AI4Health: Maternal Health Perspective

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Referral of high risk mother by CHW

- Near term high risk pregnant woman had regular ANC checkup at village level by CHW

- CHW used fetal doppler for measuring FHR

- Identifies heart rate below 100 bpm and consistently low

- CHW convince family to take expecting mother to district hospital

- C-section performed; **baby saved**

- **Doctor surprise on timely referral**

Technology for last-mile care

CareMother: Quality pregnancy care solution with decision support tool

Fetosense: Wireless digital CTG for fetal monitoring with auto-interpretation

1L+
Visits made

35K+
Mothers reached

1K+
Villages Covered
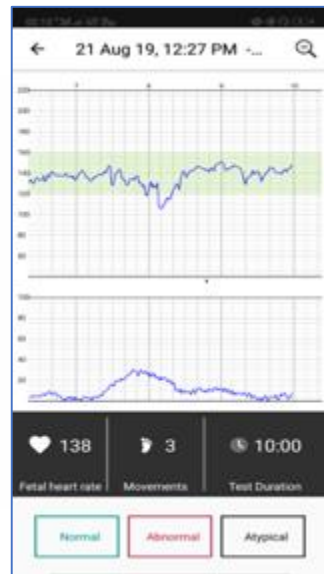
10
States Marked

15+
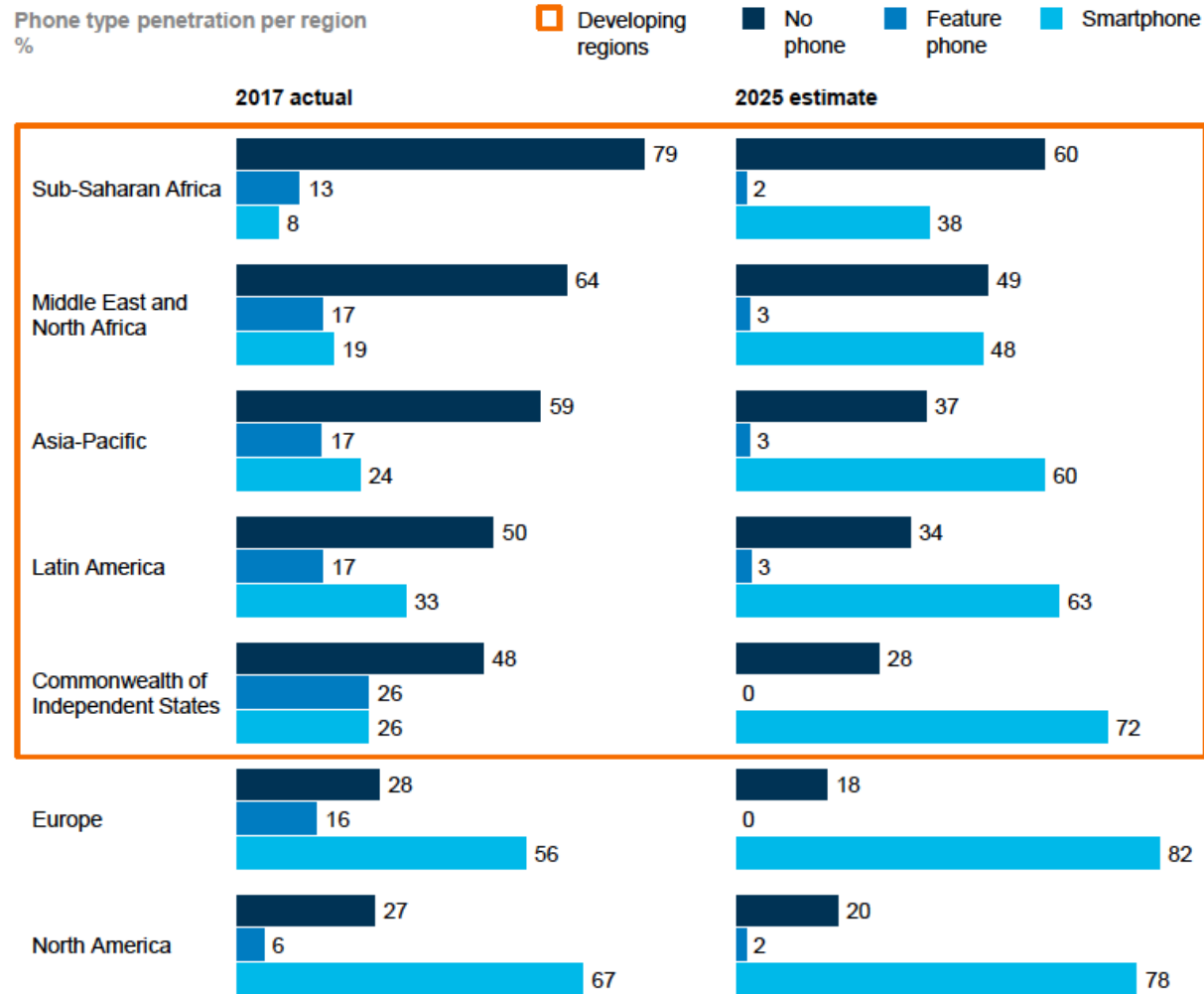NGO Partners

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Govt. Partners

AI for maternal and child health

- AI powered decision support tool for CHWs and doctors

- Prediction of high risk pregnancy

- Preterm Prediction

- Auto-interpretation of fetal heart monitoring/labor monitoring

Smartphones and cellular data as Infrastructure

Phone type penetration per region %

Legend: ☐ Developing regions ■ No phone ■ Feature phone ■ Smartphone

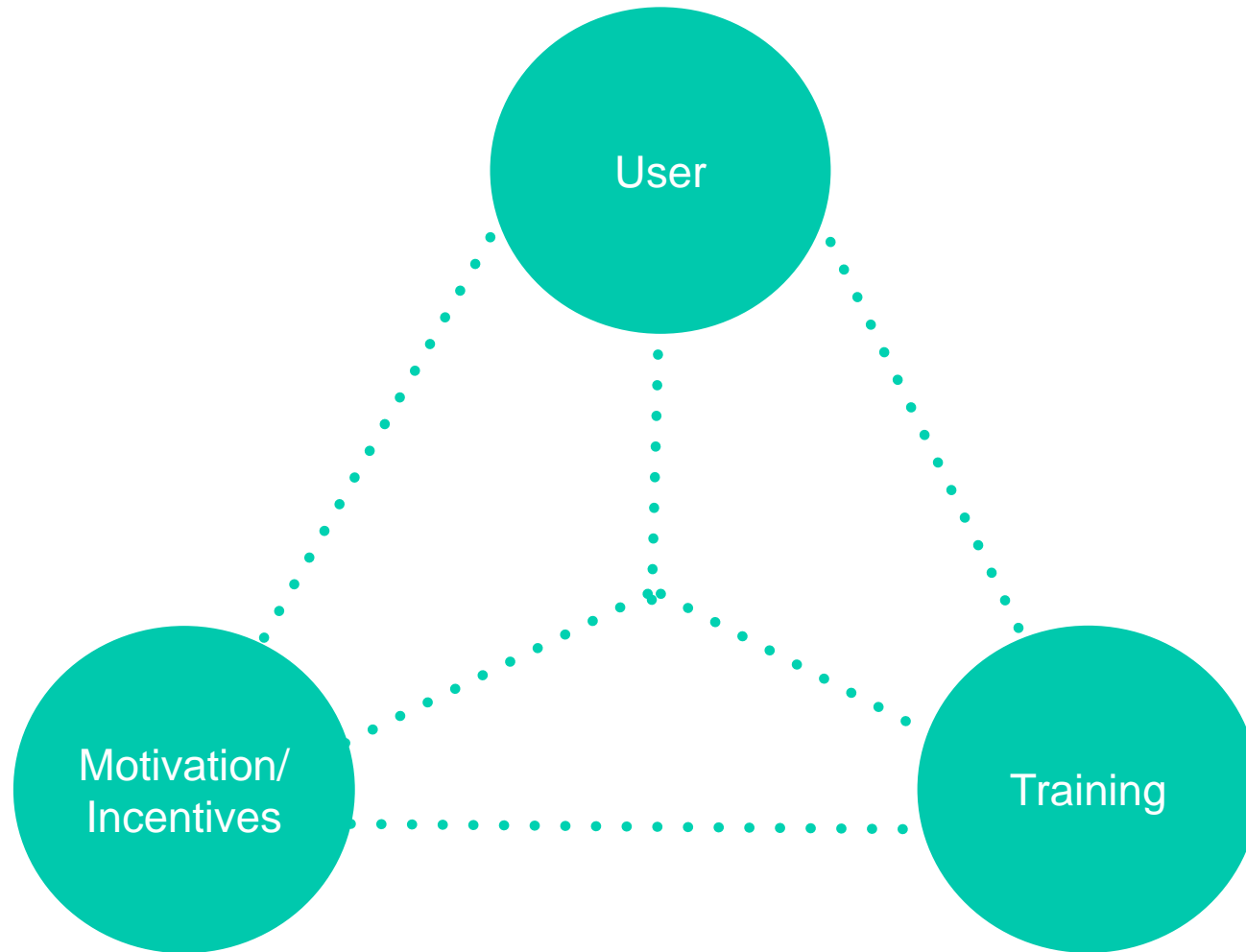| Region	2017 actual No phone	Feature phone	Smartphone	2025 estimate No phone	Feature phone	Smartphone
Sub-Saharan Africa	79	13	8	60	2	38
Middle East and North Africa	64	17	19	49	3	48
Asia-Pacific	59	17	24	37	3	60
Latin America	50	17	33	34	3	63
Commonwealth of Independent States	48	26	26	28	0	72
Europe	28	16	56	18	0	82
North America	27	6	67	20	2	78

- ANMs/Anganwadi workers are being equipped with smartphones/tablets

- 1 Million+ health-workers collecting data everyday from village level

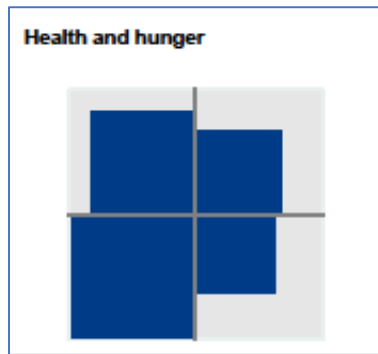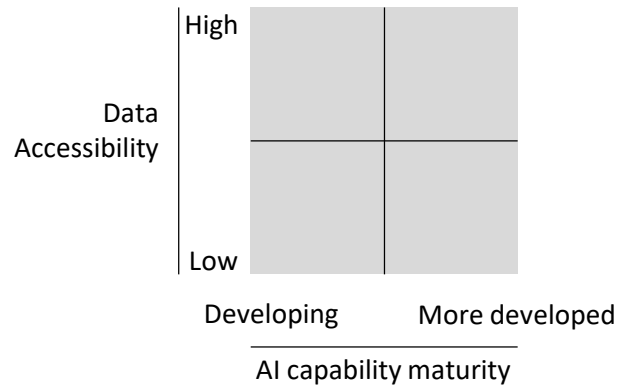- Families/Patients can be a source of data directly if digital solutions involve them

Source: The Mobile Economy, 2018, GSMA, 2018

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'Design for them'

Design and introduction of technology

REPORTING   Vs   INTERVENTION

Data and Need of AI framework for nation

Data Accessibility (vertical axis: High / Low)
AI capability maturity (horizontal axis: Developing / More developed)

Health and hunger

Source: McKinsey Global Institute Analysis

- Requirement of huge amount of accurate and reliable data

- Biases, Black Box and Results to not known cases etc.

- Control on data source for quality

- Ethical issues

AI4Health in India need a framework

Platform/sites across country to build and test AI models

Framework supporting quick collaboration and plugin

List of priority problems to solve with AI support

The real test of 'knowledge' is not whether it is true, but whether it empowers us!

- Francis Bacon, 1620

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