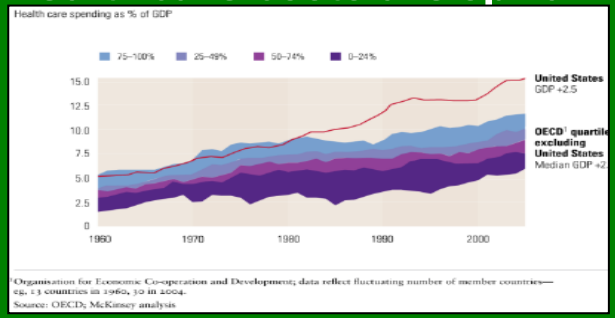
mHealth and chronic disease

Dr Oliver Harrison, harrisono@who.int

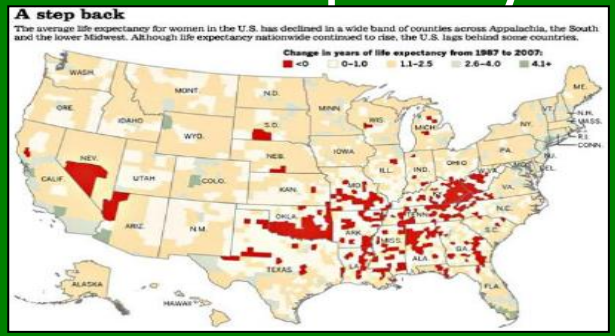
Mobile Asia Expo, June 2013

A global challenge… our shared opportunity

Healthcare costs are spiraling…



…Whilst life expectancy has plateaued



"Without precise measurement innovation is doomed to be rare and erratic… With it, invention becomes commonplace"

2013 Annual Letter from Bill Gates (quoting *The Most Powerful Idea in the World*, by William Rosen)

Cost of chronic disease

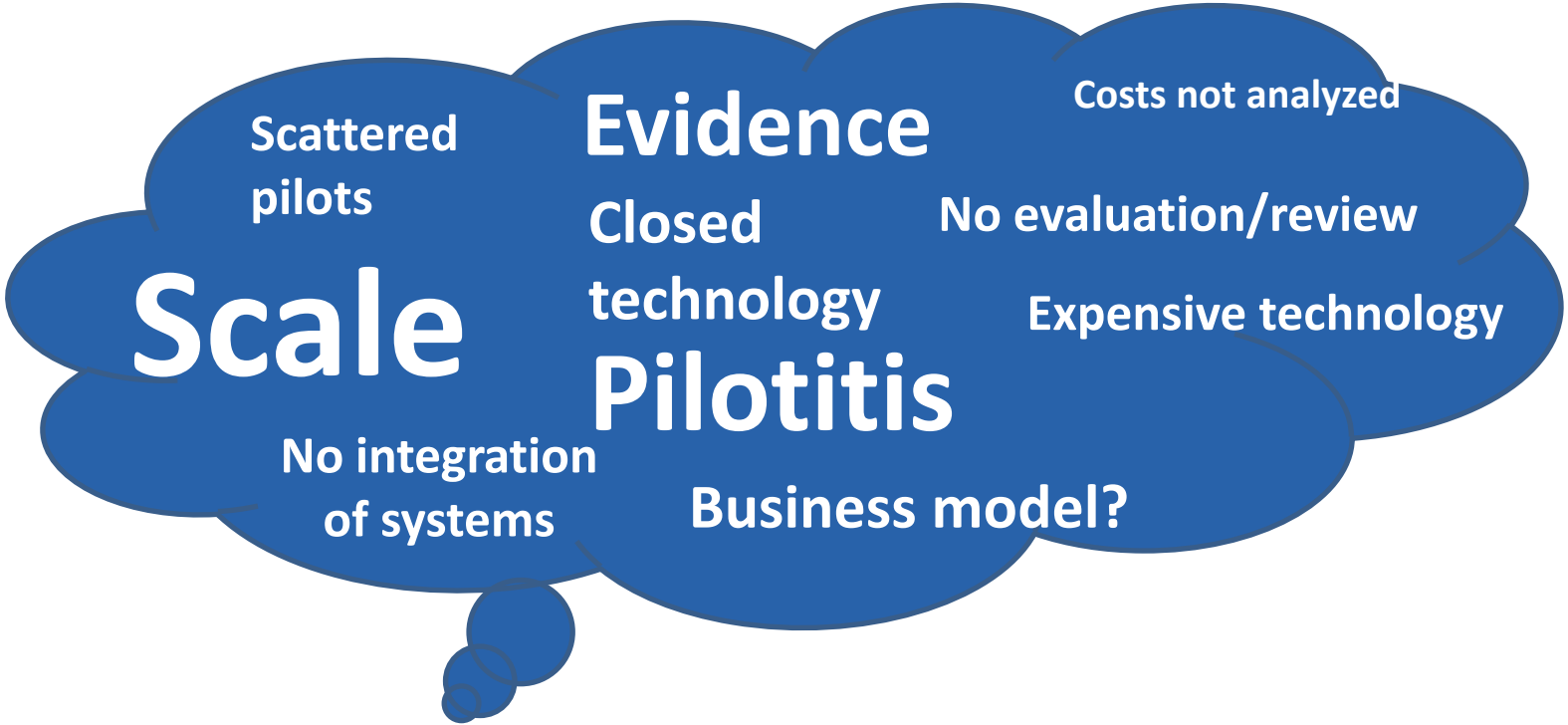
NCDs include cancers, diabetes, heart and lung diseases

63% of all annual deaths (72 million)

Largely preventable if:

- Strengthen early detection
- Facilitate timely treatment
- Combat risk factors, namely tobacco use, alcohol consumption, physical inactivity and unhealthy diet

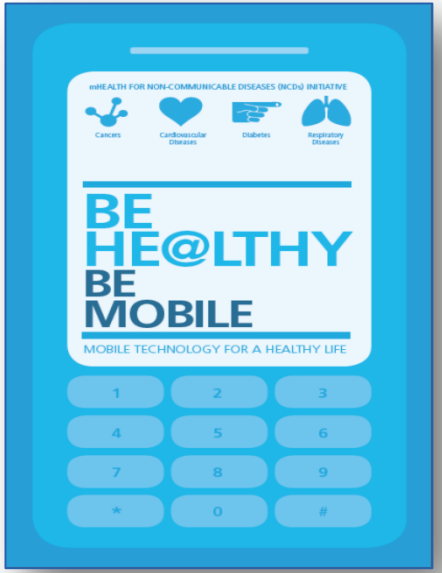
Two challenges: Evidence and Scale-up



WHO-ITU Joint Initiative

World Health Organization

ITU International Telecommunication Union



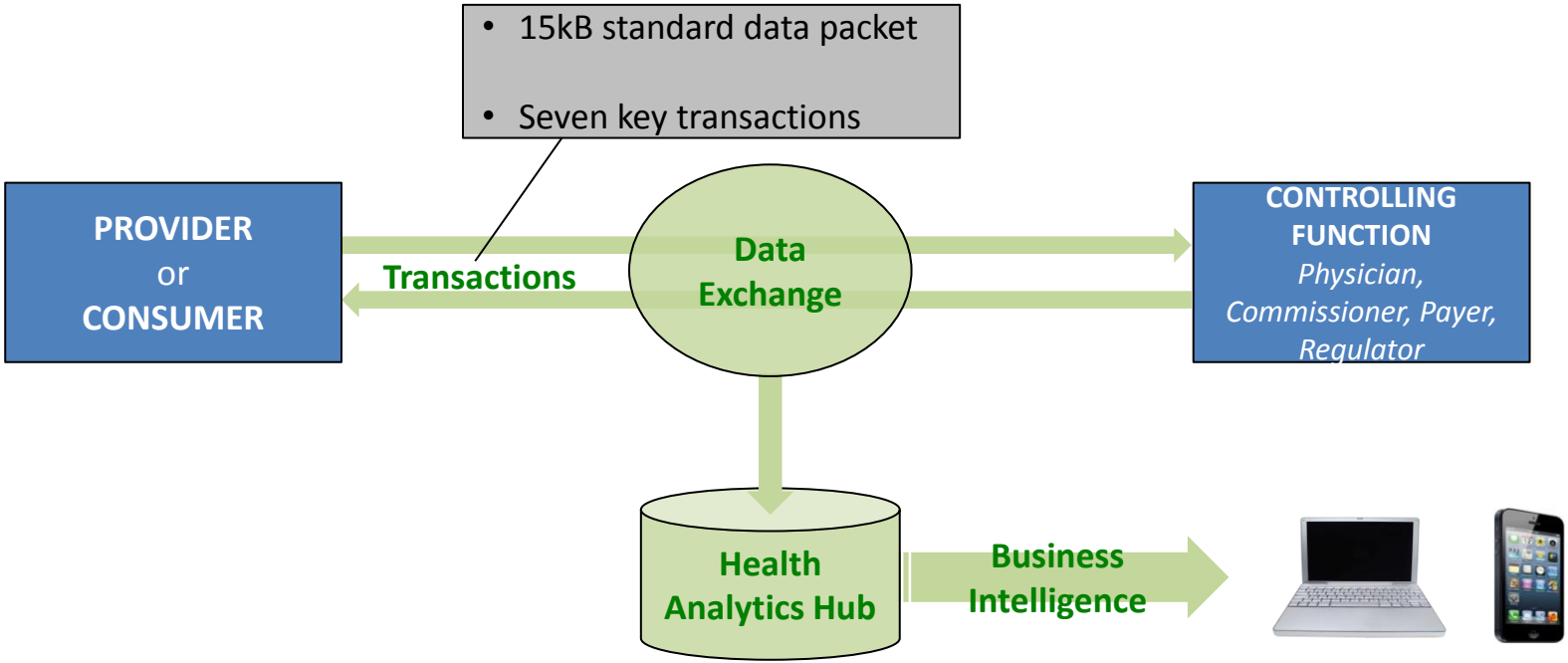
If you want to get involved email team:
harrisono@who.int

* See http://www.who.int/nmh/events/2012/mhealth_faq.pdf

Abu Dhabi was an ideal market for innovation in tackling chronic disease

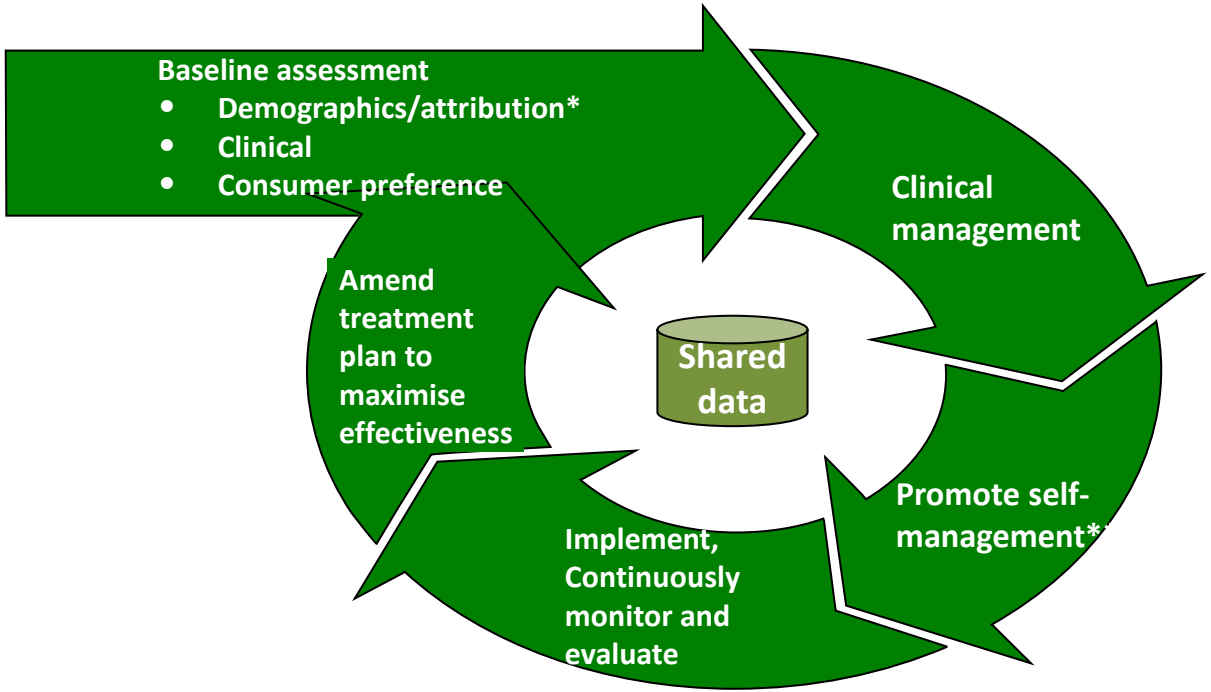
- 2.6m lives: “Big enough to matter, small enough to manage…”
- Highly strategic government with broad-based popular trust
- Extreme pace and depth of socio-economic development – very high burden of NCDs
- Plural and diverse payers and providers
- Relatively well-resourced health system enabling innovation

Standardised data and modular SOA*



* Can be tailored to different health systems and legacy IT, delivering exactly what's needed

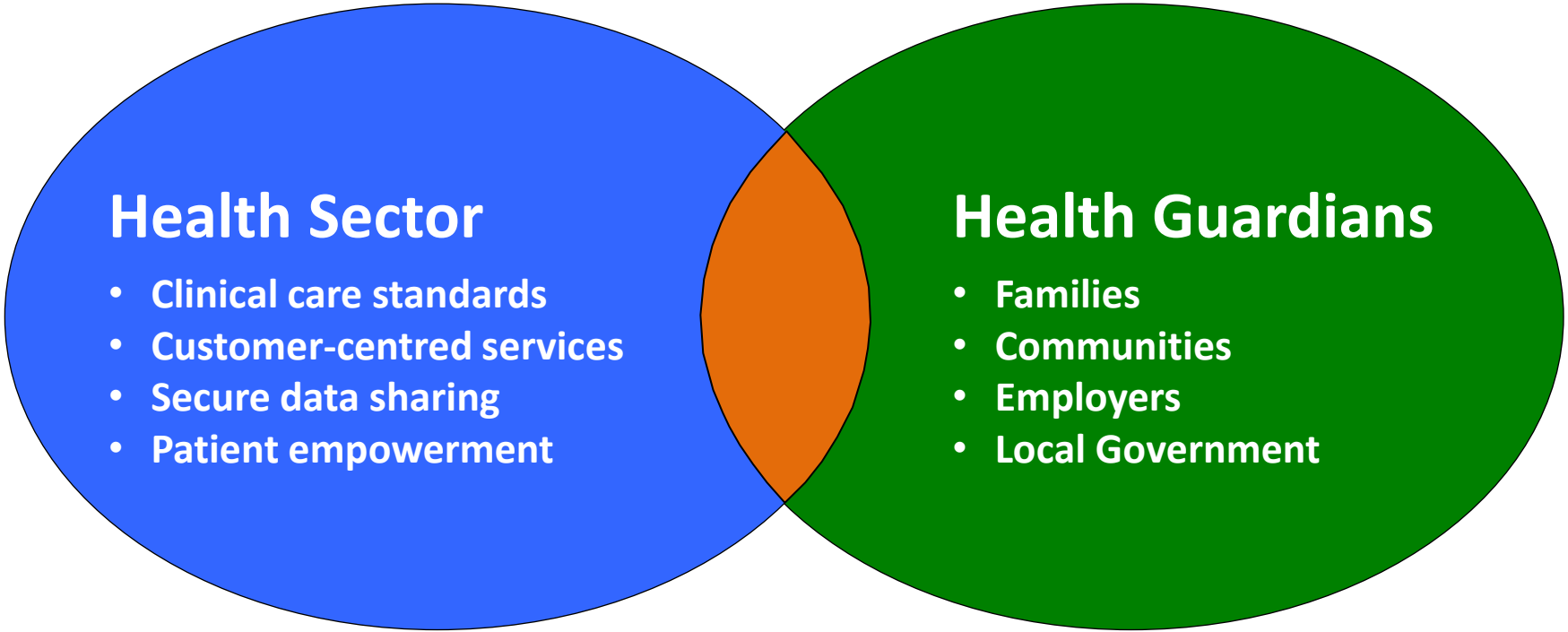
Closed-loop public health



* Specific groups, e.g., family, street, employer, etc.

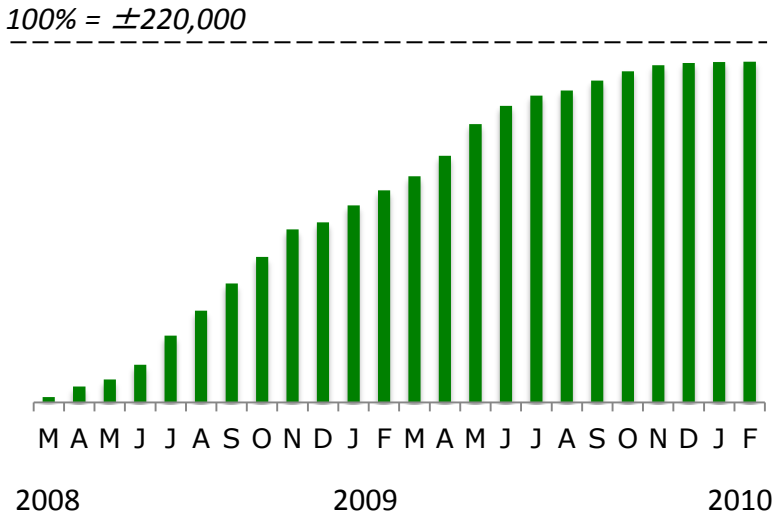
** Self-management encouraged/enabled through clinical assets (e.g., community health workers); coordinated across individual, group (e.g., family), and population levels

Two domains of Action

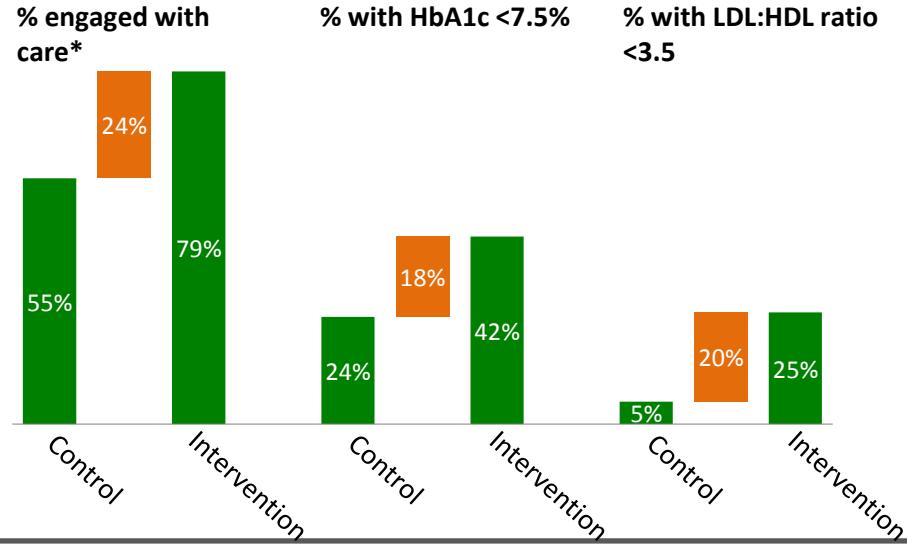


Closed-loop public health improves outcomes and lowers costs

Everyone can know their numbers…

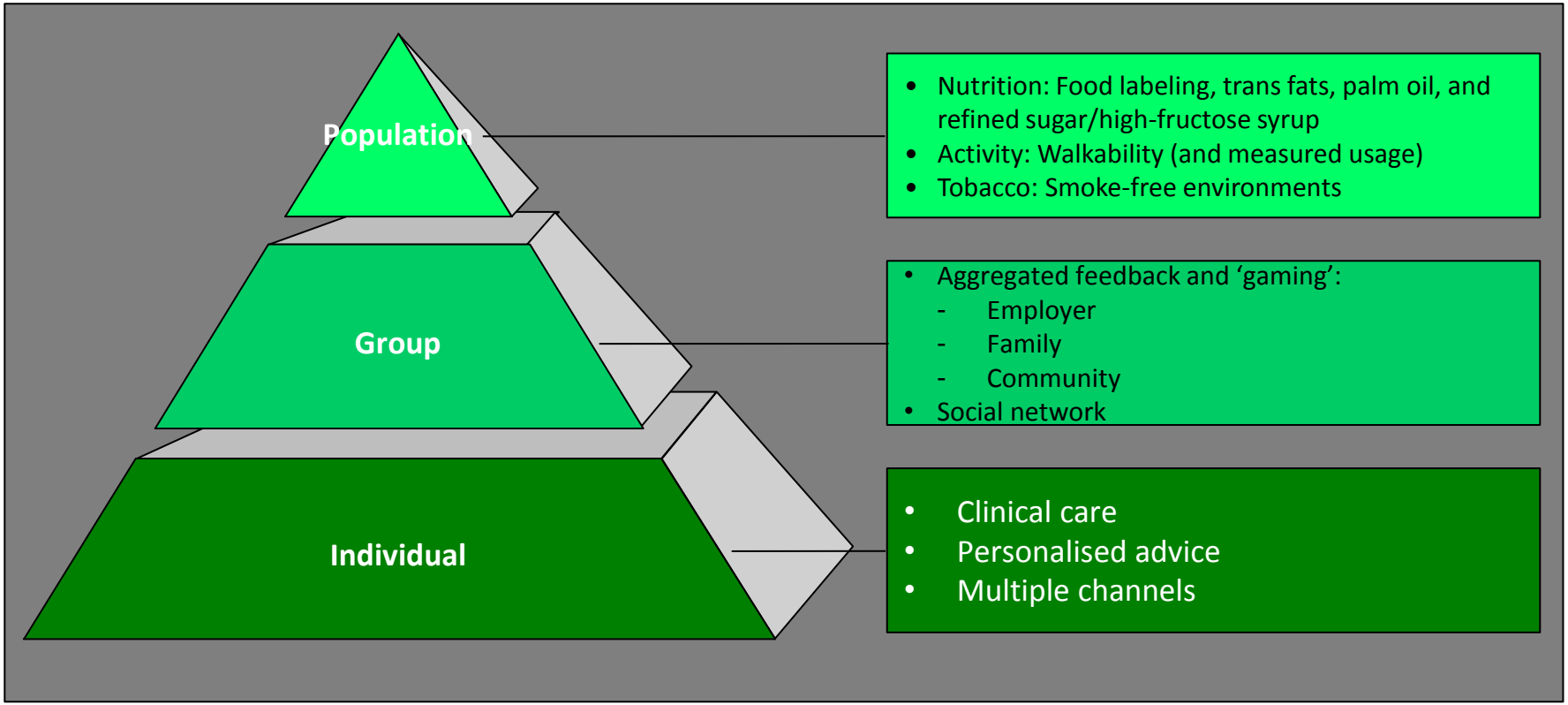


… and the numbers can change health outcomes



Source Weqaya, Abu Dhabi; presented at the IDF World Diabetes Congress, Dubai 2011

Connecting through “the cloud”



Two key areas of innovation

Measurement

- Opt-out screening
- Opt-in data sharing

Nudge

- Ubiquitous programme
- Disease Management Programmes
- Point of decision prompts, e.g., Weqaya label on healthy food
- At home monitoring
- Secure data sharing

Seven countries now running same model

Countries	Population
UAE	9m
Indonesia	250m
Malaysia	30m
Thailand	68m
Vietnam	92m
Ghana	25m
Kenya	44m

What this means for mobile operators

	Key components	What this means for you
Payer-led	• Payer (e.g., government) understanding of NCD burden • Payer eHealth interoperability layer or interest in creating interoperability layer • Payer revenues for Disease Management Providers ("Pay-for-Health")	• Where governments understand the challenge there are two revenue streams: 1. Enable interoperability layer 2. Disease Management Programme • **There is significant first-mover advantage**

Operator-led	• Operator-led interoperability layer
	• Customer-facing services: health service integration, and personal health devices
	• Measurable improvements in health outcomes
	• Direct subscriber proposition
	• Proposition to payers (reducing risk and therefore costs)
		• Even where payers are not yet ready **you can get started now**
		• Revenue streams:
		  • Now: Value-added subscriber services (e.g., for people with diabetes)
		  • Future: Payer risk sharing
		• **There is significant first-mover advantage**

What payer-led looks like: *"Pay for Health"*

Pay for Quality

- Based on compliance with evidence-based care pathways and clinical quality indicators
- Mechanism set-out in Standard Contract (between Healthcare Facilities and Health Insurers)
- Expectation it will affect base payment by <10%
- *"Compliance with high quality care receives a bonus"*

Pay for Health

- Based on individual health status
- Health initially defined as 10-year risk of cardiovascular event (heart attack or stroke)
- Contract between individual and Disease Management Programme
- AED1,000 per 1% reduction in risk to maximum of AED5,000 (5%)
- *"No health improvement – no money"*

Payer-led case example: Abu Dhabi “Weqaya”

Shared data platform means HAAD can audit effectiveness real-time

Diabetes
35,000

Pre-diabetes
55,000

Other CVD risk factors
45,000

No current CVD risk factors
55,000

Payer-led case example: Abu Dhabi “Weqaya”

Shared data platform means HAAD can audit effectiveness real-time

DMP 1 | **DMP 2** | **DMP 3**

Payer tenders licenses for Disease Management Providers (DMPs)

Diabetes	***35,000***
Pre-diabetes	***55,000***
Other CVD risk factors	***45,000***
No current CVD risk factors	***55,000***

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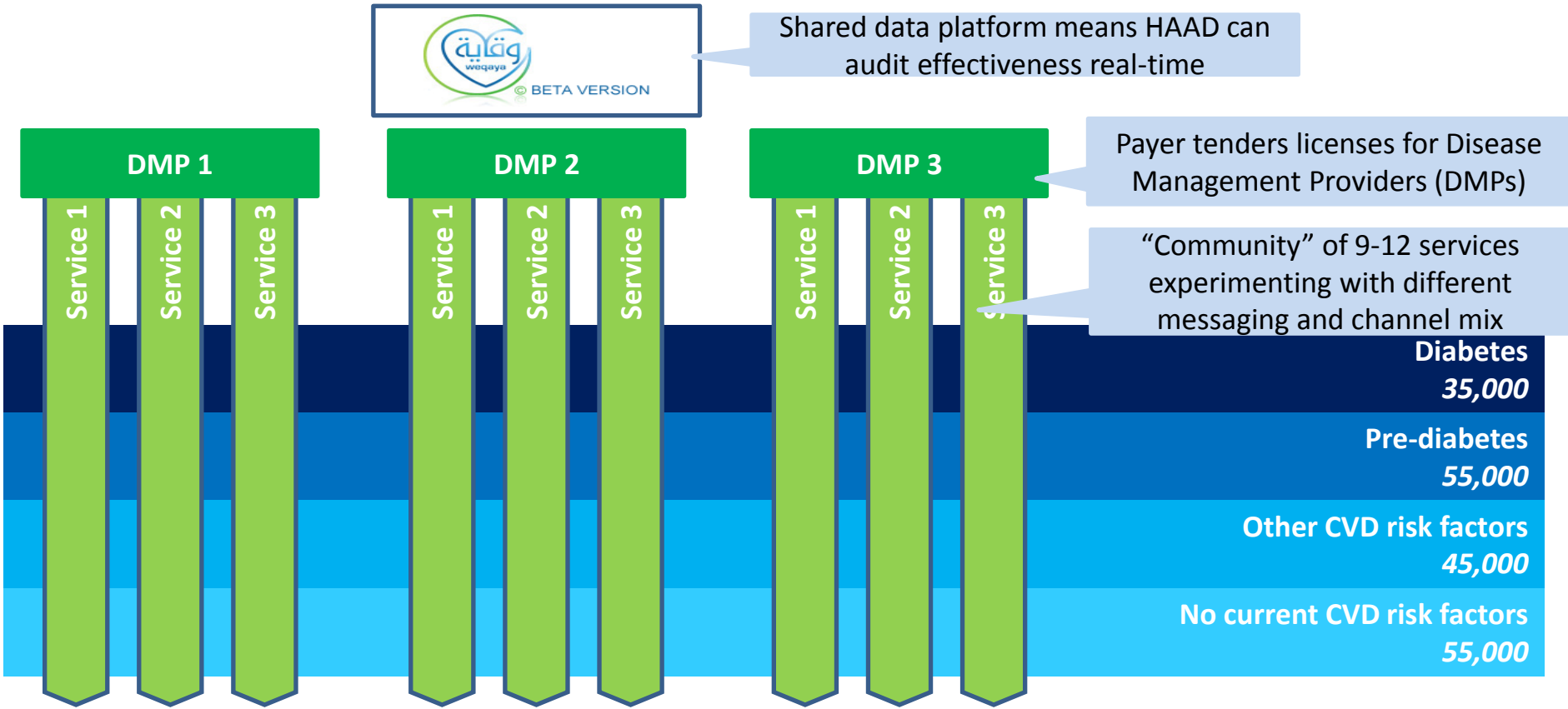

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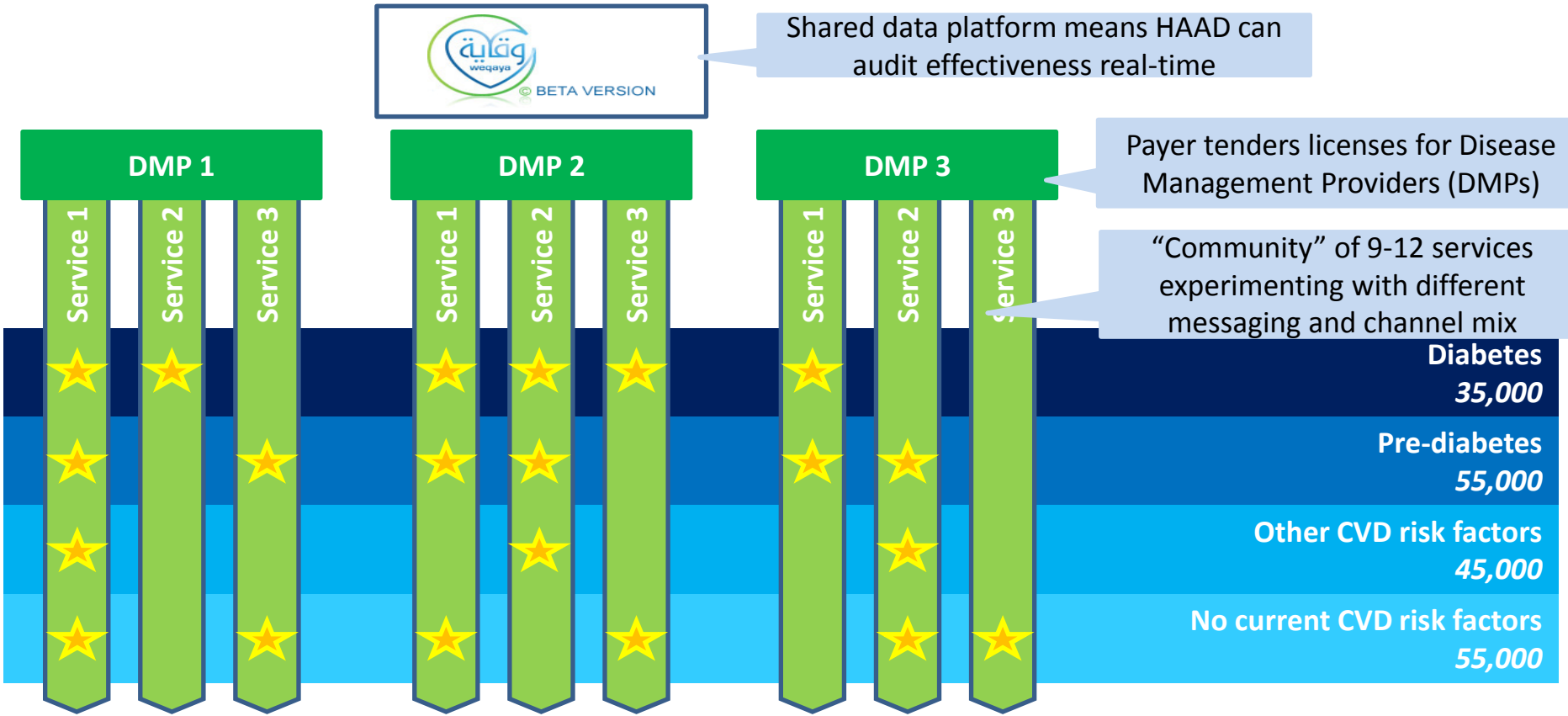
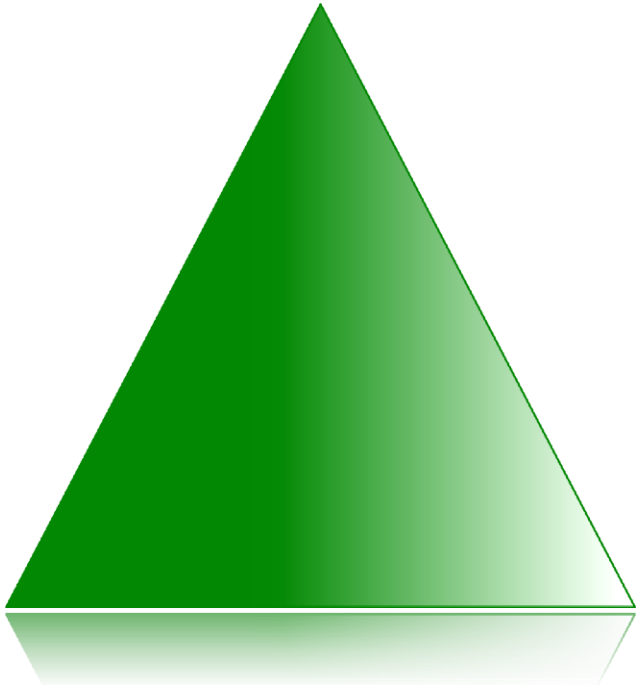


The value is there – how do you capture it?

- Devices
- Applications
- Services
- Delivery of outcomes
- …



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