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Ericsson Seamless Network

Concept and Strategy

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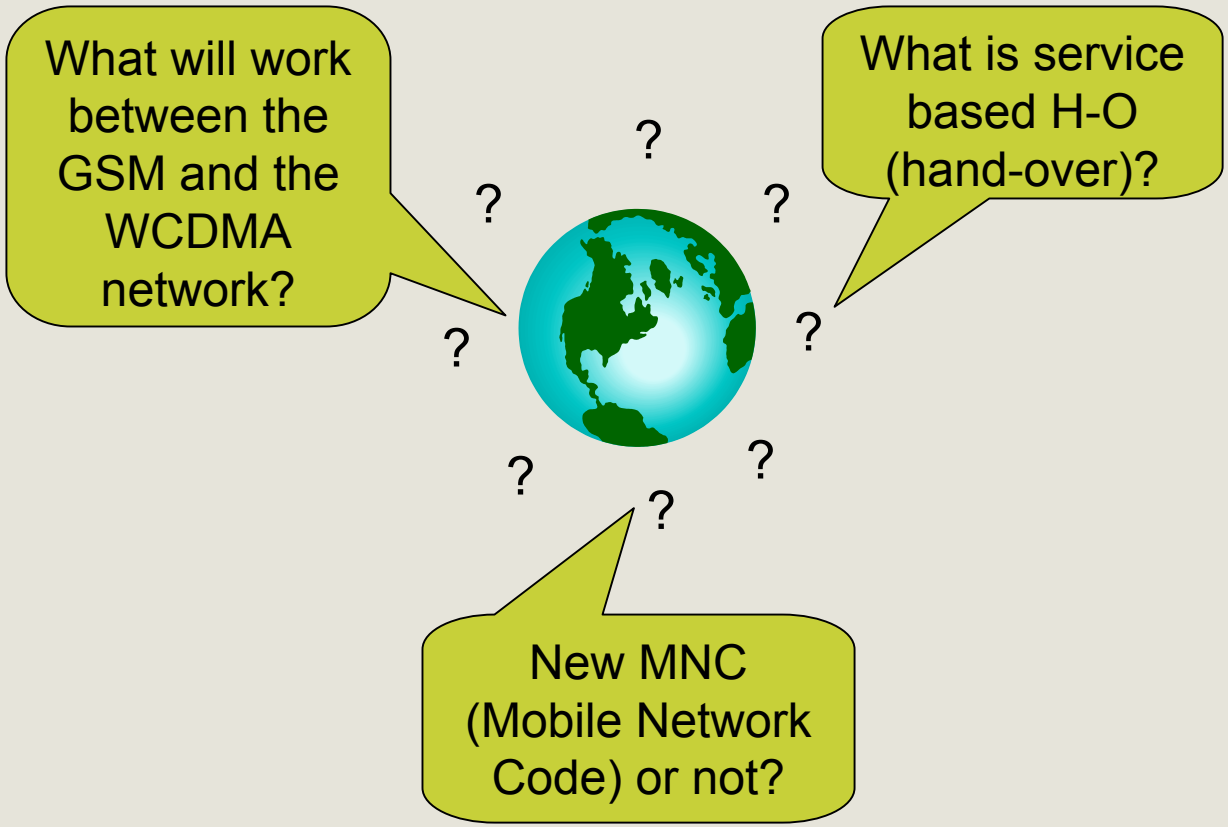
Agenda

- Operators we´ve met and questions they´ve asked
- The seamless network concept
- Operator situation
- Operators seamless strategy & decisions to make
- Summary

Operator questions



GSM/EDGE & WCDMA

Complementary Technologies

COMMON

Same applications and devices.

Seamless towards the end user.

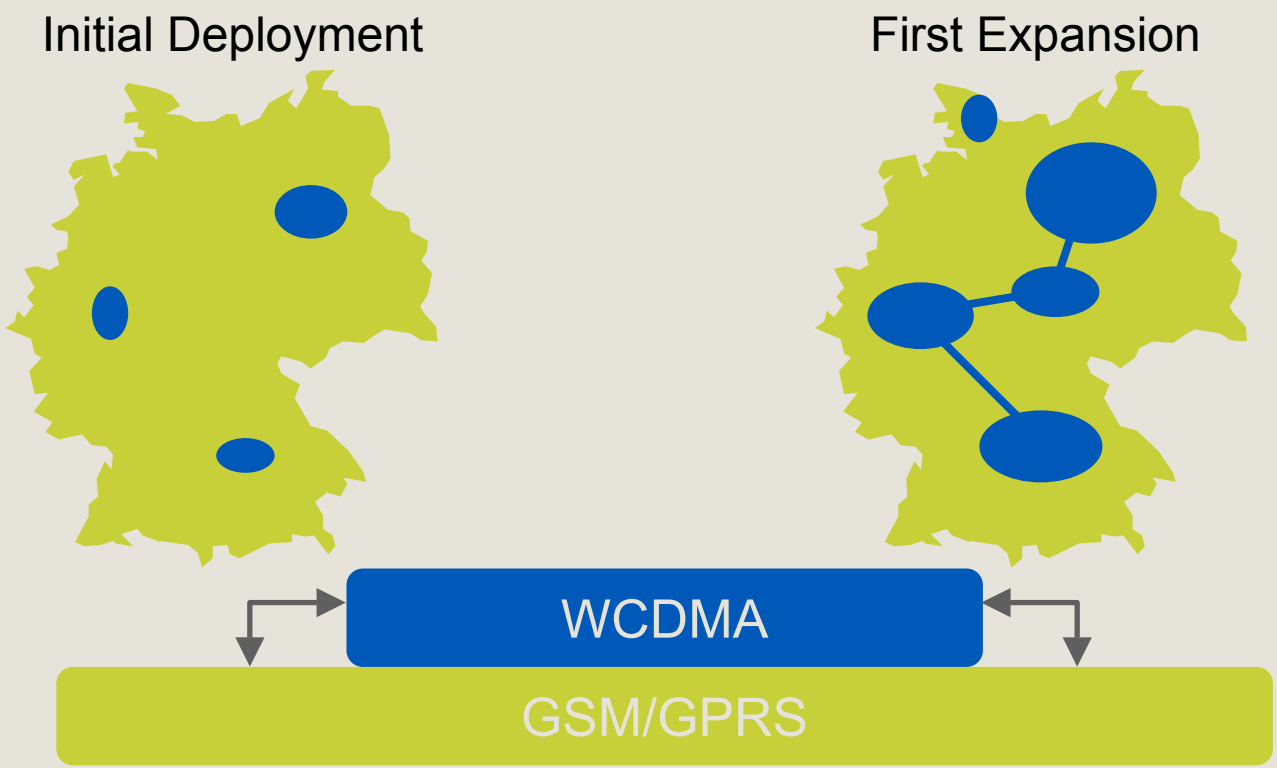
GSM/GPRS/EDGE

WCDMA

Core Network

Application Servers

Complementary coverage of WCDMA and GSM

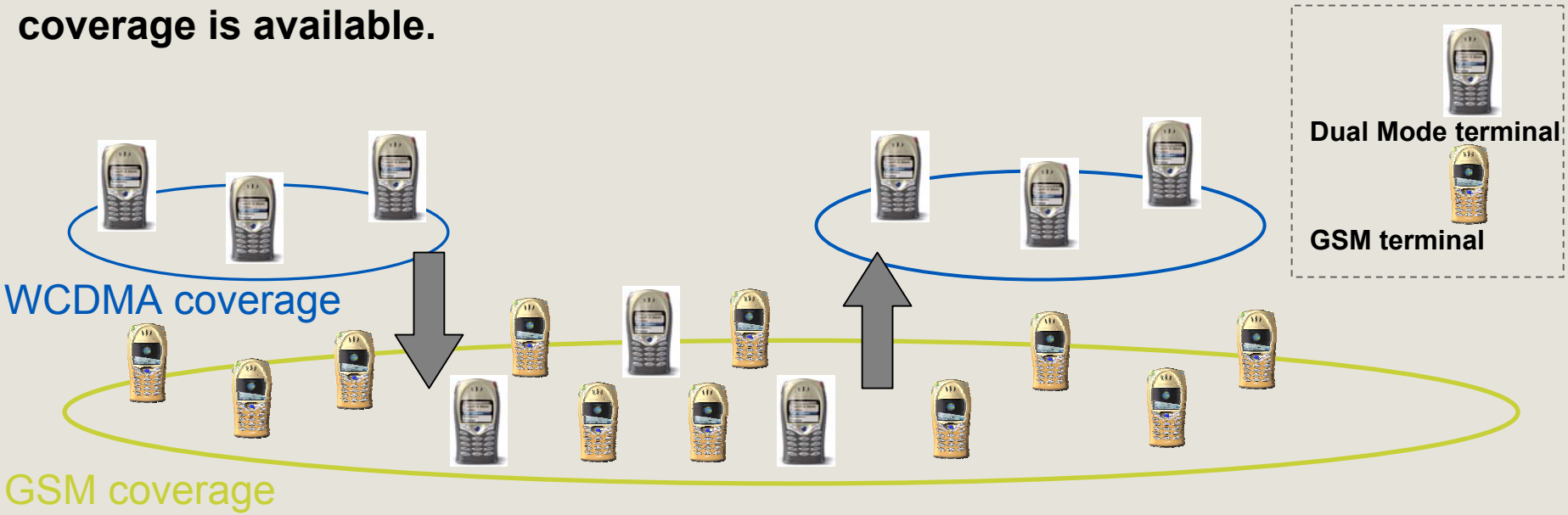


User situations and stages

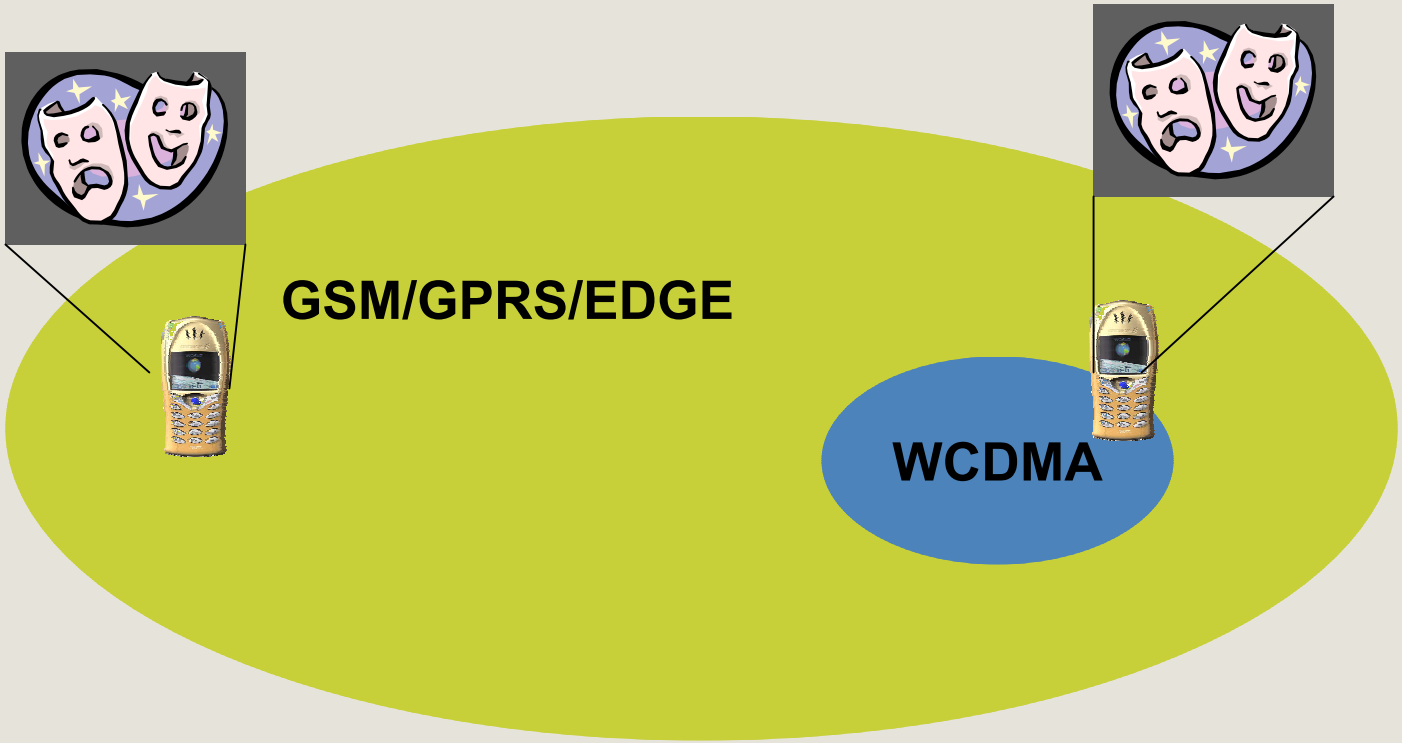
Camping

Camping is where the terminal is in **idle mode**, i.e. when the user is not attached to any service

WCDMA camping means that the terminal selects a WCDMA cell as soon as coverage is available.



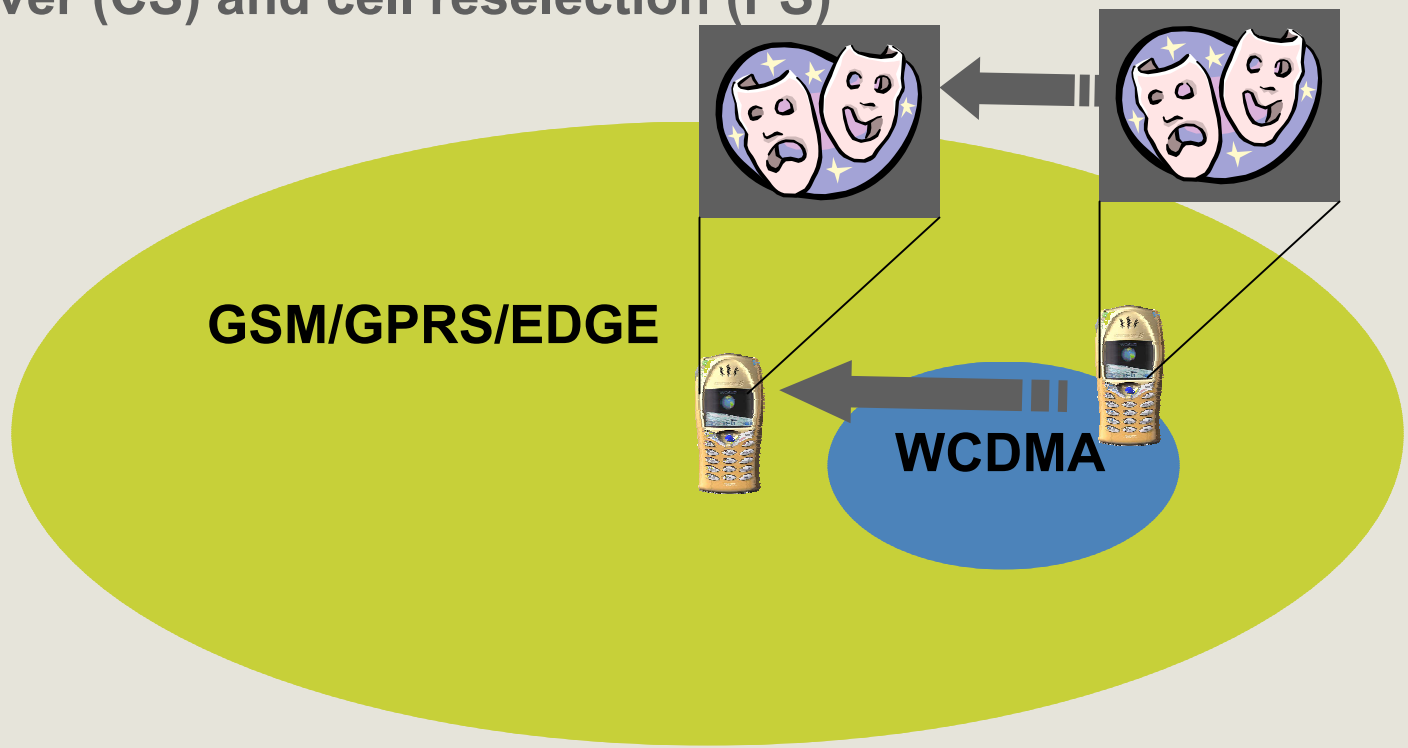
Roaming



Services can be set up in both GSM/GPRS/EDGE and WCDMA

Service continuity

hand-over (CS) and cell reselection (PS)



The user can move between access technologies and have a session ongoing

Assumption about operator situation

- Existing installed GSM/GPRS network with national coverage
- Existing GSM/GPRS subscriber base
- Existing roaming agreements

and

- Building/intention to build own initial partial WCDMA coverage

The operators would like to have:

- Service continuity - A seamless user experience

- Efficient use of both the GSM and the WCDMA network

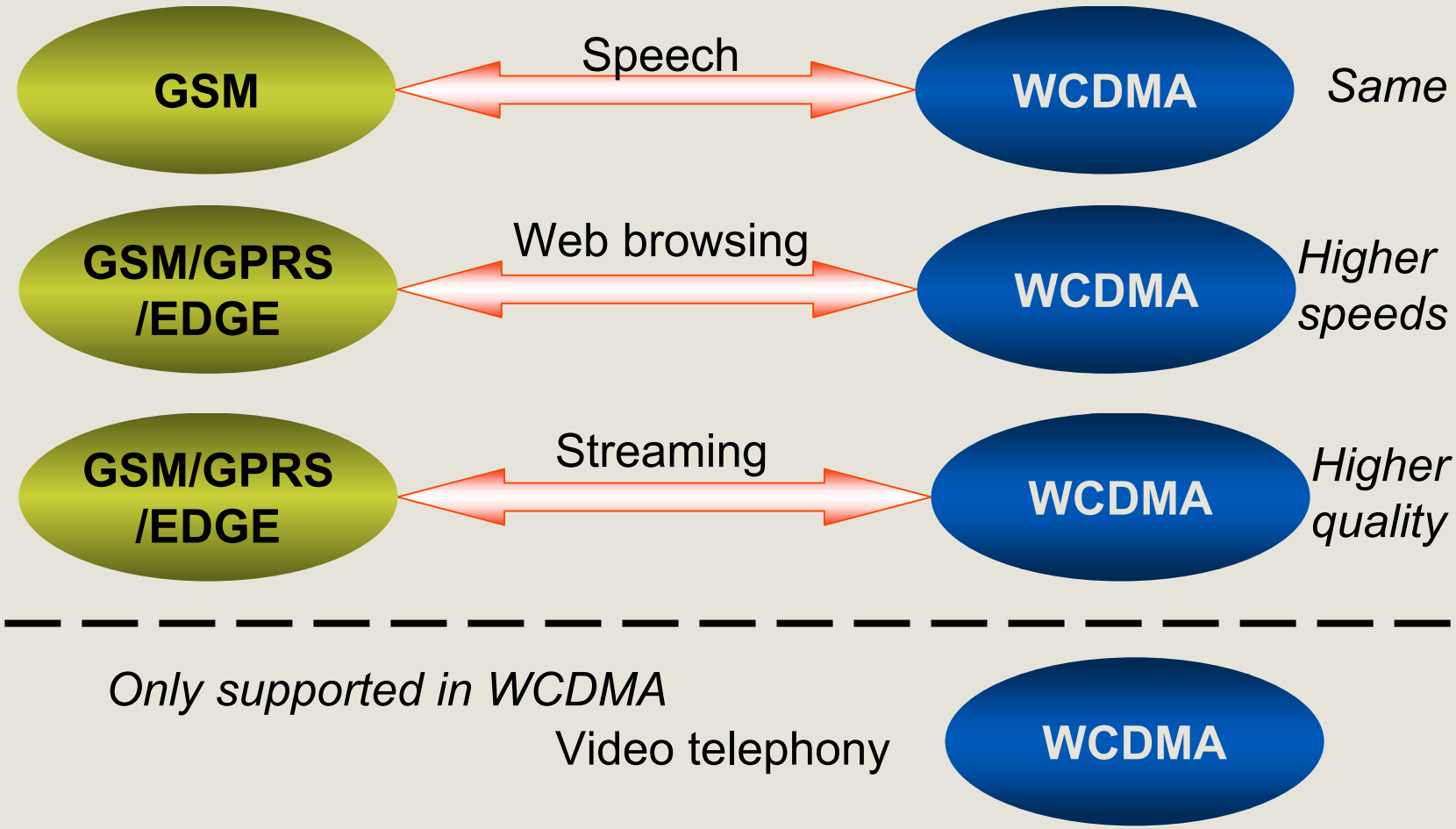
- Flexibility in 3G deployment

- Investment protection and re-use

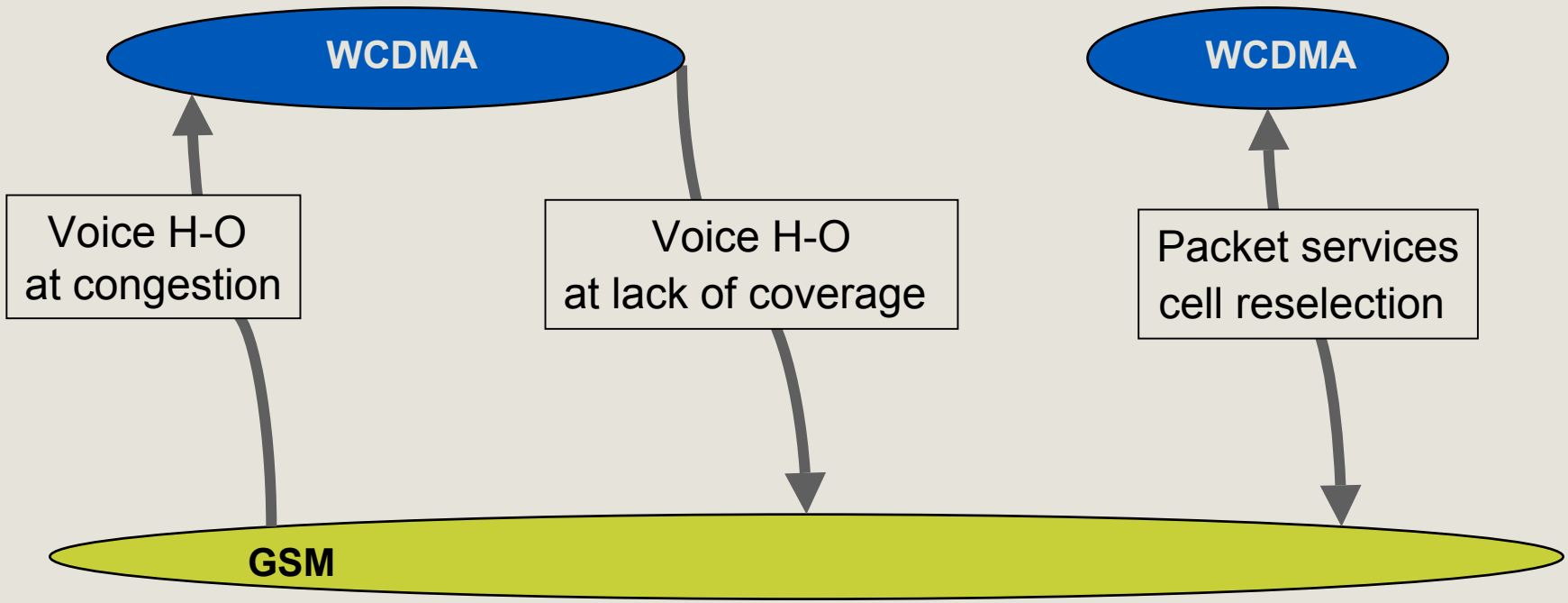
- Possibilities to restrict/allow roamers

Which applications will work in both GSM and WCDMA?

End user experience should be as transparent as possible



Transfer mechanisms in 2003



Strategy for seamless WCDMA-GSM consists of 2 parts

- Traffic Steering:
  - camping strategy
  - traffic steering mechanisms
- Service continuity:
  - mechanisms for service continuity at RAT change (GSM↔WCDMA)

Other decisions to make

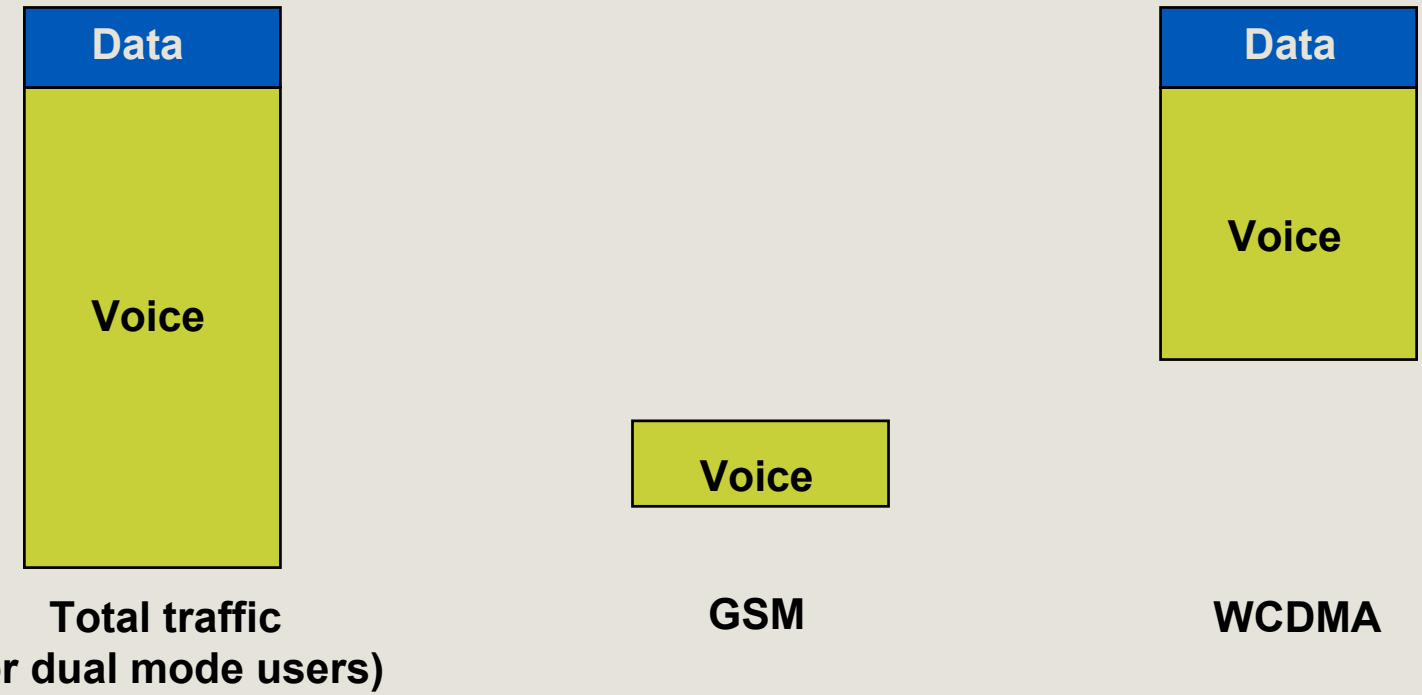
- new MNC or not ?

Strategic drivers

- service enhancements for better user experience
- resource optimizations for operators

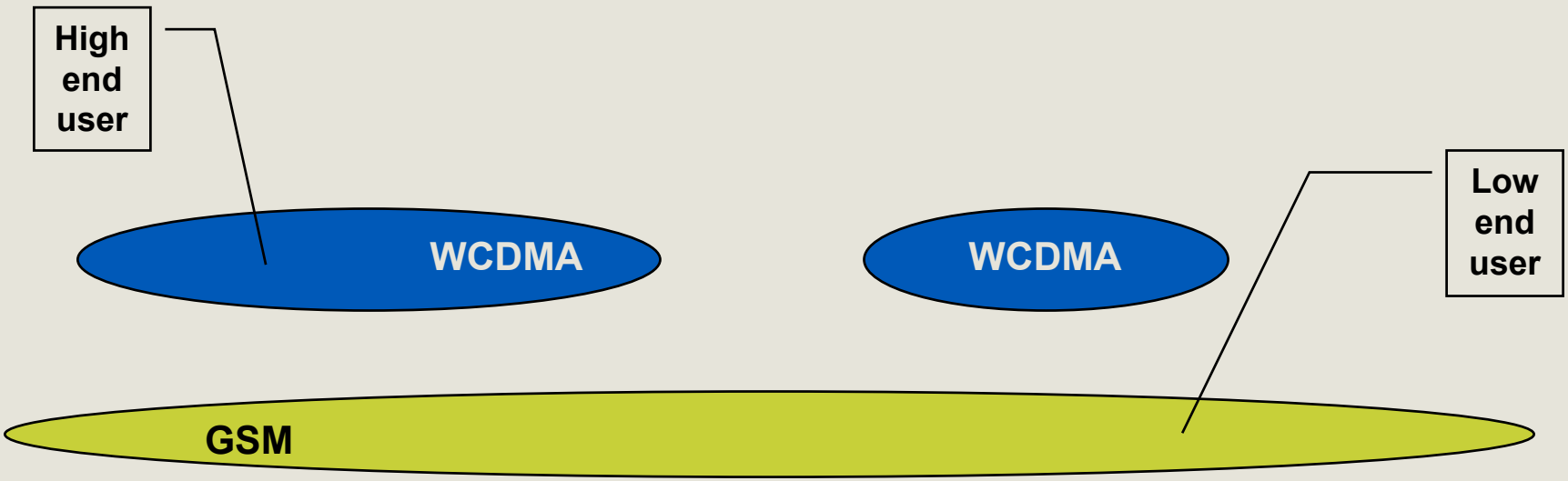
Principles (traffic steering)

Load balancing for dominant traffic group



Principles (traffic steering)

Place the mobile where subscribed services are most efficiently provided



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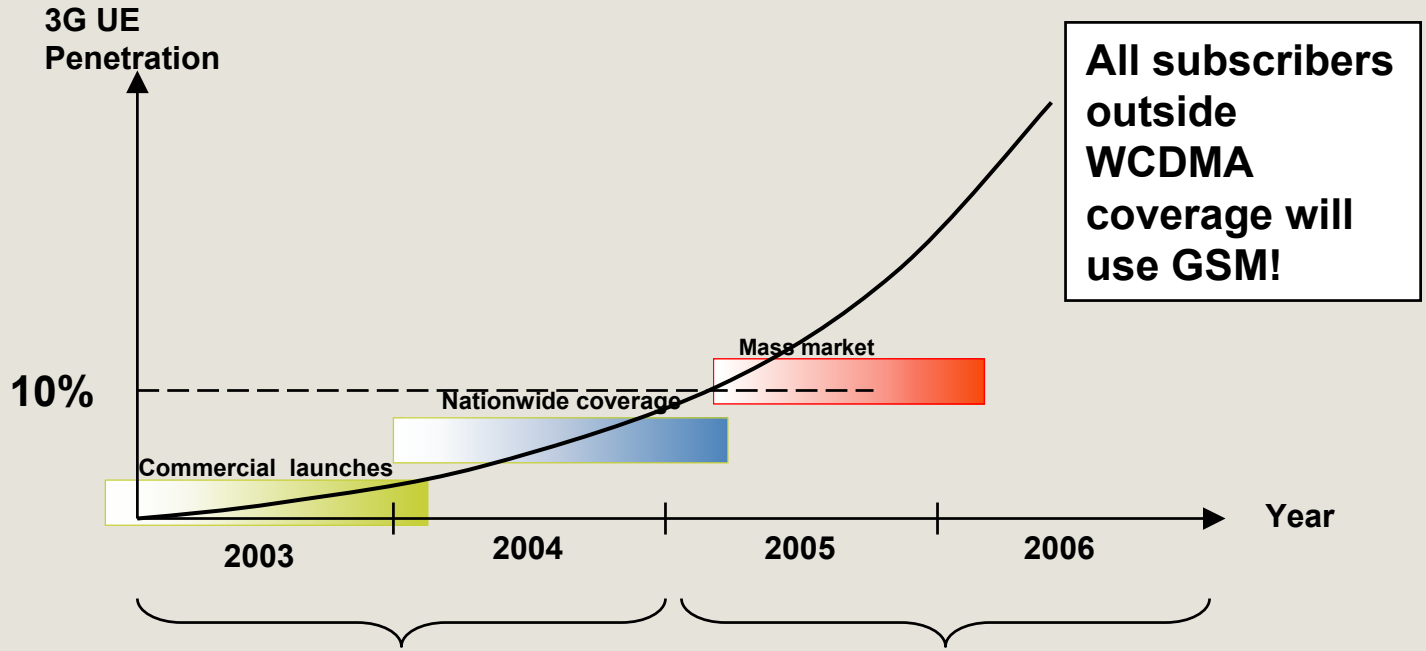
Strategy for traffic steering

- **Camping on WCDMA strategy as a short term strategy (2003-2004)**
  - 3G services directly reachable for dual-mode mobiles
- **Subscription based camping strategy as a medium term strategy (2005-2006)**
  - Enabler for subscription control and resource utilization optimization
- **Limited support for Camping on GSM strategy**
  - Too complex / costly to include all needed traffic steering mechanisms GSM -> WCDMA for 3G services
    - possibly Directed Retry for UDI64 GSM->WCDMA

Short and medium term seamless strategy

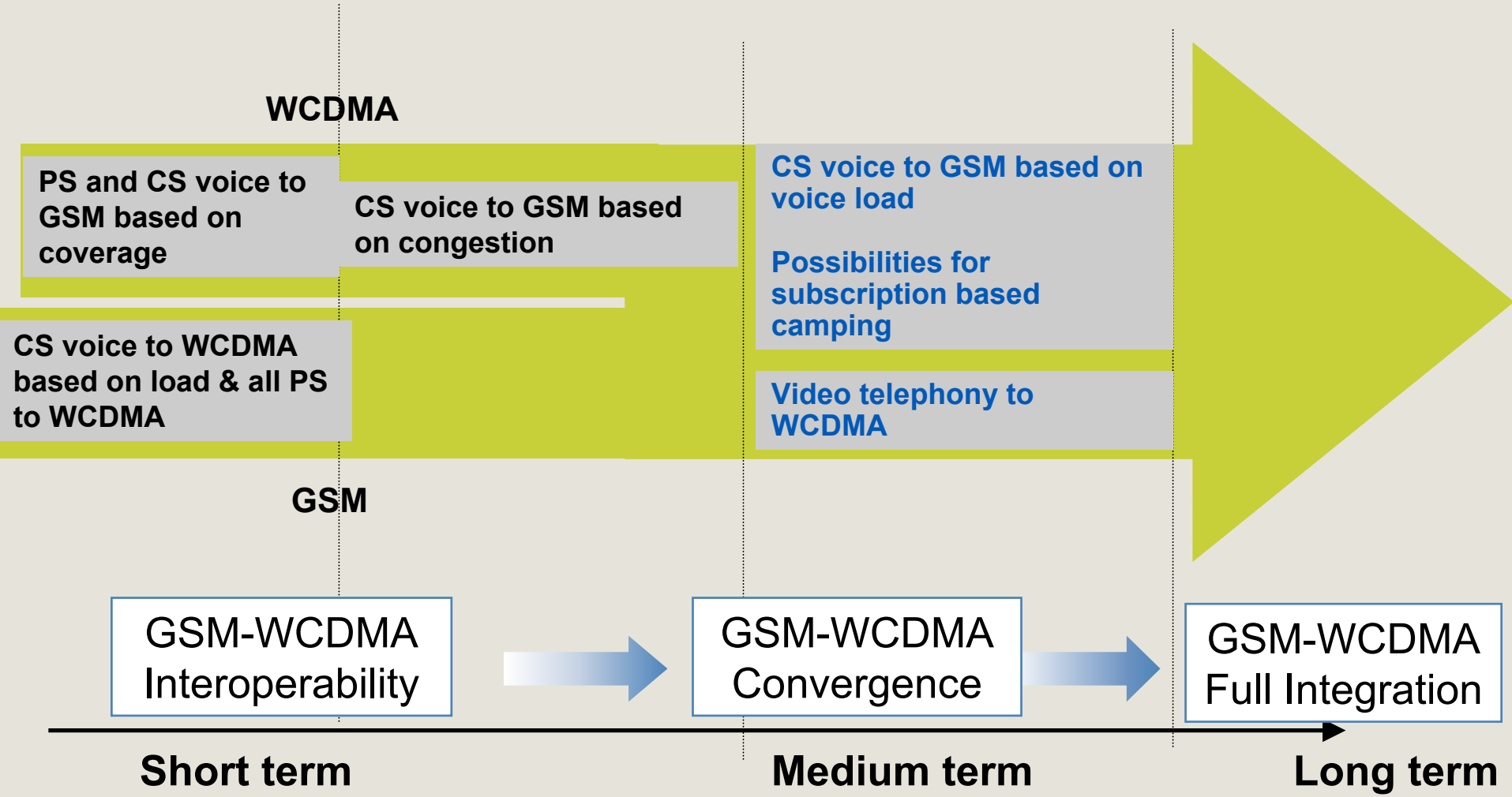


Short term:
Camping & service on WCDMA
- all Dual Mode terminals will camp and be served in WCDMA

Medium-Long term:
Subscription based camping & service
- **High-end subs in WCDMA**
- **Low-end subs possible to distribute to GSM**
- **Special transfer possibilities e.g. Video call GSM-->WCDMA**

The road towards seamless services GSM&WCDMA

Traffic control

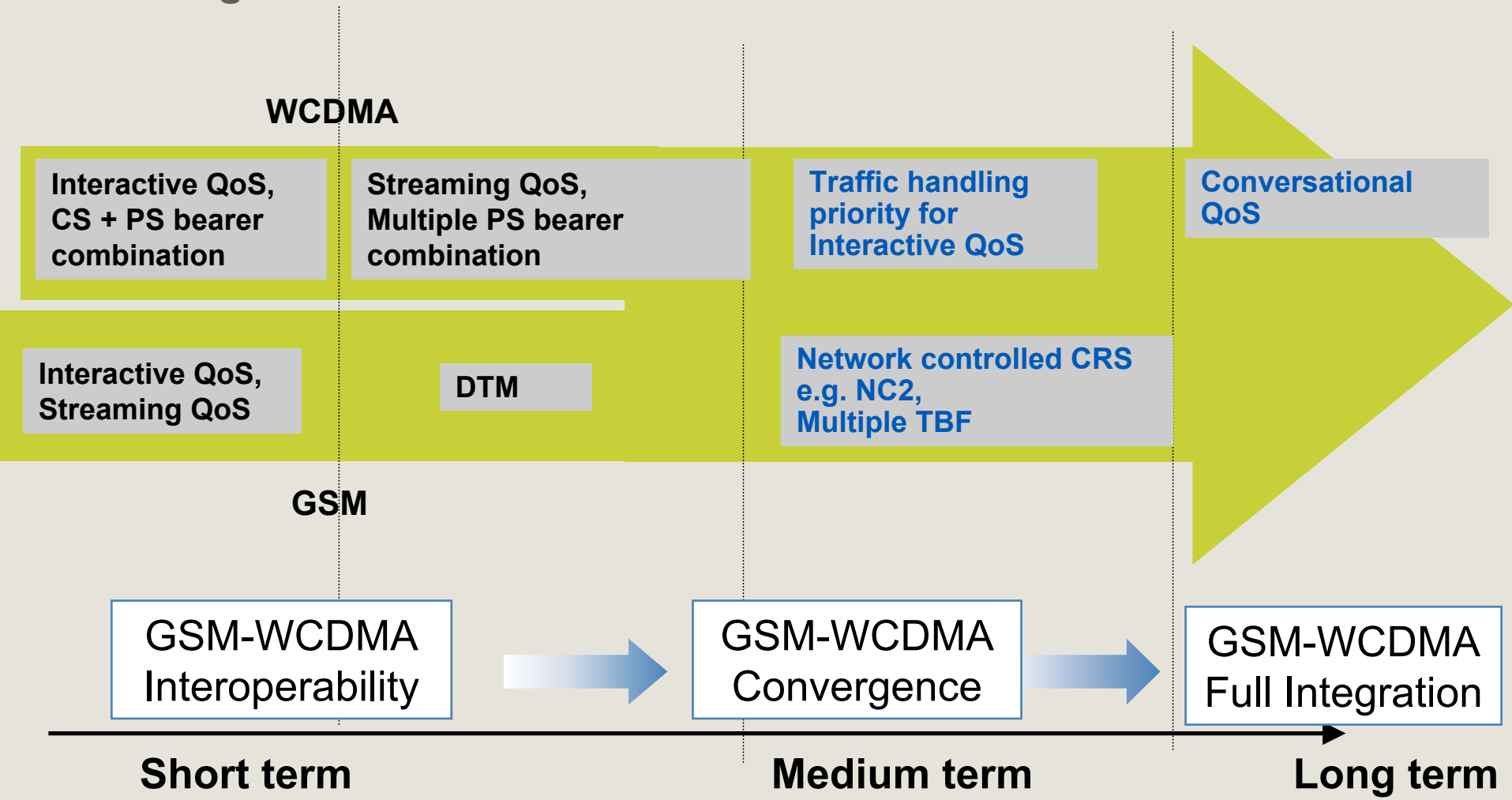


Strategy for Service continuity

- Mapping of similar bearer capabilities in both RAT (Radio Access Technologies)
  - e.g. QoS PS streaming, DTM
- Enhance service characteristics for PS services at RAT change
  - E.g. shorten interrupt times

The road towards seamless services GSM&WCDMA

Bearer alignment



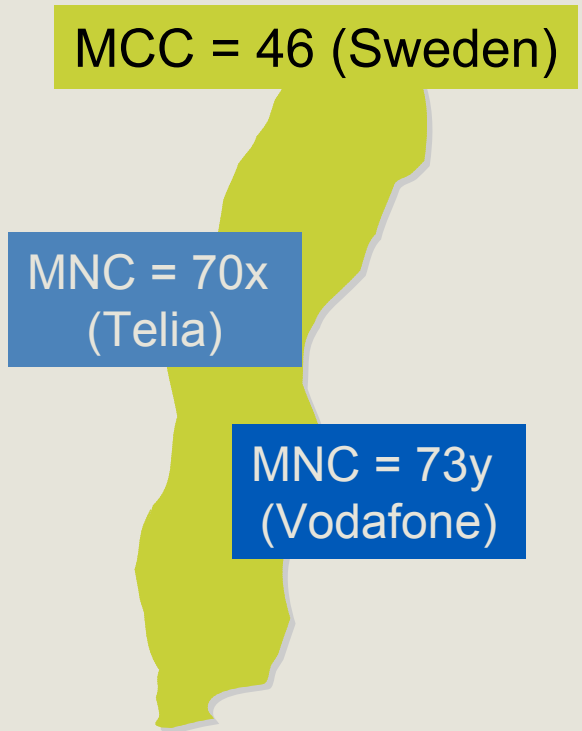
If regulations allow…..new MNC or not ?

What is MNC/PLMN?

Definition:

PLMN = MCC + MNC

- MCC = Mobile Country Code
- MNC = Mobile Network Code



How is it used ?

Example 1:

MSISDN = PLMN + value from operator

The number someone dials to reach a certain mobile user.

Comparing solutions

	Reuse of GSM MNC	Different MNC for GSM & WCDMA
Pros	Impression of “one” network Less functions needed	Early support of steering sub. Higher flexibility to steer sub.
Cons	Later support of steering sub.	Complementary functions needed Impression of two networks

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Summary

- Seamless services as much as possible
- Service based/Load based traffic steering for voice
-
- Camping on WCDMA is preferred
- MNC - both common & separate are OK!

Terminal Availability

- **Terminals will support the following features:**
  - Dual mode (2G/ 3G)
  - SMS
  - WAP
  - MMS

- **Five biggest terminal providers:**
  - Nokia 6650
  - Motorola A835
  - Samsung Z100
  - Siemens U10
  - Sony-Ericsson Z10Z10
  - NEC e808
  - ***NEC e606 (available now)***

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Thank You!