

# Fighting the global health burden through new technology:

## WHO ITU joint agreement on mHealth for NCDs

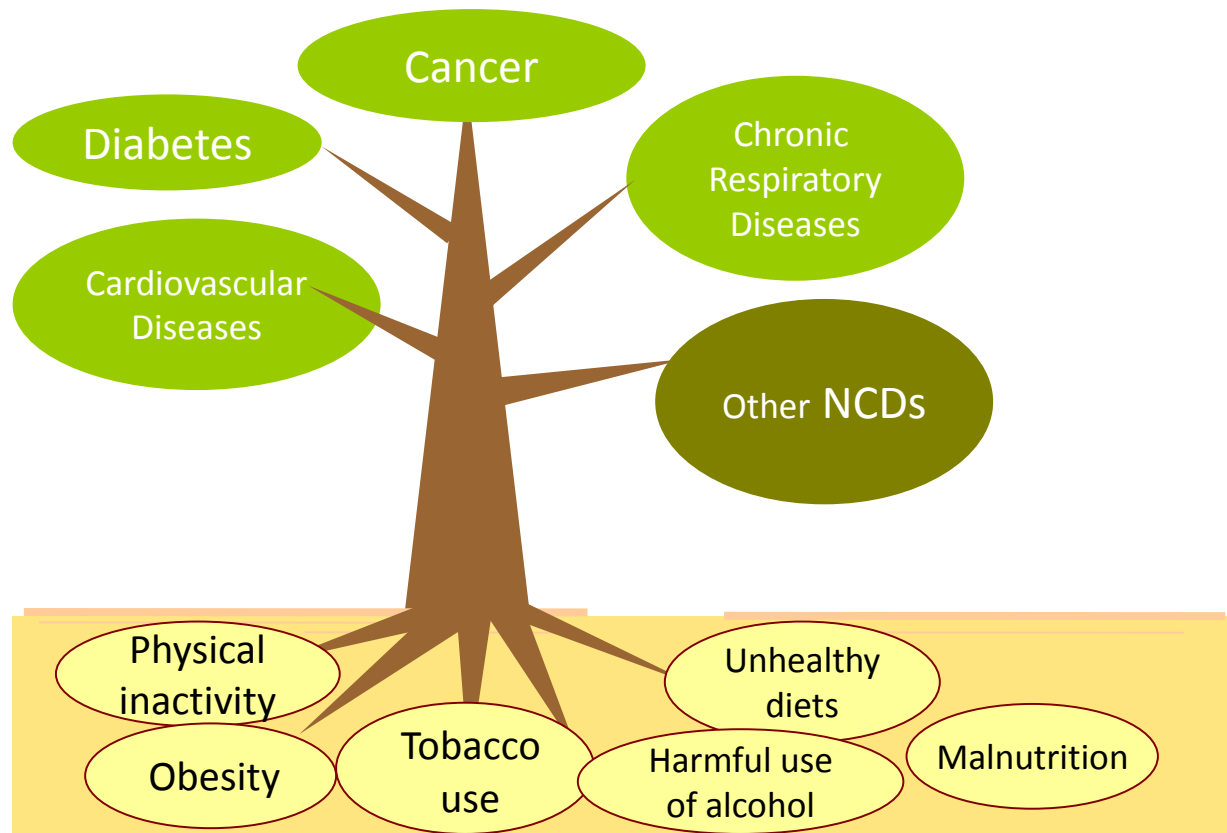
[www.who.int](http://www.who.int) • [mhealth4ncd.itu.int](http://mhealth4ncd.itu.int)



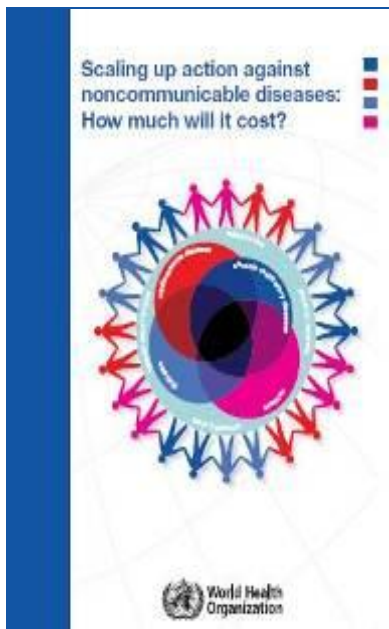
A collaborative initiative between



# Non-Communicable Diseases(NCDs) and their causes

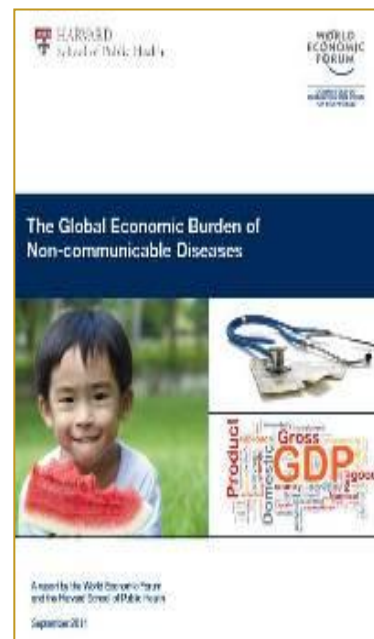


# The socio-economic burden of NCDs



**US\$ 170B**

is the overall cost for all developing countries to scale up action by implementing a set of "best buy" interventions, identified as priority actions by WHO



**US\$ 7T**

is the cumulative lost output in developing countries associated with NCDs between 2011-2025

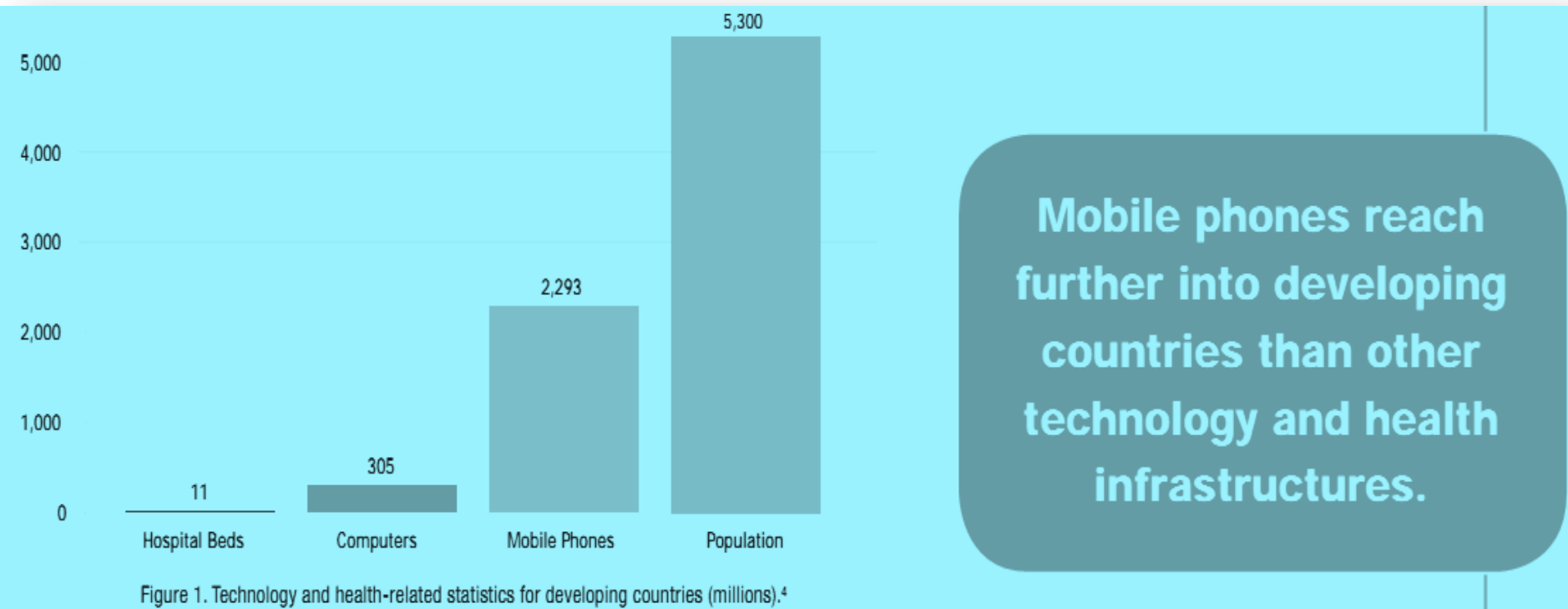
57 million total deaths in 2008 of which 36 million were due to NCDs



"This is the second health issue ever to be addressed at a special meeting of the United Nations General Assembly. We should all work to meet targets to reduce NCDs. WHO's best buys serve as excellent guidance"

**Ban Ki-moon • UN Secretary-General • 19 September 2011  
• High-level Meeting on NCDs • New-York**

# Why is mHealth important?



Source: "mHealth for Development: the Opportunity of Mobile Technology for Healthcare in the Developing World", 2009



- **25 billion** connected devices by 2020
- Mobile Health solutions could save **\$400 billion** from healthcare bills in OECD countries by 2017
- Mobile Health solutions could save **1 million lives** in sub-Saharan Africa over the next 5 years



Source: GSMA/PwC



# Why is mHealth important? Next 5 years:

## Global Mobile Users

From 4.3 Billion in 2012 to 5.2 Billion by 2017 at 4% CAGR  
Global Mobile Users Growing 3.5X Faster Than Global Population

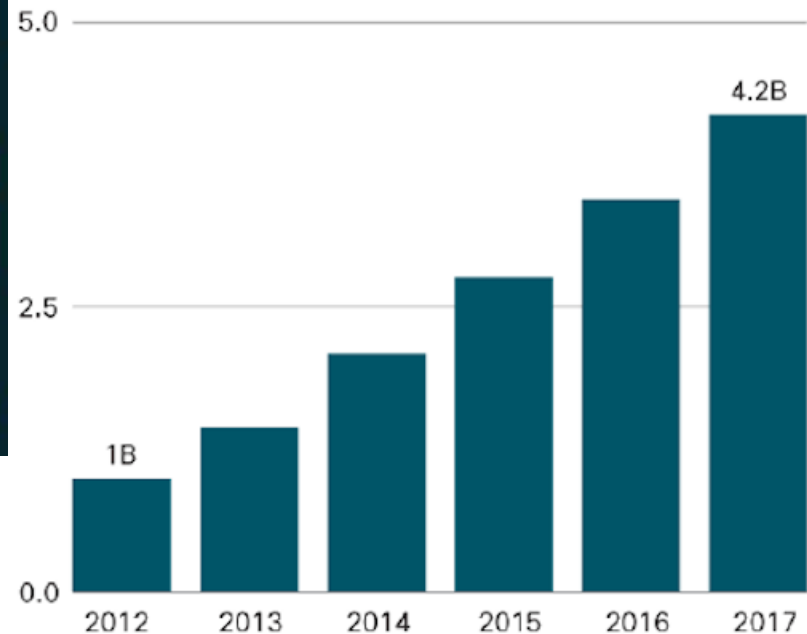


Source: Cisco Visual Networking Index (VNI) Global Mobile Data Traffic Forecast, 2012–2017

Figure 20. Global IPv6-Capable Mobile Devices Reach 4.2 Billion by 2017

Number of Devices (B)

33% CAGR 2012–2017



Source: Cisco VNI, 2013

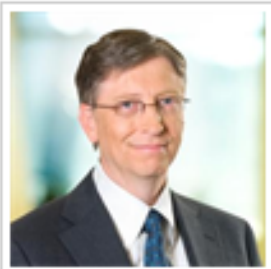
# Why is mHealth important? Next 5 years:

**Mobility United States »**

## Bill Gates Says that mHealth's Time Has Come

In his column for the Project Syndicate portal, translated into Spanish and republished by Clarin.com, the founder of Microsoft and Co-President of the Bill and Melinda Gates Foundation reveals his newly optimistic outlook for the digital empowerment of users and says that it is time that healthcare reaps the associated benefits.

[ 04 Jan 2013 | Comments ]



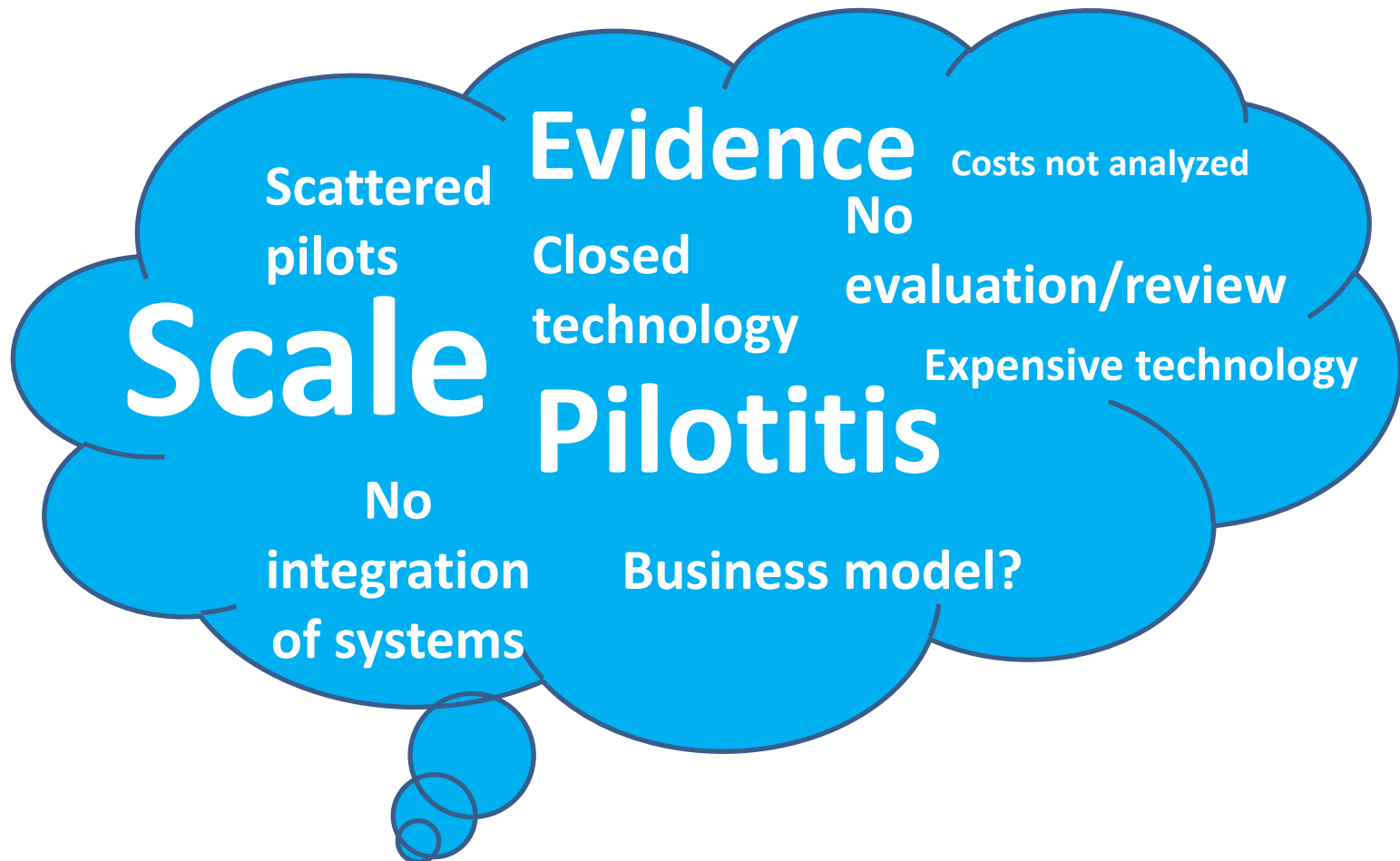
His column begins: "A decade ago, many people believed that the proliferation of mobile devices in Africa would mean a short leap to digital empowerment. It didn't. Digital empowerment is a long and ongoing process, and the mere existence of cellular technology does not immediately change how poor people meet their basic needs."

He goes on to recognize that the situation has improved and we can begin to benefit significantly from the proliferation of smartphones. "But now, after years of investments, digital empowerment is underway, owing to a confluence of factors, including growing network coverage, more capable devices, and an expanding catalogue of applications. As more people obtain access to better and cheaper digital technology, an inflection point is eventually reached, at which the benefits of providing digitally services like banking and health care clearly outweigh the costs. Companies are then willing to make the investments required to build new systems, and customers are able to accept the transition costs of adopting new behaviors," he says.



# There are a number of challenges with mHealth

---



# Looking at evidence for NCDs

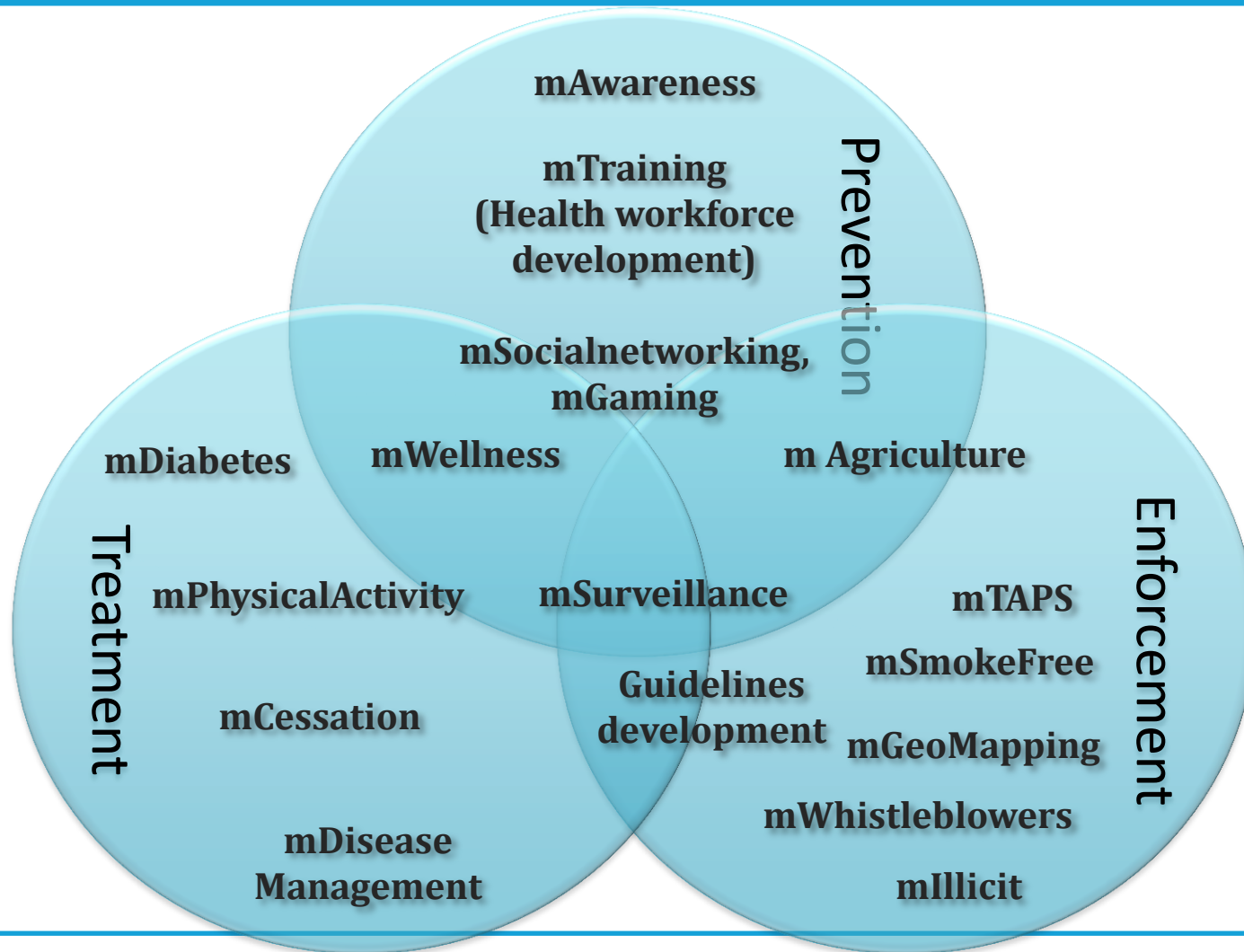
(PREVENT, TREAT, ENFORCE)

---



# Treatment: the technology exists and there is enough evidence

---



# TREATMENT: mCessation, disease management

Number of successful SMS-based behavioural change programmes for smokers have been successful in the US, UK and New Zealand, Europe (mostly High income nations)



Diabetes Manager: Proven clinical impact observed during early trials reported a 1.9% A1c drop in participants\*\*\*



# PREVENTION: mAdvocacy

- Pubmed studies show : significantly greater increase and intention/expectation to exercise using Internet and mobile phone-based physical activity program



**Ex-smokers are unstoppable :**

- Launched by the European Commission
- showcases the benefits of a life without smoking through the achievements of ex-smokers
- web and mobile phone advocacy messages



# mSurveillance for tobacco control

- Nationally representative household surveys
- Active in 31 countries (17 completed/data released)
- Covers 68.8% of world's population  $\geq 15$  yrs
- 1M household level data & 350,000 household interviews
- 50 languages & dialects
- 3600 fieldworkers trained, 3000 handhelds & 1500 fieldwork days

**OUTCOME :** Better Data quality and faster data availability for *policy and action*



# PREVENTION: mTraining

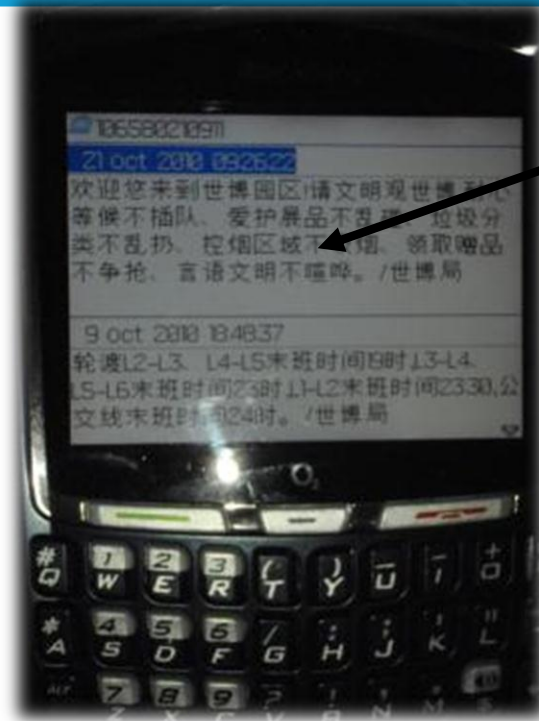
---

- **mTraining** : used for training health workers on:
  - **Adhering to prevention of NCD risk factors**
- **The cessation counselling coupled with social media and incentive based systems using standard WHO cessation guidelines for doctors, health workers and dentists.**
- **Graphic MMS messages reporting dangers of NCD risk factors for trainee nurses as part of the mTraining modules**



# ENFORCEMENT: mProtect (Geo-tagging)

- We can create geotagging/geofencing projects as well as “citizen mapping” to create images of smoke free cities on the internet for people to be able to update and provide a citizens shadow FCTC report.



Text says: No smoking outside of designated smoking areas.



“Smoke-Free” local area SMS text message at Shanghai Expo, 2010

# ENFORCEMENT: mllicit

**Using mHealth technology developed for counterfeit malarias**

**We can address big issues related to counterfeit cancer drugs**

**Advanced tools such as barcodes and barcode readers can be also used by Customs officers and consumers to identify smuggled cigarette packs.**

www.orange.co.ke

take the drug text

ensure that you are getting genuine medicine



How to check if the medicine is genuine



Look for a scratch pad on the pack of the medicine\*\* Scratch the pad to reveal the Serial ID

Text in the serial code on your mobile

Send it to 1393

**SEND**

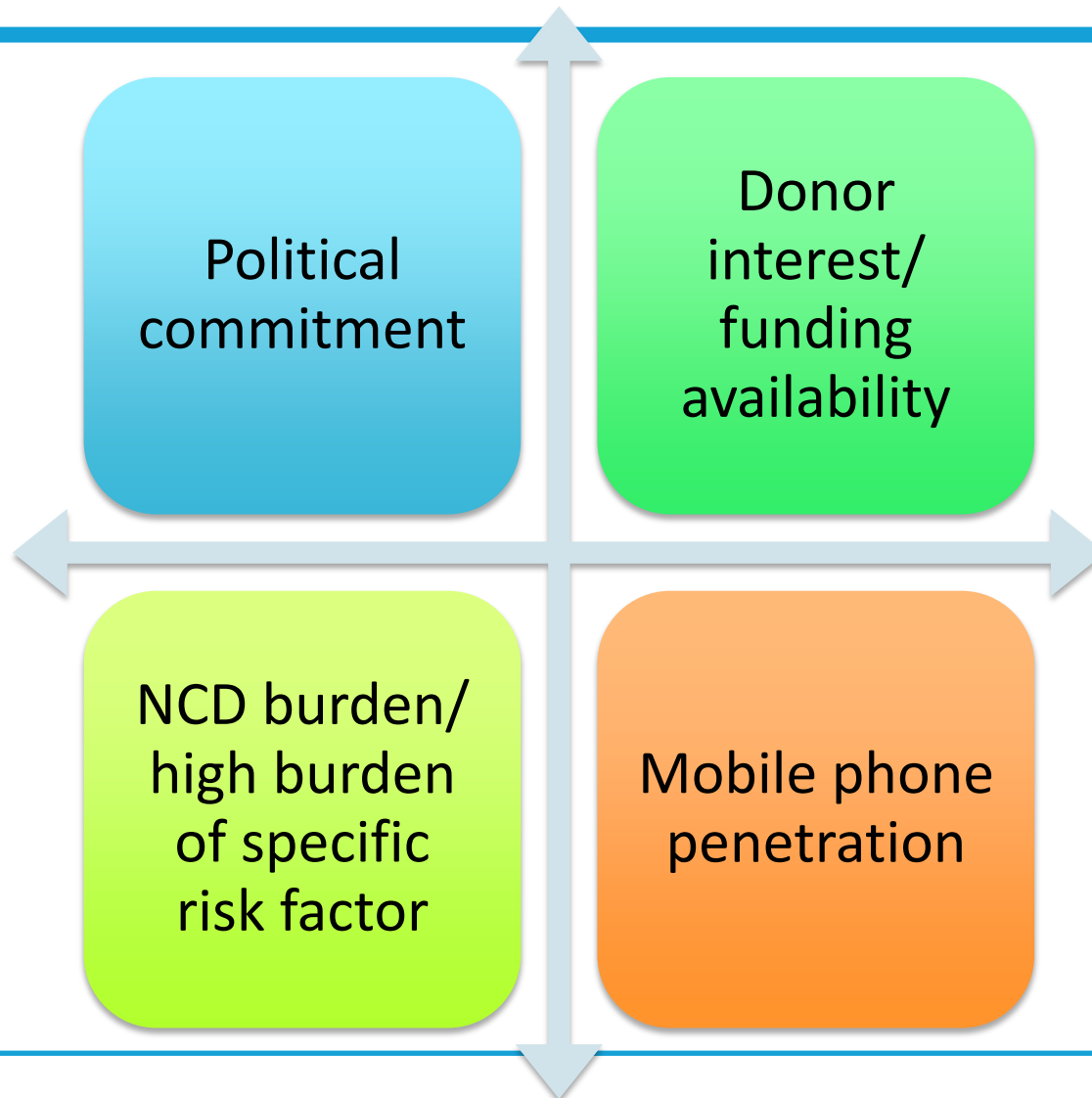




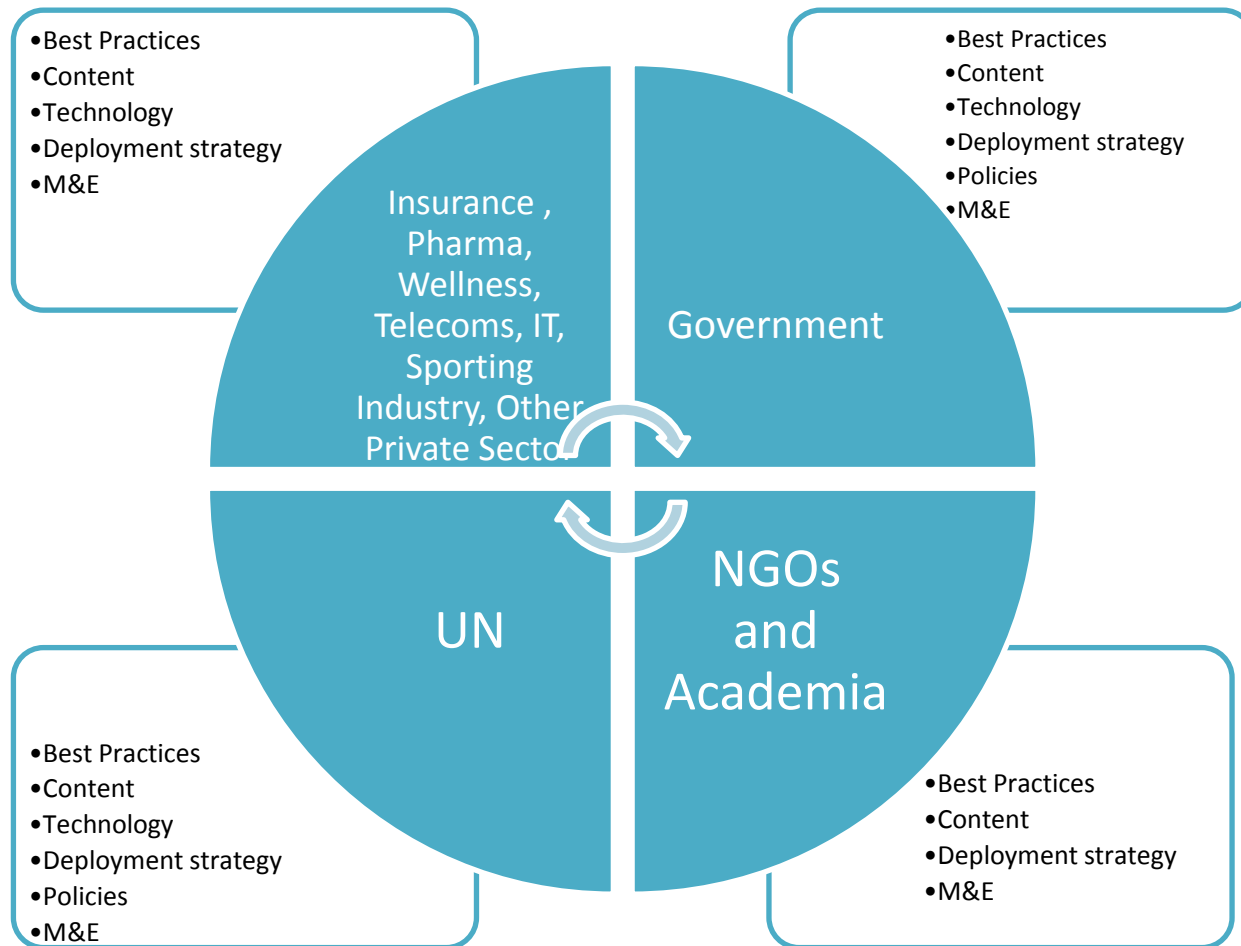
# We have reached out to a number of foundations, governments, private companies, individuals



# What is needed



# Cross sectoral partnership model





# Importance of transparency and accountability

- We are aware of best practices in terms of donor reporting and relations
- Partners will be recognized on ITU website and receive audited reports
- Donors can potentially track in real time the impact of their funds on end users due to the use of mobile in the project



# Benefits for Stakeholders

## *Telecoms/Private sector*

Early mover advantage

Sustainable mHealth business Model

PR and visibility opportunities

Part of a global initiative

Networking and growth potential

Healthier workforce

## *UN Agencies/ NGOs/Civil Societies*

Fulfill obligations of the High level meeting

Learn from private sector best practices

Opportunity to showcase public private partnership

Relevance to post 2015 health and development agenda

Healthier workforce

## *Government*

Reduced Health costs

Healthy population

Enforcement of policies

Interesting IP & investment opportunities

R and D opportunities

Obligation to achieve NCD targets

positions country as a leader NCD innovations,

## *Individuals*

Better Health outcomes

Reduction in the prevalence of modifiable risk factors

Reduced Health costs

Improved productivity and quality of life

Reduction in premature mortality and healthy ageing



# WHO ITU joint program on mHealth for NCDs

## Objectives

- Create global, regional and country level platforms to bring together key stakeholders to enhance collaboration in achieving NCD goals through technology.
- Develop cost effective, sustainable and scalable mobile NCD projects.
- Strengthen the capacity of local stakeholders towards optimal and efficient use of available resources.
- Validate the use of mobile NCD projects for results, quality assurance and cost/effectiveness and to share best practices.



“The WHO ITU joint initiative on mHealth for NCDs is a promising innovative intervention to see how to use new technologies to better health outcome”

**Helen Clark • UNDP Administrator • 31 January 2013  
• Harvard School Public Health • Boston, Massachusetts**

# Structure

---





# Costa Rica : Champion example



- **Commitment from the President's office from day 1.**
- **1 million dollars committed by the Government**
- **Strong leadership from the MoH**
- **High end coordination between MoH , MoICT, eGovernance group**
- **Proposed in January, launched in country on 9<sup>th</sup> April**



# mHealth for NCDs

## Business case

NCD control

GOOD BUYS  
FOR GOVERNMENTS

Mobile health



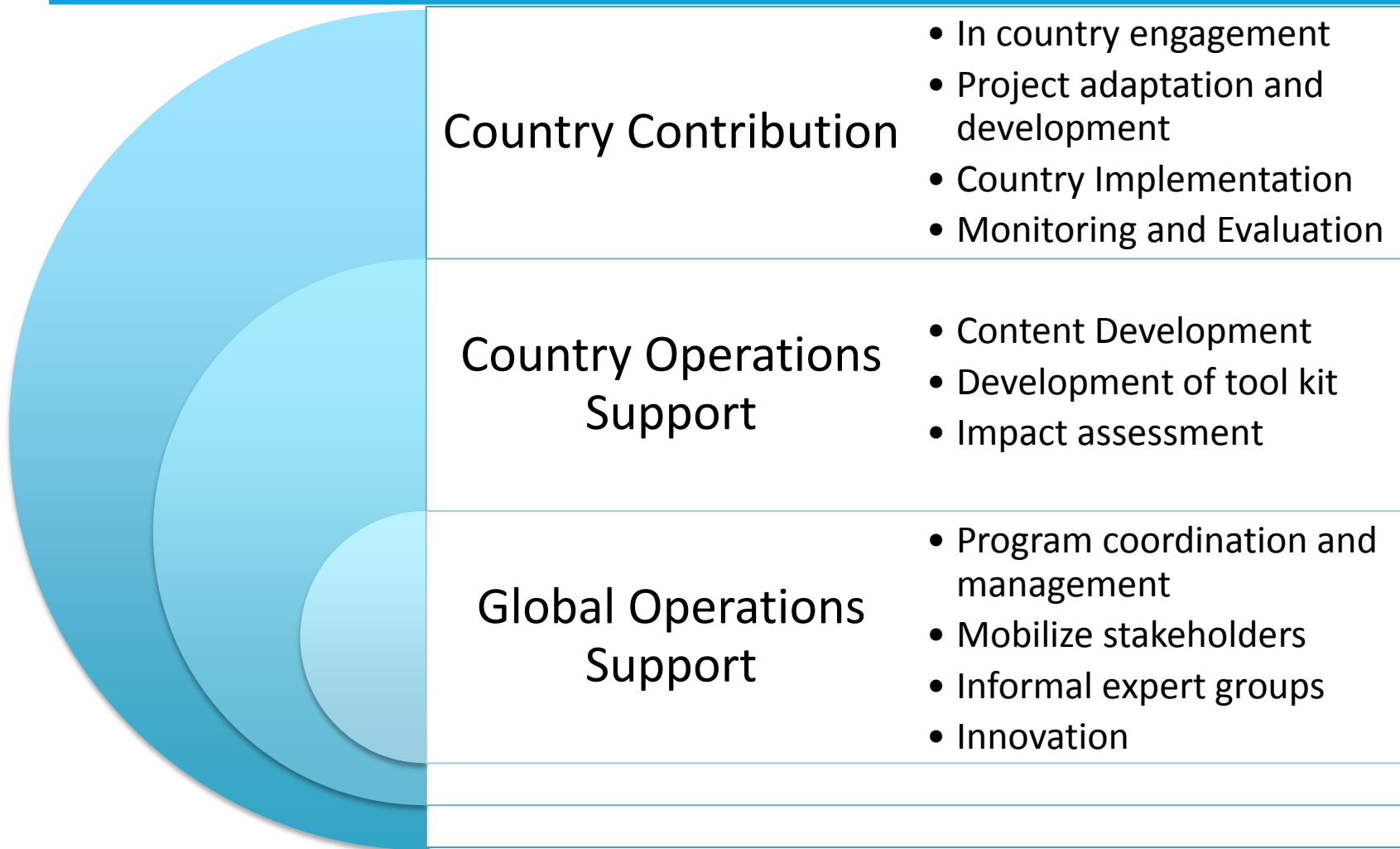
mHealth is a great mechanism to use the mobile infrastructure for out-reach and **save significant funds** in the health sector.

# mHealth for Tobacco control

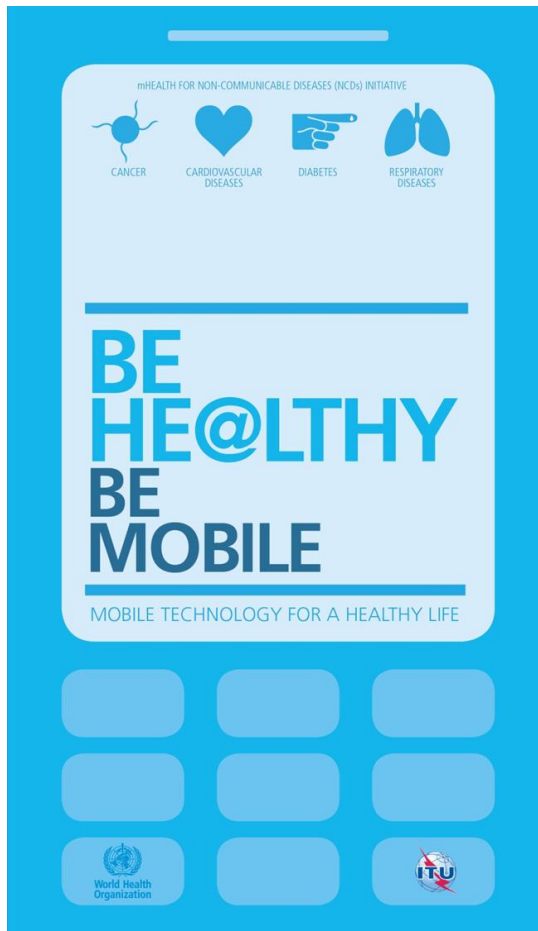
mPrevention	mEnforcement	mCessation	mSurveillance
<ul style="list-style-type: none"> <li>• mAdvocacy               <ul style="list-style-type: none"> <li>• Messages sent to population on:                   <ul style="list-style-type: none"> <li>• Harms of Smoking</li> <li>• New Anti Smoking Laws to help enforcement</li> <li>• Health risks from smoking</li> <li>• Supported by mass and social media campaigns</li> </ul> </li> </ul> </li> <li>• mTraining               <ul style="list-style-type: none"> <li>• Mobile based training of Health workers                   <ul style="list-style-type: none"> <li>• Help spread advocacy</li> <li>• Help direct smokers to assistance</li> <li>• Help pregnant mothers to avoid tobacco use</li> </ul> </li> <li>• Mobile based training of teachers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• mSmokeFree               <ul style="list-style-type: none"> <li>• Smoke free zone detectors</li> <li>• Smoke measurement devices</li> <li>• GeoTagging and Heat maps of smoke free zones, POSs etc</li> </ul> </li> <li>• millicit               <ul style="list-style-type: none"> <li>• Tracking illicit trade</li> </ul> </li> </ul>	<p>SMS Based</p> <ul style="list-style-type: none"> <li>• Smokers recruited through</li> <li>• Health system databases, Mass campaigns, Quit lines</li> <li>• Automated messages sent based on Algorithm to different sets (willing quitters, non willing, sponsored, by age, by level of addiction etc.)</li> <li>• Algorithm to pick Different messages and different frequency based on attributes</li> <li>• Follow-up</li> </ul> <p>Apps Based</p>	<ul style="list-style-type: none"> <li>• Data from all other tools feed into a monitoring and evaluation mechanism for ongoing assessment and</li> <li>• Measuring use and impact</li> <li>• Conduct surveys for measurement</li> </ul>



# Country costing model



# THANK YOU!



Contact:  
[mHealthForNCDs@who.int](mailto:mHealthForNCDs@who.int)