



NTT DOCOMO's LTE/EPC expansion toward shaping 'a Smart Life'

**Hiroshi NAKAMURA
(Takashi KOSHIMIZU)**

**NTT DOCOMO, INC.
Core Network Development Department**

1.Xi (LTE) Deployment Status

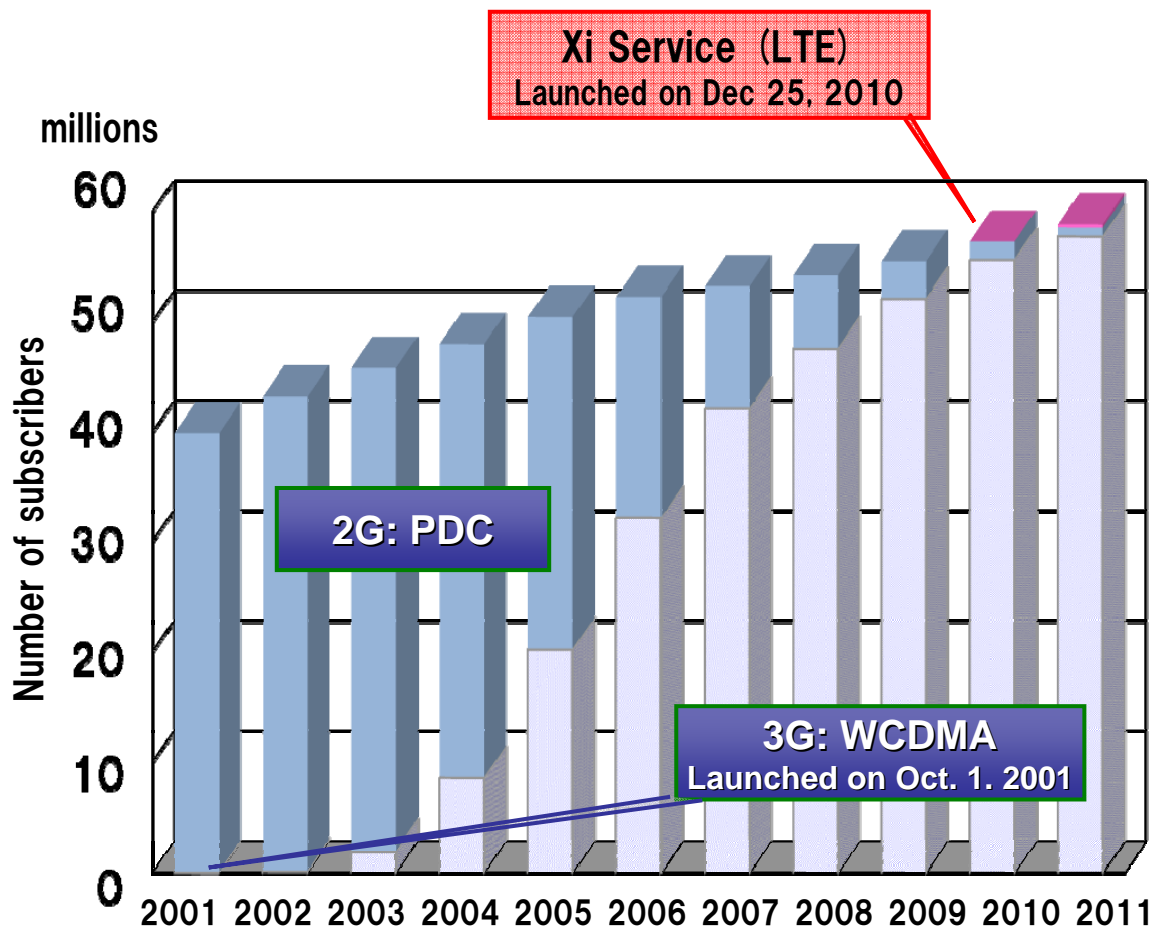
“Xi = Crossy”



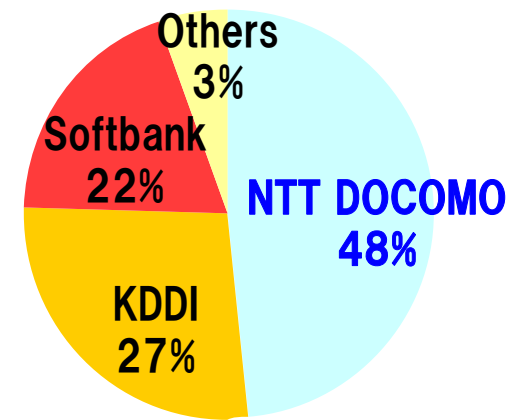
The “X” denotes both “connection” and “infinite possibility,” and the “i” both “individual user” and “innovation.”
The logo, which resembles the infinity symbol, aligns the letters in a single stream to embody the bonds that organically link people, goods and information, and lead to new innovation.

1-1. Corporate Background

- NTT DOCOMO is the largest mobile operator in Japan (subscriber: approx. 58.8 million)
- Smooth 2G to 3G migration: 99% are 3G subscriber



Mobile Market 122.4 Million subscriptions



<as of 31, August 2011>

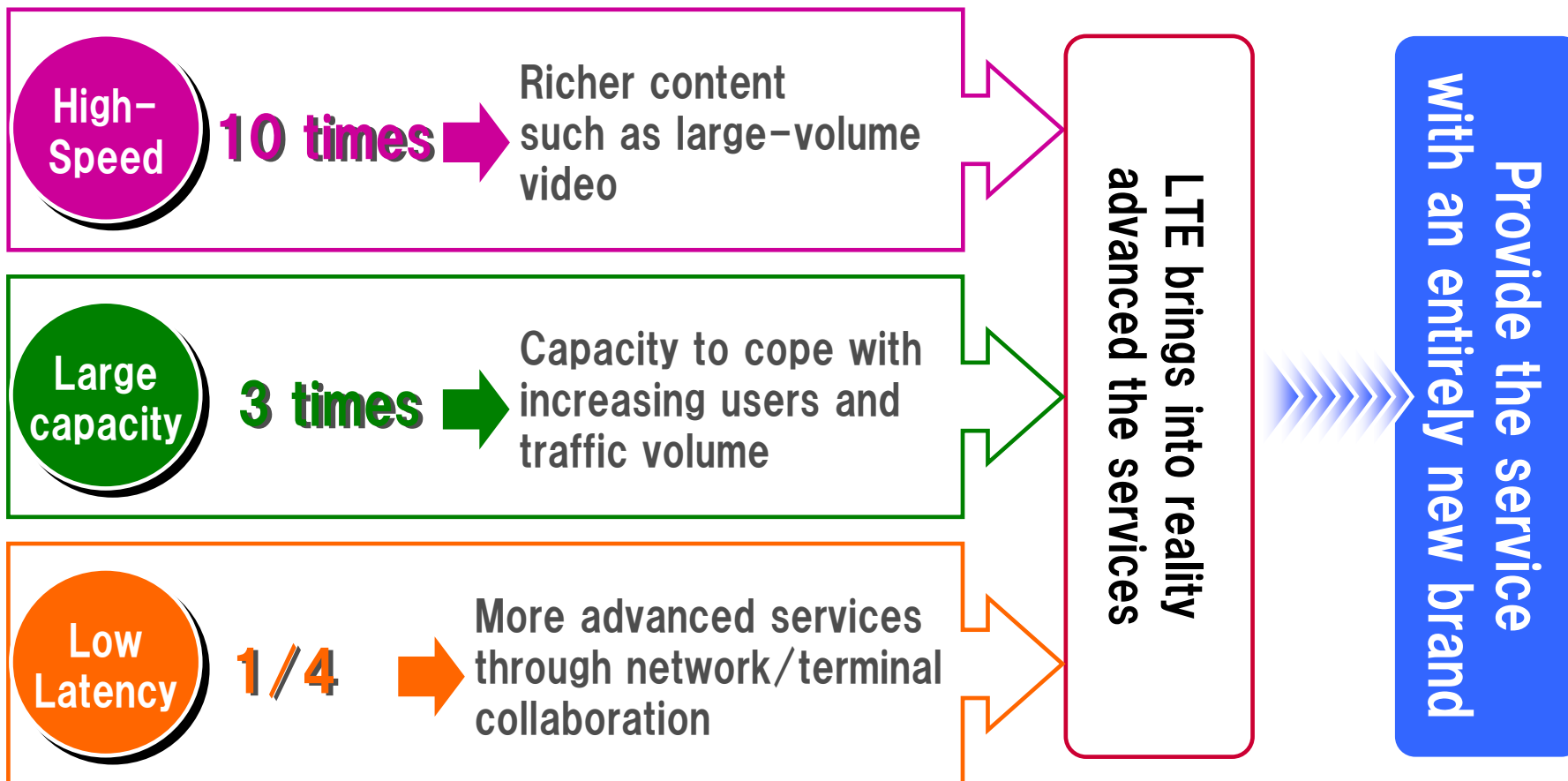
1-2. Dec. 24, 2010 Xi (LTE) Service Launch

- Commercial service launched on Dec. 24, 2010



1-3. LTE Enables Advanced Service for Xi

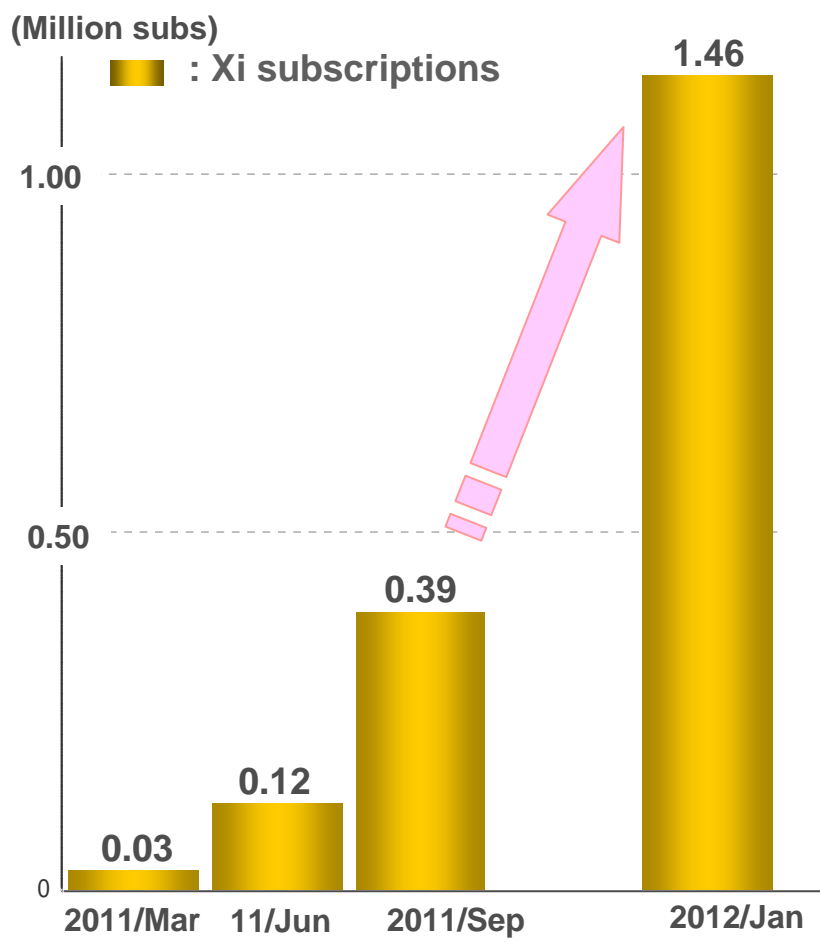
■ Advanced Capabilities of LTE which support Xi Services



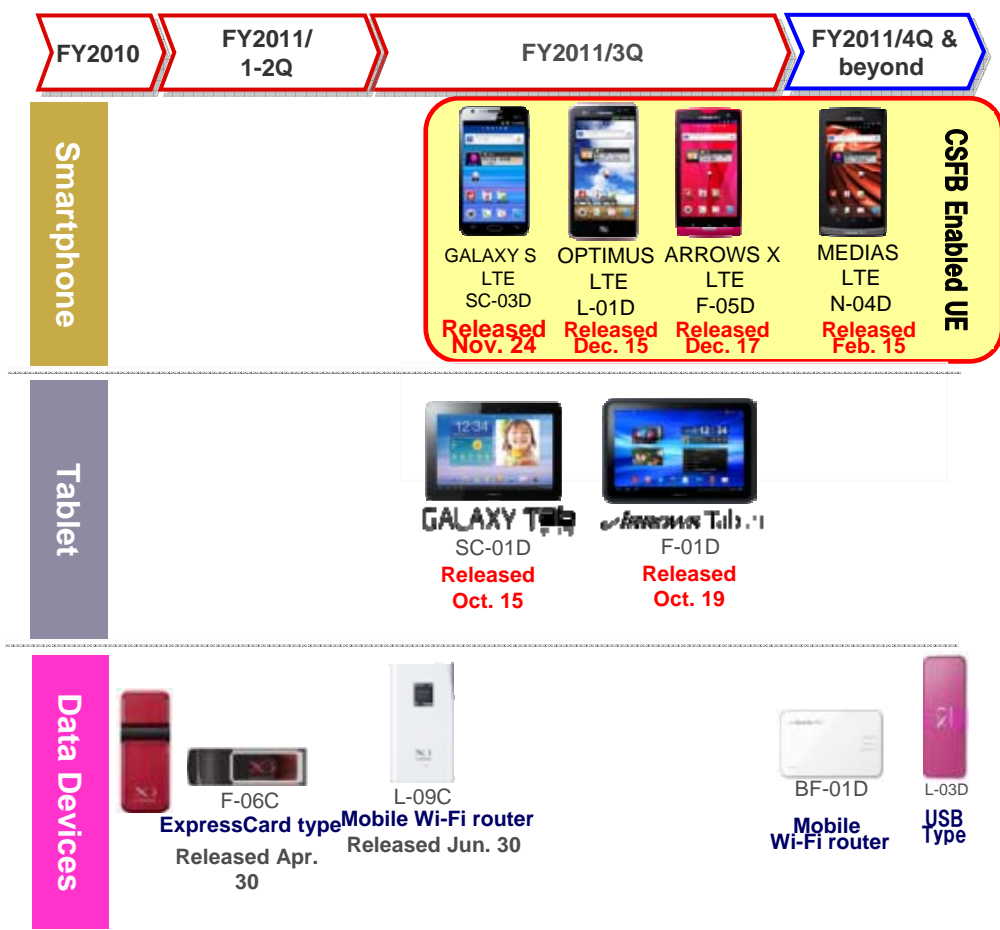
1-4. Growth of Xi Subscriptions

■ The Number of Xi Subscriber Increased Steadily to 1.46 million, as of Jan. 31, 2012

Subscriptions Growth

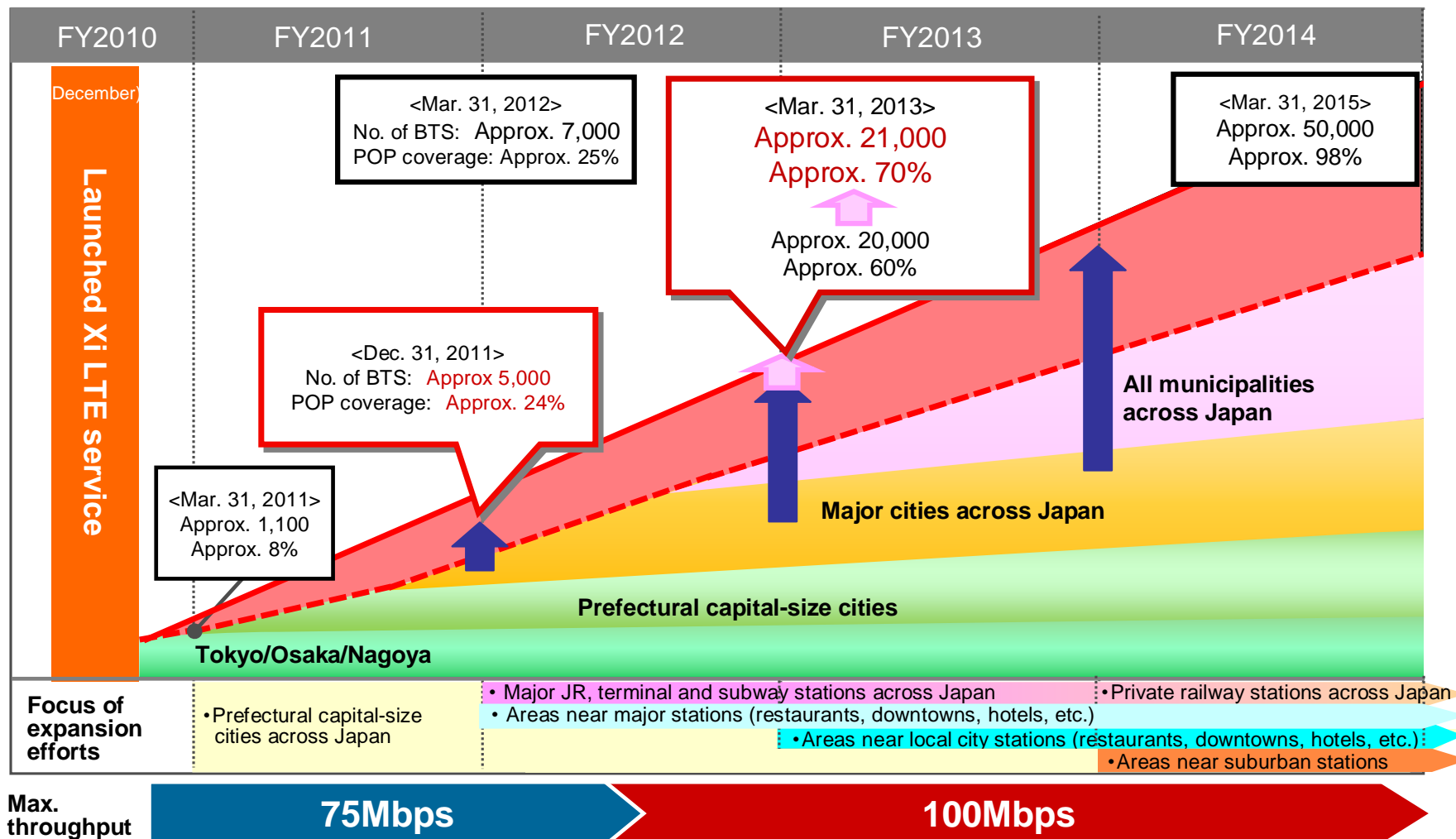


Enrichment of Xi Devices



1-5. Xi Area Expansion Plans

- Achieved POP coverage of approx. 24% as of Dec. 31, 2011.
- Aim to further expand POP coverage to approx. 70% by Mar. 31, 2013.



Xi Area Map in Tokyo as of 2012 March

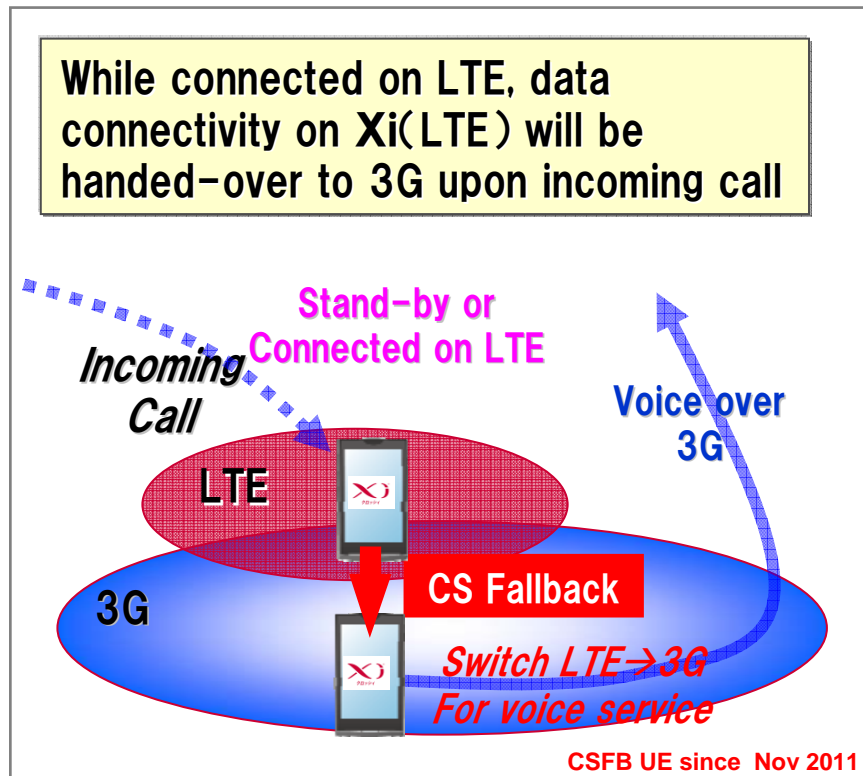


RED= 2012 Jan
YEL= 2012 April

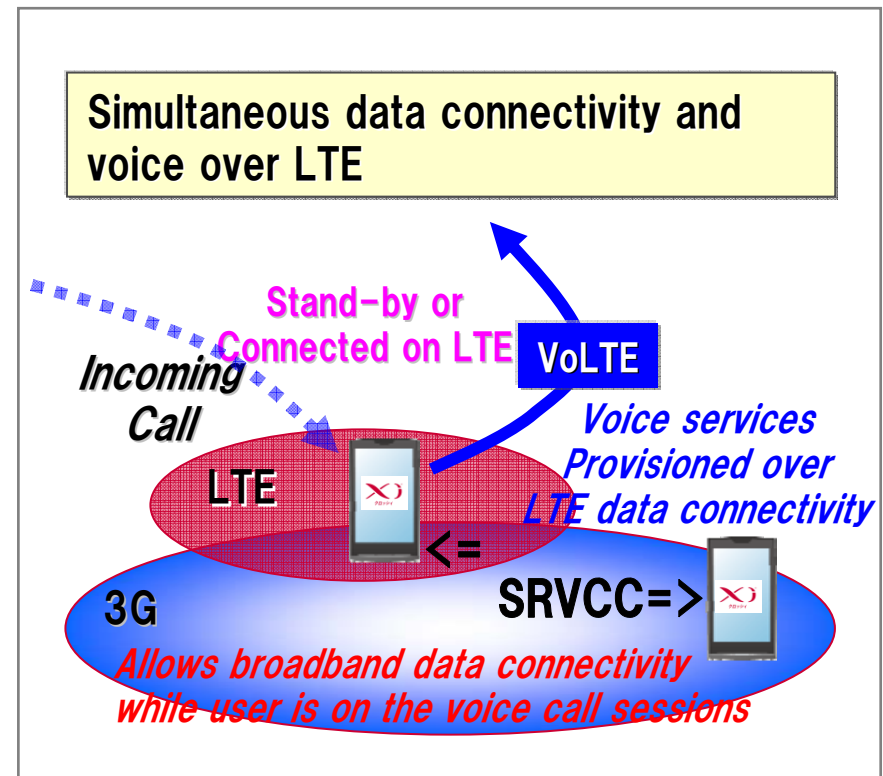
1-6. Voice over LTE (VoLTE)

- Voice services on **Handset-Xi devices** are provided using **CS Fallback**, now in service.
- Deployment of **VoLTE** is currently **being planned** to provide voice service over LTE

[Current] CSFB (CS Fallback)



[Future] VoLTE (Voice over LTE)

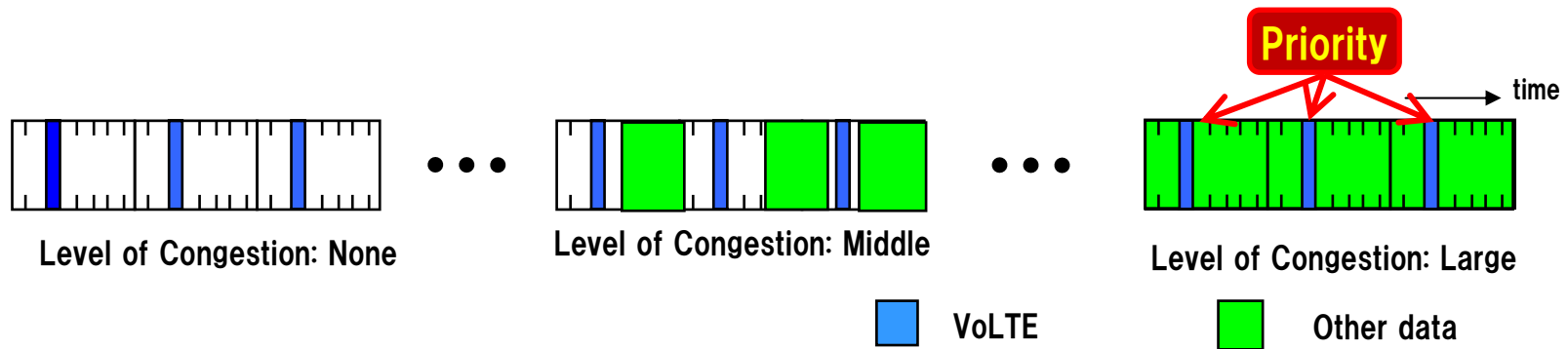


1-7. Ensured Voice Quality in VoLTE

■ More stable voice experience compared with OTT VoIP services

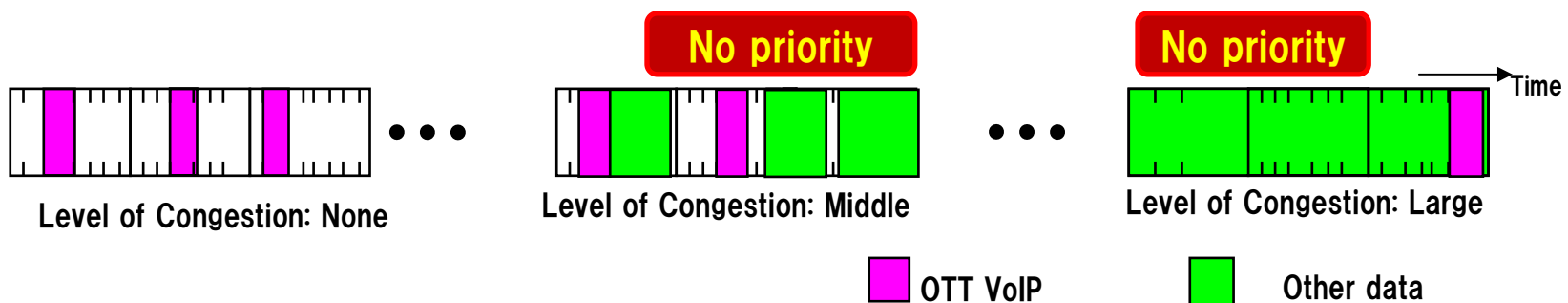
•VoLTE

- NW guarantees quality of service by packet scheduling to prioritize voice
- Efficient transmission, as the NW shapes data only with necessary information



•Over-the-Top (OTT) VoIP applications

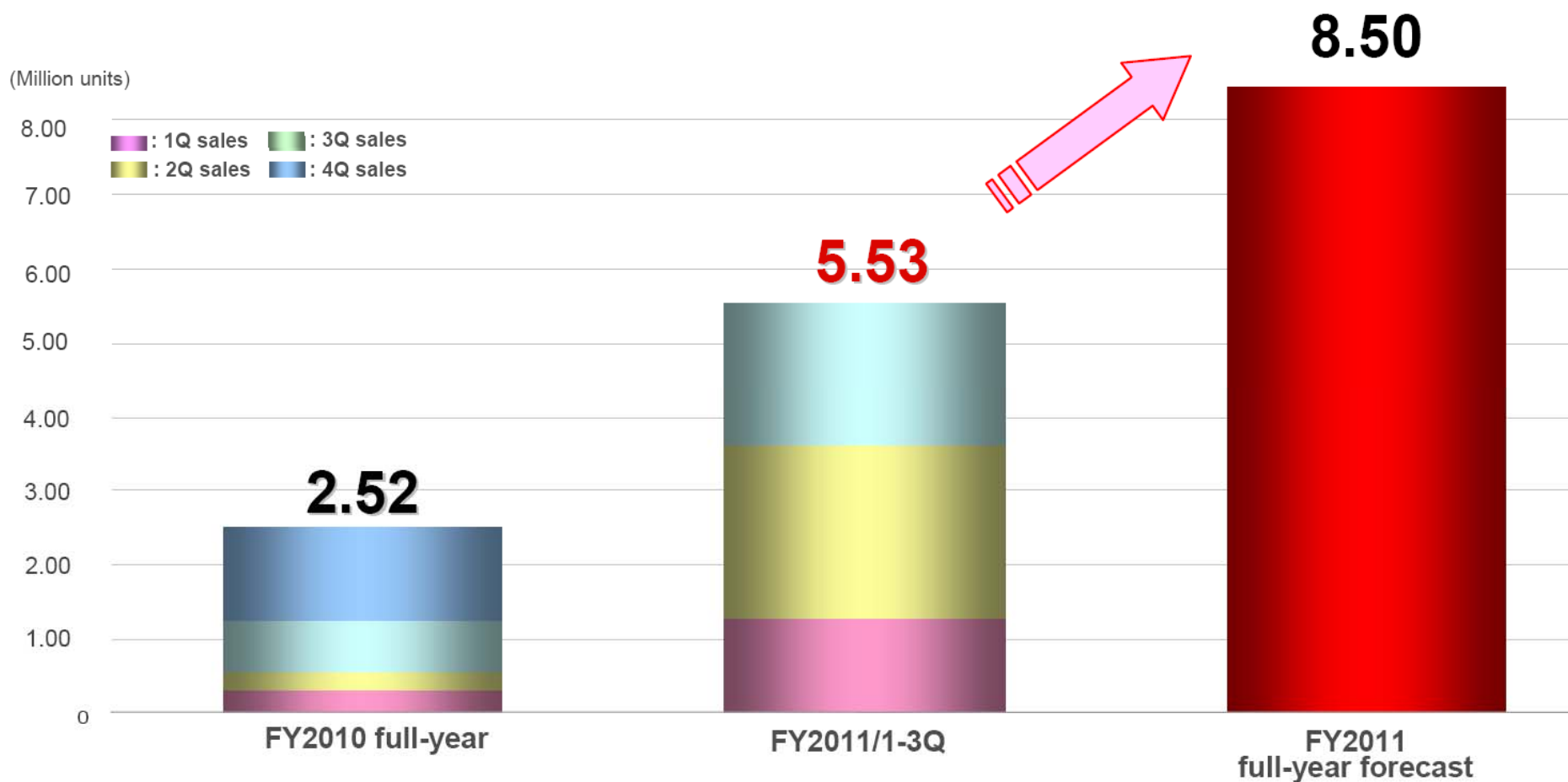
- Treated as normal packet (no priority), thus delayed transmission under congestion
- Inefficient transmission as data contains overhead information



2. Expansion of the Smartphone

2-1. Expansion of the Smartphone

- Number of smartphone units sold in FY2011/1-3Q (cumulative): 5.53 million
- Target sales: 8.50 million devices in the end of FY2011

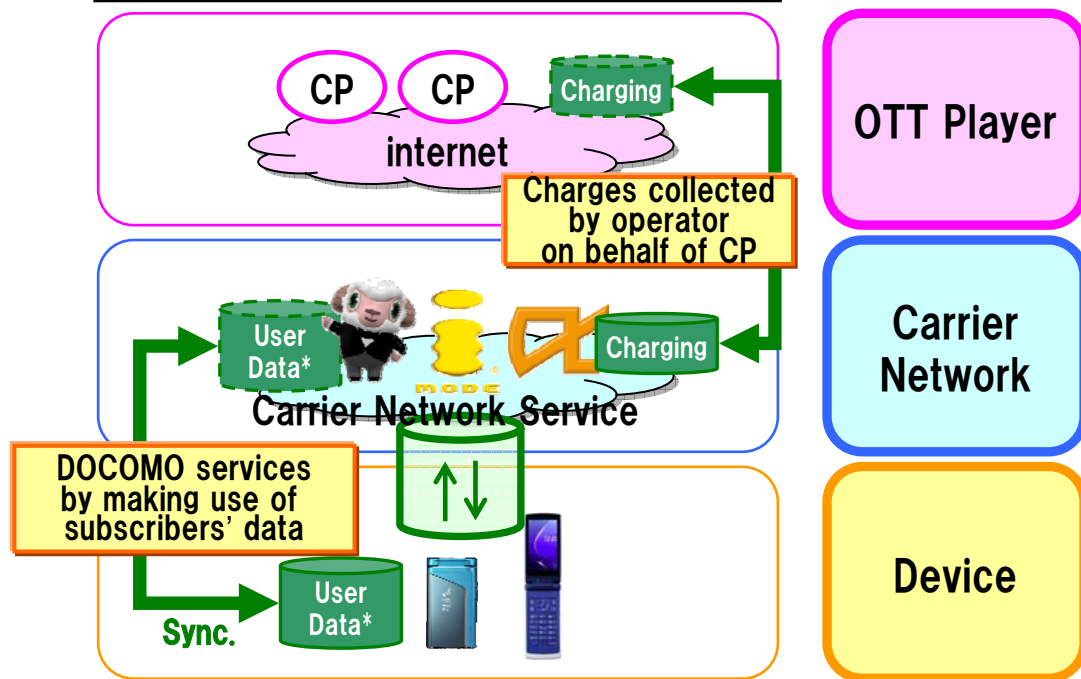


2-2. Strategy for the era of Smartphone

- Increasing smartphones might cause a tendency operators to become 'bit-pipe'
- **Service differentiation** is important by provisioning services that only operators can create

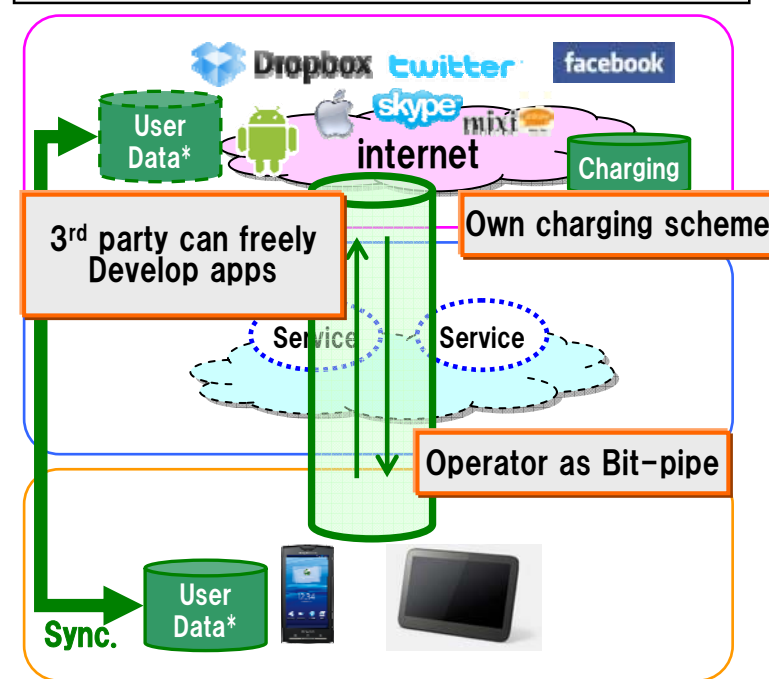
Until now (i-mode as main service)

- DOCOMO services on NW + Devices
- Contents Provider (CP) can run services without charging system, as DOCOMO charge users on behalf of them.
- Subscribers can use various DOCOMO / Contents Provide (CP) services



Future (Smartphones) Tendency

- OTT players to run services by making use of user data on the device
- OTT players can setup charging schemes without involving operators
- Subscribers is not restricted to use only services provided by operators

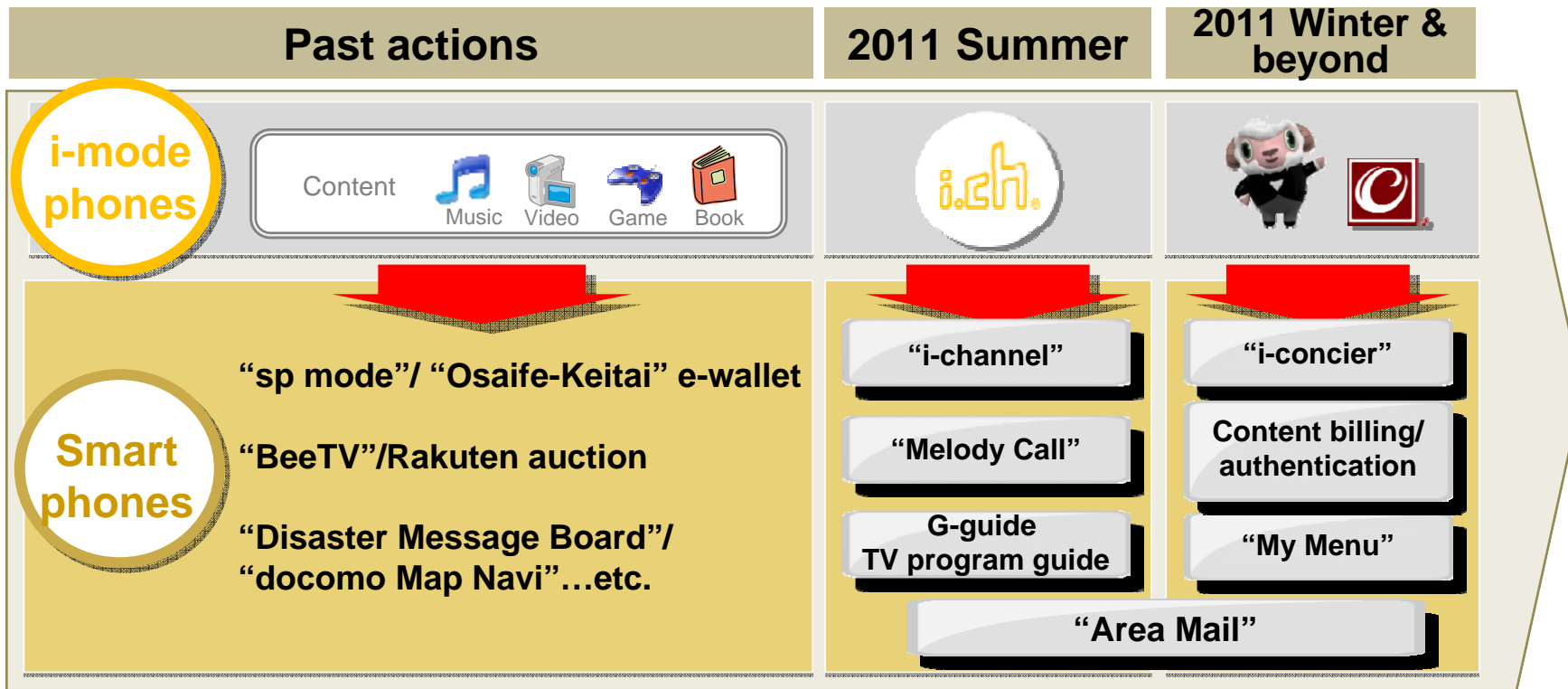


*User Data: Schedule, Location Info., Device Info. etc.

2-3. Service Migration to Smartphone Platform

■ High-quality i-mode content to become accessible via Smartphone.

Transplant Service Assets onto Smartphone Platform



Integration of services

2-4. Service Differentiation on Smartphones

- To allow a broad range of customers to use our smartphones with greater fun and convenience, we will offer services and ecosystems that can only be made available by DOCOMO and continually work on their advancements.



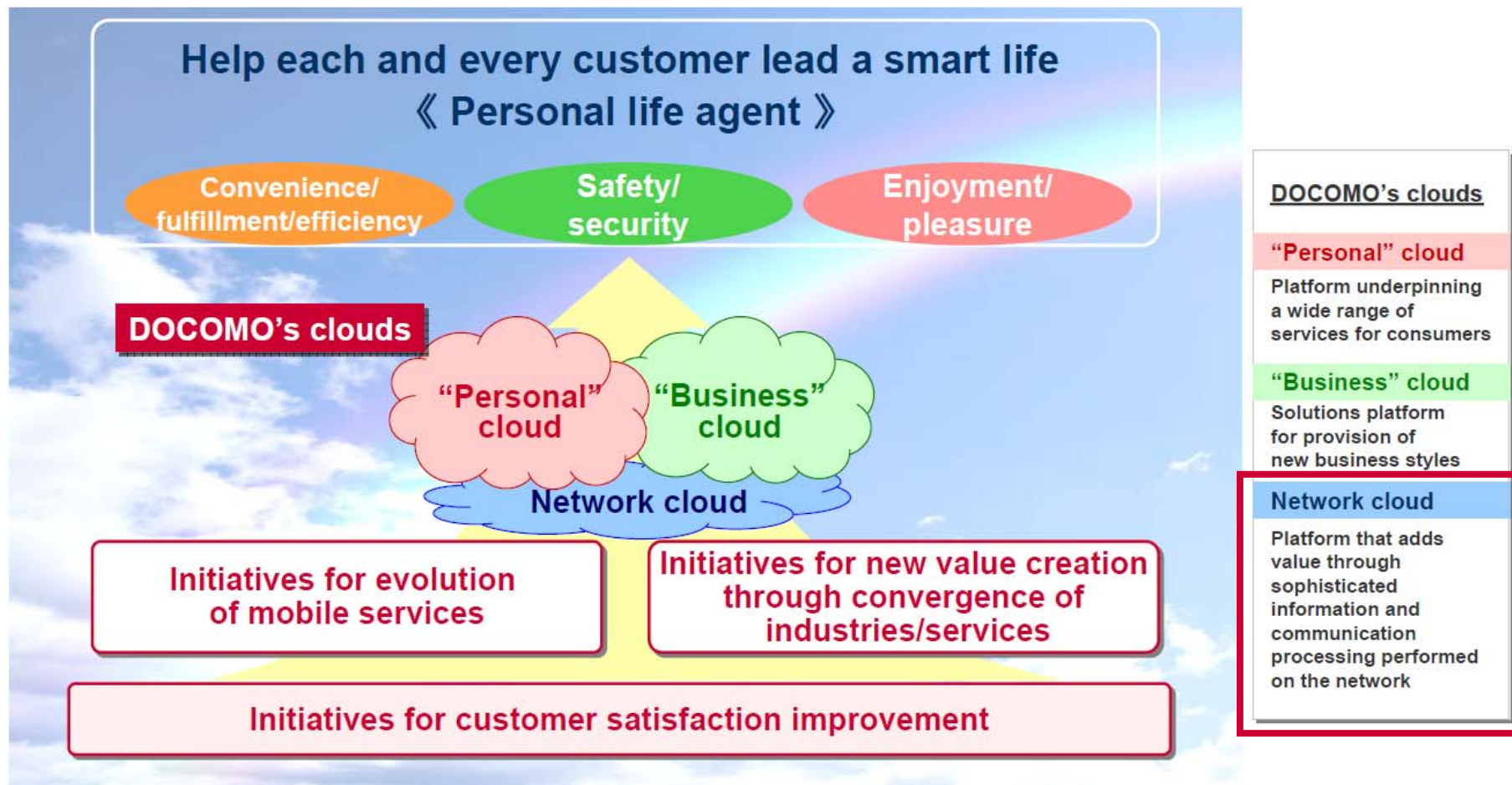
3. Shaping 'a Smart Life'

3-1. Corporate Vision "HEART" =Pursuing smart innovation=



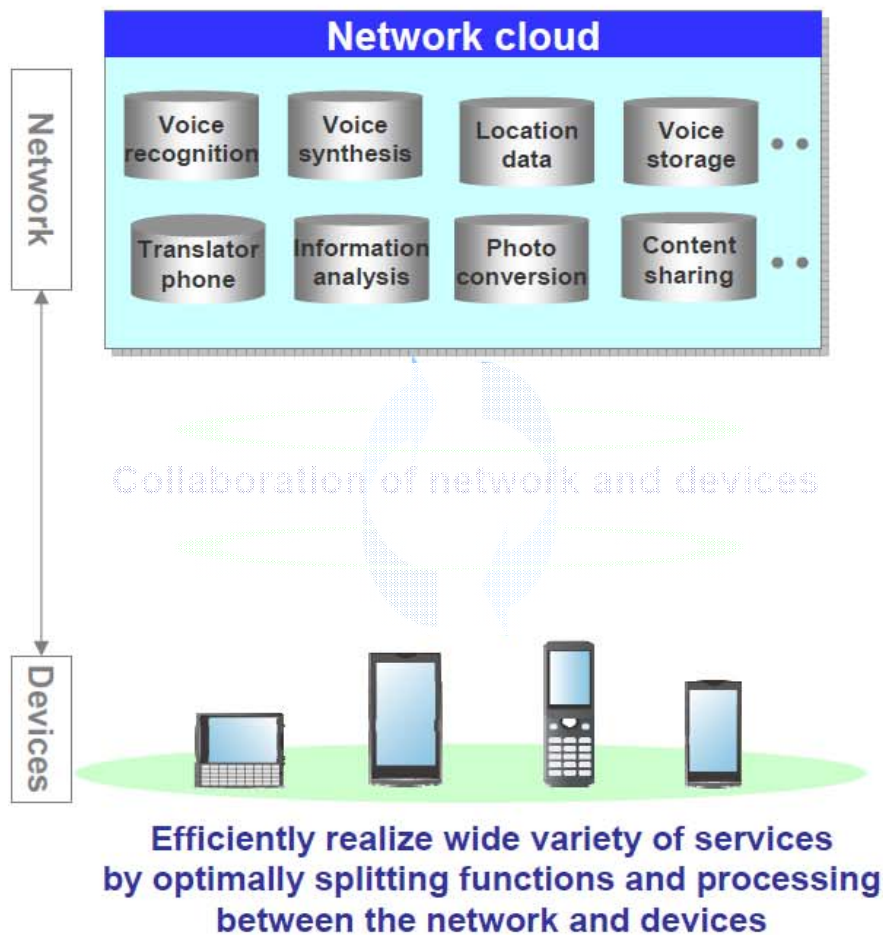
3-2. Shaping 'a Smart Life'

- Aim to bring smart life into reality by propelling the **evolution of mobile services** and **new value creation** through convergence of industries/services **leveraging DOCOMO's clouds**



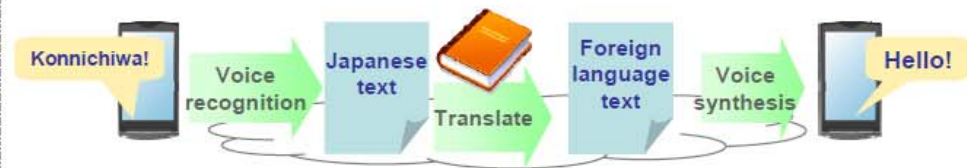
3-3. Network Cloud enables New Communication Style & Service

- Offers various added value by performing **sophisticated** information/communication processing with the **network cloud**



“Translator phone”

Automatic simultaneous translation service for voice calls (Trial service to commence in Nov. 2011)



“Communication Agent”

Provides real-time recommendation in response to voice commands



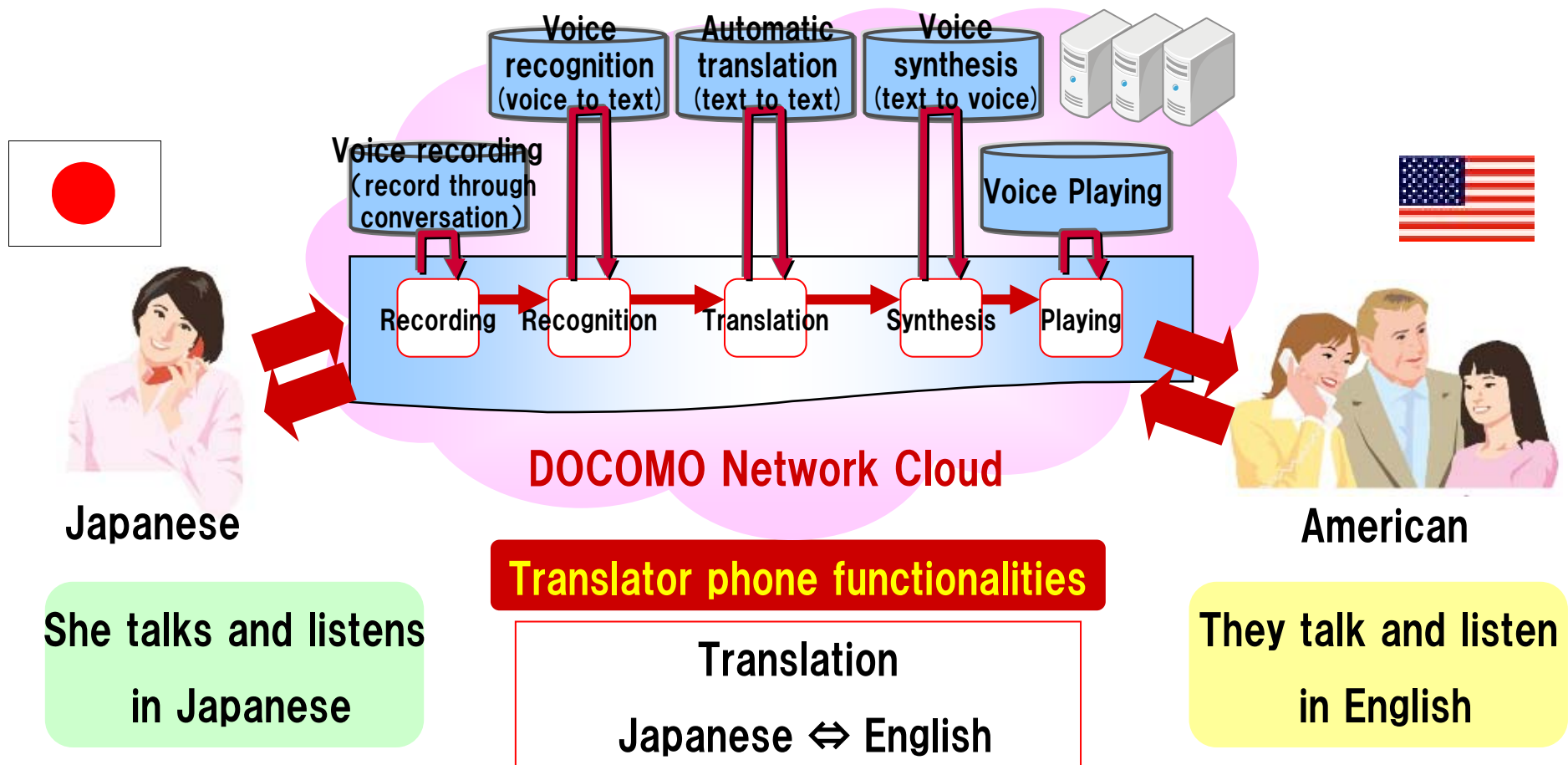
“Kaki Communication”

A service that allows users to view or operate the same data content while talking to each other



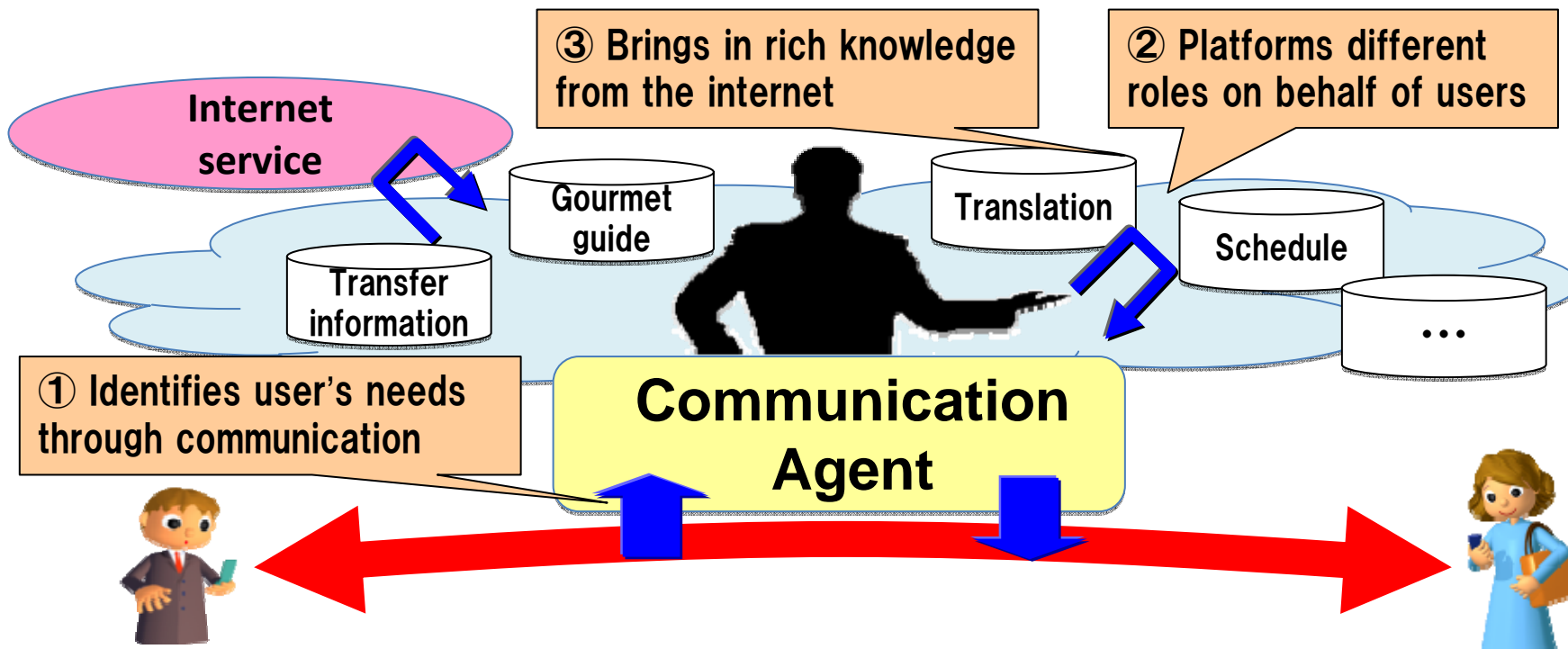
3-4. Translator phone service

- Network translates conversation when each party talk in different language.
- Both parties can talk and listen in their mother language.



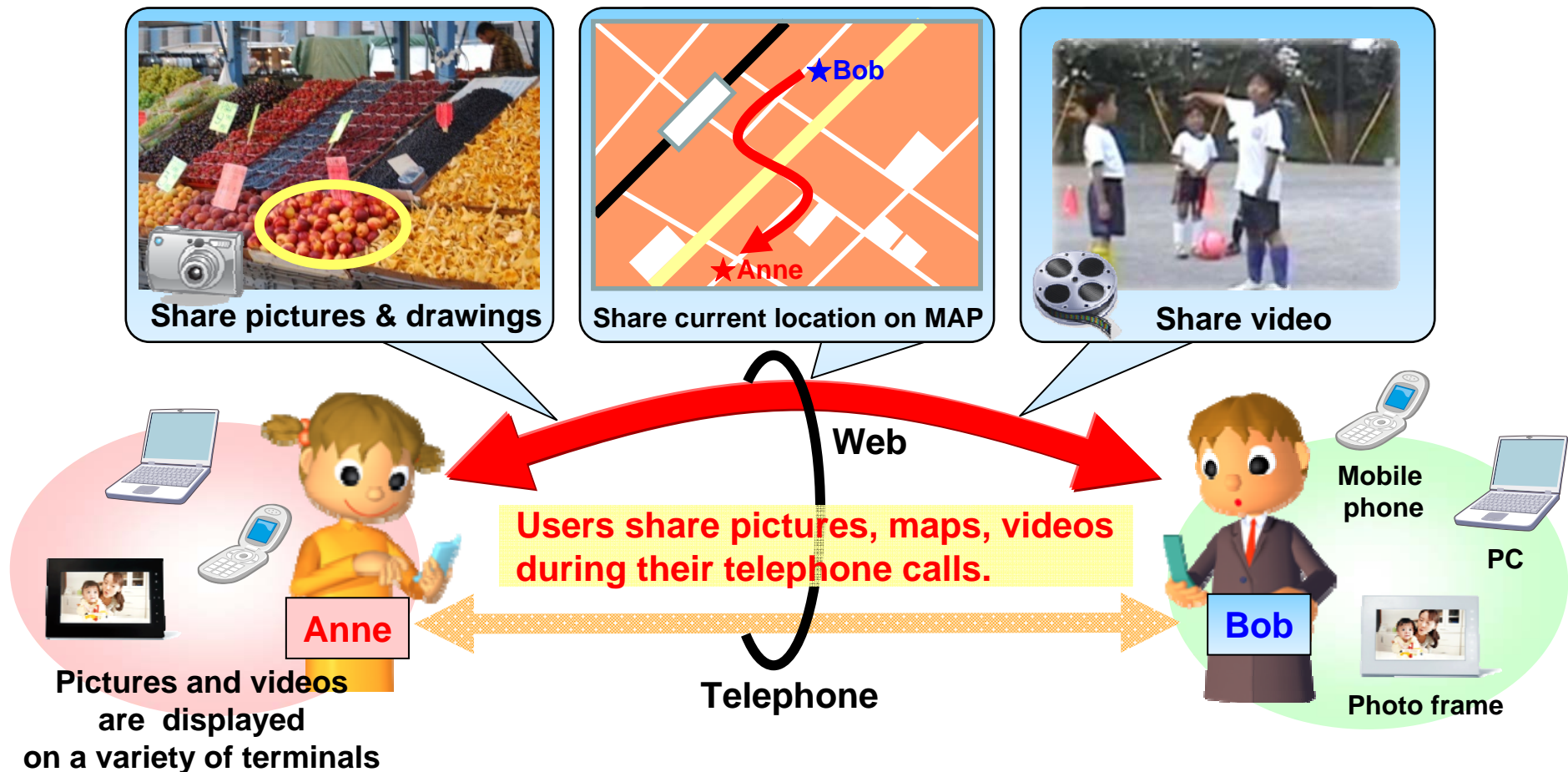
3-6. Communication Agent

- Users will feel as if a communication agent were in the NW and supporting their conversation.
- Need to achieve the following:
 - ✓ Intelligent NW realized by a communication agent.
 - ✓ Convergence of telecommunication and internet service.



3-7. Kaki Communication

- Sharing pictures, maps and videos during a telephone call.
- Users can communicate each other more conveniently and precisely.
- Users can share pictures/maps/videos easily by dial-number and securely through telecom-network.



New Smartphone series



User-friendly & brings more fun to life

Innovative & broadens your potential



FY2011 winter-spring models

Tablets

