

Connecting the Un-connected

-Taking benefits of mobile connectivity
to bottom of pyramid-

**Let there be work, bread,
water and salt for all**
- Nelson Mandela-

Ajay Ranjan Mishra
Global Head of Industry Environment
- India & Emerging Markets-
Nokia Siemens Networks



- Bridging the digital divide
- Connectivity Scorecard
- E-Governance
- Role of Key Stakeholders
- Summary

Our common vision: The world connected in 2015



Universal access to information and communication technologies boosts the economic and social development of nations

Socio-economic benefits of mobility

Shared access to mobile phones bringing mobility to millions

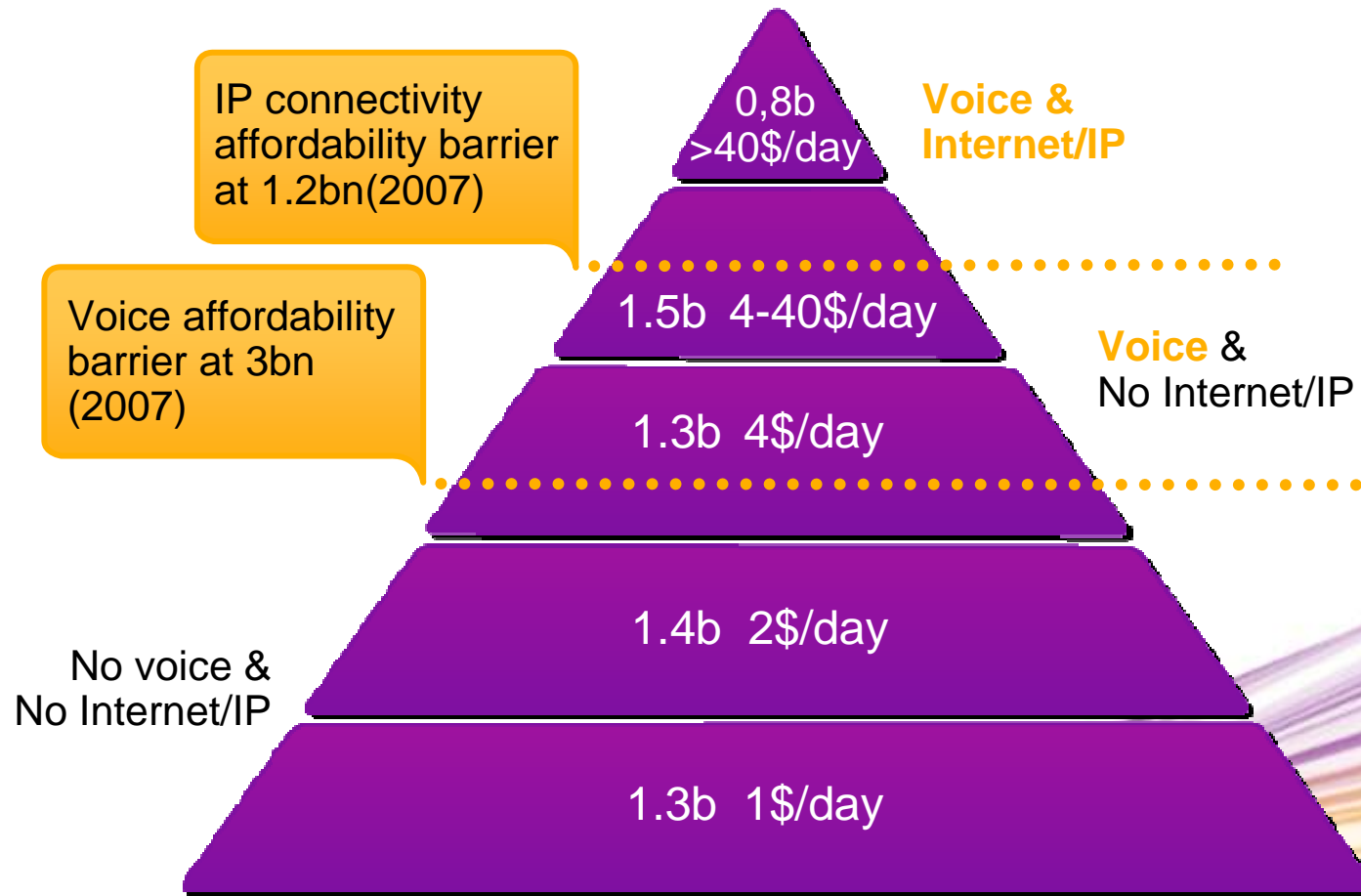
Microfinance & mobile entrepreneurs creating new business opportunities

Instant SMS alerts directing users to best market prices



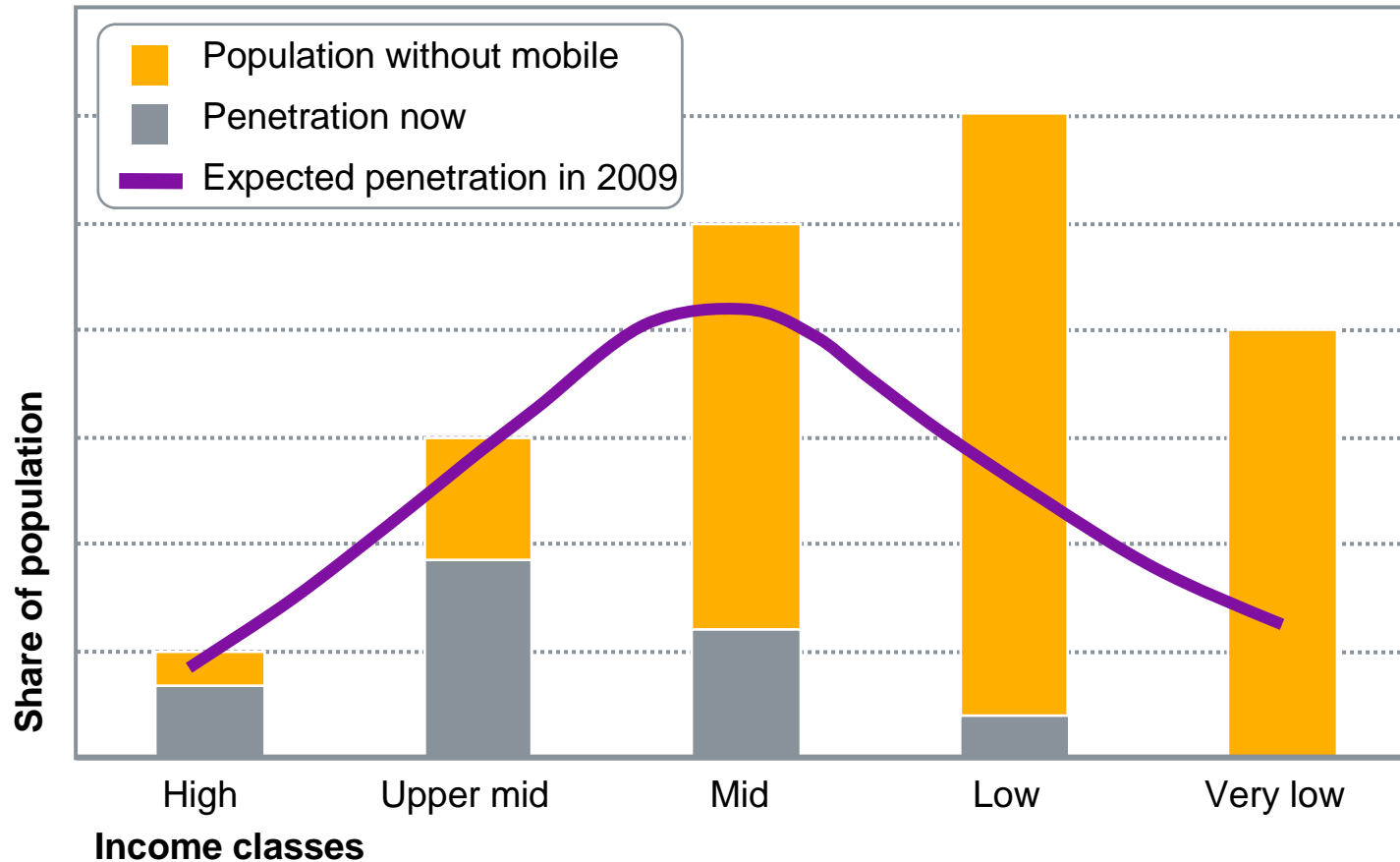
The challenge of Universal Access

Global Income Pyramid



New growth will come primarily from lower income segments

Example income distribution



1.5 million new subscribers every day

The Connectivity Scorecard

Benefiting from the Full Economic and Social Benefits of ICT

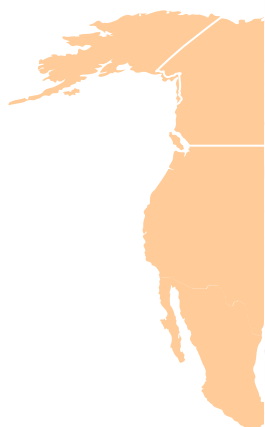
Groundbreaking study that ranks countries on approximately 30 indicators of connectivity contributing to social and economic prosperity

Created by Leonard Waverman, professor of economics at London Business School

Conducted under his direction by global economic consulting firm LECG and commissioned by Nokia Siemens Networks

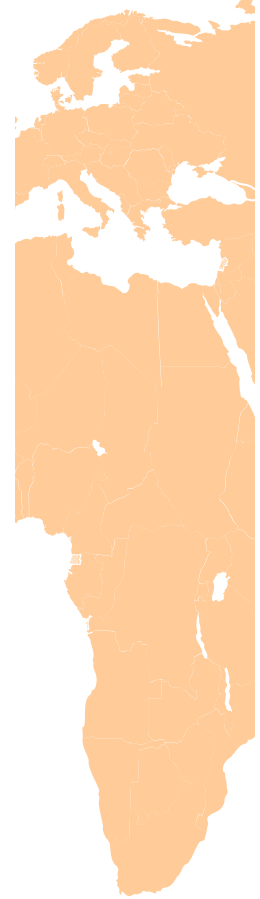
First study to rank countries not only on deployment of telecom and IT infrastructure, but also on extent to which they are put to good use

Observations from the Connectivity Scorecard – For Resource driven economies



Rank	Country	Final Score
1	Malaysia	7.14
2	South Africa	6.18
3	Chile	6.06
4	Argentina	5.90
5	Russia	5.82
6	Brazil	5.32
7	Turkey	5.09
8	Mexico	5.00
9	Colombia	4.76
10	Ukraine	4.67
11	Botswana	4.30
12	Thailand	4.11
13	Tunisia	3.87
14	Iran	3.59
15	Vietnam	3.42
16	Sri Lanka	3.18
17	China	3.14
18	Egypt	2.97
19	Philippines	2.92
20	Indonesia	2.13
21	India	1.82
22	Kenya	1.80
23	Nigeria	1.78
24	Bangladesh	1.69
25	Pakistan	1.53

2010

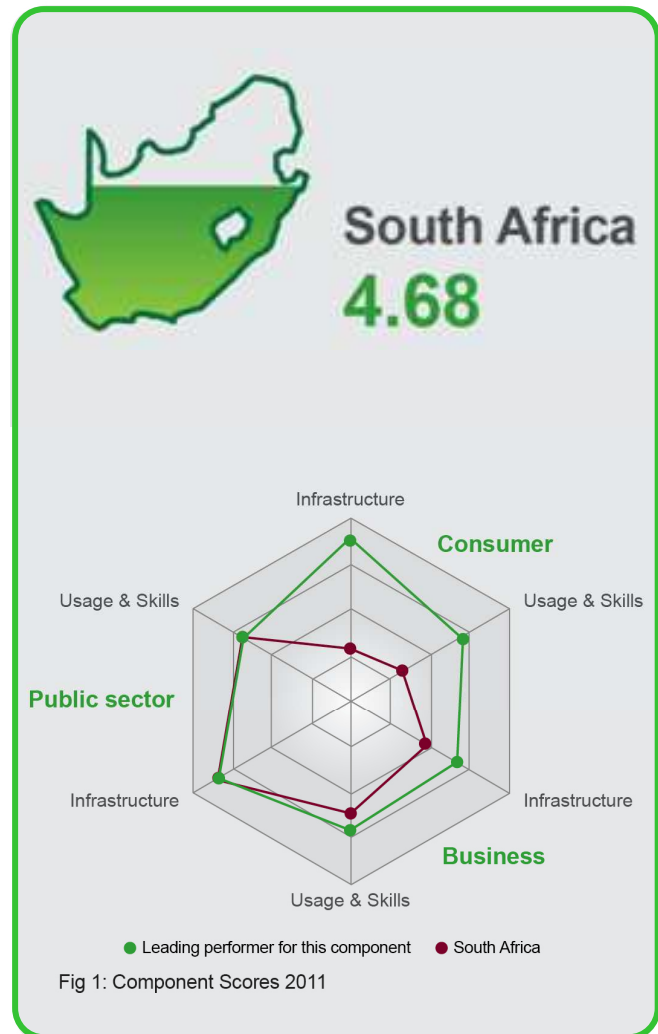


Rank	Country	Final Score
1	Malaysia	6.61
2	Chile	6.21
3	Russia	5.68
4	Turkey	5.51
5	Argentina	5.46
6	Brazil	5.14
7	Mexico	4.87
8	Ukraine	4.81
9	South Africa	4.68
10	Colombia	4.06
11	Thailand	3.68
12	Tunisia	2.79
13	Vietnam	2.73
14	China	2.72
15	Iran	2.41
16	Philippines	2.15
17	Syria	2.11
18	Indonesia	2.01
19	Sri Lanka	2.01
20	Egypt	1.89
21	India	1.25
22	Pakistan	1.14
23	Nigeria	1.09
24	Kenya	0.95
25	Bangladesh	0.90

2011



South Africa – Major inequalities in ICT access and usage affect score



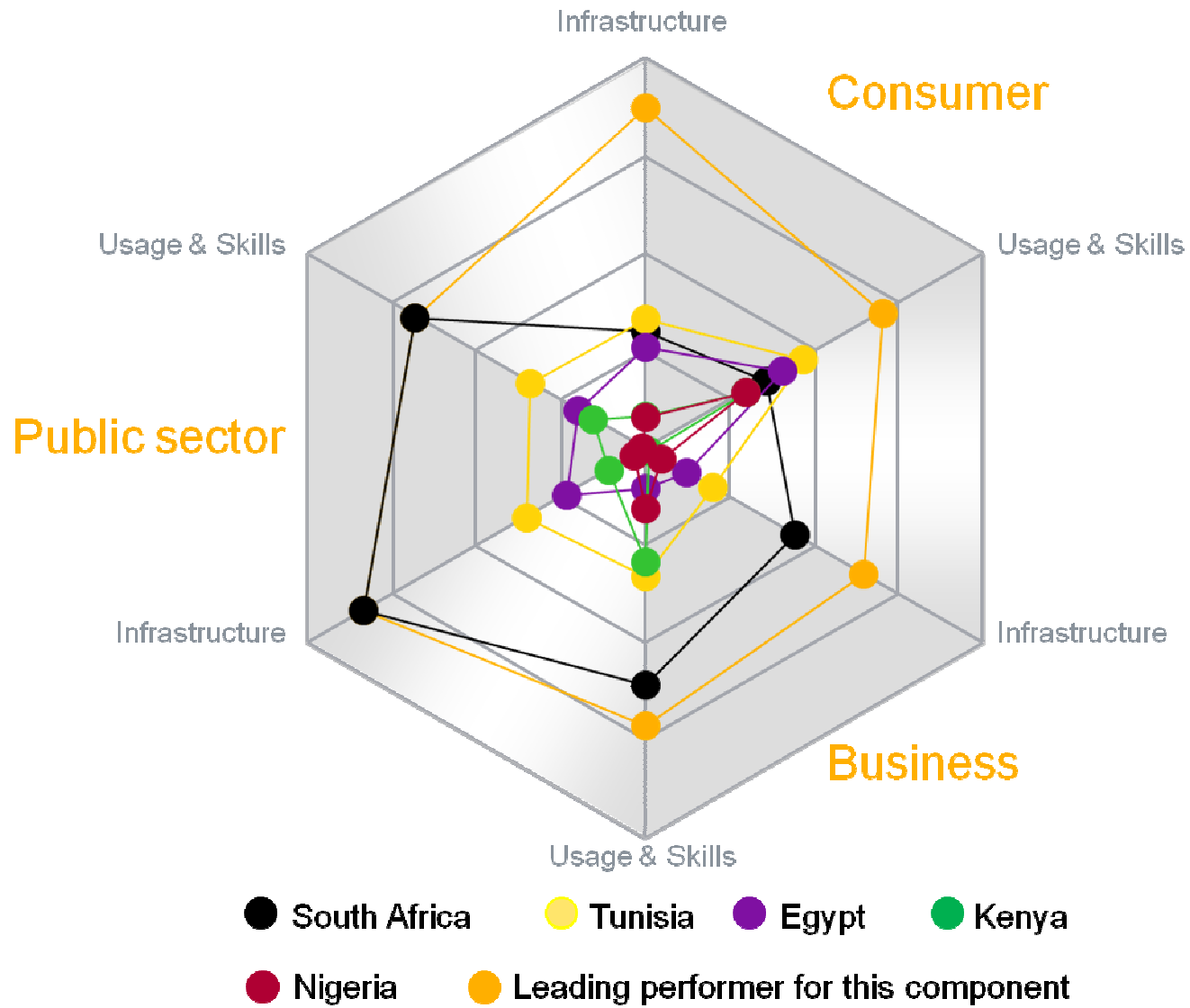
Tumbles seven spots to rank 9th among the resource and efficiency-driven economies

- Significant ICT spends by businesses
- Highest scorer in its group on public sector related metrics
- Fairly high adult literacy rates

Areas for improvement

- Home penetration of Internet, broadband
- Consumer skills and usage
- Business internet bandwidth, ICT exports
- E-governance

CS2011 - Africa



Services most expected via e-channel: job opportunities

Importance of receiving services via mobile phone and internet

(ranked by Ghana. Top scores bolded)

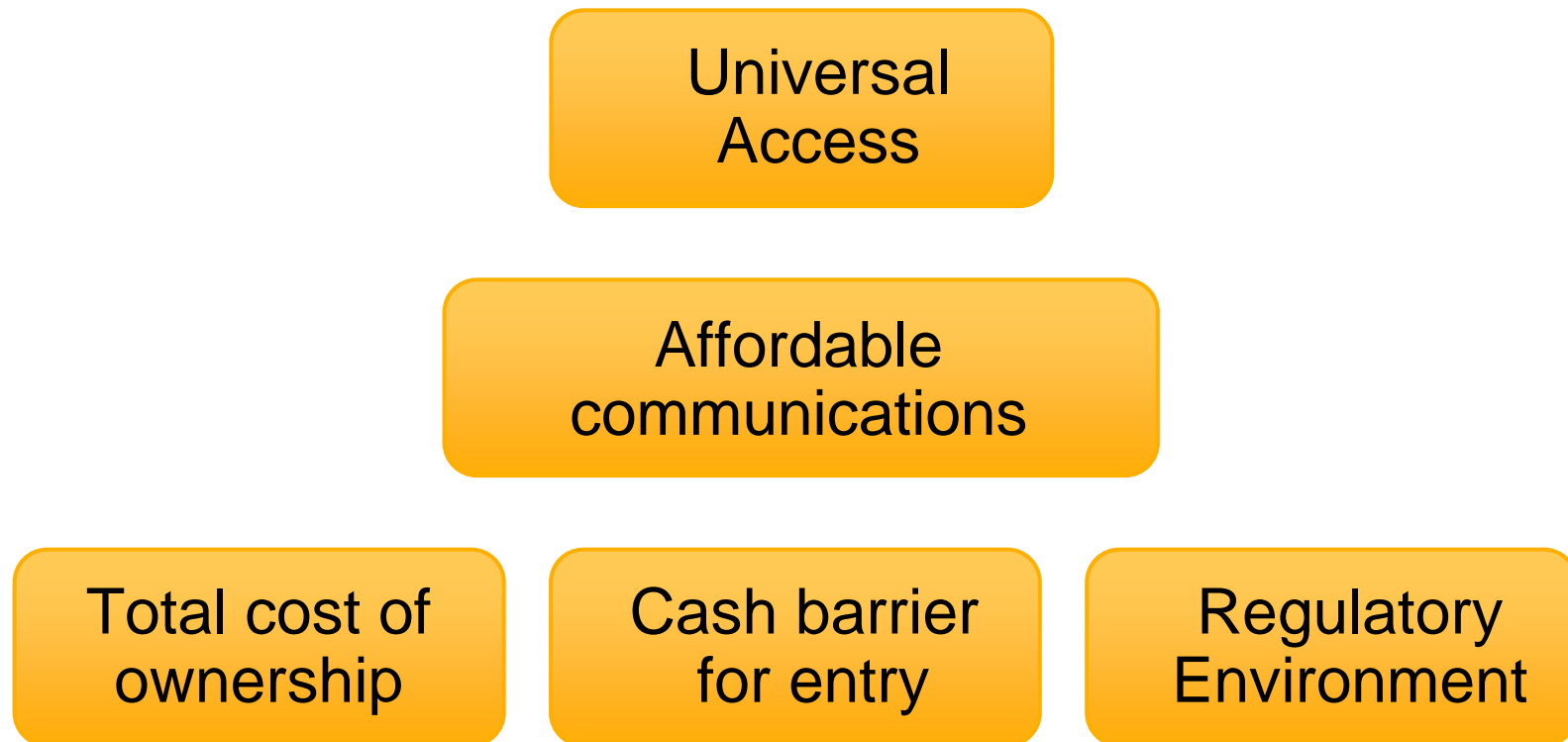
	Ghana (mean)	India (mean)	South Africa (mean)
Applying to school	2,23	1,34	1,87
Seeking and offering job opportunities	2,1	1,72	2,1
Banking transactions services	1,94	1,72	1,71
Getting certificates	1,92	1,53	1,49
Health treatment and medicines	1,89	1,44	1,81
Getting and submitting government forms	1,83	1,56	1,73
Listening to or downloading music	1,8	1,44	1,68
Paying bills	1,78	1,55	1,73
Watching videos	1,77	1,31	1,56
Travel schedules and bookings	1,76	1,71	1,8
Selling your crops and services	1,7	1,14	1,52
Sending and receiving money	1,69	1,49	1,69

*N for Ghana = 315 to 317; India = 324; South Africa = 313
Scale: 1 = unimportant; 2 = important; 3 = very important*

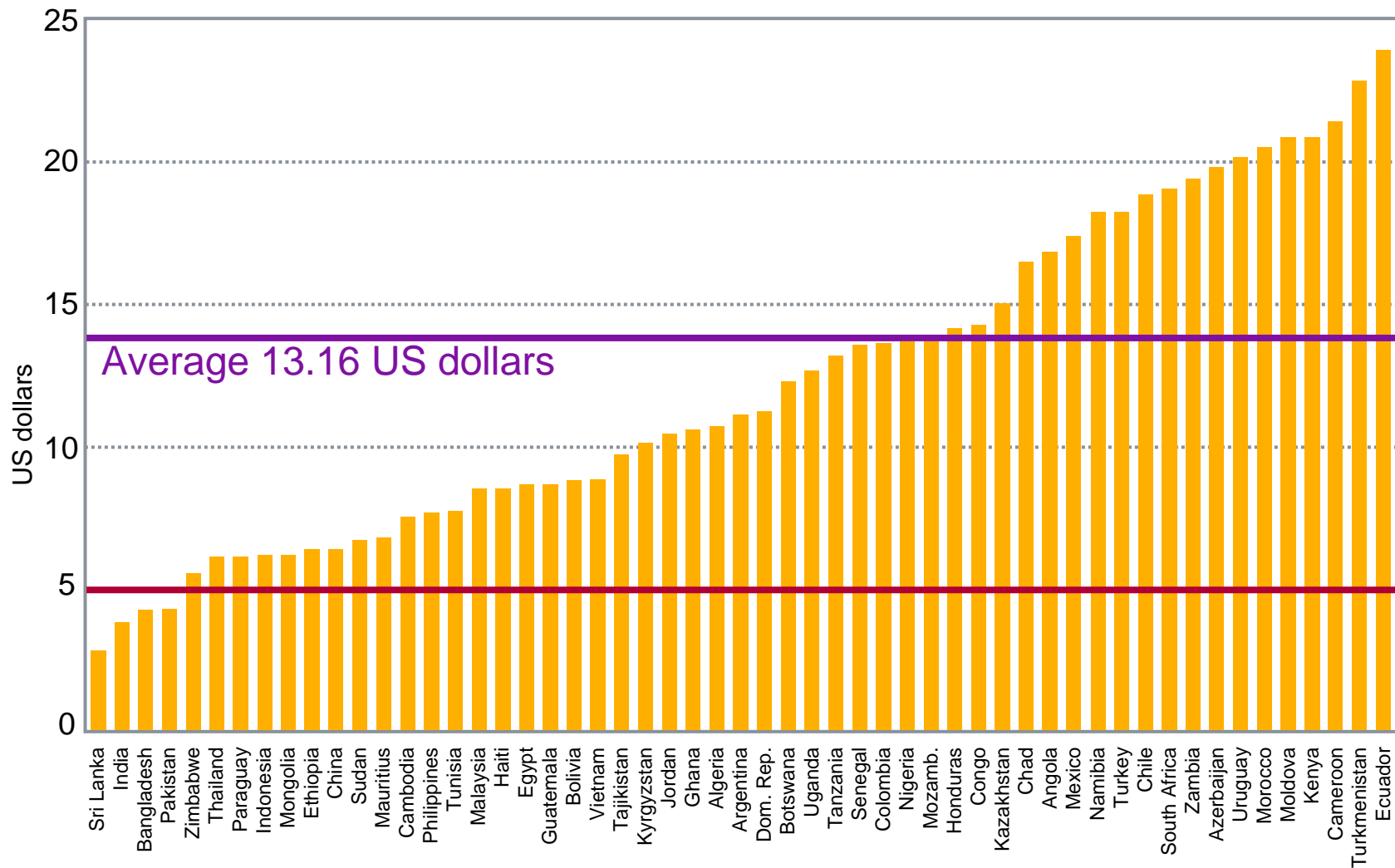
Priority service across markets

Clear link between importance of e-Services and respondent's origin (urban) and education levels -> rural connectivity solutions should include service mediation to support & transfer the competence required to service take up

Framework in bringing digital inclusion via mobile communications



Monthly Total Cost of Ownership per country

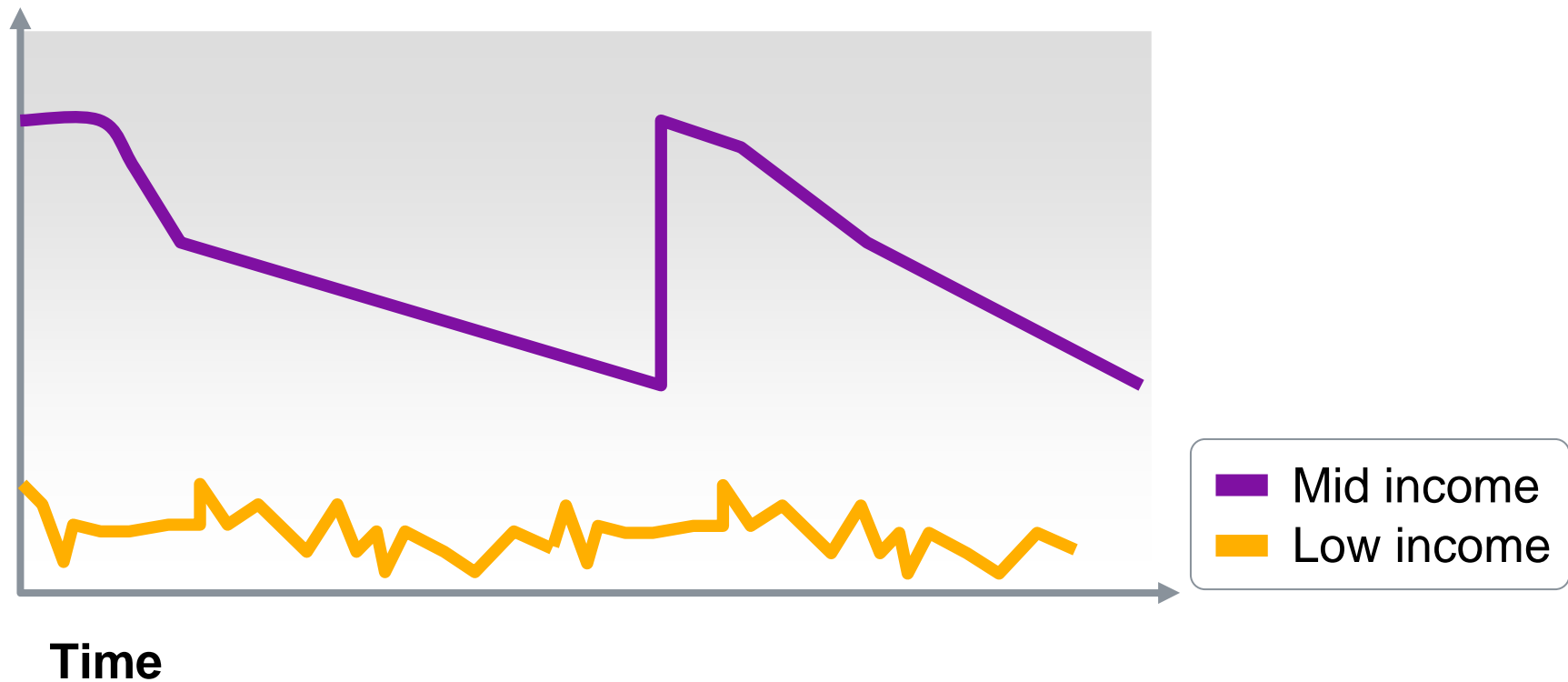


Source:
Nokia,
November
2007

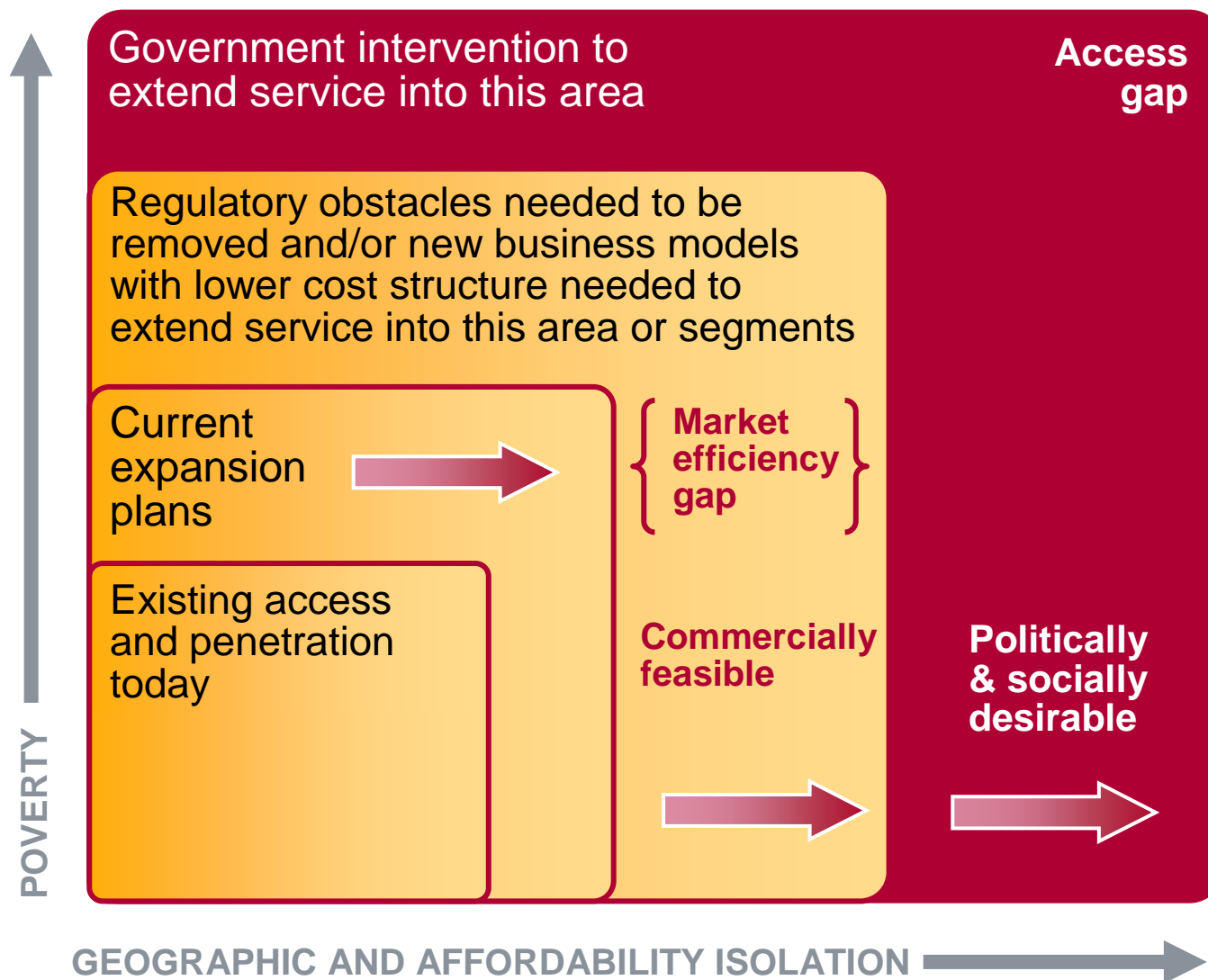
Only four countries meet the monthly TCO target of USD 5, all of them in APAC

Less structured cash flow of the low – income consumer

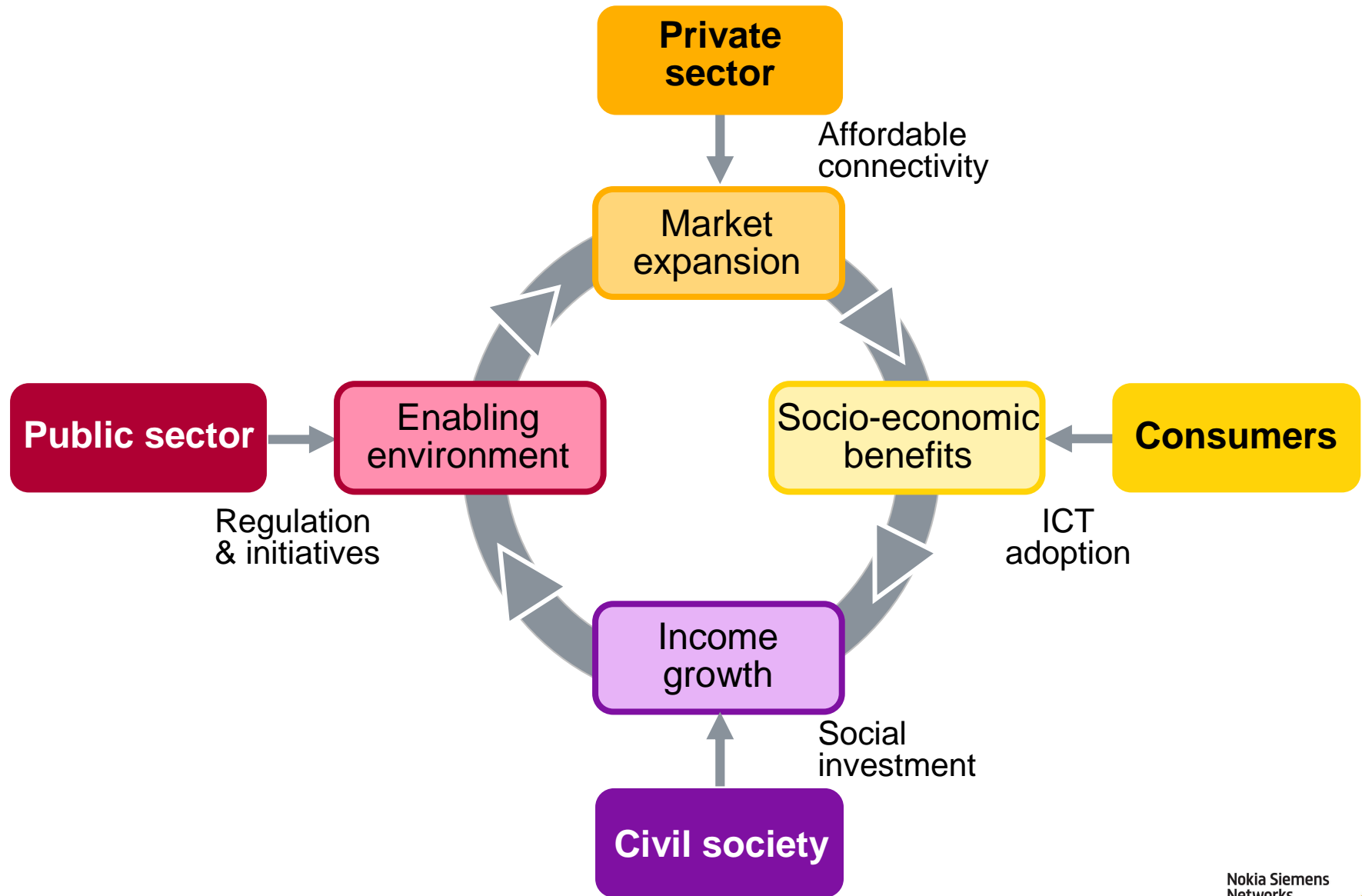
Cash at hand



Regulatory environment



The vital role of multi-stakeholder cooperation



Summary

Let there be work, bread, water, salt & **Internet** for all...

Countries missing out on opportunity to add hundreds of billions to their national revenues

New growth to come from lower income segment

Connectivity increasing but utilisation not

Affordability is the key factor - we need to work on TCO

Key stakeholders need to come together to make this happen.