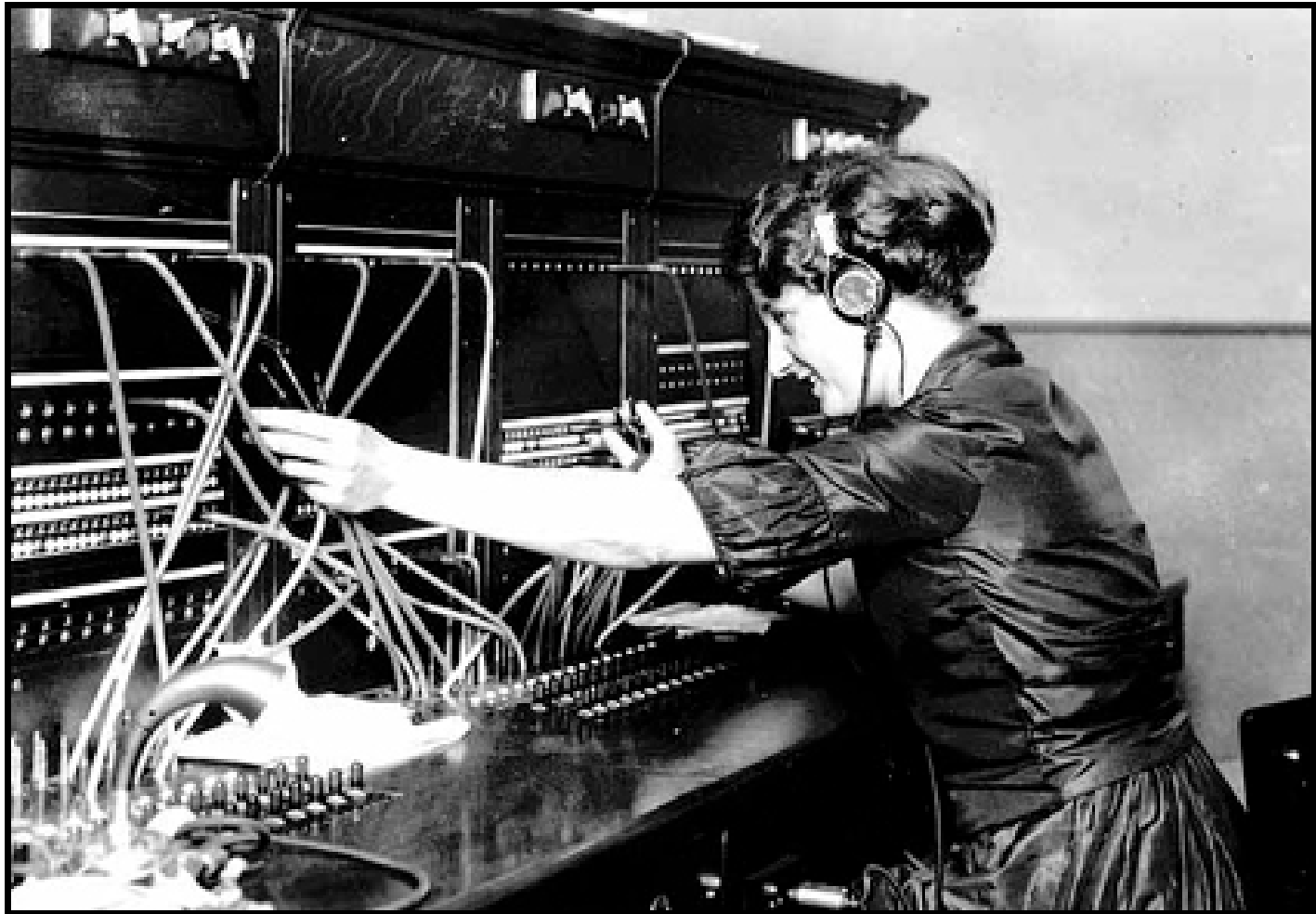




“Mr. Watson, come here, I want to see you.”  
March 10, 1876, Alexander Graham Bell,





# First handheld mobile phone: 1973

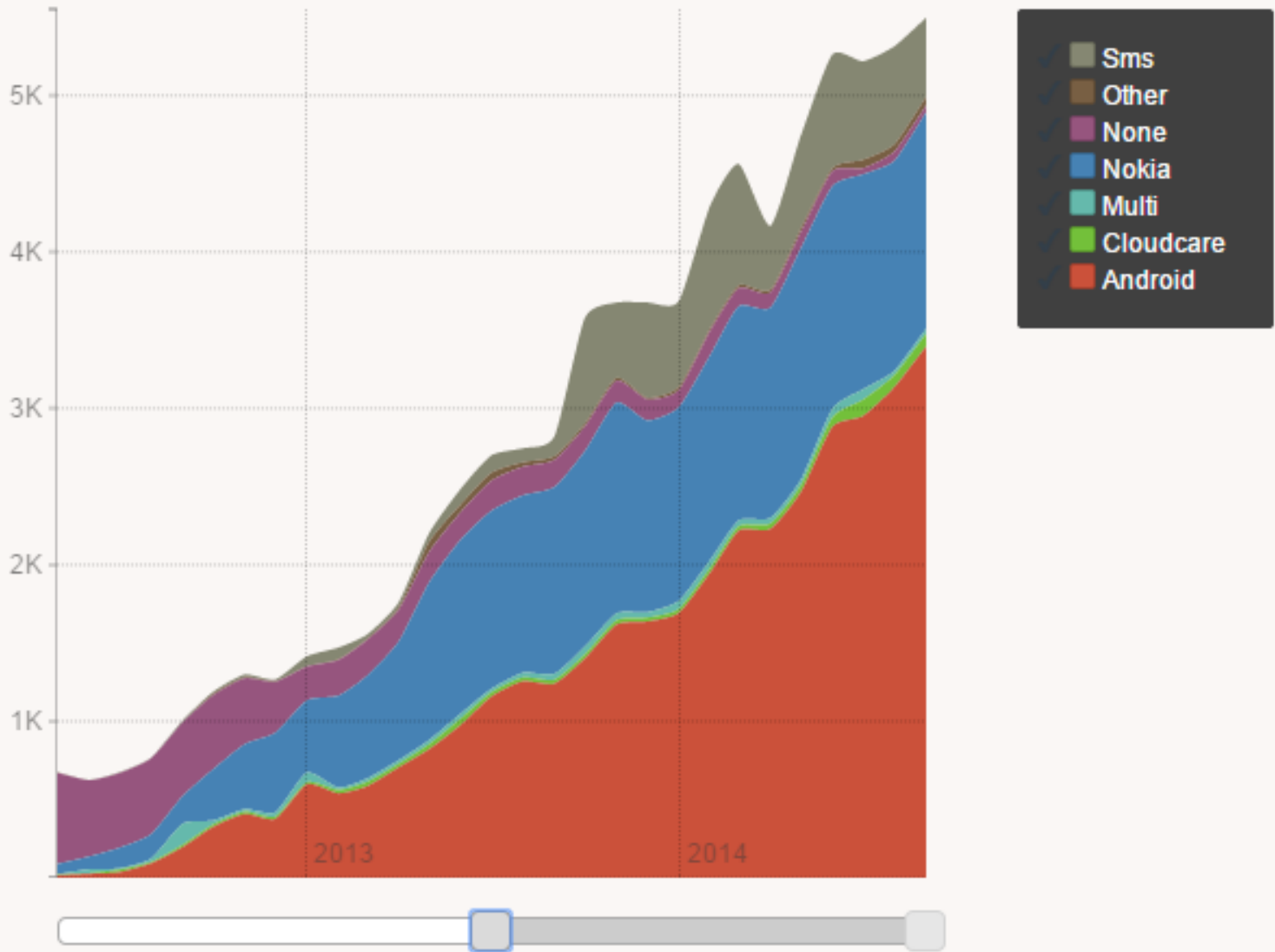


# 2015: Equipping FLWs with Mobile Apps



# Users by device type, Jan 2010 – Sept 2014

(moving the slider zooms the timeline)

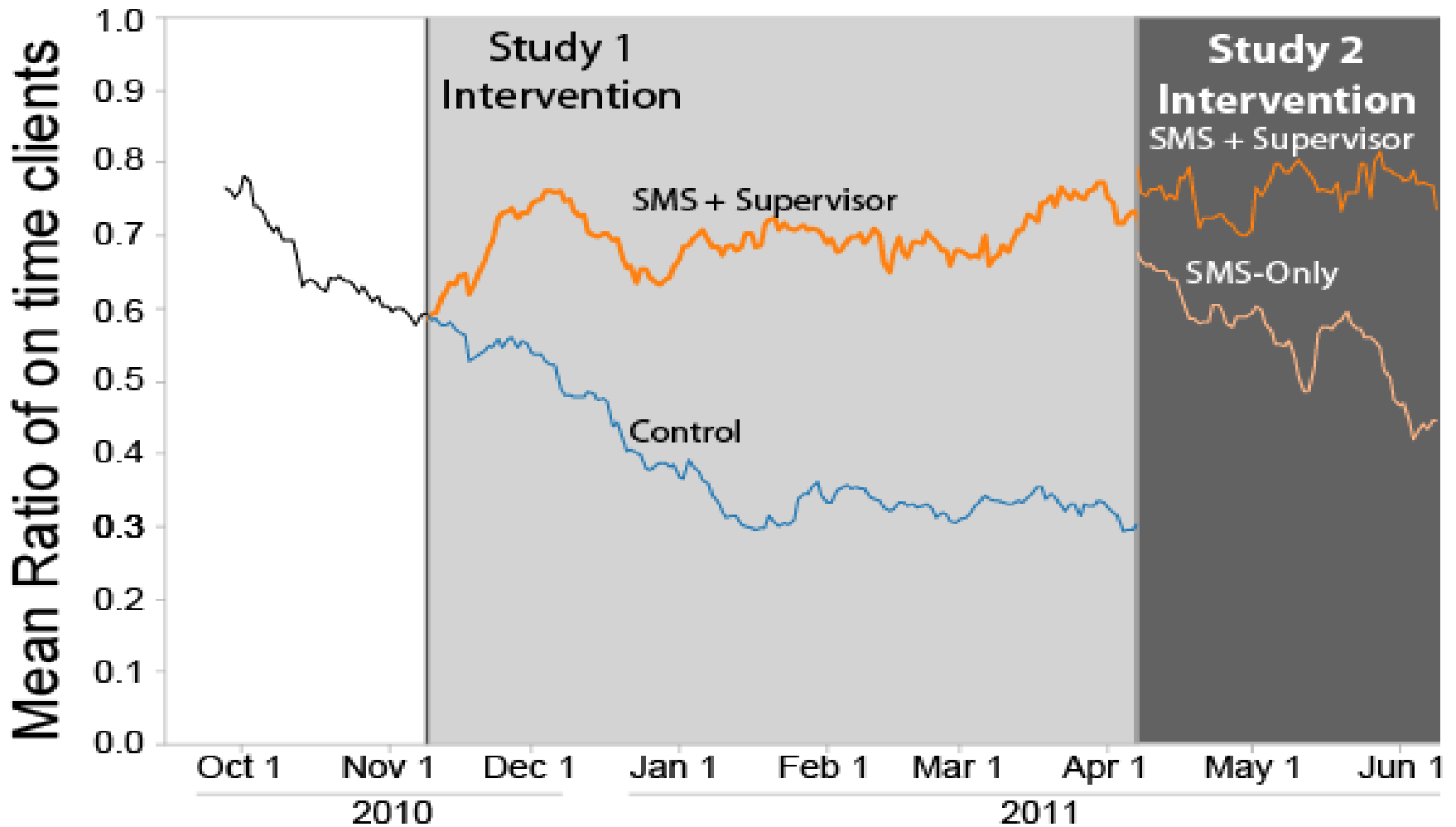


# What it means to have a cloud product...

The screenshot shows an email inbox interface. At the top, there is a search bar with the text "to: commcare-users" and a search icon. To the right of the search bar, there is a "story" label, a "+Neal" notification, a grid icon, a red circle with the number "1", a plus icon, and a user profile icon. Below the search bar, there is a toolbar with icons for checkmark, add, warning, trash, "Move to Inbox", tag, "More", "1-50 of many", and settings. The main area displays a list of 15 email messages. Each message row includes a checkmark, a star icon, a folder icon, the sender name and count, the subject line, a snippet of the message body, and the time or date.

Checkmark	Star	Folder	Sender	Subject	Snippet	Time/Date
<input checked="" type="checkbox"/>	☆	📁	Eric, Sheel, Paul (6)	Several issues in the process of learning CommConnect	- Hi Paul -- I will b	5:15 am
<input checked="" type="checkbox"/>	☆	📁	Jessica, Nate (2)	Multiple select Questions stringlength	- Hi Jessica, Thanks for reaching out	3:06 am
<input checked="" type="checkbox"/>	☆	📁	Google Groups (2)	Google Groups: Membership Pending	- Myo Min Lwin requested to join the c	12:15 am
<input checked="" type="checkbox"/>	☆	📁	Jessica Hall	Edit Forms	- Hi I am just wondering whether edit forms are only for registration	Jan 7
<input checked="" type="checkbox"/>	☆	📁	kevan.chris., Nate (2)	Changed Format for Exporting Multiple Answer Multiple Choice Question:		Jan 7
<input checked="" type="checkbox"/>	☆	📁	Natasha, William, Amelia (3)	Best option for installing multimedia	- Hi Natasha, One subtle difference to k	Jan 7
<input checked="" type="checkbox"/>	☆	📁	Google Groups (4)	Google Groups: Membership Pending	- Mai Ajjour requested to join the com	Jan 6
<input checked="" type="checkbox"/>	☆	📁	Ameera, Nate (2)	how to display signatures in an export case?	- Hi Ameera, You are able to v	Jan 5
<input checked="" type="checkbox"/>	☆	📁	Ben, Clayton, Yann (7)	Using CommCare exclusively offline?	- Ok thank you very much, that is clari	Jan 5
<input checked="" type="checkbox"/>	☆	📁	Tim, Sheel (4)	Re-assign Case to different Group or User	- Hi Tim, Thanks for noting that is	Jan 5
<input checked="" type="checkbox"/>	☆	📁	Google Groups (2)	Google Groups: Membership Pending	- Swati Roy requested to join the com	Jan 5
<input checked="" type="checkbox"/>	☆	📁	Jason, William (2)	having issues communicating with the server to send forms	- Hey Jason, "	Jan 4
<input checked="" type="checkbox"/>	☆	📁	Google Groups (2)	Google Groups: Membership Pending	- Crystal_M Pan requested to join the	Jan 3
<input checked="" type="checkbox"/>	☆	📁	Eric .. Jeremy, Sheel (28)	for referrals from an outreach worker to a clinic, opening a child case into		Jan 1
<input checked="" type="checkbox"/>	☆	📁	Charles, Clayton (3)	What led to recovery mode ?	- Hi guys, On Friday 19 December 2014 16:46:4	12/31/14

# SMS Reminders w Escalation (DeRenzi et. al)

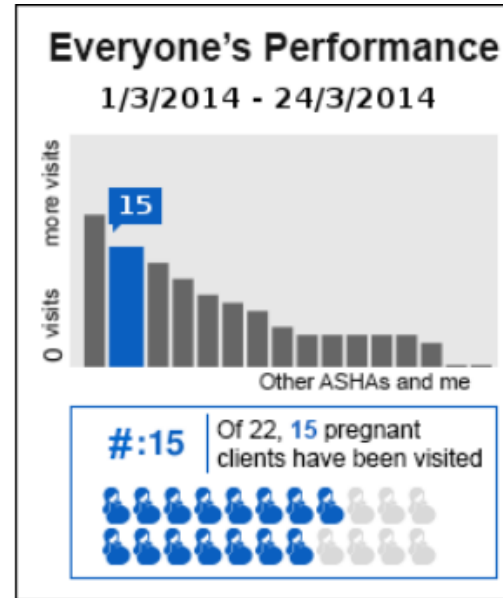
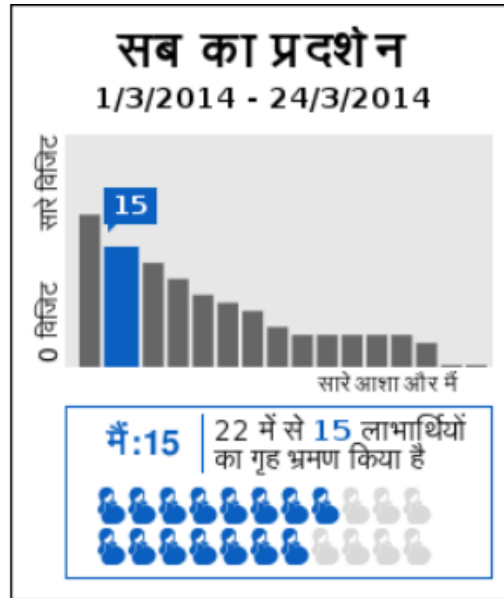


B. DeRenzi, L. Findlater, G. Borriello, J. Jackson, J. Payne, B. Birnbaum, T. Parikh, N. Lesh, "Improving Community Health Worker Performance Through Automated SMS", ICTD 2011, to appear



# Self-tracking app w/ Relative Performance (Lee)

- Led to 27% improvement in performance over the course of 10 months, and a 47% improvement in the top tercile of intrinsically motivated FLWs



## Record for patient xxxxxxxxxx

fakeid	initials	-	sex	status	ARV status	age	treatment site	Pregnant last visit
0721xxxx	xxx	adult	male	active	by MDH	15	Amana	na

first visit	first ARV	last visit	next appt.	regimen	CD4 change
23DEC04	25MAY05	05SEP05	04OCT05	d4T25/ 3TC100/ NVP200 BD	34%

date	weeks on arv	ARV	WT	HT	HGB	ALT	cd4	cd4%	vl	W H O	sep-trin	TB	acute problem
23DEC04	.		27.2	132.0	.	.	133	.	.	3	no	no	none
19JAN05	.		.	.	10.8	32	.	.	.	3	.	.	
02FEB05	.	NOT b/c: cxr shows tb adenitis	27.4	132.0	.	.	.	.	.	3	yes	no	BOILS ON THE FA
03MAR05	.	NOT b/c: has tb adenitis	27.3	132.0	.	.	.	.	.	3	yes	no	ABSCESS ON THE
25MAY05	0	AZT243/ 3TC108/ NVP121 OD	27.0	137.0	.	.	.	.	.	3	yes	yes	SKIN INFECTION
09JUN05	2	AZT243/ 3TC108/ NVP203 BD	27.0	137.0	9.9	.	.	.	.	.	yes	no	none
23JUN05	4	AZT200/ 3TC110/ NVP204 BD	27.5	137.5	9.8	.	.	.	.	.	yes	yes	COUGH
24JUN05	4		.	.	.	55	.	.	.	.	.	.	
22JUL05	8	d4T200/ 3TC104/ NVP200 BD	26.0	137.1	10.1	.	.	.	.	.	no	no	none
23JUL05	8		.	.	.	51	.	.	.	.	.	.	

date	weeks on arv	ARV
23DEC04	.	
19JAN05	.	
02FEB05	.	NOT advised
03MAR05	.	NOT advised
25MAY05	0	AZT/ NVP/
09JUN05	2	AZT/ NVP/
23JUN05	4	AZT/ NVP/
24JUN05	4	
22JUL05	8	d4T200/ NVP/
23JUL05	8	
11AUG05	11	AZT/
22AUG05	13	d4T200/ BD
23AUG05	13	
05SEP05	15	d4T200/ BD
06SEP05	15	

recommended for next  
 Consider changing to  
 consider using 30mg c  
 Order routine ALT

# Successful Report

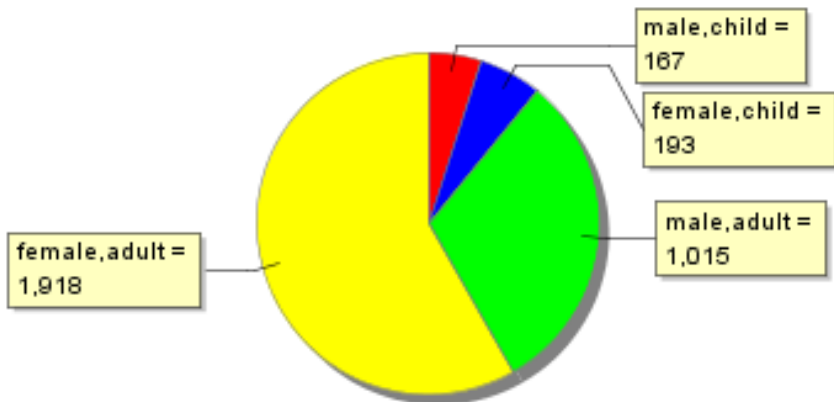
Consultation, 04 Nov 2006

User ID	Name	Age	Attend?	Weight	New weight	Food support today?	Alerts	CD4	TB (current regimen, TB start date)	arv (current regimen, initiation, last change)	accompangateur
.	.	37	<input type="checkbox"/> Y <input type="checkbox"/> N	54 kgs@19Janv06 64 kgs@12Jul06 66 kgs@9Aug06	.	<input type="checkbox"/> Y <input type="checkbox"/> N	.	151 @23Janv06 344 @11Aug06	.	Triomune-40 (1 Co, 2/j) 20Janv06 2Mai06	MBUZUKONGIR A Thadee
.	.	31	<input type="checkbox"/> Y <input type="checkbox"/> N	61 kgs@16Fevr06 65 kgs@22Aug06 69 kgs@18Sep06	.	<input type="checkbox"/> Y <input type="checkbox"/> N	late CD4	237 @27Fevr06	RHEZ (4 Co, 4/j) 2006-06-16	3TC 150 mg (1 Co, 2/j); D4T 40 mg (1 Co, 2/j); EFV 200 mg (1 Co, 1/j)	MUPENZI Faustin

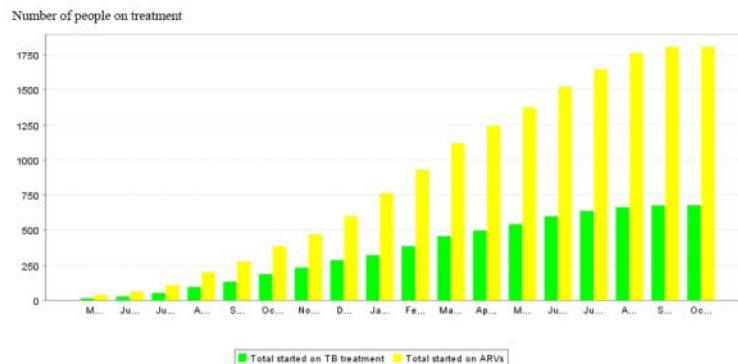
CONSULTATION, 04 NOV 2006

Attend?	Weight	New weight	Food support today?	Alerts
<input type="checkbox"/> Y <input type="checkbox"/> N	54 kgs@19Janv06 64 kgs@12Jul06 66 kgs@9Aug06	.	<input type="checkbox"/> Y <input type="checkbox"/> N	.
<input type="checkbox"/> Y <input type="checkbox"/> N	61 kgs@16Fevr06 65 kgs@22Aug06 69 kgs@18Sep06	.	<input type="checkbox"/> Y <input type="checkbox"/> N	late CD4

# Unsuccessful Report



Scaleup report: since 2005-06-01, monthly  
generated on 26 Oct 2006



## Exception Report 05 Mai 2007

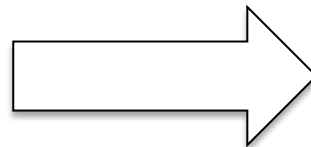
	no site In EMR	no ARV group In EMR	no weight In EMR	HIV+ but no CD4 In EMR	>82kgs but on 30 dose	<68kgs but on 40 dose	Incomplete address In EMR	HIV- and HIV+ Indications	Start ARV or TB In future	Low CD4 But No ARV	CD4 < 200 but No ARV	ARV start date Inconsistent with status
Rwinkwavu	.	417	109	52	3	11	927	8	3	57	12	67
Rukira	.	146	53	13	.	6	550	23	2	7	10	58
Kirehe	.	75	6	3	6	3	359	4	.	5	5	56
Mulindi	.	32	9	5	1	.	146	.	.	1	.	2
Rusumo	.	36	26	26	3	4	248	2	.	9	1	41
Nyarubuye	.	36	5	2	.	.	31	.	.	1	1	3
	50	43	43	14	.	.	28	6	.	1	.	17
<b>Total</b>	50	785	251	115	13	24	2289	43	5	81	29	244

## Our most successful programs

- Take 1-2 years to hit stride
- Do a lot more than just tech/CommCare
- Use data, follow up with individual CHWs based on data
- Have champions!
- Constantly iterate and improve system

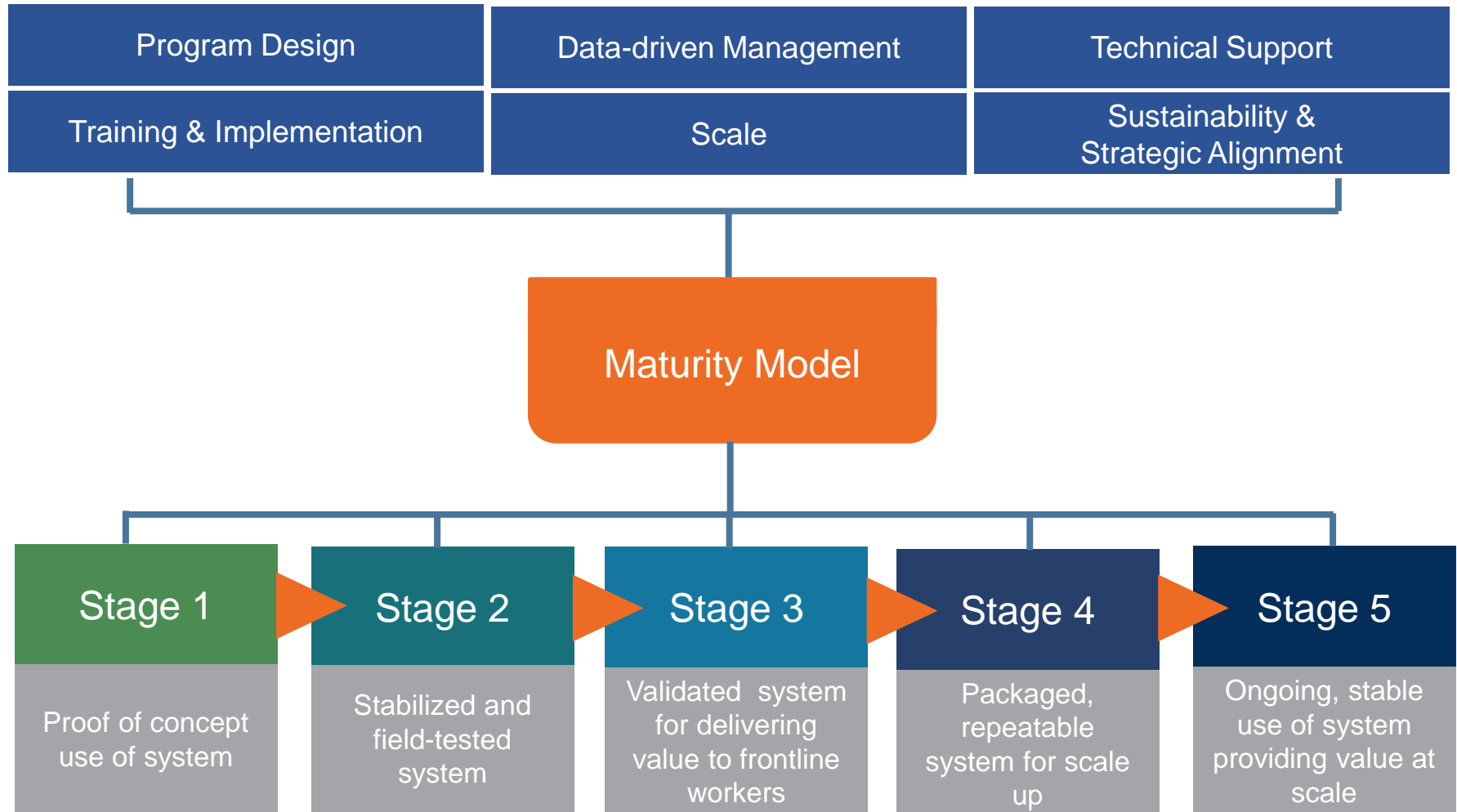
# Maturity Model = Way to to Help Partners Grow

*Initial  
Demonstration*



*Implementation  
at Scale*

# From Implementation Areas to Maturity Stages



# Assessing “Maturity” across key areas

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
<b>Program Design</b>	New content, small number of use cases	→			Additional use cases added to technology platform
<b>Data Driven Management</b>	Data collected but not used to improve workforce	→			Data used to improve program design. Increasing levels of automation for data-driven management.
<b>Technical Support</b>	Limited technical capacity among program staff	→			Technical resources fully capable of managing program independently of external support
<b>Training and Implementation</b>	Training and implementation policies not yet modified for mobile tech.	→			Training and implementation practices institutionalized and improvements can be rolled out iteratively
<b>Scale</b>	Designing and demonstrating with small number of users	→			Fully deployed to target userbase
<b>Sustainability and Strategic Alignment</b>	Focus within single organization with single source of funding	→			Core solution in national strategy receiving core programmatic funding



# The Full Maturity Model

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Program Design	New content, small number of use cases	Refined content based on field iteration	Validated Content used by frontline workers	Frontline worker content stable. New supervisor content created and iterated.	Additional use cases added to technology platform
Data Driven Management	Data collected but not used to improve workforce	Data accessed, but rarely applied	Data periodically used for performance improvement or evaluation	Data regularly used for performance or evaluation	Data used to improve program design. Increasing levels of automation for data-driven management.
Technical Support	Limited technical capacity among program staff	Technical resources existing and trained, starting to use training in the field	Technical resources certified and regularly conducting basic support	Technical resources fully capable, but still needing limited external support	Technical resources fully capable of managing program independently of external support
Training and Implementation	Training and implementation policies not yet modified for mobile tech.	Adapted training and implementation policies to mobile tech.	Training and implementation policies for mobile tech used in practice	Training and implementation practices replicable under a cascaded approach	Training and implementation practices institutionalized and improvements can be rolled out iteratively
Scale	Designing and demonstrating with small number of users	Increasing adoption with frontline workers	Fully deployed with specific target users (or deployment experience). Users demonstrating value	All processes documented and expanding to additional users	Fully deployed to target userbase
Sustainability and Strategic Alignment	Focus within single organization with single source of funding	Building awareness, buy in and support of the program. Aligning to national strategy.	Seeking additional funding based on demonstrated value. Program aligned with national strategy.	Expansion funding secured. Expanding inline with national strategy	Core solution in national strategy receiving core programmatic funding



# Thank you!

Contact: Neal Lesh ([nlesh@dimagi.com](mailto:nlesh@dimagi.com))

## Additional Videos:

CommCare Overview Video: <http://youtu.be/ZpfvISKxyIE>

CommCare Demo Video with multi-lingual support from India: <http://youtu.be/30Ftk6STM3U>

Recorded Webex of CommCare Presentation given to NetHope: <http://bit.ly/tiLaYy>

## Additional Resources:

<http://groups.google.com/group/ict4chw>

<http://www.commcarehq.org>

<http://www.dimagi.com>



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