

User Experience beyond digital tools

**A case on
Service Design
for healthcare**

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Designing for the other 98%

M4ID

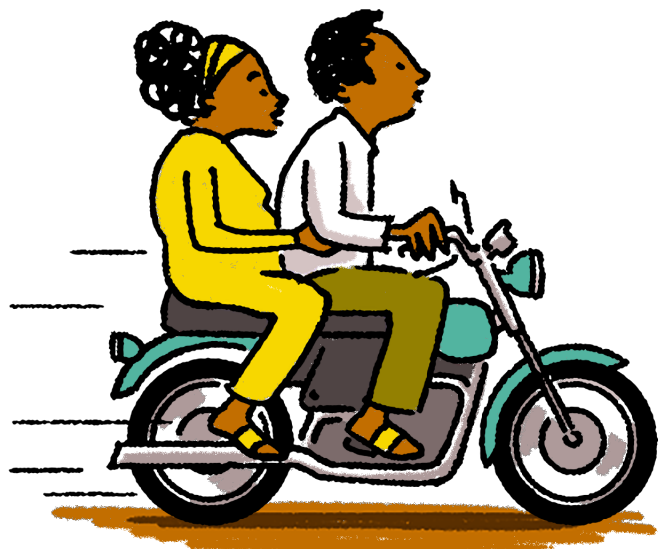
A HUMAN CENTRED DESIGN APPROACH
TO INNOVATIONS IN MATERNAL AND
NEW BORN CHILD HEALTH

**Every day
more than
800 women
and
2700 babies
die during
birth**



**99% of these deaths happen
in low resource settings**

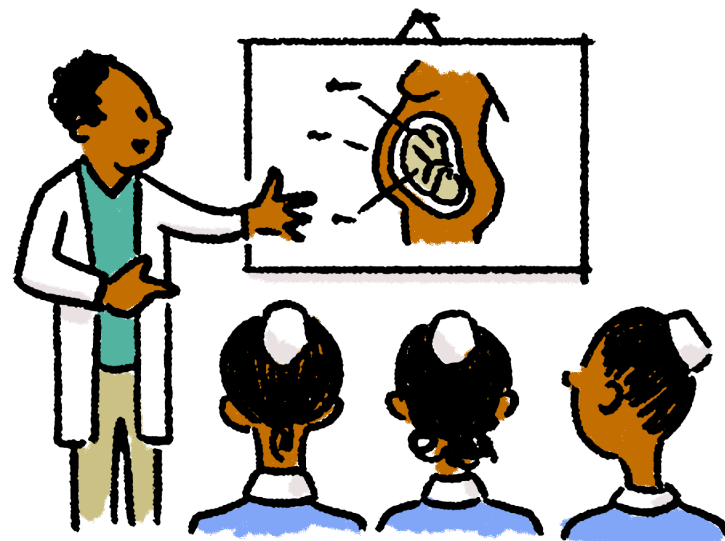
**98% of these deaths
are preventable**



Transportation



Money



Trained staff



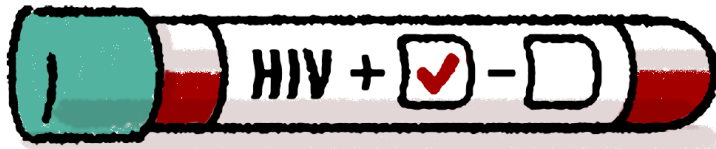
Supplies



Hygiene



**Traditional myths
and beliefs**



Fear of stigmatization



**Disrespect &
abuse**



**Lack of male
involvement**

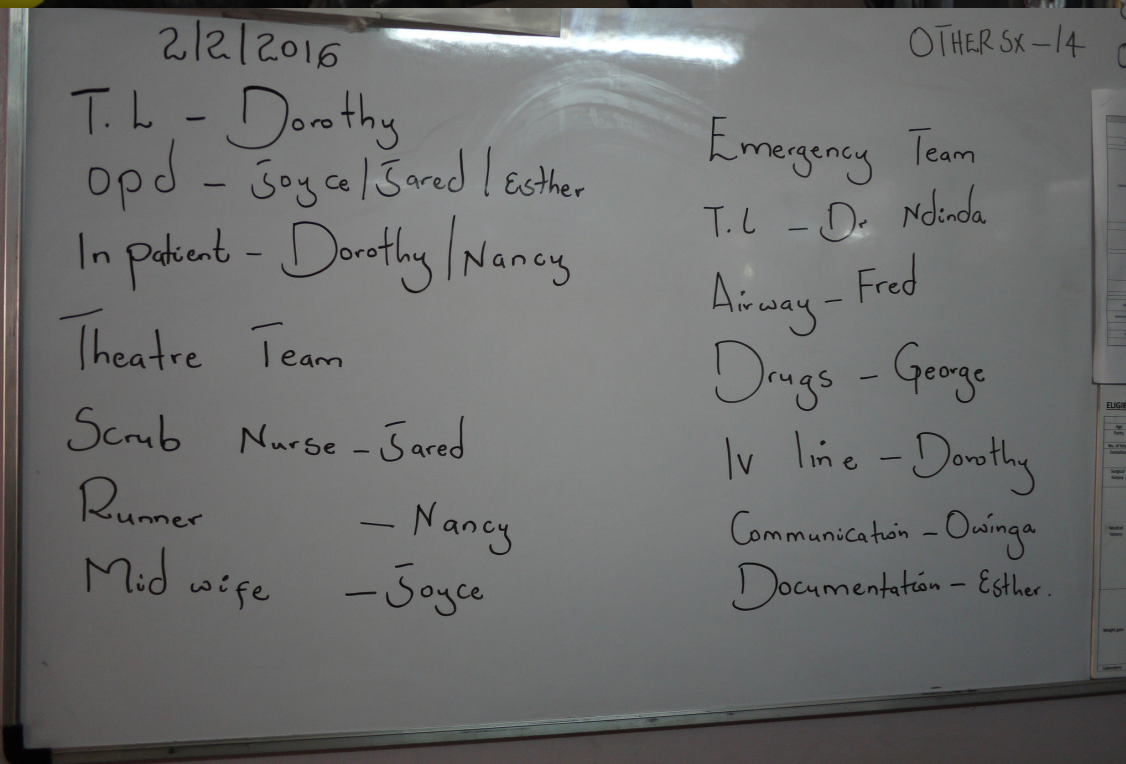
Why Service Design?

Human Centered Design

Observe people




Observe the behavioral cues




Walk through




Interviews



"I am not going to take off my gloves in the delivery room to use a tool. I will tell the mother the date and weight at birth and remember the APGAR myself."



"Convincing patients in admission and referrals is really difficult sometimes, they don't listen to me, they just demand to see the doctor and only trust her."



5
admitted

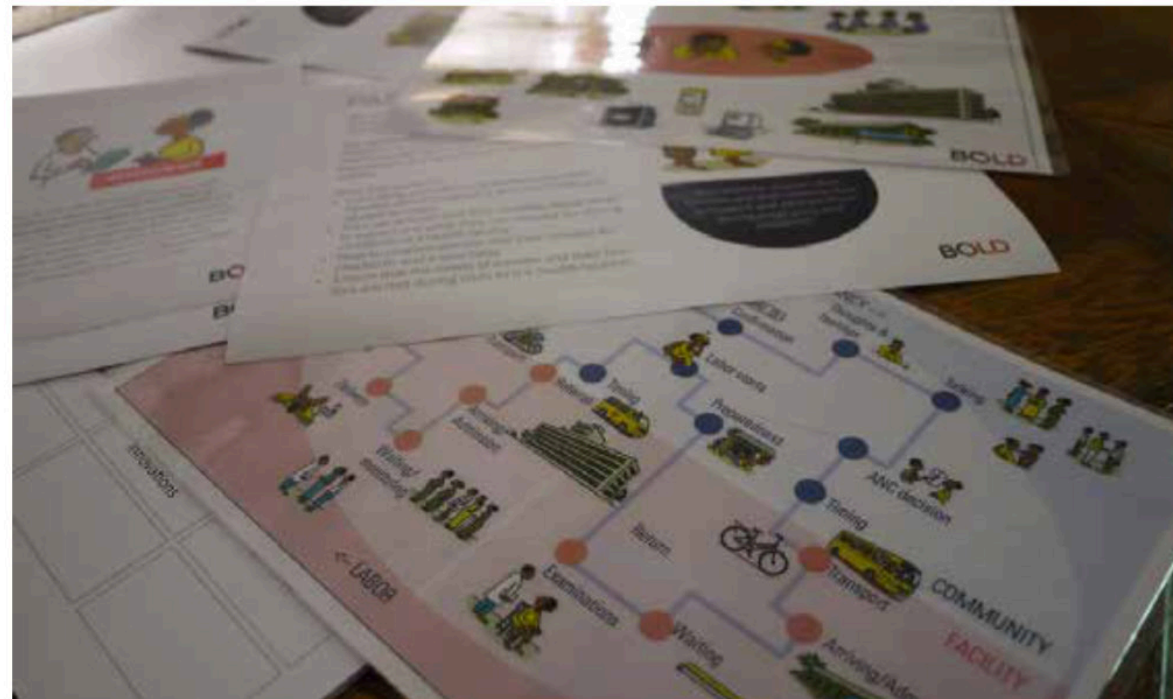
8
first stage

2
delivery

1
theatre

how
many are

"No one has a full overview on what is going on. We just see the bits and pieces and therefore sometimes its challenging to prioritize right"

[illegible]

Role Playing

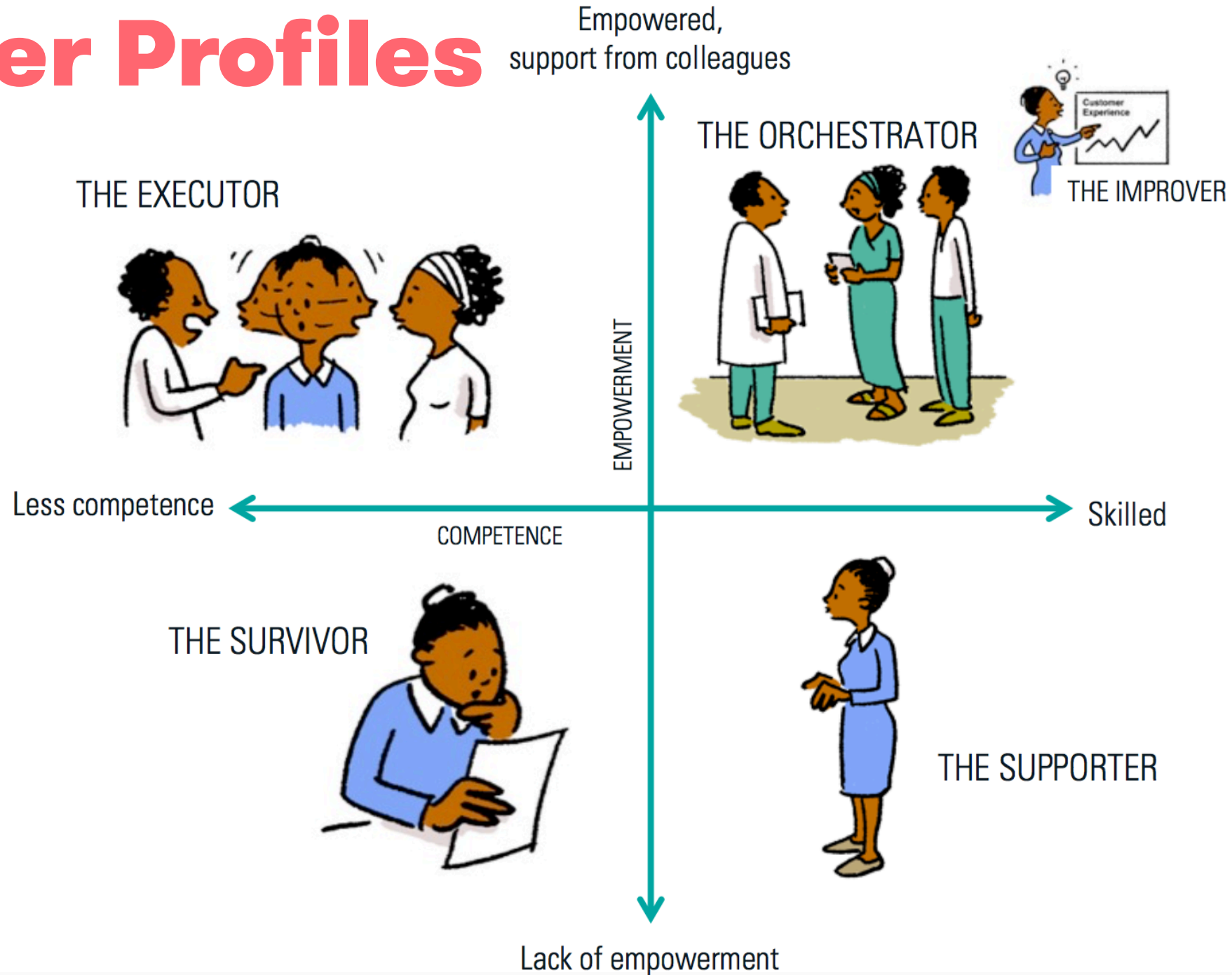


Why HCD?

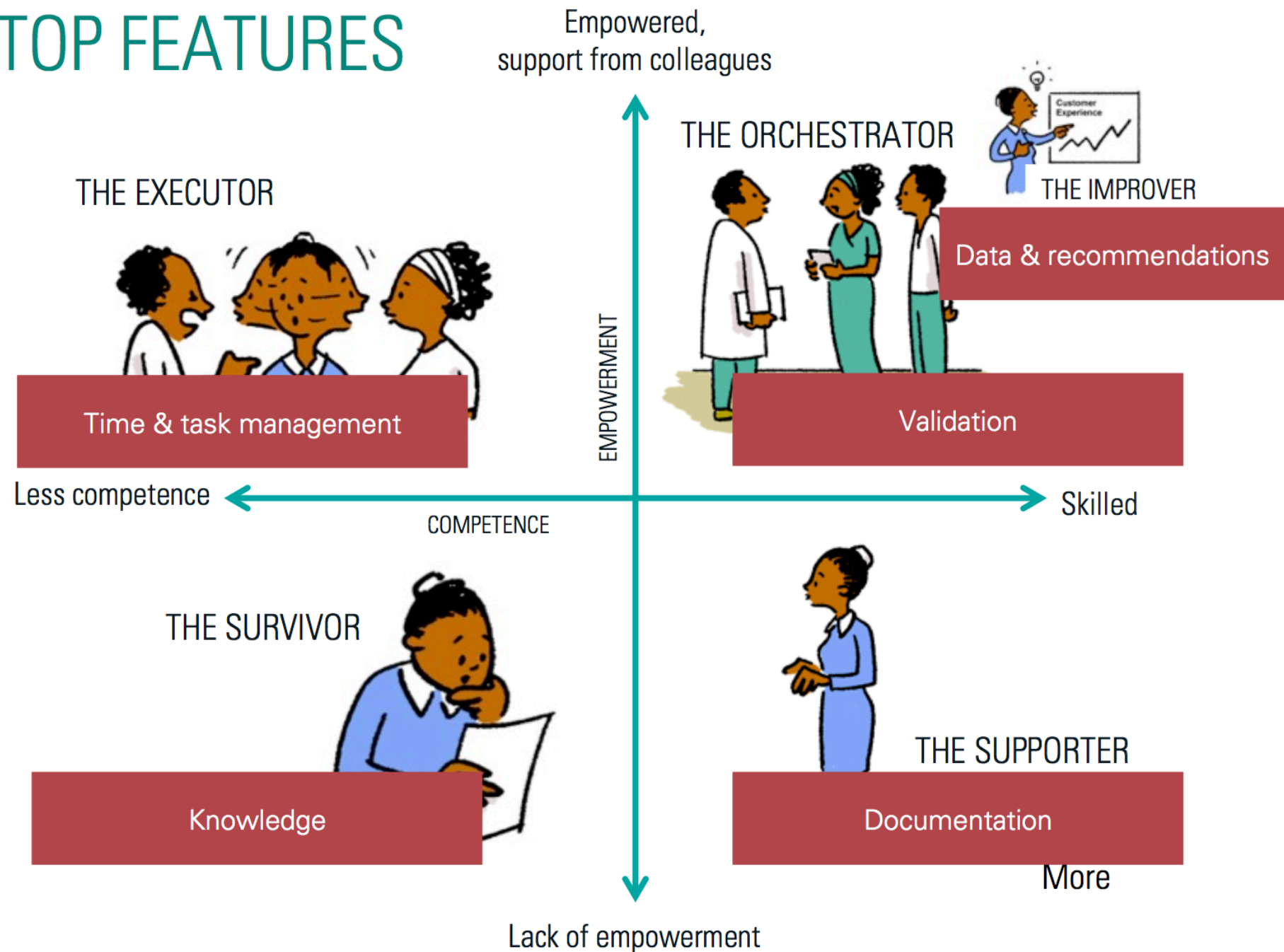
**Services are co-created
situations**

ANC has no narrative	Insight	Education of C-Section during pregnancy	Midwife
ANC has no narrative	Insight	ANC is about answering not asking questions.	
ANC has no narrative	Insight	Women answer very short with a yes or a no	Men
ANC has no narrative	Insight	Some women don't remember basic info, like in which hospital they have delivered before	Men
ANC has no narrative	Insight	No connection of pregnancy test with ANC	Men
ANC has no narrative	Insight	For the 1st baby, a woman came as soon as she knew she was pregnant. With 2nd she at 3 months. She said, they can't know about baby yet. Only after 5 months.	
ANC has no narrative	Insight	Power of family: ANC was overall total disappointment but she still went 8 times because her mom and husband asked to	Woman
ANC has no narrative	Insight	Empowered women feel that ANC is a process designed for health system's needs. Not for their needs.	Woman
ANC has no narrative	Insight	Primary health centers should do better work with early recognition of risk cases and book them in advance for referral hospitals. Now many delayed cases are unbooked high risk women (previous complications, scars, etc.)	Man
ANC has no narrative	Quote	"I didn't know you were supposed to come when you are pregnant"	
ANC has no narrative	Quote	making	
ANC has no narrative	Quote	"I don't know how many times I need to come to ANC"	
ANC has no narrative	Quote	learn more.	Doctor
ANC has no narrative	Quote	"In ANC they repeat the same information over and over again"	Doctor
ANC has no narrative	Quote	very small here. We lose some of them (women)	Woman
ANC has no narrative	Quote	midwives answer that she doesn't know)	Woman
ANC has no narrative	Quote	the subject)	Man
ANC has no narrative	Quote	I don't want to risk my life (a reason to give birth in a PHC)	Man
ANC has no narrative	Opportunity	ANC objective is communicating the potential risks and communicating potential costs.	In-law, woman
ANC has no narrative	Opportunity	Preparing to leave: defining post-partum as an opportunity to educate and create a 'leaving experience'	In-law, woman
ANC has no narrative	Opportunity	Add pregnancy test to ANC procedure to make women come earlier to ANC.	Husband
		Increase the knowledge of the decreased mortality rates and reasons behind it due to facility based care: Influence the older women (in-laws) about the benefits of frequent care (ANC) and facility based birth. Change their image, that formerly women	

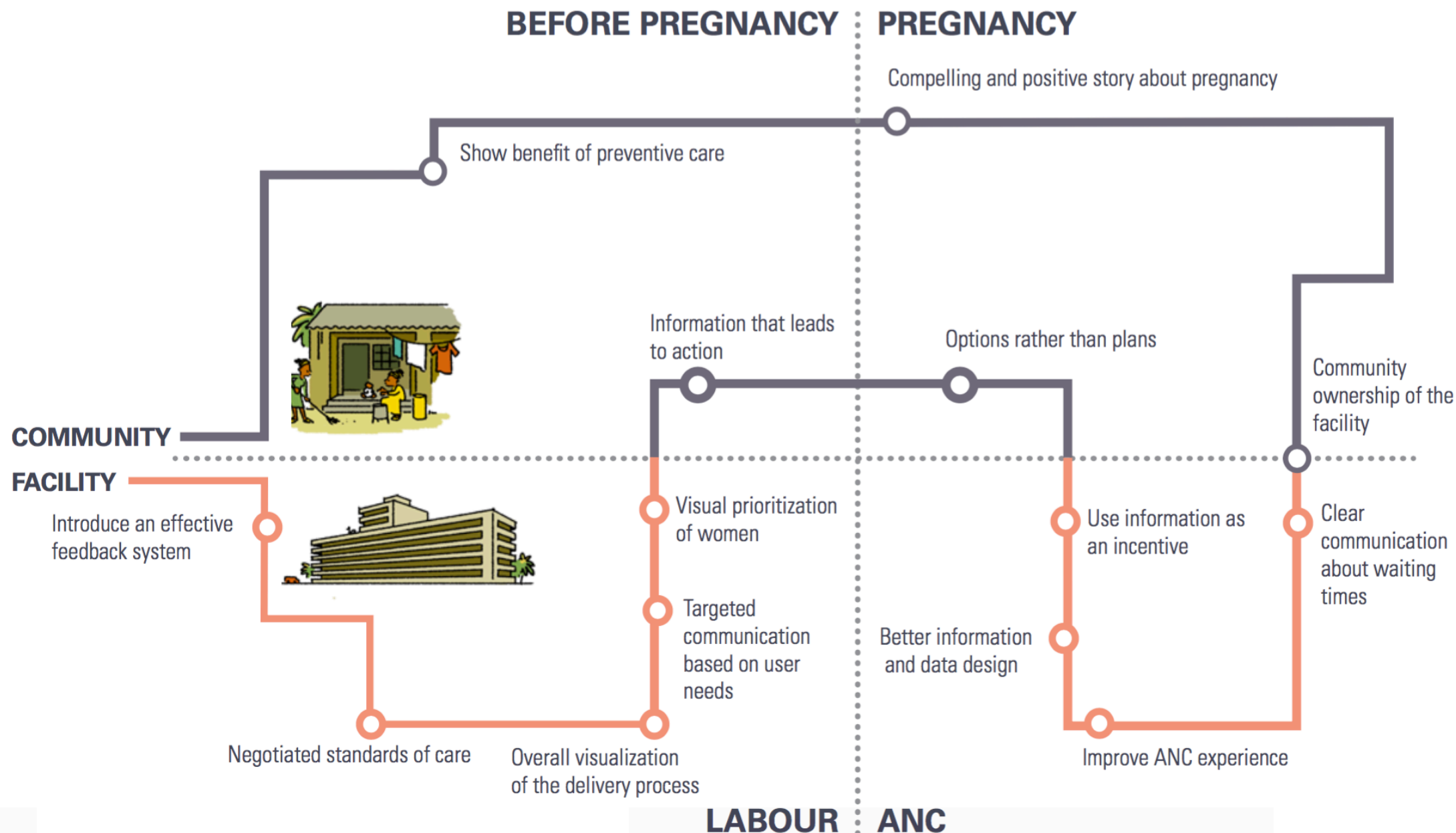
User Profiles



TOP FEATURES



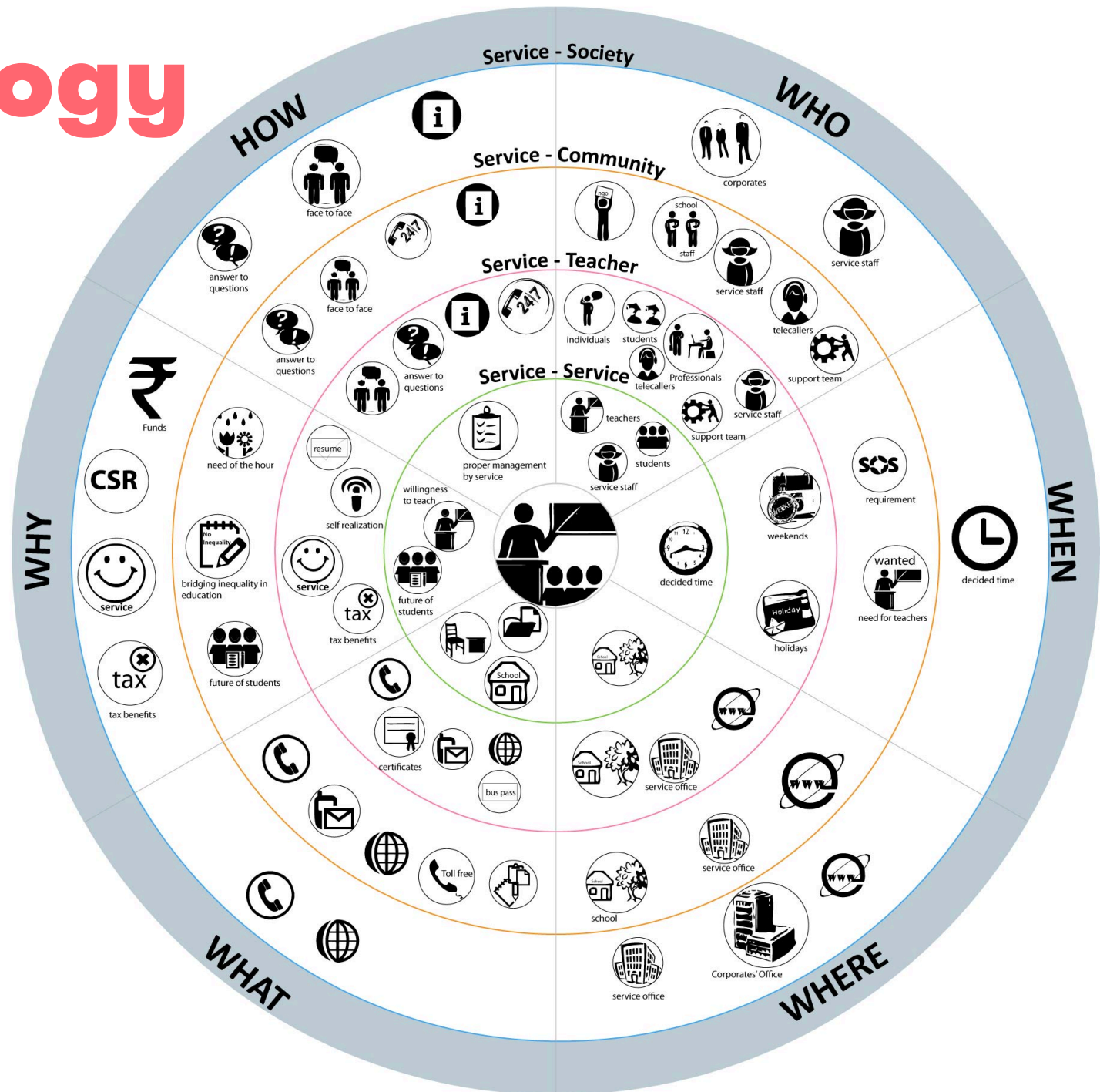
A service is a journey



Service Blueprint

Check-in for a registered client with no risk factor						
location	arrival					
woman's journey	the woman arrives	the woman place the finger in the reader	the woman is welcomed, sees her profile and continues with the check-in	answer the four urgency assessment questions		
LINE OF INTERACTION						
Tool UI onstage (for the client to see)	show how to scan the finger + offer the possibility to look up by name, DOB, MRN	scanning	show welcome message, profile and continue + possibility to edit the profile (some of the content)	shows the four urgency assessment questions	if all questions are negative: show, the current time (arrival time), provide astimated waiting time and what's next	done
midwife's interaction on stage			checks how complete is the profile			
LINE OF VISIBILITY						
midwife's interaction backstage	sets up the arrival					
Tool UI backstage (to be used by the staff)	login/switches user - starts arrival (?)				possibility to edit client profile	
iDeliver UI at all time	call for help/emergency - switch user - overview of the facility (access to waiting list) - settings: notifications on/off (select which ones, clinical decisio					
LINE OF INTERNAL INTERACTIONS						
notifications					notify waiting time after XXmin "Maria has been waiting XXmin"	notify on other tablets that a client just arrived
meassurabe indicators	record the midwife at arrival			record risk type	record time of arrival	

Service Ecology



ANALYSIS PROCESS

The analysis process has followed a process with different activities:

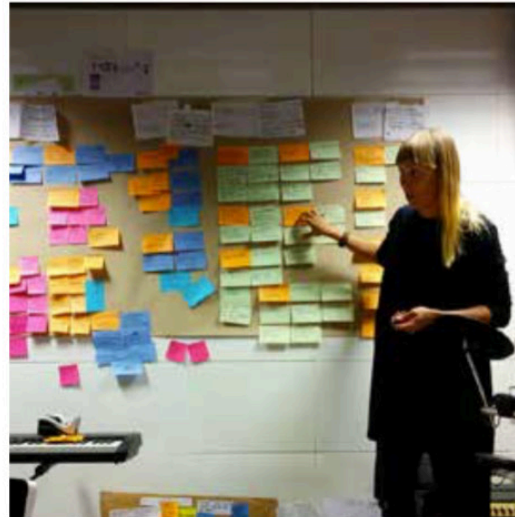
1



Transcript and notes analysis

Analysis of individual notes through discussion and workshops. Transcript review to gather quotes, insights and opportunities.

2



Insight Analysis

Mapping of insights, quotes, themes and opportunities in workshops. Trying of different approaches to filter content, e.g. Insights by step in the journey, type of behavior, stakeholder,

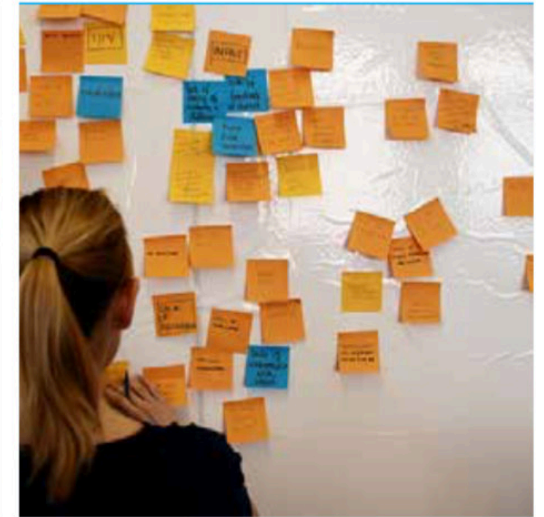
3



Cluster insights and identify themes

Cluster insights to identify key areas that will be translated in themes. Ideation of themes to convey key message within each theme.

4



Define opportunities

Mapping of opportunities to address the themes. Build a strategy to build Key Change Indicators and cluster opportunities based on these.

PREGNANCY & DELIVERY LACK A NARRATIVE

Purely clinical process

Weak macro view of the pregnancy

No compelling story around pregnancy

Weak practice of explanations

Fragile link to cultural references

"I attend ANC but I never go before the 7th month. Once I went early and later my baby died, so going early is not good."

Mother

"I don't see the point of going if I feel normal. Doctor only touches me and examinations are painful."

Mother

"I was feeling fine and I knew what drugs to take, so I only went to ANC for the first time at the 7th month to get my antenatal card."

Expectant Mother

PREGNANCY & DELIVERY HAS NO NARRATIVE

KEY OPPORTUNITIES



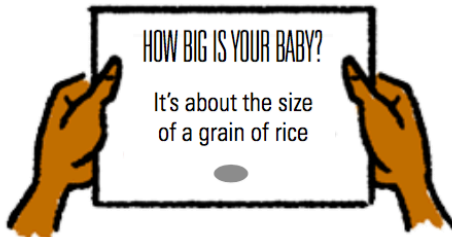
BUILD A COMPELLING AND POSITIVE STORY

Connect ANC, labour and delivery and PNC to a holistic service experience. Give a clear purpose and motive for each visit and explain the steps involved in the process.



IMPROVE ANC SERVICE AND PROCESS

Introduce a more structured and efficient process for ANC to support high volume and better understanding need for individual needs (peer to peer, groups, task sharing).



USE INFORMATION AS AN INCENTIVE

Create **curiosity** and a positive perspective of pregnancy (visualizing the development of baby) to foster engagement of women their own pregnancy and labour.

INSPIRATION FOR DESIGN

- Create roles for men and women to better share responsibilities.
- Use stories to give explanations and discussion topics to demystify pregnancy for men.
- Use cultural perceptions of delivery to motivate women to attend (ANC makes you stronger)
- Strengthen factual knowledge to uncover harmful traditions and beliefs.
- Utilise the need for pregnancy confirmation as the first step in ANC.
- Different ANC experience for first timers and multigravidas.
- Women as storytellers
- Visualize and explain the journey through labour in the facility and explain locations, staff and processes.

Design Drivers

Service Experience





Arrival

The power of welcome

- **Make the couple feel accepted and expected**
- **Give them the feeling that this is a place for them**
- **Use physical objects to give them the feeling of belonging, service and entitlements**
- **Provide an overview**
- **Support a quick assessment to understand urgency**





Welcome!

Let us know you are here



TOUCH THE SCREEN WITH YOUR PASS

OR

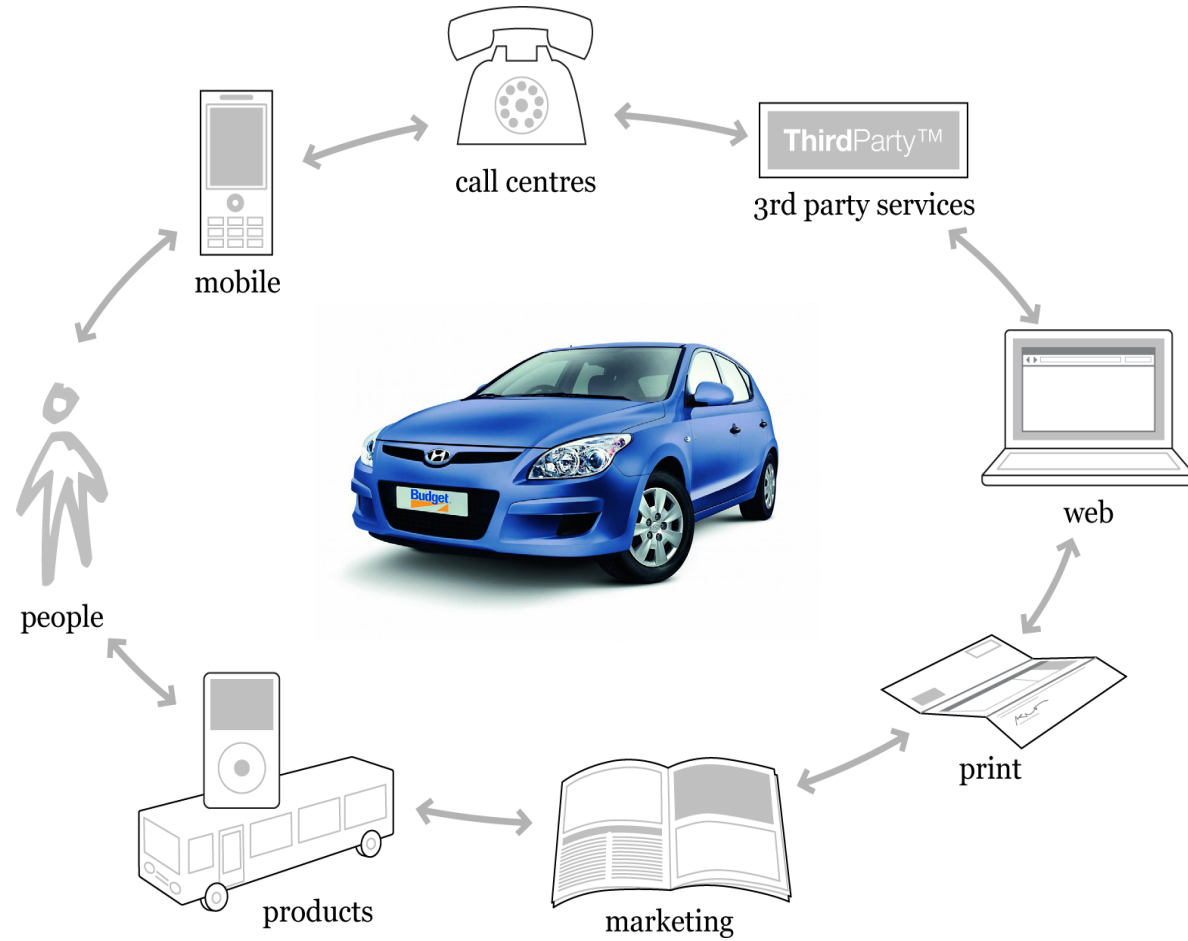
Type your name





**Design makes a
service tangible**

Service Touchpoints



Everything is a service

Exploration





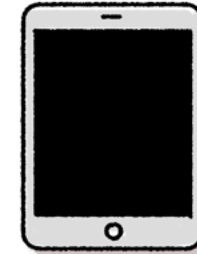
Digital tools to support midwives in intrapartum care



ACTIVITIES

Design Driver 1

At the heart of the
Service Ecosystem





Facility overview

- 13 Clients
- 5 Staff
- 2 Arrival
- 1 Admission
- 3 Labour
- 2 Delivery
- 4 Post-Partum
- 1 Referral

Manage staff

Inventory

Settings

Search for clients or add a new.




Add


Waiting

Waiting		PREGNANCY CURRENT & RX	PRESENTING COMPLAINTS	POTENTIAL COMPLICATION	WAITING	ACBET LEVEL	
	Edda Gachukia Age: 27 Birth C.: Nick Mwariki	Week 39 GPTAL 2 0 0 1 0	Contractions		00:18	L4 60min	Next
	Caroline Mutoko Age: 20 Birth C.: Kwame Bonso	Week 39 GPTAL 1 0 0 0 0	Contractions Water broken Headache		00:15	L3 30min	Next
	Moipei Quartet Age: 25 Birth C.: Lwanda Jawar	Week 39 GPTAL 3 1 1 0 2	Contractions		00:05	L4 60min	Next

Referred today

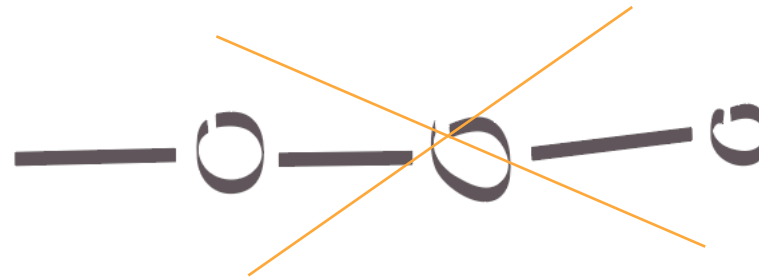
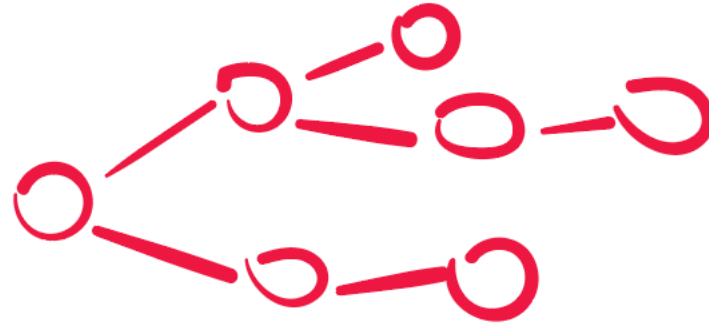
Referred today		PREGNANCY CURRENT & RX	REFERRAL TIME	REFERRAL INFORMATION	
	Anerlisa Muigoi	Week 39	10:25	Reason for referral: Bleeding	+
	Age: 37 Birth C.: Alone	GPTAL 3 0 2 0 2		Referred to: Nurse	+

Expected clients

Expected clients		PREGNANCY CURRENT & RX	LAST VISIT			
	Lilian Muli Age: 33	Week 40 OPTAL 2 1 0 0 1	10/02/2018	Notes	Notify CHW	Contact

Design Driver 2

**The UX supports
intuitive
workflow**





Pregnancy



History



Presenting complaints

Contractions

Frequency

3-5



Intensity

Moderate



Starting date

12/04/2016



Starting time

10:00



Headache

Starting date

12/04/2016



Starting time

10:00



Severity

5 (moderate)



Done



Acuity level

3

15min

Check up
Intervals

10:30

Next
check up

Possible diagnosis

Active Labour

Next step/Check

① Admit to labour room

Possible diagnosis

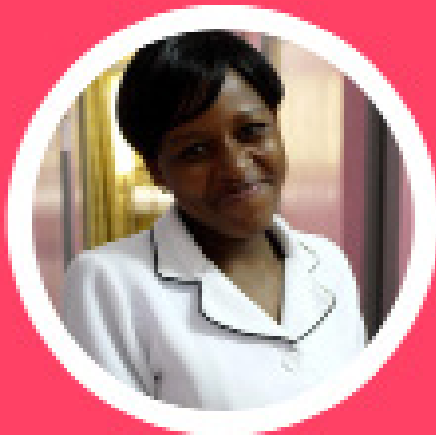
Suspected pre-eclampsia

Next steps

- ① Take BP
- ② Take urinalyses for protein
- ③ Check other symptoms of Pre-Eclampsia
- ④ Manage ABC
- ⑤ Refer

Design Driver 3

**It's the midwives
choice**



Susana

Name

Midwife

Role

46567726

Phone

5

Years of service

Yes

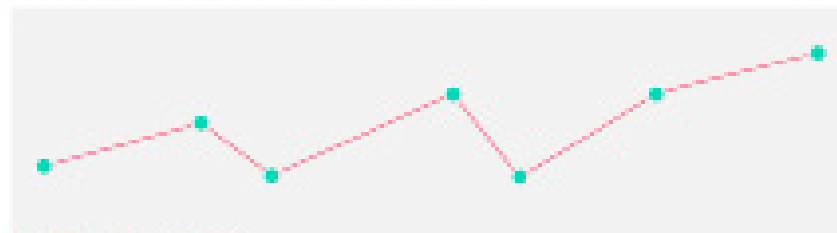
On duty



Log out

My statistics

Number of Births



Birth attended in 2016

News

The World Health Report



UN report steady progress in saving mothers' lives...



INTERVIEW-Invest in "army of midwives"



Team



Aiuma Nasenyana

ARM



Laura Ayugi

Facility Manager



Fred

Doctor in Charge



Facility Reports

May 2016 - Monthly birth report

May 2016 - Referrals

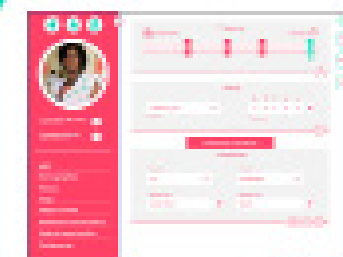


Team chat

Today

Dr. Fred, I just received Caroline. This is her profile. Please take a look

Susana 15:01



Susana 15:01

The tool recommends to refer. Should I?

Susana 15:03

Hello Susana, Are the headaches chronic or occurred suddenly?

Dr. Fred 15:05

Reply



#BirthInProgress



**Testing with
simulation**

Thank you

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www.m4id.fi