UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

Connecting economies
and empowering people

Regional perspectives in ICT measurement

13 October 2014
Bangkok, Thailand

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Presentation outline

1. Statistics for ICT policymaking , regional perspectives
2. ESCAP, its role in the *Partnership on measuring ICT for Development*
3. Current data gaps in Asia-Pacific
4. Emerging issues in ICT measurement

ICT policymaking and data

- ICT a vast, rapidly evolving area. Transformative impact on societies.
- ICT development potentials widely recognised (WSIS), most countries adopted ICT and or broadband strategies
- Data available reveal:
  - Mobile quasi ubiquity (at least in terms of number of subscriptions)
  - Growing internet use, backed by mobile broadband
  - Large differences between and within countries
  - Asia-Pacific the most digitally divided region in the World (ITU) for fixed broadband

ICT policymaking in AP – data needs

- Despite wide disparities, common challenges with ICT policy implications:
  - Exposure to disasters and need to build e-resilience
  - High prices for wholesale of international broadband capacity (developing countries, smaller markets)
  - Usage, local content, languages
  - Data safety
  - IT/ICT enabled exporting industry
- Little or no official data on these issues

Role of ESCAP – Partnership on Measuring ICT for Development

- ESCAP – UN regional commission
  1. Regional intergovernmental dialogue
  2. Economic and social analysis
  3. Capacity building
- ICT Committee (tomorrow!) – ESCAP Commission promote official dialogue on issues in ESCAP mandate including
- Improving connectivity Regional ICT infrastructure
  - Cooperation with ITU on interactive transmission maps
- E-resilience
- WSIS review
- Harnessing cross-sectoral synergies (transport – energy)

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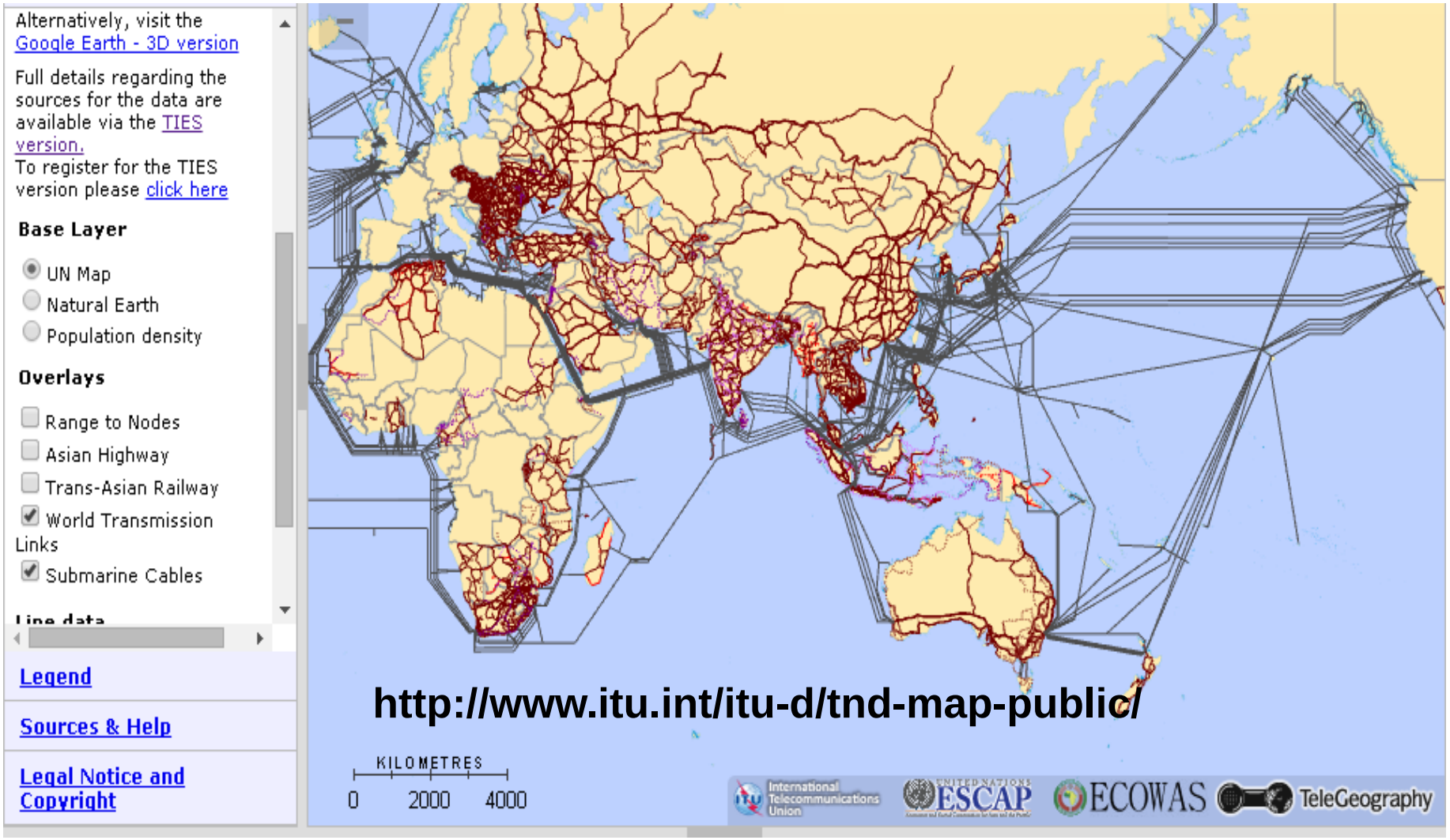
ESCAP / ITU interactive transmission maps of information superhighways



Role of ESCAP – Partnership on Measuring ICT for Development

- ESCAP founding member of Partnership on Measuring ICT for Development
- Provides regional inputs into elaboration of ICT core indicators (e.g. recently elaboration of ICT and gender indicators)
- Facilitates *Partnership's* Capacity building activities
- Review of the outcome of the WSIS
  - Collected statistics on WSIS targets (highest response rate for developing region)
  - Carried-out analysis of regional results
  - Facilitating UNCTAD CSTD's AP regional review of the Implementation of WSIS Outcomes

Regional data gaps in core ICT indicators

- Partnership Core ICT indicators includes growing number of indicators
- Availability varies greatly across countries, and subject (good for infrastructure, trade in ICT goods, much less for use of ICT by individuals, business)
- Data collection started in 2012 for E-education indicators
- Less data for LDCs, Pacific islands
- ESCAP to post review availability for AP – ICT data part of the digital divide

Microsoft Excel - Core ICT indicators availability

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	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Indicator	Index	Source	ESCAP economy	2005	2006	2007	2008	2009	2010	2011	2012	2013
84	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Macao, China	+	+	+	+	+	+	+	+	..
85	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Malaysia	+	+	+	+	+	+	+	+	..
86	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Maldives	+	+	+	+	+	+	+	+	..
87	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Marshall Islands	+	..	..	..	..	..	..	..	..
88	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Micronesia (Fed. States of)	+	+	+	+	+	+	+	+	..
89	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Mongolia	+	+	+	+	+	+	+	+	..
90	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Myanmar	+	+	+	+	+	+	+	+	..
91	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Nauru	..	..	..	..	..	+	+	+	..
92	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Nepal	+	+	+	+	+	+	+	+	..
93	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	New Caledonia	+	+	+	+	+	+	+	+	..
94	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	New Zealand	+	+	+	+	+	+	+	+	..
95	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Northern Marianas Islands	..	..	..	..	..	..	..	..	..
96	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Pakistan	+	+	+	+	+	+	+	+	..
97	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Palau	+	+	+	+	+	+	+	+	..
98	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Papua New Guinea	+	+	+	+	+	+	+	+	..
99	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Philippines	+	+	+	+	+	+	+	+	..
100	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Russia	+	+	+	+	+	+	+	+	..
101	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Samoa	+	+	+	..	..	..	..	..	..
102	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Singapore	+	+	+	+	+	+	+	+	..
103	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Solomon Islands	+	+	+	+	+	+	+	+	..
104	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Sri Lanka	+	+	+	+	+	+	+	+	..
105	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Tajikistan	+	+	+	+	+	+	+	+	..
106	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Thailand	+	+	+	+	+	+	+	+	..
107	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Timor-Leste	+	+	+	+	+	+	+	+	..
108	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Tonga	+	+	+	+	+	+	+	+	..
109	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Turkey	+	+	+	+	+	+	+	+	..
110	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Turkmenistan	+	+	+	+	+	+	+	+	..
111	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Tuvalu	+	+	+	..	+	+	+	+	..
112	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Uzbekistan	+	+	+	+	+	+	+	+	..
113	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Vanuatu	+	+	+	+	+	+	+	+	..
114	Mobile-cellular telephone subscriptions per 100 inhabitants	A2	ITU	Viet Nam	+	+	+	+	+	+	+	+	..

Core ICT indicators | ED Indicators for 2012 | Sheet1

Ready NUM

Microsoft Excel - Core ICT indicators availability

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	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Indicator	Index	Source	ESCAP economy	2005	2006	2007	2008	2009	2010	2011	2012	2013
911	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Afghanistan	..	..	..	..	..	..	..	..	..
912	Percentage of individuals using a mobile cellular telephone	HH10	ITU	American Samoa	..	..	..	..	..	..	..	..	..
913	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Armenia	..	..	..	..	..	..	..	..	..
914	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Australia	..	..	..	..	..	..	..	..	..
915	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Azerbaijan	..	..	..	+	..	+	+	..	..
916	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Bangladesh	..	..	..	..	..	..	..	..	..
917	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Bhutan	..	..	..	..	..	..	..	..	..
918	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Brunei Darussalam	..	..	..	..	..	..	..	..	..
919	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Cambodia	..	..	..	..	..	..	..	..	..
920	Percentage of individuals using a mobile cellular telephone	HH10	ITU	China	..	..	..	..	..	..	..	..	..
921	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Fiji	..	..	..	..	..	..	..	..	..
922	Percentage of individuals using a mobile cellular telephone	HH10	ITU	French Polynesia	..	..	..	..	..	..	..	..	..
923	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Georgia	..	..	..	..	..	..	..	..	..
924	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Guam	..	..	..	..	..	..	..	..	..
925	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Hong Kong, China	..	..	..	+	+	..	..	..	..
926	Percentage of individuals using a mobile cellular telephone	HH10	ITU	India	..	..	..	..	..	..	..	..	..
927	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Indonesia	..	..	..	..	+	+	..	..	..
928	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Iran (Islamic Rep. of)	..	..	..	..	..	+	..	..	..
929	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Japan	..	..	+	+	+	+	..	..	..
930	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Kazakhstan	..	..	..	..	..	..	..	..	..
931	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Kiribati	..	..	..	..	..	..	..	..	..
932	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Korea (Rep. of)	+	..	..	+	+	..	+	..	..
933	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Dem. People's Rep. of Korea	..	..	..	..	..	..	..	..	..
934	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Kyrgyzstan	..	..	..	..	..	..	..	..	..
935	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Lao P.D.R.	..	..	..	..	..	..	..	..	..
936	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Macao, China	..	..	..	..	..	..	..	..	..
937	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Malaysia	..	..	..	..	..	..	..	..	..
938	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Maldives	..	..	..	..	..	+	..	..	..
939	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Marshall Islands	..	..	..	..	..	..	..	..	..
940	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Micronesia (Fed. States of)	..	..	..	..	..	..	..	..	..
941	Percentage of individuals using a mobile cellular telephone	HH10	ITU	Mongolia	..	..	..	..	..	..	..	..	..

Core ICT indicators | ED Indicators for 2012 | Sheet1

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Microsoft Excel - Core ICT indicators availability

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1	Indicator	Index	Source	ESCAP economy	2005	2006	2007	2008	2009	2010	2011	2012	2013
1377	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Japan	..	..	..	..	..	..	..	..	..
1378	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Kazakhstan	..	..	..	..	..	..	..	..	..
1379	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Korea, Republic of	..	..	..	+	..	..	..	..	..
1380	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Kyrgyzstan	..	..	..	..	..	..	..	..	..
1381	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Mongolia	..	..	..	..	..	..	..	..	..
1382	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	New Zealand	..	..	..	..	..	..	..	..	..
1383	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Philippines	..	..	..	..	..	..	..	..	..
1384	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Russian Federation	..	..	..	..	..	..	..	..	..
1385	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Singapore	..	..	..	..	..	..	..	..	..
1386	Proportion of businesses using the Internet for accessing other	B12 ifin	UNCTAD	Thailand	..	..	..	..	..	..	..	..	..
1387													
1388	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Australia	+	+		..	..	+	..	..	..
1389	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Azerbaijan		+	+	..	+	..	+	..	..
1390	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	China	+	..	..	..	..	..	..	..	..
1391	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	China, Hong Kong SAR	..	..	..	..	..	..	..	..	..
1392	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	China, Macao SAR	..	..	..	..	+	+	..	..	..
1393	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	India	..	..	..	..	..	..	..	..	..
1394	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Japan	..	..	..	..	..	..	..	..	..
1395	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Kazakhstan	..	..	+	+	..	..	..	..	..
1396	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Korea, Republic of	+	+	..	+	..	..	..	..	..
1397	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Kyrgyzstan	..	..	..	..	+	..	..	..	..
1398	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Mongolia	..	..	..	..	..	..	..	..	..
1399	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	New Zealand	..	..	..	+	..	..	..	..	..
1400	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Philippines	..	..	..	..	..	..	..	..	..
1401	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Russian Federation	..	+	+	+	..	..	..	..	..
1402	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Singapore	..	+	+	+	+	+	..	..	..
1403	Proportion of businesses using the Internet for interacting with	B12 igov	UNCTAD	Thailand	..	..		+	+	+	..	..	..
1404													
1405	Proportion of businesses using the Internet for getting information	B12 igovif	UNCTAD	Australia	..	..	..	..	..	..	..	..	..
1406	Proportion of businesses using the Internet for getting information	B12 igovif	UNCTAD	Azerbaijan	+	+	+	..	+	..	+	..	..
1407	Proportion of businesses using the Internet for getting information	B12 igovif	UNCTAD	China	+	..	..	..	..	..	..	..	..

Core ICT indicators | ED Indicators for 2012 | Sheet1

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ICT policy areas in need of internationally comparable data

- Regional terrestrial transmission infrastructure:

- Crucial issue in AP, ESCAP promoting information superhighway initiative

- ITU facilitated definition of indicators 2 years ago in BKK - Broadband Capacity Indicators

Economy	Population within 25 Km of a transmission network (%)	Area within 25 Km of transmission network (%)	Total transmission network length (Route kilometres)
Afghanistan	37.1	n.a.	3'004
Armenia	99.4	99.0	3'075
Azerbaijan	79.3	65.5	2'502
Bhutan	78.4	73.3	830
Kazakhstan	44.2	3.9	15'616
Turkmenistan	43.8	5.1	3'226
Uzbekistan	63.2	13.7	4'655
Average ESCAP	**58.8**	**34.2**	**289'529**

No harmonisation in “backbone” definition

Backbone denser in Vietnam, Cambodia, Lao PDR than China?

Probably not, but not using similar definitions.

Harmonisation would enable identifiying where networks need priority investment

ICT policy areas in need of internationally comparable data

- Connectivity prices (wholesale) and quality determinant for emergence of IT/BPO export industry
  - Existing official metrics limited
  - Private sector sources for prices
  - Role for open data? We use Speedtest.net information for quality
  - Increasing need to consider / liaise with / harmonise such open sources

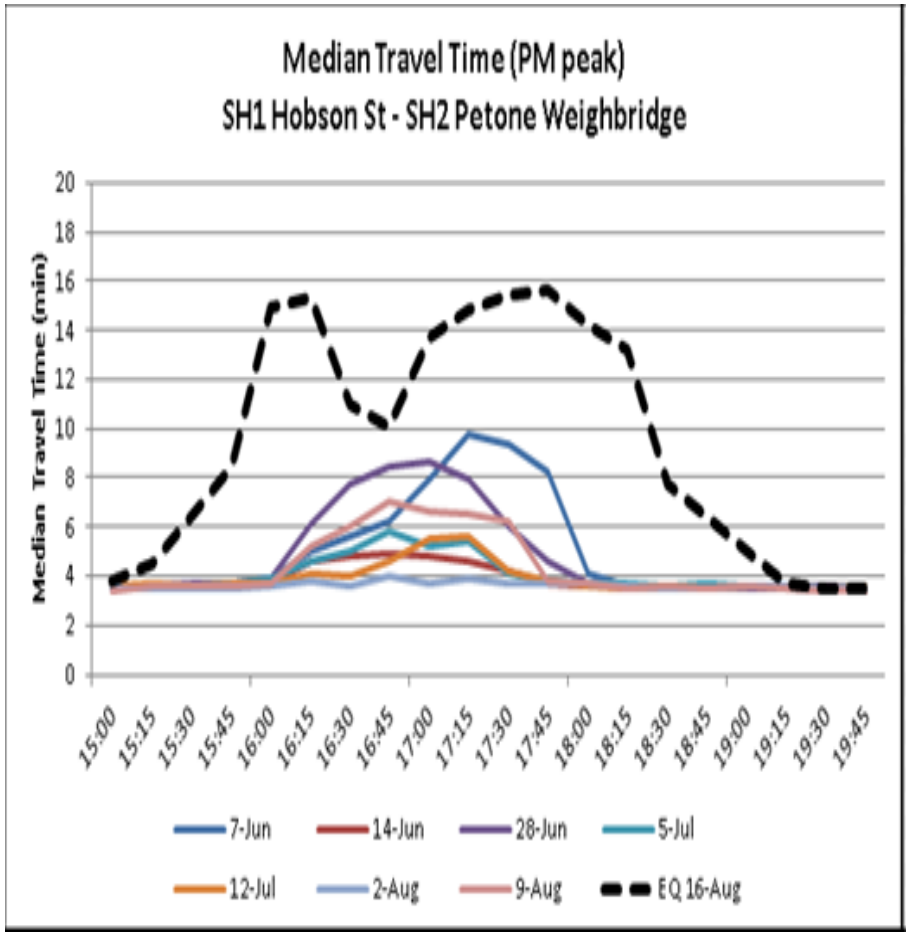
Figure 8: Network Reliability Indicators

Country	Year	Jitter	Mean Packet Loss Per 100	Mean Latency
Azerbaijan	2013	27.70	0.32	83.96
Russian Federation	2014	28.03	0.83	72.09
Hong Kong	2014	31.16	1.00	72.13
Singapore	2014	36.79	1.40	64.49
Kazakstan	2010	39.63	1.26	92.35
Nepal	2012	62.99	1.85	92.65

	Typical International Capacity Pricing (US$ per Mbps per month)					
	2008	2010	2011	2012	2013	2014
Azerbaijan	**350**		40		20*	
Cambodia					80	
Hong Kong						6
Indonesia				60 to 70		
Kazakhstan				15		
Kyrgyzstan				**>100**		
India						10-15
Lao PDR				**100**		
London						1.36
Malaysia				25		
Myanmar				**>100**		
Nepal						40-60
New York						1.64
Philippines				>80		
Russian						

Emerging issues in ICT data for Policymaking

- Big data collected through Intelligent Transport Systems
- In Wellington (NZ), people rushed both in and out of town after earthquake swarm, traffic problems
- Can draw important lessons of what happens in cases of disasters / road planning
- Data privacy, potential issues of coordination within NSS



Source: Solving Big Challenges with Big Data, Chris Vallyon, Richard Young,

Thank you

For further information please contact:

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