

STII conference, 17-18Feb2025, AASTU, Addis Ababa

Evidence and Gaps in Mobile Internet uptake

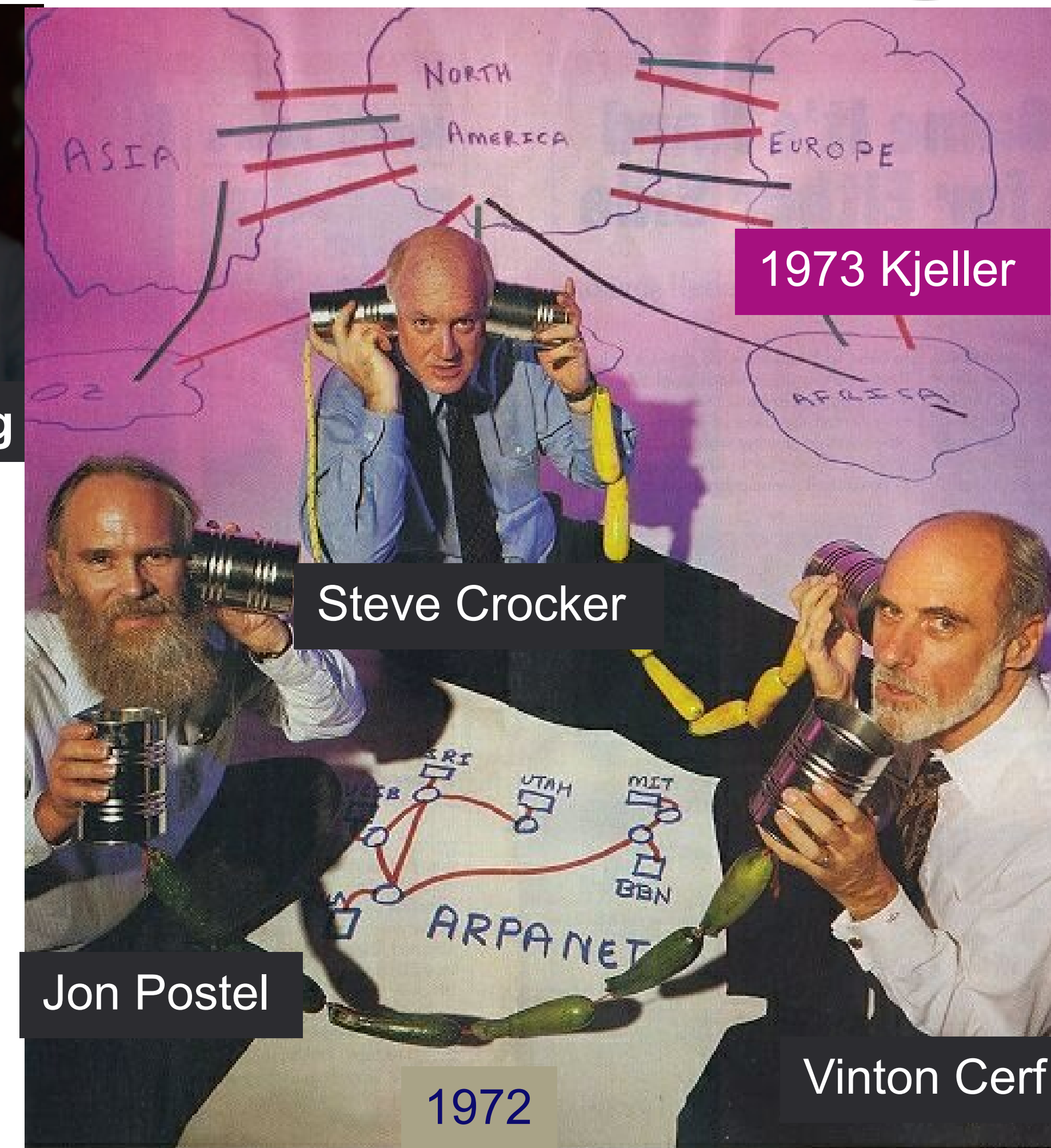
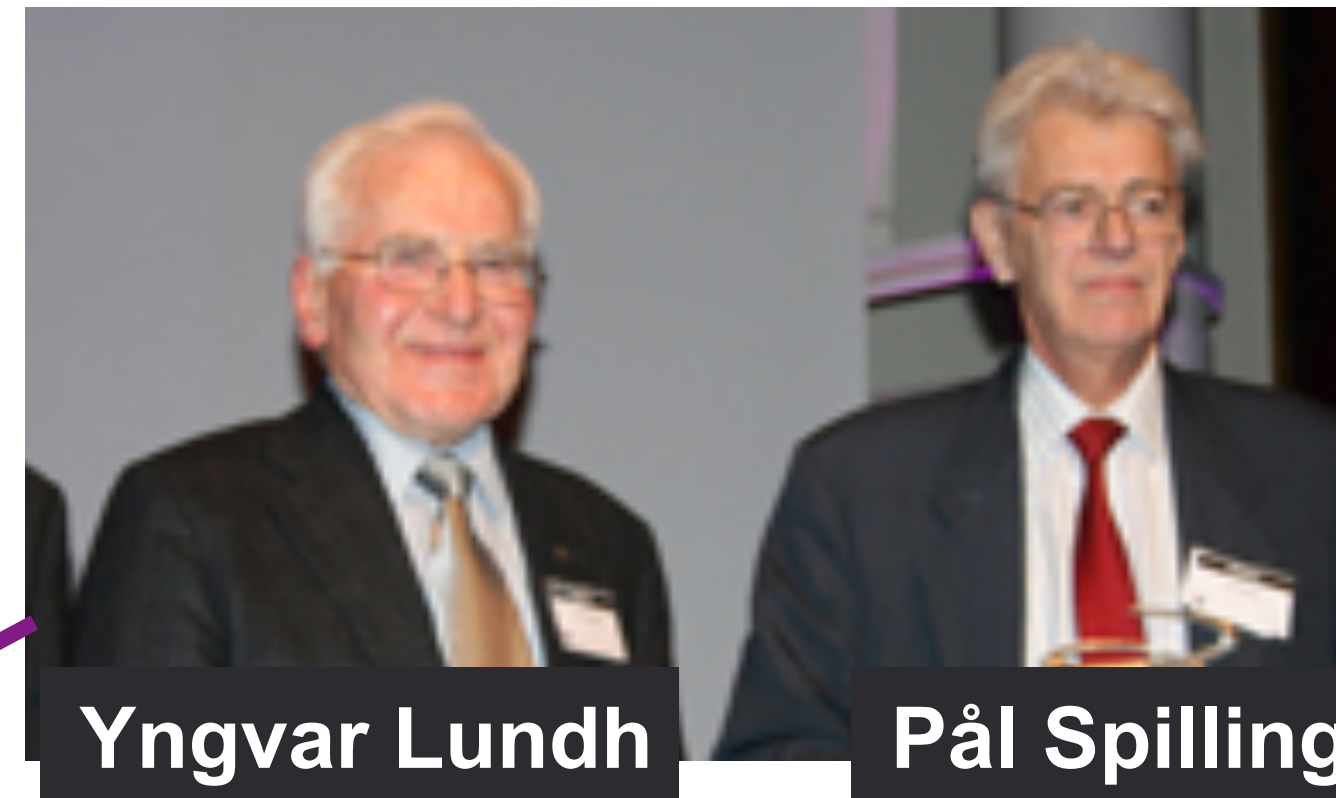
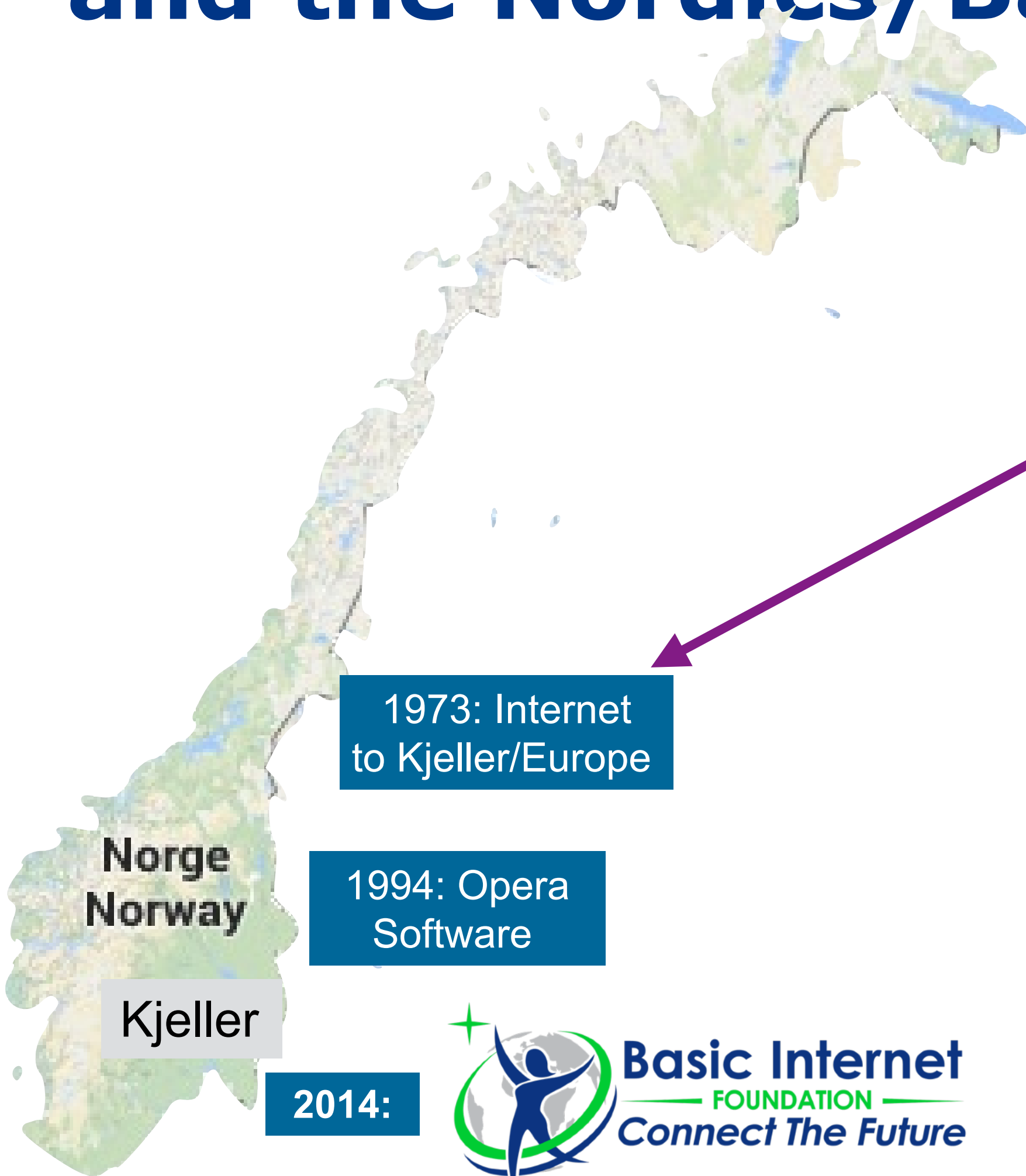
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Inclusive digitalisation in Norway and the Nordics/Baltics (N8)



.php, OpenSource, Linux, Skype, Spotify
Opera Software, FAST search
Nokia, Ericsson
GSM
GovStack.global, X-Roads



Source: <http://www.michaelkaul.de/History/history.htm>

JOSEPH E. STIGLITZ

WINNER OF THE NOBEL PRIZE IN ECONOMICS



THE PRICE OF INEQUALITY

HOW TODAY'S DIVIDED SOCIETY
ENDANGERS OUR FUTURE

Inequality in the digital era

- STII conference
- Artificial intelligence, machine learning
- high-performance computing
- do we lack the unconnected?



9.c

Significantly **increase access to information** and communications technology and strive to **provide universal and affordable access** to the **Internet** in least developed countries **by 2020**



- **57%** of the global population (4.6 billion people) using mobile internet
 - 30% decline in new mobile broadband (200 million new users in 2023)
 - **95% of unconnected** people in LDCs
- Adults in **rural 29% less likely** to use mobile Internet (compared to urban)
- Gender Gap: **Women 19%** less likely
- 41% South Asia, 36% in SSA



Digital Inclusion?

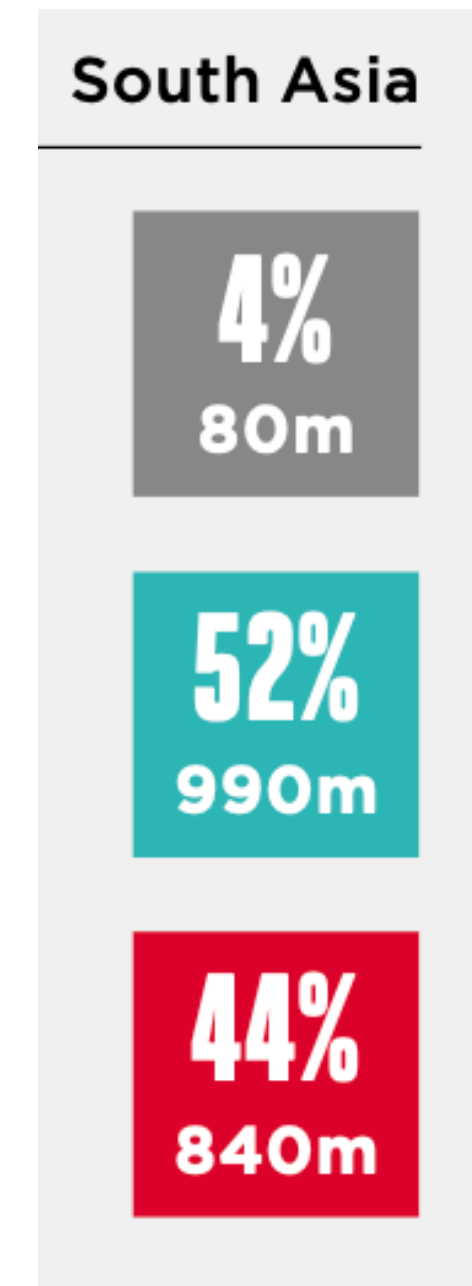
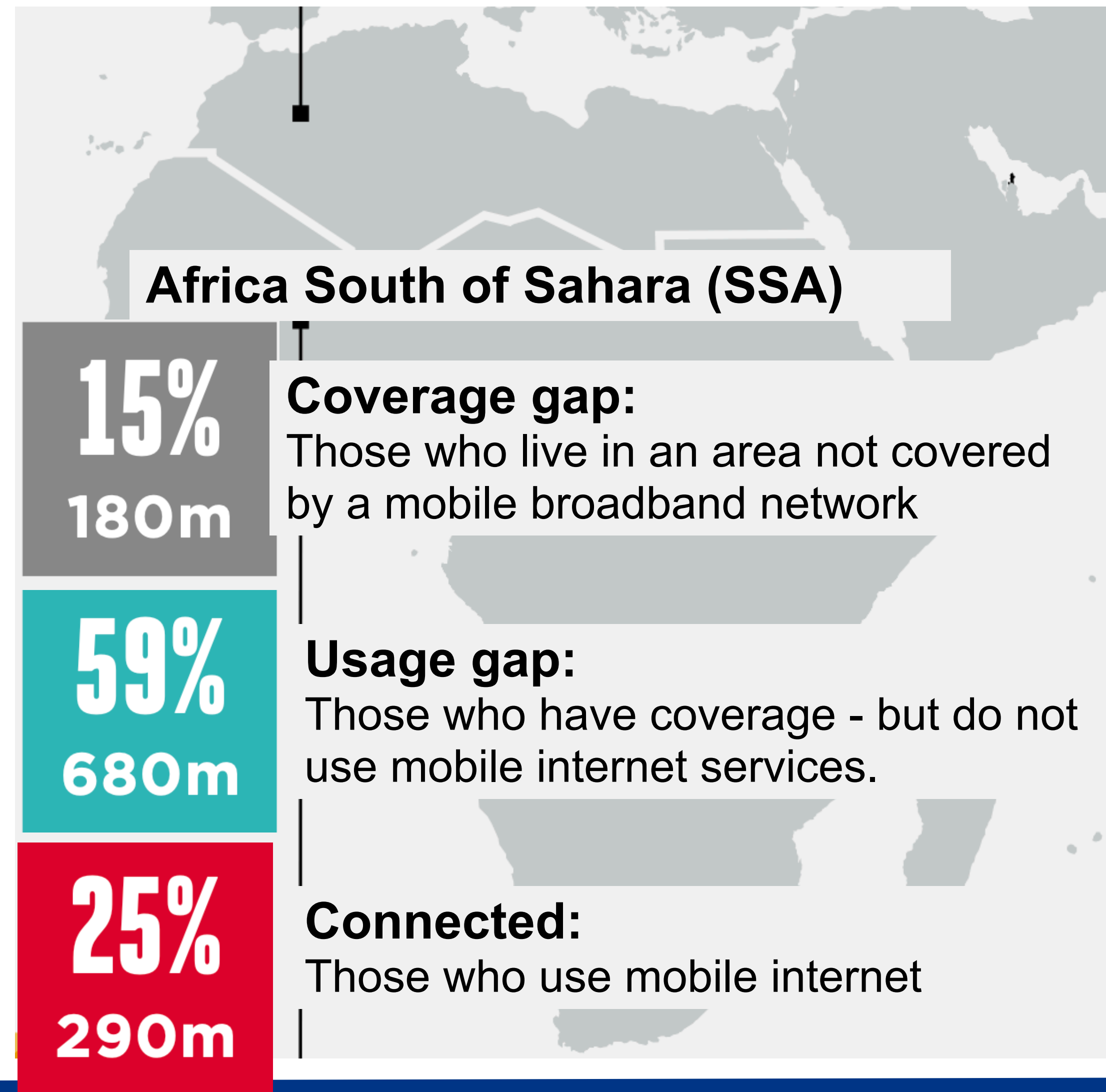


SSA:
75% not using mobile internet

SSA:
49% rural / urban gap

People in rural are more likely to have **reduced** their mobile **internet use**

Women
900 million don't use **mobile internet** (2/3 living in SSA or South Asia)



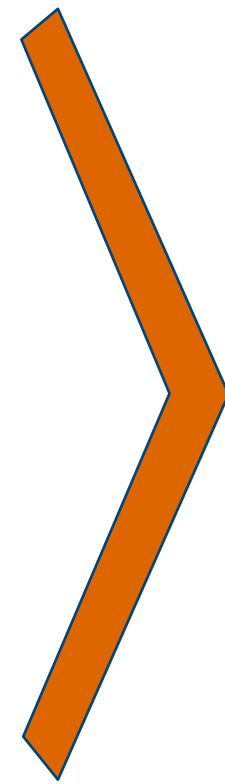
[Source: GSMA 2024]



Evidence Gap Map (EGM) on Mobile Internet Uptake

Study by Basic Internet Foundation and GSMA M4D, Aug-Dec2024

What are the **drivers**
and barriers for mobile
internet uptake?



Once people have **access**
to the internet, what do they
use it for?



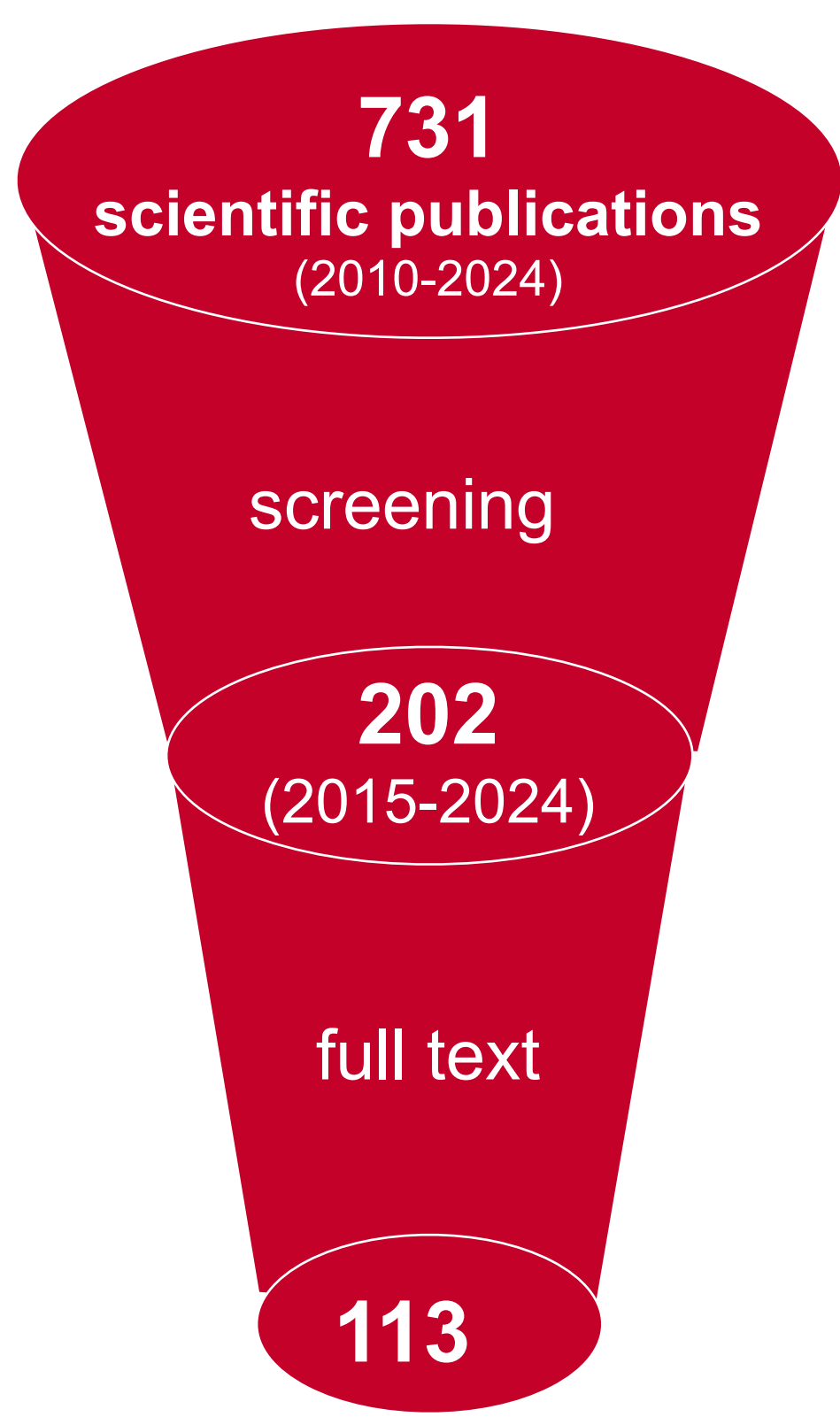
What are the **impacts**
of this use?

Focus on gender and country (SSA and SA), then age and urban-rural



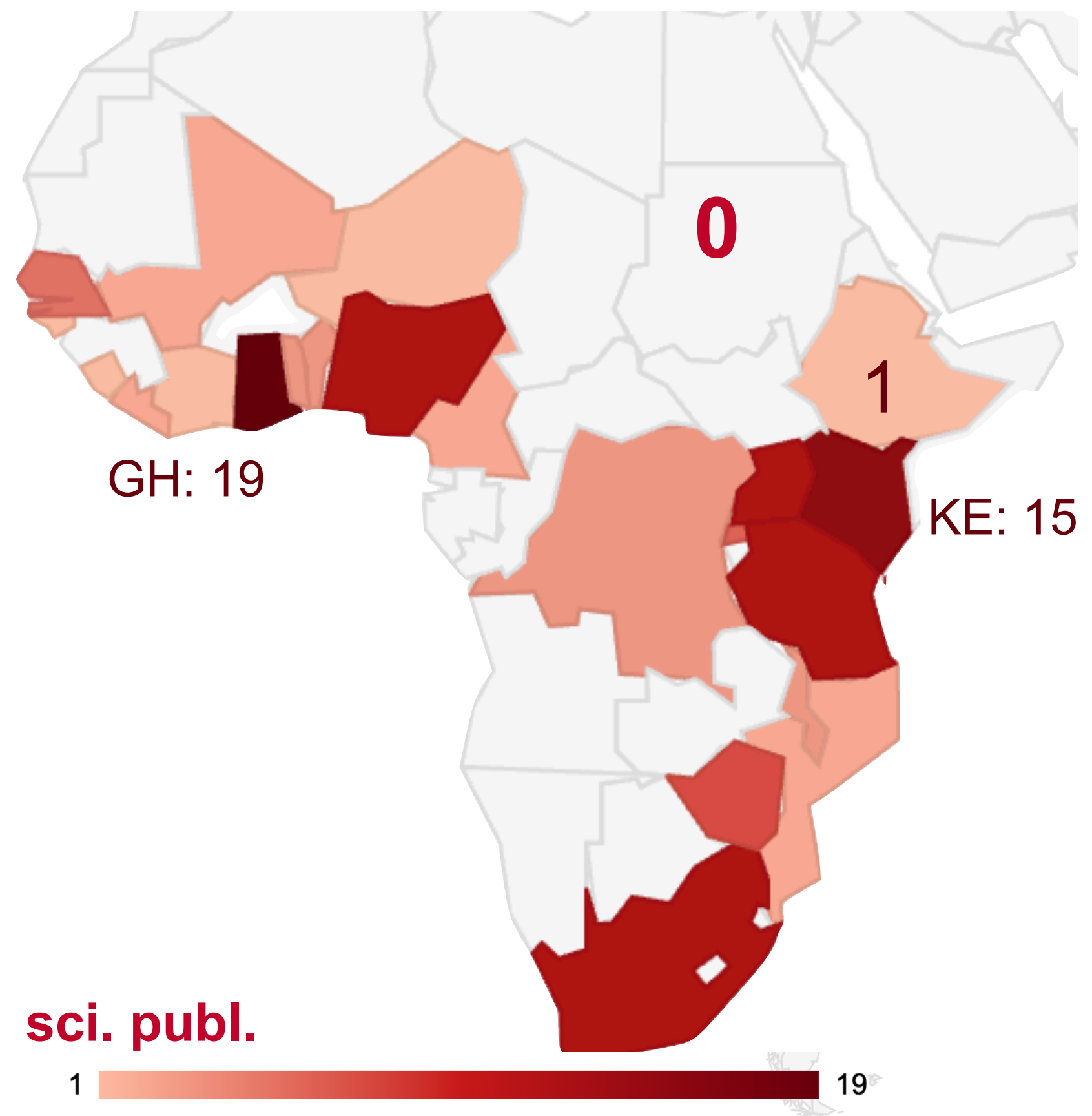
Process and Evidence

EGM Mobile Internet Access



Evidence

of scientific publications



A desktop design from so-called experts that may feel they know it all. Once they design it, it is not context-specific, it won't be accepted and it won't be effective." (developer, Ethiopia)

1 paper mentioning Ethiopia:

Coggins et al., 2022, "How have smallholder farmers used digital extension tools? Developer and user voices from Sub-Saharan Africa, South Asia and Southeast Asia", Global Food Security, 32

Debsu, et al. 2016. "Mobile phones for mobile people: the role of information and communication technology (ICT) among livestock traders and Borana pastoralists of southern Ethiopia". Nomadic Peoples 20(1), 35–61



The Impact of Mobile Internet?

what are evidences and gaps?

What are the **drivers**
and **barriers** for mobile
internet uptake?

Regulations (enabling/
disabling)

Handset affordability and
service costs

Cultrual/social norms
around phone ownership

Fear and lack of trust

User profiles

Access to information as a
driver

Coverage

Once people have **access** to the
internet, what do they **use** it for?

1 - Access to services
utilities, health, emergency, governmental, ..

2 - Civic Engagement
*Political civic action, legal awareness,
organising around rights*

3 - Fun, entertainment, leisure
Gaming, sports, social media, Porn

4 - Financial services
*Mobile money, banking, remittances, income
generation*

5 - Community cohesion
safety, security, group organising

6 - Connection to family and friends

7 - Access to information

What are the **impacts** of this use?

Individual social inclusion or exclusion

Realisation of socio-economic rights

Efficiency
Life management

Political engagement
Voter turnout, activation and participation

Individual economic effects
*business, jobs, livelihood changes, remittances,
sales distribution*

Security
*stalking, gender-based violence, device theft,
scamming*

?

1

5

3

7

1

3

1

4

6

EGM - overview



Evidence Gap Map Mobile Internet: from Drivers & Barriers to Service usage and Impacts		1- Access to service s	2 - Civic engage ment	3 - Fun & entertai nment	4 - Financi al service s	5- Comm unity cohesi on	6 - Connec tion to family and friends	7- Access to inform ation	Individ ual social inclusi on or exclusi on	Realisa tion of socio- econo mic rights	Efficien cy& Life manag ement	Politica l engage ment	Individ ual econo mic effects	Securit y& violenc e	SSA	SA
Digital skills	20	11		2	11	5	7	3	9	4	18		13	1	14	5
User profiles	75	35	2	9	38	15	24	21	35	21	68	3	32	3	54	15
Policy - regulatory	9	5	1		4		1	1	4		8	1	4		9	
Handset affordability and service costs	44	20	1	7	17	7	11	16	20	11	39	3	17	1	38	8
Cultural /social norms	41	18	1	7	18	7	13	11	21	10	33		15	3	27	12
Fear and lack of trust	23	17	2	1	14	4	11	2	10	7	21	1	9	1	12	7
Access to information	37	23	1	1	26	10	18	10	14	12	31	1	19		26	6
Network coverage	17	8	1	1	8	2	4	5	7	1	16	1	8		14	4

EGM - overview



Efficiency and Life Management

individual economic

Access to services

Financial

Evidence Gap Map Mobile Internet: from Drivers & Barriers to Service usage and Impacts		1- Access to service s	2 - Civic engage ment	3 - Fun & entertai nment	4 - Fin al service s	5 - Community cohesi on	6 - Connec tion to family and friends	7- Access to inform ation	Individ ual social inclusion or exclusi on	Realisa tion of socio- econo mic rights	Efficien cy& Life manag ement	8- Individual engage ment	9- Individual economic effects	10- Security & violenc e	USA	SA
Digital																
User		35	2	9	38	15	24	21	35	21	68	3	32	3	54	15
Policy		4			4		1	1	4		8	1	4		9	
Handsets		20	4	7	17	7	11	16	20	11	39	3	17	1	38	8
Cultural		18			18	7	13	11	21	10	33		15	3	27	12
Fear and lack of trust		23					11	2	10	7	21	1	9	1	12	7
Access to information		20	1	1	20	10	18	10	14	12	31	1	19		26	6
Network coverage	17	8	1	1	8	2	4	5	7	1	16	1	8		14	4

User profiles: university, business

costs of handsets and access

cultural and social norms

Access to information: Health, news, education

EGM Mobile Internet - services



Evidence Gap Map Mobile Internet: Drivers & Barriers and Services		#	1 - Access to services				2 - Civic engagement				3 - Fun & entertainment				4 - Financial services				5- Community cohesion			6 - Connection to family and friends				7-Access to information			
			Health care	Utilities	Emergency services	Governmental services	Political engagement and action	Civic action	Legal awareness	Human rights	Gaming	Sports	Social Media	Sex& Pornography	Mobile Money	Banking	Remittances	Income generation	Community safety	Community building	Income generation	Remittances	Mobile Money	Income generation	Connection to family and friends	e-Learning	Search	News	Income generation
		#	9	58	0	9	3	3	1	1	6	0	9	5	20	21	9	35	0	17	8	9	14	4	20	18	7	0	11
Digital skills		20	1	10		1					2		1		1	2	1	9		4	1	1	1	2	3	3	1		1
User profiles	Gender	39	1	15		2	1	2	1	1	1		6	4	5	4	3	13		6	6	3	2	2	10	2	6		7
	Youth	26	2	10			1	1			1		7	4	6	4	1	7		7	3	1	1	1	8	3	5		4
	Education level	43	4	19		2	1	1			2		1	1	5	7	4	12		7	3	4	4		9	8	3	2	3
	Adolescent	5		2									1	1	1			2		1	1				1	1		1	1
	Rural	12	1	4		2							1		3	1	1	1		2		1	2		3	1	2		
	Urban	23	1	7							3		3	1	5	2	1	8		5	3	1	2	2	5	1	5		5
Policy - regulatory		9		4		2	1									1		4						1					1
Handset affordability and service costs	Cost of access to data and internet	41	3	17		1	1	1			3		7	4	8	1	1	11		7	2	1	3	1	9	10	5	1	3
	Access to electricity	9		3										1	2			4		1					2	2	3		1
Cultural /social norms		41	2	15		3		1	1	1	3		6	3	6	5	1	11		7	1	1	2	1	11	8	6	1	4
Fear and lack of trust	Lack of trust in pricing	15	2	12		2	1	2	1	1			1	1	2	3	4	5		1		4	2		3	1	1		
	Mis- and Disinformation	0																											
	Device theft and security	19	3	13		1					1		1		4	5	2	3		4	1	2	3		5		1		3
Access to information		37	4	21		2	1						2		10	8	5	13		7	5	5	8	3	5	3	2		6
Network coverage	Mobile network	13	1	8		2	1						1		2	1	1	5			2	1	1	1	1				3
	Access to electricity	10		4										1	2			5		1	1				2	2	3		2

Evidence Gap Map
Mobile Internet:
Drivers & Barriers
and Services

Evidence Gap Map Mobile Internet: Drivers & Barriers and Services			1 - Access to services								3 - Fun & entertainment								5- Community cohesion				6 - Connection and friends				Search & News			
			Health care	Utilities	Emergency services	Governmental services	Political engagement and action	Civil action	Legal awareness	Mobile Money	Banking	Remittances	Income generation	Community safety	Community building	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	Income generation	
		#	9	58	0	9	3	3	1	1	6	0	9	5	20	21	9	35	0	17	8	9	14	4	20	18	7	0	11	
Digital skills		20	1	10		1					2		1		1	2	1	9		4	1	1	1	2	3	3	1		1	
User profiles										1	1		6	4	5	4	3	13		6	6	3	2	2	10	2	6		7	
											1		7	4	6	4	1	7		7	3	1	1	1	8	3	5		4	
											2		1	1	5	7	4	12		7	3	4	4		9	8	3	2	3	
	Adolescent	5		2									1	1	1			2		1	1				1	1		1	1	
	Rural	12	1	4		2							1		3	1	1	1		2		1	2		3	1	2			
	Urban	23	1	7							3		3	1	5	2	1	8		5	3	1	2							
Policy - regulatory		9		4		2	1									1		4												
Handset affordability and service costs	Cost of access to data and internet	41	3	17		1	1	1			3		7	4	8	1	1	11		7	2	1	3	1	9	10	5	1	3	
	Access to electricity	9		3										1	2			4		1					2	2	3		1	
Cultural /social										1	3		6	3	6	5	1	11		7	1	1	2	1	11	8	6	1	4	
										1			1	1	2	3	4	5		1		4	2		3	1	1			
Fear and lack of trust																														
	Disinformation																													
	Device theft and security	19	3	13		1					1		1		4	5	2	3		4	1	2	3		5		1		3	
Access to information		37	4	21		2	1						2		10	8	5	13		7	5	5	8	3	5	3	2		6	
Network coverage	Mobile network	13	1	8		2	1						1		2	1	1	5			2	1	1	1	1				3	
	Access to electricity	10		4										1	2			5		1	1				2	2	3		2	

Gender, education level

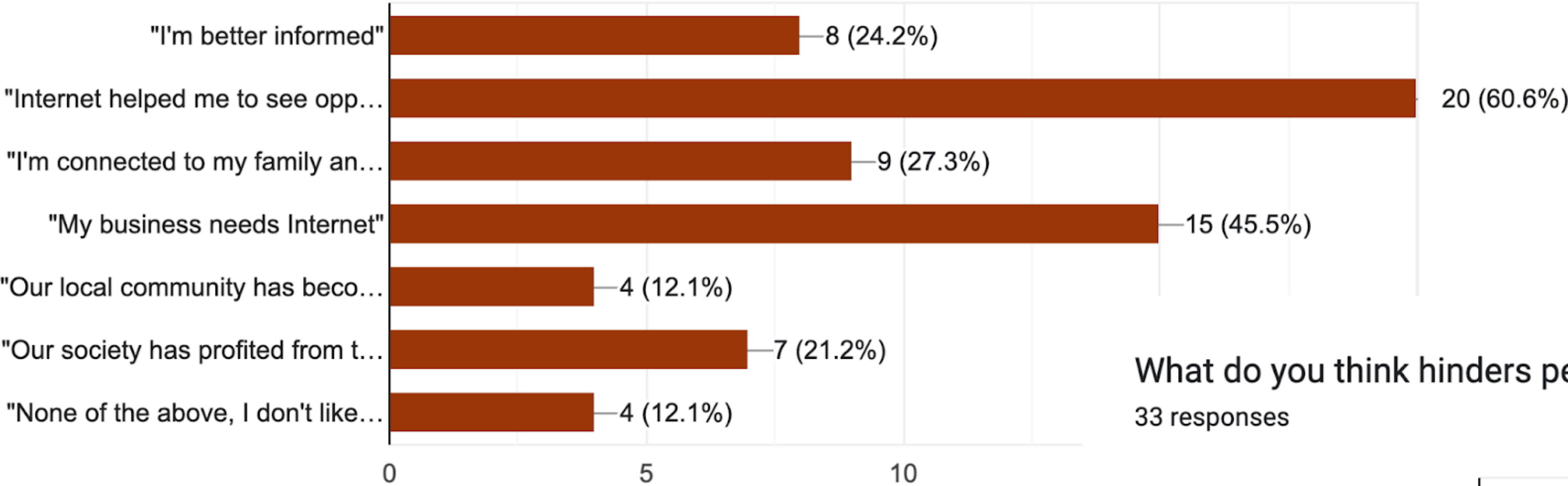
Policy

cost of access to data/internet

EGM Mobile Internet, Drivers & hinders

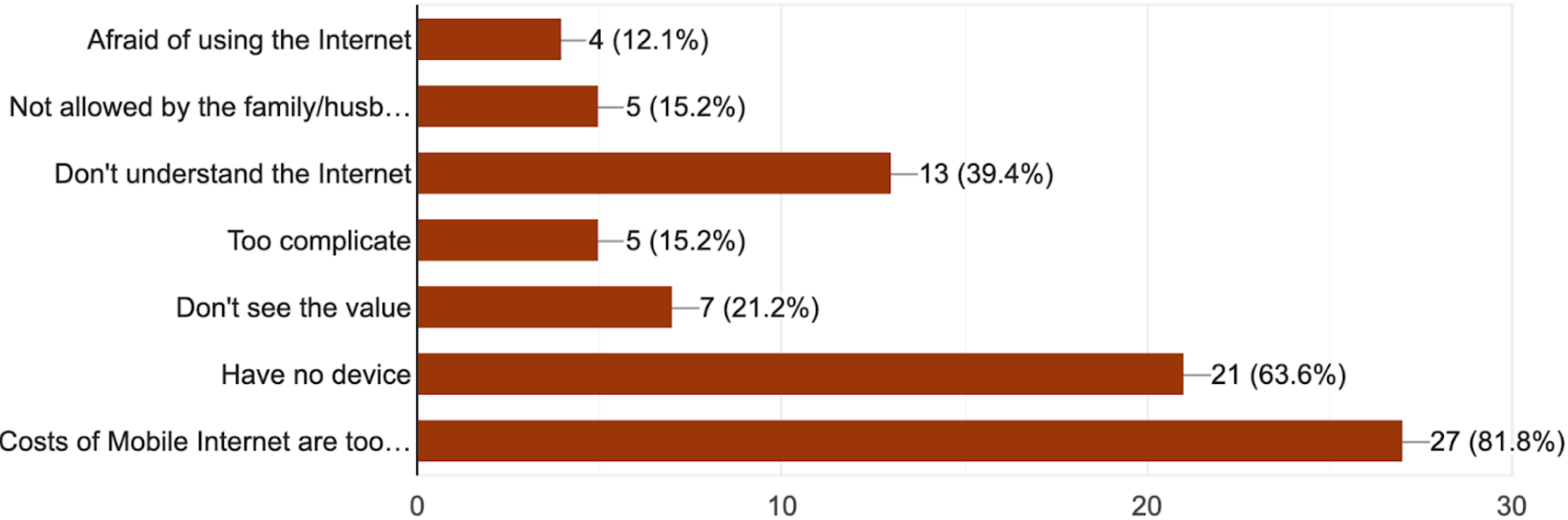
Out of the following statements, which fits for you?

33 responses



What do you think hinders people buying mobile internet? (max 3 answers)

33 responses



Drivers for Mobile Internet

Thanks for your help in addressing topics related to mobile Internet access. Your input is used as a basis for an academic study to identify evidence and gaps between mobile internet uptake and the impact on people, businesses, community, and society. For more information, please scroll down to the bottom of this page

Note: all answers are handled anonymously, thus we don't identify you. Your input is used to quality control our assumptions in the study.

Gaps

EGM Mobile Internet			Social & emotional connection					Political engagement		Individual economic effects						
Drivers / Barriers and Impact			Mental health	Isolation	Social & emotional connection	Economic development	Life management	Buzz development	Livelihood improvement	Remittances	Income generation	Gender-based violence	Theft	Cybersecurity		
			2	2	44	36	94				14	2	2	0		
Digital skills					9	4	18			1	2	1	2	1		
User profiles	Gender	39	2	1	20	12	34	3	8	8	6	5	10	2	1	
	Youth	26	1	1	14	10	24	3	6	6	4	2	6		1	
	Education level	43		1	15	12	39	1	10	4	3	4	4			
	Adolescent	5			3	1	5		1	1			1		1	
	Rural	12		1	3	5	10		4	2	2	1				
	Urban	23		1	14	9	21	2	5	5	1	2	5	1		
Policy - regulatory		9			4		8	1	4							
Handset affordability and service costs	Cost of access to data and internet	41	1	2	17	11	36	3	11	4	5	2	7	1		
	Access to electricity	9	1		4		9		3	2	1	1	2			
Cultural /social norms		41	2	2	21	10	33		7	5	5	2	6	2	1	
Fear and lack of trust	Lack of trust in pricing	15			4	3	14	1	4			3		1		
	Mis- and Disinformation	0														
	Device theft and security	19			7	6	18		3	3	1	1	3			
Access to information		37			14	12	31	1	14	5	1	4	6			
Network coverage	Mobile network	13			3	1	12	1	3	3	1	1	2			
	Access to electricity	10	1		4		10		3	3	1	1	3			

Findings EGM Mobile Internet

Drivers *for uptake of Mobile Internet*

Digital skills, education

Youth divide, access to information



Use of Mobile Internet

Access to services

Connect with family and friends

Impact

Improved social and emotional well-being

Better life management

Economic opportunities

Women's participation and income generation

Barriers

Costs

Socio-cultural norms

Gender- and rural-urban divide

Findings of the EGM Mobile Internet



Gaps
lack of evidence

Absence of explicit policy regulations

Lack of attention of role of service providers



Use of mobile internet for entertainment

Omission of emergency services, legal awareness, human rights and community safety





Recommendations for Researchers and Practitioners

Researchers *under-researched aspects*

- Policies and regulations
- Digital literacy
- Role of service providers
- Negative uses and consequences

Practitioners

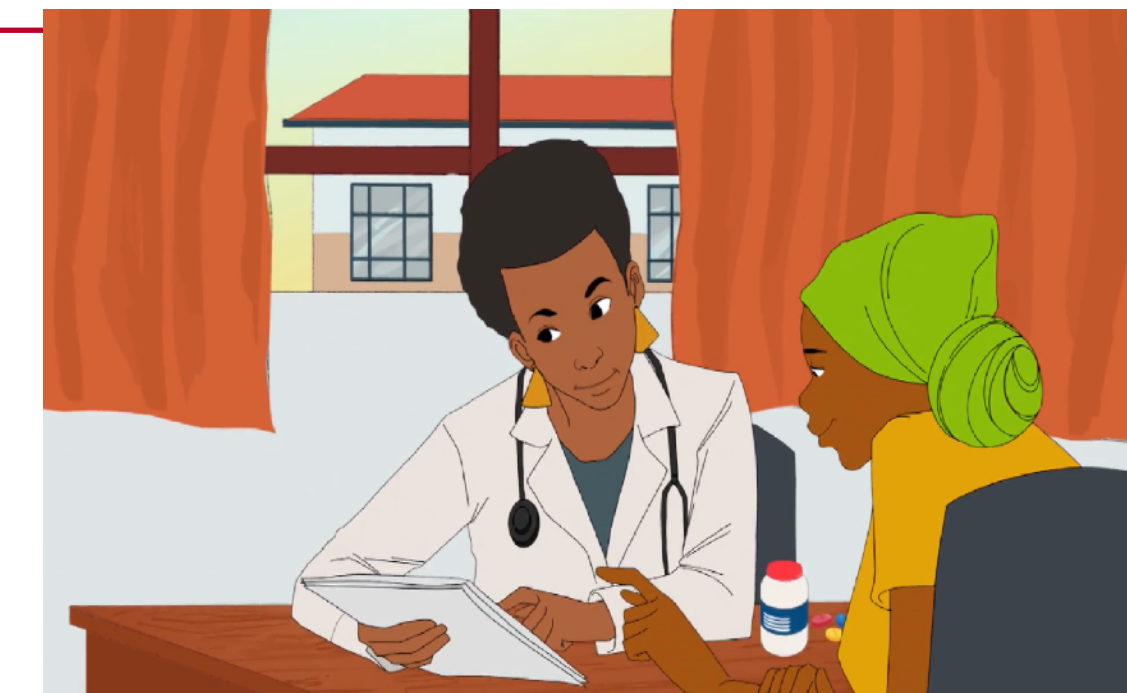
- Nuances of digital literacy and user profiles - **meet user needs**
- Innovation: inclusive business models, governance processes to address **cost**, **cultural** and **societal norms** hampering women



University students connect schools



Community Networks



[Source: Final Report, EGM Mobile Internet, https://its-wiki.no/images/b/be/D4-D5-EGM-ExecSum_FinalReports.pdf]

Establish Digital Public Infrastructure (DPI) *and apply the model of the road*

Step 1:



Step 2:

0 1 0 1
1 0 0 1
0 1 0 0



**Free access to information
for all**

[Source: <https://www.gatesfoundation.org/ideas/digital-public-infrastructure>]



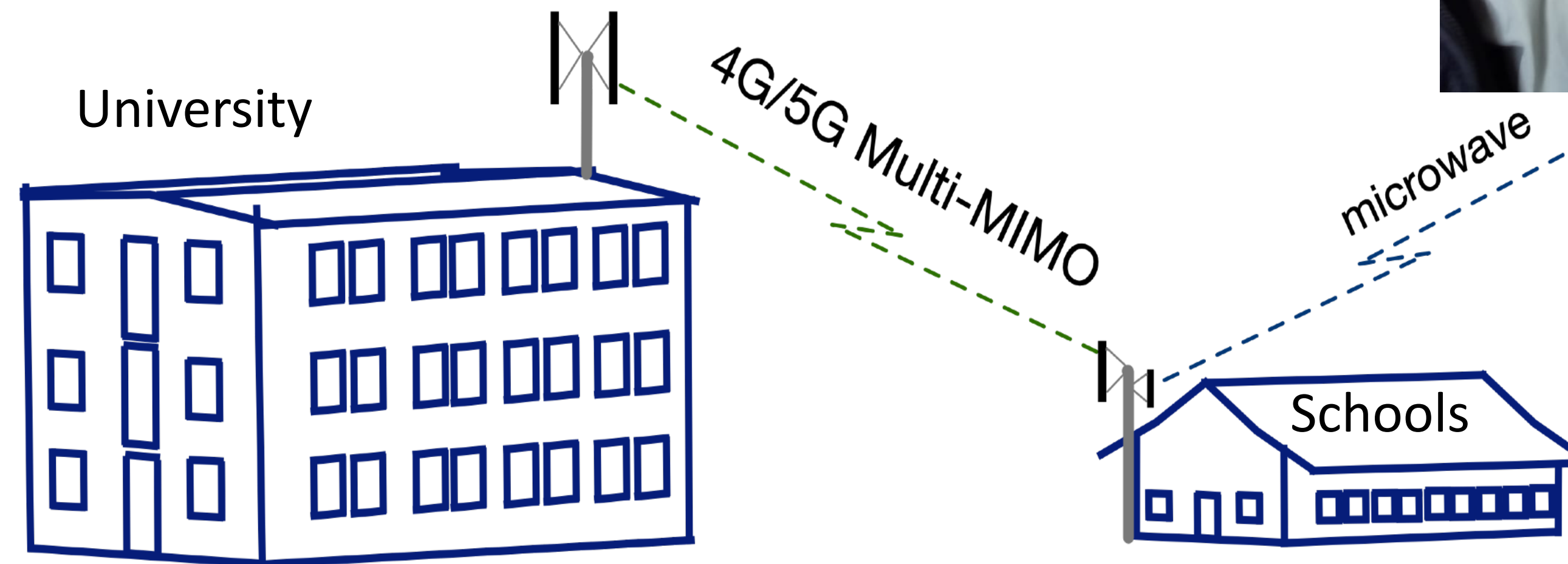
Recommendations for Policy Makers

Policy makers

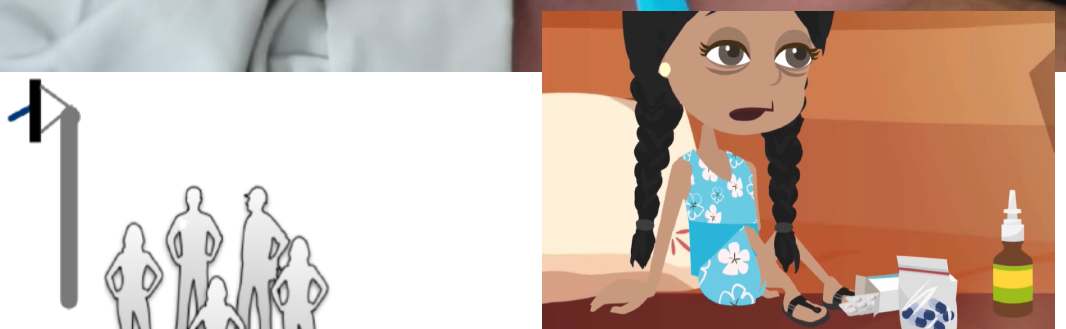
Targeted policies and regulations to address the **cost of access** and the negative consequences, e.g. digital divide

Instantiate the Digital Public Infrastructure (DPI) to ensure an inclusive access to mobile Internet

Support efforts to increase digital literacy and the use of mobile internet for **women's empowerment**.



National Research & Education Network (NREN)



Community Learning & Living Labs (CL3)

