



Successful Innovation of the Korean Mobile Communications Industry and SK Telecom's Role

June, 2007

***InnChan Lee, Ph.D.
Vice President
ICT Research Office***

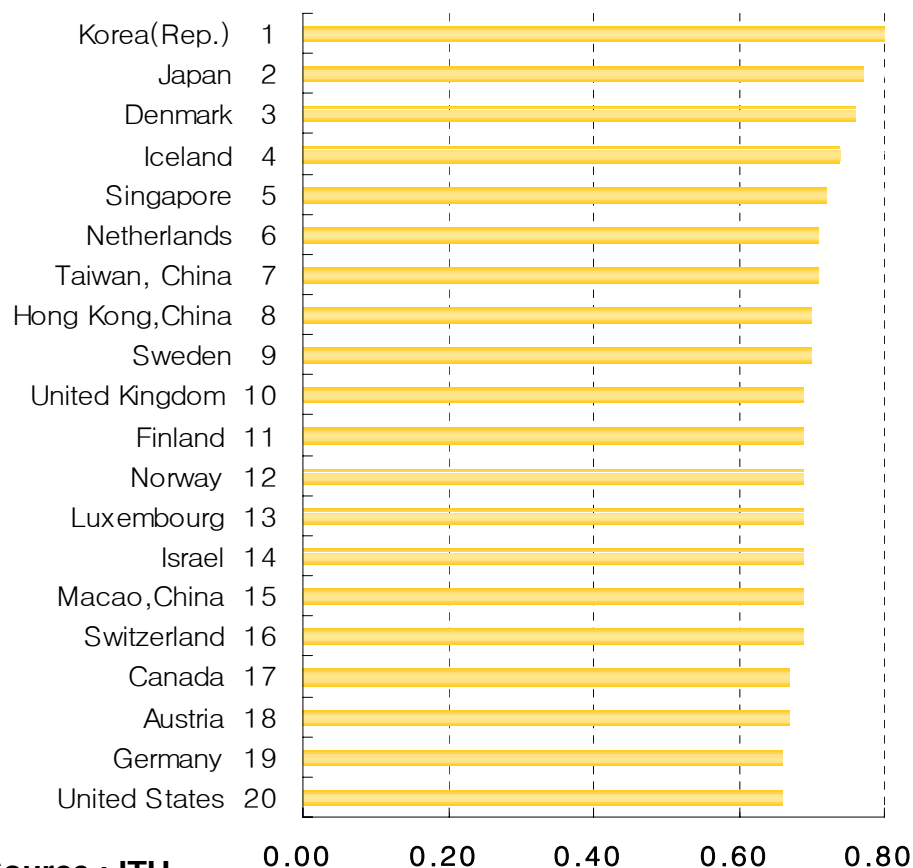


Contents

- Overview of the Korean Telecommunications Industry
- Cases of Successful Innovation
- Global Collaboration for Innovation
- Implications & Summary

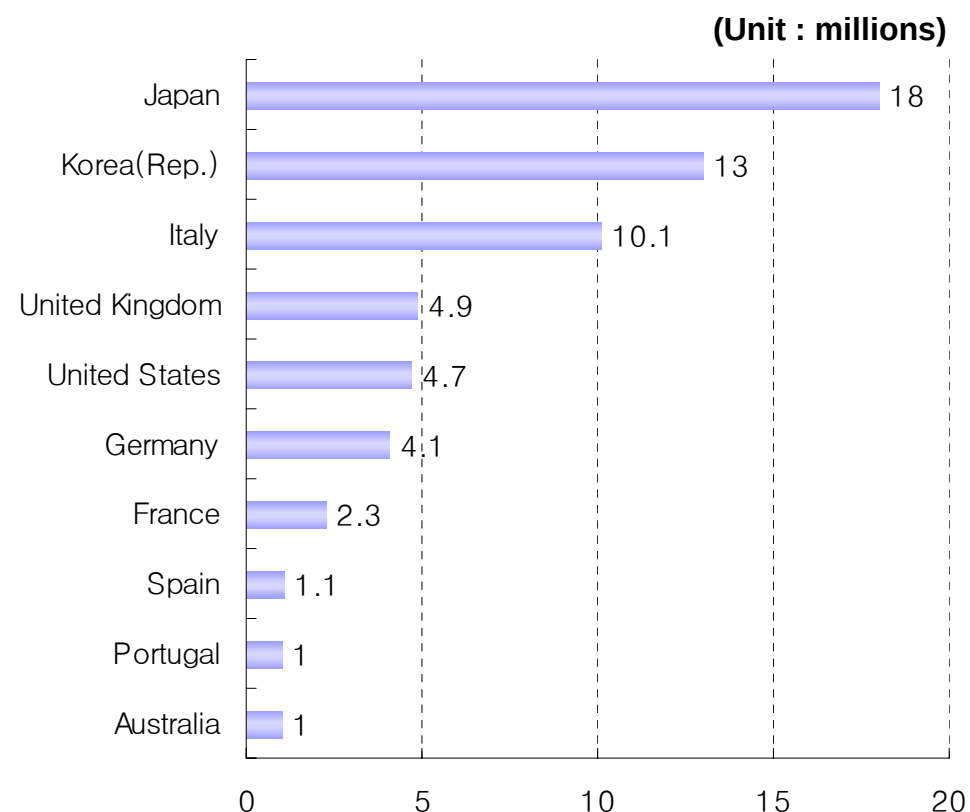
- With the advanced IT Infrastructure and telecommunications industry development, Korea has been leading the telecommunications market serving as the global test-bed for new technologies and services

Digital Opportunity Index(2006)



Source : ITU

Top 10 economies by number of mobile broadband subscribers(2005)

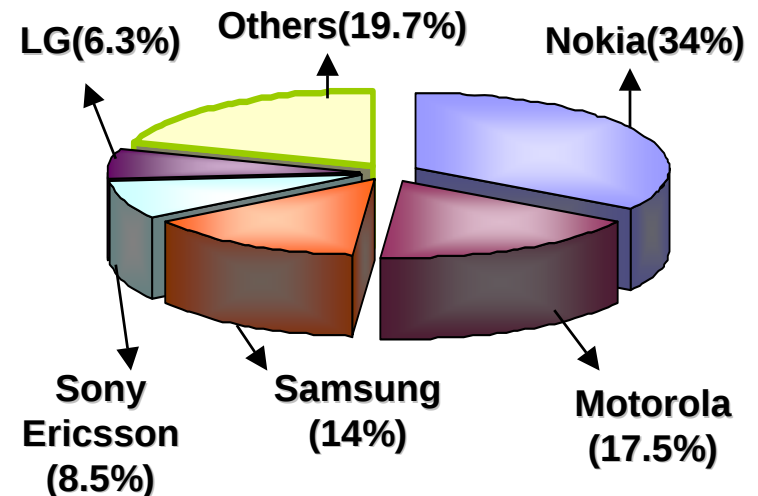


- The advancement of ICT services has facilitated growth of various sectors of the ICT value chain, helping contents, platform, devices, and handset industry develop
- In particular, the Korean handset manufacturers have grown to be global major players

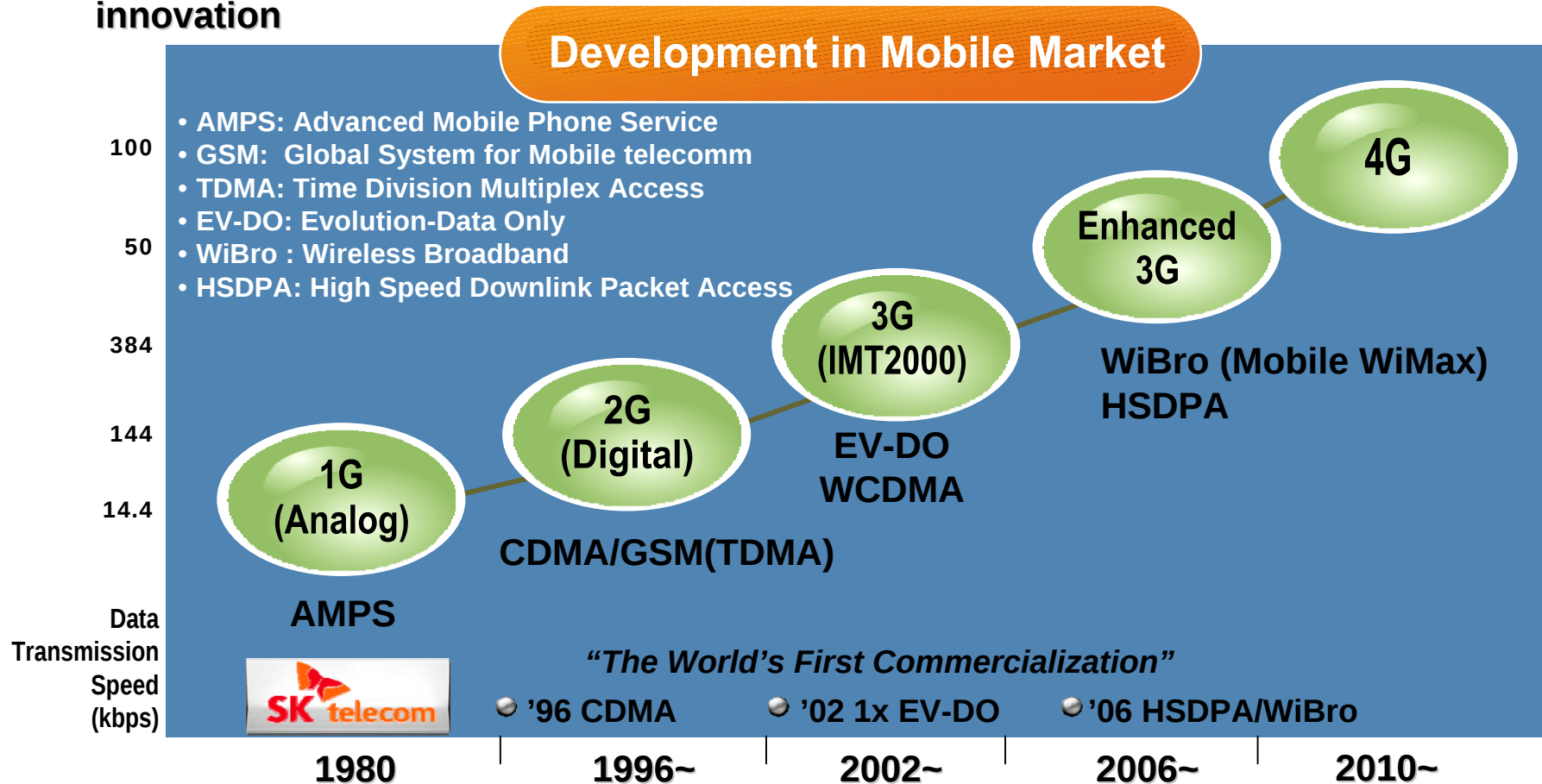
Ranking Changes in the Global Handset Market

Ranking	1998	2002	2006
1	Nokia	Nokia	Nokia
2	Motorola	Motorola	Motorola
3	Ericsson	Samsung Electronics	Samsung Electronics
4	Panasonic	Siemens	Sony Ericsson
5	Alcatel	Sony Ericsson	LG Electronics
6	NEC	LG Electronics	BenQ Mobile (Siemens)
7	Samsung Electronics	Alcatel	Panasonic

Global Handset Market Share('07Q1)



- The success of the Korean telecommunications industry was laid with the world's first commercialization of CDMA in 1996 and the subsequent technological innovation



- SK Telecom has made a number of historical breakthroughs in the Korean telecommunications industry
- SK Telecom has been recognized as one of the World's most innovative companies - 'Business Week' (2006.4)

Contents

- Overview of the Korean Telecommunications Industry
- Cases of Successful Innovation
- Global Collaboration for Innovation
- Implications & Summary

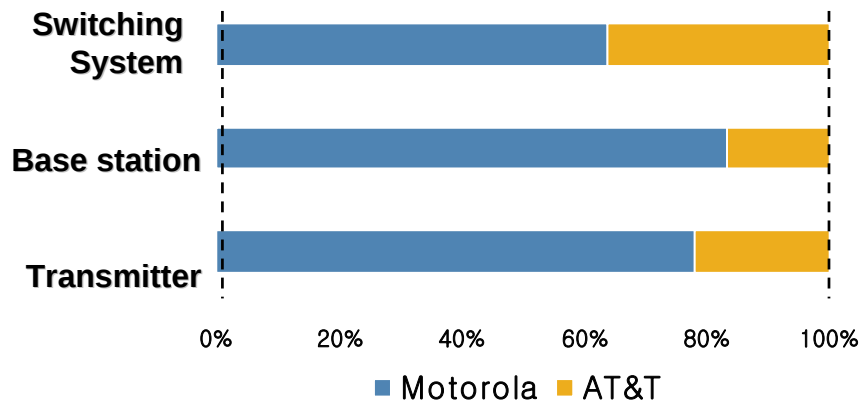
1) CDMA Technology Innovation : Backgrounds

- By the mid 1990s, Korea had no proprietary mobile communications technology and transition to digital technology was needed to meet the increasing demands
- To avoid technology dependency, commercialization of CDMA had been decided

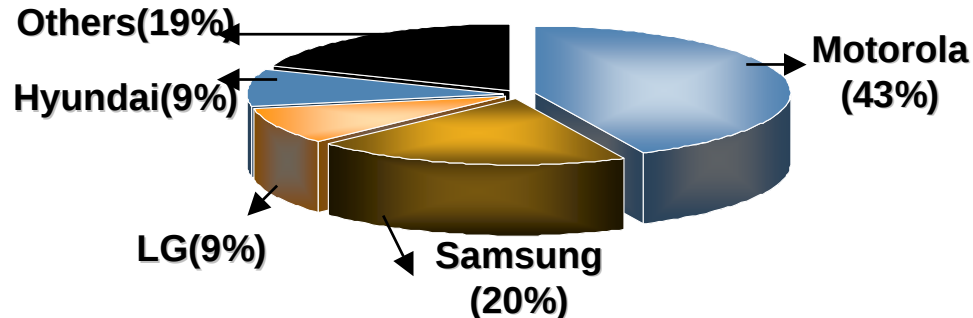
In 1990s, Korea had no proprietary mobile technology and mobile market was dominated by foreign vendors

Transition to digital technology was needed to meet the increasing demands for mobile communications service

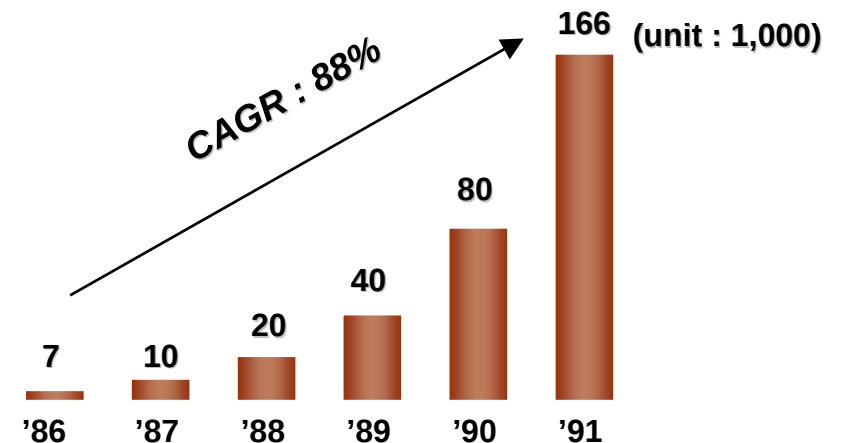
Mobile Equipment Market Share(1991)



Handset Market Share(1991)



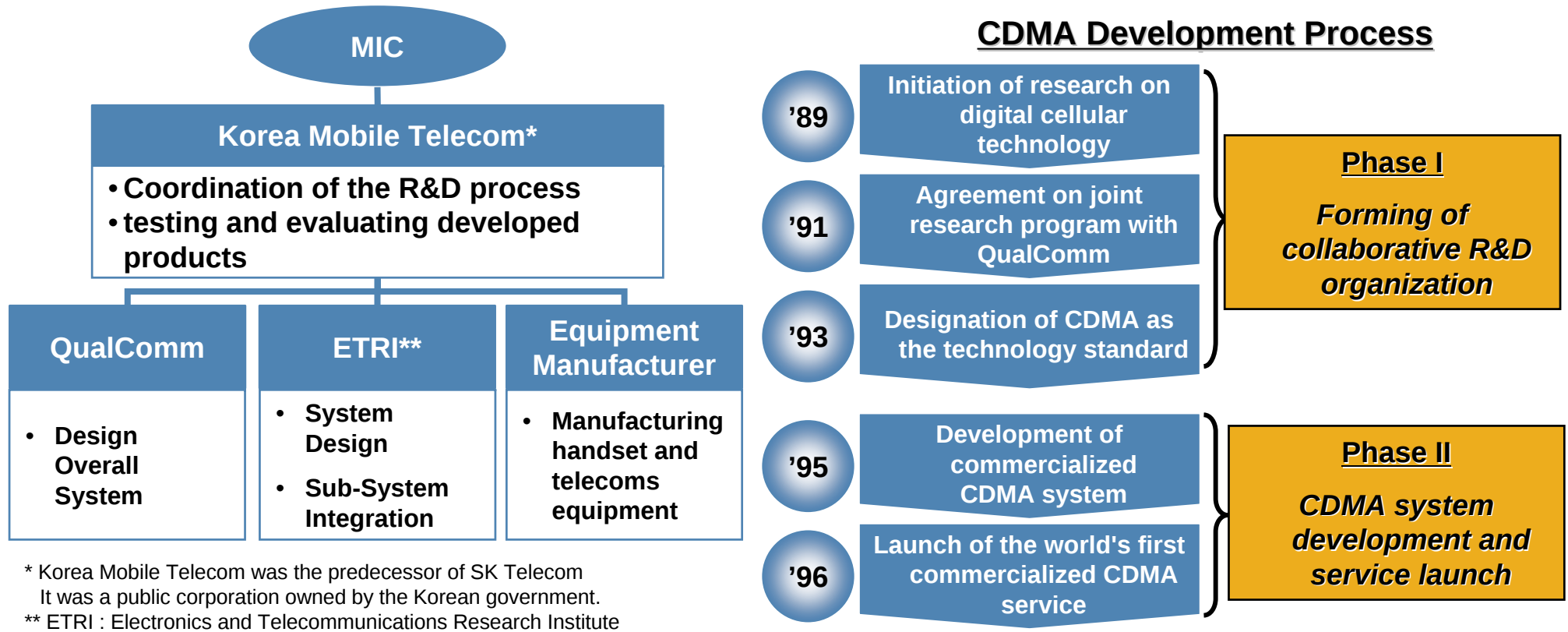
Growth of mobile subscriber



- From the late 1980's, demands for mobile communications began to increase sharply
- In mid 1990s, the only commercialized digital mobile communications technology was TDMA in Europe

1) CDMA Technology Innovation : Development Overview

- CDMA commercialization was a national R&D project, funded by the Korean government and jointly carried out by Korean handset manufacturers, telecoms service providers, and government-sponsored research institutes



Changing paradigm of innovation from a follower to an innovation leader for the Korean ICT industry

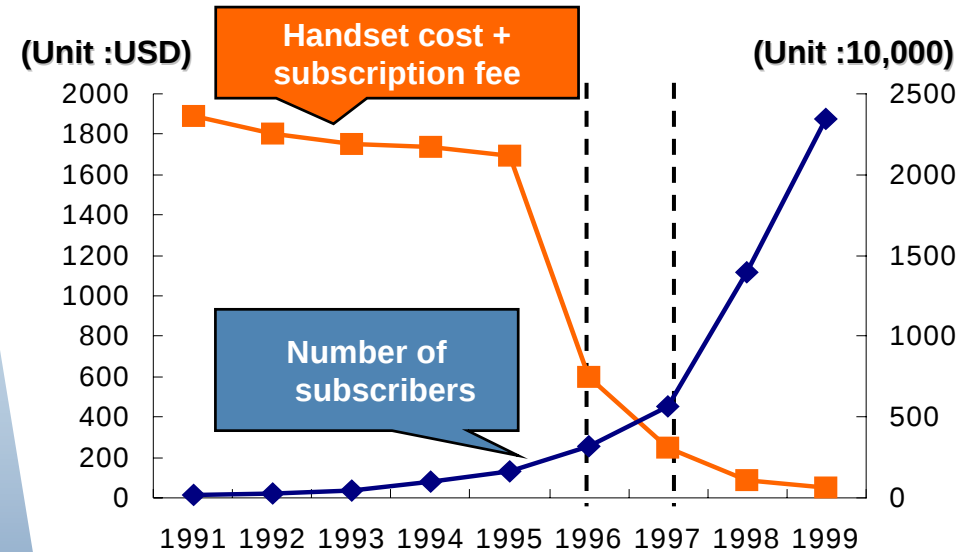
1) CDMA Technology Innovation : Key Factors for Success

- There are four major factors to the success of CDMA technology innovation

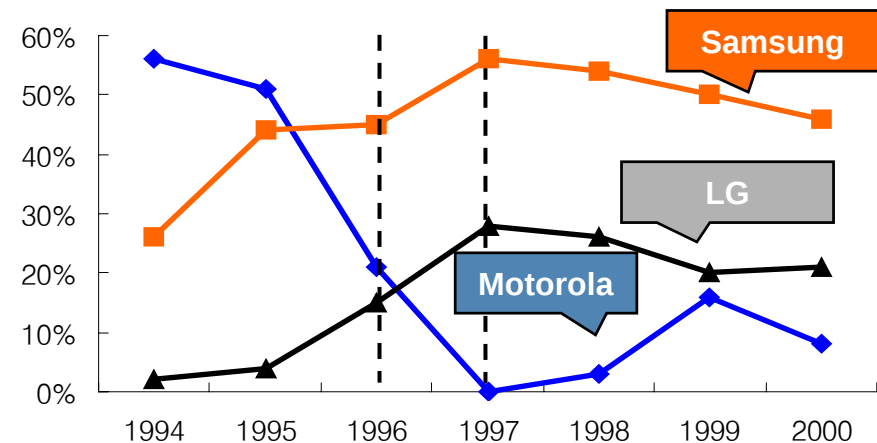
Key Factors for CDMA Success

- The Korean Government timely introduced the cutting-edge CDMA technology and led a large-scale project*
- Development methodology and research management expertise accumulated through the previous 'TDX project'*
- Korea Mobile Telecom had defined specifications of CDMA systems and also coordinated conflicts between development sub groups*
- Korean government adopted demand facilitation policy*
- Market competition was introduced through the newly licensed operators*

※1996 : Commercialization of CDMA service
 ※1997 : introduction of newly licensed PCS operators



Changes in Handset Market Share



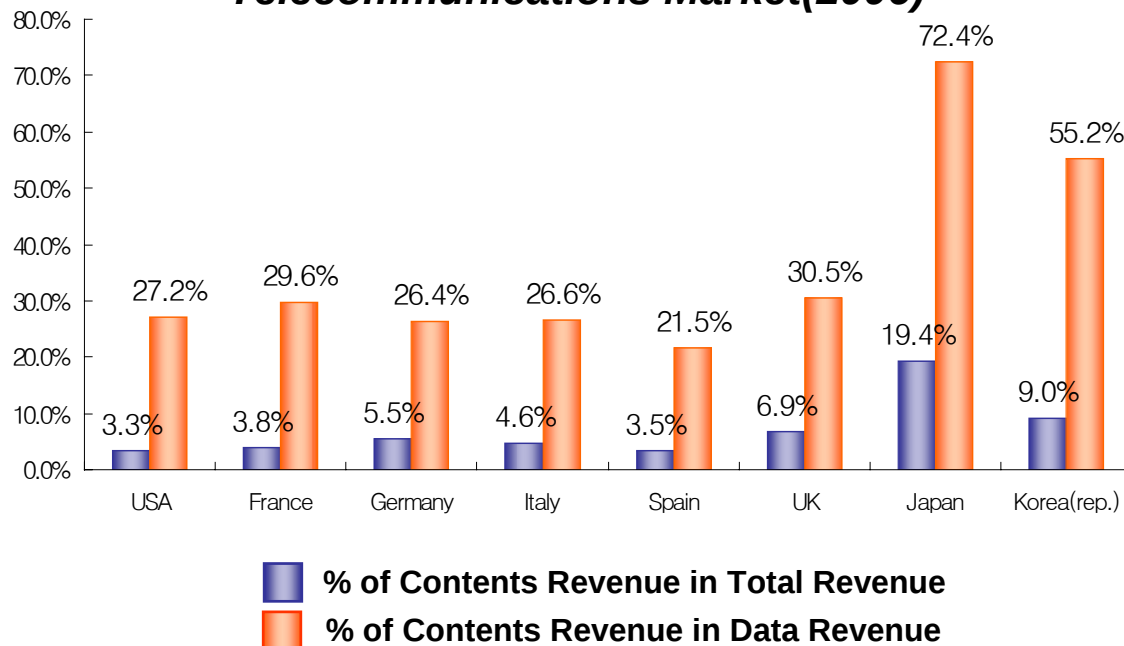
2) Wireless Internet : Overview of the Korean Wireless Internet Market

- With development of cutting-edge technology including CDMA 1x and CDMA 1x EV-DO, the Korean communications market moved away from voice-oriented service to lay the basis for wireless internet service

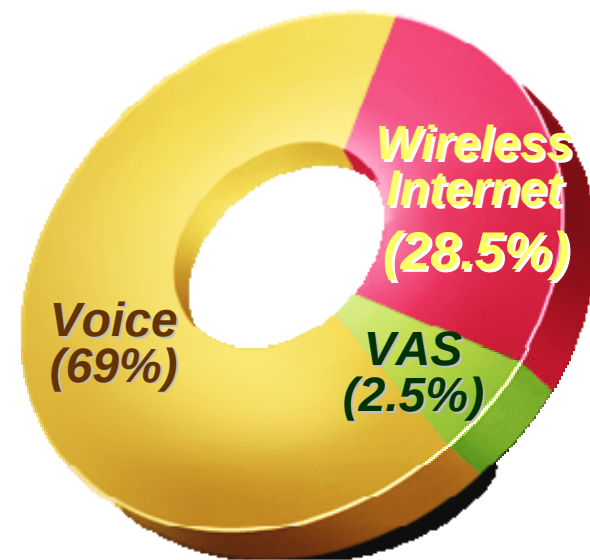
- Korean wireless market leads global telecommunications market with highest contents revenue next to Japanese service providers

- SK Telecom has led wireless internet technology advancement and nurtured wireless internet business to grow nearly 30% of total service revenue

Contents Revenue in Major Telecommunications Market(2006)



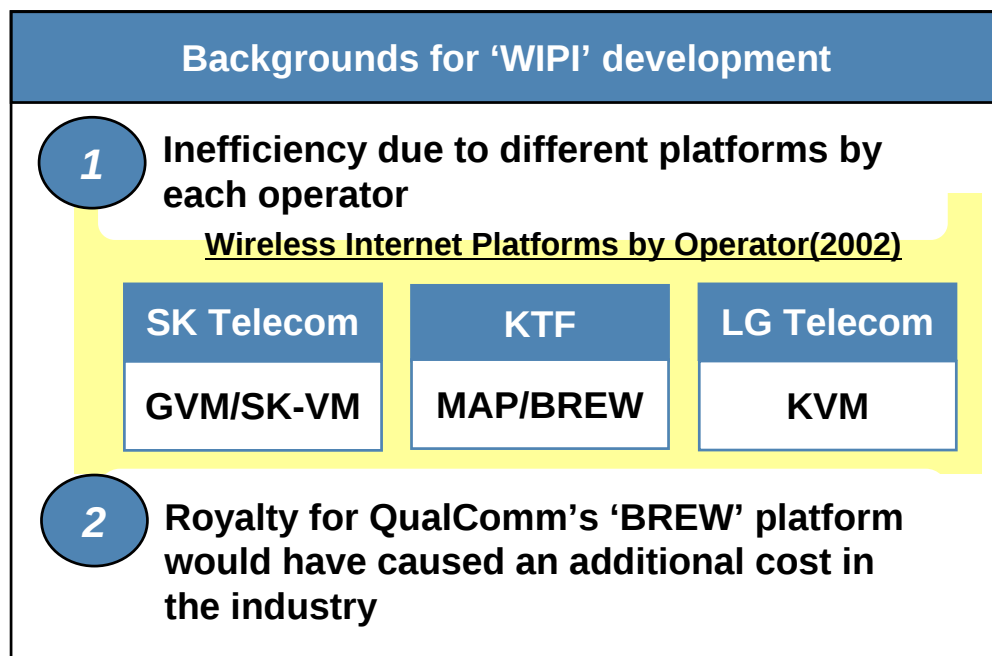
SK Telecom's Sales Breakdown(2006)



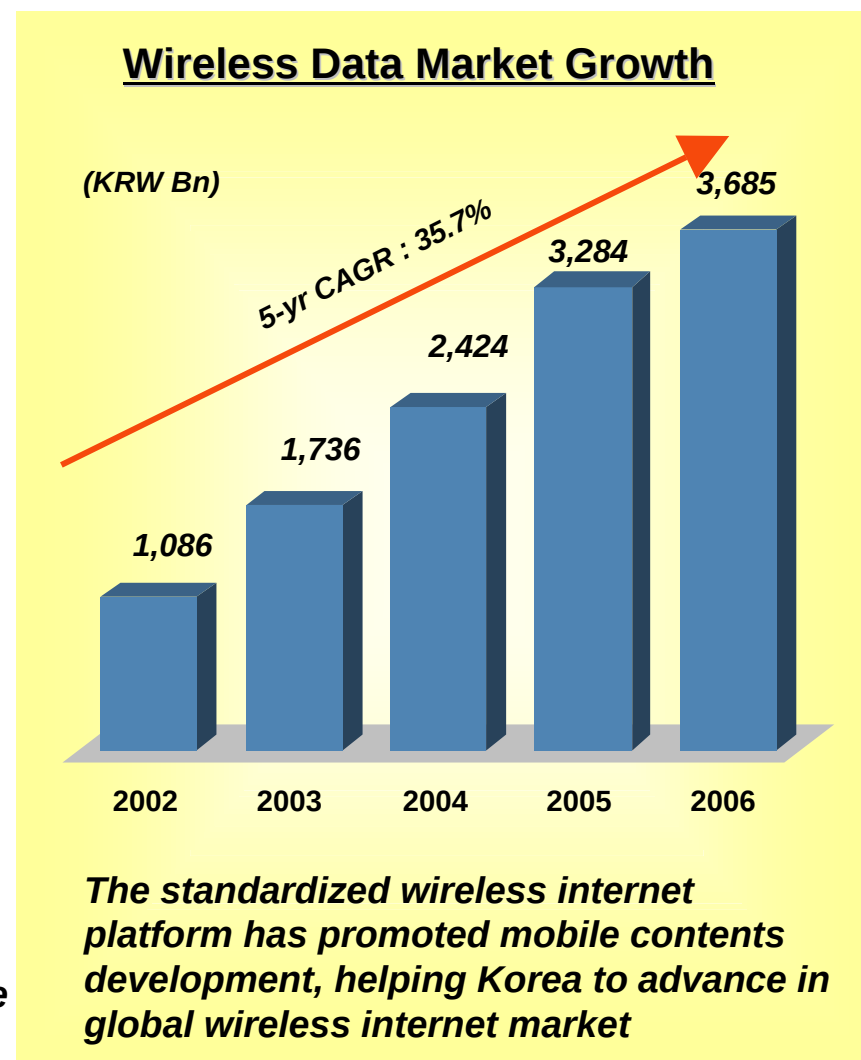
NATE
june

2) Wireless Internet : Development of the Korean Wireless Internet Platform

- “WIPI”, the Korean wireless internet platform, has been developed as standardization of wireless internet platform

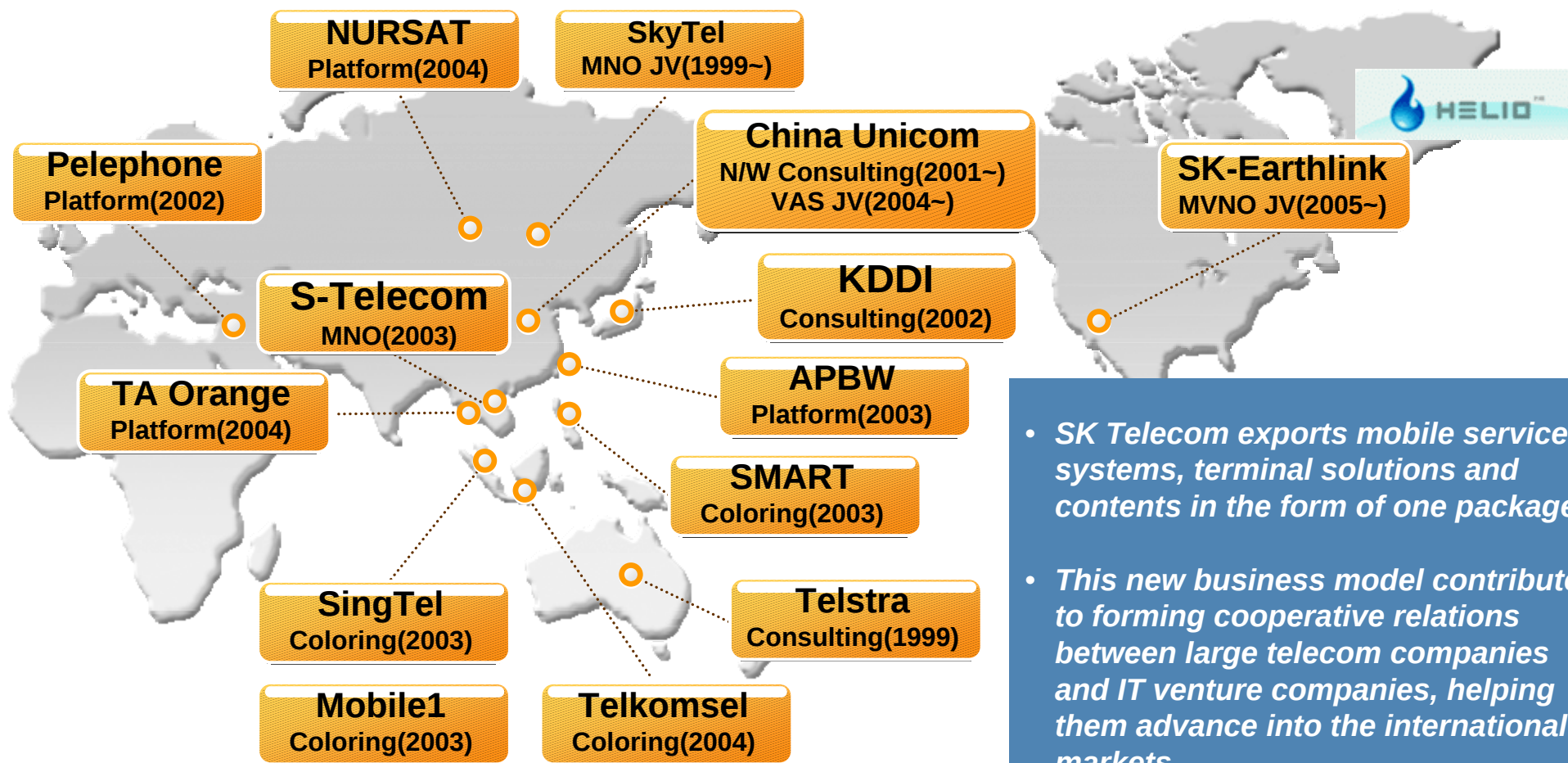


In 2002, SK Telecom, KTF, LG Telecom, Samsung Electronics, LG Electronics, ETRI, and the Radio Research Laboratory successfully developed ‘WIPI’- the Korean wireless internet platform



2) Wireless Internet : Global Expansion

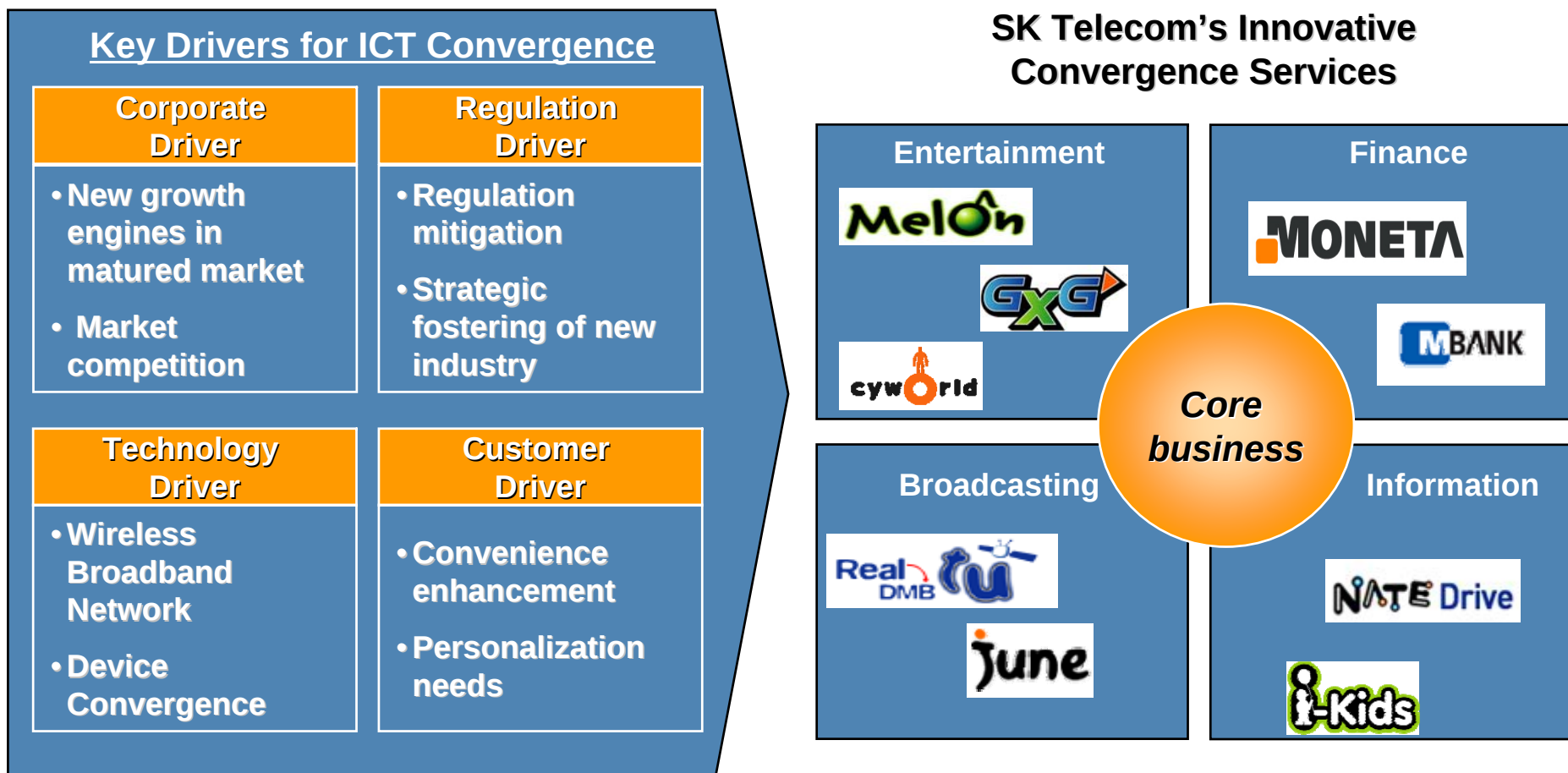
- SK Telecom is making a strong impression on the global market through the exporting of its cutting-edge wireless Internet solution, helping its business partners (contents providers and solutions/ platforms providers) advance into the overseas market



- SK Telecom exports mobile service systems, terminal solutions and contents in the form of one package*
- This new business model contributes to forming cooperative relations between large telecom companies and IT venture companies, helping them advance into the international markets*

3) Convergence Services : Overview

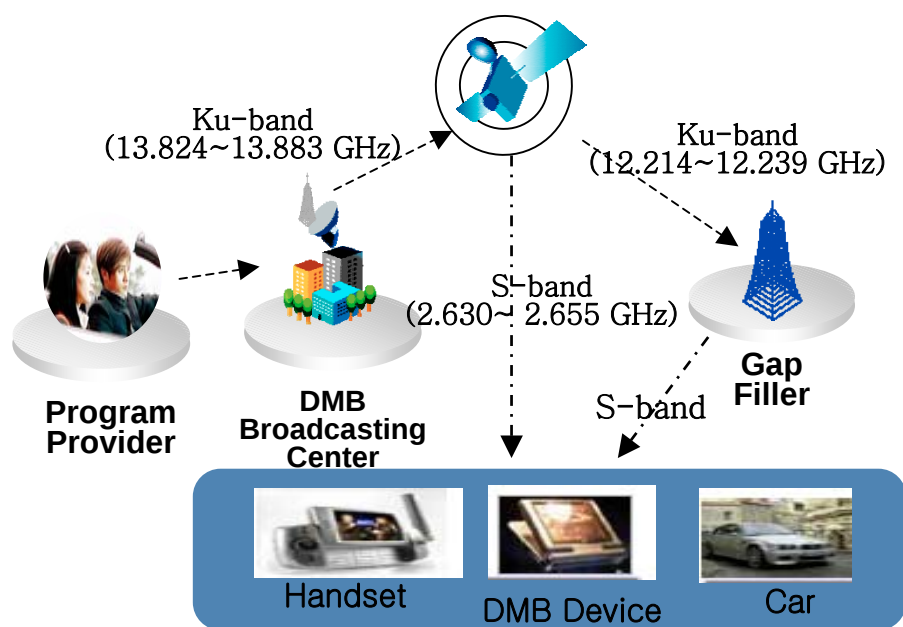
- Based on network advancement, the Korean ICT industry is facing unparalleled changes that are dismantling the boundaries between different industries
- SK Telecom has pioneered innovative convergence services, providing new values to consumers in mature telecommunications market in Korea



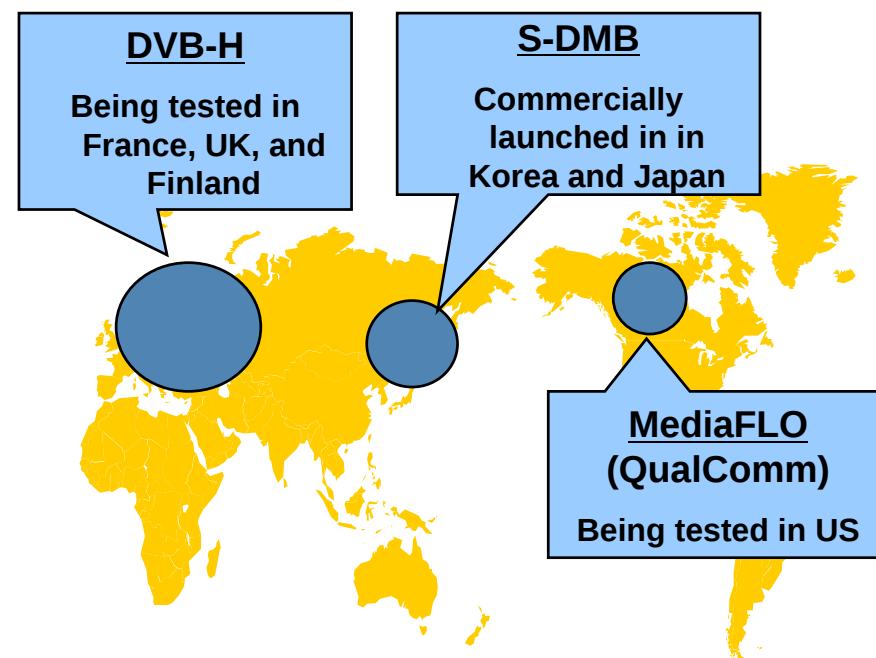
3) Convergence Services : DMB (Digital Multimedia Broadcasting)

- SK Telecom launched Satellite DMB service via 'TU Media' in May 2005, creating a new concept in multimedia mobile broadcasting service that converges telecommunications and broadcasting

Configuration of S-DMB Service



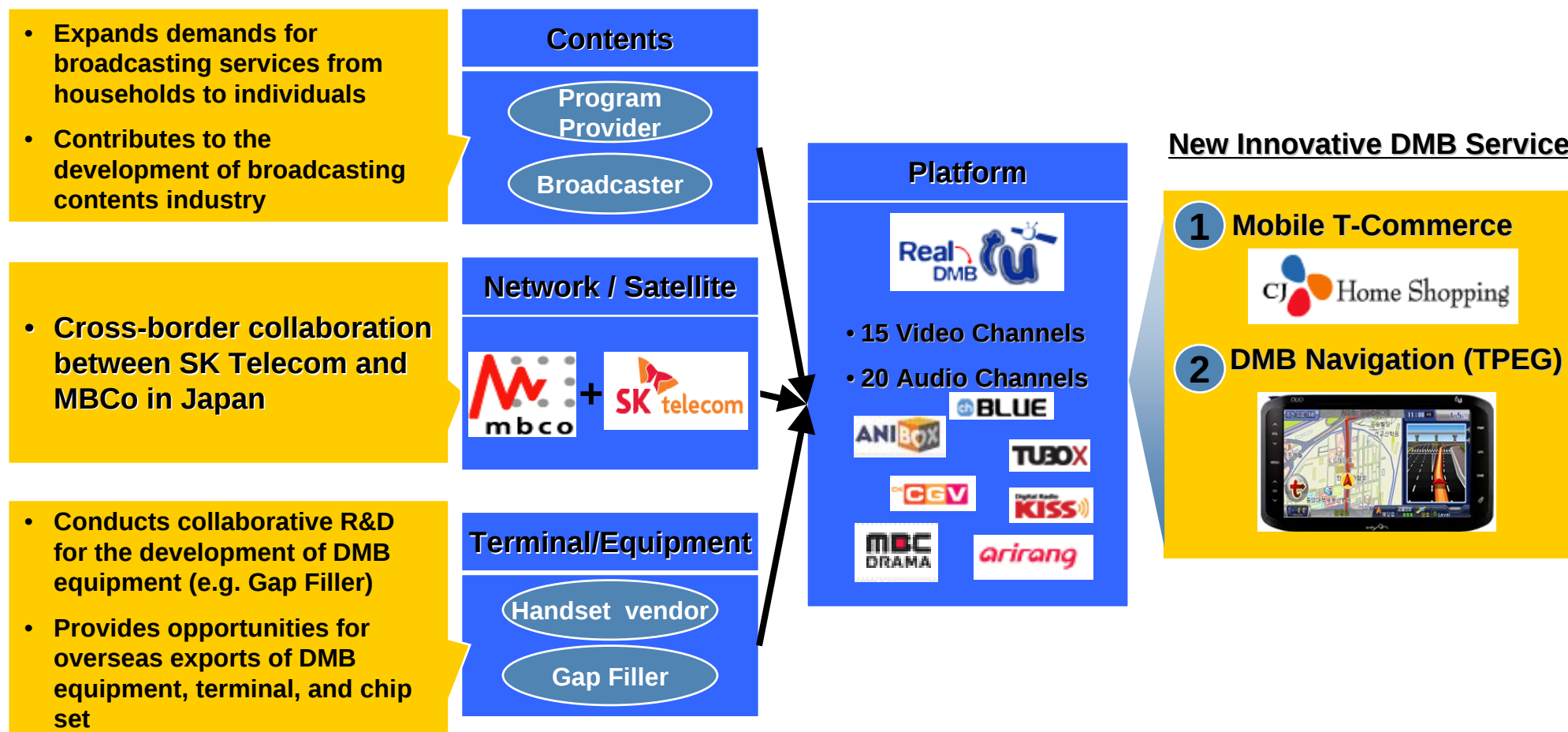
- premium mobile broadcasting service by offering nationwide coverage and enhanced content
- SK Telecom pioneered the development of DMB service with early investment since 2001
- To promote the Korean IT industry, major system components such as broadcasting center and gap filler were all developed by Korean companies



- Several standards such as DVB-H and MediaFLO are under development
- S-DMB is the world's first commercialization of mobile broadcasting service, creating another case for global test-bed

3) Convergence Services : DMB (Digital Multimedia Broadcasting)

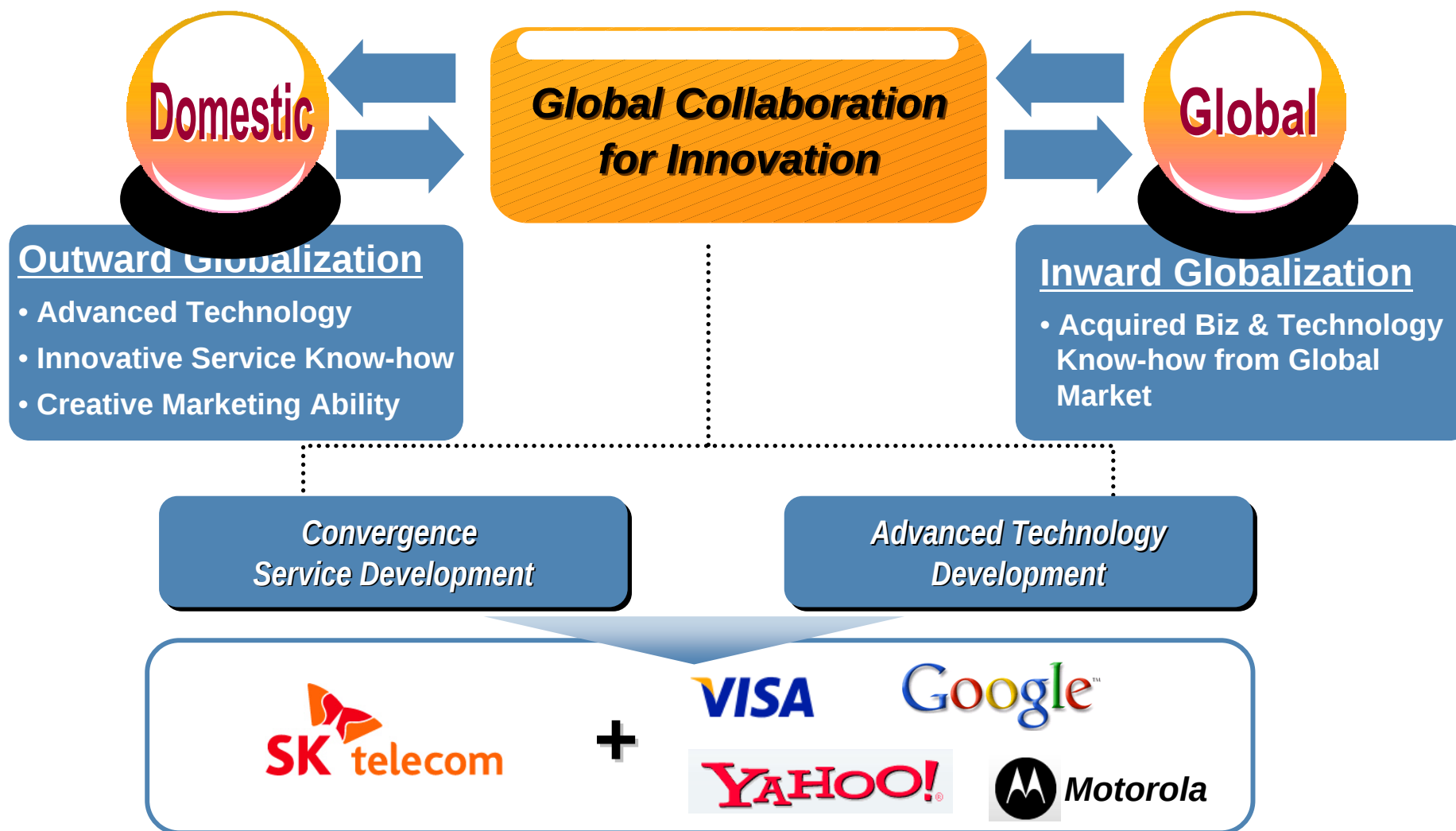
- S-DMB has been developed through collaboration with various interested parties including program providers, broadcasters, terminal vendors and government officials
- SK Telecom has innovated new services based on its satellite DMB technology by developing mobile T-commerce and intelligent telematics service



Contents

- Overview of the Korean Telecommunications Industry
- Cases of Successful Innovation
- Global Collaboration for Innovation
- Implications & Summary

- SK Telecom has actively collaborated joint R&D projects with leading global players sharing advanced technology and innovative service know-how



- Specially, SK Telecom seeks a global cooperation with China for the development of next leading telecommunications technologies including TD-SCDMA

Signed MOU for cooperation on development of the "TD-SCDMA Project"



- *First overseas telecom service provider to agree with Chinese government on development of TD-SCDMA technology*
- *TD-SCDMA Test-bed opened in Korea, followed by establishment of TD-SCDMA Service Development Center in Beijing*

SK Telecom hopes to contribute to accelerating the commercialization of TD-SCDMA service through systematic cooperation

- TD-SCDMA network interoperability tests
- TD-SCDMA terminal platform tests
- Developing 3G multimedia and convergence services
- Resolving problems that may arise in the process of launching large-scale commercial services
- Establishing the Korea-TDIA (TD-SCDMA Industry Alliance) to nurture TD-SCDMA ecosystem

- *Strengthening the competitive edge of TD-SCDMA technology and promoting the 3G service in China*

- SK Telecom seeks to establish a solid foundation for the two countries' cooperation on future generation telecommunications technologies, facilitating subsequent innovation

**World-first's implementation of
TD-SCDMA / WCDMA Interconnection and
TD-SCDMA global video telephony**



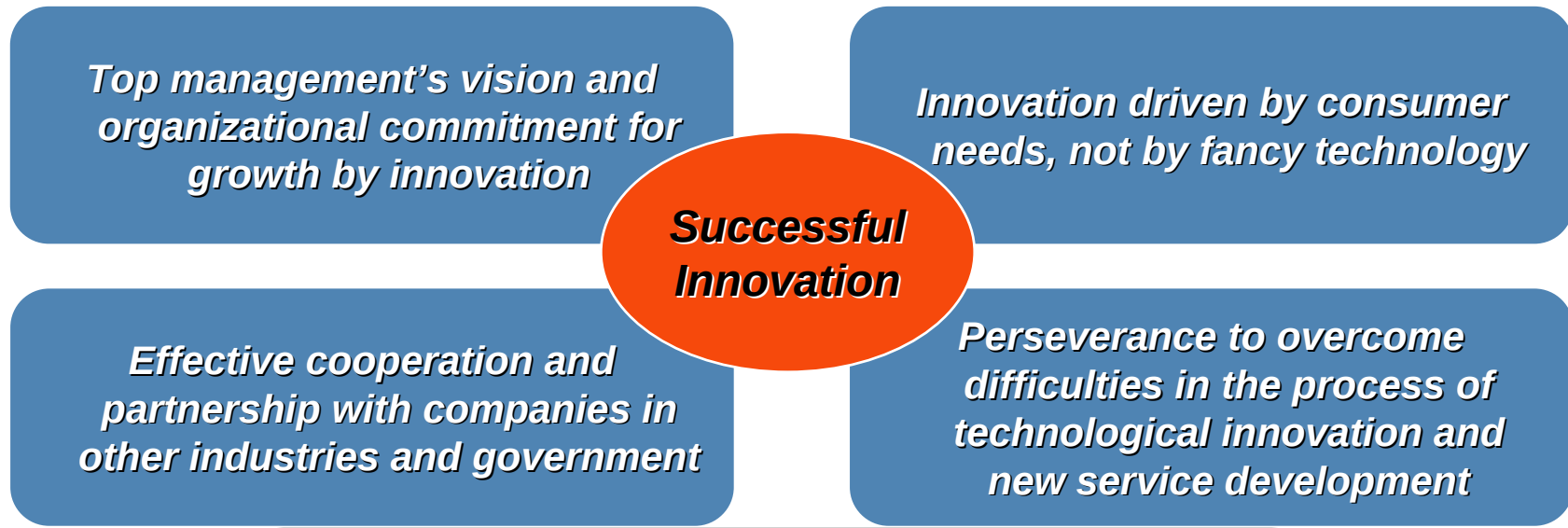
- SK Telecom has significant expertise in 3G technologies such as CDMA and WCDMA, and expects to share know-how and experience in TD-SCDMA development
- SK Telecom is particularly keen to see TD-SCDMA technology established as a global standard
- SK Telecom will continue collaboration to research and develop beyond 3G and 4G technologies

- *Building a cooperative model for joint China-Korea development in the telecommunications industry, for not only TD-SCDMA technology but also beyond 3G technology and 4G*

Contents

- Overview of the Korean Telecommunications Industry
- Cases of Successful Innovation
- Global Collaboration for Innovation
- Implications & Summary

- The success of innovation for Korean telecommunications industry has been strongly rooted in the following factors
- The ICT industry in East Asian region should promote joint collaboration to lead ICT market of next generation



Future Challenges

- *Promote global cooperation in the East Asian region to lead the ICT market of next generation*
- *Achieve standardization of the next ICT technology, including 4G, through joint R&D projects and test-beds in the East Asian region*

Thank You

