



PSI DIGITAL STRATEGY

Prepared by HealthEnabled
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health.enabled



ACRONYMS

AI	Artificial Intelligence	NCD	Non-communicable Disease
CIO	Chief Information Officer	OpenIMIS	Open Insurance Management Information System
CRM	Consumer Relationship Management	OpenLMIS	Open Logistics Management Information System
CwS	Connecting with Sara	OpenMRS	Open Medical Record System
DfID	Department for International Development - United Kingdom	OpenSRP	Open Smart Register System
DHIS2	District Health Information System 2	PASMO	Pan American Social Marketing Organization
DHIRT	Digital Health Investment Review Tool	RAPID	Recommend Agree Perform Input Decide Decision Making Model
EMR	Electronic Medical Record	Sara/Sam	PSI archetype consumer
FOSS	Free and Open Source Software	SMS	Short Message Service
GBS	Global Business Services	SRH	Sexual and Reproductive Health
HIV	Human Immunodeficiency Virus	TB	Tuberculosis
HNQIS	Health Network Quality Improvement System	UHC	Universal Health Coverage
HQ	Headquarters	USAID	United States Agency for International Development
IPC	Interpersonal Communication	USG	United States Government
IVR	Interactive Voice Response	USSD	Unstructured Supplementary Service Data
LMIC	Low and middle income country	WASH	Water Sanitation and Hygiene
M&E	Monitoring and Evaluation	WHO	World Health Organization
MIS	Management Information System		

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EXECUTIVE SUMMARY

It is driven by the vision to improve consumer health and wellbeing by using digital technologies to increase access and personalize delivery of quality information, products, and services throughout the life course.

The PSI Digital Strategy 2019-2023 is a living document that serves as a guiding compass to harvest technology and innovation for consumer-powered health. It is driven by the vision to improve consumer health and wellbeing by using digital technologies to increase access and personalize delivery of quality information, products, and services throughout the life course. It supports PSI's strategic focus on selfcare and universal health coverage through achievement of PSI's health targets in the areas of HIV, malaria, family planning, non-communicable diseases, and WASH.

The Digital Strategy Framework provides a high-level overview for how PSI will align its digital activities to enable sustained engagement of consumers over time in prevention, diagnostic, and treatment activities through personalized information and access to products and services when and where consumers need them most. It also informs a strategic focus on gender and human rights as well as adolescents and youth with greater emphasis on becoming a trusted source of information through responsible data governance practices, including a proactive approach to privacy and security of personal data.

The strategy builds on PSI's technology investment focus on DHIS2 and software Global Goods with a targeted focus on increasing adoption and effective use of consumer-facing digital tools with linkages to service and product outlets for increased reach and measurable health impact. A strong focus of the strategy is to leverage as much as possible the technology tools that consumers are most familiar and build collaborations with large and small technology companies. This includes social media and consumer relationship management (CRM) platforms on the front end with unique identifiers and machine learning on the

back end for more personalized engagement. These efforts are an extension and build from the pioneering work of the Pan American Social Marketing Organization (PASMO) with cyber-educators using social media for outreach and engagement activities. In between, will be key support tools to facilitate engagement with health service providers and improved quality of care and delivery of products and services through the strategic adoption of case management, electronic medical records (EMRs), and decision support tools.

To implement the digital strategy, PSI will need strong leadership and governance, clear and transparent decision-making criteria and processes, and investment in strategic hires and upskilling of current staff.

To implement the digital strategy, PSI will need strong leadership and governance, clear and transparent decision-making criteria and processes, and investment in strategic hires and upskilling of current staff. A newly established Digital Strategy Officer role and Digital Solutions Group that is accountable to Strategy and the CIO as well as a Digital Governance Council can better facilitate engagement with health, marketing, and evidence teams as well as country digital teams to ensure quality timely delivery for maximum impact. The strategy leverages the adoption of the RAPID decision-making framework and builds on successful comprehensive approaches to digital implementations from within the PSI universe. An organization-wide architecture will enable the over 50 country programs and health teams to map investments in technology to a larger effort that facilitates interoperability, economies of scale, and cumulative impact, while generating and producing insights for monitoring and evaluation and more targeted marketing approaches. Tools will vary based on the prioritized health outcomes, program focus, country priorities, and the local context in terms of health-seeking behavior and technology trends (supported by the application of the Keystone Design Framework to consumer and market challenges).

BACKGROUND

In 2017, PSI developed a global strategy for 2017-2020. While PSI looks holistically at health and the accompanying ecosystem, it has prioritized five health areas in the PSI Global Strategy 2017-2020: sexual and reproductive health (SRH) with a focus on contraception, safe abortion, and cervical cancer; HIV/AIDS and tuberculosis (TB); malaria; WASH and NCDs with a focus on hypertension and diabetes. There is an overall push towards universal health care and opportunities for selfcare and movement towards consumer-powered health.

The aim of this document is to articulate PSI's vision and strategic approach to using digital technology as part of its focus on **harvesting technology and innovation** for consumer-powered health, serving as the organization's digital strategy from 2019-2023.

In alignment with PSI's efforts to promote consumer-powered health, the digital strategy is intended to be both aspirational and grounded in reality to ensure that what is proposed can be localized based on evidence-based health practices, country program priorities, and the state of digital technology enablers. This strategy was co-designed by HealthEnabled and PSI through a highly participatory process that engaged executive leadership, health team leads, country offices, and external stakeholders, including donors and implementing partners to reflect on the current and ideal future state of PSI's digital technology activities. It draws from a series of activities including an in-depth situational analysis and interviews with over 75 key informants; country visits to draw from the experiences of PSI offices and programs in Kenya, Lesotho, Malawi, Mozambique, Myanmar, and Zimbabwe; a comprehensive assessment of technologies currently or formerly in use by PSI; and a high-level assessment of emerging technologies relevant to consumer-powered health.

PSI leadership and management should read the digital strategy with PSI global and country program priorities, contexts, and operational strategies in mind. While balancing the need to standardize, scale, sustain and contribute to the evidence base, there is intentional flexibility built into the digital strategy. The first half of the strategy document focuses on what PSI will focus its digital engagement towards and the second half more closely examines how PSI will transition to its ideal state from where it is now, building on the foundation it has developed to date.

As an organization PSI has a clear mission and vision. Across all of the organization's divisions and country programs, PSI leadership and staff articulate the consumer-powered health focus and ensuring that the PSI archetype, Sara (Sam), gets what s/he wants and needs and that the focus of the digital strategy is not about the tool or technology. **Digital technology is an enabler.**

THE DIGITAL STRATEGY SERVES AS A PATHWAY TOWARDS THE FOLLOWING FUTURE STATE, WHEREBY PSI HAS:

1.

Ability to view the health ecosystem through the eyes of consumers

2.

Effective in-person and digital engagement with consumers and other health ecosystem stakeholders

3.

Effective partnerships to co-create digital tools and solutions based on the Principles for Digital Development, Global Goods, and the Keystone Design Framework

4.

Standardized vetting system to aid in the prioritization and adoption of tools (moving towards a suite of integrated tools)

5.

Clear and effective methods to demonstrate and replicate impact

PRIORITIES IDENTIFIED FOR THE ACHIEVEMENT OF THE DIGITAL STRATEGY

Establish Digital Strategy Officer Role, Digital Governance Council, and Digital Solutions Group at global level and strengthen focus and capabilities in digital technology knowledge and skills of existing staff in health, marketing, evidence, and country teams

Increase focus and investment in consumer-facing digital tools with linkage to health system digital health tools and mobile money and support initial ethnographic and market research and policy/ regulatory scan in prioritized settings to inform design processes

Continue investment and strengthening of DHIS2 both within the organization as well as with governments with a focus on moving towards real-time monitoring and insights and connect new data sources as appropriate

Digitize the Keystone Design Framework and support its application to digital technology adoption and design

Develop architecture and data analytics capabilities with the view towards adaptive management and real-time monitoring and marketing insights

DIGITAL STRATEGY FRAMEWORK

In alignment with PSI's organizational strategic vision of faster, sustained and increased health impacts, the organization's approach to digital technology aims to achieve the following digital strategy vision to effectively harness digital technology to increase and maintain the use of quality primary care without financial hardship.

Digital Strategy Vision: To improve consumer health and wellbeing by using digital technologies to increase access and personalize delivery of quality information, products, and services throughout the life course.

The following Digital Strategy Framework provides an overarching guide for PSI's push to increase access, sustained engagement, financing, and insights for decision-making as well as marketing and advocacy. It is presented across the continuum of consumer, health workforce, and health ecosystem to illustrate the movement towards longitudinal engagement and to ensure that digital approaches are comprehensive, integrated, and take a holistic view. The starting point will be a shift towards technologies that consumers are already using with a focus on high impact long-term engagement at a sustainable cost.

PSI DIGITAL STRATEGY FRAMEWORK

GOAL	Faster, sustained, increased health impact
VISION	Improve consumer health and well-being through increased access to and personalized delivery of quality information, products, and services throughout the life course
OUTCOME	Harvest digital technology to increase and maintain consumer access and use of quality primary care without financial hardship

	CONSUMER AGENCY				HEALTH ECOSYSTEM			
	CONSUMER CHOICE		CONSUMER VOICE		WORKFORCE		ENABLING ENVIRONMENT	
INTERMEDIATE OUTCOMES	<p>Awareness: Consumers can make informed choices (are aware) and are able to access quality info, products and services</p>	<p>Availability: Consumers can increasingly self administer prevention, diagnosis and treatment when applicable</p>	<p>Affordability: Consumers find it easier to afford and pay for health products and services</p>	<p>Appeal: Consumers are actively engaged in how their health-related activities are shaped. Ensuring preferences and needs are met through high quality experiences that result from active engagement for more affordable high quality products and services</p>	<p>Quality of Health Services: Improved quality of health services through better workflow support, capacity building and oversight</p>	<p>Coordination, Policy and Regulation: Fostering coordinated adoption of digital technology focused on Consumer Powered Health across the various market actors within the health ecosystem through active public sector engagement and supportive market shaping policies and regulation through effective use of data, information, and research</p>		
OUTPUTS	<p>Promotion, On-demand Health Info/Support: Personalized, easy to access and navigate via consumers' digital devices</p>	<p>Promotion, Targeted Engagement: Direct to consumer support for health journey and engagement with healthcare system</p>	<p>Price, Health Payment Mechanisms: Facilitating access to health insurance, savings accounts, and subsidies</p>	<p>Product, Client Experience: Consumer satisfaction with insights channeled towards product and service quality improvement through frictionless interactions</p>	<p>Place, Decision Support & Case Management: Guiding health workers on prevention, diagnosis and/or treatment & engagement</p>	<p>Place, Product and Service Delivery Support: Supply chain management, and supportive supervision & learning</p>		
INPUTS	<p>Organizational Digital Transformation: PSI is a digitally transformed, agile organization with the people and systems to rapidly shift business and program strategies in response to real-time consumer, marketing, monitoring, and financial insights with cost-effectiveness, scalability, and sustainability driving investments and approaches.</p>				<p>Consumer Facing Digital Technology: Such as social media, CRM, digital marketing, e-referrals, mobile messaging platforms, chatbots, AI-supported self-diagnostics and virtual health assistants, mobile apps, telehealth, biometrics</p>	<p>Digital Financial Services: Such as mobile money, Open IMIS, biometrics</p>	<p>Health Service Delivery Digital Technology: Such as DHIS2, Open SRP, OpenLMIS, HNQIS, eLearning, EMRs, AI-driven decision support tools, sales & inventory systems, biometrics</p>	<p>Key Actor Engagement: Public & private health sector, technology companies, market research firms, donors, investors and consumers</p>

FRAMEWORK FOUNDATION

Consumer Data Protection	Gender and Equity Considerations	Data to Action	Keystone Design Framework	Value for Money	Principles of Digital Development	Strategic Partnerships	National Government Strategies & Policies	Strategic Evidence Agenda to Measure Outcomes
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CONSUMER-POWERED HEALTH

The primary focus of the digital strategy is on effectively using digital tools to improve consumers' ability to prevent, diagnose, and treat diseases through better access to quality information, products, and services as well as to safely and effectively manage wanted and unwanted pregnancies. At its core is the movement towards bringing care closer to consumers and selfcare with continuous and active engagement that is tailored to the specific needs of each consumer with consideration for the ability pay for health products and services. These outcomes will be achieved through on-demand health information and support facilitated by personalized and targeted health information and continuous engagement delivered through social media, chatbots, mobile messaging, mobile apps and telehealth – powered by machine learning, enhanced digital marketing strategies, and digital financing strategies like health insurance and health savings programs. These will be supported on the backend through the strategic use of unique identifiers increasingly supported by biometrics for longitudinal tracking and linkage to care as well as more robust analytics approaches.

LINKAGE TO CARE: ACCESS TO QUALITY SERVICES AND PRODUCTS

For improved health outcomes and wellbeing consumers will need to effectively use digital tools for two-way engagement with the health workforce –social enterprises, community health workers, pharmacies, clinics, or hospitals. To better support quality and efficiency in service and product delivery health service delivery outlets and professionals will need tools to facilitate decision support, case management, electronic medical records (EMRs), and supply chain management. In support of quality of care are supportive supervision tools, networking, and education tools. Digital tools that facilitate engagement of consumers with health service outlets for longitudinal and continuous care will necessitate the adoption of lightweight case management systems with unique identifiers increasingly powered by biometrics and digital financing strategies to ensure that consumers do not face financial hardship due to health costs. To engage consumers automated reminders for appointments as well as treatment compliance and remote monitoring systems should be put into place to ensure that relationships and linkages to care are established and maintained. In addition, channels for consumers to provide feedback on their preferences and the quality of the care that they receive should be reinforced and expanded to better inform product and service delivery and marketing approaches as well as to monitor program performance and inform decision making.

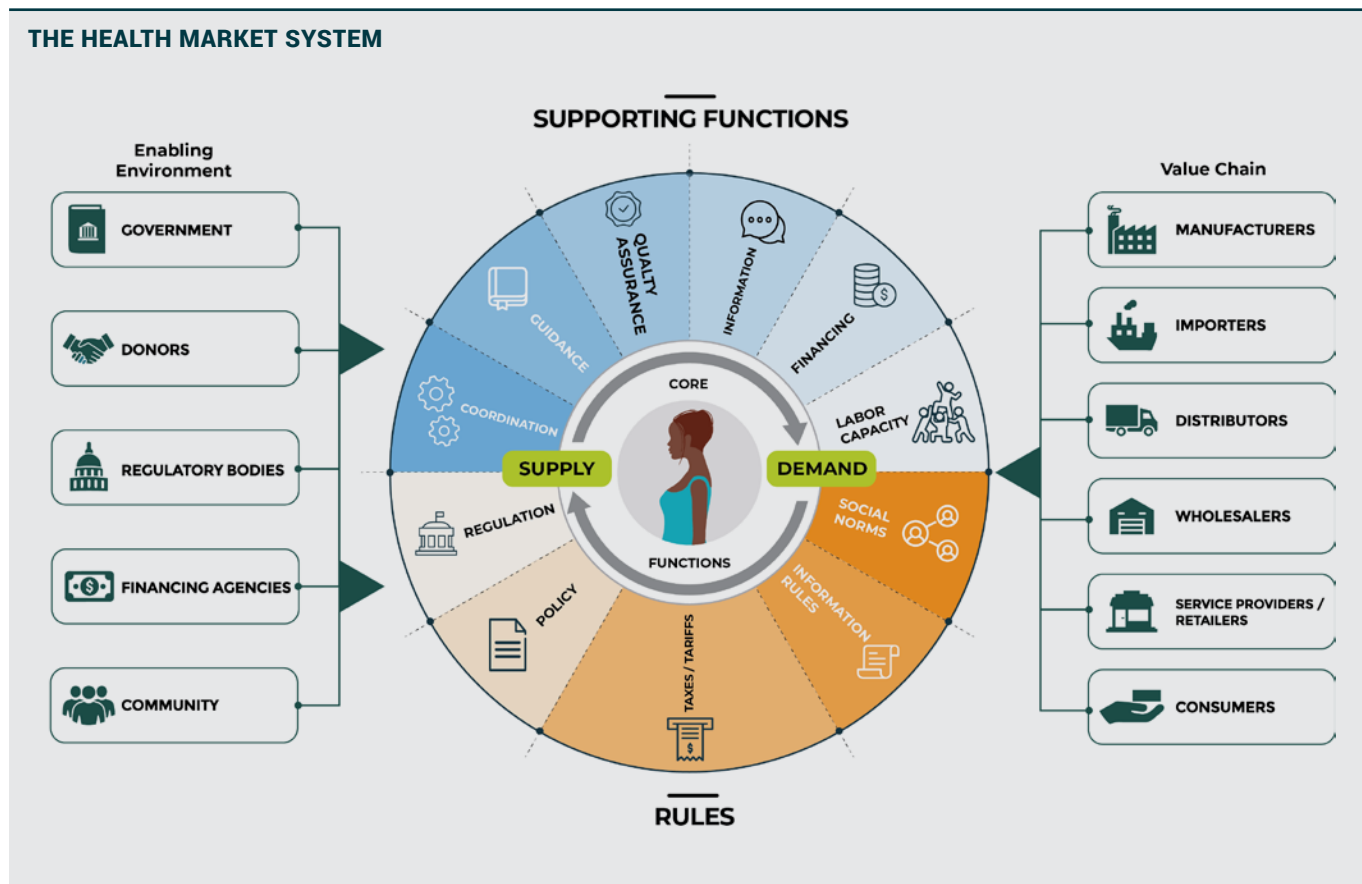
ENABLING THE HEALTH AND TECHNOLOGY ENVIRONMENT

In support of consumer-powered health and to build on PSI's role as a thought leader in social marketing and digital health, the strategy emphasizes a proactive approach to engagement on the enabling environment in the domains of market shaping and technology. Engagement with the public sector is increasing at PSI as the acknowledgement that UHC will not be achievable without greater private sector involvement. In addition, the movement towards selfcare will also require new policies to be put into place to ensure safety and verification of health products that are being accessed directly by consumers. Many of the

countries where PSI works have limited policies and regulations that are up to par with the latest technology trends or consumer-powered health shifts toward greater engagement with pharmacists as key actors in the selfcare ecosystem. To engage as a responsible actor in the field, PSI may need to proactively adopt industry standards or develop its own ethical practices in the absence of country specific guidance.

This will necessitate investment in both formative (ethnographic, market, and situational analyses) research to understand the current policy and regulatory environment and use of technology by target consumers. It will also require more rigorous research of the effective use of digital technology for consumer-powered health to inform policy and advocacy activities. In support of the enabling environment, PSI will need to effectively engage with a broad range of key stakeholders within the health market system- including consumers, governments, donors, researchers, technology companies, etc. to foster collaboration, better practices, and more informed investments.

In addition to investments in targeted digital technologies, an organizational digital transformation will be needed to shift business and program strategies to be more agile in responding to real-time insights. An institutional investment in people, systems, and processes will help drive PSI forward in the digital space. The focus should be on upskilling existing staff with appropriate digital technology knowledge and skills along with adaptive management training to facilitate management of programs and services that include digital technology and real-time data.



FRAMEWORK FOUNDATIONS

Underlying the Digital Strategy are a number of foundational considerations that must be accounted for to ensure both responsive and responsible delivery of consumer-powered health in alignment with PSI's values and principles. As outlined in the framework and expanded below, these include consumer data protection and unique identification; gender, youth, and equity considerations; Data to Action; Keystone Design Framework; Value for Money or operational efficiency; Principles for Digital Development; strategic partnerships; alignment with government policies; and the strategic evidence agenda.

FOUNDATIONAL CONSIDERATIONS	
FOUNDATION BLOCK	WHY IT MATTERS
CONSUMER DATA PROTECTION	Given that the use of digital technology can lead to the collection of personally identifying consumer information, it is important to ensure that the data is stored securely, managed responsibly and used legitimately. PSI has an institutional policy on consumer data protection that sets the standard for collection, storage, use and sharing of consumers' personal data. It will be important to ensure that the policy keeps pace with industry standards and aligns with country-specific privacy and security policies. A data governance policy will be needed globally and at country level to make provisions for how data will be collected, stored, used, and shared and to ensure that this is communicated effectively to consumers.
GENDER, YOUTH, AND EQUITY CONSIDERATIONS	Implementation of digital technology interventions may potentially have positive, negative or mixed gender, youth and equity implications, particularly with regards to consumer facing digital technology. It is therefore important to factor in gender, ability to consent/ opt-in, and equity analysis in design, implementation and evaluation of digital technology related interventions.
DATA TO ACTION	PSI is institutionally committed to effective use of data to predict, plan, adaptively implement and evaluate interventions. Digital technology plays a significant role in enhancing availability and use of data (both Realtime and periodic). Data to Action represents an institutional approach to decision-making and course correction.
KEYSTONE DESIGN FRAMEWORK	The Keystone Design Framework enables a marketing discipline to be embedded within the design and implementation of digital technology interventions. It guides us to diagnose the need for a technology intervention, decide where its application will have the greatest impact, design user centred technology interventions, and deliver the intervention to address the specific need. In addition, it may be worthwhile considering the application of Keystone at higher levels when making large-scale multi-country digital investments.
VALUE FOR MONEY	The use of digital technology can potentially help maximize the impact of resources being spent on health by consumers as well as by PSI as the steward of donor funding (e.g. save time, cut costs etc.). Digital tools also have the potential to improve operational efficiency, which should be a key consideration in design, implementation and evaluation of digital technology related interventions. Other considerations include responsible sourcing, reducing the footprint on the environment among others.
PRINCIPLES OF DIGITAL DEVELOPMENT	PSI is an endorsed stakeholder of the Principles for Digital Development, a set of guidelines that are designed to help integrate best practices into technology-enabled programs and are intended to be updated and refined over time. They include guidance for every phase of the project life cycle, and they are part of an ongoing effort among development practitioners to share knowledge and support continuous learning. Complementary efforts include Global Goods and the Principles for Donor Alignment.
STRATEGIC PARTNERSHIPS	In order to avoid duplication of developing digital technology solutions that already exist, it is important to invest in strategic partnerships with stakeholders that have robust technology products. Partnerships should be established with a view to access fit-for-purpose, cost effective, sustainable digital technology solutions that address our needs. PSI only invests in building in-house solutions where there is an external solution gap or where the organization has a significant comparative advantage to do so.
GOVERNMENT STRATEGIES AND POLICIES	It is important to ensure that the application digital technology within health interventions consider government strategy, policies and regulations regarding ICT/Digital Health as well as broader health regulation in order to align efforts, and where possible, proactively influence the enabling environment.
STRATEGIC EVIDENCE AGENDA	PSI is institutionally developing a Strategic Evidence Agenda that ensures it is identifying the questions that support PSI to refine approaches and accelerate contributions towards Universal Health Coverage. Evidence collected through routine monitoring data, implementation research, program learnings, and strategic research will respond to these strategic questions and position PSI as a leading contributor to relevant communities of practice. The Agenda will include questions relating the application of digital health to health impact.

Initial efforts have been made to map health journeys and illustrate how digital technology can be used within and across health priority areas in support of the PSI archetype, Sara (Sam). In addition, more guidance will be needed to assess and align country initiatives with each other as well as with the larger PSI architecture and strategy for greater cumulative impact.

HEALTH JOURNEYS

There are a broad range of consumer facing health interactions that can be facilitated through digital technology in support of the PSI archetype, Sara (Sam), and her (his) family. Using the WHO Classifications for Digital Health, these largely sit within the Client and Health Provider categories, but also have implications for the Health System as well as Data Services. In addition, it is important to recognize that in some settings and for some interactions paper and other media like radio may be the most reliable and feasible information and communication technology for consumer engagement either due to lack of infrastructure or poor access to digital technology that might be related to age, gender, equity, and other considerations.

As PSI moves towards a more personalized, integrated and holistic approach, it is helpful to understand and identify common touch points and problems faced by consumers and map the range of solutions and support available in different contexts in relation to PSI's product and programmatic offerings that can be supported through digital technology implementations.

Health Journey Map Guiding Questions

1. How can digital systems support Sara's health journey?
2. What are Sara's touchpoints with digital by health area? What are the common supporting digital systems? How much do they cost? What cost-savings might they generate?
3. What are the current base and ideal states of digital systems at PSI to support Sara's health journey? What partnerships might provide cost-effective options to help achieve scale and accelerate engagement with Sara?
4. What does the path to data use to improve Sara's health outcomes look like at different levels of system implementation?
5. How can building a unique digital profile of Sara's health journey help us to deliver more personalized, higher quality care and better marketing insights?
6. What underlying principles for system implementation will support Sara's health journey?
7. What are the recommendations coming out of the digital strategy process to make this a reality? What should be done first and/or phased in based on the achievement of prioritized milestones?

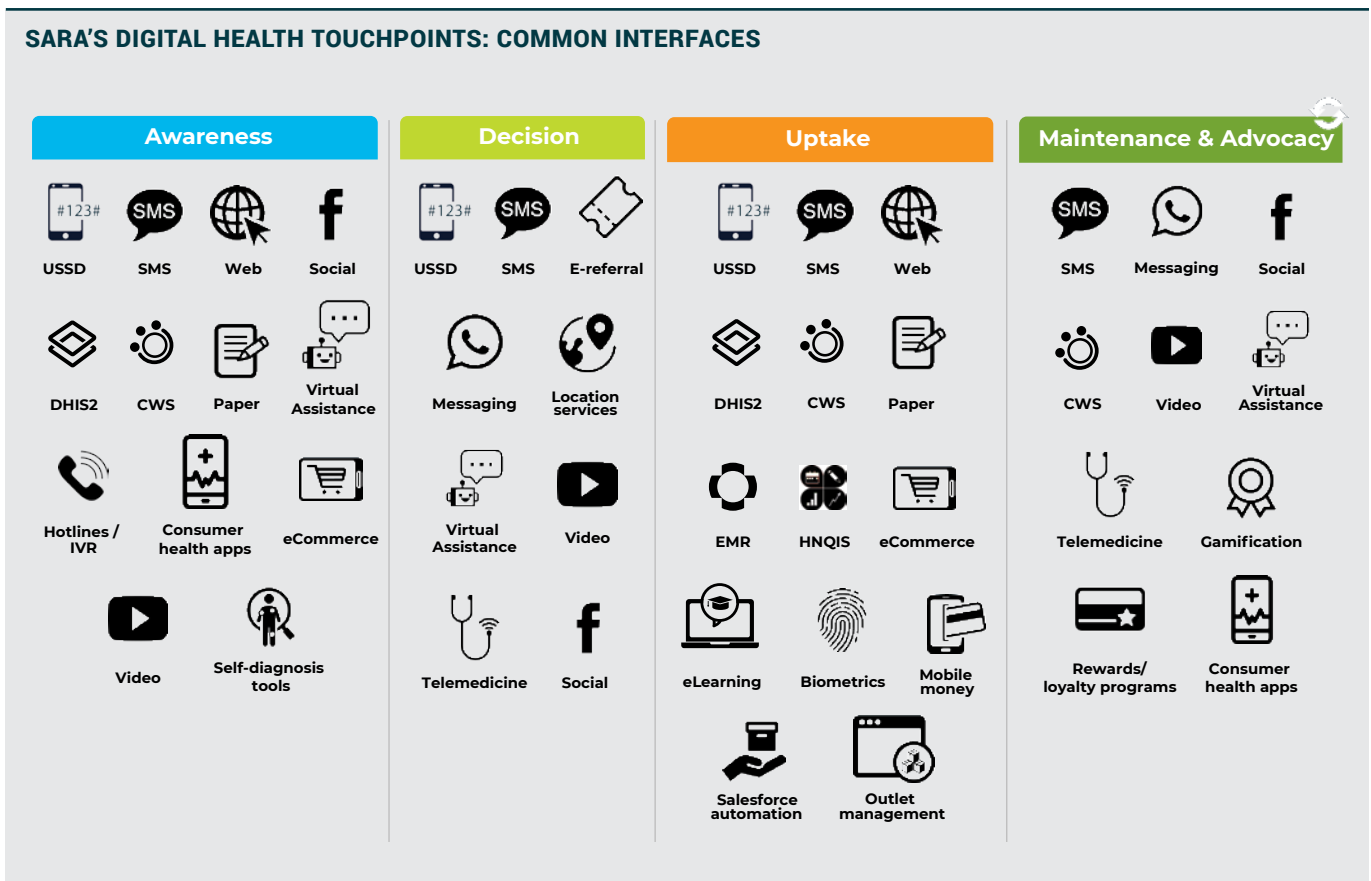
The breadth of these consumer-powered health journeys can inform PSI's architecture and begin to identify areas of standardization. Frameworks have been developed for Sara and Sam archetype health journeys for HIV, malaria, family planning, safe abortion, cervical cancer, hypertension and type 2 diabetes, and WASH. They are available in a companion set of slides.

Sara's points of entry to access quality primary care vary by health area and whether she directly accesses information and services or is supported through an intermediary such as a community health worker or agent, but there are similar stages along the path where digital solutions can support with common interfaces.

PSI's value proposition to consumers includes:

- Digital tools for self-diagnosis and self-counseling in conjunction with appropriate self-testing and screening products, providing Sara tailored guidance (instructions for use) and recommendations based on her health profile
- Digital companion support, including virtual assistance for self-care, support for adherence and continuation, and side-effects management
- Decision-support tools for providers and health workers to provide better care to Sara, including digital-aided diagnosis, treatment recommendations, behavior change prompts, and alerts based on Sara's health history
- Sara's on-demand access to her health record, including care history, lab results, reminders, and appointments

The state of connectivity and access to technology will inform the delivery channels used to engage Sara. Efforts will be made to provide a comprehensive personalized health and wellbeing experience for consumers across health areas.



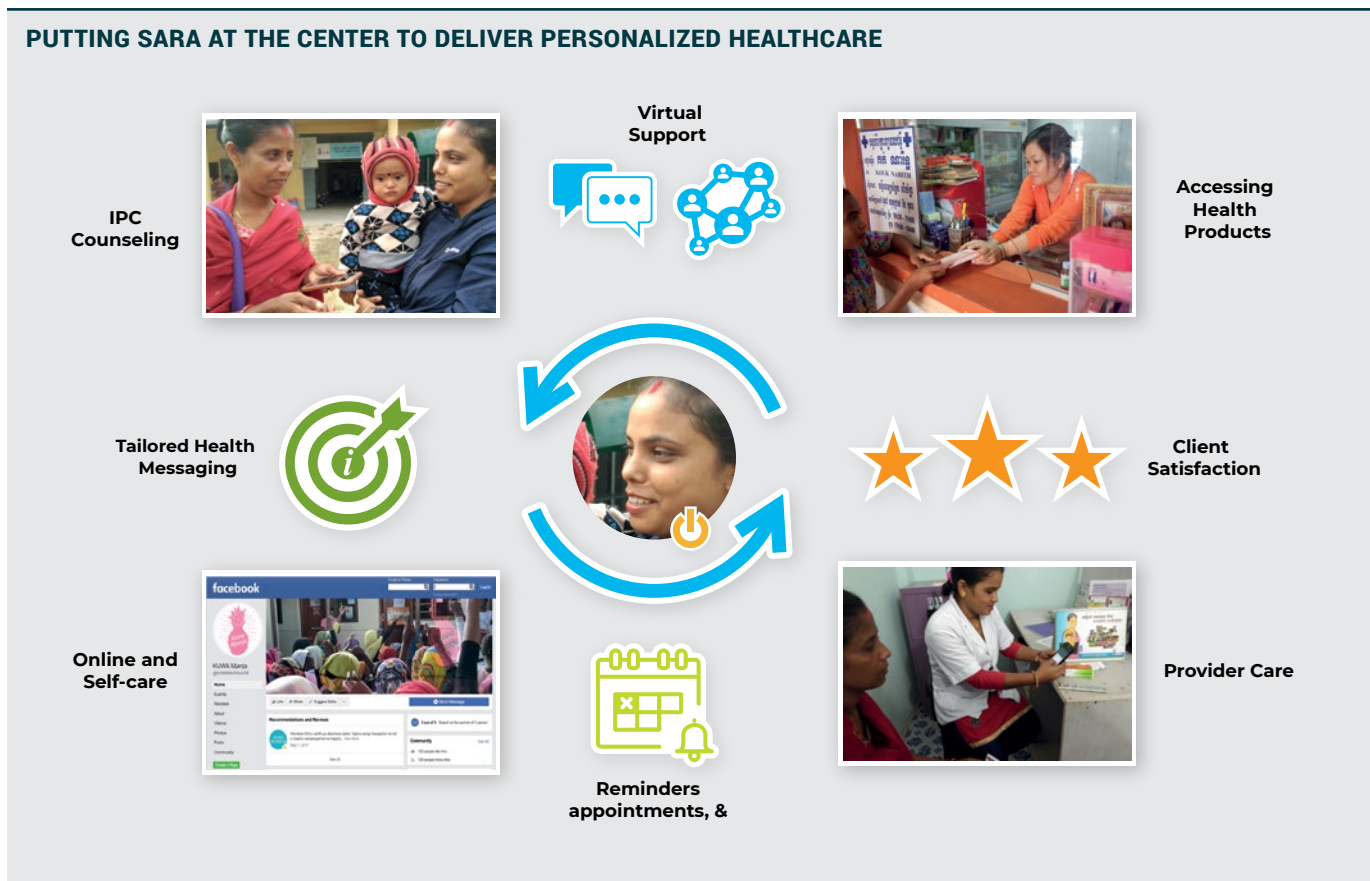
360° CONSUMER PROFILE

Once Sara is activated and consents for further engagement, PSI will seek to uniquely identify her at as many engagement interfaces as possible to build a single digital client profile of her health journey. As Sara's digital profile builds, deep analytics and virtual assistance tools can be used to offer her even more personalized and relevant health information, products, and services at each touch point based on prior engagements with her.

Data generated through personalized engagement with Sara will be used for market shaping, facilitating the ability of PSI to:

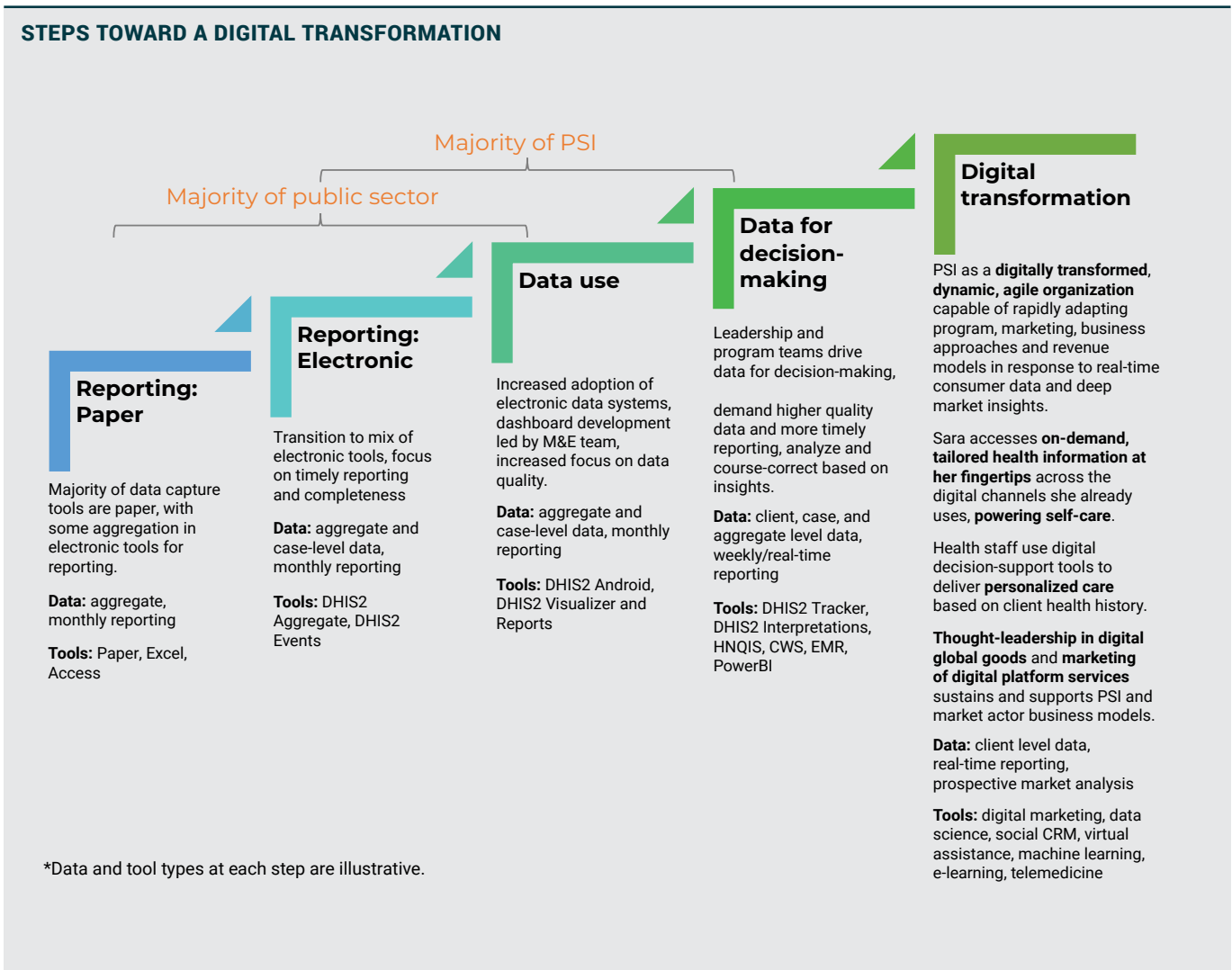
- Understand and support key drivers of conversion and sustained engagement along every step of the client journey
- Drive marketing strategies around the 'four Ps' to deliver a better consumer experience from end to end, driving demand and sustainability for social enterprise
- Execute targeted digital marketing and social media campaigns to reach Sara with timely, relevant information across channels she already uses, including web, social, and mobile
- Deliver a personalized health experience for Sara at every touchpoint based on our prior engagements with her
- Identify trends and forecast shifts in consumer sentiment and health-seeking behavior

PUTTING SARA AT THE CENTER TO DELIVER PERSONALIZED HEALTHCARE



Transparent responsible data policies and practices will need to be established within PSI for security and privacy and will be key to building trust with consumers and strengthening engagement with the public sector. Using push models will be necessary at the outset to build awareness of health issues and PSI's offerings. However, over time efforts should be made to transition towards a pull model where Sara comes to PSI through digital engagement as a trusted and valued source of information, services, and products. This will require strategic investments in on-going monitoring and feedback systems to ensure that digital interactions are facilitating the desired outcomes.

By linking its consumer and health service provider facing digital tools with its foundational investments in DHIS2, PSI will be able to strengthen its engagement with the public sector, generate data for decision making, and glean market insights for more personalized engagement. This aligns with PSI's work on data integrity and priority should be given to the development of digital pathways for data intensive efforts including those linked to PEPFAR and Global Fund with appropriate data strategies where the organization is in control of the full data value chain and where it is dependent on data from other sources like public sector or private companies. A reassessment of the data and information that is needed, how it is collected, how it flows, and how quality is ensured will be an important consideration as new digital tools are phased in and the architecture is developed.

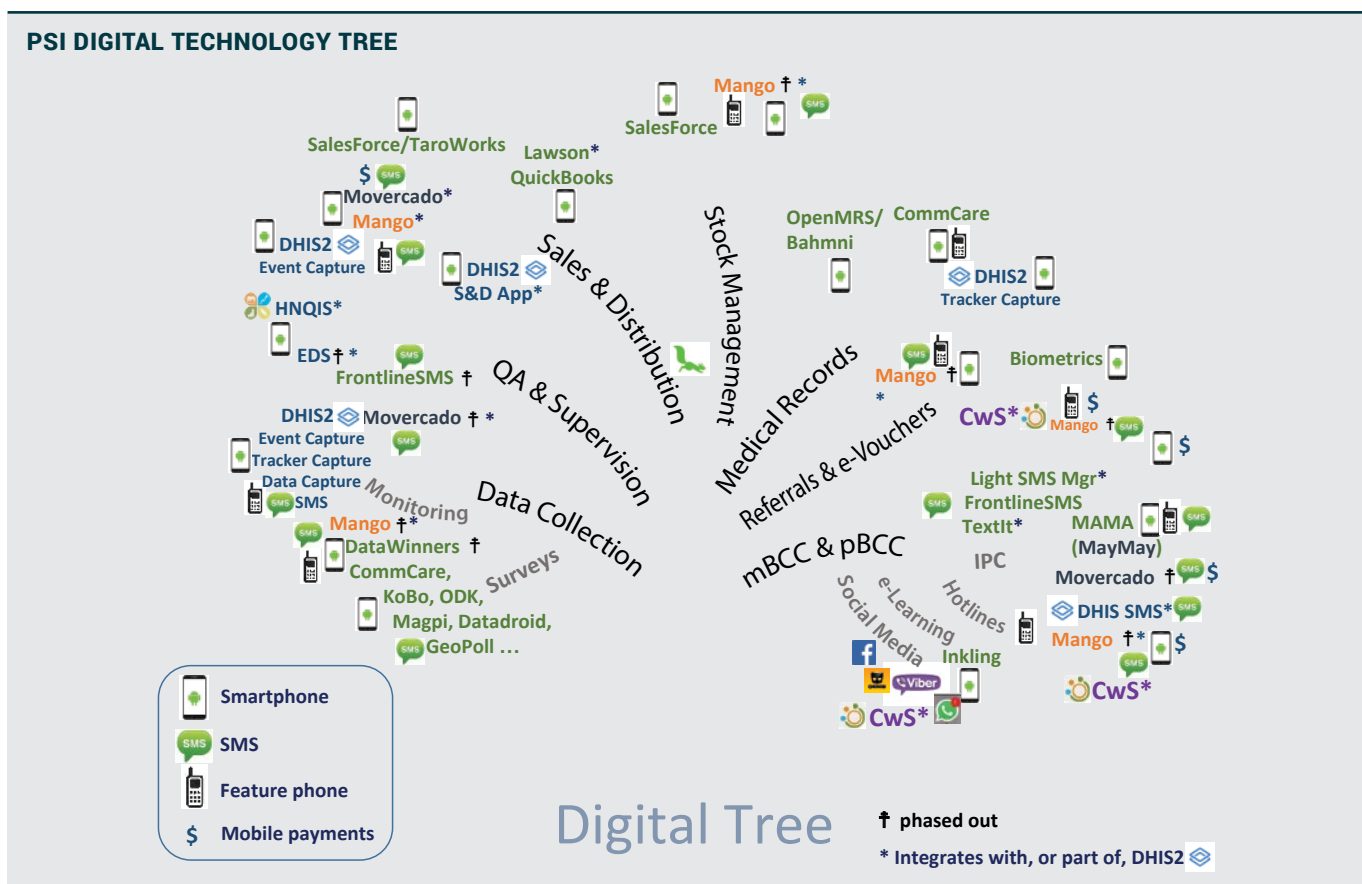


FROM STRATEGY TO IMPLEMENTATION

As PSI moves from the strategy development phase into implementation, it is important to articulate the ideal state, take stock of where PSI is now, explore external factors that are informing the strategy, and prioritize structures and approaches that should be undertaken to ensure a smooth transition. In parallel, technology investments need to evolve from the organizational perspective with investments in DHIS2 to the consumer perspective with greater adoption and use of platforms that consumers already use like basic mobile phones and social media. This will require strategic leadership and a more thoughtful and informed approach to collaboration and technology adoption.

CURRENT STATE

There are numerous digital technology and social media implementations ongoing at PSI with varying levels of adoption, scale, quality, and support. Since the early days of mHealth (2008-2011), PSI has been an active participant in the digital revolution, implementing some of the earliest mobile applications and hotlines with active participation in the mHealth Working Group. In 2012, PSI explored DHIS2 as a management information system (MIS)



for PSI's monitoring and reporting activities. Evolutions over time included re-aligning DHIS2 with country program activities to improve and enhance its use and develop extensions of DHIS2 like HNQIS for quality improvement and assurance and resource allocation as well as Connecting with Sara (CwS) for eReferrals. In addition, countries have had varying degrees of adoption of social media platforms with successful engagement of Cyber Educators by the Pan American Social Marketing Organization (PASMO) as well as Facebook for client education and informal telehealth in Myanmar and to lesser degrees in other PSI country programs. Among health service providers, several electronic medical records (EMR) systems have been deployed with the most recent successful large-scale deployment of OpenMRS Bahmni in Zimbabwe. PSI country offices have also implemented smaller scale programs with chatbots, CRM platforms, unique identifiers, biometrics, drones, and mobile money. A technology assessment of current and emerging technologies for consideration was conducted and available as a separate report.

The adoption of mobile applications and the development of digital tools and use of social media has historically been "organic" and arising out of an individual or group idea or response to a sales pitch by a technology company or vendor. Implementations have largely been siloed and skewed towards facilities and health systems as opposed to the direct to client engagement needed for consumer-powered health. They have also been approached with little consideration for long-term sustainability and maintenance.

WHAT PSI DOES: PSI'S DIGITAL EVOLUTION				
2012	2015	2016-17	2018	2019
<ul style="list-style-type: none"> PSI creates Global Business Systems unit (GBS) to replace fragmented boutique management information systems (MIS) with a global approach PSI explores DHIS as MIS Partners with University of Oslo to design multi-country DHIS2 instance PASMO launches first Cyber-Educators Strategy and intervention 	<ul style="list-style-type: none"> PSI increases DHIS2 use – the key global good MIS in public and private sector Ad hoc initiatives continue (Greenmash, Triggerize) Integration efforts with other systems PSI organizes the first DHIS2 Symposium for NGOs 	<ul style="list-style-type: none"> PSI established as DHIS2 leader HNQIS and Malaria Surveillance apps develop based on Principles of Digital Development Tunza EMR (Fortis) in Uganda 	<ul style="list-style-type: none"> External evaluation of PSI operating Model Client facing Connecting w. Sara app development PASMO develops regional digital technology and social media strategy (Cyber Educator project in Facebook) 	<ul style="list-style-type: none"> Renewed interest in more effective engagement, partnerships, global goods Keystone Design Framework rolled out Bahmni EMR in Zimbabwe Developing an AI Chatbot for youth on SRH topics

An external evaluation of PSI conducted in 2018 highlighted fragmentation, lack of coordination of technology, and no overarching framework for decision-making of PSI's digital implementations, primarily when it comes to proposing and using technology. In addition, as part of the digital strategy situational analysis- the following strengths, weaknesses, opportunities and threats were identified.

SWOT ANALYSIS

STRENGTHS

- Strong organizational strategy and alignment on vision and approach
- DHIS2 backbone as organizational MIS
- Alignment and contribution to Global Goods – global thought leader
- Strong technical teams in health, marketing, and evidence
- Strong country programs with solid engagement between program leads and technology teams
- Strategic focus on consumer-powered health and opportunity to use technology to motivate client engagement while also capturing data for decision-making

OPPORTUNITIES

- Market trend towards personalized health and individuals through shared/electronic health records and community case management and health apps and monitoring devices
- New technologies enable direct bi-directional engagement with clients (bi-product of technology use are insights into consumer behavior)
- Self-care interventions for sexual and reproductive health and rights and NCDs
- Greater focus on digital solutions for malaria elimination

WEAKNESSES

- No lead or oversight for digital technology in general or integration and coordination in particular
- Challenges with knowledge management and keeping track of everything that is happening related to digital technology at PSI
- Digital activities could stagnate and perceived to be overly dependent on or driven by DHIS2
- Limited systematic engagement between health, marketing and technology teams in decision making, design, and implementation of technology
- Inconsistency in implementations across countries - people dependent
- Demand has outstripped supply of digital services - unable to keep pace

THREATS

- Too many ad hoc engagements with technology companies and vendors without clear ask
- Contraction of HIV and USG funding
- Too many cooks in the kitchen
- Digital technology sitting within GBS is limiting
- Fragmentation by program and health area within and across countries with little standardization of content or technology and technology integration
- What should be adopted vs. built?
- Data privacy and security with more client facing engagement (risk)
- Technostructure in LMICs

SWOT = Strengths, Weaknesses, Opportunities and Threats

PSI's current digital technology implementations extend beyond digital health and include social media initiatives and technology approaches that make it easier for decision-makers to use monitoring and research data (through a Data to Action Approach). Therefore, the digital strategy has been developed with the independent and intersection of these areas in mind.

Conditions Impacting How Digital Technology is Approached

- Project-based focus on digital systems implementation and limited long-term core funding constrains opportunities organizational scale and system-wide benefits
 - Uneven digital capacity for data use, systems use, and support across organization leads to variable quality
 - Technology investment strategies for new business and partnership opportunities not aligned across departments and between country and global teams
 - System fragmentation and interoperability challenges leads to missed opportunities to build comprehensive digital health profiles of clients for personalized care and marketing insights
 - Low knowledge management of country system implementations misses opportunities to share lessons from successes and failures
 - Demand outstrips capacity for responsive global systems support
-

In order to achieve the digital vision and mission, PSI will need to re-organize and adopt a new structure to invest in and support its digital portfolio. Current challenges facing the existing structure are that demand is outstripping the supply, the need for more cohesion and coordination across global programs and country offices, and the underutilization of existing local capacity.

IDEAL STATE

With the rapid speed of technology, PSI will need to be nimble and responsive to real-time consumer insights and monitoring data as well as changes in technology, keeping an eye on emerging trends and investing in cross-country sharing and learning.

In the ideal state, PSI will co-design initiatives with consumers and view the health ecosystem through their eyes by leveraging global standards and principles for digital technology and the Keystone Design Framework. The ecosystem of tools, platforms and accompanying processes will sit within a leadership, governance, and accountability structure that balances organizational standardization and quality delivery and support with local flexibility and innovation.

A living repository will serve as a launching point for sharing standardized content and tools across sites alongside peer learning and exchange. There will be clear language and recommendations on prioritized tools and step-wise pathways that countries can follow based on their enabling environments, type of market and consumer access and engagement with digital technology in general and social media in particular.

Partnerships and funding will be effectively leveraged with an emphasis on impact, scale, and sustainability. All this will culminate in the improvement of health and well-being through the personalized delivery of health information, services and products.

GOVERNANCE

Underpinning the success of the digital strategy and desire to implement sustainable cost-effective solutions will be strong leadership and governance, clear decision-making criteria and processes, and accountability. While many of the global and organization-wide digital activities, such as DHIS2, HNQIS, and CWS, are currently led or supported by GBS with some engagement with the evidence team, the mandate has mostly evolved from roles in overseeing the organization's MIS. This has led to the implementation of digital technologies that lack a sustainable vision and core funding with high cost for maintenance. At present, there is no clearly articulated governance or decision-making framework for evaluating, assessing, and making digital technology partnership and investment decisions. This has led to some technology activities being led by health teams and programs, some by marketing, and others by countries.

A revised structure will enhance PSI's capabilities, generate better insights through improved coordination and more strategically place PSI as a leader in the digital technology for health and marketing sectors. It will only be effective if it has the mandate and the support from the larger organization to do so. It is recommended that the revised structure has dual reporting lines to Strategy as well as to the CIO. Digital technology is inherently multi-disciplinary and cross-cutting. Country offices that recognized this and adopted a matrix structure for digital technology tend to have better collaboration, coordination, stronger alignment and more responsive innovation. It is recommended that RAPID be more proactively used in digital technology-related decision making and should be used to jumpstart the transition into the new strategy.

To overcome past challenges, there will be a greater need to establish clear criteria and processes for decision making that prioritizes the following:

1. Engaging health, marketing, and country teams in the decision-making so that the digital tools that are prioritized and implemented are both appropriate to evidence-based health practice, program structures, marketing practices, and country contexts.
2. Establishing mechanisms for joint design processes and oversight over delivery by health, marketing, operations, and evidence teams.
3. Redefining the role of GBS in relation to its engagement on the organizational MIS, public sector adoption and use of DHIS2 and related services such as HNQIS, and new digital solutions design and implementation.
4. Establishing a Digital Solutions Group to facilitate cross team and country coordination, provide delivery support for technology design and implementation, provide accountability and quality assurance for technology implementations, assess and evaluate technology viability and effectiveness, cultivate strategic partnerships, and support knowledge management and thought leadership.

5. Making strategic hires, beginning with the Digital Strategy Officer and then building the team's capabilities in the following key areas as resources become available:
 - a. Data science and analytics
 - b. Digital marketing
 - c. Digital design
 - d. Digital finance
6. Appointing focal people within major organizational departments to lead on digital technology activities within their teams and liaise with the Digital Strategy Officer and Digital Solutions Team
 - a. Digital leads/ liaisons in major health areas and programs
 - b. Digital leads/ liaisons on marketing team
 - c. Digital leads/ liaison on evidence team
 - d. Country digital lead/ liaison
7. Appointing regional digital coordinators and developing decentralized support structures- as this will take time to establish, mechanisms and processes for support from HQ should be updated and clearly communicated to country and program teams

At the global level, a governing council and matrix structure should be adopted for digital technology. The Digital Strategy Officer, Digital Governance Council, and the Digital Solutions Group will together to engage with digital focal people within health, marketing, evidence, and country teams for better prioritization, identification, leverage, coordination, documentation, and sustainability of digital programs and staffing.

As a dedicated resource, the Digital Strategy Officer- should have high-level oversight and accountability of the digital strategy, strategic collaborations, coordination, and internal progress. This individual should also have a strong familiarity with global trends, drive PSI's thought leadership in the digital space and introduce structures for improved knowledge management and documentation for internal learning and advancements. They would ultimately function as the 'glue' and support more coordinated collaboration across the organization.

Digital Strategy Officer Profile

Senior leader with consumer-facing digital technology leadership experience — either with social media and viral campaigns, digital marketing, and/or customer relationship management to capture, engage, and sustain relationships with consumers over time- preferably in the health or related sector. Strong communication and coordination skills, broad knowledge of digital technology trends, and strong networks and relationships with large multi-national consumer facing technology companies.

As time and funding permits, the role should be mirrored either by region and/or market groups and function as a conduit for coordination, peer exchange, and learning. For example, the regional or market group coordinator can work with country offices to establish a living roster of local 'stars' and expertise that other country offices can work with and learn from, rather than waiting for technical assistance to be flown in from out of the region. In addition, as capacity gaps are identified and addressed and current staff are provided with training, this pool of more local resources should grow. Standardized protocols and approaches will need to be developed and communicated for those who want to request and receive support.

The Digital Strategy Officer will co-convene the Digital Governance Council with the CIO and serve as the lead for the Digital Solutions Group, which will be a shared resource with GBS. GBS will maintain its organizational responsibilities in supporting the organization's MIS and other DHIS2 activities, while the Digital Solutions Group will focus its work on digital tools for consumers and the health system.

Proposed PSI Digital Governance: Digital Governance Council

The purpose of the Digital Governance Council will be to:

- Drive and monitor implementation of the Digital Strategy 2019-2023
- Provide updates on latest digital projects and opportunities
- Decide and prioritize implementations and technology (based on feedback from digital health and systems leads)
- Support implementations through market leads
- Disseminate knowledge on latest trends and opportunities at all levels (e.g. country opportunity, strategic direction, global projects and feedback from stakeholders)
- Explore, vet, and decide strategic partnerships

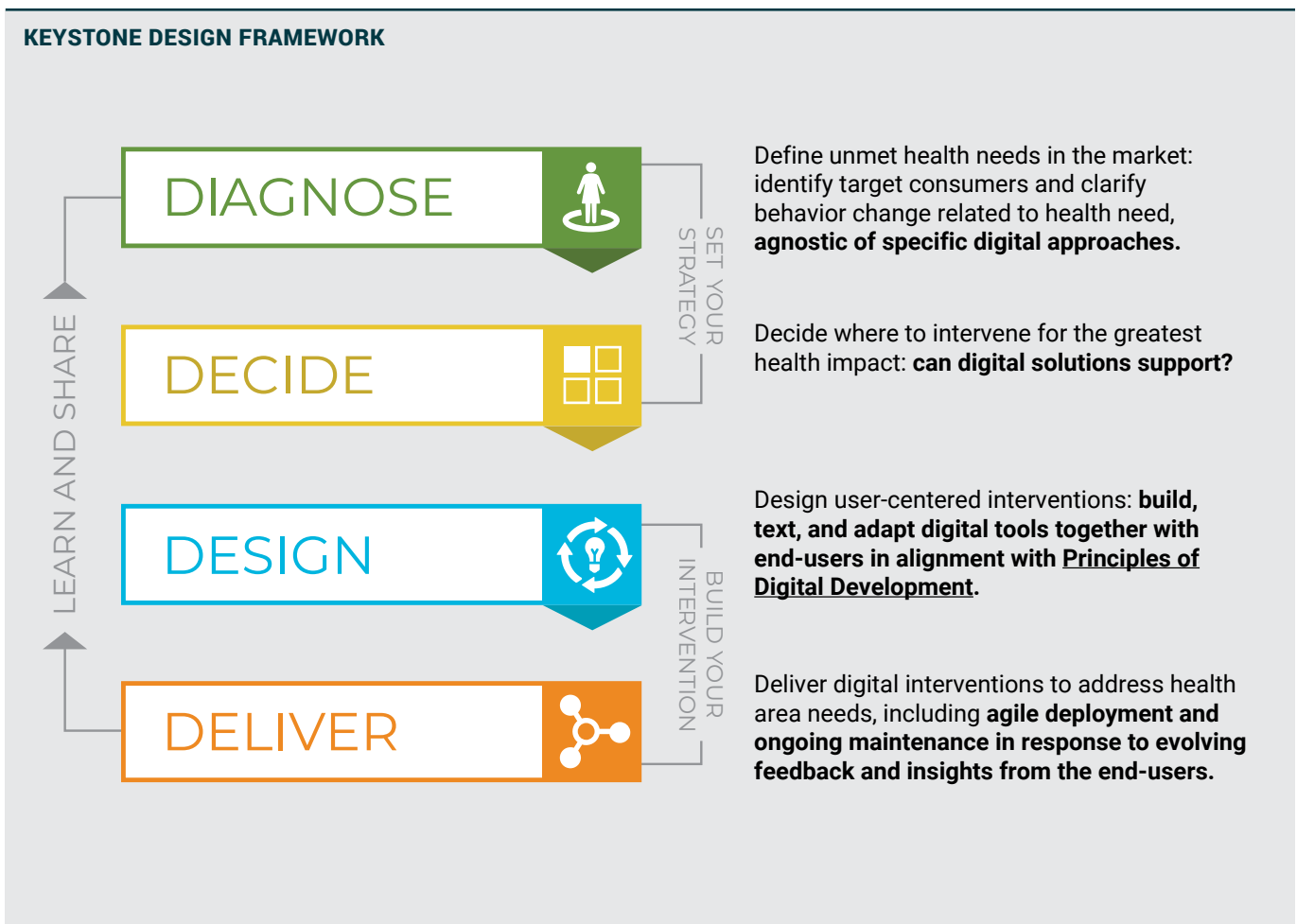
The council composition will include:

- A Market VP
- Executive level
- Social Enterprise
- Digital leads from health, marketing, and evidence teams
- GBS
- Digital Solutions Group
- Country digital lead from each market group
- Regional digital coordinators
- CIO

Meetings will be led by Digital Strategy Officer and held on a bi-weekly basis with participants attending as their schedules enable. A terms of reference for the group will be developed to ensure that decision making processes are clear.

COUNTRY PATHWAYS

As an organization, PSI will need to assess how it approaches digital technology based on the type of market (acceleration vs. foundation) as well as the general maturity of the technology environment. To date, 'successful' countries have strong country leadership that is open to innovation and willing to adopt, have a strategic vision or know who to turn to for support to fill in gaps and invest in staff, have management layers that make good, aligned decisions and get things done. Countries that appear to struggle do so mostly because of the enabling environment – that limits what is possible as it affects culture/attitudes/perspectives towards technology, digital literacy, technostructure, ownership, etc. Moving forward success will be measured by how much a country's digital activities contribute to the country's ability to engage consumers and the health ecosystem to deliver better health outcomes in the push towards consumer-powered health.



In addition to consumer journeys, a country's market and enabling environment dictate appropriate possibilities as it relates to digital technology interventions. The Keystone Design Framework lends itself well to helping countries consider the needs of the consumer within the context or market that the consumer lives and operates.

In addition to the Keystone Design Framework, it will be important to continue to use the RAPID decision-making framework so that the right people are involved at the right time in the process. Where possible, existing technology should be adapted. If a new digital technology is being explored at the global level, then a consensus approach across health teams, programs, and countries should be undertaken. Whether a global or local intervention, there should be consideration of how it integrates into PSI's overall architecture. Strong prioritization should be given to Global Goods and the Principles for Digital Development should be systematically applied to the assessment, design, implementation, and evaluation processes.

PRINCIPLES FOR DIGITAL DEVELOPMENT



Design with the User



Understand the Existing Ecosystem



Design for Scale



Build for Sustainability



Be Data Driven



Use Open Standards, Open Data, Open Source and Open Innovation




Reuse and Improve



Address Privacy and Security



Be Collaborative

Stewarded by  Digital Impact Alliance

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STRATEGIC PARTNERSHIPS

PSI's ability to deliver on its digital strategy vision and framework will be strengthened through strategic partnerships, starting with those that focus on consumer engagement, service and product delivery, marketing, and insights. The appetite for donors to fund software development is low and strategic partnerships with Global Goods software developers and large- and small-scale technology partners will be the path forward. To engage effectively, PSI will need to establish criteria and apply a disciplined approach in order not to adopt tools that may or may not have impact, integrate well with what PSI is already doing, scale cost-effectively and be sustainable. Organizations and governments are beginning to institutionalize digital solutions departments, allowing them to self-start and better coordinate their own technology implementations. The following table lists a series of questions to help vet potential partnerships to better align with PSI's priorities, principles, and values.

Notable new potential strategic collaborations for PSI include working with incubators and startups, academic institutions, large technology companies and innovative governments. Incubators and startups provide pools of local talent with contextual awareness; they are often hubs for innovation and creativity. Academic institutions can often provide interim support through fellowships and specialized technical knowledge; many innovations in technology emerge from academic labs; they also function as a strong research partner to support the validation and evaluation of the feasibility and effectiveness of digital tools. Large technology companies have extensive human and financial capital that they leverage to push boundaries and solve problems.

Strategic partnerships can add value by bringing in expertise or products and services that can be immediately adapted or adopted for use by PSI. They can also help alleviate staffing burdens, but they are often time intensive and require clear scopes of work and consistent oversight and management. Partnership vetting will be important collaborations being explored for scale and sustainability either at a country or multi-country level- appropriate due diligence will be needed to ensure that the partners align with health, program, marketing, and evidence team needs.

PROBLEM STATEMENT

- Does the product already exist within the PSI ecosystem?
- What is the need? How does it align with the PSI focus on consumer-powered health and digital strategy?
- Is this need specific to a particular program or technology approach or does it have broader implications?

FIT

- What is the partner's vision and mission? What is the partner's value add?
- What are their core values? How do these align with PSI's values, the Principles for Digital Development & Global Goods?
- Are any other entities doing similar work / have similar offerings? Why are they not being considered?

RESONANCE

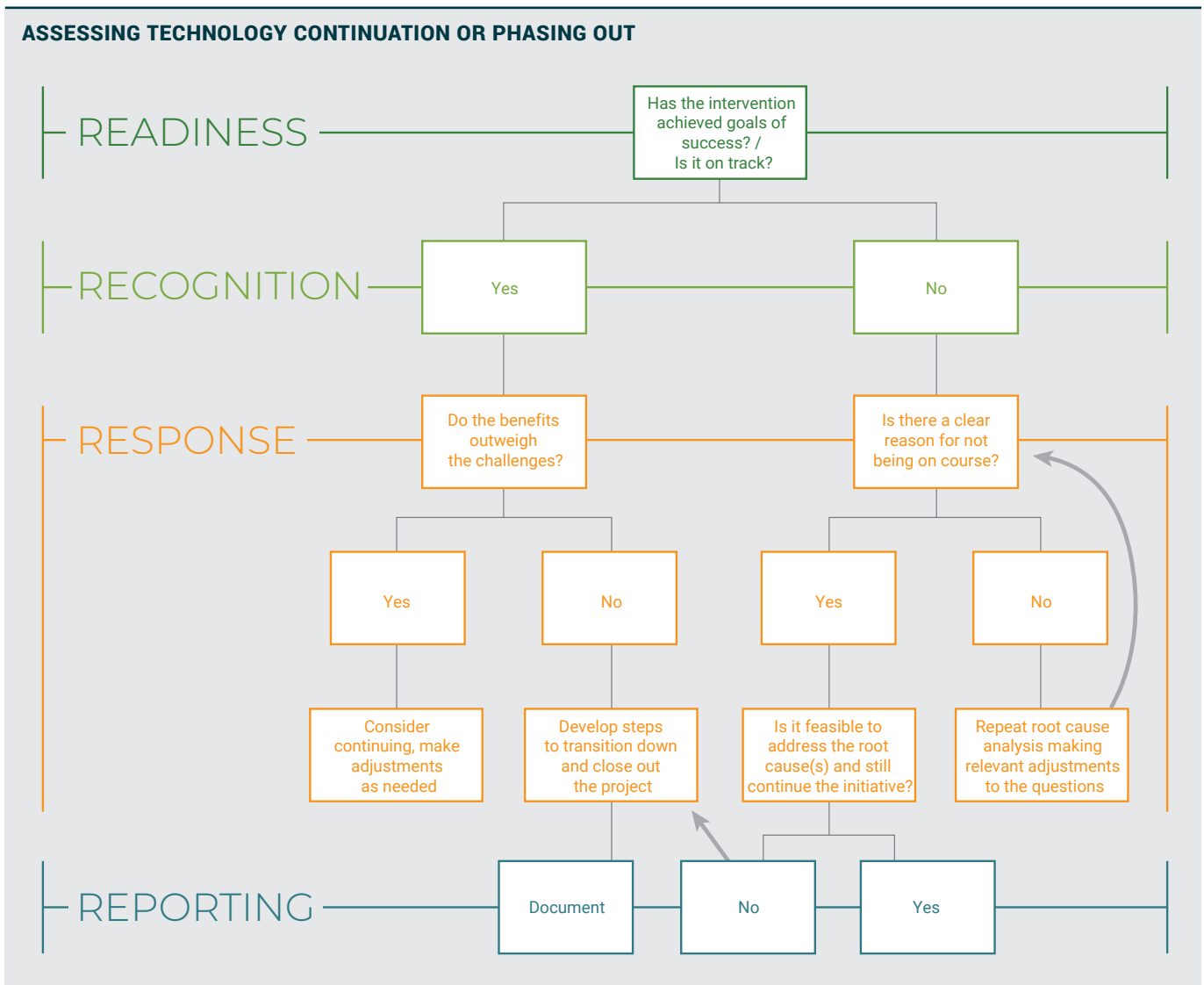
- Has PSI worked with the partner before?
- What was the outcome? Why?
- Who [else] have they worked with?
- What else have they done that is similar to PSI's use case and need?

RELEVANCE

- What are they offering and why is it helpful to PSI?
- How well does it fit the need? What value are they adding?
- How well does the solution fit into PSI's architecture? Is it interoperable?
- Is there an opportunity for PSI to grow with this partner?
- What is the cost to PSI (e.g., people, content, cost, approach)?

ASSESSING SUCCESS, POTENTIAL FOR SCALE, OR TIME TO PHASE OUT

Inherently in the adoption of technology – there will be successes that will need to be built upon and failures that will need to be acknowledged, addressed, and/or phased out. As such, there should be routine assessments of digital technology investments and implementations. For country specific investments- especially those that are being considered for scale up or for promotion to government, these should be led by country offices. Theories of change can facilitate the linking of health and program outcomes to technology workflows and prioritization. Setting quantitative targets and qualitative measures of success at the beginning of an implementation along with milestones will be necessary to track progress. This will help with key decision making, especially when determining the success or failure of an implementation and/or when an initiative has met its goals and the intervention is no longer appropriate. This process should involve key stakeholders using a consensus approach with transparency. Where appropriate, tools like the MAPS toolkit and the Digital Health Atlas should be used as a self-assessment by countries to evaluate and strengthen digital implementations once proof of concept in the formative design and testing phase has been completed.



As part of PSI's global Strategic Research Agenda (SEA), the organization will be exploring the extent to which digital technology has supported the delivery of health outcomes from a consumer powered healthcare lens. A set of overarching and health area specific research questions relating to digital will be established, explored and used to determine the attributable outcomes associated with digital health. An example of an overarching research question to be explored is *'Can consumer facing digital tools improve agency, equitable access and maintenance of services?'*. An example of a health area specific research question to be explored is in the case of HIV *'Can a particular digital strategy support continuation among PrEP users?'*

FINANCING

There are a number of financing mechanisms that digital can draw upon, including non-traditional funding (e.g. Maverick), traditional funding (DFID/USAID), and PSI overhead resources. There are also specific innovation funds and innovations baked into wider RFPs. A blended finance approach can also be explored to support different phases of technology investment, for example mobilizing Maverick funding for exploration of organization-wide strategic investments as well as linkages, traditional funding for scaling, overhead funds to maintain support to a core suite of tools. The Digital Solutions Group will also need to work closely with the Business Development team to ensure that any technology solutions written into proposals are fit for purpose and appropriate budget are developed. Furthermore, challenge or innovation funds should be reinstated. They allow for local innovation and problem solving, they also help identify potential regional or global solutions and provide countries with a platform to showcase innovative problem-solving successes and failures.

Funding the digital strategy will require some new investments in new consumer facing partnerships and technologies, restructuring and recruiting strategic hires in key areas, new approaches to investment in organization-wide digital technologies as indicated above. In addition, new investments in ethnographic study of consumer adoption and use of technology will be needed to ensure that digitally supported information, products, and services are appropriate and designed in collaboration with users. This includes a targeted focus on differential adoption and use of technology by gender, age, education, literacy, and other socio-demographic factors that impact how well a technology is adopted and its use is sustained.

PSI works in a competitive field that is increasingly crowded with new players, shifts in funding, and emerging technologies. In addition, as funding priorities shift among major donors like USAID, PSI's collaborators have increasingly become competitors.

PSI's focus on consumers across a broad range of health domains sets it apart from its competition and positions the organization well to push more heavily into direct to client and consumer engagement, selfcare, and personalized health.

PSI's competition has digital health programs in HIV/AIDS, SRH, malaria, immunizations, NCDs and general health with the most common digital technology systems and interventions being direct to client messaging programs, health information systems (community, facility, pharmacy, lab), human resource management tools, health finance tools, geographic mapping and learning and training tools. Smartphone applications, websites, social media (i.e., Facebook, Twitter, YouTube) and SMS are the most common modalities used to deliver digital health interventions. Sub-Saharan African countries are the most frequently represented, followed by Asia and South America. PSI's competitors are increasingly putting into place digital strategies, executive leadership,

and departments. In comparison to most organizations, PSI is ahead of the curve with its organization-wide adoption of DHIS2 and in some countries with its strategic use of social media for consumer engagement. It is on par with its competitors in its adoption and use of technology by community health workers with most implementing CommCare, MedicMobile, or OpenSRP in similar ways to how PSI uses HNQIS with the benefit of additional functionality and without being impacted by changes in DHIS2. PSI should build on its thought leadership position regarding supportive supervision of service providers through HNQIS as an add on to DHIS2. Many are also now integrating technologies across an enterprise architecture to link platforms to OpenMRS and DHIS2. Most organizations struggle with transitioning from program driven siloed technology development. PSI's focus on consumers with diversity of funding and technical expertise in health and marketing will enable it to transition into a more coherent approach faster.

Donors are increasingly investing in Global Goods alongside integration and architecture approaches that overcome interoperability challenges and facilitate meaningful data use. In the first year, PSI should explore how its architecture can align with what is happening within the ecosystem in collaboration with Digital Square and the Health Data Collaborative.

Donors are also better aligning investments with other donors based on country government priorities and needs. Recently, the Principles for Digital Development and the Principles for Donor Alignment for Digital Health have been incorporated into the Digital Health Investment Review Tool (DHIRT), which provides guidance and resources for donors to use when evaluating proposals and implementers to use when designing their approaches. PSI's commitment to Global Goods and the Principles for Digital Development, cultivating a data use culture as well as its established architecture are all advantageous for PSI. The Maverick Collective has also been a more flexible source of support at PSI towards achieving a strategic vision for digital technologies and providing core support to digital health investments.

Principles for Donor Alignment in Digital Health

1. Collaborate
 2. Prioritize national plans
 3. Quantify costs
 4. Track and measure
 5. Strengthen donor skills and core capacities
 6. Invest in national strategies
 7. Invest in maturity continuums of systems
 8. Invest in country capacity
 9. Invest in global goods
 10. Invest in sharing and peer-learning
-

SUSTAINABILITY

A key challenge for PSI as well as for others investing in digital technologies is sustainability. To address this, PSI will need to account for it as part of its governance and financing for start-up, scale up, and on-going operational costs. In addition, consideration will be needed for support costs, maintenance, and upgrading and migrations as new versions and new tools become available. There are three main models for sustainability

in digital technology- these include pay to play- including subscription services, private insurance, and savings models; partnering with large scale private sector companies (including technology, pharma, insurance, etc.) that have nationally deployed infrastructure and support capabilities; and government adoption- making the case through cost-effectiveness and utility studies to inform public investment. It will also be critical to align activities within the global and national technology and digital health strategies and ecosystems and advocate for policies and standards that facilitate digital enabled consumer-powered health, starting with Global Goods. Sustainability can be achieved only if there is a core investment from the organization at the beginning to play a catalytic role to make the digital strategy happen.

Global Goods are digital health tools that are adaptable to different countries and contexts. Mature digital health global good software is software that is usually Free and Open Source Software (FOSS), is supported by a strong community, has a clear governance structure, is funded by multiple sources, has been deployed at significant scale, is used across multiple countries, has demonstrated effectiveness, is designed to be interoperable, and is an emergent standard application.

Guide to Sustainable Investments in Digital Technology

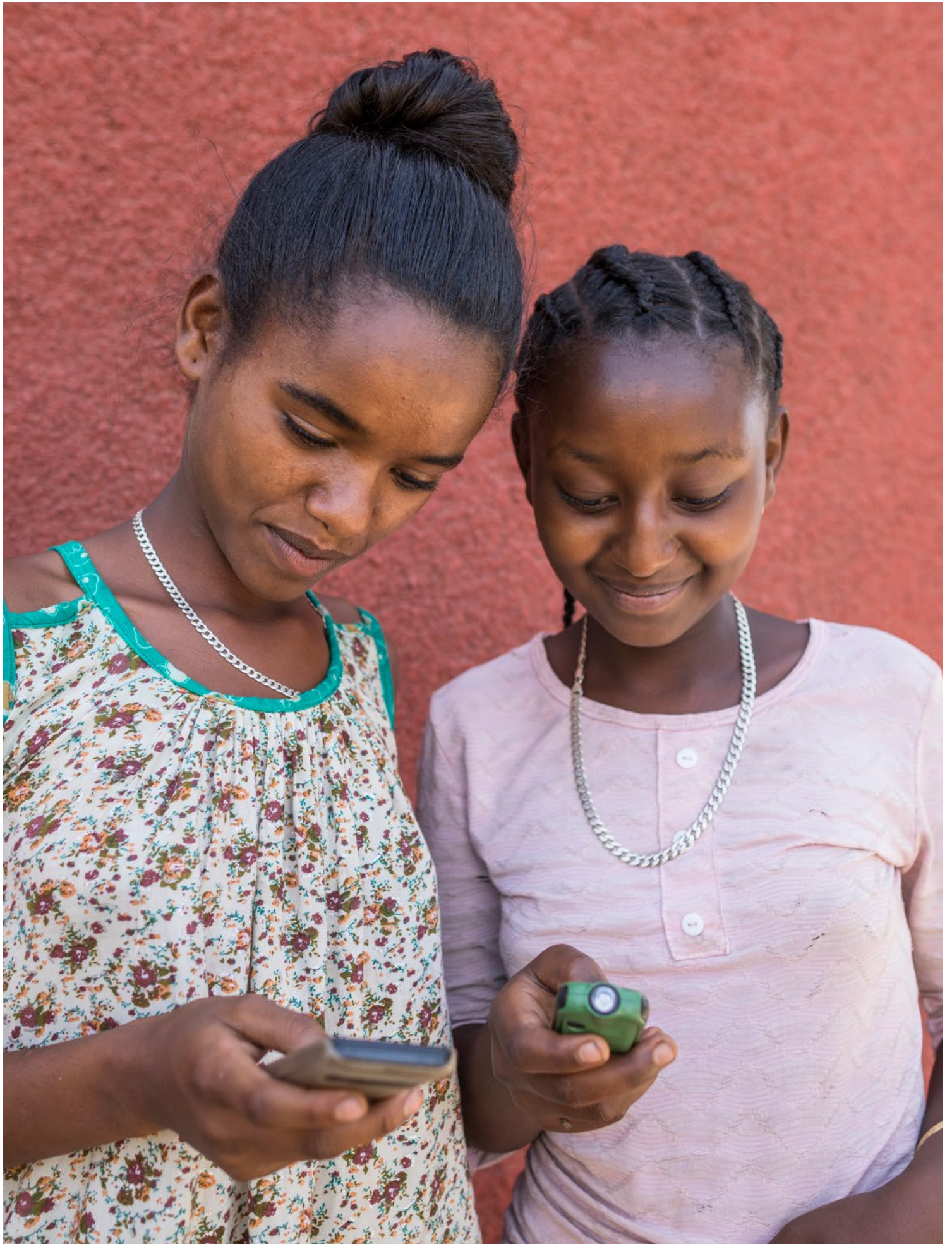
- Where Global Goods-based systems meet requirements, adopt and adapt existing tools in the market, rather than build new tools
 - Leverage existing experts in community, support systems, training resources, and best practices to support implementation
 - Build community capacity and establish thought leadership and best practices in data use, sharing knowledge with other market actors and public sector
 - Share open source innovations with the community and co-develop further adaptation and ongoing maintenance
 - Pricing for proprietary solutions should be scalable and sustainable; avoid transaction-based pricing
 - Where possible, establish ownership of any new developments and build organizational capacity for ongoing management; avoid licensing
-

COMMUNICATIONS AND EXTERNAL ENGAGEMENT

Within the global health ecosystem there are few if any true thought leaders that focused on consumer-powered health, and hence no one that is driving the effective use of technology by consumers. This is an important gap that PSI can and should fill. At present, PSI's thought leadership is largely focused on DHIS2 and should continue in this role and support, as its founder, for the DHIS2 Symposium. In the future, it will be important for PSI as an organization to be recognized as the global leader in digital enabled consumer-powered health. The organization should become more actively engaged with the Global Digital Health Network and the Global Digital Health Forum. In addition, PSI should consider playing a leadership role in the intersection of digital technology and selfcare. To do this, PSI should begin by launching and developing a communications strategy for its digital strategy and related partnerships, milestones, and success stories.

CONCLUSION

PSI's Digital Strategy 2019-2023 leans into the organization's unique positioning in consumer-powered health by articulating an ambitious vision towards personalized, longitudinal digital engagement to drive the development of consumer-powered, user-centered systems. To succeed, PSI will need to take a systems approach to strengthen and build on its back-end investments in DHIS2 while adding a more robust focused effort on front end consumer-facing technologies- supported by an architecture that facilitates real-time feedback loops for marketing insights and decision-making. Strategic partnerships with large consumer-facing technology companies will be needed to reach the scale and impact PSI is striving for particularly in accelerated and transition markets and technology decisions aligned to market groups and technology maturity. New governance and coordination mechanisms as well as investment in strategic leadership will be needed to facilitate the transition into the new strategy along with new approaches to financing digital technology investments. Through its digital strategy, PSI will be well positioned to more effectively leverage digital technology to achieve its goal of faster, sustained, increased health impact.



CATEGORY	ACTIVITY	2019					2020																	
FINANCE	Establish approach for overhead allocation for digital technology as part of updated financing structure at global, regional and country levels																							
KNOWLEDGE MANAGEMENT	Develop a living repository of digital technology implementations in SharePoint using the WHO Digital Health Classifications & Digital Health Atlas																							
KNOWLEDGE MANAGEMENT	Engage countries (and regional/global staff) in process to make submissions to the repository (and maintain it)																							
KNOWLEDGE MANAGEMENT	Develop process and templates for routine documentation (supplemental to the MAPS Toolkit-based repository), 'good' implementations, challenging implementations and other lessons																							
KNOWLEDGE MANAGEMENT	Provide guidance within Keystone Design Framework on best practice engagement with digital solutions and develop case studies of how it works in different health areas and country programs																							
TECHNOLOGY DESIGN	Digitize the Keystone Design Framework																							
TECHNOLOGY DESIGN	Trial and refine the digitized Keystone Design Framework and identify and integrate where appropriate with other technology implementations																							
TECHNOLOGY DESIGN	Develop strategy for ethnographic research on health and digital literacy and insights in (at least) countries representative of the different country pathways and health priorities																							
TECHNOLOGY DESIGN	Conduct ethnographic research and document and share across cross section of prioritized settings (with strategic focus on self care and UHC)																							
TECHNOLOGY DESIGN	Develop, test, and implement country needs assessment tool and guide based on alignment with digital strategy and architecture																							
TECHNOLOGY DESIGN	Set standards of practice for digital identity management based on country pathways																							

ACKNOWLEDGMENTS

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