DIGITAL TRANSFORMATIONS FOR HEALTH LAB

GOVERNING HEALTH FUTURES 2030

Safeguarding the Digital Generation

Qualitative Analysis of African-based Digital Technology Companies' Policies impacting African Youth Health and Well-being

Esther Opone, January 2025

This report has been made possible by financial contribution from Fondation Botnar, Switzerland, to the Project IMG-22-005 “Digital Transformations of Health Lab (DTH-Lab). Their commitment to advancing global health is deeply appreciated, and this project would not have been possible without their contribution. DTH-Lab is hosted by Université de Genève (UNIGE), Switzerland. DTH-Lab is committed to ensuring and enabling Global Access. The knowledge and information gained from the Project will be promptly and broadly disseminated and its ‘Funded Developments’ will be made available and accessible free of costs. The Global Access Commitments will survive the term of the Project.

Suggested citation: Opone, E. (2025). Safeguarding the Digital Generation: Qualitative Analysis of African-based Digital Technology Companies’ Policies impacting African Youth Health and Well-being. Geneva: Digital Transformations for Health Lab.

Safeguarding the Digital Generation:

Qualitative Analysis of African-based Digital Technology Companies Policies Impacting African Youth Health and Well-being

CONTENTS

ABSTRACT

Background: With over 520 million African Internet users and a youth population exceeding 60%, digital technology companies (DTCs) shape health behaviours and outcomes of Africa's youth through their data collection and engagement strategies. This study, conducted for Digital Transformations for Health Lab, examines the policies of Africa-based DTCs (digital technology companies) to protect and promote youth's privacy and health.

Methodology: This two-phased qualitative study involved a desk-based review and key informant interviews (July - August 2024). Of 134 Africa-based DTCs identified through online sources and professional networks, 53 were selected for landscape analysis, and finally, 15 for detailed content analysis. Policies were reviewed and scored against 4 themes: User Privacy and Consent, Health Data Governance and Protection, Health Promotion, and Special Considerations/Measures for Youth.

Findings: 2 DTC categories were analysed: digital health (n=10) and non-health with health-related impacts (money lending, sports betting, social networking platforms) (n=5). Policy comprehensiveness and transparency varied, with one company scoring "weak", three "fair", six "moderate" and five "strong". Positive policies included responsible gambling, courteous collections, health disclaimers, Health Insurance Portability and Accountability Act (HIPAA) compliance, anonymous access, mental health support and content moderation. However, gaps were found in transparency, age verification, tailored youth experiences, and cross-regional policy alignment.

Conclusion: Variations in policy accessibility and content impact users' decision-making about their data and well-being. While differences in service scope may influence policy provisions, Africa-based DTCs must enhance policy transparency and youth-focused safeguards, policymakers should enforce compliance with relevant frameworks, while research should assess practical policy implementation and impact on youth's health and well-being.

1. INTRODUCTION

In recent years, the proliferation of Internet access and mobile penetration has dramatically increased the use of digital technologies. In Africa alone, over 520 million people now have access to the Internet, a number that continues to rise (Statista, 2024). The continent's significant youth population (which stands at over 60% under age 25 according to World Economic Forum in 2023), also means that young people make up a large portion of Internet and digital technology users (40% versus 27% for the rest of the population [Enyinnia, E., 2023]). This demographic shift has coincided with a surge in digital technology companies, many of which are startups. The increase in funding for Africa-based technology companies has further driven innovation and the development of new products. Notably, the African digital health sector alone has attracted up to US$550 million in the past three years (Salient Advisory, 2024).

The surge in digital health platforms and broader digital technology usage among Africa's youth has created significant opportunities, while also raising important challenges and concerns. In terms of opportunities, the World Health Organization (WHO) has emphasized the importance of digital technologies in supporting universal health coverage, especially in regions where healthcare access remains limited (O'Brien *et al*., 2023). These digital health platforms offer services ranging from virtual consultations to health education and health facility management, promoting healthier lifestyles and improved well-being. Young people, who are typically digital natives, are naturally inclined to use these technologies to manage their health (Lupton, 2021). While we appreciate the trends that place young people at the centre of the digital revolution, it is important to recognize that digital technology companies exert a profound impact on the health and well-being of young users, which could be positive or negative. For instance, Akangbe (2022) reports that 41% of African Internet users search for health information on their mobile phones.

However, their digital engagement also makes them more vulnerable to privacy, data security and well-being risks (Holly *et al*., 2024). From collection of user data, to creation of highly-addictive "sticky" products and very engaging marketing strategies, these platforms can either promote positive health behaviours or contribute to adverse outcomes, depending on the policies they implement (Digital Transformations for Health Lab, 2024).

Beyond digital health platforms, other digital services, including social networks, money lending apps, and betting platforms, also have a significant impact on the health and well-being of young users who use these platforms to connect with others and access tools, services and resources for their day-to-day lives. Social media platforms, for example, can influence mental health by shaping

social interactions and body image perceptions (Xie, 2024), while betting platforms can introduce addictive behaviours that could lead to financial and mental stress (Ndala, 2021). Similarly, money lending platforms can also impact users' financial decisions, potentially affecting mental and emotional health due to financial strain and aggressive debt recovery practices by creditors (Oyeleke, 2024). The integration of health data tracking in non-health platforms — such as Google Fit integration in some social and lifestyle apps — further blurs the lines between health and non-health digital platforms. This integration calls for cross-sectoral policies that regulate not just health data but all personal data that could indirectly impact well-being.

As Africa's youth increasingly engage with digital technologies, it is therefore essential to prioritize data protection, privacy, and the health and well-being of these users. Globally, frameworks such as the HIPAA and the General Data Protection Regulation (GDPR) emphasize stringent data protection standards, including the right to privacy, secure handling of health data, and obtaining explicit consent for data collection. In Africa, the following regulations all play a key role in ensuring compliance with international data protection standards: the African Union's Data Protection Framework (which also builds on the Malabo Convention on Cyber Security and Personal Data Protection), the Nigeria Data Protection Regulation (NDPR), Rwanda's Law On The Protection Of Personal Data And Privacy (DPP Law) and South Africa's Protection of Personal Information (POPI) Act play a key role in ensuring compliance with international data protection standards.

Despite these frameworks, many digital platforms in Africa still lack clear and comprehensive guidelines for protecting young users. Ensuring compliance with national regulations and aligning with regional and global standards will be crucial in addressing these gaps. Beyond generic measures, strengthening and enforcing digital protection policies that cater specifically to the needs of young people is critical to ensuring that the digital space remains a safe and supportive environment for their health and well-being (Holly *et al*., 2023).

This forms the rationale for this paper, which integrates findings from two phases of research: a landscape analysis of Africa-based DTCs and an in-depth content analysis of their policies and strategies in order to:

- Provide a comprehensive overview of African-based DTCs, highlighting their activities and their impact on young users' health and well-being. These include companies focusing primarily on the health domain, such as telemedicine, health information systems, and other digital health solutions, as well as other non-health digital technology companies with solutions that exert indirect health impact.

- Analyse the policies and strategies employed by these companies, focusing on key areas such as the companies' prioritization of user privacy and consent, data governance, health promotion, and special considerations/measures for young users.
- Identify the strengths and weaknesses of these policies and recommend strategies for improvement.

The findings aim to contribute to the body of knowledge that highlights the need for youth-focused policies, and guide policymakers, industry stakeholders and regulators in creating safer, more inclusive digital environments that promote the health and well-being of young people in Africa.

2. METHODOLOGY

2.1. Overview

This study employed a two-phased approach to systematically evaluate African-based digital technology companies (DTCs) and their policies and strategies aimed at protecting and promoting the health and well-being of young users. The first phase involved a landscape analysis, while the second focused on a qualitative content analysis of selected DTC policies.

2.2. Phase 1: Landscape Analysis

2.2.1. Data Collection

A desk based review consisting of mostly grey literature and Internet-based sources was conducted to collate a list of digital technology companies in Africa. This review considered two categories of companies:

- **Core Digital Health Companies**: Primarily focused on digital health solutions such as telemedicine, personal health records, and emergency response.
- **Non-Health Digital Technology Companies with Health Impacts**: These included loan apps, betting platforms, and social networks, which were selected based on their potential impact on users' health. For instance:
    - Loan apps are associated with financial strain and psychological stress due to predatory lending and aggressive debt recovery practices.
    - Betting platforms present risks of gambling addiction and financial instability.
    - Social networks are linked to social media addiction, cyberbullying, and exposure of sensitive data.

2.2.2. Search Strategy

For the core digital health companies, keywords such as "digital health startups in Africa", "health technology startups", "telemedicine apps in Africa", "EHR/EMR in Africa", etc were used in the search engine search (Google). For others, keywords like "loan apps in Africa", "money lending apps in Africa", "betting apps in Africa", "sport betting platforms in Africa", "social networking platforms

in Africa" were used. Region-specific keywords (East, West, North, Southern Africa) were also used to get some representation across.

Furthermore, tech-focused media websites and venture capital databases like Tech Point, Salient Advisory, Tracxn, F6S, Healthcap, AU Startups, Startup List, and Tech Cabal were also searched. Additionally, suggested names of companies were collected through professional networks, LinkedIn and in-person contacts.

2.2.3. Selection Criteria

Inclusion:

- Digital technology companies founded or headquartered in Africa.
- Companies offering digital health solutions (core digital health companies) or non-health digital solutions impacting health.
- Companies currently operational.
- Availability of policies (openly accessible website documentation and/or key informant interviews).

Exclusion criteria

- Non-African digital technology companies.
- Companies founded or headquartered outside Africa with subsidiaries in Africa.
- Inactive or non-operational companies.
- Startups are still in ideation phase, without operational products or services.
- Incubator, funding or development organisations who work or partner with digital technology companies.

2.2.4. Digital Technology Companies List and Profiling

From an initial pool of 135 companies, 40 core digital health companies and 13 non-health digital companies were shortlisted for profiling. For the organisational profiling, a data collection framework was developed to collate the necessary information of interest, as follows:

- **Company Overview**
  - Company name and location(s)
  - Founder(s) and founding year
  - Mission and vision statements
  - Website/reference link
- **Health-related or Health-impacting Activities**
  - Types of digital health solutions offered and corresponding user segments
  - Types of non-digital health solutions (with health impact)

    - Targeted health issues (if specific)

- **Strategies and Policies to be reviewed (relevant links/sources collected)**
    - Internal policies on data privacy and security
    - Compliance with health regulations
    - Inclusion and special consideration for young people in decision-making process

The profiled companies are found in Appendix 1 and Appendix 2.

2.3. Phase 2: Content Analysis

This phase employed a qualitative content analysis approach to systematically evaluate the policies and strategies implemented by Africa-based digital technology companies (DTCs), aimed at protecting the health and well-being of young users. Content analysis is a research method that allows for the interpretation of the context and themes present in qualitative data, making it particularly suitable for analysing the diverse policies of DTCs (Hsieh & Shannon, 2005)

2.3.1. Company Selection

Building on the landscape analysis, 15 companies were selected for detailed policy evaluation. Selection criteria included:

- Regional representation: At least one company per African region (North, West, East and Southern Africa).
- Health-related activities: for direct/core digital health technology companies, at least one from each category was selected - EHR, telemedicine, personal health records, emergency response, tracking/monitoring and data analytics. For non-digital health companies with health impact, at least one from each of sports betting, money lending, social networking was selected.

With some DTCs, the criteria overlapped at multiple points, but they were retained due to their special information of interest and high likelihood of being used by youths (such as mental health, and sexual and reproductive health services).

Table 1 below shows the final list of Africa-based digital technology companies selected for content analysis.

Table 1: Final List of Selected Africa-based DTCs for Content Analysis

S/N	DTC Name	Country Founded/ Headquartered In	Region of Operation	Links	Health-related/ Impacting activities/ solutions
1	O7 Therapy	Egypt	North Africa	https://o7therapy.com	Telemedicine
2	PrimeBridge Health	Nigeria	West Africa	https://primebridgehealth.com/	Telemedicine
3	Cranium Integrated Solutions Limited	Nigeria	West Africa	https://cranium.com.ng/	Electronic Health Records
4	Contro	South Africa	Southern Africa	https://www.contro.co.za	Telemedicine
5	Eden care	Rwanda	East Africa	https://www.edencaremedical.com/	Health Financing
6	Lifesten Health	Rwanda	East Africa	http://www.lifesten.health/	Health Monitoring/Tracking
7	Sila Health	Zimbabwe	Southern Africa	www.sila.health	Data analytics
8	Healthtracka	Nigeria	West Africa	https://healthtracka.com/	Diagnostics
9	Caafisom	Somalia/Somaliland	East Africa	https://caafisom.com	Personal Health Records
10	EightMedical	Nigeria	West Africa	https://www.8medical.co/	Emergency Response
11	Bet9ja	Nigeria	West Africa	https://www.bet9ja.com	Sports betting
12	Blue Ridge Microfinance Bank Limited/Easimoni	Nigeria	Multiple regions	https://www.easemoni.com/	Money lending
13	Young Africa Live/BWise Health	South Africa	Southern Africa	https://www.youngafricalive.org/ https://www.bwisehealth.com/	Social networking
14	Zenka Loan	Kenya	Multiple regions	https://zenka.co.ke/	Social networking
15	Dikalo	Cameroon	West Africa	https://about.dklo.co/	Social networking

2.3.2. Data Collection

The relevant policies to be analysed were retrieved from the policy pages available on the websites and/or privacy policy information on the app store (IOS and Google Play Store) for DTCs that had app offerings. Semi-structured interviews were also conducted with key informants of two DTCs (direct digital health). One had no policy documents available on the website, while the other provided in depth follow-up on its displayed policies. A questionnaire (Appendix 3) was developed based on the areas of emphasis and content analysis framework to guide the interview, while leaving room for extra explanations, in-depth perspectives and contexts that could enrich the study (Fontana & Frey, 1994). These interviews were conducted in July and August 2024 over Google Meet and WhatsApp calls, and all sessions were recorded with participants' consent. During the call, key points were jotted down and the recordings subsequently transcribed for analysis.

2.3.3. Content Analysis

Based on the objectives of this study, a framework for content analysis of the DTCs' policies was developed across four predefined themes:

- User Privacy and Consent Policies
- Data Governance and Protection Policies
- Health Promotion Policies
- Special Considerations/Measures for Young Users

Each theme was further broken down into subthemes, drawing from key principles and guidelines found in global and regional frameworks that govern digital health, data privacy, and user protection, including the WHO Digital Health Strategy, African Union Data Protection Framework, and Health Insurance Portability and Accountability Act (HIPAA) (WHO, 2021; AU, 2022; U.S. Department of Health and Human Services, n.d.).

Table 2 shows a full breakdown of the policy content analysis framework.

Table 2: Themes, Subthemes and Description of the Content Analysis Framework

Themes	Subthemes	Description
User Privacy and Consent	Mechanisms for Obtaining Data and Consent	The processes and tools used by DTCs to collect user data and obtain informed consent. It evaluates whether consent is explicit, informed, and obtained through transparent mechanisms, ensuring users are aware of what data is being collected and for what purpose. Possible mechanisms include: ● Provided by user upon registration. ● Automatically collected or assumed based on use of services. ● Collected through third-parties.
	Types of data collected	The specific categories of data that companies collect from users. It assesses the breadth and sensitivity of the data to understand potential privacy implications. These include: ● Personal data/Personal Identifiable Information (e.g., names, contact information). ● Usage data: e.g. browser, mobile device details. ● Health-related data (e.g., medical history, health metrics, symptoms), and any other sensitive information.
	Data Usage	This analyses how the collected data is utilized by the company. It includes examining whether data is used solely for its stated purpose or if it is repurposed for other activities such as marketing, research, or third-party partnerships, and whether users are informed about these uses.
	Data Retention	The policies and practices surrounding the duration for which user data is stored. It considers whether data retention periods are clearly defined, justified, and aligned with legal requirements, and how data is securely deleted after its intended use.
	Data Sharing/Disclosure/Transfer	The conditions under which user data is shared, transferred or disclosed to third parties. It examines whether data sharing is done with user consent, the types of entities with whom data is shared (e.g., partners, healthcare providers, advertisers, government agencies, storage servers), and the geographic locations to which data may be transferred. It also evaluates the safeguards in place to protect shared data during these

Themes	Subthemes	Description
		processes.
	User Rights	The rights granted to users concerning their data, including the ability to access, correct, delete, or restrict the use of their data. It also considers the processes in place for users to exercise these rights and how effectively they are communicated.
	Policy Provisions	The provisions outlined in a company's privacy policies, including dedicated pages such as Privacy Policy and Terms and Conditions. It examines how these documents address user data practices and the frameworks referenced within these policies, such as the Health Insurance Portability and Accountability Act (HIPAA) and other relevant national, regional, or global regulations. Additionally, this subtheme considers the frequency and transparency of policy reviews and updates, ensuring that users are kept informed of any changes that may affect their data privacy.
Health Data Governance and Protection	Data storage and access controls	How data is stored and who has access to it. It includes an analysis of the physical and digital storage environments, the measures taken to ensure data integrity, and the access controls in place to prevent unauthorized access. The focus is on ensuring that sensitive health data is securely stored and only accessible by authorized personnel.
	Policies governing data tracking	This explores the policies that guide the tracking and monitoring of health-related (and potentially health-impacting) data through digital platforms. It includes an assessment of what data is tracked, the purpose of tracking, and how this data is used to influence service provision, user behaviour and potentially, health outcomes. The analysis also considers the transparency of these policies (e.g. cookie policies), ensuring that users are aware of what data is being tracked and for what purposes.
	Encryption and security measures	The encryption methods and security measures employed to protect health data during storage, transmission, and processing. It includes the use of secure communication channels, and other cybersecurity measures like firewalls, intrusion detection systems, and regular security audits.
	Mention/Reference to national, regional or	The company’s mention and adherence to relevant national and international data protection laws and regulations, such as the General Data Protection Regulation (GDPR),

Themes	Subthemes	Description
	international data protection laws	the Health Insurance Portability and Accountability Act (HIPAA), Fast Healthcare Interoperability Resources (FHIR) and local data protection laws in African countries. The analysis focuses on whether the company's data governance practices comply with these legal frameworks, including the protection of sensitive health information, user consent, and data breach notifications.
Health Promotion	Strategies for health promotion through digital platforms	The approaches and strategies employed by DTCs to promote health and wellness through their digital platforms. It includes an analysis of the content and tools provided, such as disclaimers, educational resources, blogs, digital campaigns, and interactive features aimed at encouraging continued use of platforms with impact on healthy behaviours.
	User engagement and feedback mechanisms	The mechanisms in place for engaging users and gathering feedback. It includes how DTCs encourage user participation, the tools provided for users to share their experiences or concerns, and how feedback is incorporated into the platform's policy formulation, development and improvement.
Special Measures/Considerations for Young Users	Age limitation and verification processes	The mechanisms for verifying the age of users to ensure compliance with age-related regulations and protect young users. It includes an analysis of the effectiveness of these processes (e.g., identity checks, self-reporting, third-party verification). The focus is on preventing underage users from accessing platforms or services not suitable for their age group.
	Age-appropriate/Tailored User Experience for Young Users	The provisions for tailored user experiences designed to support young users in making informed decisions on the platform. It includes an analysis of how the platform's design, navigation, and functionality are adapted to meet the cognitive and emotional needs of younger users, with clear, simplified information, guidance, or decision-making aids, and details of how companies adjust decision-making pathways to accommodate the age and maturity of users. The focus is on enabling young users to understand their choices and the consequences of their actions within the digital environment, especially regarding data sharing and health decisions.

Themes	Subthemes	Description
	Parental consent requirements	The level of parental/guardian involvement allowed or required in young users' decision-making processes, particularly regarding privacy settings, health data sharing, content access, financial interactions, etc. It assesses how consent is requested, verified, and documented, ensuring compliance with legal requirements like the Children's Online Privacy Protection Act (COPPA) and other relevant regulations, as well as the ease of use and clarity of these processes for both parents and young users. The focus is on finding a balance between supporting young users' autonomy (especially for older minors) and ensuring appropriate parental oversight.
	Content moderation and ethical nudging measures	This evaluates the measures to moderate content and ensure the safety of young users on digital platforms. It assesses the use of filters or restrictions on harmful content, community guidelines, measures to protect young users from online risks such as cyberbullying, predatory behaviour, or exposure to unsuitable content, and how DTCs respond to inappropriate content or interactions It also explores how companies ethically guide or "nudge" young users towards certain behaviours or decisions. It assesses whether behavioural nudging techniques (e.g., notifications, prompts, games) are used responsibly, ensuring they are age-appropriate and do not exploit young users' vulnerabilities, but ensure they are empowered to make decisions that are in the best interests of their health and well-being in the digital space.

2.3.4. Theme Scoring

A scoring guide was developed to score the DTCs across the 4 themes (and relevant subthemes). The indicators for this were based on mention of terms that are relevant to the specific subtheme (for instance, terms like “how we collect and use your data [data collection and usage consent mechanisms]”, “disclosure to 3rd parties [data sharing/disclosure]”, “the content you submit” [content moderation], etc.). The table containing the scoring guide is shown below.

Table 3: Scoring Guide

Themes	User Privacy and Consent	Health Data Governance and Protection	Health Promotion	Special Measures for Young Users
Subthemes	• Mechanisms for Obtaining Consent • Types of data collected • Data Usage • Data Retention • Data Sharing/Disclosure/Transfer • User Rights • Policy Provisions	• Data storage and access controls • Policies governing health data tracking • Encryption and security measures • Mention/Reference to national and international data protection laws	• Strategies for health promotion • User engagement and feedback mechanisms	• Age limitation and verification processes • Age-appropriate/Tailored User Experience for Young Users • Parental consent requirements • Content moderation and ethical nudging measures
Scoring	0 - **Non-existent:** No evidence or policy addressing the theme.	0 - **Non-existent:** No evidence or policy addressing the theme.	0 - **Non-existent:** No evidence or policy addressing the theme.	0 - **Non-existent:** No evidence or policy addressing the theme.
	1 - **Poor:** Incomplete and/or significant gaps in addressing the theme.	1 - **Poor:** Incomplete and/or significant gaps in addressing the theme.	1 - **Poor:** Incomplete and/or significant gaps in addressing the theme.	1 - **Poor:** Incomplete and/or significant gaps in addressing the theme.
	2 - **Fair**: Basic policies or mechanisms are in place but lack depth, clarity, or comprehensive coverage.	2 - **Fair**: Basic policies or mechanisms are in place but lack depth, clarity, or comprehensive coverage.	2 - **Fair**: Basic policies or mechanisms are in place but lack depth, clarity, or comprehensive coverage.	2 - **Fair**: Basic policies or mechanisms are in place but lack depth, clarity, or comprehensive coverage.
	3 - **Good:** Policies or mechanisms are well-developed and adequately address the theme, with minor areas for improvement.	3 - **Good:** Policies or mechanisms are well-developed and adequately address the theme, with minor areas for improvement.	3 - **Good:** Policies or mechanisms are well-developed and adequately address the theme, with minor areas for improvement.	3 - **Good:** Policies or mechanisms are well-developed and adequately address the theme, with minor areas for improvement.
	4 – Excellent: Policies or mechanisms are highly comprehensive and clear with no significant gaps.	**4 – Excellent**: Policies or mechanisms are highly comprehensive and clear with no significant gaps.	**4 – Excellent**: Policies or mechanisms are highly comprehensive and clear with no significant gaps.	**4 – Excellent**: Policies or mechanisms are highly comprehensive and clear with no significant gaps.

2.3.5. Overall Scoring and Classification

The highest overall score possible across themes was 16. DTC policies that scored between 0-3 were classified as “weak”, those with a score of 4-8 were classified as “fair”, those that had 9-12 were deemed “moderate” and those that scored between 13 - 16 were rated as “strong”.

2.3.6. Data Synthesis and Reporting

Findings were synthesized to provide a detailed overview of Africa-based DTC policies. Visual formats such as tables, figures and heatmaps illustrated results, while strengths and weaknesses of policies across the DTCs were highlighted. The Consolidated Criteria for Reporting Qualitative Research checklist was used to ensure compliance with qualitative data reporting standards, as much as possible (Tong *et al.*, 2007).

3. FINDINGS

3.1. Landscape Analysis

The landscape analysis covered 53 Africa-based digital technology companies categorized into direct digital health companies and other digital technology companies with health-related impacts. Of these, 75.5% (40 companies) were directly involved in digital health while the remaining 24.5% (13 companies) were loan apps, sports betting apps and social networks, which have potential health impacts.

3.1.1. Core Digital Health Companies

Regions of Operation

The digital health companies analysed were distributed across different regions in Africa, ensuring a representation of the continent's digital health landscape (West Africa = 45%, East Africa = 17.5%, Southern Africa = 12.5%, North Africa = 5% and 20% had distribution across multiple regions).

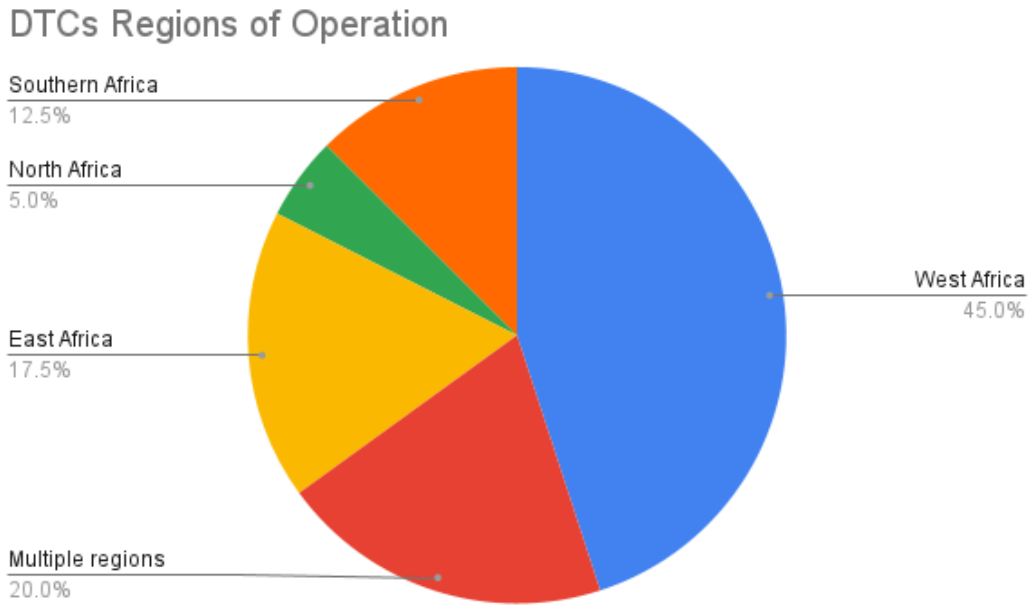

Figure 1: Distribution of selected digital health companies by African region

3.1.2. Health-related Activities/Solutions

The health-related activities refers to the solutions, products or initiatives of these companies that pertain to the health space, as guided by the World Health Organization (WHO) Classification of Digital Interventions, Services and Applications in Health (CDISAH) (World Health Organization, 2023). The solutions covered here are telemedicine, personal health records, electronic health records, pharmacy information system, data analytics, diagnostics, health monitoring/tracking, health financing and emergency response. The distribution among the companies analysed are as follows (Figure 2).

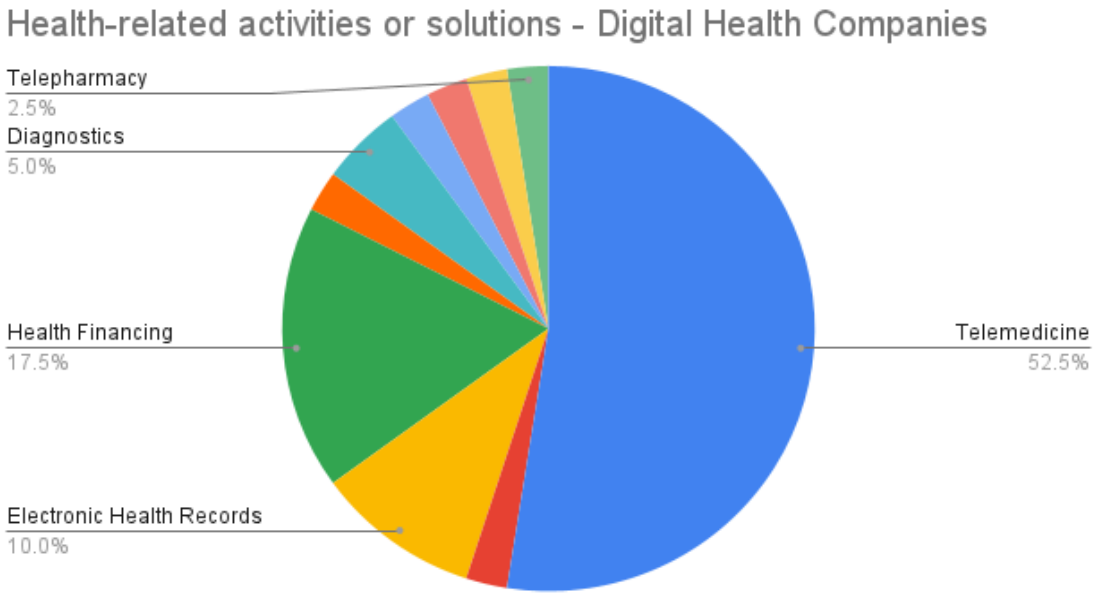

Figure 2: Health-related activities or solutions (n=40)

*It is important to note that some of the companies have multiple/overlapping solutions, for instance, telemedicine services was a recurring theme. For the sake of this categorization and visualization, focus was placed on their core offerings/flagship products, while others are detailed in their full company profiles (Appendices).

3.1.3. Other Digital Technology Companies

Regions of Operation

The distribution of the selected non-digital health companies are as follows: West Africa = 50%, East Africa = 16.7%, Southern Africa = 16.7%, North Africa = 0%, Multiple regions = 16.7%. This is represented in Figure 3 below:

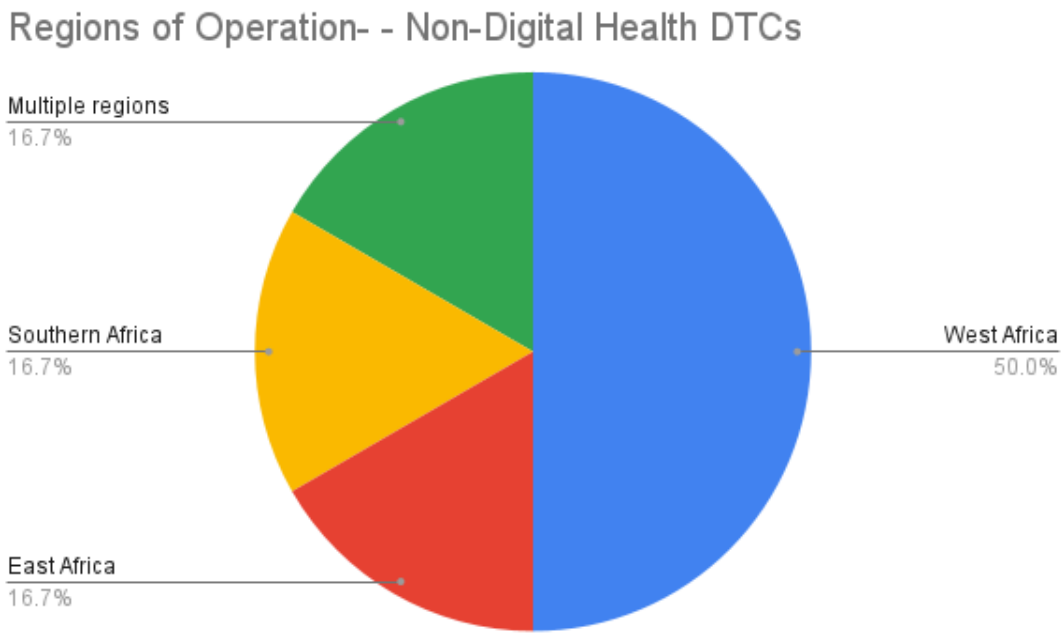

Figure 3: Distribution of selected non-digital health companies by African region (n=13)

3.1.4. Health-related or Health-impacting Activities/Solutions

These refer to the products/services from these digital technology companies that are not direct digital health solutions but have a high likelihood of impacting users' health, especially young people. This factors in the amount of time likely to be spent on these platforms, the kind and amount of data generated and the mental, emotional and psychological investment of the user. These are social networking, sports betting and money lending, as shown below (Figure 4).

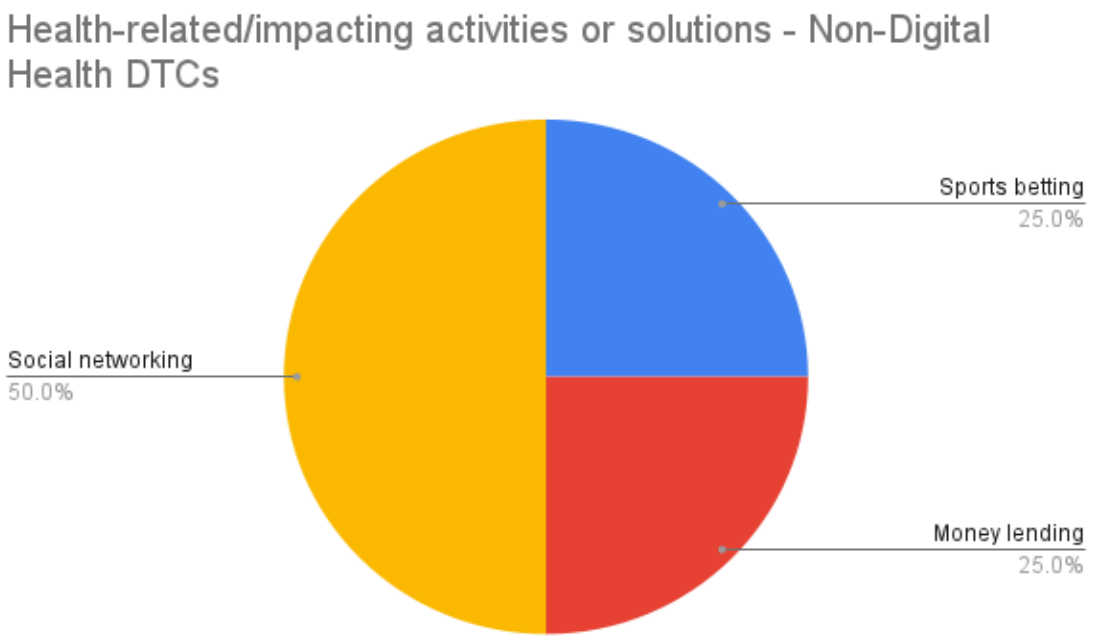

Figure 4: Health-related or health-impacting activities or solutions

3.1.5. Africa-based Digital Technology Companies Landscape Summary

Tables 4 and 5 list the Africa-based digital technology companies identified for this analysis. This table presents a quick overview and the full organizational profile, including the policies to be analysed for each company are available in the (Appendices).

Table 4. Digital Health Technology Companies

DTC Name	Country Founded/ Headquartered In	Region of Operation	Links	Health-related activities or solutions
Heala	Nigeria	West Africa	https://heala.ng/	Telemedicine
mPharma	Ghana	Multiple regions	https://mpharma.com/	Pharmacy Information System
Afya Rekod	Kenya	Multiple regions	https://afyarekod.com	Electronic Health Records
Reliance Health	Nigeria	Multiple regions	https://getreliancehealth.com	Health Financing
Rocket Health/ The Medical Concierge Group	Uganda	East Africa	https://rockethealth.africa/	Telemedicine
O7 Therapy	Egypt	North Africa	https://o7therapy.com	Telemedicine
AfriHealth	Nigeria	West Africa	https://www.afri-health.com/rigourplus/	Telemedicine
PrimeBridge Health	Nigeria	West Africa	https://primebridgehealth.com/	Telemedicine
Vezeeta	Egypt	North Africa	https://www.vezeeta.com/en	Telemedicine
Zuri Health	Kenya	Multiple regions	https://zuri.health/	Telemedicine
Helium health	Nigeria	Multiple regions	https://heliumhealth.com/	Electronic Health Records
Cranium Integrated Solutions Limited	Nigeria	West Africa	https://cranium.com.ng/	Electronic Health Records
Ask Without Shame (AWS)	Uganda	East Africa	https://bit.ly/2YQcNNL	Telemedicine
Honey and Banana Connect	Nigeria	West Africa	https://www.honeyandbanana.com/	Telemedicine
DoctorCare247	Nigeria	West Africa	https://doctorcare247.com/	Telemedicine
Clafiya	Nigeria	West Africa	www.clafiya.com	Health Financing
CribMD	Nigeria	West Africa	https://www.cribmd.com/	Telemedicine
Waspito	Cameroon	West Africa	https://www.waspito.com/	Telemedicine
Wella Health	Nigeria	West Africa	https://www.wellahealth.com/	Health Financing
SonoCare	Nigeria	West Africa	https://sonocare.com.ng/	Telemedicine
myPaddi/ MOBicure	Nigeria	West Africa	https://web.mypaddiapp.com/ https://www.mobicure.biz/	Telemedicine
mDoc	Nigeria	West Africa	https://mymdoc.com/	Telemedicine

DTC Name	Country Founded/ Headquartered In	Region of Operation	Links	Health-related activities or solutions
Contro	South Africa	Southern Africa	https://www.contro.co.za	Telemedicine
Vula Mobile	South Africa	Southern Africa	https://www.vulamobile.com/	Electronic Health Records
Syked	South Africa	Southern Africa	https://syked.co.za/	Telemedicine
Eden care	Rwanda	East Africa	https://www.edencaremedical.com/	Health Financing
Medikea	Tanzania	East Africa	https://medikea.co.tz/home	Telemedicine
Turaco	Kenya	Multiple regions	https://www.turaco.insure/	Health Financing
Lifesten Health	Rwanda	East Africa	http://www.lifesten.health/	Health Monitoring/Tracking
Wazi	Kenya	Multiple regions	https://www.wazi.co/	Telemedicine
Aviro Health	South Africa	Multiple regions	https://www.avirohealth.com/	Diagnostics
Sila Health	Zimbabwe	Southern Africa	www.sila.health	Data analytics
DoctorMauritius (Médecin à domicile)	Mauritius	Southern Africa	https://www.doctormauritius.com/	Telemedicine
Healthtracka	Nigeria	West Africa	https://healthtracka.com/	Diagnostics
Caafisom	Somalia/ Somaliland	East Africa	https://caafisom.com	Personal Health Records
EightMedical	Nigeria	West Africa	https://www.8medical.co/	Emergency Response
Leadway	Nigeria	West Africa	https://leadwayhealth.com/	Health Financing
mTiba/CarePay	Kenya	East Africa	https://mtiba.com/	Health Financing
MobiHealth	Nigeria	West Africa	https://www.mobihealthinternational.com/	Telemedicine
MyMedicines/ Advantage Health Africa	Nigeria	West Africa	https://mymedicines.africa/	Telepharmacy

Table 5. Other/Non-Health Digital Technology Companies

DTC Name	Country Founded/ Headquartered In	Region of Operation	Links	Health-related/impacting activities or solutions
Bet9ja	Nigeria	West Africa	https://www.bet9ja.com	Sports betting
Betika	Tanzania	East Africa	https://www.betika.co.tz/	Sports betting
BetCO.ZA	South Africa	Southern Africa	www.bet.co.za	Sports betting
FairMoney	Nigeria	West Africa	https://fairmoney.io	Money lending
Branch	Nigeria	West Africa	https://branch.com.ng/	Money lending
Zenka	Kenya	East Africa	https://app-api.zashloan.com/	Money lending
Umojja	DR Congo	Multiple regions	https://www.umojja.com/	Social networking
Young Africa Live/BWise Health	South Africa	Southern Africa	https://www.youngafricalive.org/ https://www.bwisehealth.com/	Social networking
Ayoba	South Africa	Multiple regions	https://www.ayoba.me/web/home?lang=en	Social networking
Uwasocial	Nigeria	West Africa	https://www.uwasocial.com/	Social networking
Village Square	Nigeria	West Africa	https://villagesquare.io/	Social networking
Dikalo	Cameroon	West Africa	https://about.dklo.co/	Social networking

3.2. Content Analysis

From the initial 53 DTCs, 15 companies were selected for in-depth policy analysis, including 10 direct digital health companies (66.7%) and 5 non-digital health companies (33.3%). Figure 5 shows the DTC categories while Figure 6 shows the health-related and health-impacting activities across both categories.

Two of the DTCs had no publicly accessible policies, two had dedicated pages for health data and youth well-being, while others bundled theirs within the Privacy Policy and Terms and Conditions pages of their website and app store.

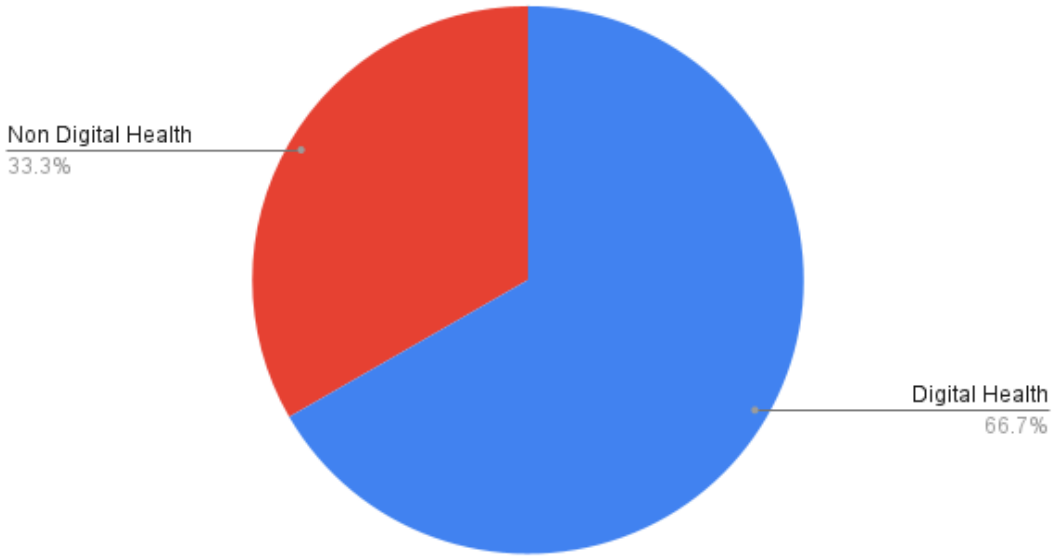

Figure 5: Distribution of selected digital technology companies (for content analysis) by category (n=15)

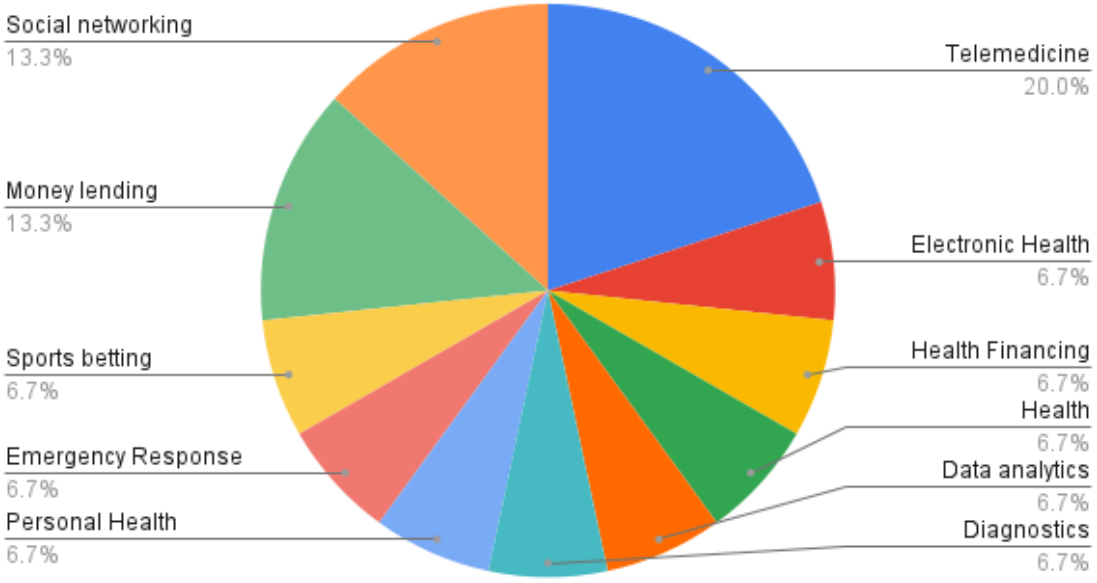

Figure 6: Health-related and health-impacting activities of analysed DTCs

3.3. Objective 1 - Policy Analysis

The company policies are presented across the four themes: (1) user privacy and consent policies), (2) data governance and protection policies, (3) health promotion and tracking policies and (4) special considerations/measures for young users (Table 6).

Table 6. Overview of Company Policies Across Four Analysis Themes

DTC Name	Company Policies
O7 Therapy	**User Privacy and Consent**: Collects personal data from users upon registration and automatically gathers usage data during service use. Users provide consent by agreeing to the terms outlined in the privacy policy or by continuing to use the platform. This process ensures that user consent is tied to active participation and acknowledgment of the platform's terms. However, specific details about consent for particular types of data collection are not explicitly highlighted. **Health Data Governance**: Secures personal information with a range of administrative, technical, and physical protections. Service providers have access to personal data strictly for performing their designated roles and are prohibited from using the data for other purposes. The company uses strong encryption protocols, such as 256-bit TLS encryption and end-to-end chat encryption, to protect communication and prevent unauthorized access. 07 Therapy is HIPAA-compliant, with no other mention of compliance with additional international data governance frameworks beyond HIPAA. **Health Promotion and Tracking**: Promotes mental health through a wide network of licensed therapists and emphasizes the effectiveness of online therapy as a faster, more comfortable alternative to traditional care. The platform provides mental health resources and educational content to encourage positive behaviours and mental wellness. In terms of health data tracking, cookies and similar technologies are used to monitor user activity, with transparency about the types of cookies used and options for users to manage their preferences. Feedback is collected through surveys after consultations, but other forms of user engagement are not explicitly stated. **Special Measures for Young Users**: Does not knowingly collect personal information from users under 18 years old, and if data from children under 13 is identified, it is immediately deleted. Parental consent is required for users under the applicable age threshold, following COPPA-like regulations. In addition, the platform includes strong content moderation measures, such as disclaimers and safety warnings for users in crisis situations, like those experiencing suicidal thoughts. However, there are no explicit provisions for tailoring the user experience for younger audiences or providing age-appropriate content.

DTC Name	Company Policies
PrimeBridge Health	**User Privacy and Consent**: Complies with HIPAA 1996 regulations, requiring patients to provide consent when booking appointments. During this process, patients submit their biodata and symptoms, after which their information is securely transmitted and is no longer accessible by the patient. The platform uses collected data solely for appointment bookings and consultations, ensuring a streamlined, purpose-limited approach. While patient data is not retained, it is securely handled during the interaction period. Although there is no detailed documentation on users' rights concerning data management, HIPAA compliance ensures the protection of patients' privacy and confidentiality. **Health Data Governance**: Data access is controlled by internal policies that ensure accountability, with access limited to authorized personnel such as doctors and developers. Every instance of backend access is traceable, providing a transparent audit trail for data security oversight. Patients receive post-consultation summaries and test results via email. The encryption of consultations, conducted via Google Meet, adheres to Google's encryption standards. Additionally, PrimeBridge Health adheres to HIPAA and Business Associate Agreements (BAAs) to ensure secure handling and compliance with privacy regulations. However, there is limited mention of international or local data governance frameworks beyond HIPAA. **Health Promotion and Tracking**: Focuses on gathering patient feedback through various channels such as phone calls, messages, and emails. This feedback is occasionally used for promotional content, with explicit patient consent obtained beforehand. In terms of health promotion, the company engages in corporate social responsibility (CSR) initiatives, such as health campaigns in collaboration with AIESEC and local health ministries, highlighting its broader commitment to community development. PrimeBridge takes a non-intrusive approach to health data tracking, selectively monitoring interactions to enhance the user experience without being invasive or pushy. This approach is aligned with their respect for patient privacy and preferences. **Special Measures for Young Users**: Adheres to the Gillick competence principle, which allows minors aged 12 or 13 who demonstrate cognitive maturity to consult independently without parental involvement. For minors under 16 who do not meet this threshold, parental consent is required. Post-consultation summaries and results are provided to young users, ensuring continuity in care. Although age verification processes are not explicitly detailed, the internal system assesses the competency of young users based on the Gillick principle. The platform's efforts to accommodate young users' cognitive capabilities reflect an understanding of the need for tailored experiences and respecting user autonomy. However, content moderation and ethical nudging measures are not explicitly addressed.

DTC Name	Company Policies
Cranium Integrated Solutions Limited	**User Privacy and Consent**: Ensures users provide consent when signing up and sharing personal information necessary for healthcare services and obtaining biometric cards. If users refuse consent, they can still use biometric cards, but their data will be excluded from research. The platform collects personal data such as names, addresses, biometric details, and photographs. This information is used for healthcare services, record-keeping, and communication. Cranium does not retain data longer than necessary, and sharing is limited to medical personnel and third-party service providers when required. The company complies with the Nigeria Data Protection Regulation (NDPR) and other applicable laws, ensuring user rights to access, update, and object to certain data uses. Policies are periodically reviewed, with the latest documented update in December 2022. **Health Data Governance**: Secures user information by implementing encryption for sensitive data like credit card details and using administrative, physical, and technical safeguards. Cloud-based servers are regularly audited, and security vulnerabilities are addressed through penetration testing. The company complies with both national and international data protection laws, including the Nigeria Data Protection Commission's standards, and undergoes audits every two years. Data access is restricted to authorized personnel, and Business Associate Agreements (BAAs) ensure third-party compliance with data protection measures. **Health Promotion and Tracking**: Employs a strong feedback system to gather user input and improve services, with dedicated client services for addressing user complaints. The company conducts user research to enhance the design of their biometric card solutions. Data tracking is conducted via cookies, focusing on user behaviour and interactions on the platform. There is also a wearables offering for remote health data tracking. **Special Measures for Young Users**: Provides different biometric card categories based on age and conditions, allowing minors below 18 to access health services independently. AI algorithms are used to restrict certain actions for minors, requiring parental authorization for more complex activities. Although specific age verification processes are not detailed, Cranium's system tailors the user experience for young individuals, allowing them autonomy in accessing school health services while maintaining appropriate restrictions. Parental consent is required when minors attempt to go beyond the AI-enforced limits, ensuring that both autonomy and safety are balanced for younger users. Content moderation and ethical nudging measures are not explicitly stated.

DTC Name	Company Policies
Contro	**User Privacy and Consent**: Obtains consent through a checkbox during sign-up and collects user data during registration and consultations. The platform gathers both personal identifiable information (PII), such as names, addresses, and medical details, and non-PII, like product interests and website usage data. This data is used for healthcare operations, communication, analysis, and improving user experience. Contro explicitly states that no data is collected without the user's active participation and consent. Data sharing occurs with trusted service providers and medical professionals, as well as for legal obligations or in cases of mergers or acquisitions. However, data retention periods are not specified, and anonymized data is used without restrictions. Users have the right to access, update, or delete their personal data. The Privacy Policy and Terms and Conditions pages outline these provisions, but the privacy framework is not specified. Users are notified of updates through the website or email, with the last known update in 2023. **Health Data Governance**: Integrates AWS cloud services to ensure secure data storage and prevent unauthorized access, although they acknowledge the risks of data interception during online transmissions. Details about encryption or compliance with national or international data protection laws are not provided. **Health Promotion and Tracking**: Emphasizes that their platform is not for emergency use, directing users to local emergency services in critical situations. The platform provides supplementary consultations through partner doctors, clarifying that they do not replace a user's primary doctor. Health promotion is carried out through educational blogs and social media, with no specific tracking of health outcomes linked to consultations. Contro uses cookies to track user activity on the platform, customising user experiences based on general usage patterns. Users can opt to accept or decline cookies, but no explicit policies on tracking health-specific data are mentioned. **Special Measures for Young Users**: Sets a minimum age of 18 for access to its services, verifying user age through personal information during registration. No tailored experiences for younger users are provided since the platform is designed exclusively for adults. Parental consent is not required, and the service restricts users to managing their own health consultations, ensuring accountability and safety. Content moderation ensures that only individuals who are legally able to enter agreements use the platform, reinforcing responsible usage.

DTC Name	Company Policies
Eden Care	**User Privacy and Consent**: Collects personal data during user registration or account activation and automatically acknowledges user consent when accessing the platform, even without an account. The platform also collects data from third-party associates under specific agreements. The types of data collected include personal data (e.g., names, identification numbers, and household income), service-related data (e.g., claims and authorizations), and user-generated content. EdenCare uses this data for marketing, wellness programme outreach, and communication with users. While personal data is not sold or rented, it may be shared with business associates and transferred during business changes. Data retention policies are tied to business needs, but the duration is unspecified. Users have the right to access, delete, and opt out of data sharing while being protected under HIPAA (Health Insurance Portability and Accountability Act of 1996, US). **Health Data Governance**: Implements administrative, physical, and technical safeguards to protect personal data, conducting regular security tests and ensuring privacy compliance among business associates. However, the platform acknowledges the risks of non-encrypted Internet communications, such as email, which may be vulnerable to unauthorized access during transmission. Although EdenCare adheres to HIPAA, there is no mention of specific encryption measures for data storage and transmission. **Health Promotion and Tracking**: Promotes user wellness, such as through its ProActiv feature, which tracks mental health and offers access to wellness programmes, contributing to workforce productivity and well-being. The platform collects general usage data and geolocation information to improve service delivery but does not use this data for advertising purposes. Cookies and tags track user activity, optimizing the platform experience without storing sensitive health data. No specific policies for tracking health-related data or user outcomes are outlined. **Special Measures for Young Users**: Restricts its services to users aged 18 and above, with no explicit age verification processes outlined beyond user-provided information. The platform does not offer tailored experiences for younger users, and parental consent is not required. As part of its content moderation efforts, EdenCare reserves the right to disable user accounts that exhibit inappropriate behaviour, ensuring safety and adherence to platform rules.

DTC Name	Company Policies
Lifesten Health	**User Privacy and Consent**: Collects personal data during registration and automatically gathers usage data when users interact with the service. Explicit consent is required before processing data, ensuring user autonomy. Collected data includes personal details (e.g., email, name, address) and usage information (e.g., IP address, device ID, and mobile access data with prior permission). Personal data is used to manage user accounts, provide services, and for marketing and analysis purposes. Data is retained for as long as the user engages with the platform, and usage data is stored for one year. Data is shared with service providers for various purposes, including monitoring, payments, and business transactions. Transfers to other jurisdictions occur only with proper legal safeguards. Users have rights to access, correct, or erase their data and may withdraw consent, though it might limit certain features. Lifesten's framework aligns with GDPR and Rwanda's Data Protection Authority regulations, with policies last updated in early 2023. **Health Data Governance**: Access to sensitive data is controlled through role-based permissions, ensuring only authorized personnel can access it. Data is stored securely, both on-premises and in the cloud, with regular updates to security protocols and audits to prevent unauthorized access or breaches. Lifesten employs encryption techniques like de-identification and data masking to protect sensitive data during storage and transmission, while also following industry-standard security protocols. Data minimization principles are enforced, limiting the collection of only necessary data to reduce breach risks. The company complies with Rwanda's data protection laws and ensures that data is not transferred outside the European Economic Area unless adequate protection is provided. **Health Promotion and Tracking**: Employs health gamification techniques, encouraging users to participate in daily health challenges, earning points for incentives and rewards, which motivates healthier behaviours. Additionally, the platform engages in CSR initiatives, like the "Kigali Cardiovascular Health Challenge," promotes cardiovascular health awareness, screening over 75,000 individuals and reaching 1.6 million people. Lifesten collects data like IP addresses and device information for system administration and uses third-party analytics tools, including Nuralogix AI, to track user activity. These data collection efforts comply with GDPR and HIPAA, ensuring health-related data is handled with care. User feedback is gathered through various channels, including calls and messaging, and the platform utilizes email marketing for updates and promotions. **Special Measures for Young Users**: Sets a minimum age requirement of 13 years and prevents the collection of personal information from users below this age. However, it does not provide specific mechanisms for age verification, suggesting reliance on user self-reporting. While no tailored user experience for younger users is explicitly mentioned, the platform requires parental consent in countries where it is legally necessary for users under 18. Parents may also request the removal of their child's personal data. Content moderation is enforced through the User Conduct policy, which prohibits inappropriate or unlawful activities, ensuring that users, including minors, maintain proper conduct while using the app.

DTC Name	Company Policies
Sila Health	**User Privacy and Consent**: Collects data with user consent, ensuring users are informed about the purpose of data collection. By continuing to use the service, users give implied consent to the data practices outlined in the privacy policy. The company primarily collects anonymized data unless personal identifiers are required by law. Anonymized data is used to provide requested services, and commercially acceptable means are employed to protect stored data from loss, theft, or unauthorized access. Sila Health retains information only for as long as necessary to provide services and does not publicly share any personal information unless required by law. Users can refuse to provide personal information, understanding it may limit the services Sila Health can offer. The privacy policy, effective from January 1, 2024, adheres to Meta's privacy and cookie policies for its chatbot service. **Health Data Governance**: Ensures the protection of stored data through industry-standard practices, including AES-256 encryption, to prevent unauthorized access or tampering. The platform complies with HIPAA and GDPR, providing a secure framework for handling sensitive health information. However, detailed policies regarding data tracking, storage, or secondary use of health data are not explicitly stated. **Health Promotion and Tracking**: Uses a Health Points System to encourage user engagement by rewarding points for participating in health-related activities, such as asking questions, symptom searches, and completing assessments on platforms like WhatsApp and Facebook Messenger. These points can be redeemed for rewards, motivating continuous interaction with health content. Sila Health includes a clear disclaimer advising users to seek professional medical help in emergencies, particularly for serious conditions. The platform also tracks user activity across its digital platforms to promote health engagement, though specific policies on long-term data storage are not provided. While user engagement is facilitated through multiple channels, there is no explicit mention of mechanisms for gathering feedback or improving services based on user experiences. **Special Measures for Young Users**: No relevant policy explicitly available.

DTC Name	Company Policies
HealthTracka	**User Privacy and Consent**: Collects personal information directly from users and automatically gathers usage data via cookies and analytical tools. Consent is obtained at the point of data collection and is assumed upon accessing the website or services. Users can withdraw consent at any time without affecting the legality of prior data processing, and additional consent is required for new purposes. The types of data collected include personal data (username, password, contact information, identity details, test samples, health records) and usage data (IP address, time spent on site, pages viewed, geographical location). This data is used for identity verification, healthcare service delivery, marketing analysis, and compliance with legal obligations. Personal data is retained as long as necessary, while health data is retained permanently unless a valid request for erasure is submitted. Personal information is not sold or disclosed publicly, but may be shared with trusted service providers and healthcare partners, in compliance with the Nigeria Data Protection Regulation (NDPR). **Health Data Governance**: Employs various security measures, including SSL encryption and physical access controls, to protect data. Information access is restricted to authorized personnel only, and employees receive data privacy training. The platform complies with national and international data protection laws, ensuring lawful, fair, and transparent processing of personal data. Users are notified within 24 hours in the event of a data breach. **Health Promotion and Tracking**: Actively promotes health through free health check-ups and digital campaigns to encourage participation in health services, and there is also a Student Ambassadorship Program. The platform uses cookies to track user activity for security, customization, and fraud prevention. While users can disable cookies, this may limit website functionality. Although there are engagement programmes to encourage participation, specific mechanisms for collecting user feedback or suggestions for platform development are not clearly outlined. **Special Measures for Young Users**: Requires users to be at least 18 years old to access its services, ensuring compliance with age-related regulations. There are verification processes in place to confirm user information, but specific age verification methods are not detailed. The platform includes a disclaimer indicating that the health information provided is for informational purposes only and should not be used as a direct medical diagnosis. Users are encouraged to report inappropriate behaviour, ensuring that HealthTracka is informed of misconduct while maintaining legal obligations. Tailored experiences for younger users are not explicitly mentioned.

DTC Name	Company Policies
Caafisom	**User Privacy and Consent**: Users automatically consent to Caafisom's Privacy Policy and terms by using the website. Specific reasons for collecting personal information, such as name, email address, phone number, and other contact details, are disclosed at the point of data collection. The platform also collects log files and usage data (IP addresses, browser types, timestamps) for trend analysis and demographic research. This data is utilized for website operation, personalization, user interaction analysis, and customer communication regarding updates, marketing, and fraud prevention. Data retention and sharing details are not explicitly stated. Users have rights under the California Consumer Privacy Act (CCPA) and the General Data Protection Regulation (GDPR), including requests for data disclosure, deletion, and correction. **Health Data Governance**: Complies with the CCPA and GDPR, outlining user rights related to personal data, such as the right to access, rectification, erasure, restriction of processing, objection to processing, and data portability. The company commits to responding to user requests within one month. However, specific information on data storage, access controls, and encryption measures is not available. **Health Promotion and Tracking**: No specific strategies or tools for promoting health and wellness through the platform are mentioned. Caafisom utilizes cookies, JavaScript, and web beacons to track users' browsing behaviour and measure advertising effectiveness, allowing for personalized content and ads. Users agree to cookie usage when accessing the platform. The platform has a comments section for user feedback, but comments are not filtered or edited before posting, leaving CAAFISOM with the right to monitor and remove inappropriate content. **Special Measures for Young Users**: Sets a minimum age requirement of 13 years for users, ensuring compliance with age-related regulations. It does not knowingly collect personal information from children under 13. While there are no specific tailored experiences for younger users, parental consent is necessary for removing information related to underage users upon request. The platform encourages parental involvement in monitoring children's online activities to ensure a safe online environment.
EightMedical	No relevant policy documentation found as at study period.

DTC Name	Company Policies
Bet9ja	**User Privacy and Consent:** Collects personal data during account setup, including name, gender, date of birth, contact information, and identification documents like a passport or ID card. Cookies are used to gather data automatically and users have control over their cookie preferences via browser settings, though disabling certain cookies may affect services. Additional data may come from third-party providers such as payment processors and identity verification services. Bet9ja uses this data for account management, fraud detection, marketing (with user consent), and legal compliance. Users can opt out of marketing communications and have several rights, including access, correction, deletion, and data portability. Data is retained as long as necessary to meet service or legal requirements, including anti-money laundering (AML) regulations. The company shares data with service providers for functions such as identity verification and transaction processing, and complies with the Nigeria Data Protection Regulation (NDPR). **Health Data Governance:** Employs various security measures to protect user data, including physical, electronic, and procedural safeguards. The platform uses Secure Sockets Layer (SSL), Akamai IP/Geo Firewall, and RESTful API encryption to protect data during transmission. Bet9ja advises users to keep their passwords confidential, as the security of their account relies on these credentials. Regular audits are conducted to ensure compliance with data protection standards, and Bet9ja complies with both national and international data protection laws, including the NDPR. **Health Promotion and Tracking:** Supports responsible gambling by providing tools such as self-exclusion options and deposit limits, encouraging users to set limits on their gambling behaviour. The platform provides guidance on responsible gambling, such as using gambling for entertainment purposes only. Bet9ja offers mental health support by promoting breaks from gambling when it negatively affects users' well-being and provides a problem gamblers' hotline. The platform tracks user activity via cookies, collecting data on IP addresses and web activity to customize the user experience and maintain security. Users can manage cookie settings, although disabling cookies may limit site functionality. Bet9ja also offers tools for self-assessment of gambling habits and trains its staff to support users effectively. **Special Measures for Young Users:** Enforces strict age restrictions, requiring users to be at least 18 years old to register or place bets. The platform verifies user age through identification checks and blocks accounts if a user is found to be underage. Although there are no tailored experiences for young users, Bet9ja actively prevents underage gambling through age verification measures and content moderation. The platform does not offer parental consent options since minors are prohibited from accessing the services. Bet9ja includes responsible gaming messages in its advertising and takes measures to close accounts operated by underage individuals, forfeiting any associated winnings.

DTC Name	Company Policies
Blue Ridge Microfinance Bank Limited/Easimoni	**User Privacy and Consent**: Collects data through explicit user consent during platform access and service use. Users must consent to the privacy policy, with data primarily collected for Know Your Customer (KYC) purposes, including personal details such as name, ID (NIN, BVN), and biometric data (facial photos). Transaction data, geolocation, device details, and third-party data from financial institutions or credit bureaus are also collected. The data is used for service provision, risk management, legal compliance, and marketing (with explicit user consent). Personal data is retained for as long as necessary for business or legal purposes, and users have the right to request data access, rectification, erasure, or restriction under certain conditions. Data sharing occurs with third parties (affiliated companies, financial institutions, and service providers) only with user consent, and the policy complies with the Nigeria Data Protection Act (NDPA) of 2023. **Health Data Governance**: Secures personal data through firewalls, physical access controls, CCTV, and information access authorization controls. Data is encrypted and stored in line with applicable security standards, and users are advised to protect their account credentials. Easimoni ensures compliance with national and international data protection laws, such as the Freedom of Information Act and NDPA. Personal data may be transferred out of Nigeria, provided the destination jurisdiction has adequate data protection laws. **Health Promotion and Tracking**: Promotes a courteous loan collection process, emphasizing user safety and mental health by prohibiting harassment or inappropriate staff conduct. This measure aims to create a positive and safe user experience. Cookie usage helps track user activity and enhance experience during sessions, with encrypted session cookies ensuring platform functionality. Users are informed that disabling cookies may limit service use. Easimoni also encourages feedback through a reporting mechanism, allowing users to report abusive behaviour by staff and ensure such cases are addressed. **Special Measures for Young Users**: Enforces a minimum age requirement of 18 years, ensuring no personal information is collected from minors. There are no specific provisions for tailored experiences for young users or parental consent requirements, as individuals under 18 are not allowed to use the platform. Content moderation and ethical nudging measures for young users are not available.

DTC Name	Company Policies
Young Africa Live/BWise Health	**User Privacy and Consent**: BWise Health, operated by the South African National Department of Health (NDOH), requires users to acknowledge and consent to the use of their personal data upon accessing the platform. Users are responsible for the content they submit (e.g., blogs, tweets, podcasts) and grant NDOH a licence to use such content. Personal data, including identity and contact details, is collected to improve services and user engagement. NDOH disclaims liability for interactions with third parties accessed through the website. Users have the right to discontinue use if they disagree with the terms, and the privacy policy is governed by South African law, with periodic updates made directly on the website. **Health Data Governance**: Ensures reasonable steps are taken to protect personal information collected through the website, with users responsible for safeguarding their account credentials. Although encryption and security measures are not explicitly stated, any attempts to access the site unlawfully can lead to legal actions under South African law. **Health Promotion and Tracking**: Engages users, especially youths, through social media and WhatsApp to promote health information on topics such as STDs, sexuality, and mental health. The platform uses cookies to track website traffic and engagement but does not track health-specific data or personal information. Health-related content is informational only, with disclaimers urging users to seek professional medical help for serious conditions. While explicit feedback mechanisms are not detailed, the platform encourages user interaction through social media. **Special Measures for Young Users**: Enforces a minimum age requirement of 10 years for access, with users between 10 and 18 required to obtain parental consent. No specific provisions for tailored experiences for young users are mentioned, and while the platform does not filter user-generated content before publication, users are responsible for ensuring compliance with legal and ethical standards. Content moderation measures include requiring responsible content submission by users.

DTC Name	Company Policies
Zenka Loan	**User Privacy and Consent**: Requires users to provide consent upon downloading the app, authorizing the collection and processing of personal information for credit score determination, loan provision, and other legitimate business purposes. Data collected includes identity, contact, financial, technical, profile, and usage data. Users certify the accuracy of the data provided and authorize Zenka to verify it with third parties such as government agencies and credit bureaus. Zenka may share consumer information with external debt collection agencies, credit bureaus, affiliated companies, and law enforcement. Users have various rights, including access, correction, erasure, and objection to data processing, and are obligated to inform Zenka of changes to their data. The policy complies with Kenya's Data Protection Act, and updates are periodically made, with the last one on 23rd October 2023. **Health Data Governance**: Stores personal information on secure servers and employs encryption techniques and security features to protect user data. Users are responsible for securing their credentials. The platform has procedures in place for responding to data breaches, notifying users and regulators when necessary. The company complies with national and international data protection laws, including responding to data access requests. Zenka retains user data based on factors such as data sensitivity and legal requirements and may anonymize it for research purposes. **Health Promotion and Tracking**: Does not engage in health promotion. For data tracking, the platform uses cookies, including performance and targeting cookies, to track user activity and improve website performance. Users are informed about cookies and can manage preferences via browser settings. Zenka also facilitates user engagement through interactive forums, though it clarifies that user opinions do not reflect the company's views. **Special Measures for Young Users**: Enforces a minimum age requirement of 18 years, with no parental consent requirements or tailored user experiences for younger users. Content moderation is implemented to prevent misuse, including posting harmful or inappropriate content. The platform emphasizes protecting individuals, particularly minors, from improper content.

DTC Name	Company Policies
Dikalo	**User Privacy and Consent**: Requires users to register using an email address to create an account, with optional profile information such as a name and picture. Users' contacts are cryptographically hashed for privacy when using the contact discovery feature. Consent is implied by using the app, including the use of cookies. Data collected includes account information (email, profile names, and pictures), contact information (hashed phone numbers), and message data, which is encrypted. Dikalo uses this data to transmit messages, manage accounts, and improve the user experience. Information may be shared with third-party providers, but Dikalo does not share user data externally unless required for safety or legal reasons. Users can update their personal information and enable privacy features via the app, and the privacy policy is governed by German law. **Health Data Governance**: Emphasizes data minimization and encryption for all user information, including profile data. The company cannot decrypt or access the content of messages, ensuring high security. Additional privacy features, like a Lock PIN, are available to users. Compliance with national and international data protection laws is not explicitly stated. **Health Promotion and Tracking**: Promotes free expression as a fundamental human right while implementing tools to ensure user safety and respectful interactions. The platform uses cookies to track user activity on and off the platform, with details outlined in their Cookie Policy. Dikalo encourages feedback and has established community guidelines to ensure a safe environment, allowing users to report abuse or harassment. **Special Measures for Young Users**: Does not explicitly state a minimum age requirement for users but requires accurate personal information, including date of birth, during registration. There are no specific provisions for a tailored experience for young users, nor are there parental consent requirements. Content moderation policies focus on balancing free expression with safety, providing tools for users to control their interactions and combat abusive behaviour.

3.3.1. Theme Scoring Results

For Theme 1 (User Privacy and Consent), four DTC policies were found to be "excellent", four were "good', six were "fair" while one was "poor/non-existent". For Theme 2 (Health Data Governance and Protection), five DTC policies were "excellent", three were "good", one was "poor/non-existent", while others were "fair". In Theme 3 (Health Promotion and Health Tracking theme), three policies were "excellent", eight were "good", three were "fair" and one was "poor/non-existent". The Special Considerations/Measures for Young Users component (Theme 4) was "excellent", "good", "fair" and "poor/non-existent" in three, eight, one and one DTC policies respectively.

The policy provisions, comprehensiveness and transparency varied significantly across the African-based DTCs. Positive policies included responsible gambling, ethical/courteous debt collections, health disclaimers, HIPAA compliance, anonymous access option, parental consent, mental health support and content moderation. However, concerning practices such as data selling and machine learning-powered surveillance were also identified. More information about the results per theme can be found in Figure 7 below.

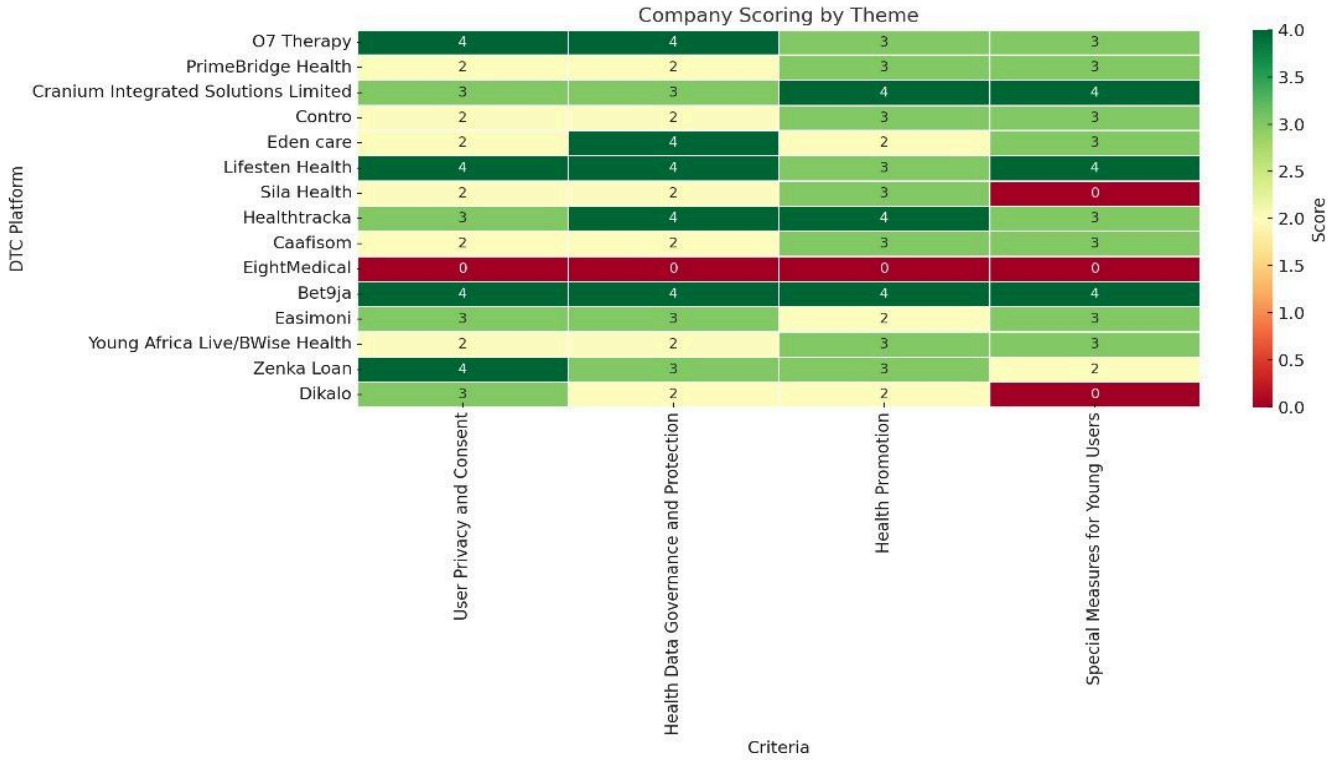

Figure 7: Company scoring results per theme

3.3.2. Overall Results

After adding the scores under each theme, one company was found to be “weak” in its policies, three were "fair", 6 were "moderate" and 5 DTCs were "strong". The DTCs and their ratings are found in Figure 8.

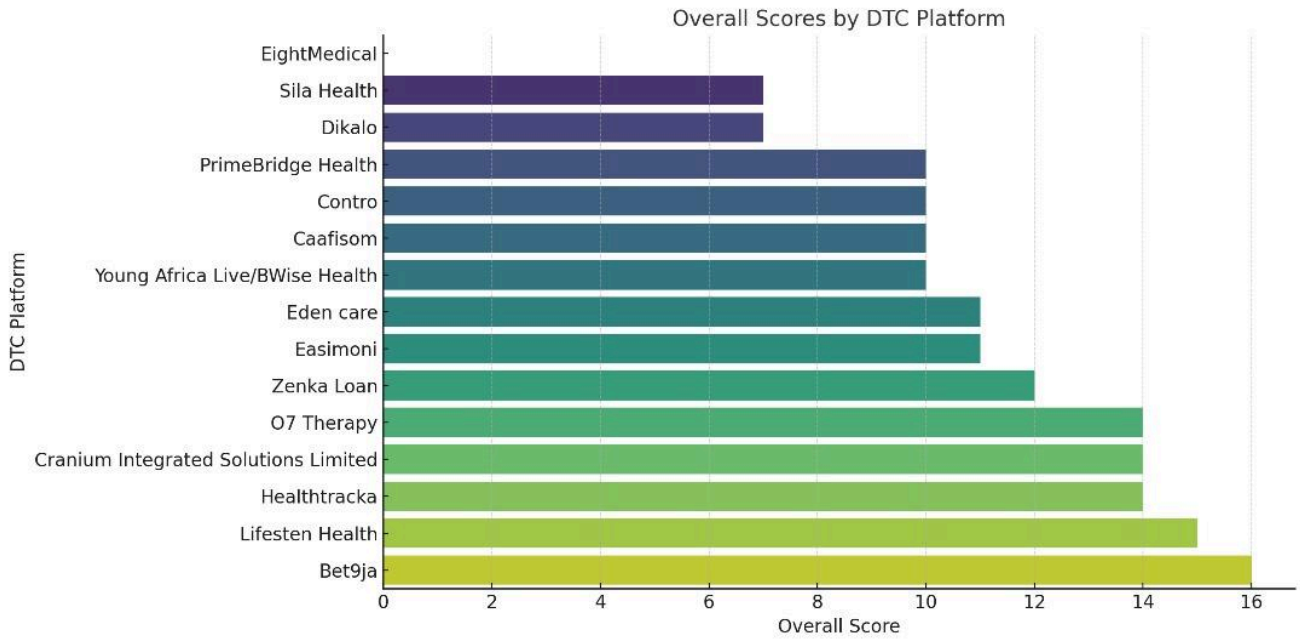

Figure 8: Overall scores and rating per DTC

3.4. Objective 2 - Key Strengths and Weaknesses

The following table highlights the key strengths and weaknesses observed in the reviewed DTC policies.

Table 7: Key Strengths and Weaknesses of Policies of Africa-based DTCs

DTC Name	Key Strengths	Key Weaknesses
07 Therapy	• Readily accessible, well-structured, simple and clear policies with multilingual support (English and Arabic language translations). • Transparency on 3rd-party usage with the ability to opt out of data-sharing, strengthening user control over their data. • HIPAA compliance with security and confidentiality measures like 256-bit TLS encryption and end-to-end chat encryption, advisory on secure Internet connections and private environments to ensure that user data is protected during virtual consultations. • COPPA-like regulations to protect younger users and provide parental consent mechanisms.	• Account deactivation is not automated. Users are required to contact the platform via the website or email, which could create unnecessary friction and inconvenience. • Some truncated sentences, broken links and contact forms. • Absence of explicit differentiation for more sensitive data types. • Links for anonymous usage options are absent. • Aside from HIPAA, there is little mention of compliance with other global or regional data governance frameworks, where different data protection standards apply.
PrimeBridge Health	• Compliance with HIPAA regulations. • Gillick competence application to foster user autonomy and tailored experiences (independent consultation for cognitively mature minors). This is particularly useful for emancipated children. • Prioritizes health promotion with community engagement through corporate social responsibility (CSR).	• No publicly accessible policy documentation. • No clear process for age verification or detailed guidelines on how to assess young users' competency, which could potentially lead to inconsistencies in applying the Gillick principle. • No explicit content moderation and ethical nudging measures. • Users cannot access their data after submission. • Heavy reliance on only internal policies for access control and data protection raises transparency and objectivity concerns.

DTC Name	Key Strengths	Key Weaknesses
Cranium Integrated Solutions Limited	• Users can access services even if they refuse consent for data sharing. • Protection of young users with age-based categorisation. • Aligns with local data governance frameworks like NDPR too. • Regular audits and policy reviews to ensure that they are compliant and up-to-date. • Strong encryption for sensitive information, such as credit card details, and third-party Business Associate Agreements (BAAs). • Well-established user research and feedback system to drive decision-making.	• Policy documentation on the website is poorly positioned for access. • No clear content moderation and ethical nudging measures for young users.
Contro	• Readily accessible policies on website. • Clear data collection practices, ensuring that users are aware of the information they provide. • Health promotion with educational content and clear disclaimers. • Focused geographical area, service scope and clear age limitation.	• Lack of clarity regarding data retention periods and the specific measures taken to protect user data. • Poorly organised policy documentation with headings and readability issues. • Overemphasis on data collection without sufficient emphasis on data protection measures (especially health-specific information), such as HIPAA reference. • User data update or erasure is not automated, requiring direct contact with the company. • The potential for Contro to transfer, sell, or assign user information to third parties without clear restrictions undermines user confidence in data privacy.

DTC Name	Key Strengths	Key Weaknesses
Eden Care	• Clear and accessible policies on data collection, usage and user rights. • HIPAA adherence • Regular security tests and compliance checks among business associates • Advisory measures to educate users about the risks associated with non-encrypted communications. • Emphasizes the protection of employee data from employer access, for its ProActiv programme.	• Use of vague language in some policy statements, such as "In the past 12 months, we have not sold any information to third parties.", implying past data sales or future possibilities. • Makes automatic assumptions about consent, regardless of whether users create accounts or not.
Lifesten Health	• Easily accessible dedicated data room for relevant policies and guidelines, with breakdown of terms. • Adheres to both international and specific local regulations, such as GDPR and Rwanda's DPP Law. • Minimises data collection and combines multiple data protection measures, including role-based permissions, data encryption, de-identification and masking. • Health promotion through gamification and CSR initiatives. • Automated account deletion and ethical data transfers • Consideration for specific age limitations and consent guidelines in different jurisdictions	• Poor margins and unclear section numberings, which can hinder user understanding and navigation of critical privacy information. • No disclaimers on how prolonged use of the gamified platform could lead to negative side effects, especially for younger users
Sila Health	• Adheres to HIPAA and GDPR guidelines. • Collection of anonymized data unless personal identifiers are required by law, which minimises the risks associated with the exposure of personal information. • Implements high-standard data protection practices, including AES-256 encryption. • Promotes health with a health points system for user engagement. • Recently updated policy (January 2024).	• For a company that handles sensitive health data, with data analytics offerings, policy documentation leaves much to be desired with very sparse and vague information. • Dissonance between the claim of anonymized data and the platform's integration with WhatsApp, where user phone numbers are required. • Age and user verification processes are unclear, especially when it comes to protection of young users and verifying user identity for claiming rewards.

DTC Name	Key Strengths	Key Weaknesses
HealthTracka	• Easily accessible and comprehensive policies with clear break down of terms and subheadings. • Clear consent and privacy guidelines, with adherence to privacy laws, including Nigeria's NDPR. • Transparency with data use, 3rd-party sharing and protection measures such as SSL encryption and employee data privacy training. • Clear data breach management procedure. • Age limitation, scope of services and health disclaimers clearly stated. • Community engagement and student ambassadorship programme for health promotion and youth inclusion.	• No clear indication of mechanisms for collecting feedback or user suggestions. • Policy documents show inconsistencies, particularly with the update dates at the beginning and end, which may lead to confusion regarding the current practices. • No specific mention of policies peculiar to its AI assistant/period tracker offering, such as on AI algorithms.
Caafisom	• Accessible and clear policies on data collection, tracking and use. • Mandates parental consent for the removal of children's data. • Emphasizes parental supervision for online activities of minors. • Compliance with the California Consumer Privacy Act (CCPA) and the General Data Protection Regulation (GDPR).	• No detailed information about the data storage, retention, and security practices such as encryption or access controls. • No clear content moderation and ethical nudging measures stated. • No reference to HIPAA guidelines
Eight Medical	No relevant policy documentation or information was found for EightMedical during the study period.	Fails to provide any accessible policy documentation at the time of analysis. This lack of transparency raises concerns regarding data privacy, consent management, and health data governance.

DTC Name	Key Strengths	Key Weaknesses
Bet9ja	• Robust, comprehensive and up-to-date privacy and consent policies, with provisions for users rights. • Ensures user data protection through multiple security layers. • Emphasis on responsible gambling, with provisions for self-exclusion, self assessments, deposit limits, staff training and a Problem Gamblers Hotline, to promote mental health and prevent gambling addiction. • Complies with multiple data protection regulations, including the NDPR audits.	• Although users have control over cookie settings, the potential limitations in service functionality upon disabling certain cookies could negatively impact user experience. • Accessing policy provisions on the home page requires scrolling for too long.
Blue Ridge Microfinance Bank Limited/Easimoni	• Courteous loan collection process promotes mental health and user safety by prohibiting harassment or abusive conduct from staff. • Uses encryption, firewalls, and physical access controls to protect personal data, ensuring compliance with both national and international data protection standards. • Integrates feedback mechanisms for users to report staff misconduct to enhance user trust and safety. • Clear age limitation and verification processes	• As a non-health platform, it collects information from job applicants about their state of health, with no specific detail on why and what it would be used for. • The cookie usage policy is vague and disabling cookies may limit service use. Users who decline are advised to exit the website.

DTC Name	Key Strengths	Key Weaknesses
Young Africa Live/BWise Health South Africa	• Readily available policy documentation on user consent, privacy and opt out options, powered by the South Africa National Department of Health. • Youth-focused engagement through social media and WhatsApp, promoting health information on crucial topics such as mental health, and sexual health. • Caters to relatively younger users (from age 10), with strict parental consent requirements for ages 10 - 18. • Clear medical disclaimers to promote proper health-seeking behaviour.	• Policies are mostly presented as compressed information, and not well broken down to the details, such as privacy and security measures. • Data retention period is not clearly stated. • Content moderation process is not explicitly stated. Much of the responsibility is placed on the user. • Explicit feedback mechanisms, especially from youths, are not stated.
Zenka Loan	• Well-presented policy, including use of tables to detail purposes of data collection. • Strong compliance with Kenya's Data Protection Act, as well as international data protection frameworks. • Clear user rights and consent process, including on data collection sharing and usage with/by 3rd parties. • Transparency on data breach reporting and management process.	• Does not detail ethical/courteous loan collections policy to prevent harassment. • Collects data on user's contacts, which could make them vulnerable to unsolicited calls/messages.
Dikalo	• Strong data minimization and encryption policies. • Empowers users with anonymity, to control information access and sharing through use of nicknames and private personal code when connecting with others.	• Does not specify a minimum age requirement or include explicit guidelines for verifying the age of users. • Besides encrypted messages, there are no explicit details on how data is stored and protected. • Alludes to a cookie policy, which cannot be found documented. • While the platform emphasizes user protection and freedom of expression, content moderation policies are not specifically provided.

4. DISCUSSION

This study provides an analysis of the policies of the Africa-based digital technology companies (DTCs), revealing significant insights into their approaches to user privacy, health data governance, health promotion, and the special considerations for young users. This is crucial, as it further highlights how both direct digital health and non-digital health entities play a role in shaping users' health behaviours and outcomes.

4.1. Policy Accessibility, Readability and Transparency

Two of the DTCs had no readily accessible policies documented publicly, suggesting a concerning lack of transparency in an industry that handles sensitive health information. While one of them provided information on company policies through a key informant interview, the remaining companies presented their policies in various formats: some dedicated data hubs for information on data and user well-being, while others embedded relevant information within broader Privacy Policies and Terms and Conditions pages. This variation aligns with concerns raised in literature regarding the accessibility and clarity of health-related digital platform policies, as the absence of clear guidelines can lead to misunderstandings regarding user rights and expectations, potentially eroding user confidence in digital health platforms (Fowler *et al*., 2020).

It is also worthy of note that within the policies themselves, some DTCs assume user agreement just by users' continued use of the website or platform, regardless of whether or not they actively sign up. While it could be argued that users are aware and can always opt out, the associated nuances must be considered. One, the policy statements are often wordy, complex and unengaging to read, and hence do not encourage thorough consumption and understanding-based decisions by users. This, coupled with a short attention span among youths, results in ignoring these statements and absentmindedly accepting the terms due to information overload (Sigmund, 2021). Furthermore, opting out of some data processing aspects can lead to inability to access certain service functionalities, hence users tend to accept anyway, without particular concern for and/or understanding of its impact on their privacy and safety.

Clarity and user-friendly design in policy documentation is fundamental for fostering a transparent digital health environment that prioritizes users' informed decision-making,

engagement and safety, hence there is need for standardisation in policy presentation to enhance user understanding and trust (LaMonica *et al.*, 2021).

4.2. Theme-Based Insights

4.2.1. User Privacy and Consent

The evaluation of user privacy and consent policies showed a mixed performance across DTCs, with four companies classified as 'Excellent' while one company lacked sufficient policies altogether. This reflects the ongoing challenge of ensuring informed consent, particularly in contexts where users may not fully understand the implications of data sharing.

The strong policies observed in some companies often included full disclosure of how data is collected, processed and shared, as well as user rights to exercise control over these, in line with best practices as recommended by GDPR, HIPAA, African Union Data Policy Framework and other national privacy regulations like NDPR (Nigeria), DPP Law (Rwanda) and POPI Act (South Africa).

Besides inadequate provision of privacy guidelines, some DTCs showed weaknesses regarding collection of information that was not directly relevant to their service scope, like access to users' contacts. This could lead to unsolicited marketing communications to those contacts. In Africa, some loan apps leverage this when redeeming loans, by harassing and embarrassing users with undue calls/messages to them and their contacts. This takes a toll on the reputation and mental health of vulnerable users, especially youths (Oyeleke, 2024). Moreover, with enough user data points (health and non-health) collected and tracked, even de-identified data can reveal users' identity and weaken their privacy on and off the digital platforms (Grande *et al.*, 2020).

Some companies did not update their policies in consideration of new offerings with slightly different modalities. For instance, two DTC companies with AI assistant/chatbot offerings did not speak to peculiar AI algorithm aspects within their general company policies. As such, important user privacy and protection measures can easily slip through the cracks.

DTCs must stay on top of their privacy and consent policies, to align with the WHO's emphasis on the importance of adequate principles and processes for data protection to ensure that users, especially vulnerable populations like youth, are not subjected to exploitation through inadequate privacy measures (WHO, 2021).

4.2.2. Health Data Governance and Protection

With five DTCs rated as "excellent" in this theme, it is evident that some companies are prioritizing data governance frameworks that comply with regulations, demonstrating a commitment to safeguarding user data, which is crucial given the increasing prevalence of data breaches and cyber threats in the digital health landscape (Paul *et al.*, 2023). Nonetheless, the presence of policies that permit data selling, sharing with third parties and surveillance practices among other DTCs raises numerous concerns, including users' data being used in marketing and in profit-making initiatives, without due compensation to them (Grande *et al.*, 2020).

Once shared or sold, there is no longer control over the data, putting users at additional risk. While some companies indicate having Business Associate Agreements in place, one can only act in good faith that third parties would honour said agreements and not use the data for extracurricular purposes (Grundy *et al.*, 2019). This highlights the need for stronger regulatory oversight and industry accountability.

The DTCs also track user data with cookies, usually for analytics, communication and customisation purposes. While this can be useful for service improvement, innovation and business expansion, it also invites the risk of users losing control over their digital health footprint, which can be commercialised and exploited for health, non-health and combined purposes like predictive healthcare, insurance bias, surveillance and unwanted targeting for marketing and political purposes (Grande *et al.*, 2020). Young users can be easily influenced and impacted by these, hence, great care must be taken to protect them. The implementation and compliance with governance frameworks that set clear boundaries for access and use of data, such as the Fair, Reasonable and Non-Discriminatory (FRAND) licensing obligations for platforms and cloud providers, as recommended in the African Union Data Policy Framework (2022), can help ensure accountability and trust, thereby promoting user engagement, adherence to health recommendations and safety (Wong *et al.*, 2021).

Within the context of Fast Healthcare Interoperability Resources (FHIR) standards, none of the DTCs specifically indicated if/how they align. A consideration might be that the disclosure is made to the relevant regulatory/audit bodies, and not the general public.

4.2.3. Health Promotion Policies

The effectiveness of health promotion strategies varied significantly, with only three companies implementing "excellent" policies to take proactive steps to promote health and wellness. This

includes provision of healthcare services, thorough vetting of healthcare providers on their platforms, community outreaches and educational resources. This supports the fact that leveraging digital tools can significantly enhance health promotion efforts, particularly in reaching underserved populations (WHO, 2021). Commendable policies by non-digital health technology companies include responsible gambling, right to self exclusion, ethical/courteous debt collection policies and removal of inappropriate user accounts, which are also useful in promoting the health and wellbeing of users in the digital space (Oyeleke, 2024; Ndala, 2021).

One common pattern is also the use of disclaimers. While some were positive, regarding proper health-seeking in case of emergencies, responsible gambling and right to self exclusion policies on sports betting sites, some platforms extricated themselves from taking responsibility for user protection on their platforms with terms like "indemnify", "hold harmless", "users are responsible for content provided". Additionally, some DTCs failed to consider the impact of their policies on young users, especially concerning the mental health effects linked to excessive use of platforms offering rewards or points for engagement. While incentivising user engagement may promote certain positive health behaviours, social interactions and health literacy, long exposure to digital platforms can lead to technostress, sleep deprivation, and other health concerns, as supported by research on the adverse effects of screen time (Yao & Wang, 2023).

4.2.4. Special Measures/Considerations for Young Users

While some companies have mechanisms to protect young users, others show a lack of adequate explicit measures for age verification, parental consent, and content moderation. The policy measures aimed at protecting young users are crucial in aligning with global standards such as the Children's Online Privacy Protection Act (COPPA) and the General Data Protection Regulation (GDPR), which mandate strict controls over data collected from minors (Federal Trade Commission, n.d.; European Union, 2016).

It was also noted that even with the DTCs that implemented age restrictions and parental consent, only two of those that operated across multiple countries gave consideration for differences in the governing law in specific jurisdictions. There is also a grey area regarding platforms that do not cater to youths directly, but serve businesses/facilities that handle data of young users, such as hospitals and diagnostic centres. It is not clear whether they have limitations regarding processing the data of young users via their platforms in those cases.

In addition, aside from generic feedback mechanisms (mostly collected through analytics cookies and clinical consultation feedback), there was very little emphasis on special considerations for young users in decision-making processes for platform design and features, such as nudging/prompts. This lack of focus on explicit inclusion can hinder the empowerment of youth in digital health contexts. Content moderation practices also varied; some companies relied on user reports to manage inappropriate content while others implemented proactive measures like flagging of inappropriate terms and removal of offending accounts. The relevance of age-appropriate content and ethical nudging to empower young users is paramount, especially given the huge exposure of this demographic to digital platforms (Grande *et al.*, 2020). Companies demonstrating strong policies in this regard are not only fostering safer digital environments but are also promoting healthier behaviours among young users (Holly *et al.*, 2023).

5. LIMITATIONS

While the content analysis provides valuable insights, it is essential to acknowledge some limitations. One major limitation is the inability to access the concrete user base data of some of the DTCs, which would have provided further insights into the extent of their reach and impact. The study is also heavily reliant on publicly available documents on the companies' websites and app stores. While the content analysis framework provided a structured approach, the policies reviewed may not necessarily reflect the actual implementation of these practices. Policies may be well-articulated, yet organizations might fail to enforce them effectively in practice. Some attempts to explore this further with direct key informant interviews resulted in deadends, with redirection to legal/product teams that ended in no response.

Furthermore, the semi-structured interviews successfully conducted with key informants from two DTCs introduced the potential for response bias. The informants may have had incentives to present their organizations in a more favourable light, thereby impacting the reliability of the qualitative data obtained. Moreover, the study did not involve direct engagement with the end users of the digital technology platforms, which could have provided further insights into the actual implementation and impact of these policies on them. The scoring and assessment of strengths and weaknesses were also carried out by only one researcher, thus introducing a degree of subjectivity.

6. IMPLICATIONS FOR RESEARCH, PRACTICE AND POLICY

Future research should be carried out to see if the policies are actually being practised by the DTCs in every aspect of their processes. This would include approaches like talking to identified users of these platforms to capture their experiences.

In addition, for DTCs that operate across multiple African countries and/or regions, there is a need to explore the nuances of policy implementation across different jurisdictions, such as regarding age verification and parental consent. Clear guidelines that delineate the responsibilities of these companies in protecting young users across diverse regulatory environments must also be put in place.

It is also important for policy makers to improve and standardize minimum requirements for policy documentation and presentation. Companies must align, making sure their policies are readily accessible, comprehensive, clear, engaging and user-friendly (in terms of simplicity, flow, use of graphics, etc.) to enhance user understanding and informed decision-making on data sharing and use of such platforms. Responsivity across various gadgets should also be prioritized, as most young users tend to access digital services with mobile devices like smartphones and tablets. In a similar vein, policies should reflect considerations for youths, particularly within the African context. These could include data minimization and transparency, nuanced age and parental consent mechanisms across different age groups and cultures, nudges and prompts to take breaks to avoid technostress and screen fatigue, which are issues prevalent among digitally active youths. Future studies could also explore how youth perceptions of privacy, consent and safety evolve over time and across varying policy presentations and content.

Finally, the dynamic nature of digital technologies means that policies can evolve rapidly, necessitating ongoing monitoring to ensure continued relevance and compliance with emerging regulations, for instance, regarding artificial intelligence algorithms and gamification.

7. CONCLUSION

This study has provided a comprehensive analysis of the policies and strategies adopted by Africa-based digital technology companies (DTCs) to protect and promote the health and well-being of young users. By examining key themes such as User Privacy and Consent, Data Governance and Protection, Health Promotion and Tracking, and Special Considerations/Measures for Young Users, the findings reveal significant variation in policy transparency, comprehensiveness, and enforcement across both direct digital health companies and non-health digital platforms with health impacts.

While some companies have developed robust policies that align with global and regional frameworks like the WHO Digital Health Strategy, HIPAA, GDPR, and African Union Data Policy Framework, there remains a notable gap in policy implementation, particularly around youth protection. Some platforms lack tailored strategies for young users, especially concerning parental consent, age-appropriate user experiences, inclusion in decision-making processes and safeguarding mechanisms against risks like harmful content.

Furthermore, the study highlights both strengths, (such as ethical debt collection practices and responsible gambling policies), and weaknesses, like poor accessibility and presentation of policies which can impact users' ability to make informed decisions about their data and well-being, misuse of user data and limited attention to emerging technologies like AI chatbots. These findings point to the need for minimum standards across all Africa-based DTCs for improved policy presentation, stricter enforcement of existing data protection frameworks and more youth-centric and Africa-informed policies that leave no loopholes for exploitation.

As Africa's youth continue to embrace digital platforms for health and other services, the analysis underscores the importance of continuous evaluation and updates to digital health policies to ensure they remain relevant and adequately protect the younger population. Future research and policy efforts should focus on addressing the identified gaps. In doing so, Africa-based DTCs can contribute to the broader goals of improving youth health and well-being, and safeguarding their digital rights, inclusion and safety in the digital realm.

REFERENCES

African Union (AU), Department of Infrastructure and Energy,) *AU Data Policy Framework, (Addis Ababa, 2022)* Available at https://au.int/sites/default/files/documents/42078-doc-AU-DATA-POLICY-FRAMEWORK-ENG1.pdf

African Union, *African Union Convention on Cyber Security and Personal Data Protection*, Assembly of the Union, Malabo, (Addis Ababa, 2014). Available at https://au.int/en/treaties/african-union-convention-cyber-security-and-personal-data-protection

Akangbe R. (2022). "Africa Digital Health Requires Indigenous Approaches", conference paper, Lagos, October 2022. Available at https://www.researchgate.net/publication/364673952_AFRICA_DIGITAL_HEALTH_REQUIRES_INDIGENOUS_APPROACHES

AU-Startups, "12 Innovative Health Tech Startups Improving Healthcare Access in East Africa", 7 June 2023. Available at https://au-startups.com/2023/06/07/12-innovative-health-tech-startups-improving-healthcare-access-in-east-africa/ausjobs/

AU-Startups, "9 Innovative Health Tech Startups in North Africa You Should Know", 4 October 2023. Available at: https://www.linkedin.com/pulse/9-innovative-health-tech-startups-north-africa-you-should

AU-Startups,. "Health Tech Startups in Southern Africa You Should Know", 1 November 2023Available at: https://www.linkedin.com/pulse/health-tech-startups-southern-africa-you-should-know-au-startups-95u3f/

AU-Startups, "Revolutionary Healthtech Startups in West Africa You Should Know", 25 October 2023. Available at: https://www.linkedin.com/pulse/revolutionary-healthtech-startups-west-africa-you-should-know-km5yf/

Carew J., "8 startups using tech to transform healthcare in sub-Saharan Africa", 13 January 2021, CIO. Available at:

https://www.cio.com/article/191155/8-startups-using-tech-to-transform-healthcare-in-sub-saharan-africa.html

Rwanda, National Cyber Security Authority, Data Protection and Privacy Office, *Rwanda's Law on the Protection of Personal Data And Privacy (DPP Law), (15 October 2021).* Available athttps://dpo.gov.rw/dpp-law/

Digital Transformations for Health Lab: Governing Health Futures 2030, " Building a blueprint for digital first health systems: Findings from global youth consultations", interim report,(Geneva, 2024). .

Ejiga G., "Best Betting Apps Africa: Here's Our Top 10 for 2024!", Football Whispers, 7 June 2024. Available at: https://footballwhispers.com/blog/best-betting-apps-africa/

Enyinnia E., "Bridging The Technology Gap In Africa", Afe Bablola University, Nigeria, August 2023. Available at: https://www.researchgate.net/publication/373433110_BRIDGING_THE_TECHNOLOGY_GAP_IN_AFRICA

European Union, "Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of Such Data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance)", *Official Journal of the European Union*, L 119, 1-88, 4 May 2016. Available at http://data.europa.eu/eli/reg/2016/679/oj[legislation]

Fontana, A., & Frey, J. H. (1994). "Interviewing: The Art of Science, in *Handbook of Qualitative Research*, N. K. Denzin & Y. S. Lincoln, eds, *Handbook of qualitative research*, pp. 361–376. (USA ,Sage Publications, Inc., 2017),

Fowler, L. R., Gillard, C., & Morain, S. R.,"Readability and Accessibility of Terms of Service and Privacy Policies for Menstruation-Tracking Smartphone Applications", *Health promotion practice*, *21*(5), 679–683 (2020). Available at https://doi.org/10.1177/1524839919899924

Grande, D., Luna Marti, X., Feuerstein-Simon, R., Merchant, R. M., Asch, D. A., Lewson, A., & Cannuscio, C. C., "Health Policy and Privacy Challenges Associated With Digital Technology", *JAMA network open*, *3*(7), e208285 (2020). Available at https://doi.org/10.1001/jamanetworkopen.2020.8285

Grundy, Q., Chiu, K., Held, F., Continella, A., Bero, L., & Holz, R., "Data sharing practices of medicines related apps and the mobile ecosystem: traffic, content, and network analysis", *BMJ (Clinical research ed.)*, *364*, l920 (2019). Available at https://doi.org/10.1136/bmj.l920

Holly, L., Demaio, S., & Kickbusch, I., "Public health interventions to address digital determinants of children's health and wellbeing", *The Lancet. Public health*, *9*(9), e700–e704 (2024). Available at https://doi.org/10.1016/S2468-2667(24)00180-4

Holly, L., Wong, B. L. H., van Kessel, R., Awah, I., Agrawal, A., & Ndili, N., "Optimising Adolescent Wellbeing in a Digital Age", *BMJ (Clinical Research Edition.)*, *380*, e068279 (2023). Available at https://doi.org/10.1136/bmj-2021-068279

Hsieh, H & Shannon, S., "Three Approaches to Qualitative Content Analysis", *Qualitative health research*, 15. 1277-88. 10.1177/1049732305276687 (2005).

LaMonica, H. M., Roberts, A. E., Lee, G. Y., Davenport, T. A., & Hickie, I. B., "Privacy Practices of Health Information Technologies: Privacy Policy Risk Assessment Study and Proposed Guidelines", *Journal of medical Internet research*, *23*(9), e26317 (2021). Available at https://doi.org/10.2196/26317

Lupton, D., "Young People's Use of Digital Health Technologies in the Global North: Narrative Review", *Journal of Medical Internet Research*, *23*(1), e18286 (2021). Available at https://doi.org/10.2196/18286

Ndala, N.,"Assessing the Effects of Sports Gambling Among the Youths in Blantyre City of Southern Malawi", *International Journal of Sociology and Anthropology.* 13. 111-122. 10.5897/IJSA2021.0921 (2021).

Nigeria, National Information Technology Development Agency,*Nigeria Data Protection Regulation (NDPR) 2019*. Available at https://nitda.gov.ng/wp-content/uploads/2020/11/NigeriaDataProtectionRegulation11.pdf (accessed September 2024).

O'Brien, N., Li, E., Chaibva, C. N., Gomez Bravo, R., Kovacevic, L., Kwame Ayisi-Boateng, N., Lounsbury, O., Nwabufo, N. F. F., Senkyire, E. K., Serafini, A., Surafel Abay, E., van de Vijver, S., Wanjala, M., Wangari, M. C., Moosa, S., & Neves, A. L., "Strengths, Weaknesses, Opportunities, and Threats Analysis of the Use of Digital Health Technologies in Primary Health Care in the Sub-Saharan African Region: Qualitative Study", *Journal of medical Internet research*, *25*, e45224 (2023). Available at https://doi.org/10.2196/45224

Oyeleke, J., “Mental Health Risks in Digital Debt Recovery: Insights from Nigeria's Digital Money Lending Sector”, *Nigerian Journal of Clinical Psychology*, 14(1), 104–118 (2024).

Paul, M., Maglaras, L., Ferrag, M. & Almomani I, . “Digitization of Healthcare Sector: A Study on Privacy and Security Concerns”, ICT Express, vol 9, No. 4, 2023, pp. 571-588, ISSN 2405-9595 (2023). Available at https://doi.org/10.1016/j.icte.2023.02.007.

PitchBook, “07 Therapy Overview”, Available at: https://pitchbook.com/profiles/company/494563-69

Salient Advisory,. “Healthtech Companies in Africa Were Founded in Droves Amidst the Pandemic. What are Companies Doing, and Where?”, March 2022. Available at: https://www.salientadvisory.com/insights/health-tech-companies-in-africa-were-founded-in-droves-amidst-the-pandemic-what-are-companies-doing-and-where/

Salient Advisory, “2023 Round Up: Investments in African Healthtech. A Review of 2023 Funding Activity”, February 2024. Available at: https://www.salientadvisory.com/2024/02/12/report-2023-roundup-investments-in-african-healthtech/

Salient Advisory, “Discover Innovators Who Are Driving African Healthtech”, African innovator directory archive. Available at: https://www.salientadvisory.com/innovator-directory/

Sigmund, Tomáš, "Attention Paid to Privacy Policy Statements", *Information* 12, no. 4: 144 (2021). Available at https://doi.org/10.3390/info12040144

Republic of South Africa, South African Government Official Information and Services, *Protection of Personal Information Act 4 of 2013*. Available at https://www.gov.za/documents/protection-personal-information-act

Statista,“Internet usage in Africa - statistics & facts”, 10 January 2024. Available at https://www.statista.com/topics/9813/internet-usage-in-africa/#:~:text=The%20use%20of%20the%20internet,than%20doubled%20compared%20to%202015.

Tracxn, “Telemedicine Startups in Nigeria”, 23 November 2024. Available at: https://tracxn.com/d/explore/telemedicine-startups-in-nigeria/__P_9WdJzOIJ4w06-8i1PRYJuRd8PWLTvplVXUI8kqFE0/companies

Tracxn, “Telemedicine startups in South Africa”, 23 November 2024. Available at: https://tracxn.com/d/explore/telemedicine-startups-in-south-africa/__MxWfmf5kN7YerYT0kbfFSGEkLvqVNXPD584suDisYKg/companies

Telecom Asia Sport, “African Betting Sites in 2025”, . Available at: https://www.telecomasia.net/sports-betting/sites/africa/

Tong, A., Sainsbury, P., & Craig, J., “Consolidated Criteria For Reporting Qualitative Research (Coreq): A 32-Item Checklist For Interviews And Focus Groups”, *International Journal for Quality in Health Care*, vol. 19, No. 6, December 2007, pp. 349–357 (2007). https://doi.org/10.1093/intqhc/mzm042.

United States of America, Federal Trade Commission. (N.D.)., Children’s Privacy, Children's Online Privacy Protection Act of 1998, 15 U.S.C. 6501–6505 (21 October 1998). Available at https://www.ftc.gov/business-guidance/privacy-security/childrens-privacy (accessed September 2024).

United States of America, U.S. Department of Health and Human Services (N.D)., *Health Insurance Portability and Accountability Act*. https://www.hhs.gov/hipaa/index.html (accessed August 2024).

Vyas T., “Assessing Digital Health Infrastructure and Uptake (East Africa)”, HealthTech Hub, 14 June 2024. Available at: https://thehealthtech.org/assessing-digital-health-infrastructure-and-uptake-east-africa/

Wong, B., Holly, L., Gray, W. & Kessel, R., “Youth: Key Drivers of Digital Adoption and Health Data Governance”, 27. 10.6084/m9.figshare.19767343 (2021).

World Economic Forum, “How Africa's Youth Will Drive Global Growth”, 16 August 2023. Available at: https://www.weforum.org/stories/2023/08/africa-youth-global-growth-digital-economy/#:~:text=Africa%20is%20a%20continent%20teeming,rest%20of%20the%20world%20combined.

World Health Organization, *Global Strategy on Digital Health 2020-2025*, (Geneva, 2021). Available at: https://apps.who.int/iris/handle/10665/344249 (accessed August 2024)

World Health Organization, *Classification of digital interventions, services and applications in health: a shared language to describe the uses of digital technology for health, second edition*. (Geneva, 2023). Licence: CC BY-NC-SA 3.0 IGO.

World Health Organization,Regional Office for Europe, *The Protection of Personal Data in Health Information Systems – Principles and Processes for Public Health*, (Copenhagen, 2021). Available at https://iris.who.int/handle/10665/341374. Licence: CC BY-NC-SA 3.0 IGO

Xie, Z., "The Influence of Social Media on Perception of Body Image and Beauty Standards on Young People", *Transactions on Social Science, Education and Humanities Research*, vol. 5, pp. 143-148 (2024). Available at https://doi.org/10.62051/67rvhh97

Yao, N., & Wang, Q., "Technostress from Smartphone Use and Its Impact on University Students' Sleep Quality and Academic Performance", *The Asia-Pacific Education Researcher*, *32*(3), pp. 317–326 (2 March 2022). Available at https://doi.org/10.1007/s40299-022-00654-5

APPENDICES

Appendix 1: Full Profile of Africa-based Digital Technology Companies: Digital Health

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Heala	**Founder(s)**: Ofuzim Anderson Oriahi, Ifeoluwa Aribatise, and Ezegozie Eze, Jr **Location(s)**: Nigeria **Mission**: To make interoperability within the Nigerian health space seamless by using technology to bridge the gap between the average person and healthcare providers. **Vision**: To become the leading healthcare integration company in Nigeria and help erase the accessibility difficulty in the Nigerian Healthcare space. **Reference/Link**: https://heala.ng	• Telemedicine/Remote care solutions: Heala Patient and Heala Doctor apps • Patient data system and white-label integrations for businesses (HMOs, hospitals, pharmacies, diagnostic centres)	• Key informant interview • https://heala.ng/privacy-policy/; https://heala.ng/terms/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
mPharma	**Founder(s)**: Gregory Rockson, Daniel Shoukimas, James Finucane **Location(s)**: Ghana, Ethiopia, Gabon, Kenya, Malawi, Nigeria, Rwanda, Zambia, Zimbabwe. **Mission**: To build an Africa that is in good health by increasing access to drugs for all patients at reduced costs while assuring and preserving quality. **Vision:** An Africa that's in good health. We will not cease until every person on the continent has access to safe and affordable medicine. **Ref/Link**: https://mpharma.com	• Providers/Pharmacies: Inventory management services that allow reliable access to supply of quality medicines. • Patients: Access to healthcare services and products, including diagnostic services, telemedicine consultations, and commodity financing for a chain of pharmacies under its flagship Mutti membership programme.	https://mpharma.com/privacy-and-security-policy/
Afya Rekod	**Founder(s)**: John Kamara, Irene Phoebe Kiwia, Nancy Christiano and Ronald M Harris. **Location(s)**: Kenya, Nigeria, United States, Zambia. **Founded**: 2020 **Mission**: To bridge the gap between healthcare and treatment for healthcare facilities and institutions to access and assist their patients anywhere, anytime through tools and resources accessible on the platform. **Ref/Link**: https://afyarekod.com	• Electronic Health Records backed by AI and Blockchain Technology: Universal Patient Portal, Universal Doctor's Portal and Hospital Management Information System. • AI-based analytics and disease modelling. • Telepharmacy	https://afyarekod.com/#:~:text=Hospital%20portal-,Quick%20Links,-Pharmacy%20portal

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Reliance Health	**Founder(s)**: Femi Kuti, Opeyemi Olumekun, Matthew Mayaki. **Location(s)**: Nigeria, Egypt **Founded**: 2016 (as Kangpe) **Mission**: To make quality healthcare delightful, affordable, and accessible to those who need it most. **Ref/Link**: https://getreliancehealth.com	• Health plans for businesses and individuals. • Telemedicine: Reliance Health app, for swift access to doctors via virtual consultations, and door-step prescriptions delivery.	https://getreliancehealth.com/privacy/?_gl=1*8e7v0c*_up*MQ..*_ga*MjEzNTY3NjI5NC4xNzIxMTExMTMz*_ga_F0H2RVZM3L*MTcyMTExMTEzMy4xLjEuMTcyMTExMTE0Ni4wLjAuMA..
Rocket Health (The Medical Concierge Group)	**Founder(s)**: Dr. John Mark Bwanika, Dr. Davis Musinguzi, Dr. William Lubega, Hope Achiro **Location(s)**: Uganda **Founded**: 2012 **Mission**: We design and deliver innovative digital health solutions that are value-based, efficient and achieve the best outcomes throughout the healthcare value chain. **Vision**: To be the leading world class digital health company in Africa. **Ref/Link**: https://rockethealth.africa	• Multichannel access to healthcare services (USSD, SMS, WhatsApp and call): in-person appointment scheduling, tele-consultations, mobile pharmacy and laboratory services, chronic care management. • Rocket Health e-shop: for purchase of pharmaceuticals with last-mile delivery, and home laboratory sample pick up with electronic results dispatch. • Insurance and healthcare subscription plans: Rocket Health Wallet. • Vaccination services	https://rockethealth.africa/privacy-policy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
O7 Therapy	**Founder(s)**: Ashraf Bacheet, Ashraf Adel, and Nader Iskander **Location(s)**: Egypt, Saudi Arabia **Founded**: 2019 **Mission**: Revolutionising access to mental health services. **Ref/Link**: https://www.o7therapy.com	• Mobile and Web app: Psychological text support, online therapy session (individual or group). • Employee wellness programme for businesses. • Sports and performance enhancement programme for athletes and teams.	https://www.o7therapy.com/ar/privacy-policy https://www.o7therapy.com/faq
AfriHealth	**Founder(s)**: Linda Obi **Location(s)**: Nigeria **Founded**: 2018 **Mission**: To create the most advanced, affordable and complete care model for everyone through applications of cutting-edge technology and universal access to medical resources providing healthcare solutions to everyone's convenience through passion and commitment. **Vision**: To become the ultimate healthcare solutions provider that gives complete control over health-related concerns in a personalized, transparent, and empathetic manner across Africa and ultimately worldwide. **Ref/Link**: https://www.afri-health.com	• Telemedicine: RigourPlus app for virtual doctor's consultation, facility checks, ambulance booking and medication ordering. • Emergency response: RigourAmbulance app for drivers.	https://www.afri-health.com/privacy-policy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
PrimeBridge Health	**Founder(s)**: Ahmed Abdulkareem **Location(s)**: Nigeria **Founded**: 2024 **Mission**: To provide accessible, comprehensive healthcare services that empower individuals to take control of their health and well-being. **Ref/Link**: https://primebridgehealth.com	• Telemedicine: Website and WhatsApp to book appointments, consult virtually and refill prescriptions. • Concierge services: annual health check-up, laboratory tests, test review and medical advice	Key informant interview
Vezeeta	**Founder(s)**: Amir Barsoum **Location(s):** Egypt, Jordan, Lebanon, Kenya, Saudi Arabia and Nigeria Founded: 2012 **Mission**: Transforming the way healthcare providers and patients interact by integrating technology into medical practice. **Vision:** To make healthcare accessible, affordable and of better quality for all patients. **Ref/Link**: https://www.vezeeta.com/	• Telemedicine: physical clinic/home visit appointment booking, teleconsultations, laboratory and medications ordering via mobile app, website or call • Health monitoring/tracking: Daily steps tracking with rewards	https://www.vezeeta.com/ar/Generic/PrivacyPolicy https://www.vezeeta.com/ar/Generic/DoctorsPrivacyPolicy

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Zuri Health	**Founder(s)**: Ikechukwu Anoke and Daisy Isiaho **Location(s)**: Ghana, Kenya, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia **Founded**: 2020 **Mission**: To provide the best universally accessible healthcare experience in Africa by offering end-to-end services, including consultations, lab testing, pharmacy delivery and aftercare management. **Vision**: A healthier world where people are living longer, happier and healthier lives. **Ref/Link**: https://zuri.health	• Telemedicine: virtual consultations (Vera, WhatsApp, chatbot or video), facility search, pharmacy and laboratory services. • Continuous care programme: subscription plans for chronic diseases management • AI Screening: mental health (voice-based), general wellness/health monitoring or tracking (camera-based)	• Key informant interview • https://zuri.health/privacy-policy?id=2

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Helium health	**Founder(s)**: Goke Olubusi, Dimeji Sofowora, Ralph Oluwole, Tito Ovia (ex). **Location(s)**: Nigeria, Ghana, Liberia, Senegal, Cameroon, Uganda, and Kenya **Founded**: 2016 **Mission**: To accelerate Africa's transition to a technology and data driven healthcare sector. **Vision:** To build the digital infrastructure that will power a new age of more efficient and data-driven decision making in healthcare across emerging markets. **Ref/Link**: https://heliumhealth.com	• HeliumOS: end-to-end digitization of medical records and hospital operations. • HeliumDoc app: doctor and treatment search, in-clinic appointment booking, and telemedicine. • HeliumCredit: healthcare facilities financing. • HeliumWallet: payment processing platform from private paying patients and HMOs. • Partnerships for public health interventions. • Data and insights: provision of anonymized, longitudinal health data.	https://heliumdoc.com/ng/privacy/ https://heliumhealth.com/information-security-policy/#:~:text=LEGAL,Consent%20for%20Adult

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Cranium Integrated Solutions Limited	**Founder(s)**: Kunle Adesida and Susan Adesida **Location(s)**: Nigeria **Founded**: 2018 **Mission:** To use integrated healthcare solutions to drive growth using international standards **Vision**: To make healthcare affordable and achievable worldwide through ICT. **Ref/Link**: https://cranium.com.ng	• Electronic medical records/hospital management system for health facilities. • Telemedicine for patients. • Cranium Biometric Health Card: personal health records and banking inclusion. • Data collection centre for de-identified healthcare data for research. • AI-powered wearable bands for remote monitoring/tracking.	Key informant interview
Ask Without Shame (AWS)	**Founder(s):** Ruth Nabembezi **Location(s)**: Uganda **Founded**: 2015 **Mission**: Providing accurate sexual reproductive health information to African youth without any shame or judgement through mobile technology, coaching and community outreaches **Vision**: Empowered youths with accurate sexual eeproductive health information making informed decisions. **Ref/Link**: https://askwithoutshame.org	• Free and anonymous emergency sexual health information service: Connecting users to medical experts and counsellors 24/7 through the Nabembezi app, WhatsApp, call centre hotline and SMS. • Ask Without Shame Clinic: subsidised medical and coaching services such as laboratory services, minor surgeries, family planning, counselling and guidance. • Community Outreach: needs based awareness sensitization and training in local communities, schools and universities across Uganda using FAQs from our users.	https://play.google.com/store/apps/datasafety?id=com.askwithoutshame7

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Honey and Banana Connect	**Founder(s)**: Not publicly available* **Location(s):** Nigeria **Founded**: Not publicly available **Mission:** Not publicly available **Vision**: Not publicly available **Ref/Link:** https://www.honeyandbanana.com/ *This is probably due to the kind of service provided and cultural norms/perceptions about it in Nigeria	• Telemedicine: website allows users to find the nearest certified clinic, book appointments and chat with providers to get a safe, reliable and affordable contraceptive method. • Honey&Banana Connect Call Center: toll free line to talk to a trusted counsellor. • Self screening and health information: website resources on the best contraceptive methods. • Store: To order and purchase products online.	https://www.honeyandbanana.com/privacy-policy
DoctorCare247	**Founder(s):** Chucks Chibundu **Location(s):** Nigeria **Founded:** 2019 **Mission:** Offer affordable on-demand healthcare services through superior E-health technology solutions that meet stakeholders expectations. **Vision:** To be the foremost innovative telehealth organisation providing world class healthcare solutions to teeming consumers. **Ref/Link**: https://doctorcare247.com/	• Telemedicine: Mobile app and website platforms for access to healthcare providers and services via video, audio and/or text chat. • Symptom checker: Helps users understand symptoms, with possible related health conditions and treatments • Remote patient monitoring with integrated devices	https://doctorcare247.com/policy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Clafiya	**Founder(s)**: Jennie Nwokoye, Itoro Inoyo **Location(s):** Nigeria **Founded:** 2021 **Mission:** To transform the way individuals, families, and businesses in Africa pay, access, and receive quality & affordable health and wellness services. **Ref/Link**: http://www.clafiya.com/	• Health Savings Account: Enabling users to save, earn interest, and access healthcare tailored to their specific needs. • Clafiya Care Clinic: Digital clinic for primary healthcare needs. It covers home or virtual consultations, diagnostic tests and doorstep medication delivery. • Wellness hub: Digital marketplace for health and wellness facilities and services, including spa, fitness, dental, eye and mental healthcare	• Key informant interview • https://www.clafiya.com/privacy-policy
CribMD	**Founder(s)**: Ifeanyi Ossai, Lorna Johnson, Michael Ngiri **Location(s)**: Nigeria **Founded**: 2020 **Mission**: To democratise healthcare by delivering quality, affordable and accessible healthcare to everyone, irrespective of who they are. **Vision:** CribMD is a diverse network of doctors, health workers and technology enthusiasts working to confront healthcare inequity through providing healthcare at every sector of society. **Ref/Link**: https://www.cribmd.com	• Telemedicine: Mobile and web app access to licensed doctors online, through chat, audio call, or video conference call. • Doctor home visit booking. • Online pharmacy with doorstep delivery. • CribMD Health Plan: for individuals, family, or businesses.	https://www.cribmd.com/legal

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Waspito	**Founder(s):** Jean Lobe **Location(s):** Cameroon, Ivory Coast **Founded:** 2020 **Mission:** Making healthcare accessible to all Africans. **Ref/Link:** https://www.waspito.com/	• Telemedicine: mobile app connecting patients to verified doctors instantly for consultations. Also enables laboratory home sample collection with in-app results reporting, and medications delivery. • Health discussion forum: to address FAQs and engage on topics of health interest. • Electronic records: enabling doctors to manage their patients and appointments digitally, with reminders for follow up.	https://www.waspito.com/en/appstatic/terms

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Wella Health	**Founder(s):** Ikpeme Neto **Location(s):** Nigeria **Founded:** 2015 **Mission:** To ensure quality healthcare is accessible to all Africans wherever they are **Ref/Link**: www.wellahealth.com	• Microinsurance/Health plans for individuals and businesses • Telemedicine: For doctors' consultations and medication advice through mobile app and WhatsApp. • Meditrina: Nutrition Support Clinic for chronic diseases management with access to personalized nutrition and dietitians. • HealthSend Wallet: allows users to buy health plans, medications, elderly home visits and other healthcare services for loved ones back home. • VeriClaim and WeFill for efficient HMO claims management for healthcare providers and HMOs. • WellaPartner: pharmacy management system for community pharmacies.	https://www.wellahealth.com/privacy https://www.wellahealth.com/terms

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
SonoCare	**Founder(s):** Enokela O. Moses **Location(s):** Nigeria **Founded:** 2015 **Mission**: Pushing frontiers of care through technology and innovation towards an equitable and quality healthcare distribution for all sections of society. **Vision:** To reimagine the care experience by leading the transformation of virtual/remote healthcare and build lasting healthcare partnerships that deliver excellence, service, and sustainability. **Ref/Link**: https://sonocare.com.ng	• Telemedicine: Mobile app that allows users to subscribe to health plans and fund their wallet to access personalized care. This includes online and offline doctors consultations, nursing care, home laboratory tests, e-prescriptions and door step medication delivery. • Health monitoring/tracking: remote vital signs tracking using phone camera.	https://sonocare.com.ng/privacy-policy/ https://sonocare.com.ng/terms-conditions/
MOBicure	**Founder(s)**: Charles Akhimien and Emmanuel Owobu **Location(s)**: Nigeria **Founded**: 2015 **Vision**: To bring healthcare to the fingertips of everyone using mobile technology. **Ref/Link**: https://www.mobicure.biz	• myPaddi app: provides young people with anonymous access to sexual and reproductive health resources, services and products. • Jeje Health platform for mental health resources and services, including teleconsultations and mental wellness products. • Omomi platform: provides maternal and child health information and services to mothers and expectant mothers.	https://web.mypaddiapp.com/privacy-policy https://www.omomiapp.com/wp-login.php?redirect_to=https%3A%2F%2Fwww.omomiapp.com%2Fdoctors%2F&bp-auth=1&action=bpnoaccess

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
mDoc	**Founder(s)**: Nneka Mobisson, Imo Etuk **Location(s):** Nigeria **Founded**: 2013 **Mission**: To be the leading virtual health companion, instilling confidence and empowering people to live healthier and more fulfilled lives. **Vision**: To ensure a healthier and more fulfilled world. **Ref/Link**: https://mymdoc.com/	• Telemedicine: CompleteHealth app and USSD for health and wellness virtual support. Integrated with Kem AI (health coach chatbot) • Health plans for individuals and businesses • NaviHealth.ai: Digital directory of health services and providers. • NudgeHubs: For in-person consultations with health coaches. • Project ECHO partnership: Tele-education for individuals (pregnant women and nursing mothers) and healthcare workers.	https://mymdoc.com/privacy-policy
Contro	**Founder(s)**: Alex Schmid **Location(s):** South Africa **Founded:** 2020 **Mission:** To streamline the process of getting medication by offering a convenient, hassle-free and affordable online service. Contro is for anyone over the age of 18 currently living in South Africa seeking convenient, affordable and discreet healthcare products. **Ref/Link**: https://www.contro.co.za/	• Telemedicine: Convenient, affordable and discreet subscription service for virtual doctors consultations (general and sexual health), online prescription and delivery for sexual health and confidence products. • Tele-education: Provision of sexual and reproductive health information via blog	https://www.contro.co.za/privacy-policy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Vula Mobile	**Founder(s):** Dr William Mapham **Location(s):** South Africa **Founded:** 2014 **Vision**: For all people to have access to the best possible healthcare in their area **Ref/Link**: http://www.vulamobile.com/	• Referral management: Mobile app that connects primary healthcare workers to specialists to get advice and seamlessly refer patients. • Patient Communication: Allows healthcare providers to update the patient via SMS. SMS contents are retained and added to the patient record. Optimized to work in rural areas with minimal data consumption.	https://www.vulamobile.com/legal-and-compliance
Syked	**Founder(s)**: Wandile Khumalo **Location(s):** South Africa **Founded:** 2019 **Mission**: Destigmatising mental health assistance for the African population by making it accessible to all. **Ref/Link:** https://syked.co.za/	• Telemedicine: Connects patients to vetted therapists for mental and emotional wellness via website, app, text, and private, secure video calls. • Maintains a database of qualified professionals that provide counselling support.	https://syked.co.za/privacy-policy

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Eden Care Medical	**Founder(s)**: Moses Mukundi **Location(s):** Rwanda **Founded:** 2021 **Vision**: A future where digital solutions empower individuals to lead healthier lives. **Ref/Link:** https://www.edencaremedical.com/	• Health insurance plans for individuals, families and businesses. Accessible via the Eden Care mobile app that enables users to easily view benefits, track claims, and manage policy details. • ProActiv Health and Wellness Program: Customizable app-based programme for businesses to improve employees' physical and mental wellness. This covers wellness screenings and assessments, education, health monitoring/tracking, wellness activities and rewards. • Database of healthcare providers.	https://www.edencaremedical.com/legal/privacy-policy
Medikea	**Founder(s)**: Elvis Silayo, Desire Ruhinda, John Manko **Location(s)**: Tanzania **Founded**: 2022 **Mission**: To make human-centred digitally enabled care accessible and useful to everyone's health and well-being. **Ref/Link**: https://www.medikea.co.tz/	• Telemedicine: mobile app to book appointments with doctors, order pharmaceutical products and laboratory tests. • Physical clinics and customised electronic medical records for efficient referrals and continuity of care.	https://medikea.co.tz/privacy-policy https://medikea.co.tz/terms-and-condition

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Turaco	**Founder(s)**: Ted Pantone, Peter Gross **Location(s)**: Kenya, Uganda, Nigeria, Ghana **Founded:** 2019 **Mission**: To insure a billion people over the next 25 years, doubling the number of insured people globally. **Vision:** To free people from the fear of financial shocks. **Ref/Link**: https://www.turaco.insure/	• Insurance: provides affordable and flexible health and life insurance services for underserved low-income earners, with swift claims filing via WhatsApp or phone calls. • Partnerships: white-labelled API integration with Africa's leading tech-enabled companies.	https://www.turaco.insure/our-impact-copy-2
Lifesten Health	**Founder(s)**: Stephen Ogweno, Peace Iraguha **Location(s):** Rwanda **Founded:** 2020 **Mission:** To make wellness accessible, engaging, and transformative. **Ref/Link**: http://www.lifesten.health/	• Health Monitoring/Tracking: AI-powered app for health assessment and tracking, including integration with wearables and transdermal optical imaging technology for camera-based analysis of health status. • Positive reinforcement for healthy lifestyle through rewards for hitting health milestones. • Community and networks for support, accountability and connecting with wellness coaches and experts.	https://lifestenhealth.com/dataroom/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Wazi	**Founder(s)**: David Henia, Alex Royea **Location(s)**: Kenya, South Africa, Ghana and Nigeria **Founded**: 2018 **Vision**: To improve mental health care in Africa **Ref/Link**: https://www.wazi.co/	• Telemedicine: Offers anonymous digital mental health therapy to individuals and companies over a web app or chatbot. • White-label end-to-end tools for NGOs, mental health groups, and healthcare companies. Covers bookings, data collection and management, tele-counselling platform for phone, audio, or video calls, and monitoring and evaluation support.	https://www.wazi.co/privacy https://www.wazi.co/terms https://www.wazi.co/emergency-contacts

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Aviro Health	**Founder(s)**: Musaed Abrahams, Luke Shankland **Location(s)**: South Africa, Kenya and Eswatini **Founded**: 2014 **Mission**: To help healthcare workers focus on more complicated cases by providing technology-enabled services that automate workflows, improve access to quality medical information, and provide digitally-enabled counselling services. **Vision**: A world in which everyone gets medical information and healthcare that is accessible, efficient and delivered with empathy and understanding. **Ref/Link:** https://www.avirohealth.com/	• Telemedicine: Aviro Pocket Clinic for patient on-boarding, testing, semi-automated counselling and support for HIV, diabetes and other chronic diseases. This allows access via mobile phones or devices in facilities. • Patient engagement/user flow management for healthcare providers through web app, offline app, WhatsApp, and chatbots, including data and analytics functions.	https://www.avirohealth.com/privacy-policy

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Sila Health	**Founder(s):** Babusi Nyoni, Phillen Maqhuzu, Hlupani Chipunza **Location(s):** Zimbabwe **Founded:** 2019 **Mission:** Connecting people across Africa to healthcare, on any mobile device **Ref/Link**: https://sila.health/	• Healthcare plans: HealthPass prepaid healthcare plan that covers consultations, prescriptions, vision and dental care. • Health data, insights and surveillance: Sila Trends provides anonymised data to enable health organisations and governments to view real-time health trends across every location and demographic. • Telemedicine, patient acquisition and adherence: The Sila Lifeline platform leverages WhatsApp, Messenger and SMS for triaging and referring only high-intent users to partners/providers. It also provides adherence prompts modelled on user behaviour to aid aftercare of patients with chronic illnesses. • Sis Joyce AI-powered chatbot service for instant, personalized health advice and medical alerts in multiple African languages via Facebook, WhatsApp and SMS • Positive reinforcement: Sila Health Points reward system for carrying out health activities like asking questions, looking up symptoms, and taking disease assessments.	https://sila.health/privacy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
DoctorMauritius (Médecin à domicile)	**Founder(s)**: Dr Aukhojee Yasheel **Location(s)**: Mauritius Founded: **Mission:** To provide premium healthcare to everyone. **Ref/Link:** https://www.medecin.mu	• Patient portal and health monitoring/tracking: Mobile app and patient portal to track vital signs and store patient health records. • Provider booking: Allows in-app and website bookings for home/hotel/company/travel doctor consultations and follow ups 24/7.	https://www.doctormauritius.com/secure/user/hpTerms https://play.google.com/store/apps/datasafety?id=com.medecinadomicile.medecinmu
Healthtracka	**Founder(s)**: Ifeoluwa Dare-Johnson, Victor Amusan **Location(s):** Nigeria **Founded**: 2021 **Mission:** To make health testing accessible to all Africans. **Ref/Link:** https://healthtracka.com/	• Diagnostics: Enables digital test ordering, results tracking and digital patient diagnostic records via the Path and Healthtracka web platforms for practitioners and patients, respectively. Also offers self-sampling and self-testing kits, and referral linkage to treatment. • Telemedicine and Flourish Care for non-communicable diseases. This covers health monitoring, routine consultations and tests. • Lola AI Period Tracker: WhatsApp AI chatbot for tracking users' menstrual cycles, sending personalized reminders and providing helpful tips and playlists to manage periods and emotions.	https://privacy-policy.healthtracka.com/terms-and-conditions

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Caafisom	**Founder(s)**: Mohamed Ismail Ahmed **Location(s):** Somalia/Somaliland **Founded:** 2021 **Mission:** To improve the healthcare services in Somalia/Somaliland and wider region by working with the stakeholders. **Vision**: We strive to create a world where access to quality healthcare is a universal right, and where everyone has the tools and resources they need to live their healthiest life. **Ref/Link:** https://caafisom.com/	• Personal Health Records: The mobile app allows patients to access their medical records anywhere they go, and decide who to grant access. • Telemedicine: allows users to conveniently find hospitals, book doctor appointments, order laboratory tests and results, and get medications. • Emergency care: Offers ambulance booking services via the app or call line.	https://caafisom.com/privacy-policy
EightMedical	**Founder(s)**: Ibukun Tunde-Oni **Location(s):** Nigeria **Founded:** 2021 **Mission**: Ensuring universal healthcare access for Africa by building the largest online healthcare community, leveraging the use of technology with a mobile-first approach. **Vision**: To provide reliable access to healthcare when it matters most. **Ref/Link:** https://www.8medical.co/	• Enables people to access emergency medical services via phone call or call request through the website. • Emergency care cover plans for individuals and families. • Ambulance booking for events and non-emergency purposes. • Maintains a network of medical professionals who provide urgent pre-hospital care, and emergency-ready labs, hospitals, and imaging centres.	https://www.8medical.co/privacy-policy/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
Leadway	**Founder(s)**: Hassan Olusola Odukale **Location(s):** Nigeria **Founded:** 2018 (Mother company, Leadway Assurance Company Limited founded in 1970) **Mission:** To use health insurance and technology as a vehicle for the attainment of universal and quality healthcare coverage for all Nigerians. **Vision:** To be the most dominant health Insurance solutions provider in Nigeria within the Corporate and Retail Market Segments leveraging technology. **Ref/Link:** https://leadwayhealth.com/	• Health insurance: Leadway Health plans for individuals and corporate organisations • Telemedicine: Enrollee app allows users to book hospital appointments, find nearby providers, get help with diagnosis, prescriptions, referrals and emergency services, access telemedicine, report delays and get health information.	https://leadwayhealth.com/data-subject-access-request/
mTiba/CarePay	**Founder(s)**: PharmAccess, M-PESA and Safaricom **Location(s):** Kenya **Founded:** 2015 **Mission/Vision:** M-TIBA makes healthcare transparent, efficient, and affordable. The goal is to increase access to affordable quality healthcare for millions of people in Africa. **Ref/Link: https://mtiba.com/**	• Mobile health wallet for users to save money, access entitlements and pay for health services using their phone. • Financial and health data collation: For governments, donors, healthcare providers and health insurers.	https://mtiba.com/privacy-policy/ https://mtiba.com/terms/

DTC Name	Company Overview	Health-related activities/solutions/products	Strategy/Policy to be Reviewed
MobiHealth	**Founder(s)**: Funmi Adewara **Location(s):** Nigeria, UK **Founded:** 2017 **Mission/Vision:** To bring affordable, quality healthcare within the reach of everyone leveraging technology. **Ref/Link:** https://www.mobihealthinternational.com/	• Telemedicine: Offers remote consultations, including access to global specialists. • Electronic medical records • Diagnostics and pharmacy	https://mobihealthinternational.com/terms https://mobihealthinternational.com/privacy
MyMedicines/Advantage Health Africa	**Founder(s)**: Abimbola O Adebakin **Location(s):** Nigeria **Founded:** 2017 **Mission/Vision:** To be the largest aggregator across the healthcare solution industry in Africa, leveraging technology and innovations in our products and services. **Ref/Link:** https://mymedicines.africa/	• E-pharmacy • D2C distribution of medications • Fulfilment of prescriptions and medications for providers.	https://advantagehealthafrica.com/privacy-policy/ https://advantagehealthafrica.com/quality-policy/

Appendix 2: Full Profiles of Africa-based Digital Technology Companies: Other/ Non-Health Digital Technology Companies

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
Bet9ja	**Founder(s)**: Ayo Ojuroye and Kunle Soname **Location(s)**: Nigeria **Founded**: 2012 **Ref/Link:** https://bet9ja.com/	• Offers sports betting, virtual racing and casino games to customers.	https://help.bet9ja.com/general-tcs/?lang=en https://help.bet9ja.com/responsible-gaming/ https://help.bet9ja.com/privacy/ https://help.bet9ja.com/self-exclusion/
Betika	**Founder(s)**: Chris Mwirigi **Location(s)**: Kenya, Tanzania, Ethiopia, DRC, Ghana, Nigeria, Mozambique, Zambia and Malawi. **Founded**: 2016 **Mission:** To delight and entertain our customers with responsible gaming experiences through technology and innovation while positively impacting communities. **Vision**: To be the leading pan-African sports betting and gaming brand. **Ref/Link:** https://www.betika.com/en-ke/	• Provides customers and gaming enthusiasts with access to sportsbook, casino and virtual games with thousands of games and 60+ markets to ensure that users are greatly rewarded. • Accessed through mobile app, website, SMS and USSD.	https://cdn.betika.com/int_assets/ke/pages/betika-responsible-gaming-policy-2023.pdf?_gl=1*n946s5*_gcl_au*MTMzMjM4NjMzNS4xNzIwNzk3MDc5*_ga*NjQ2ODM3Mi4xNzIwNzk3MDc5*_ga_R8GRWELHBE*MTcyMTY2MzU2My4yLjAuMTcyMTY2MzU2My42MC4wLjA. https://betika.et/et/privacy-policy-et-en.html
BetCO.ZA	**Founder(s)**: Mark Bosman **Location(s):** South Africa **Founded**: 2010 **Mission:** To make the process of online sports betting as simple as possible. **Ref/Link:** https://www.bet.co.za	• Online sports betting platform that allows users to track and bet on sports events globally, see each team's sport betting odds and get betting advice.	https://www.bet.co.za/#:~:text=Serie%20A-,Help,Bonus%20Terms,-Useful%20Links

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
FairMoney	**Founder(s)**: Laurin Hainy, Matthieu Gendreau, Nicolas Berthozat **Location(s):** Nigeria **Founded:** 2017 **Vision**: Building the leading mobile bank for emerging markets. **Ref/Link**: https://fairmoney.io/	• Loans: Personal and business loans with competitive interest rates, extension possibilities and no collateral. • FairSave: High interest savings account designed to help people save and make money everyday. • FairLock fixed deposits account	https://fairmoney.io/terms-and-conditions
Branch	**Founder(s):** Matt Flannery, Daniel Jung **Location(s):** Nigeria, Kenya, Tanzania, India **Founded:** 2015 **Mission:** To deliver world-class financial servicesto the mobile generation. **Ref/Link:** https://branch.co	• Mobile app that provides first time access to digital banking services like instant loans, money transfers, bill payment, high yield investments and savings. • Leverages machine learning algorithms to determine credit worthiness via customers' smartphones and create personalized loan options. • Branch debit card that enables Nigerian customers to make reliable payments and ATM withdrawals with no charges.	https://branch.com.ng/pp

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
Zenka Loan	**Founder(s):** Robert Masinde, Loukas Notopoulos **Location(s)**: Kenya **Founded:** 2018 **Mission:** To introduce balance and harmony in the financial world of every customer by providing smart financial products to people who need them, right here and right now. **Ref/Link:** https://zashloan.com/	• Digital lending platform that grants small business owners, entrepreneurs and tech-savvy customers access to loans via mobile app and USSD. • Machine learning algorithms for customer identification and creditworthiness evaluation.	https://zenka.co.ke/zenka-finance-limited-privacy-policy/
Umojja	**Founder(s)**: Charles Muleka Kitwa, Djo Kyadi, Temilade Oduwalo **Location(s)**: Democratic Republic of Congo **Founded:** 2023 **Mission:** A platform where you connect with reputable people, and verified brands. **Vision:** To convey messages of peace and promote discussion related to the continent's development issues. **Ref/Link**: https://www.umojja.com/	• Social networking, news sharing, entertainment and live streaming service. • Business services: Company profile, exporters and importers marketplace, payment gateway, brand boosting resources and directory, business-to-business and business-to-consumer connections. • Blogging and content creator marketplace.	https://www.umojja.com/site/privacy https://www.umojja.com/site/terms

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
Young Africa Live (BWise Health)	**Founder(s):** Partnership between Reach Digital Health, Avert and Elton John AIDS Foundation. **Location(s):** South Africa **Founded:** 2023 **Mission:** We put young people's health and well-being back in their hands. **Ref/Link:** https://www.youngafricalive.org, https://www.bwisehealth.com/	• WhatsApp Chatbot for private conversations and tailored support on issues relating to mental health, HIV and STIs, sex and relationships. • Peer engagement and open discussion on Facebook and Instagram. • Data and behavioural science to engage young users, e.g. quizzes, rewards, etc. • Partnerships with organisations to deliver youth-friendly services or sex-positive content.	https://www.bwisehealth.com/terms-and-conditions/
Ayoba (Simfy Africa Ltd)	**Founder(s)**: Burak Akinci (CEO) **Location(s):** South Africa, Cameroon, Congo Brazzaville, Cote d'Ivoire, Ghana, Guinea Bissau, Nigeria, Democratic Republic of Congo, Kenya, Senegal, Tanzania, and Togo. Founded in Mauritius. **Founded**: 2019 **Mission:** To grow a business ecosystem that functions as a platform where users, creators, entrepreneurs and partners can create exceptional connections and communities with enriching experiences that make Africa thrive. **Ref/Link**: https://www.ayoba.me	• Mobile app for peer-to-peer private and end-to-end encrypted messaging via chat, call and video. • Also features channels of information, music playlists, services, games and integration with MTN Mobile Money.	https://www.ayoba.me/web/privacy-policy?lang=en

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
UwaSocial	**Founder(s)**: Fred Uduma (Executive Director) **Location(s)**: Nigeria **Founded:** 2022 **Mission:** To give Africa and the world a social network / social hub that captures Afrocentric expression, culture, and way of life. **Ref/Link:** https://www.uwasocial.com/	• UWA Social network allows users to share thoughts, go on dates, make friends and create memories, with encrypted and secure conversations. • UWA Hub for expressing creativity and catching up on news and updates. • UWA marketplace for business owners and service providers to showcase their offerings and sell.	https://www.uwasocial.com/page/privacy-policy
Agbora	**Founder(s):** Agbora Inc **Location(s):** Pan-African **Founded:** 2021 **Mission:** To connect Africa, the African diaspora, and people from around the world, on a platform where professionals, influencers, talents, and leaders, can share ideas, knowledge, memories, interests, and opportunities, in a network of trusted relationships. **Ref/Link:** http://agbora.com	• Mobile app for finding connections, building relationships, sharing experiences through microblogging, sharing polls and opportunities, and building one's brand. • AgboraChat for engaging with connections.	http://agbora.com/index.php/privacy-policy/ http://agbora.com/index.php/user-agreement/ https://apps.apple.com/story/id1538632801

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
Village Square	**Founder(s):** Rotimi Akerele, Otunola Akerele **Location(s):** Nigeria **Founded:** 2024 **Vision:** Creating a digital platform embodying the communal spirit of African village squares. **Ref/Link**: https://villagesquare.io	• Mobile application for engaging socially by uploading pictures, videos, and comments, with live streams for sharing moments in real time, and audio hubs for voice-based interactions. • Nationality connection for Africans in diaspora to connect with their fellow countrymen in their vicinity. • Dating/Match-making module for singles. • Virtual Market Square for businesses. • Job listings for career opportunities or hiring talents, forums and gossip sections.	https://villagesquare.io/terms https://villagesquare.io/privacy https://villagesquare.io/disclaimer

DTC Name	Company Overview	Activities with Potential Health Impact	Strategy/Policy to be reviewed
Dikalo	**Founder(s):** Alain Ekambi, Daniel Agnéro, Bitoa Pedenkil, Kate Awanda **Location(s):** Cameroon **Founded:** 2017 **Mission:** To become Africa's best social network by connecting people with a focus on privacy. **Vision:** To promote African culture through technology **Ref/Link**: https://about.dklo.co	• Mbuntu: Web and mobile messaging app targeted at Africans with unlimited group size, indigenous stickers and high call quality. With a strong focus on privacy and anonymity, it allows users to create a nickname and generate a private personal code with which they can find and connect with people. Each user controls access, when and how private information is shared. • Dikalo: web and mobile app that enables connection with friends, family and communities of people with same interests.	https://about.dklo.co/help/data-policy https://about.dklo.co/safety

Appendix 3: Questionnaire for Key Informant Interviews (Digital Health Companies)

A. Company Information

- Can you please provide the name of your company, its location, user base and the year it was established?
- Who are the key personnel and leaders in your company?
- Can you provide a brief overview of your company's mission and vision statements?

B. Health-related Activities

- What types of digital health solutions does your company offer?
- What specific health issues does your company target? (e.g., mental health, maternal health, chronic diseases)
- Can you describe some of the key projects and initiatives your company has undertaken?

C. Policies and Guidelines

1. User Privacy and Consent

- What mechanisms does your company have in place for obtaining user consent?
- What policies are in place to ensure user data privacy?
- How does your company ensure transparency in data collection and use?

2. Data Governance and Protection

- How does your company manage data storage and access controls?
- What encryption and security measures are in place to protect health data?
- What policies govern health data tracking in your company?

- Which national and international data protection laws does your company align with and how does your company ensure compliance?
- Are there regular security audits and compliance checks conducted by your company?

3. **Health Promotion**

- What strategies does your company employ for health promotion, especially through digital platforms? What other avenues do you employ?
- How does your company engage users and gather feedback on health promotion initiatives?

4. **Special Considerations/Measures for Young Users**

- What is the age limitation for using your platform? What processes does your company have in place for age verification?
- What are the requirements for parental consent in your company's services?
- How does your company ensure content moderation and safety measures for young users?
- Do you have specific approaches for young users' inclusion in your product design and development processes?
- Are there tailored adjustments for young users of your platform?

D. Closing

- Do you have any additional comments or suggestions regarding the topics we've discussed?
- Would you be open to a follow-up interview if we have additional questions?

About DTH-Lab

DTH-Lab is a global consortium of partners working to drive implementation of The Lancet and Financial Times Commission on Governing Health Futures 2030's recommendations for value-based digital transformations for health co-created with young people. DTH-Lab operates through a distributive governance model, led by three core partners: Ashoka University (India), DTH-Lab (hosted by the University of Geneva, Switzerland) and PharmAccess (Nigeria).

Leadership Team

Aferdita Bytyqi, DTH-Lab Executive Director and Founding Member.

Ilona Kickbusch, DTH-Lab Director and Founding Member.

Anurag Agrawal, DTH-Lab Founding Member. Dean of Biosciences and Health Research, Ashoka University.

Rohinton Medhora, DTH-Lab Founding Member. Professor of Practice, McGill University's Institute for the Study of International Development.

Njide Ndili, DTH-Lab Founding Member. Country Director for PharmAccess Nigeria.

DIGITAL TRANSFORMATIONS FOR HEALTH LAB

GOVERNING HEALTH FUTURES 2030

Digital Transformations for Health Lab (DTH-Lab)
Hosted by: The University of Geneva
Campus Biotech, Chemin des Mines 9
1202 Geneva, Switzerland

www.DTHLab.org