



PSI DIGITAL STRATEGY

Prepared by HealthEnabled
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ACRONYMS

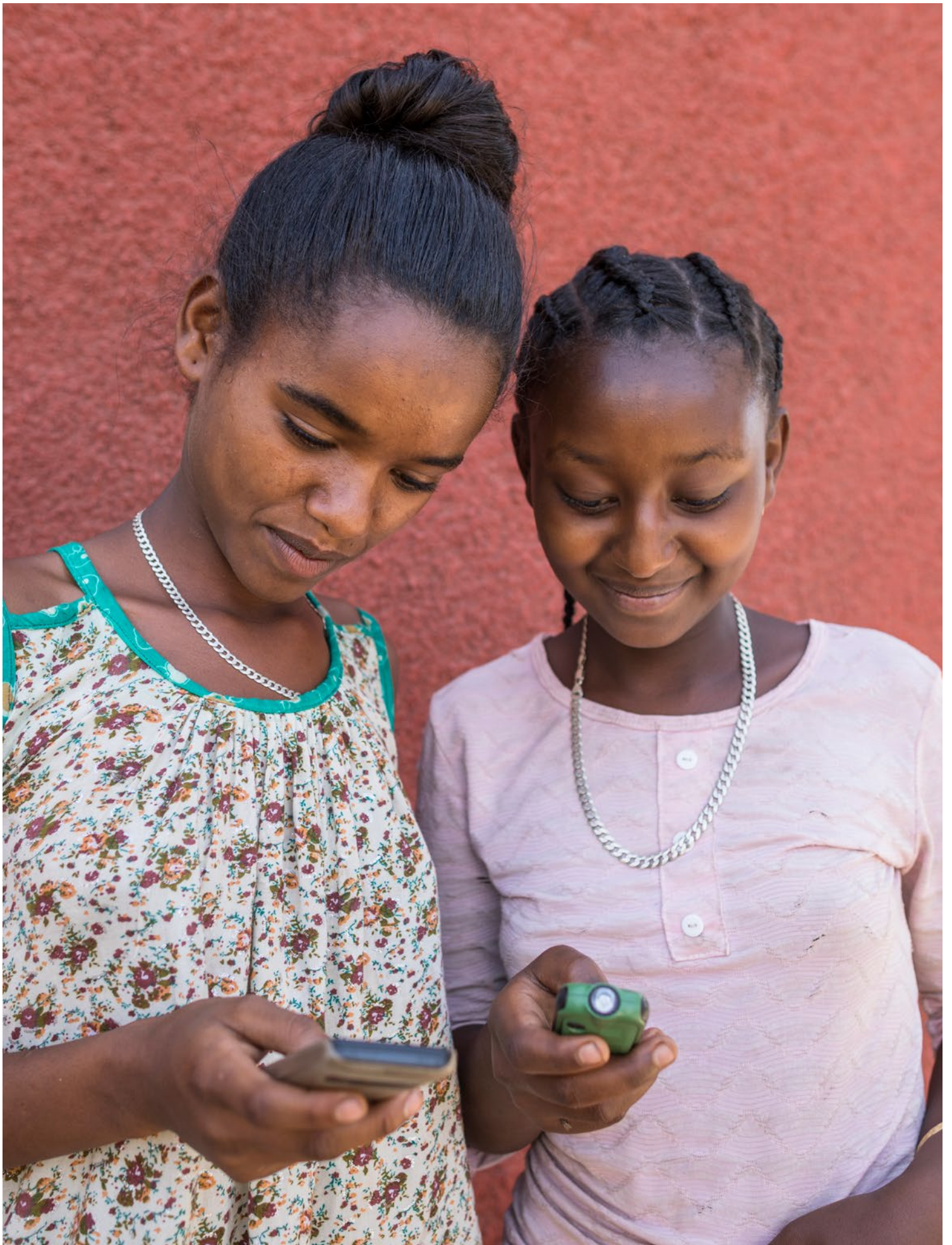
AI	Artificial Intelligence	NCD	Non-communicable Disease
CIO	Chief Information Officer	OpenIMIS	Open Insurance Management Information System
CRM	Consumer Relationship Management	OpenLMIS	Open Logistics Management Information System
CwS	Connecting with Sara	OpenMRS	Open Medical Record System
DfID	Department 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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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.

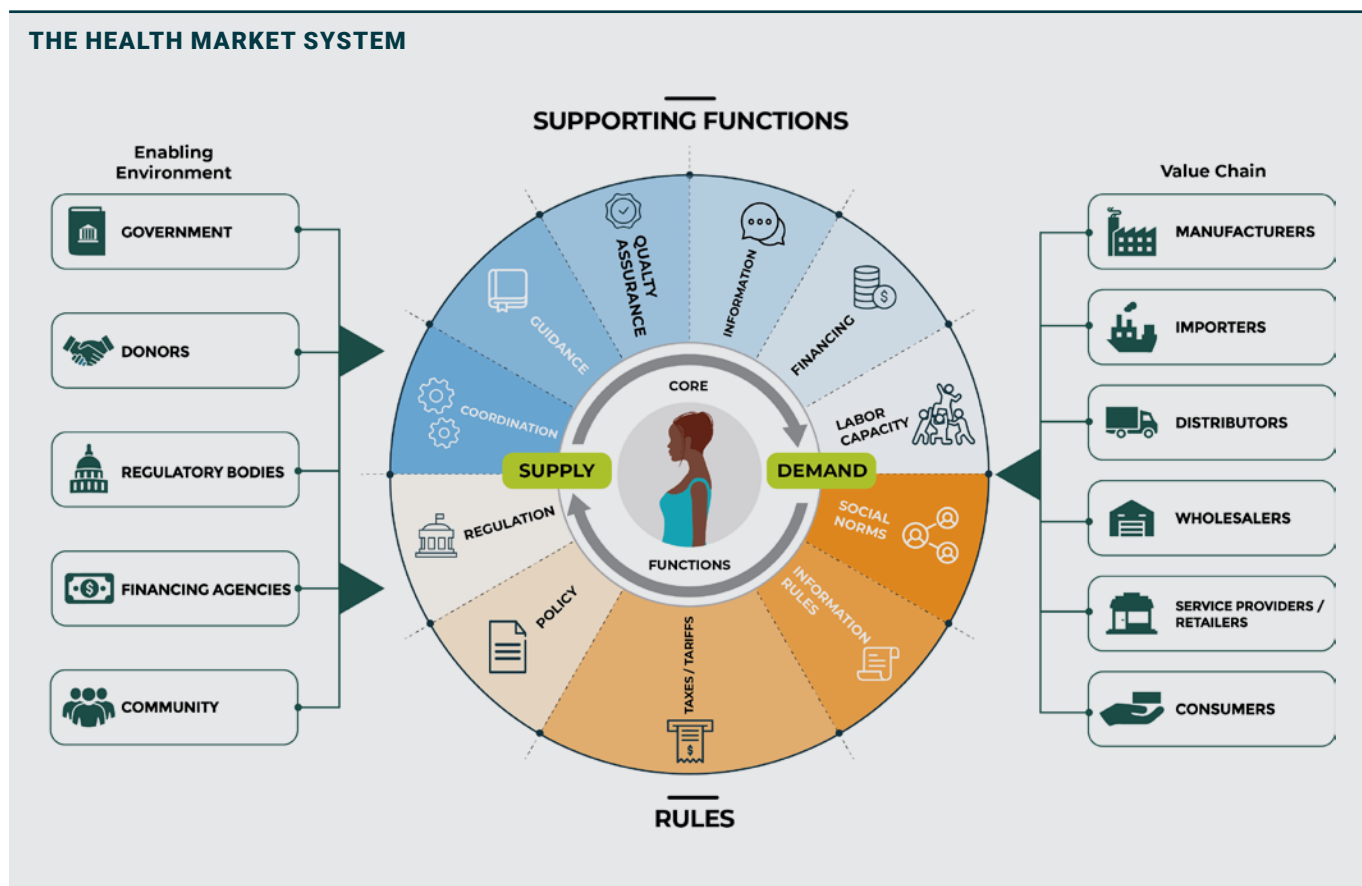
ENABLING THE HEALTH AND TECHNOLOGY ENVIRONMENT

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.

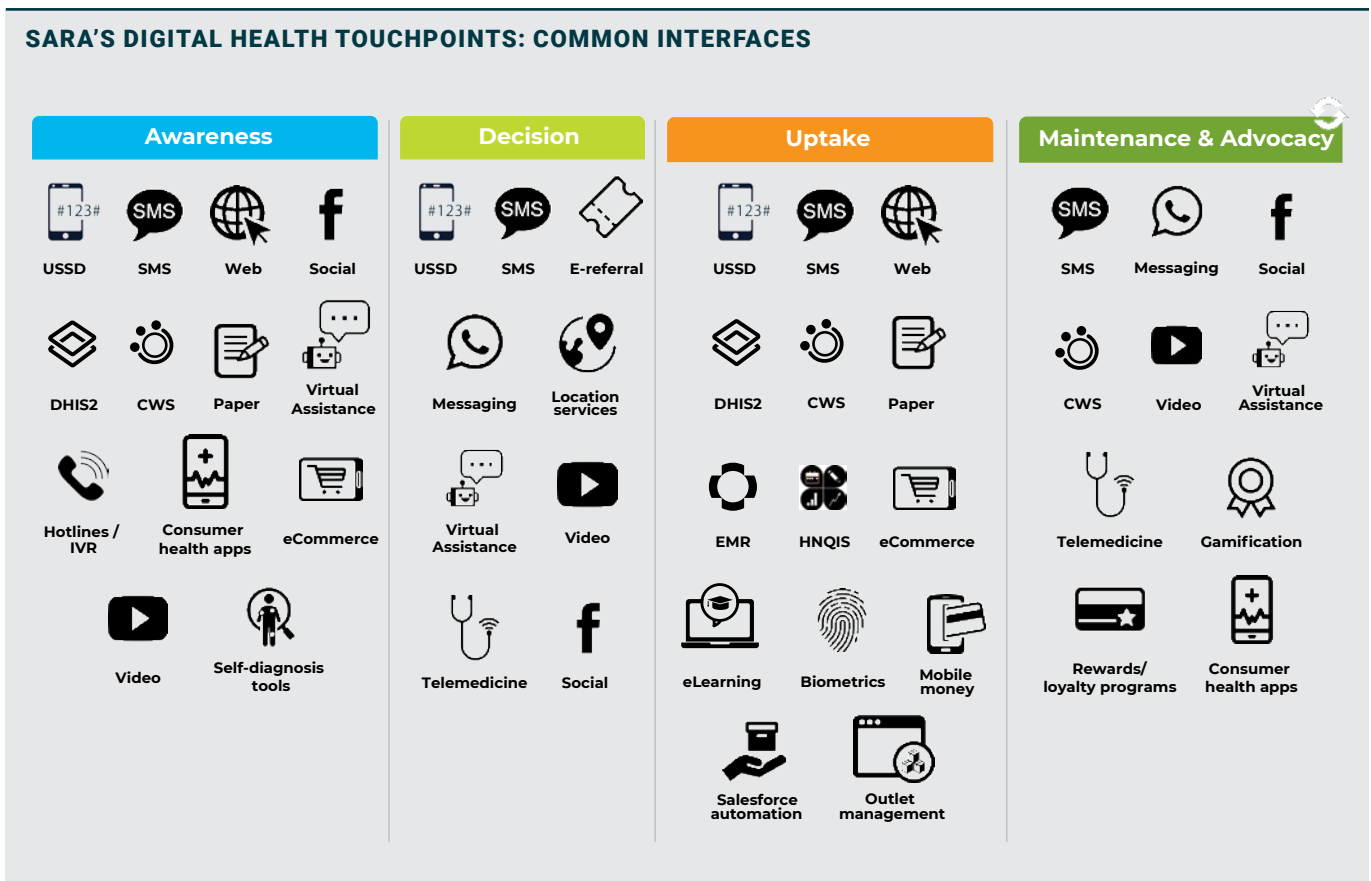
Sara's points of entry to access quality primary care vary by health area and whether she directly accesses information and services or is supported through an intermediary such

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.



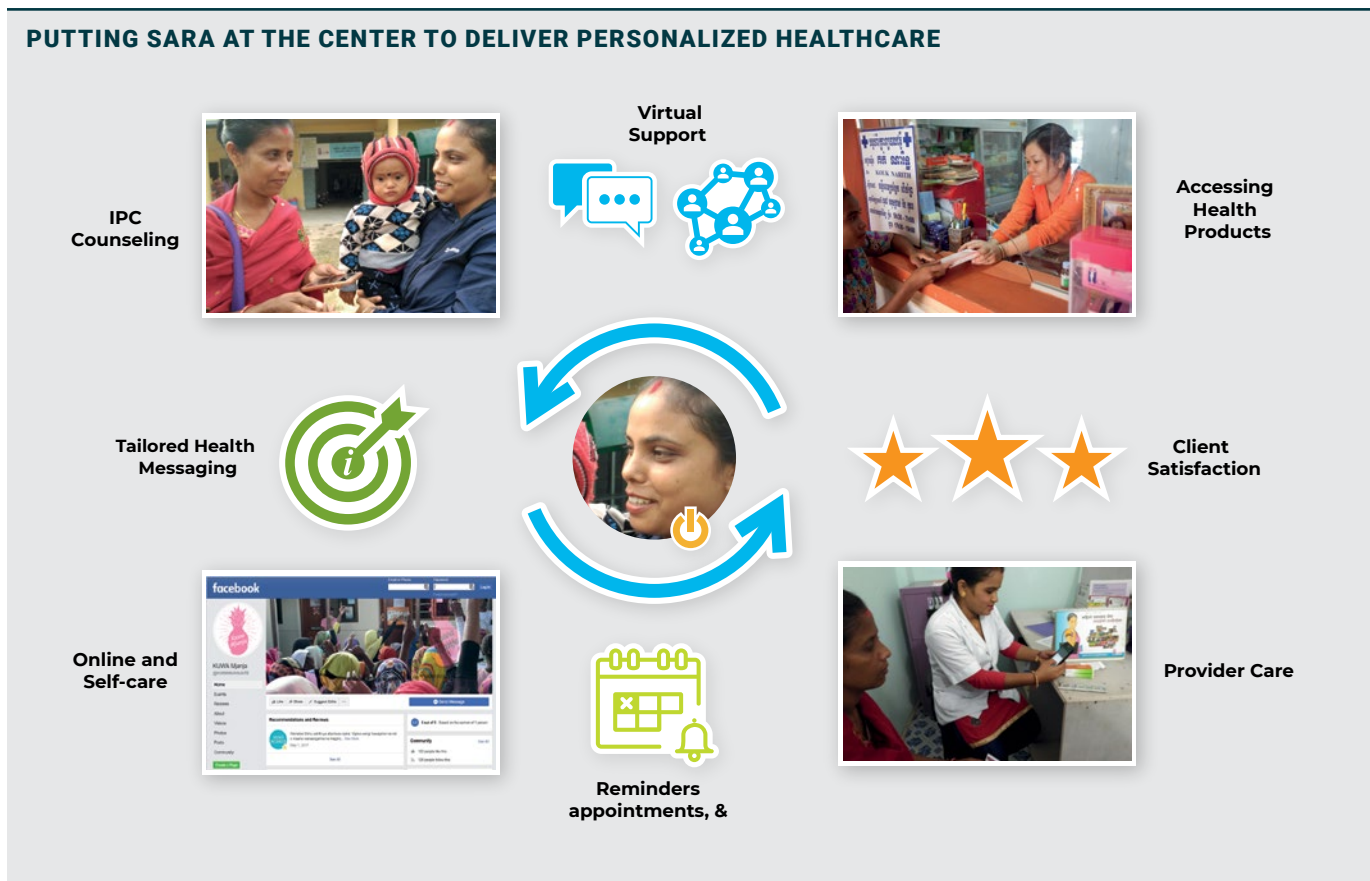
360° CONSUMER PROFILE

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:

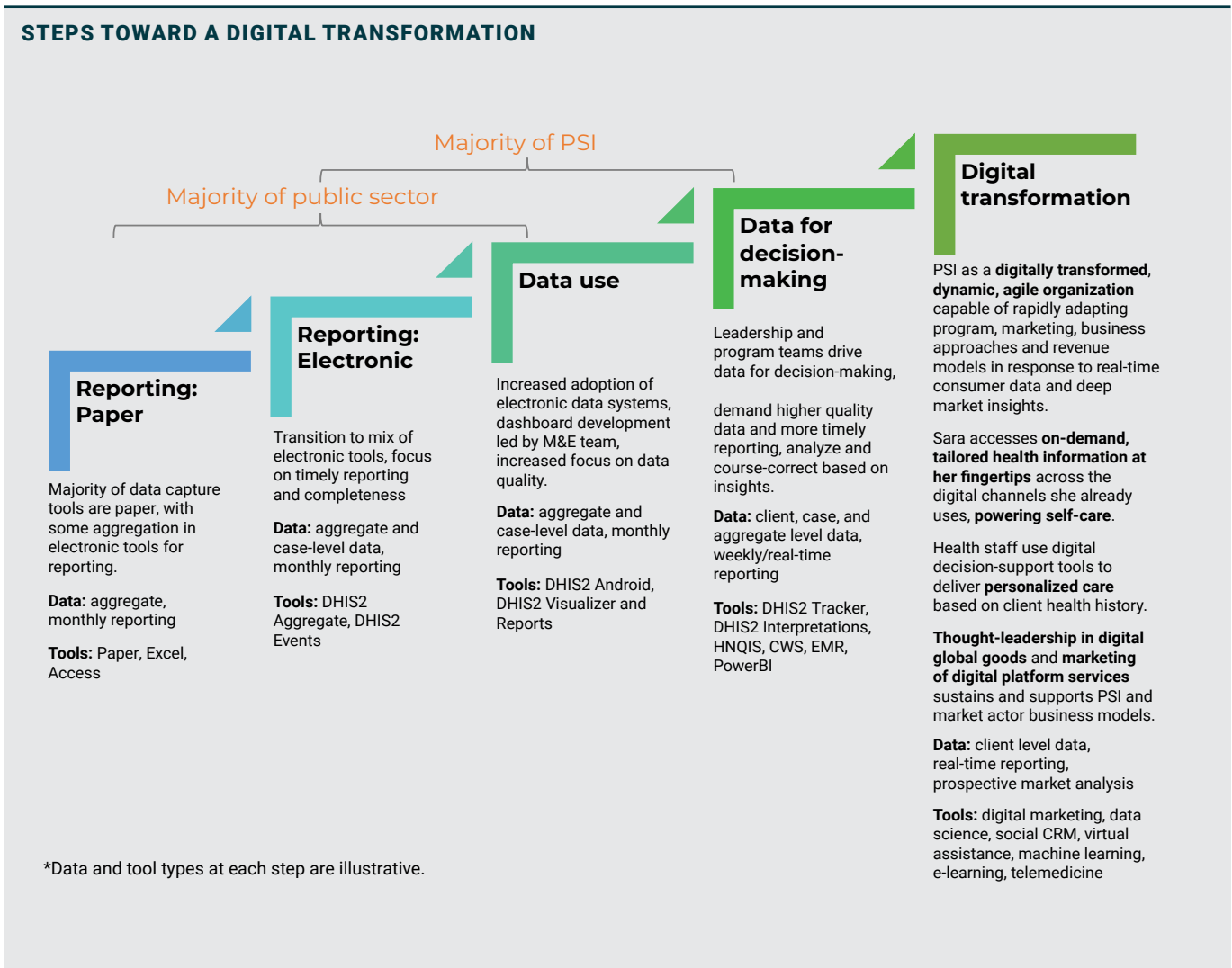
- Understand and support key drivers of conversion and sustained engagement along every step of the client journey
- Drive marketing strategies around the 'four Ps' to deliver a better consumer experience from end to end, driving demand and sustainability for social enterprise
- Execute targeted digital 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.







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