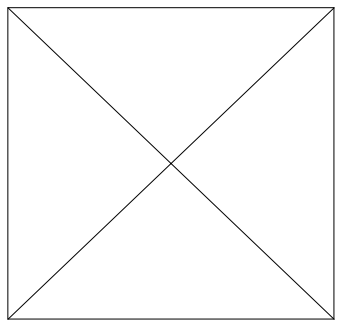
NGN Deployment Strategy toward Bridging Digital Divide

Yuji Inoue



Chief Technology Officer
Nippon Telegraph and Telephone Corporation

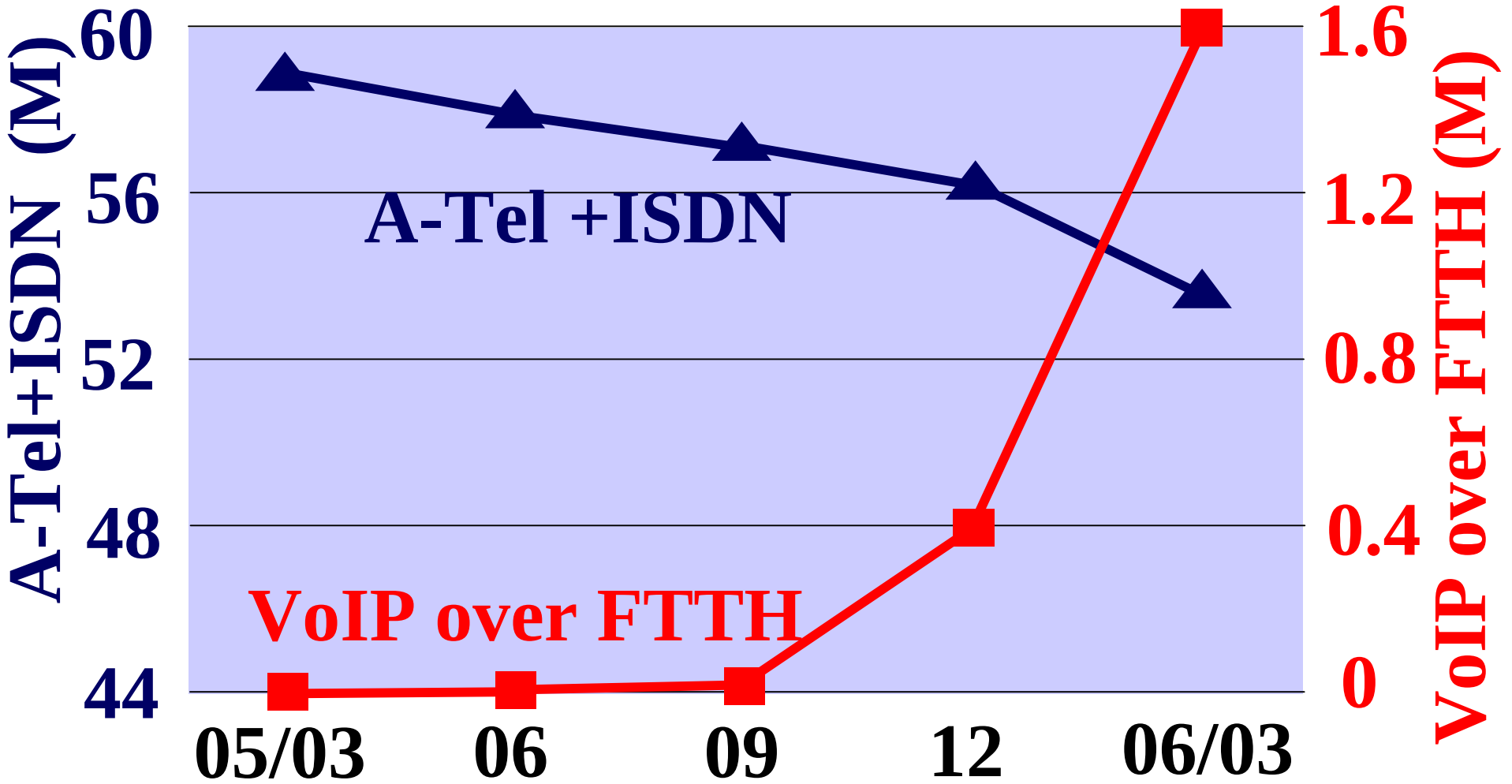
Experiences in Japan / NTT

Present Situation in NTT

March 2006

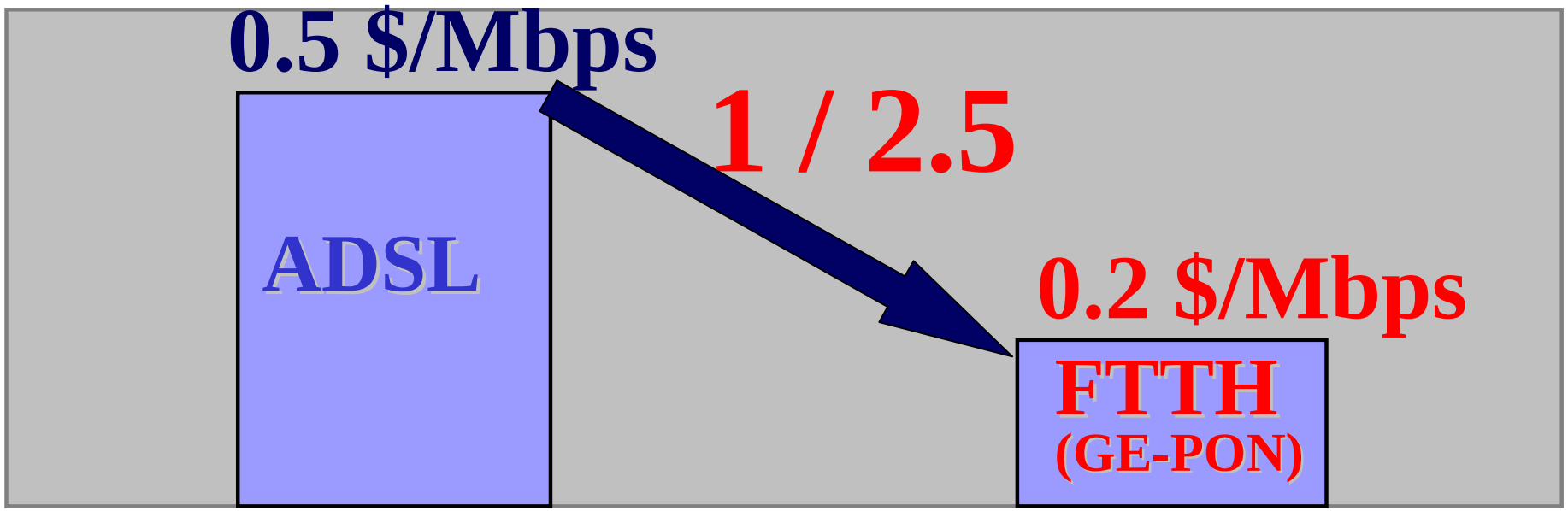
FTTH	**265 k**	**3.4 M**
ADSL	**-22 k**	**5.7 M**
3 G	**1,448 k**	**22.0 M**
2 G	**-963 k**	**28.6 M**

Rapid Shift to VoIP

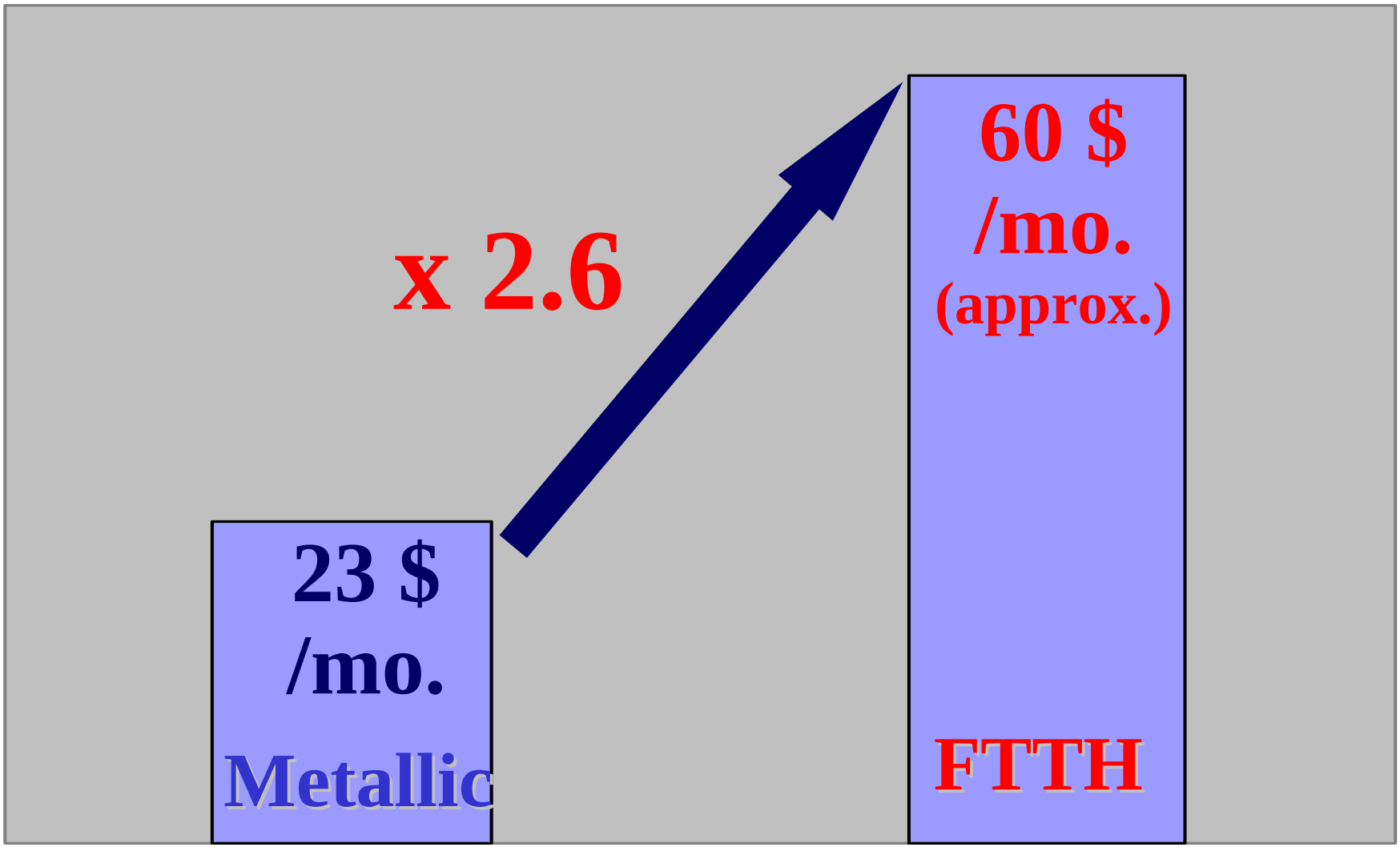


Why FTTH & VoIP – Price -

	Max. Speed Down/Up (Mbps)	Monthly Charge (US$)
ADSL	47 / 5	22.3
FTTH	100 / 100	22.1



Why FTTH & VoIP – ARPU -



Demand for NGN in Japan

1. Social Demand

i) Shift to Broadband & Service Convergence

ii) New infrastructure toward "Aged Society"

iii) Digital opportunity everywhere from Digital Divide

2. Internal Demand

i) Life time of existing digital switch

ii) More competitive in ever-changing business environment

Solutions ONLY by NGN

Implementation

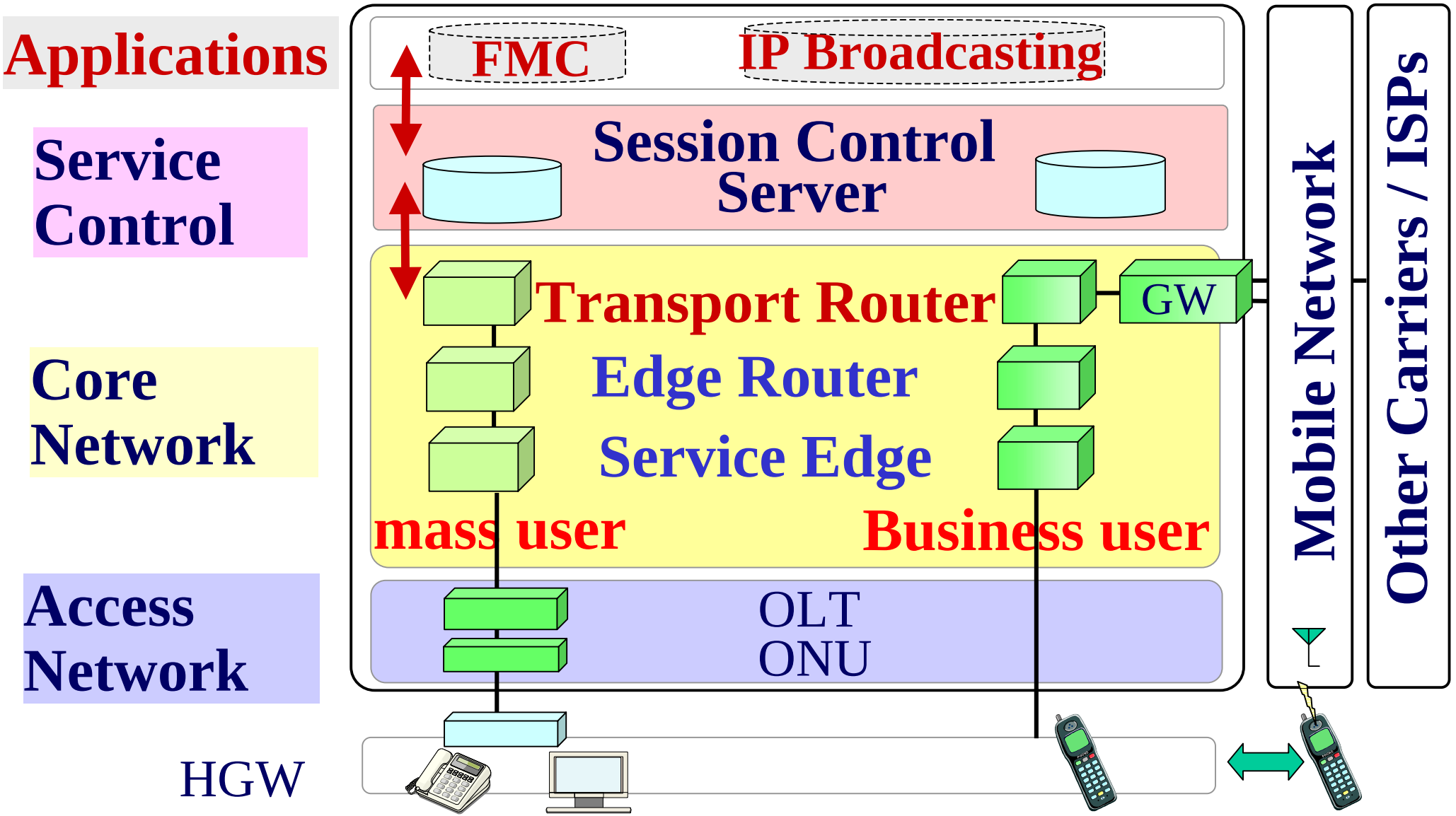
1. Build a next-generation network that is *open*, *flexible*, *easy-to-use*, *inter-operable*, and *safe&secure*

   => 30 million FTTH users by 2010

2. Strengthen our competitiveness and financial base (Targets up to 2010)

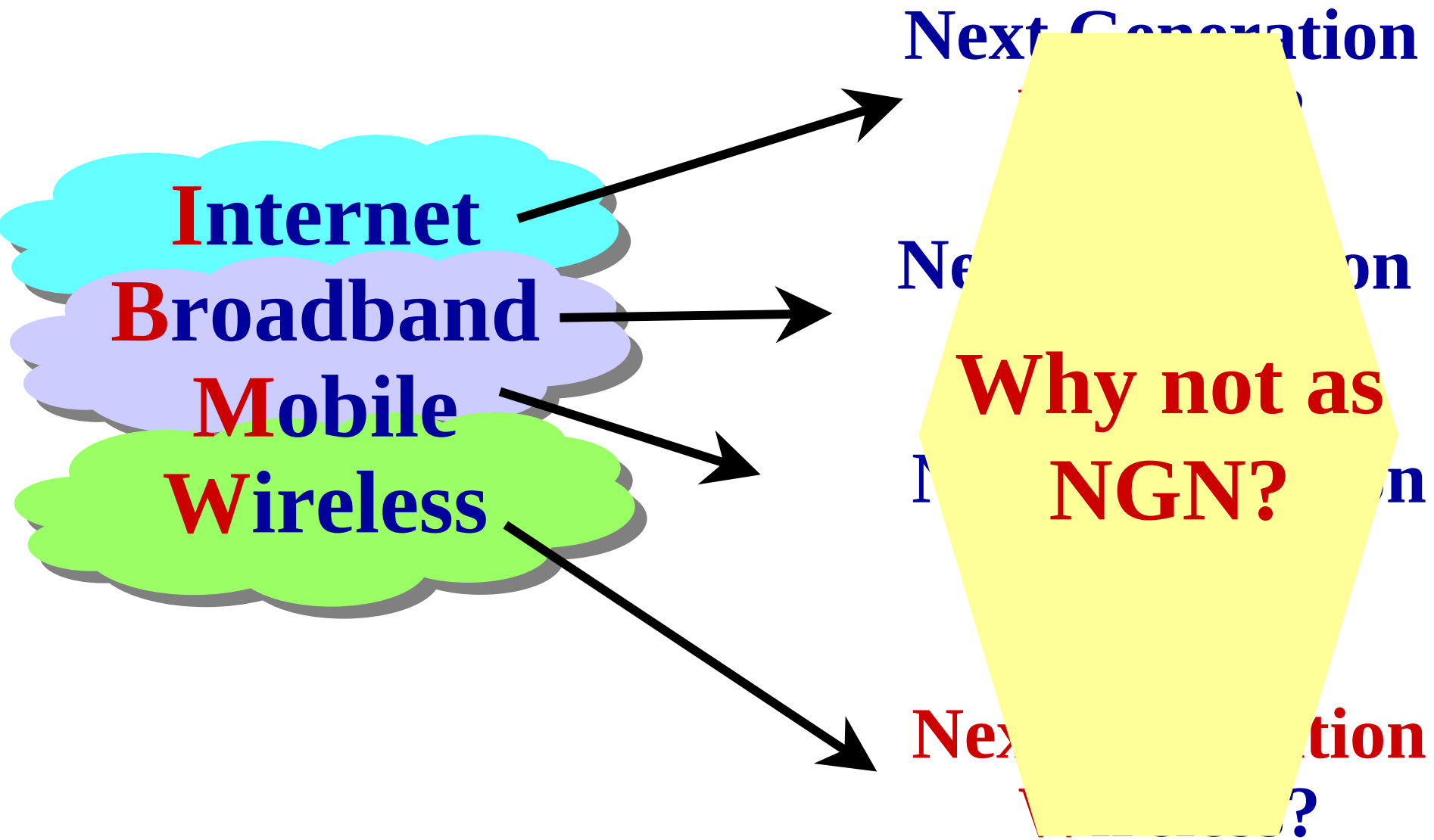
   - *Annual additional sales: 5 billion US$*
   - *Total capital expenditure: 50 billion US$*
   - *Annual cost reduction: 8 billion US$*

NTT's NGN Architecture



NGN as Global Infrastructure

Deployment Strategy of IBMW



Rough Estimation: Deployment Cost

Ratio of cost per user to provide 1-10Mbit/s access in urban area:

	If provided independently		If deployed as NGN
Internet	20	100	80
Mobile	40		
Wireless	40		

Digital Divide in Japan

1. “Mbit/s” access for the rural area

- *Deployment cost issues: Geographical problems, population density, …*
- *Optical lines in rural area is still proceeding*

2. Accessibility for all generations

- *Reliable, secure, safe, and easy to use, for all generations including aged people*

<= Solutions by technology:

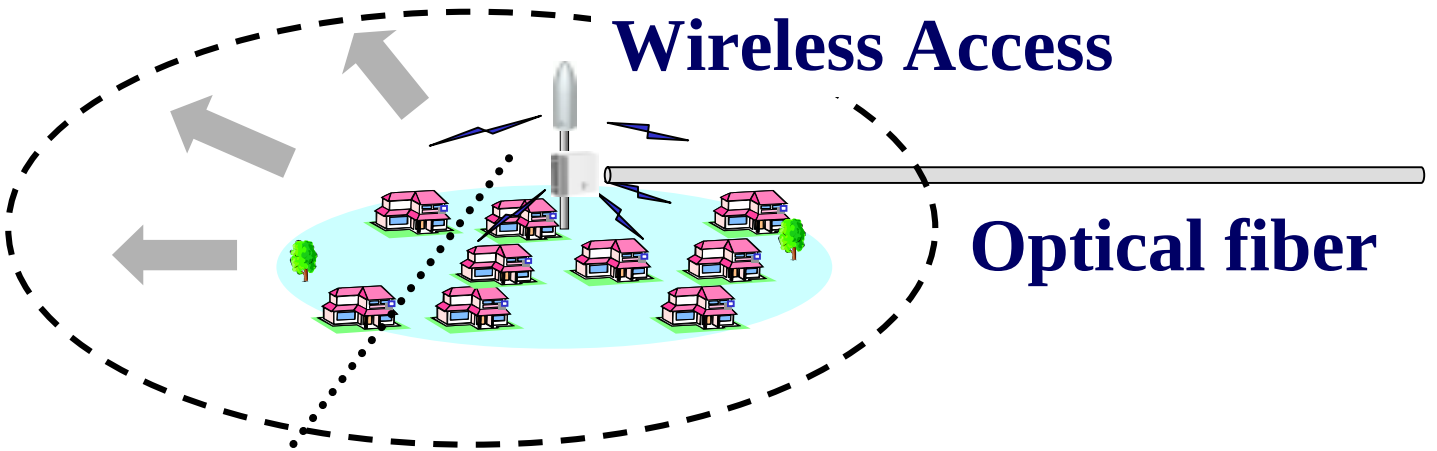
- Zero configuration / zero maintenance

- Security functions in Network

Access Service in Rural Area

Example: Optical Fiber +Wireless Access

Extension of area coverage to 10km ?



WIPAS:

- 1km coverage
- 26GHz band
- 80Mbit/s radio transmission rate
- 46Mbit/s max transfer rate

B-Flets (FWA Type)

- 20 US$ /month

Digital Divide in Global

1. Causal relationship is complicated

- *Regional factor: population density, geographical conditions,*
- *Social factor: difference of income, generation, and ICT literacy, etc.*

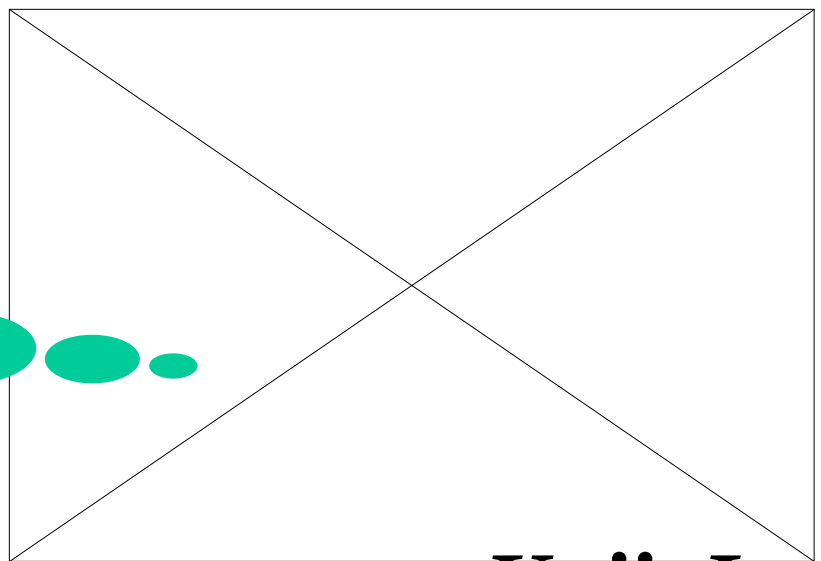
2. What should we do?

- *Problem statement, definition*
- *Priority: What to solve at first?*

I am a candidate for the Director of ITU-T

Challenge in a Changing Era, NGN

Thank you very much



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