



NBN Co – Impact and Opportunities for ICT

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National Broadband Network

Impact

Migration – Network, Open WAN

Decommissioning - Non-Premises

NBN Network – POI, Distribution

Coverage - Efficiencies

Opportunities

ICT Industry -> Applied

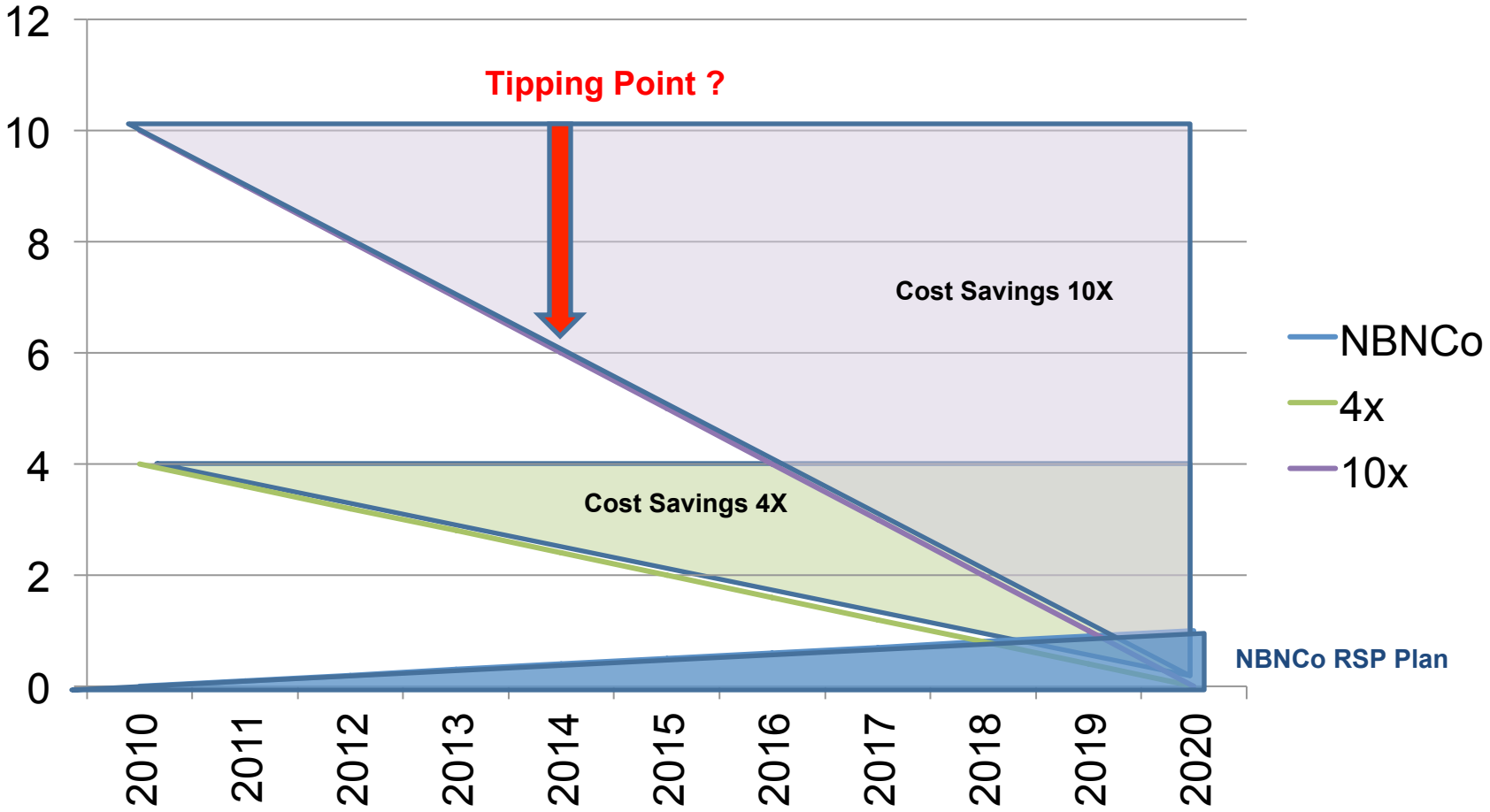
Government Services

Applications, New Services

Enterprise Pricing Cost Savings Migration Model

For example:

NBNCo \$250/month, 4x = \$1000/month, 10x = \$2500/month



Schools NBN Migration Solution

WAN Offload, Local Internet Filtering

Problem Scenario:

- WAN architecture, Contracts
- Bandwidth constrained (<10MB)
- Traffic pattern shift: 80% internet
- NBN rollout is progressive

Recommendation:

- Offload WAN traffic through NBN fibre connection for local internet accesses.

Solution:

- Local NBN fibre connection with internet filtering at school location
- Decrease WAN bandwidth allocation/cost per school
- Purchase internet filtering servers
- Maintain WAN link for central services and redundancy

Benefits to schools

- More bandwidth, cost savings.

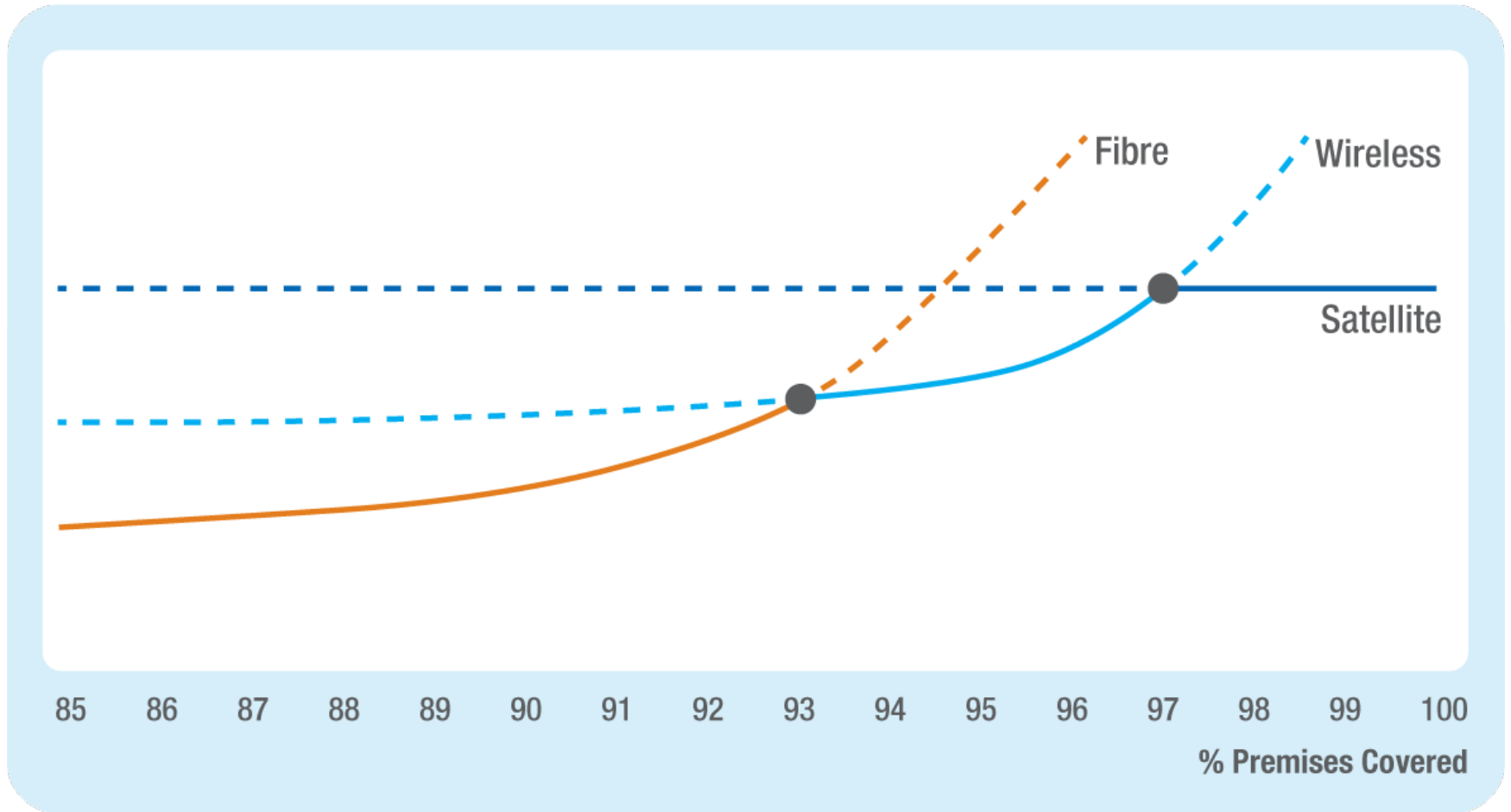
Example:

SA schools have implemented a similar architecture.

Non-Premises Examples – Copper Decommissioning

- Traffic lights / traffic light controller / electronic sign / traffic signals
- Bus stop, tram stop, railway station
- Banking communications - EFTPOS and ATM terminals
- Privately operated payphones;
- Assistance telephones (eg elevator and roadside phones)
- Transformer / kiosk / pad mount substation / pole mount transformer
- Links / Link pole LV / MV / HV links / ABC links / dynamic switch / airbrake switch / isolator
- Other metering point (any service)
- Camera (security / traffic)
- Bridge control, swing bridge, traffic control gate
- Mobile phone cell tower / radio antenna
- Street lighting pole, street light controller
- Band stand, rotunda, other park building
- Unmanned (council) car park
- Weather monitoring devices
- Water (including storm water and sewage management), gas and electricity infrastructure
- Public alarm and security systems.

Estimated Net Marginal Cost by Platform



Illustrative Only

Coverage Challenges

General

- Delivering the most cost-effective technology mix
- Take-up and usage estimates
- Explaining technology rollout requirements to users

Technical

- Spectrum is a scarce resource
- Spectral efficiency is approaching its limits
- We cannot always place wireless towers in the ideal location
- GNAF and cadastral data has its limitations

Digital Displacement: Physical -> Digital

Physical

- Post ⇒
- Music Stores ⇒
- Newspapers ⇒
- Bookstore ⇒
- DVD Rental ⇒
- Store, Local ⇒

Digital

- eMail
- iTunes
- Services
- eBooks
- Download
- Online, Global



Emerging Services

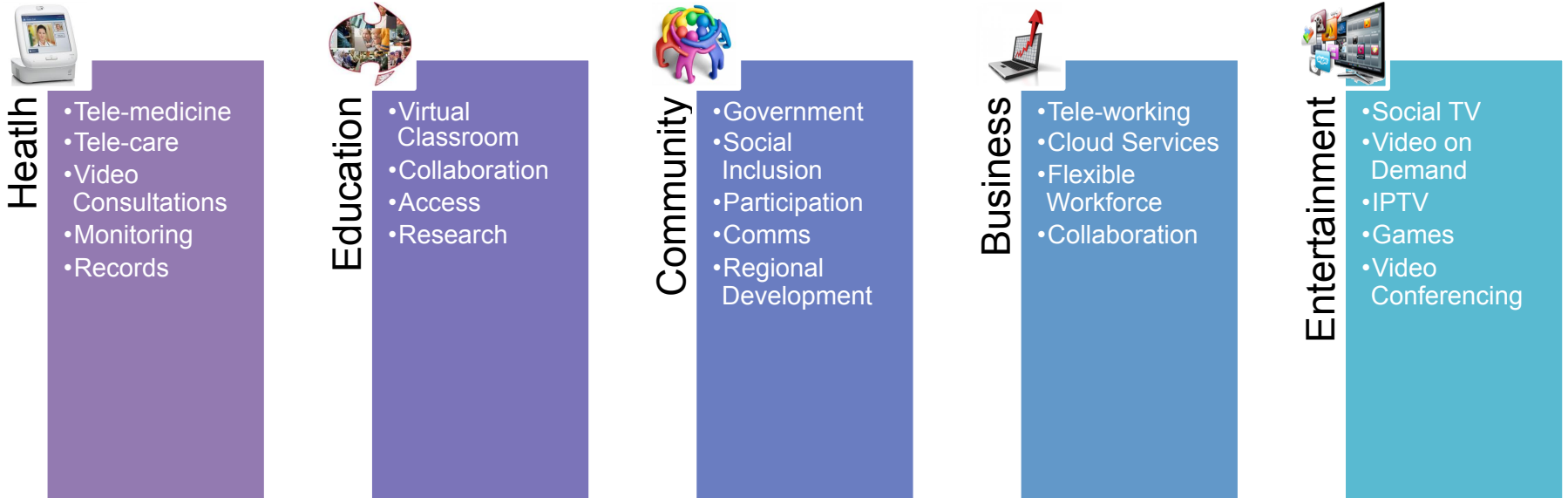
- *Health care*
- *Education*
- *Cloud Businesses*



What's next?

High Speed Broadband will expand service delivery through two-way communications.

Building Cross Industry Infrastructure



Layer 2

National Broadband Network

Horizontal ICT ?



Health

- Tele-medicine
- Tele-care
- Video Consultations
- Monitoring
- Records



Education

- Virtual Classroom
- Collaboration
- Access
- Research



Community

- Government
- Social Inclusion
- Participation
- Comms
- Regional Development



Business

- Tele-working
- Cloud Services
- Flexible Workforce
- Collaboration



Entertainment

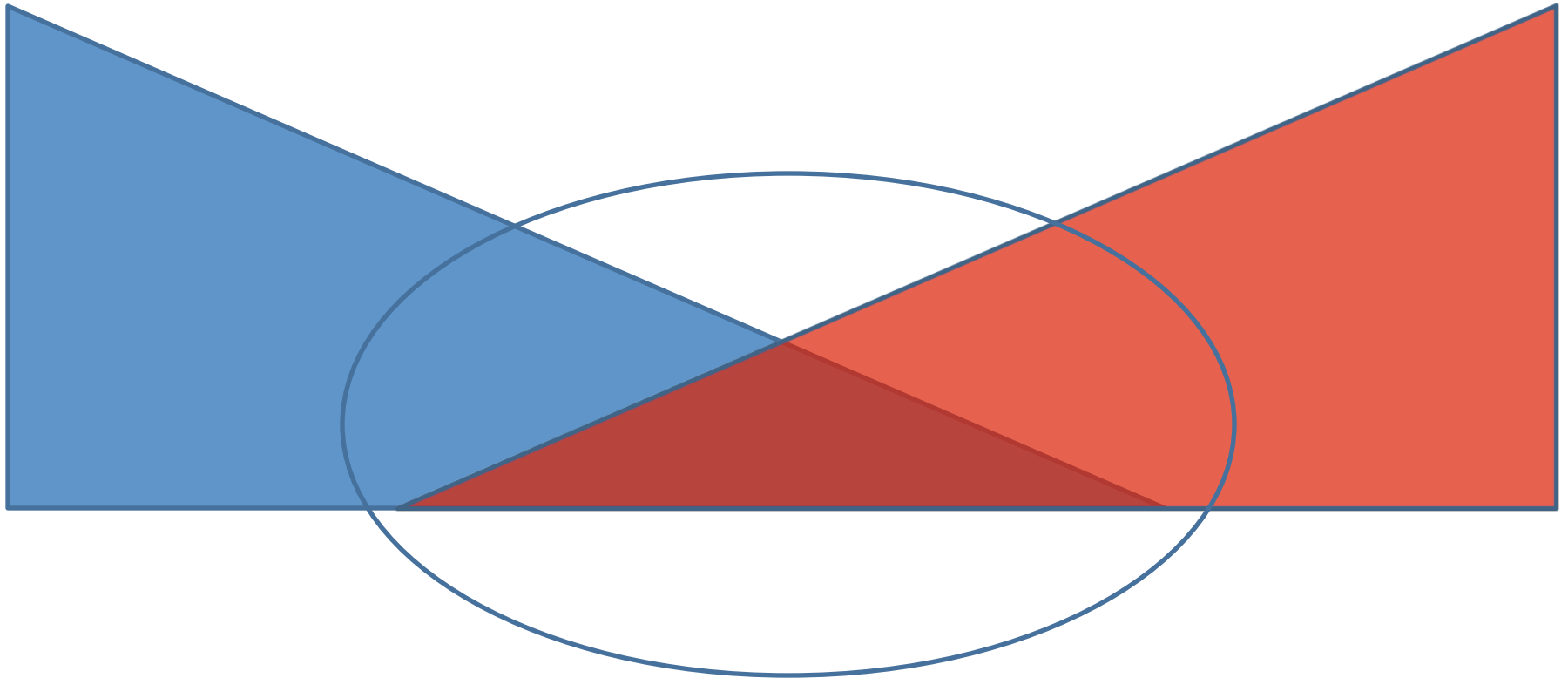
- Social TV
- Video on Demand
- IPTV
- Games
- Video Conferencing

ICT

Need to focus on ICT+

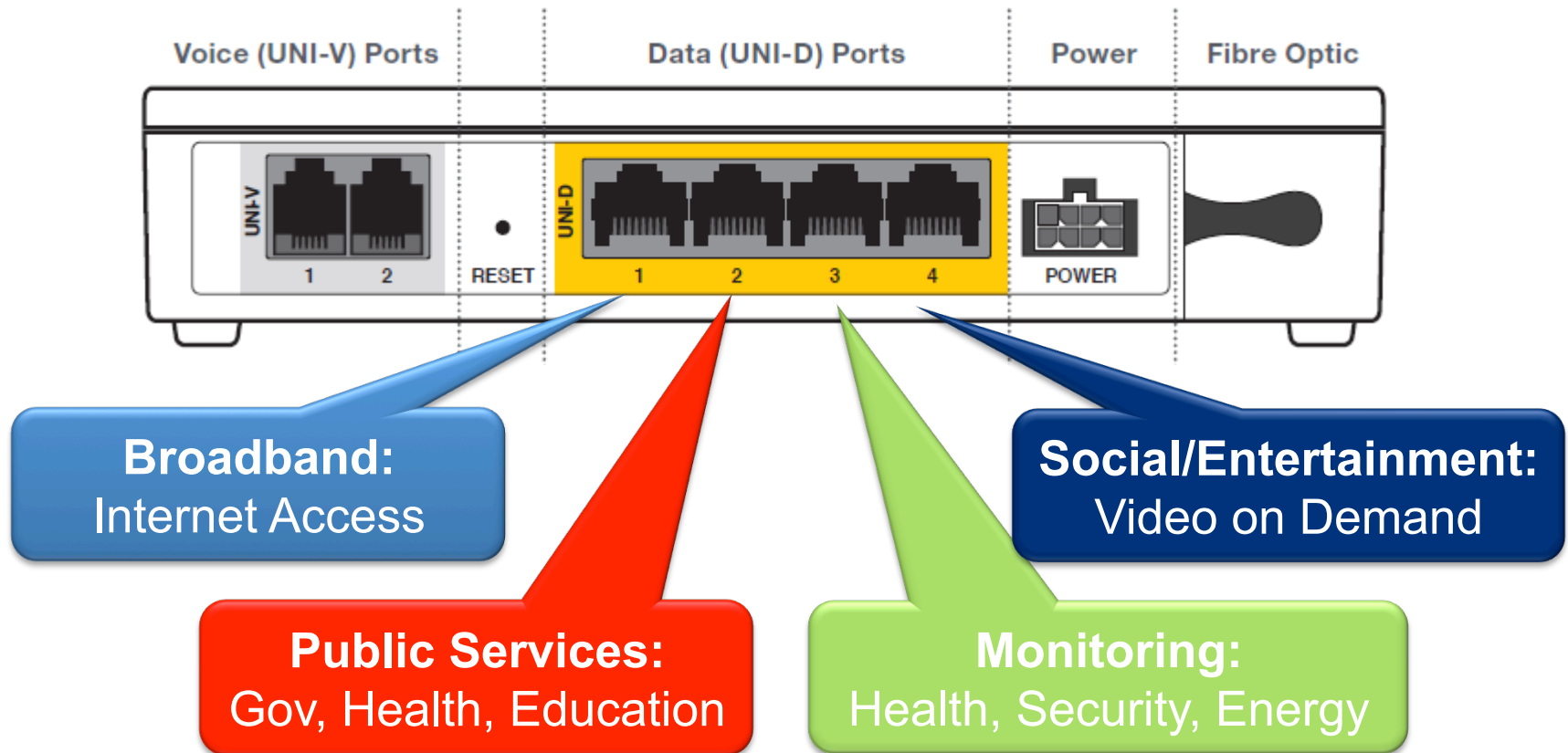
ICT Knowledge
Domain

“Vertical” Knowledge
Domain

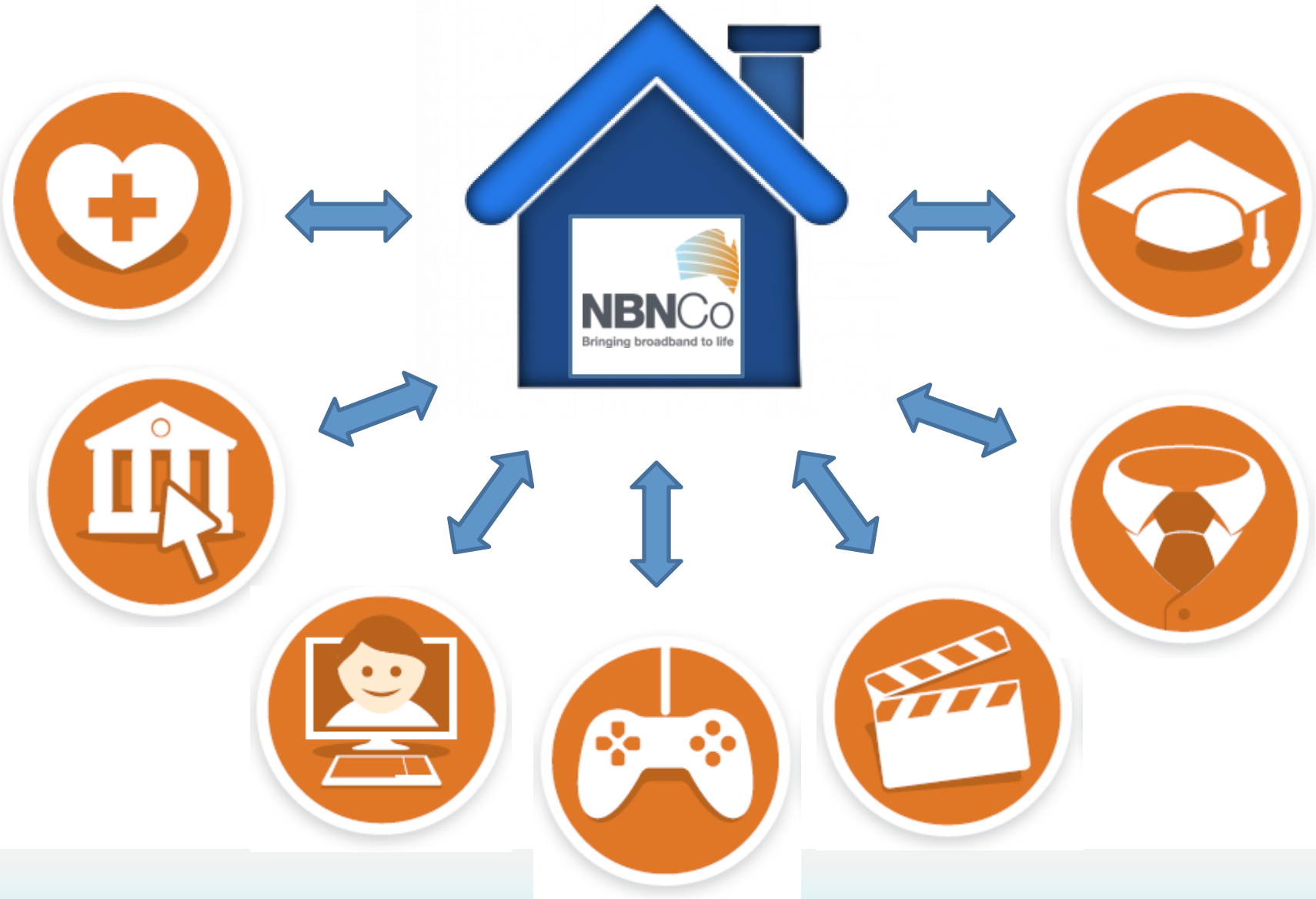


NBN New Opportunity:

- **Multiple Ports, Multiple Services**
4 x independent services per home

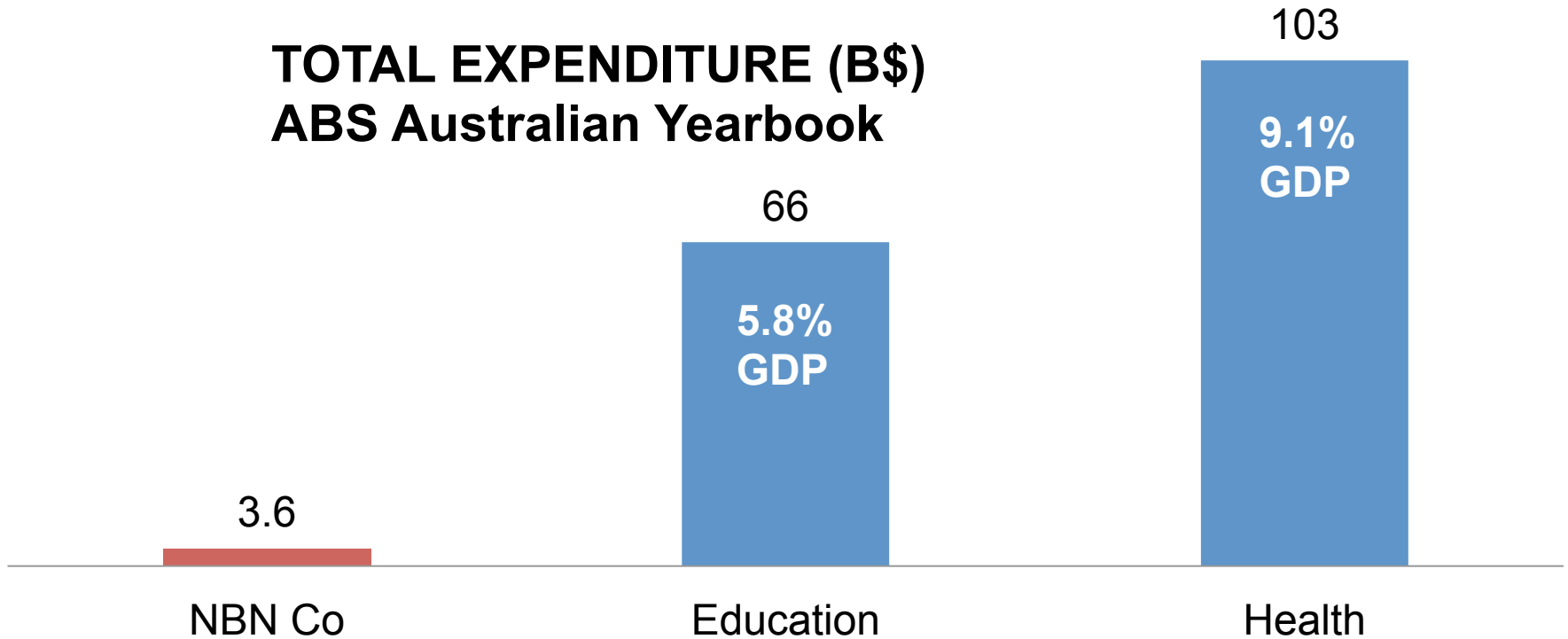


Extending Services to the Home



Industry Opportunity: Reduce Costs, Improve Service Delivery

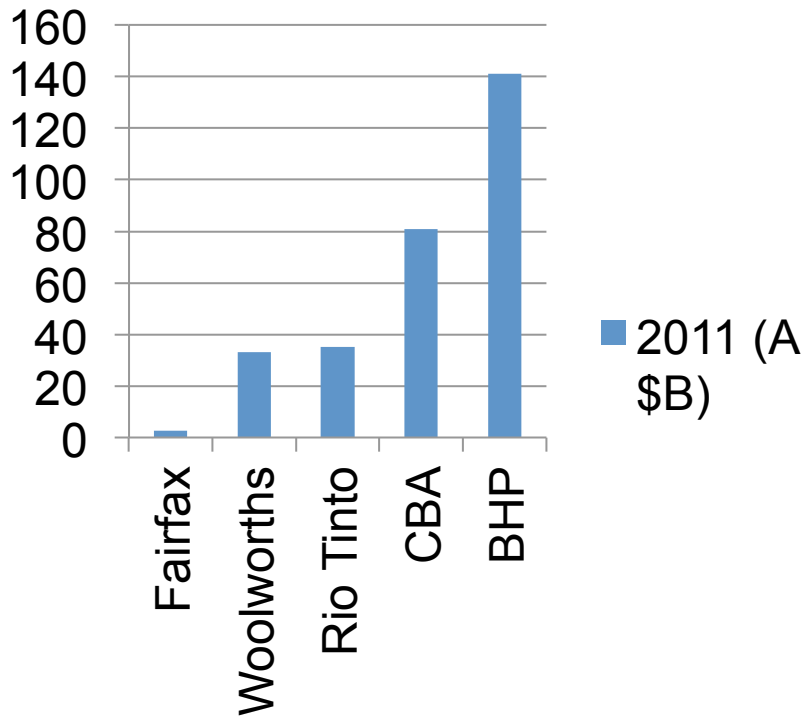
TOTAL EXPENDITURE (B\$) ABS Australian Yearbook



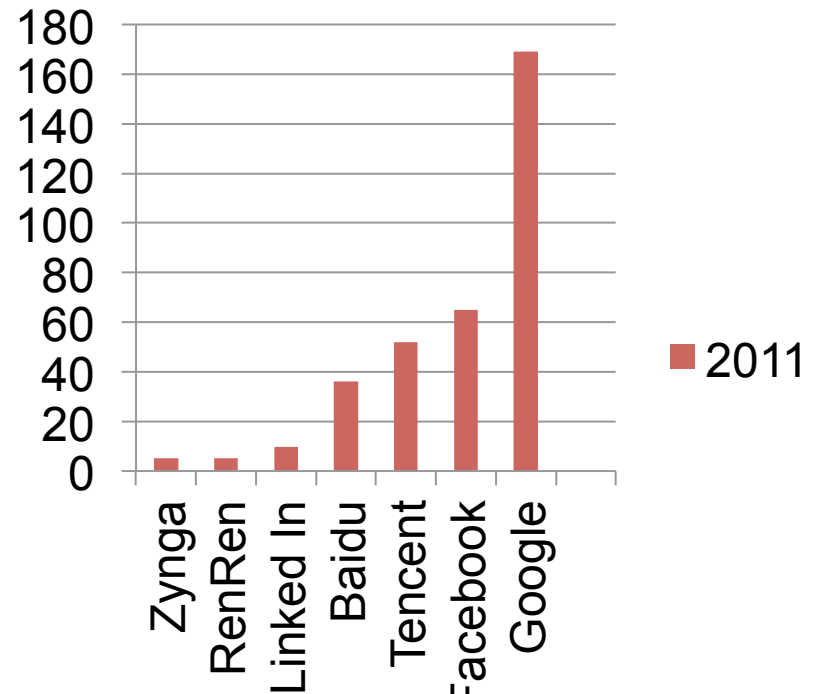
Source: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/1301.0>

Bricks vs. Clicks Economic Business Opportunity

Australia Companies



Global Clicks (\$B) 2011



Most of these companies didn't exist 10 years ago.

Australia Fastest Growing Industries in the Coming Decade

Industry	2011 Rev (\$M)	2020 Rev (Est)	Growth %	Use Broadband ?
Video Games	3732	7988	114	✓
Security Vehicles	13189	28205	113.8	
Stock Exchange Registry Services	11369	23486	106.6	✓
Internet Service Providers	6100	11944	95.8	✓
Online Education	4155	7967	91.8	✓
Investment Banking	9183	16282	77.3	✓
Uranium Mining	1128	2000	77.3	
Online Shopping	21344	36903	72.9	✓

Source: Smart Investor May 2011 – IBIS World



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