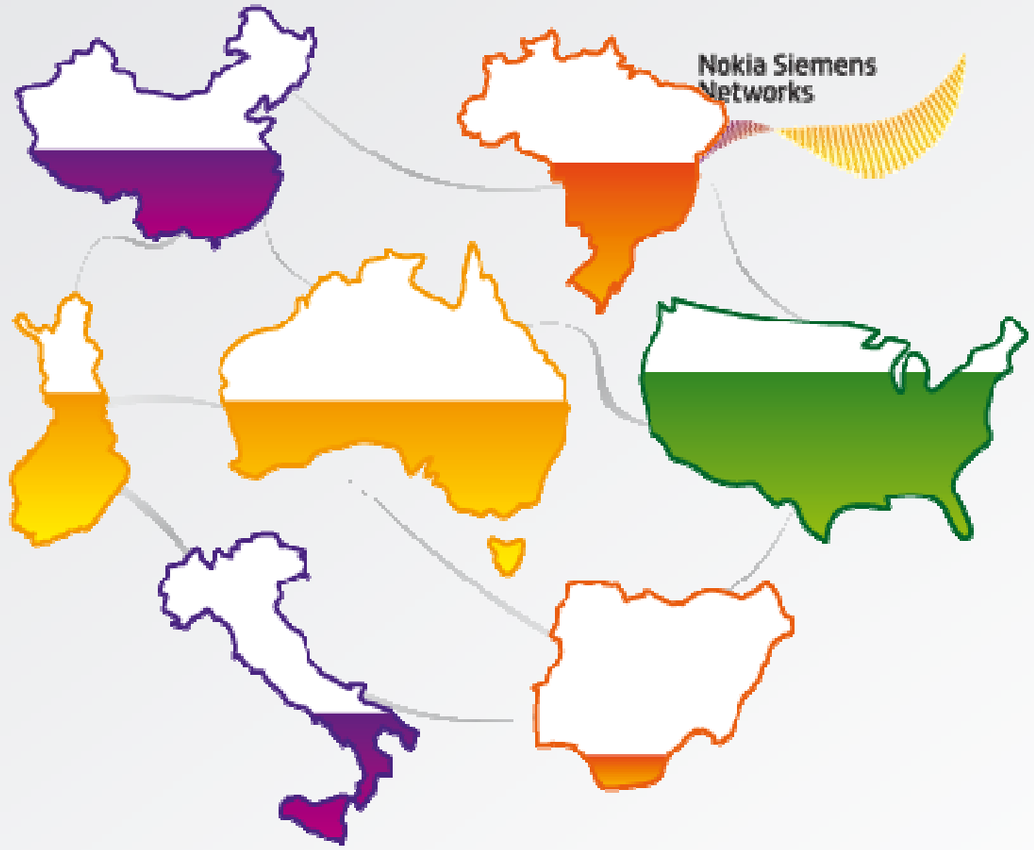

Why communications matters

The Connectivity Scorecard: A wake-up call for operators and governments

Leonard Waverman
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December 3, 2008

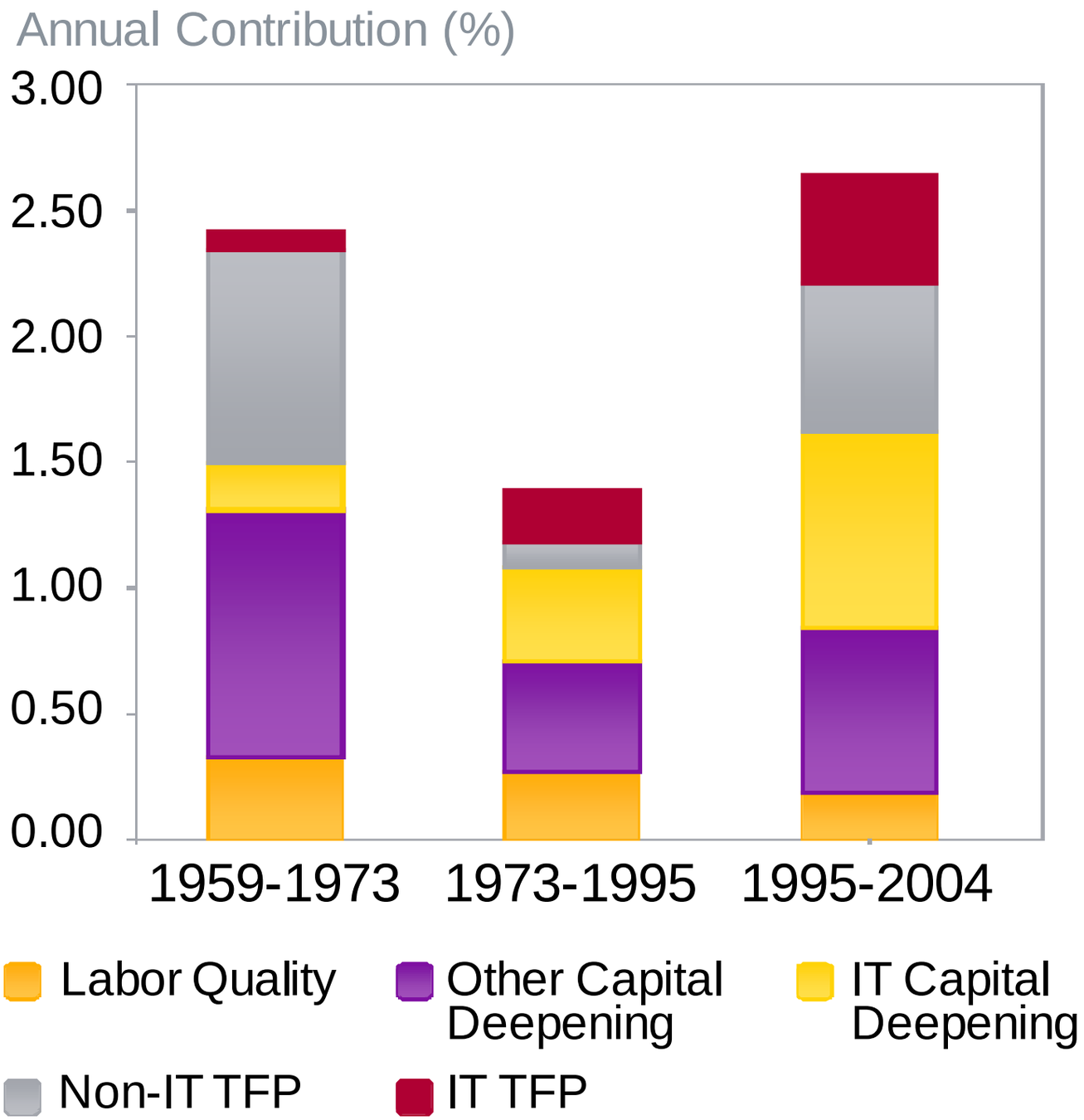
Why communications matters?

The Connectivity Scorecard

Current hurdles

Impact of ICT on US labor productivity

ICT = Telecoms and Computers, TFP = Total Factor Productivity



ICT has a critical role in acceleration of US productivity growth

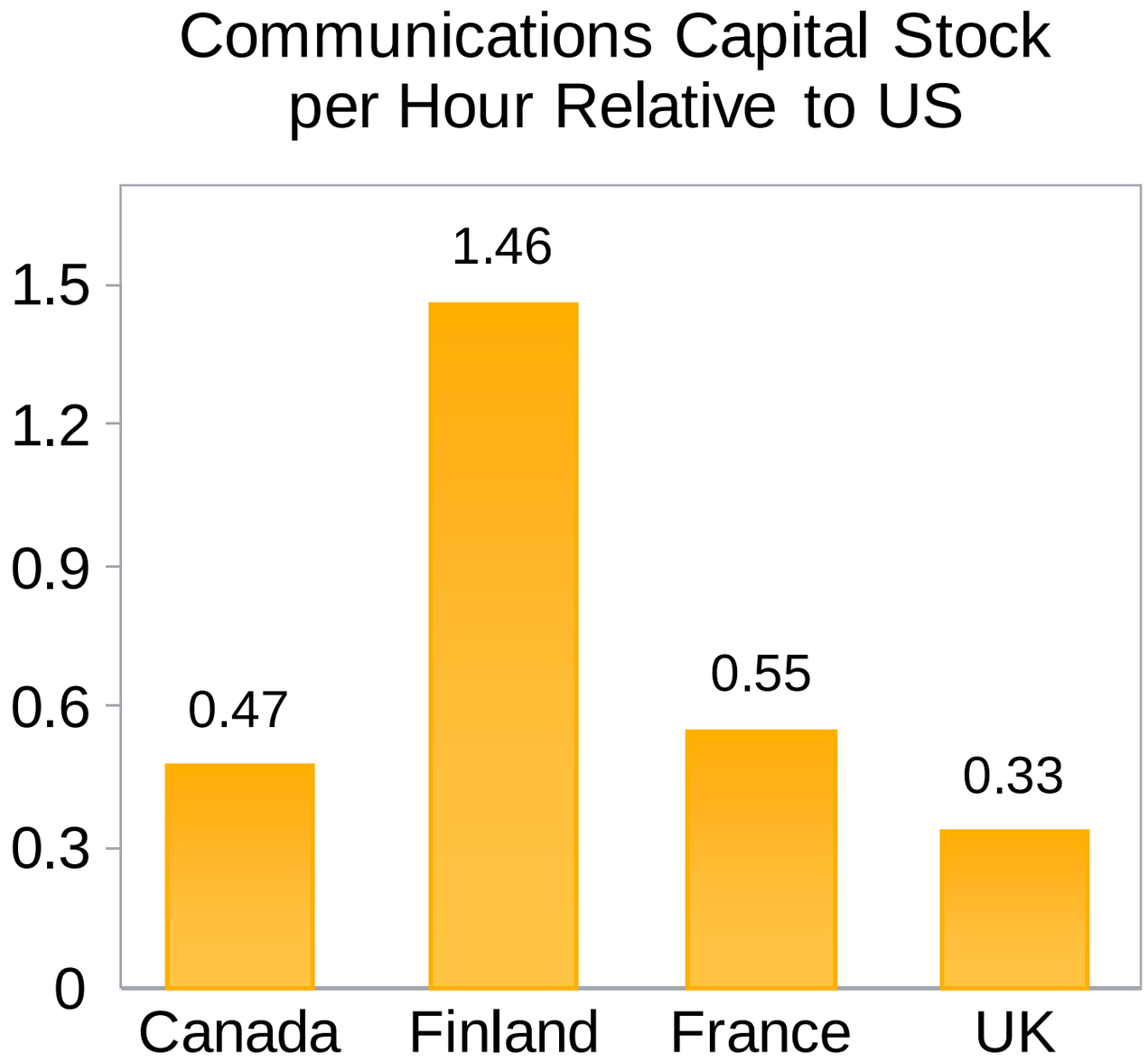
Source: Jorgenson (2005): IT accounts for 48% of labour productivity growth in 1995-04, much larger than IT share of GDP.

Communications + Computers = The New Economy

Communications infrastructure is a key element in national productivity

There are clear gaps in *infrastructure availability*

Relative Capital Stock in Communications Equipment (infrastructure, not usage and skills)



Gap in "Communications Equipment" capital stock

Why does it matter to us ?

Why efficiency matters?

The Connectivity Scorecard

Hurdles in increasing efficiency

The Connectivity Scorecard
www.connectivityscorecard.org

Scorecard asks:

- How do we measure the capability of existing communications networks to deliver productivity enhancement and economic growth?
- How well do existing networks deliver?

What did we do and why is it different?

Account for infrastructure, usage and complementary services and skills

Emphasis
- on the business sector
- on ‘smart’ usage

Different measures for economies at different levels of development

Design based on “economics”

Economic growth and productivity
- Focus on “useful” connectivity
- Connectivity as a productivity tool

The Connectivity Scorecard:

Measuring ICT impact on socio-economic growth

Innovation driven economies	Connectivity score
United States	6.97
Sweden	6.83
Japan	6.68
Canada	6.56
UK	6.13
Finland	6.10
Australia	5.90
Germany	5.52
France	5.07
Korea	4.73
Hong Kong SAR	4.46
Italy	3.85
Spain	3.56
Hungary	3.18
Czech Republic	3.10
Poland	2.33

Resource and efficiency driven economies	Connectivity score
Malaysia	7.59
Russia	6.60
Mexico	5.54
Brazil	5.28
South Africa	5.26
China	4.45
Philippines	3.00
India	1.83
Nigeria	1.07

LECG

Nokia Siemens Networks

No country performed especially well – much to be done

Innovation driven economies:

- Do not fully exploit the current telecoms revolution
- Productivity behind opportunity

Resource and efficiency driven economies:

- Lack of basic access to education and infrastructure hampers connectivity

Industry opportunity:
Take “infrastructure +” to the next level

The Communications Industry needs to move to Connectivity 2.0

….this means attention on Infrastructure + Applications, Services, Skills, Smart Usage

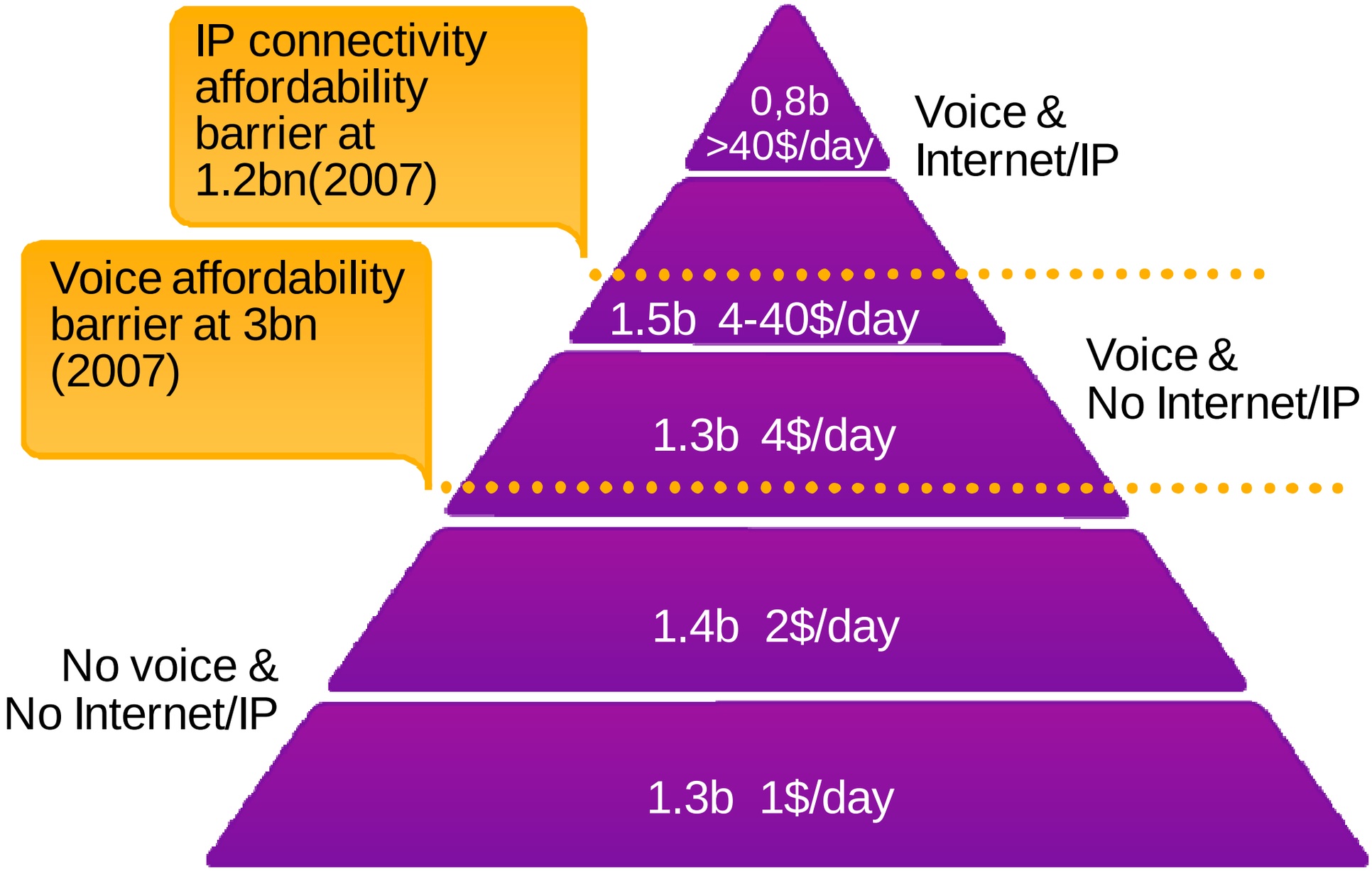
…..That is – what drives infrastructure to become the productivity/growth tool?

Why Communications matters?

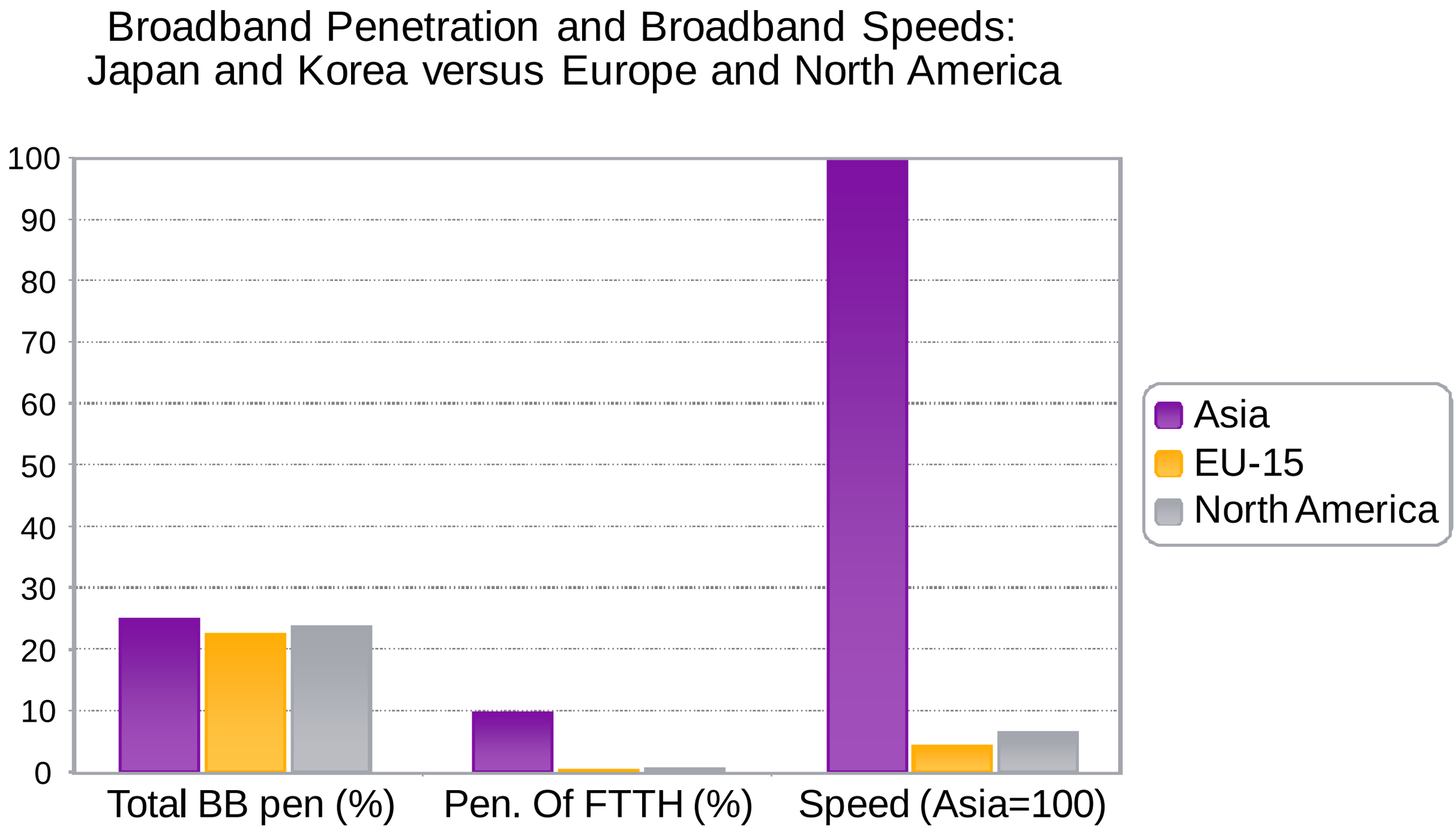
The Connectivity Scorecard

Current hurdles

The HURDLE of Universal Access - Global Income Pyramid



Hurdle #1: Investment requirements



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Hurdle #2: Adding value beyond the “bit-pipe””

Internet main source of innovations

Competitive landscape in data 100-fold >voice

Data services defy national boundaries

Capturing new revenue sources? (advertising, VoIP)

How can operators compete?

"I think you should be more explicit here in step two."

Your big challenge : Convince Governments that you are **The Infrastructure**

Make work programs for the recession

These need to be
The information broadband highway + skills

Thanks

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