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# **Launching an NGN commercial service - NTT's approach -**

**April 7, 2009**

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**NTT Information Sharing laboratory Group**

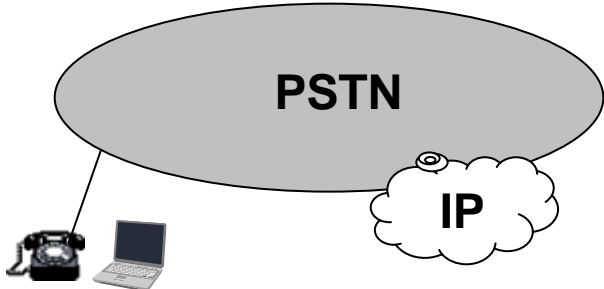
Rapid growth of Internet

IP network Pre-NGN

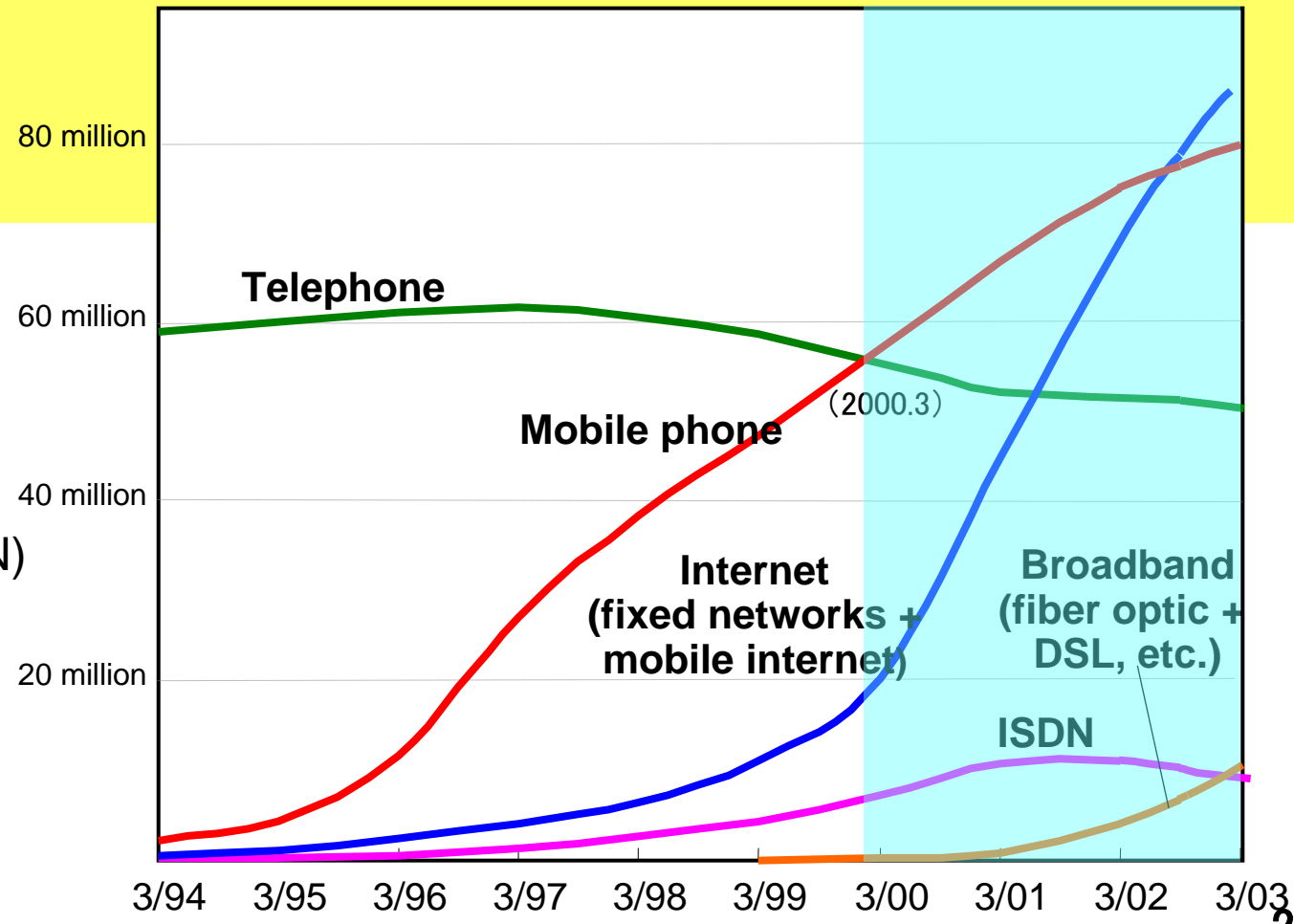
Broadband demand

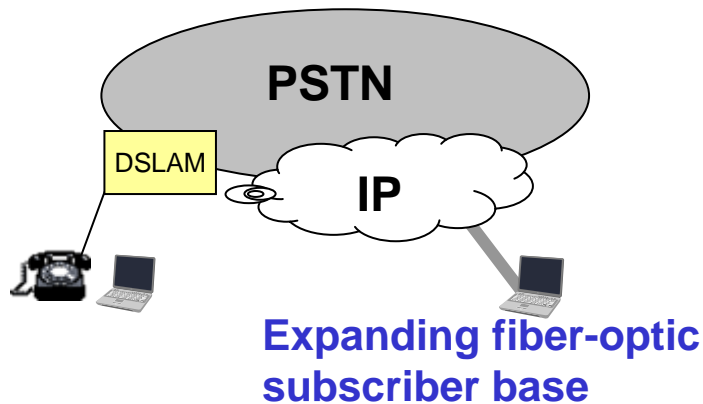
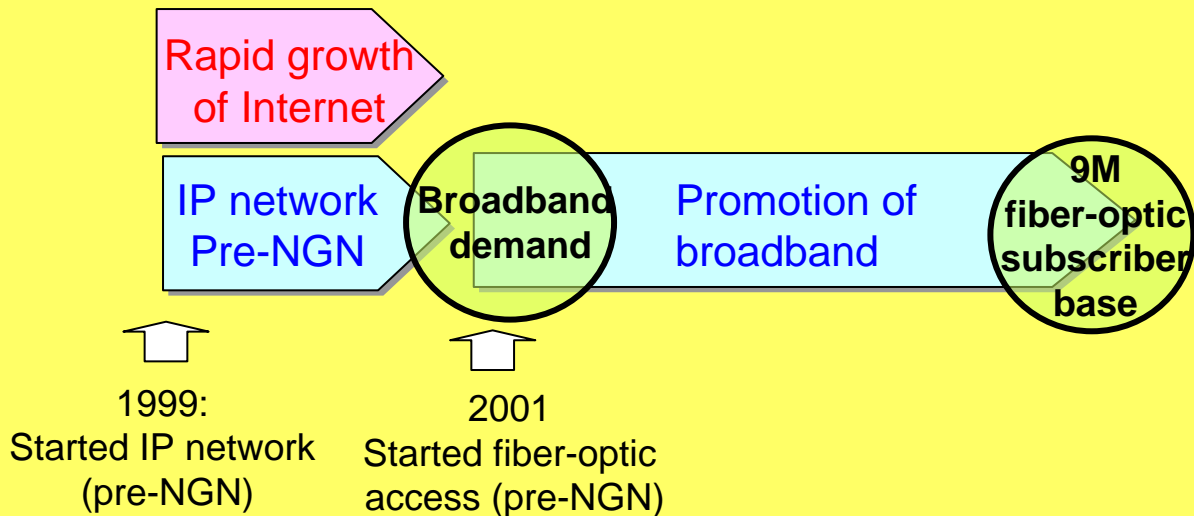


1999:  
Started IP network  
(pre-NGN)

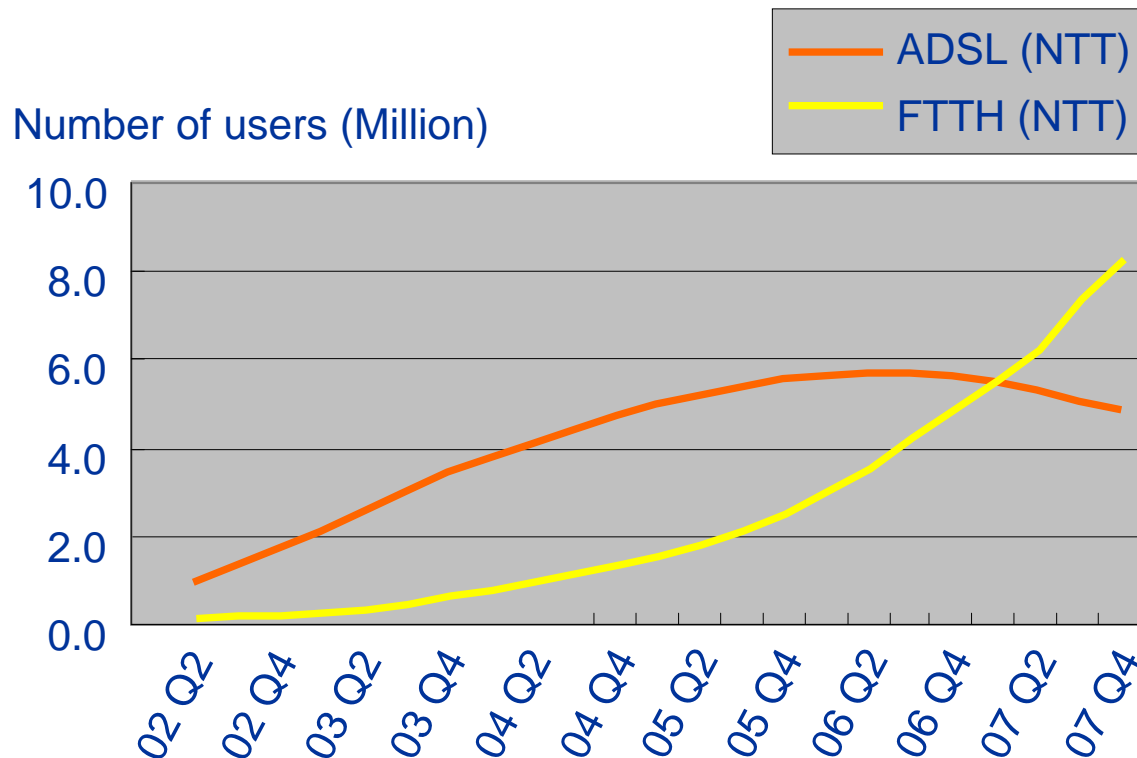


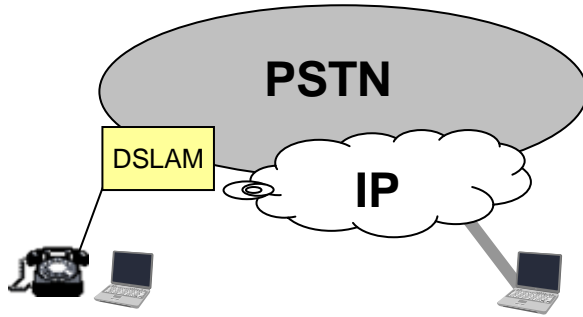
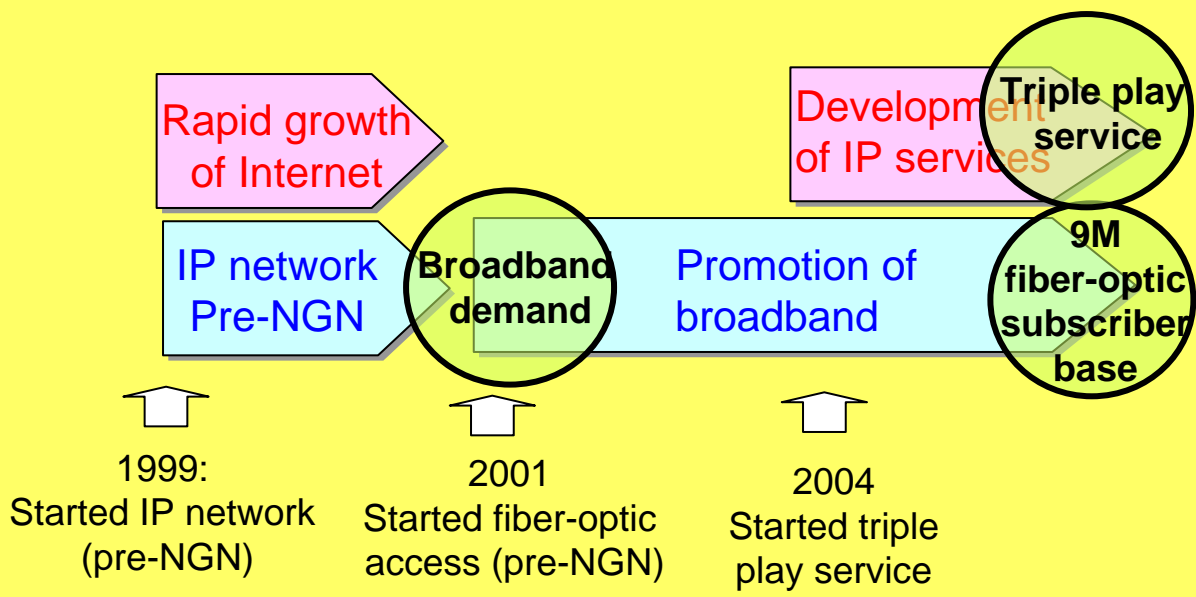
1999: Start IP network (pre-NGN)  
for Internet access





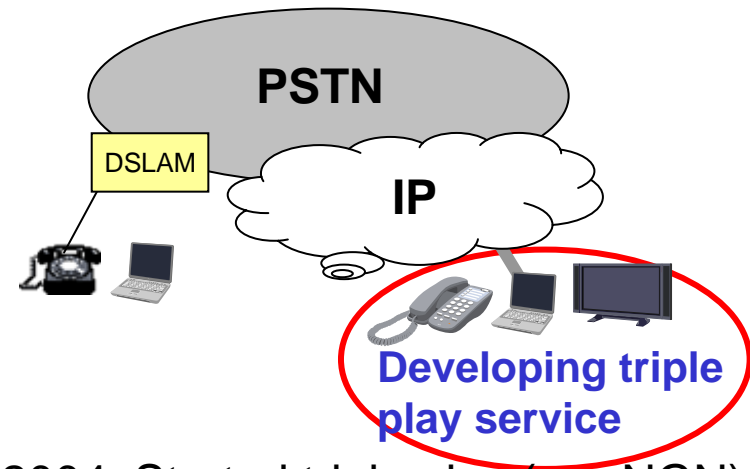
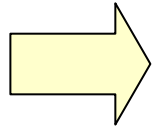
2001: Start fiber-optic access service (pre-NGN)



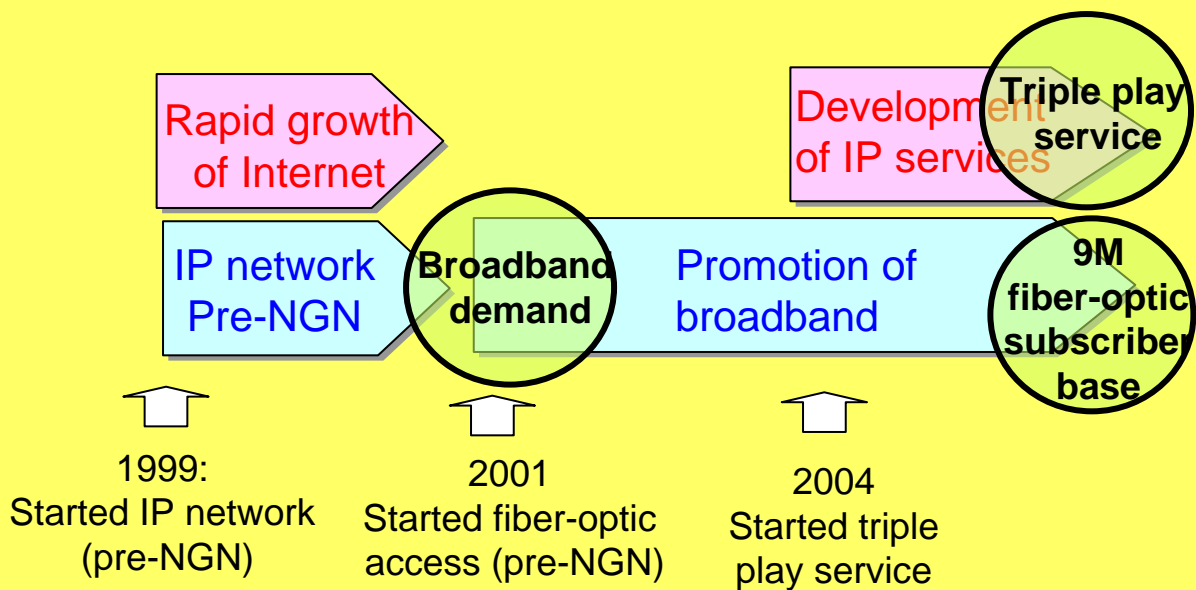


**Expanding fiber-optic subscriber base**

2001: Start fiber-optic access service (pre-NGN)



2004: Started triple play (pre-NGN)



**FLET's**

**Service features**

started 1999

- Users can access their contracted ISP
- Best-effort network service for internet access
- Fixed monthly charge

**B-FLET's**

**Variants (Peak rate: 100Mbps)**

started 2001

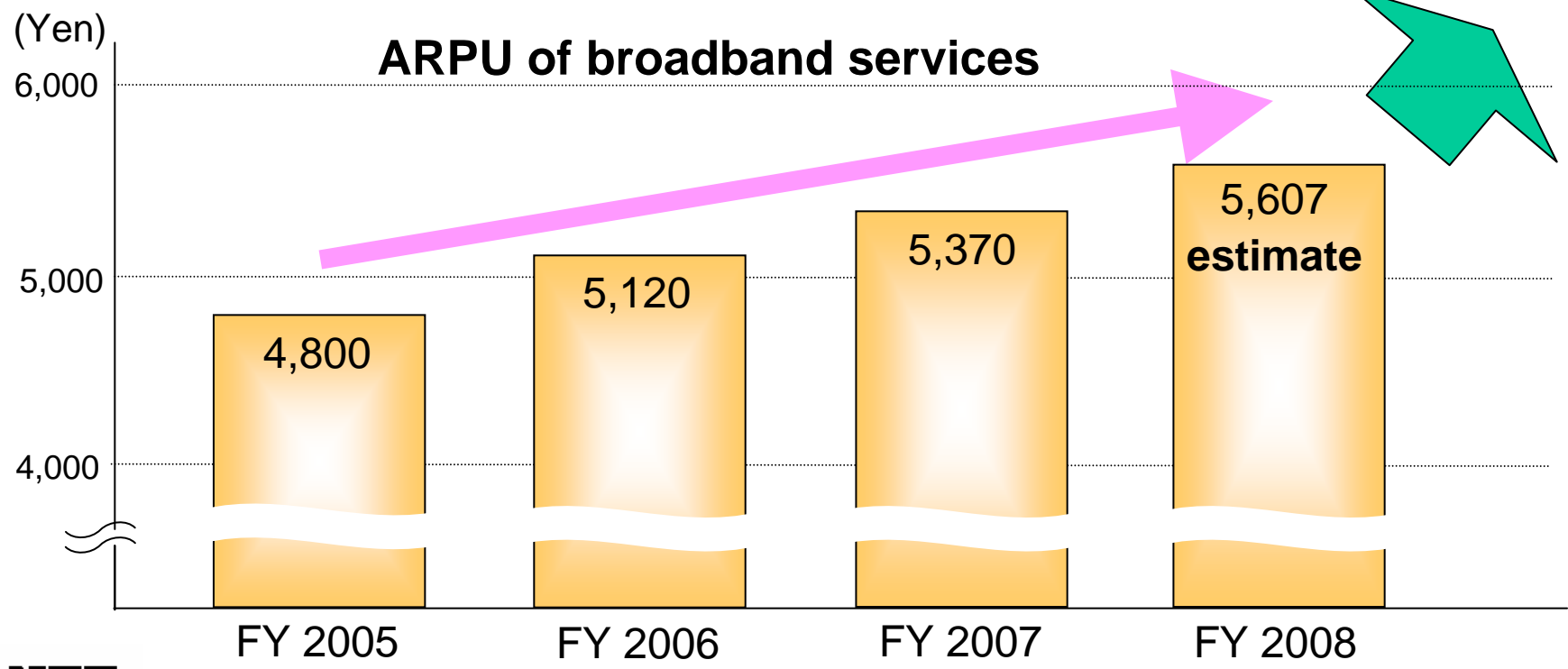
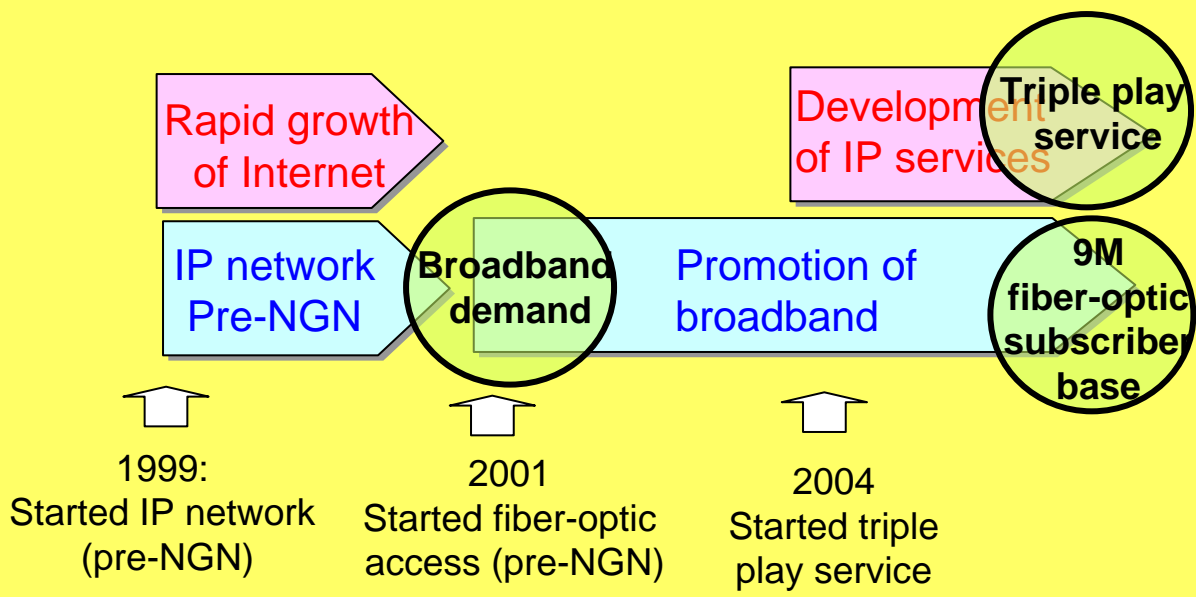
- Business type (*for large businesses*)
- Basic type (*for SOHO & heavy users*)
- Condominium type (*for mass market users*)
- Hyper-Family/Premium type (*for mass market users*)

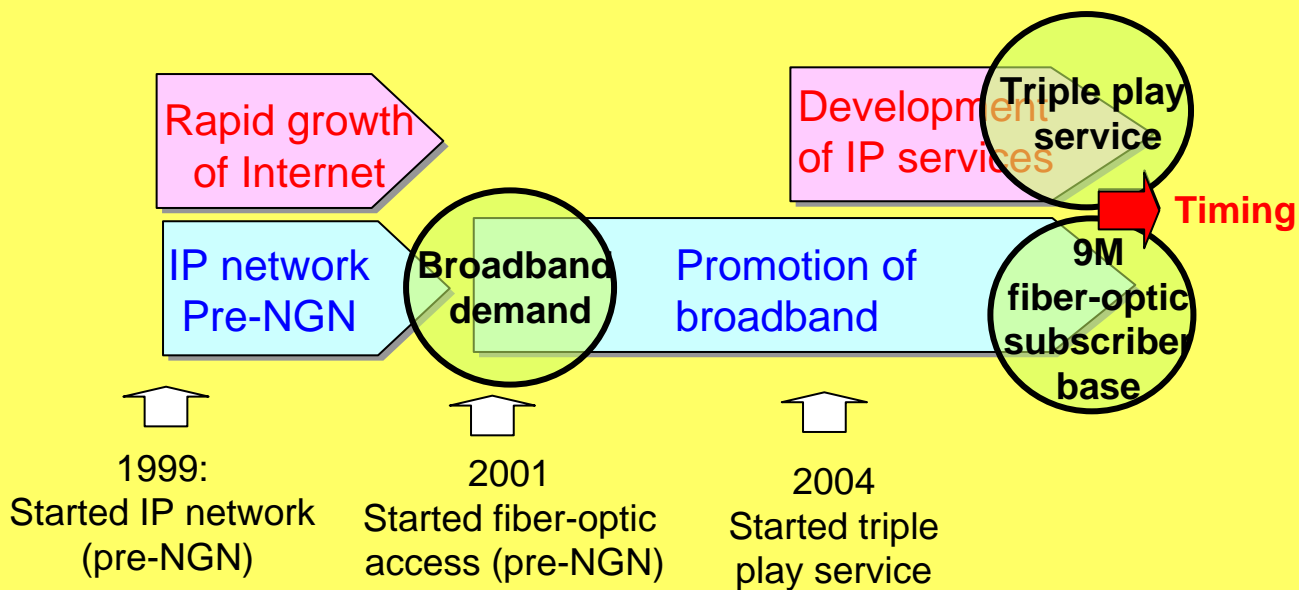


**Services on B-FLET's (Triple Play)**

started 2004

- High Speed Internet access
- IPTV up to 32,000 VODs, 100 multicast channels, including HDTV
- RF video up to 300 channels, including HDTV
- POTS quality VoIP





## Timing of NGN launch....

- Establishment of nationwide customer base (9M subscriber)

### Requirements

- Low cost structure
- Reliability and traffic control

### Solutions brought by NGN

- Converged network
- Carrier-grade IP network

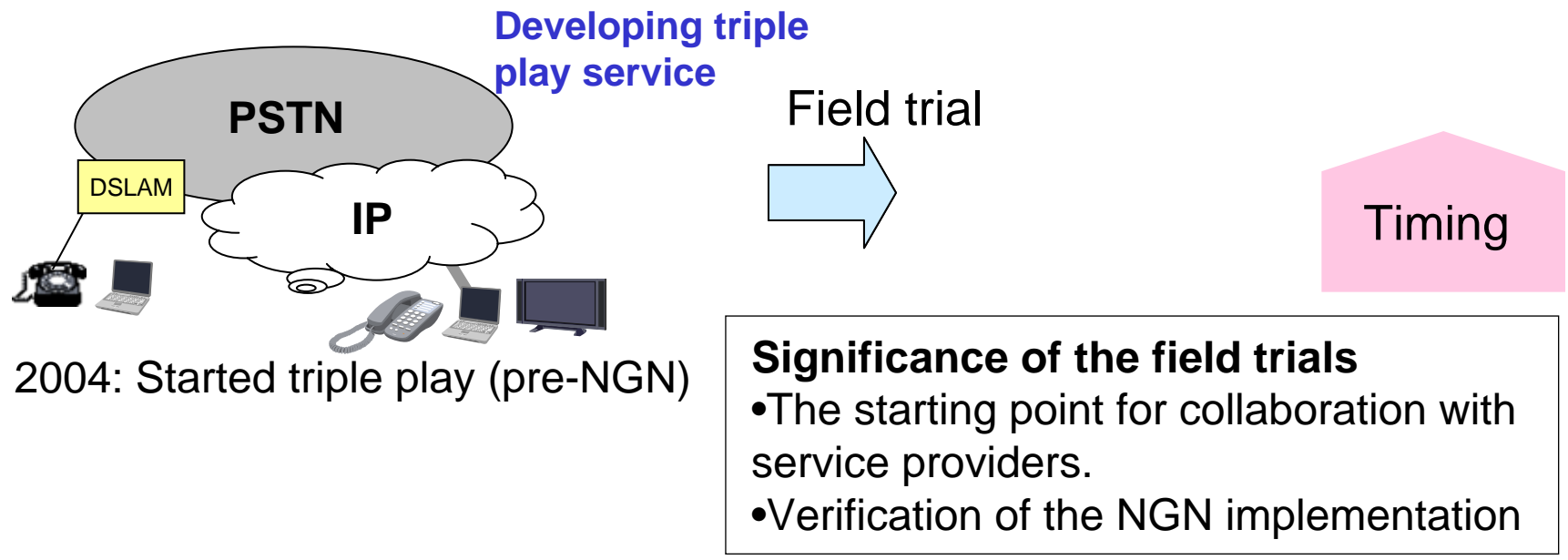
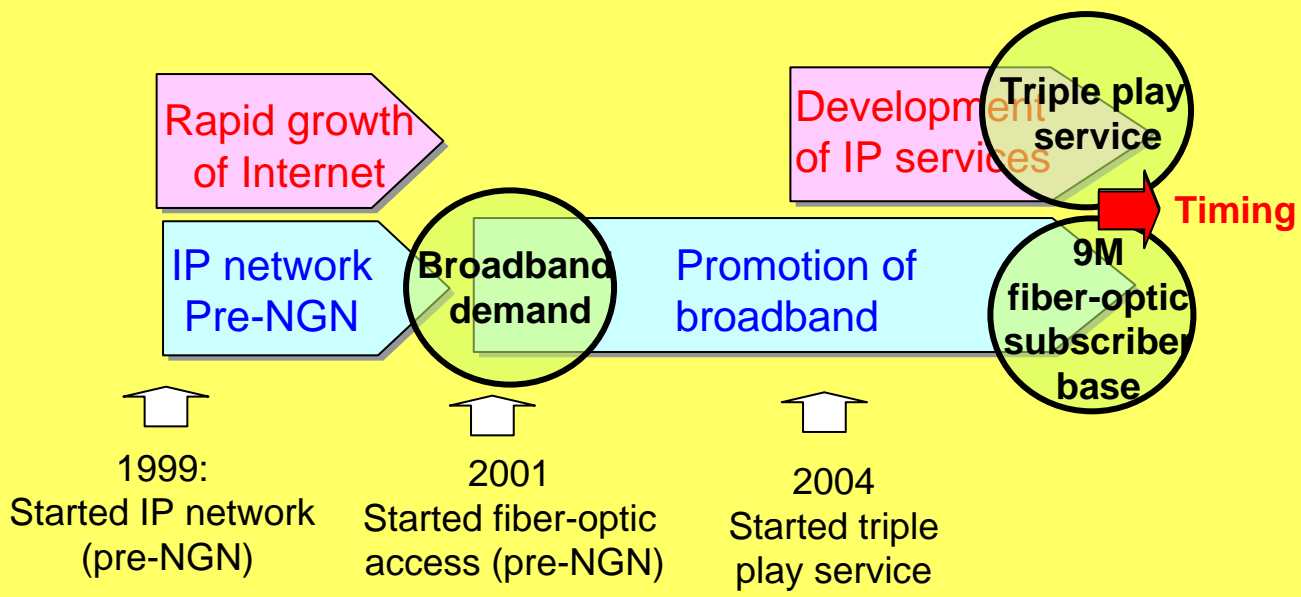
- Start of triple play services

### Requirements

- New telephone service menu for IP era
- Attractive network for content providers
- Market expansion to new business areas

### Solutions brought by NGN

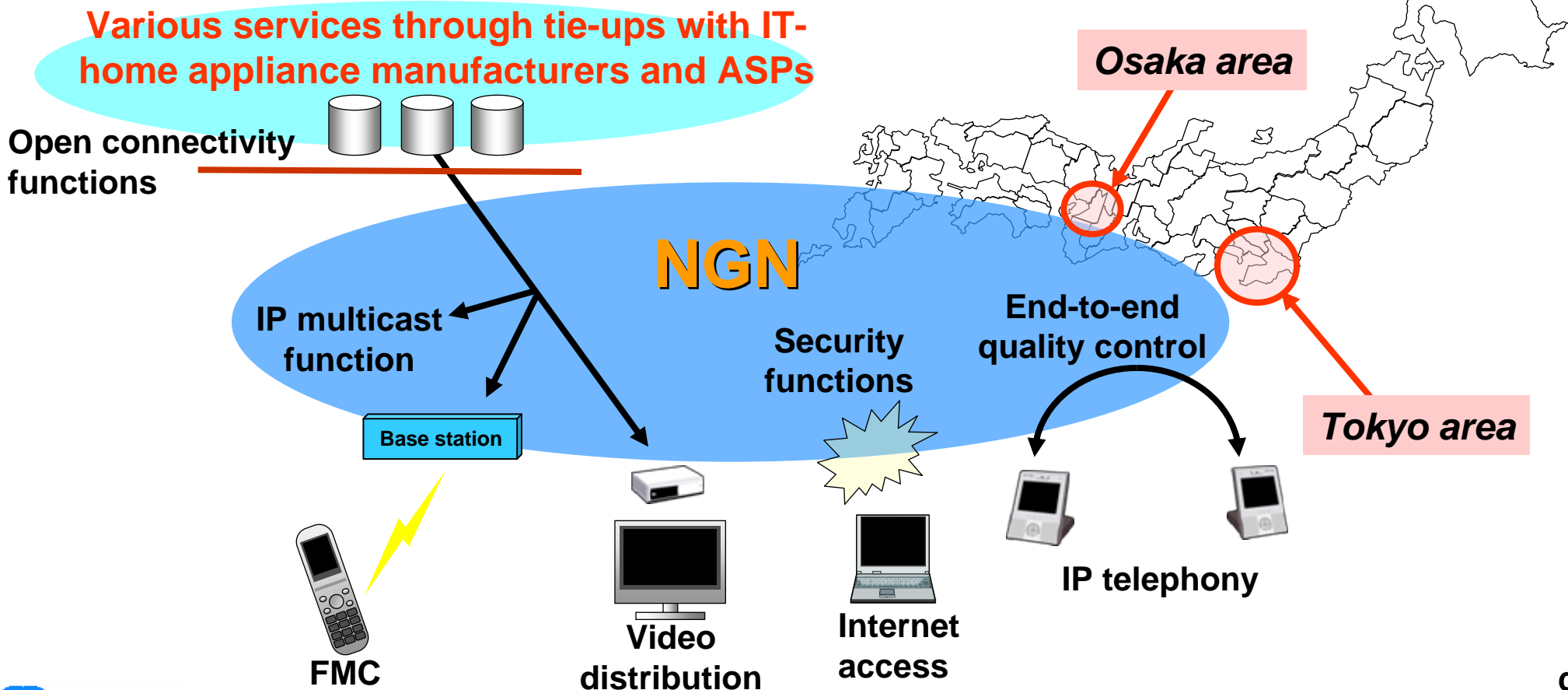
- Simulation base PSTN evolution
- QoS and Capacity
- Open Interface





# Field Trials of NTT's NGN Dec. 2006 – Dec. 2007

Objectives : - Verification of the NGN implementation  
- Creation of new business opportunity with ASPs  
- Building consensus to use NGN as a communication infrastructure of the future



# Examples of services tested in the trial

## ■ *NGN for Business*

- High definition visual communication
- Wideband IP conference calls
- Enterprise-oriented network service
- Push to talk with multimedia over NGN, etc.



## ■ *NGN for Life*

- Broadcast retransmission over IP
- High-definition IPTV service
- IP high-definition videophone
- Wideband IP phone
- Ubiquitous network service for children's safety, etc

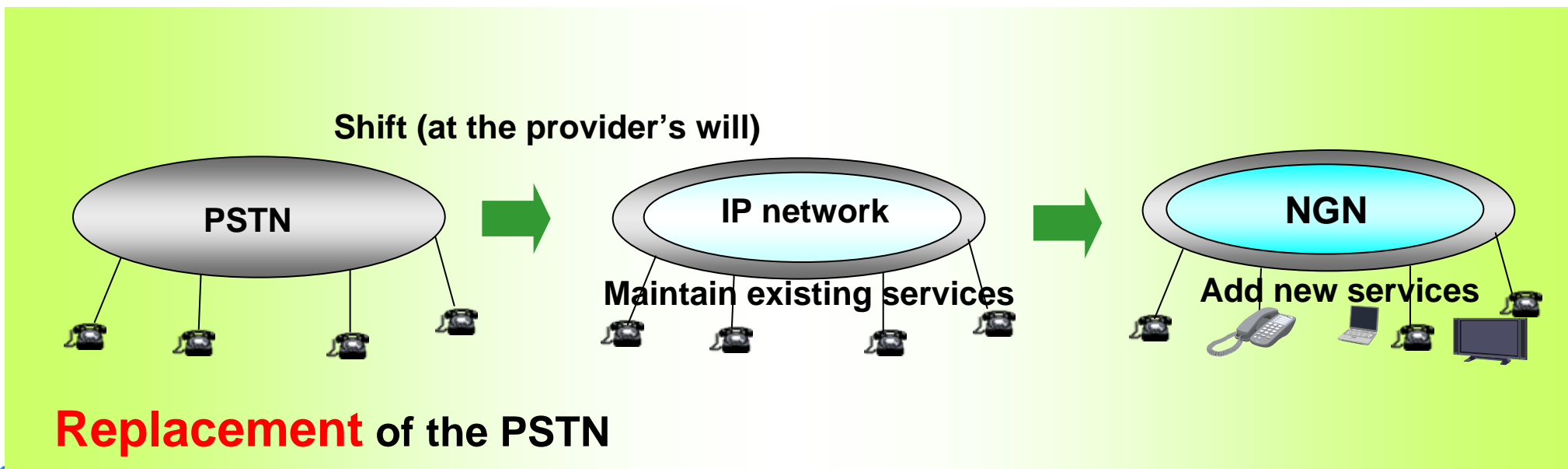
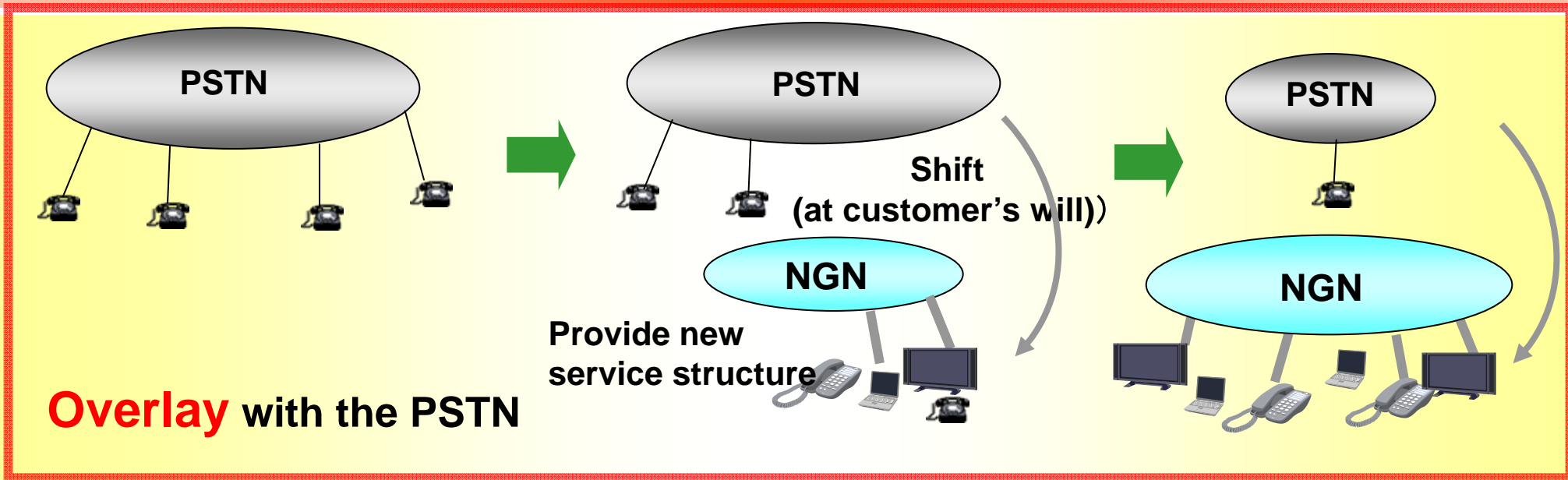


## ■ *NGN for Society*

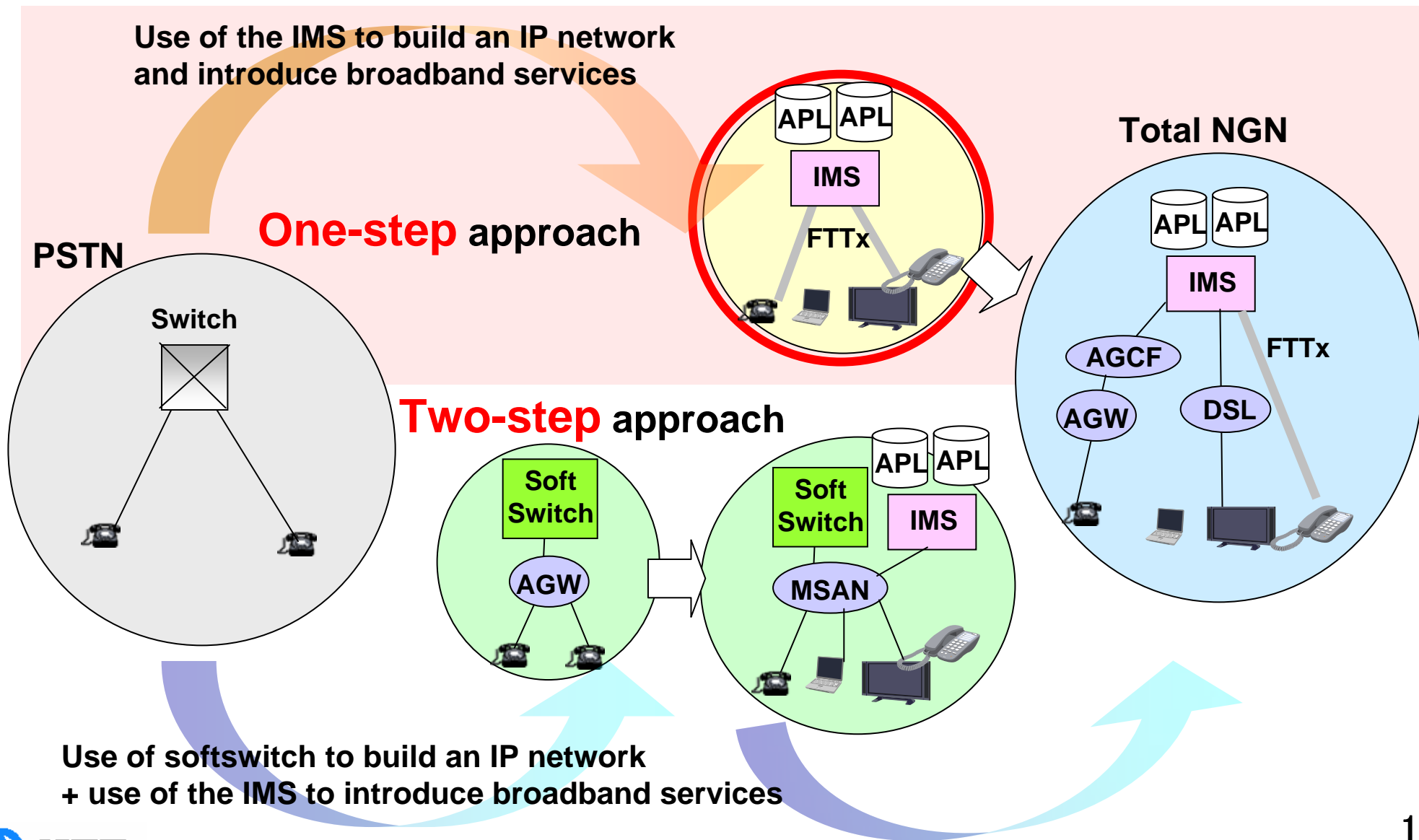
- Telepathology
- Home security and control
- Healthcare
- Gentle touch supervision by robot, etc.

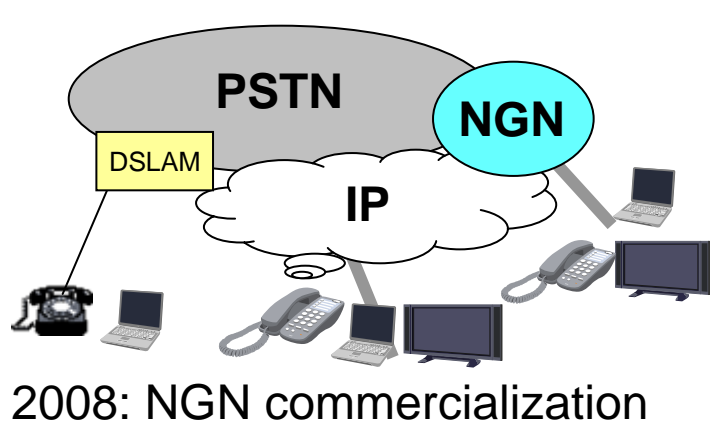
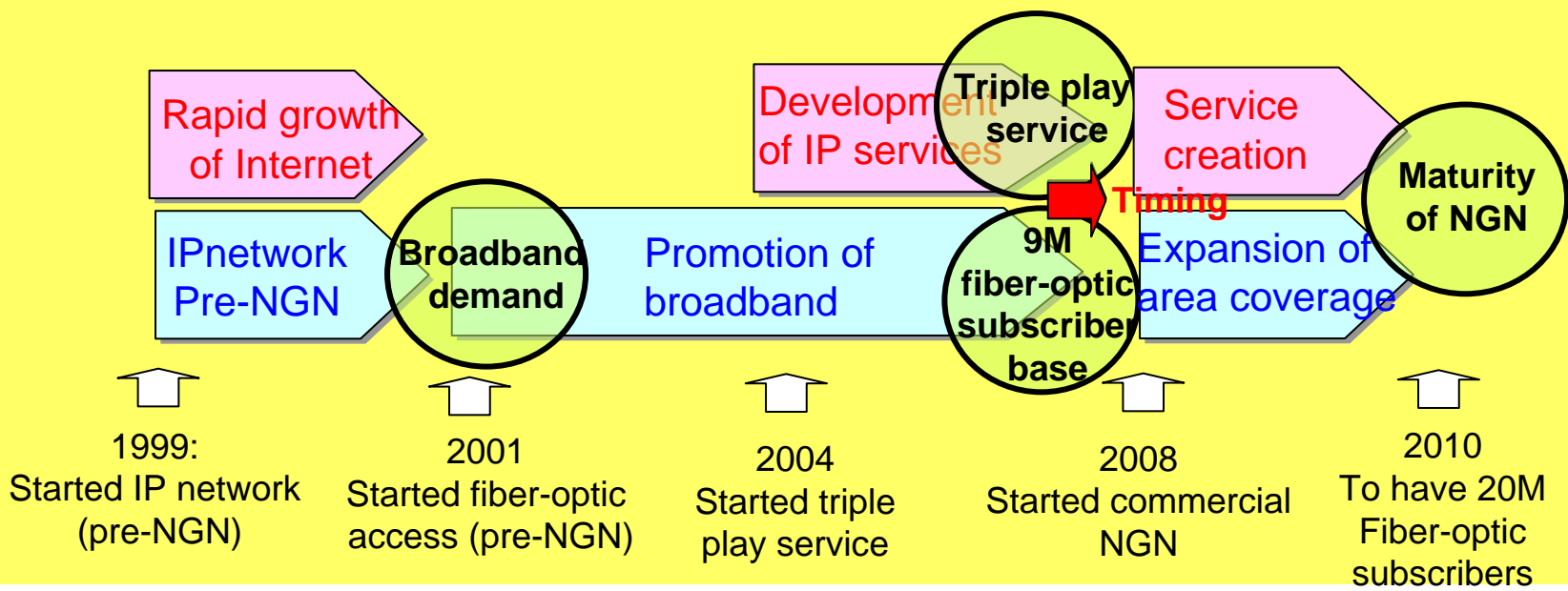


# Alternative ways of migration to the NGN

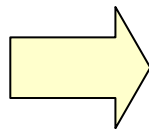


# Alternative approaches to migrating telephony

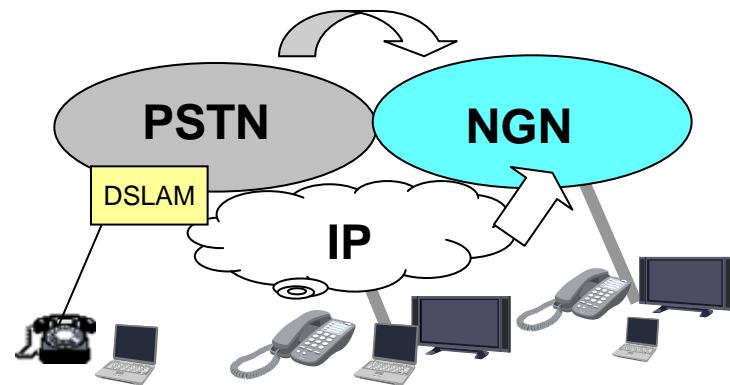




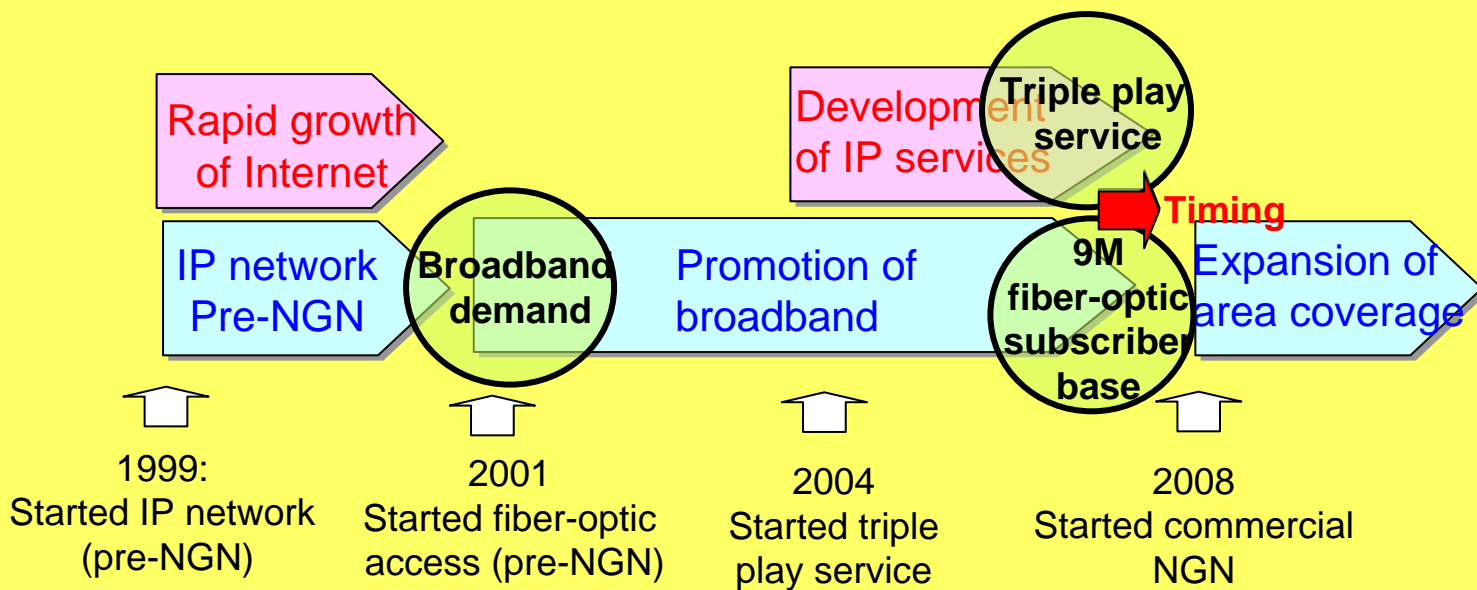
**Start from triple play with QoS and security**



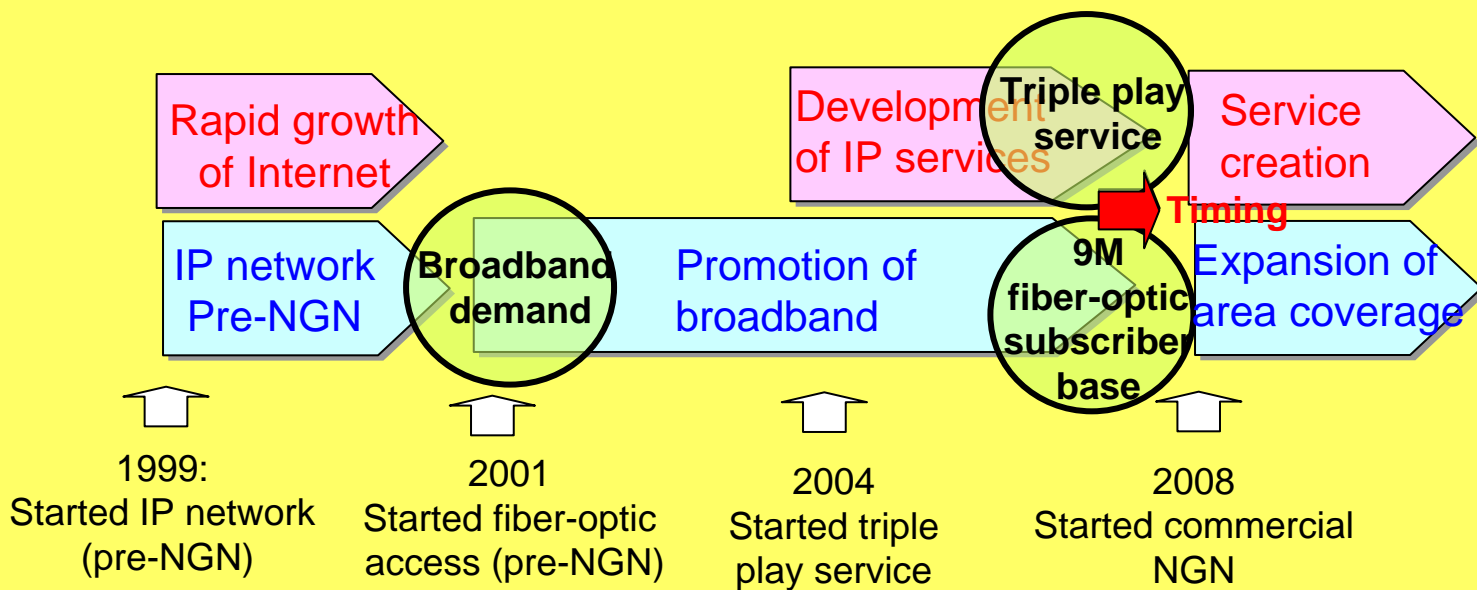
**Small start and rapid expansion of service area coverage**



- Small start
  - Covering a wide area in short time frame
- Version up from pre-NGN
  - Same categories of services = upward compatibility + QoS and security
  - New services aimed towards new business areas

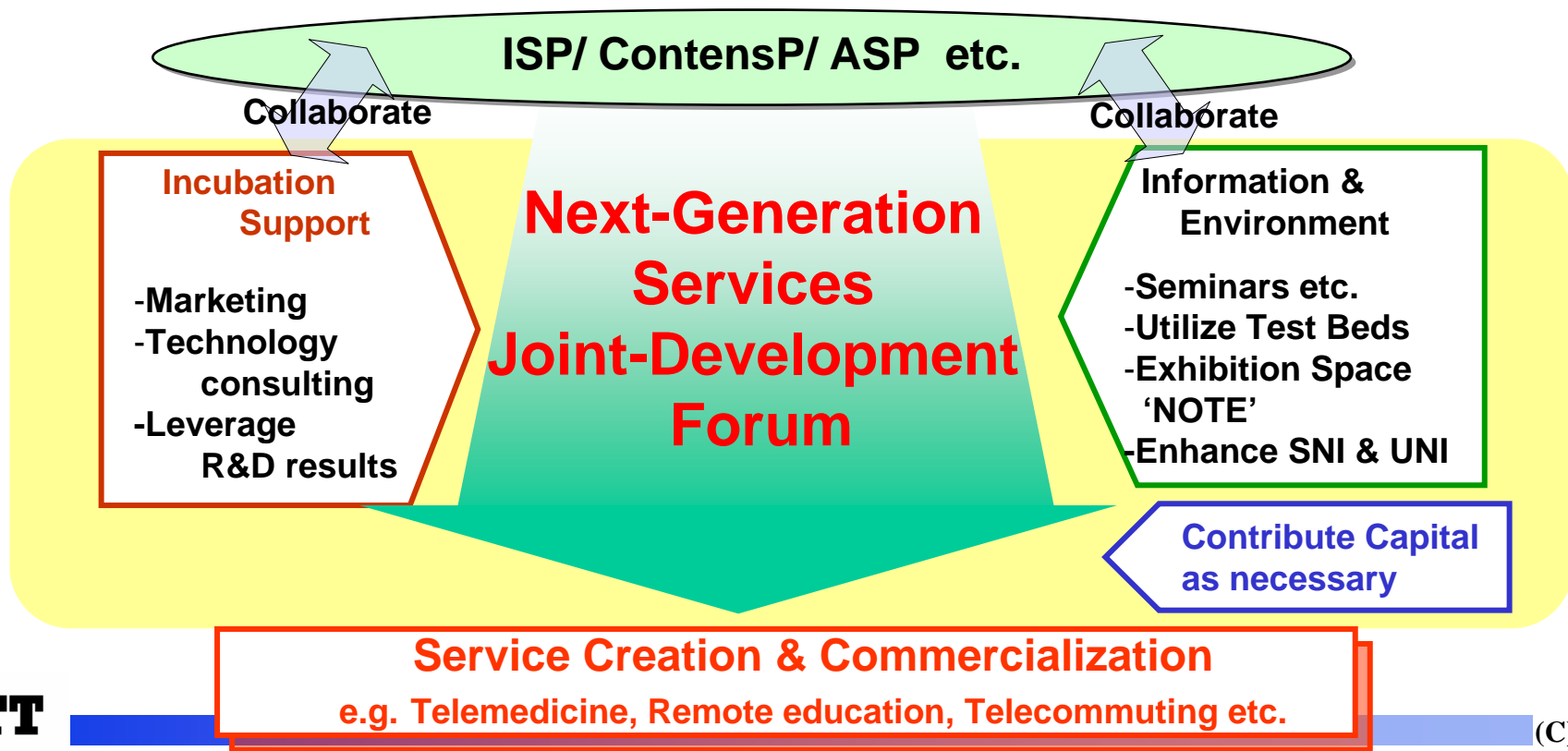
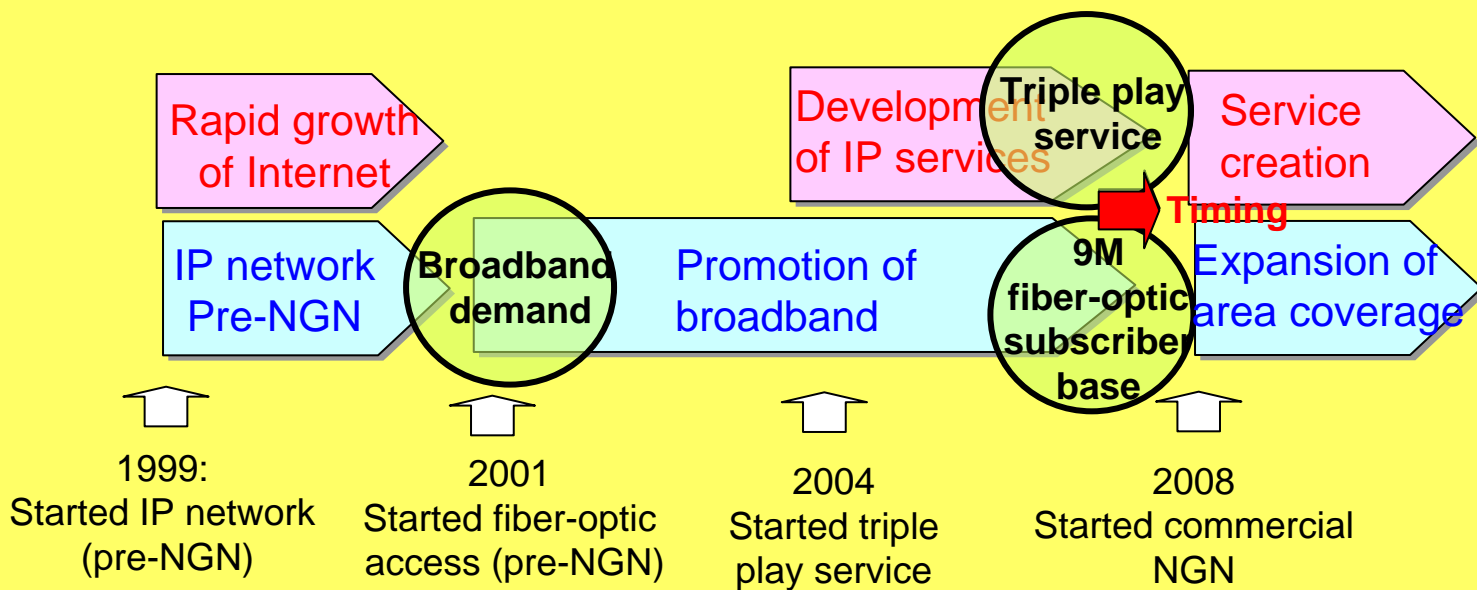


	07	FY 2008	FY 2009	FY 2010
<b>B-FLET'S &amp; Hikari Denwa services</b>  <b>Ethernet Service</b>  Video Distribution IP broadcast retransmission VOD etc.	<b>Launch of Commercial Services</b>	Launch in certain areas of Tokyo, Osaka and some more  Rollout in the 23 wards in Tokyo, the 06 area in Osaka, Yokohama, Kawasaki, Chiba, and Saitama  Expansion in other ordinance-designated cities  Rollout in major cities including those with prefectural government offices	Expansion in entire current fiber access area by the end of FY 2010	
		Launch in certain areas of Tokyo and Osaka  Expansion in major cities nationwide including ordinance-designated cities and those with prefectural government offices	Service rollout according to user needs	
		Tokyo and Osaka  Service offering <sup>*2</sup> in balance with NGN development	Development in conjunction with NGN development & user needs	

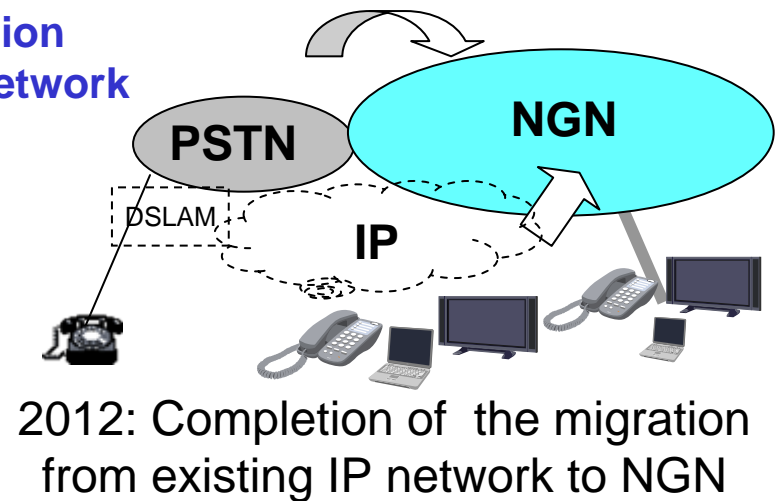
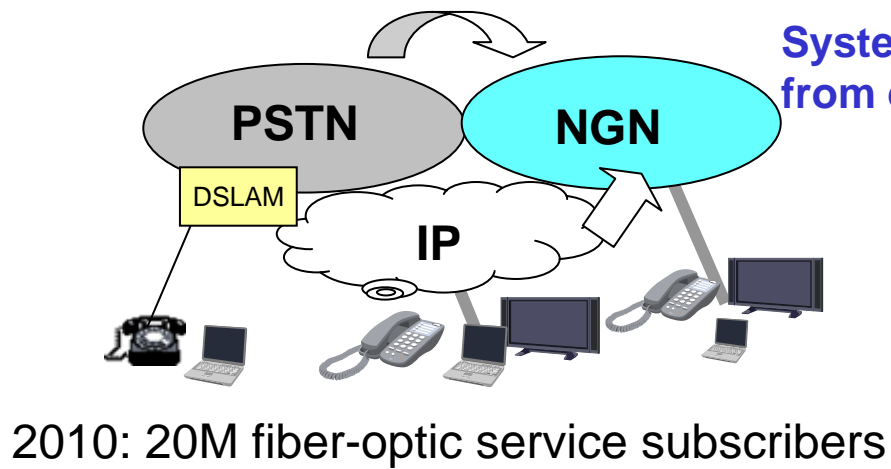
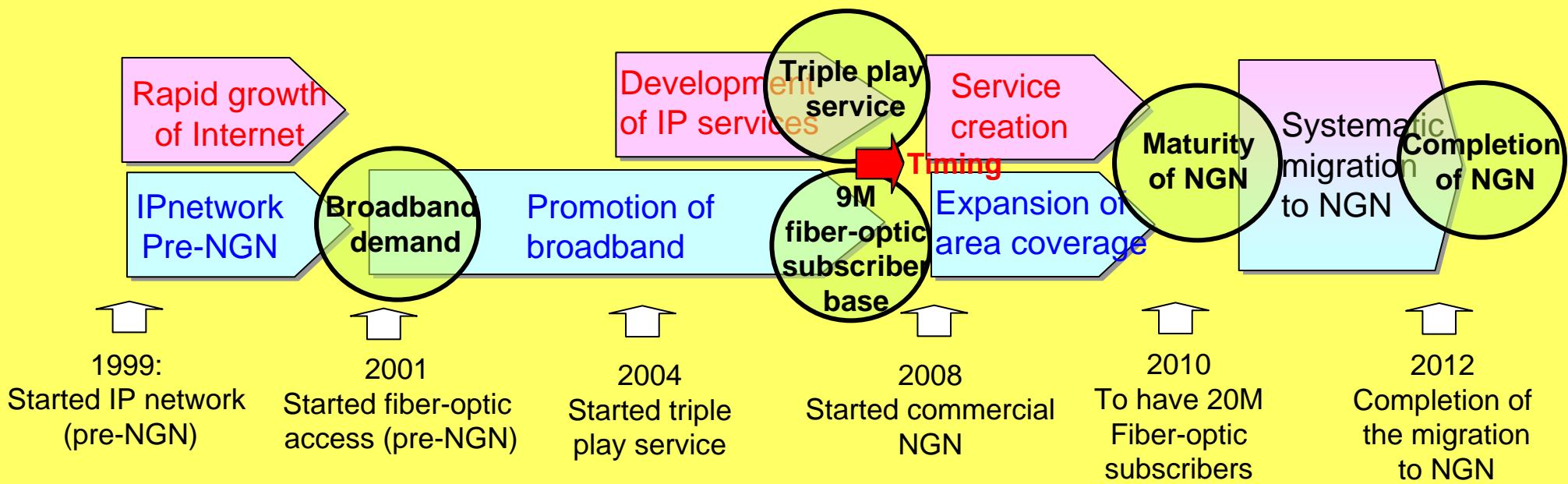


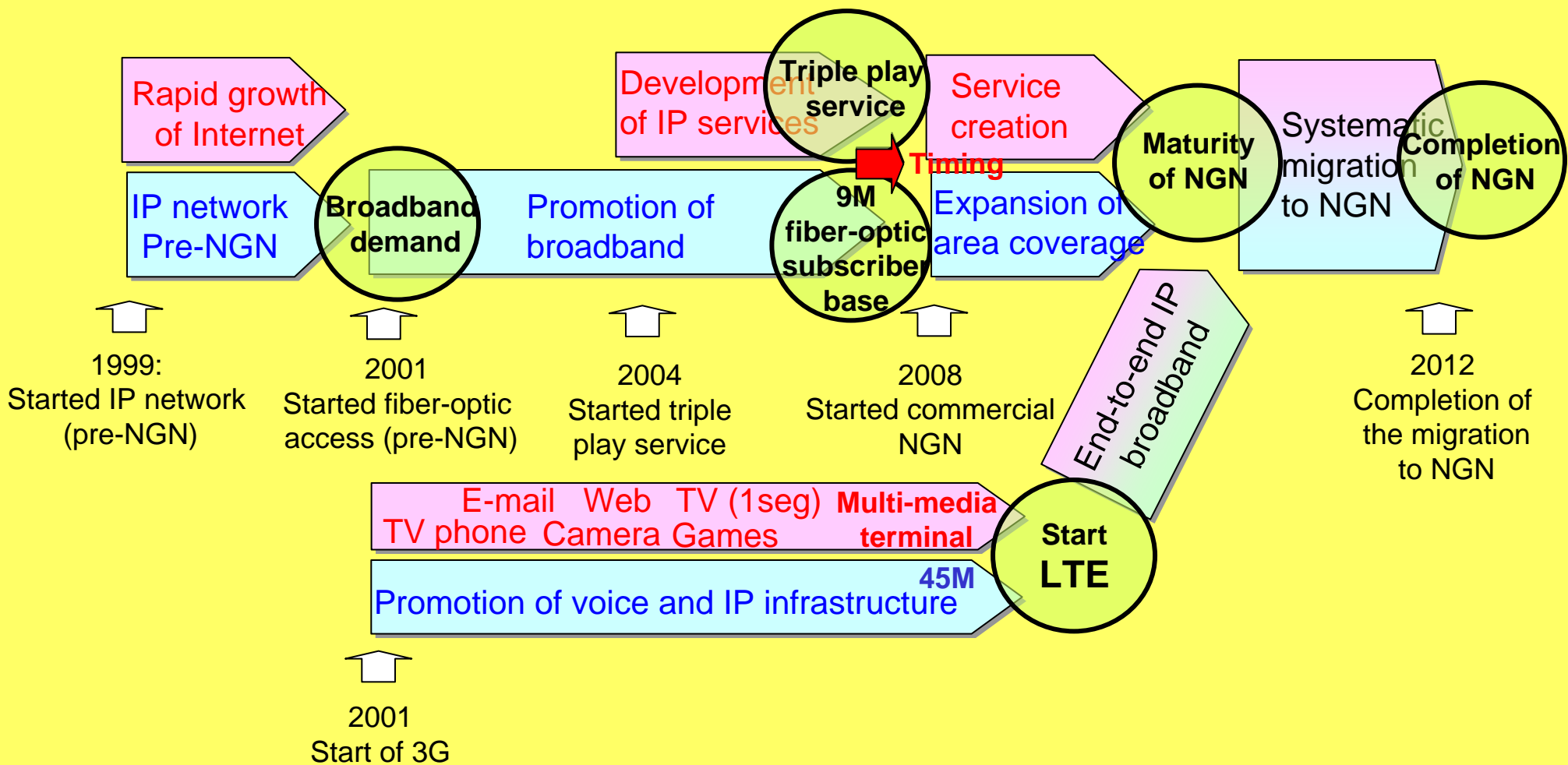
Category	Network services on NGN	Existing IP network services
Fiber Access Service	-The same as the existing	-Single-dwelling for family (~100Mbps) -Multi-dwelling for apartments (~100Mbps) -Office use (~1Gbps)
IP telephony (0AB-J)*2	-Hikari Denwa incl. both existing quality and <b>high quality</b> <i>New</i> <i>-Business type is upcoming</i>	-Hikari Denwa incl. office type
Video telephony	-Video telephony incl. existing quality and <b>two higher quality grades</b> <i>New</i>	-Video telephony
VPN service	-Center-end type, CUG type <i>-Guaranteed QoS is upcoming</i>	-Office & Group access
Service for content distribution	-The same as existing <b>- unicast/ multicast with secured bandwidth</b> <i>New</i>	-FLET'S .Net EX/ v6 cast (unicast, multicast)
Ethernet service	- The same as existing and <b>inter-prefectural</b> <i>New</i>	-Business Ethernet (intra-prefectural)











- Deployment of both fixed and mobile full-IP network infrastructure will be in 2010
  - This will be based on 3G infrastructure subscriber base started in 2001
  - Mobile handsets have already become multi-media terminals using i-mode, video phone, 1seg TV, etc.
  - LTE will drive end-to-end IP broadband communications.

# Questions for launching the NGN

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There are two questions regarding the launch of the NGN

- **Chicken or egg?**  
**Which comes first? (or, Highway or sports car?)**

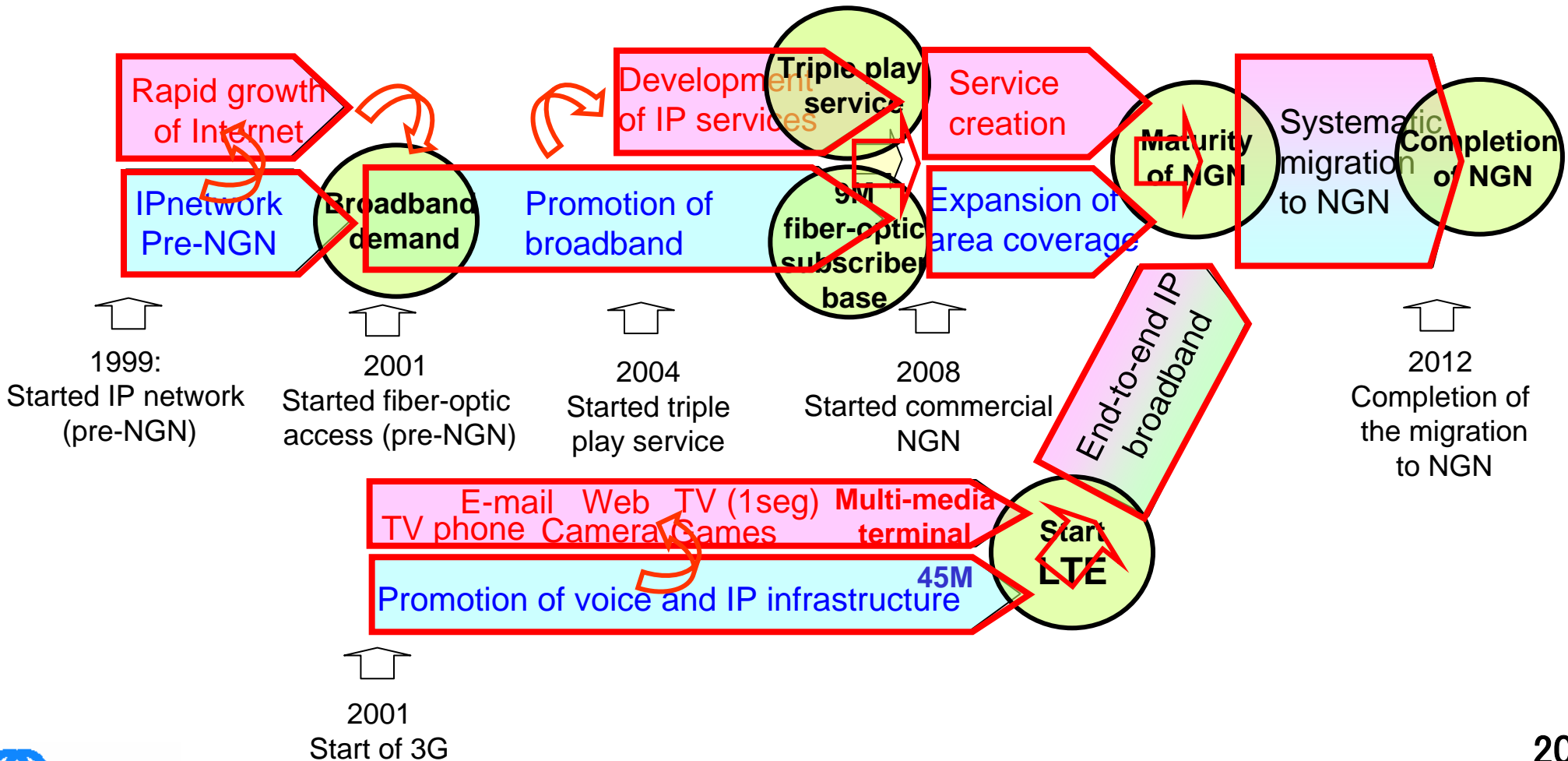
NTT may appear to be looking at infrastructure alone.  
However, NTT's approach is based on **synchronizing development of services and infrastructure**

- **From where do subscribers migrate ?**  
**What is the subscriber base ?**

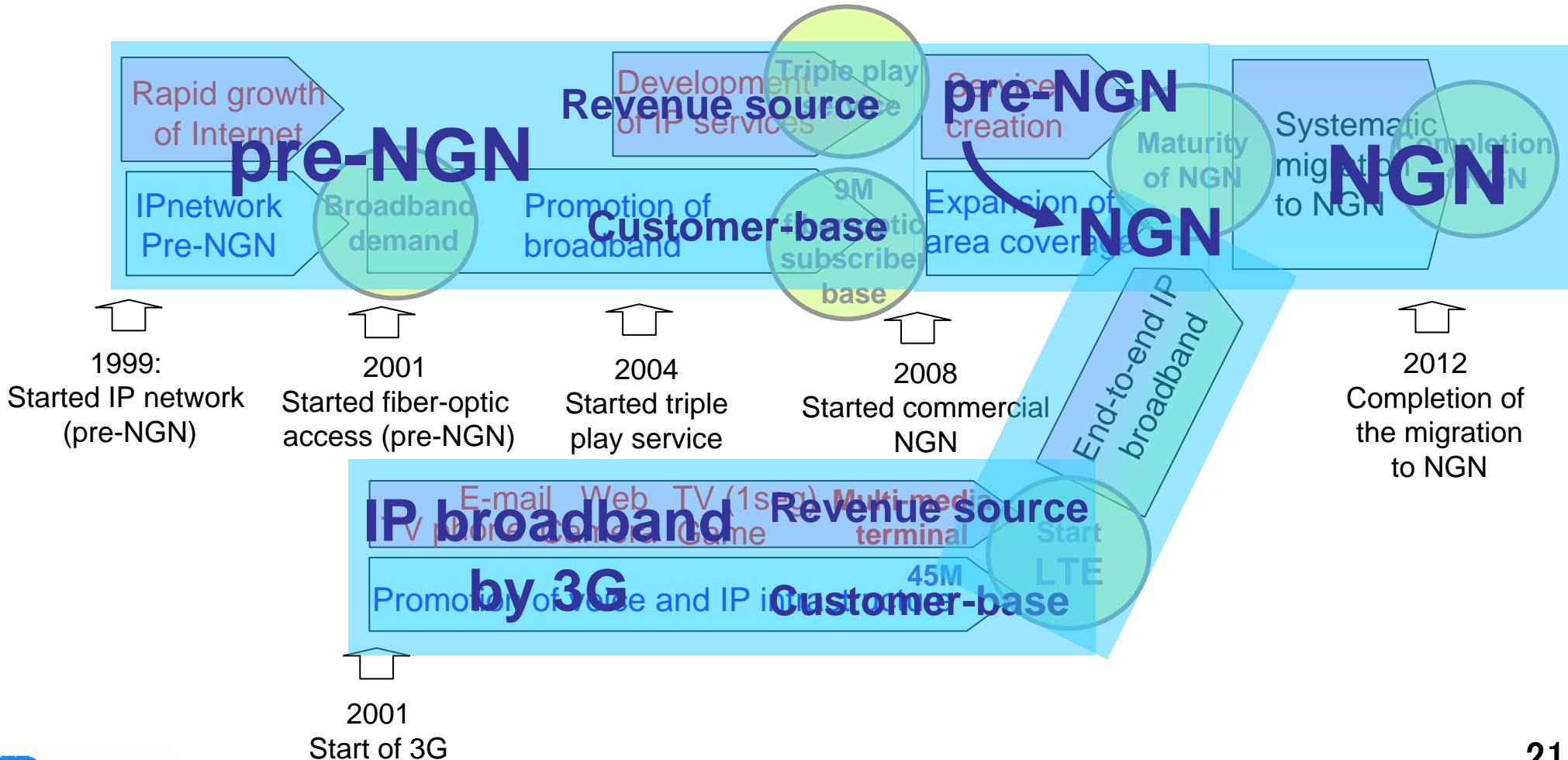
BT: Migrate from PSTN  
Europe: Migrate from GSM world

NTT: **Migrate from IP broadband**

# NTT's approach is based on **synchronizing development of services and infrastructure**



# NTT subscriber base and revenue source will be migrated to NGN from IP broadband



# Summary

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## **NTT's history and plan for the NGN**

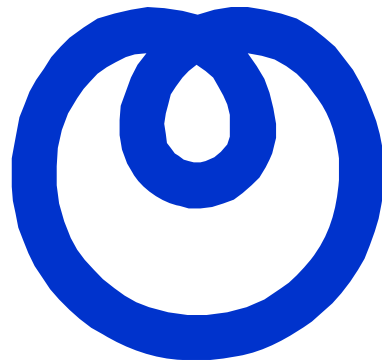
- **Since NTT first provided an IP network service for Internet access, NTT has promoted optical access and triple play services.**
- **To meet its timetable to get a 9M optical access subscriber base and establish revenue source from triple play, NTT has just started NGN commercial service.**
- **The NGN started in limited areas such as Tokyo and Osaka as an upgrade of the existing IP network service.**
- **The NGN will cover a wide area in short time frame and create new services aimed at new business areas.**

## **NTT's approach to launching the NGN**

- **NTT's approach is based on synchronizing the development of services and infrastructure.**
- **NTT's subscriber base and revenue source will be migrated from IP broadband to the NGN**

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Thank you



**NTT**