

# The Business in Mobile- Broadcast Convergence

## Opportunities, Challenges and Models

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mobile and broadcast environments"  
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# Outline

- Opportunities
  - Why convergence?
  - More than just Mobile TV?
  - Multi channel content provisioning
- Challenges
  - A compelling experience?
  - Competing broadcasting technologies
  - Regulation
- Integration business models
- Will it work?
  - The added value in DAIDALOS

# Why convergence?

Telecommunication	Broadcasting
Have... <ul style="list-style-type: none"> <li>● Large subscriber base (almost everyone has a mobile phone)</li> <li>● Secure personal interactivity</li> </ul>	Have... <ul style="list-style-type: none"> <li>● Attractive content (almost everyone watches TV)</li> <li>● Efficient broadcast channel</li> </ul>
But... <ul style="list-style-type: none"> <li>● Seek to increase ARPU</li> <li>● Seek to reduce churn</li> <li>● low experience in quality content</li> <li>● Want to limit infrastructures investments (UMTS)</li> </ul>	But... <ul style="list-style-type: none"> <li>● Seek to amortise expensive content on a large scale</li> <li>● Seek to enrich services with interactivity and personalisation/localisation</li> </ul>
<b>mass appeal of mobility ⇔ mass appeal of television</b>	

## More than just Mobile TV

- Mobile TV can be more than just stationary TV
  - Voting (response TV)
  - Additional information
  - Merchandising
  - Ticketing
  - Download
- Event notification services possibly associated with Broadcast or Telco audiovisual streaming services
- Telematics (automatic road guidance, travel and traffic information, points of interest, news, travel guide, entertainment, etc.)
- Download services (newspaper, books, music, games, software, etc.)

Though subscriptions are one important base of the business model, interactivity is key for further growth

# More than just Mobile TV

	UMTS	DVB	UMTS + DVB
<b>Entertainment</b>			
TV, radio programs	-	++	++
Audio, video on demand	0	-	0
Games, interactive TV	+ / 0	-	++
<b>General Information</b>			
News, weather, financial info	+	+	++
Travel, traffic, maps	+	+	++
Commercial info	+	+	++
<b>Personalised Information</b>			
Web browsing, file transfer	+	-	++
Individual traffic info, navigation	+	-	++
Emergency, location based services	++	-	++
<b>Business and commerce</b>			
Remote access, mobile office	++	-	++
Email, voice, unified messaging	++	-	++
E-commerce, e-banking	++	-	++

++ optimum, + good, 0 fair, - not feasible

Source: DVB-UMTS

# More than just Mobile TV

	Mobile TV	Interactive formats (interactive TV & streaming media)	Service & content download, interactivity
<b>Content</b>	TV programs	TV programs, live streams, additional infos (at least SMS number)	Application programs, application specific content
<b>Streaming vs. Download</b>	Display broadcast stream in real time	Display broadcast stream and data in real time	Store downloaded data, display them from storage
<b>User Interface</b>	Streaming client	Broadcast browser	Native applications
<b>Interactivity</b>	Limited	Telephone call, SMS/MMS, Voting, Mobile web sites, etc.	Telephone call, SMS/MMS, Voting, Internet access, etc.
<b>Broadcast time</b>	Full day	Full day	Scheduled

Source: bmco

# Revenue streams

- Broadcasters
  - Access fees (for basic, enhanced packages of channels, content)
  - Pay-TV subscription services (premium channels, pay-per-view)
  - Advertising (once mass adoption has occurred)
- Mobile operators
  - Service subscriptions
  - Download sales (e.g., ringtones, applications and games)
  - Premium messaging (SMS/MMS revenues from viewer voting, user polls, etc.)
  - Portal traffic (links and MMS/e-mail traffic for sending video clips, etc.)

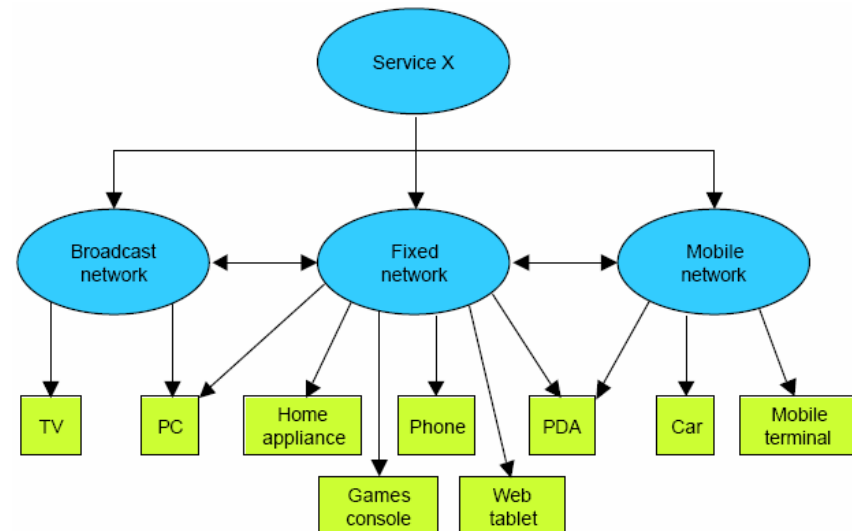
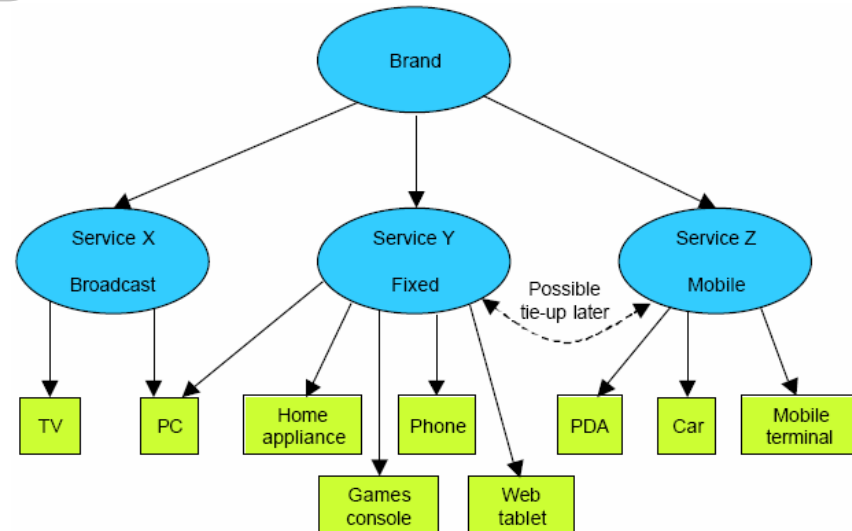
# Multi channel content provisioning

From Single Channel service provisioning...

- no particular links between devices or platforms as far as the user is concerned
- do not recognise the user between channels (ID, preferences, etc)

...to Multi Channel service provisioning

- users have access to the same core content and/or service, or at least strong 'slices' of it, across multiple channels
- recognised as the same user, no matter how they access the service, and their preferences will automatically be registered and recognised regardless of which access device they use
- Consistent, user interfaces, optimised for the channel, will be offered over all devices, including pre-set layout instructions and 'favourites' lists.



Source: Ovum

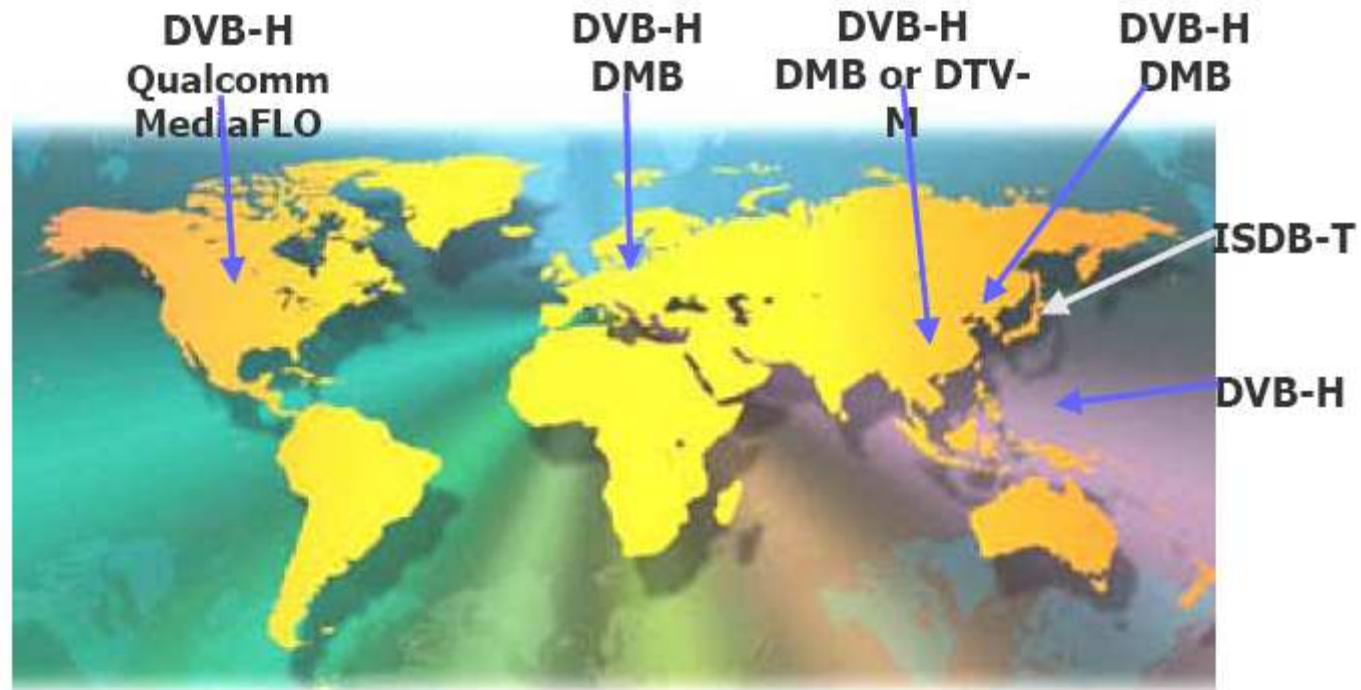
# Challenging aspects of mobile TV

- Mobility and ubiquity
  - Anytime and anywhere
  - Usage time ~10min, not ~90 min:
- Screen size
  - 2 inch, not 20 inch
- Context sensitivity
  - Personal preferences
  - Location of usage: Kill time in the bus, etc
- Personal Trusted Communication Device
  - Communication device
  - Nature of charged services

## So how to make it a compelling experience?

- Suitable content, suitable format:
  - “mobisodes”
  - News, sports and music-clips
  - Interactive services
  - GUI for mobile terminal (EPG, interaction)
- Terminal
  - Usability: Screen, keyboard
  - Battery life
  - Reception issues (“dead spots”)
  - Price
- Low and simple charging
  - Market research suggests €2 to €3 per month for basic package
  - Free content will be significant factor in driving adoption
  - Need for new advertising methods

# Competing Broadcasting Technologies



# Competing Broadcasting Technologies

	Advantages	Drawbacks
DVB-H	compatible with DVB-T networks - shared use of the DVB frequency bands can share a multiplex with DVB-T services	noticeable delay in signal acquisition when the user switches from channel to channel
DMB	Can used allocated DAB frequencies	reception in-building
ISDB-T	both fixed and mobile services	
Media FLO	Similar to DVB-H	Proprietary
MBMS	re-use of the cellular spectrum Reduces implementation costs both in the network and in handheld terminals	Transmission capacity

...and also IPTV over MBMS, WLAN, WiMAX (802.16 for fixed/nomadic and upcoming 802.16e for mobile)

# Regulation

Existing regulation: two separate worlds

## Telecom network

Interested mainly by the support

- International rules (ITU, IETF)
- Spectrum auction (and price war ...)
- International competitive market
- Private content
- Contents not regulated (Internet)

## Broadcast network

Interested mainly by the content

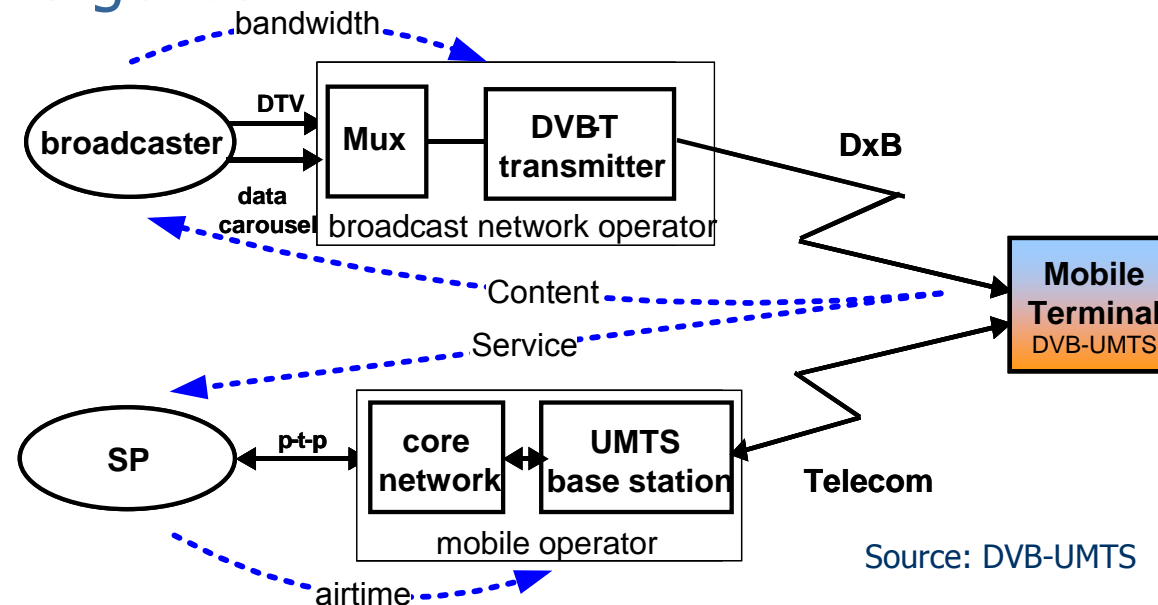
- National rules
- Selective spectrum allocation
- Two sectors : public/private
- Popular content
- Contents regulated

Evolution: two basic principles

- Separation between
  - regulation of transport infrastructure (networks)
  - regulation of content
- Basic distinction between two types of content
  - broadcast communications (to the public)
  - private correspondence (person-to-person)

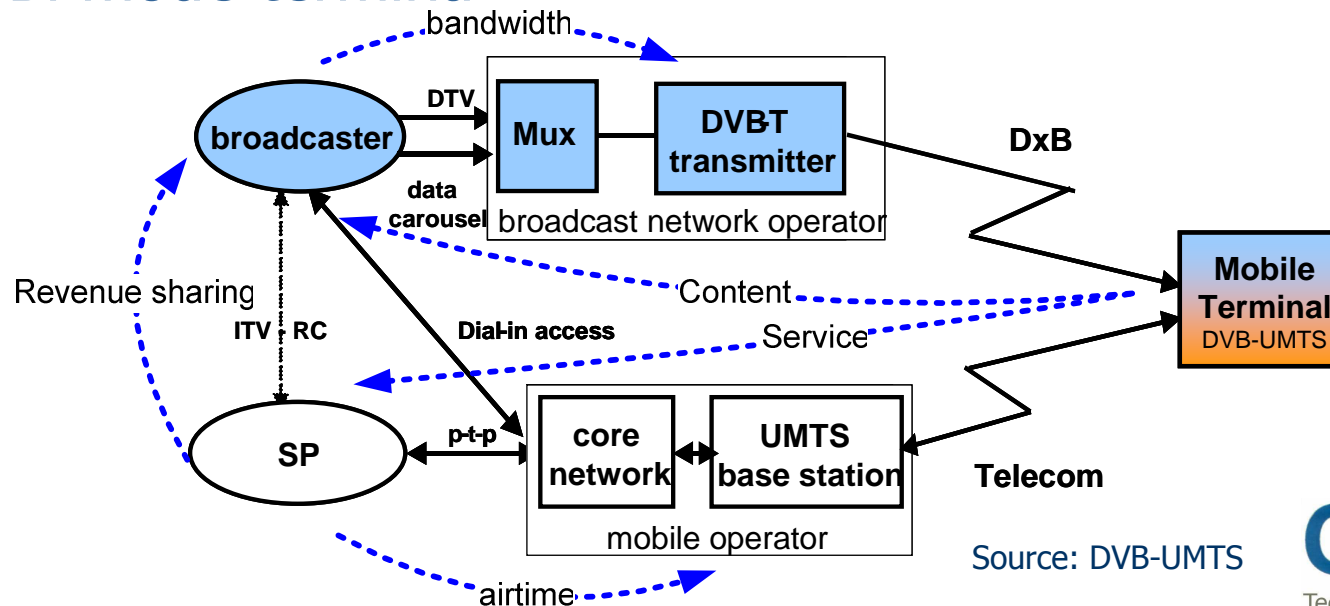
# Integration business models

- Integrated services at the terminal level (terminal oriented)
  - Services of the two networks are independent and available separately
  - Bi-mode terminal
  - No really network co-operation but terminal convergence



# Integration business models

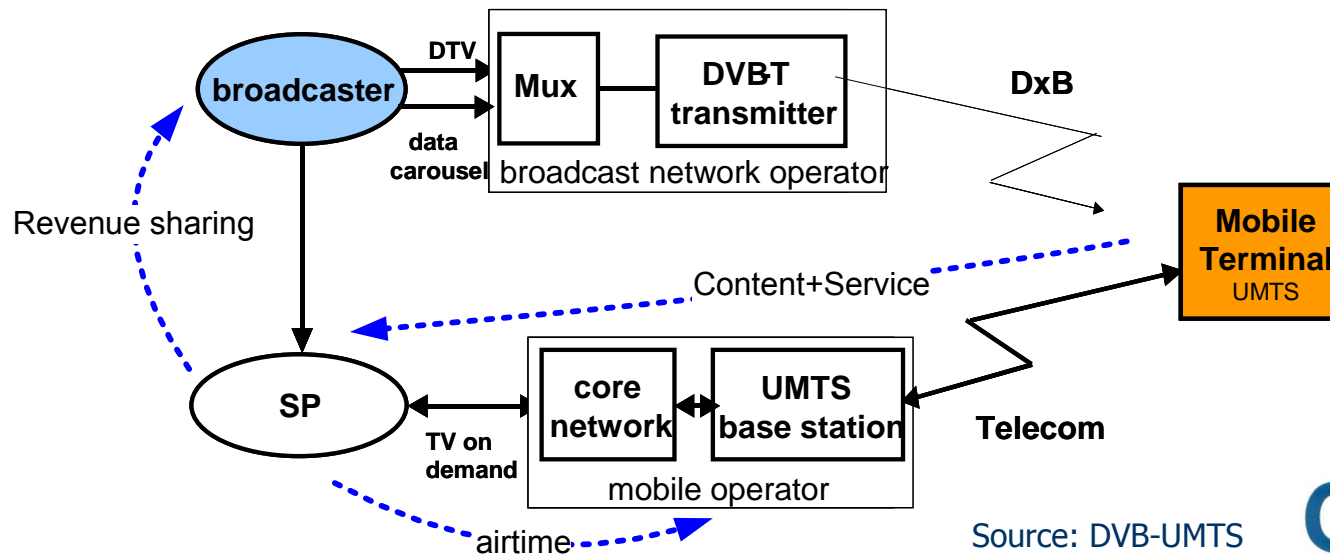
- Interactive TV/radio services for mobility (broadcast oriented)
  - Mobile network provides a return channel (as for interactive TV)
  - Interactive broadcast services thanks to GPRS or UMTS
  - Bi mode terminal



Source: DVB-UMTS

# Integration business models

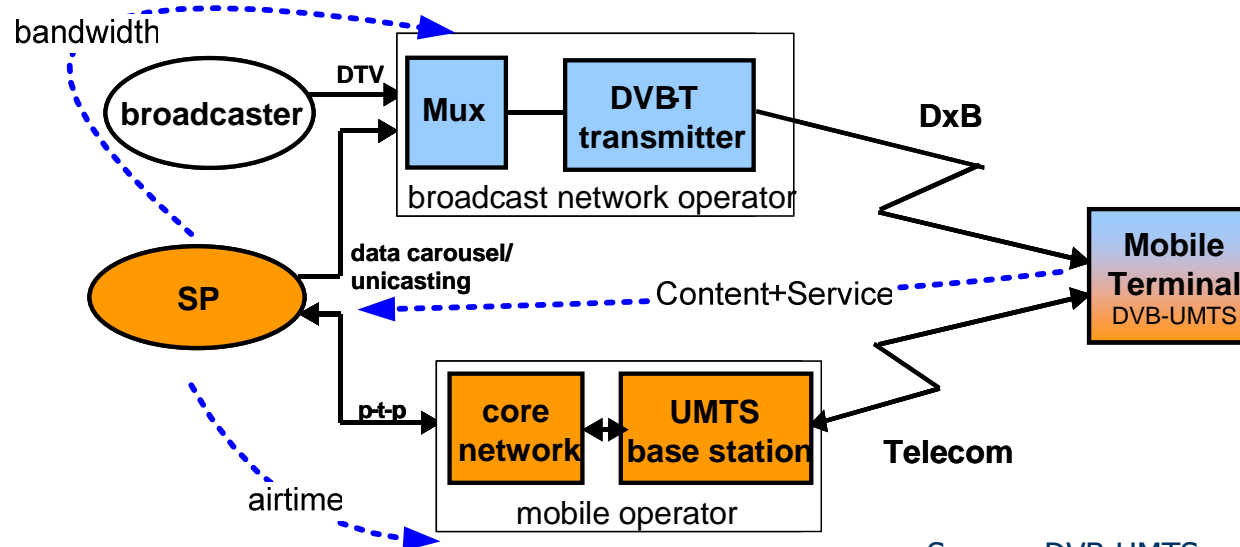
- TV services provided by telecom networks (content oriented)
  - Services provided by an SP through the mobile network
  - Adapted contents
  - Not necessary a bi mode terminal



Source: DVB-UMTS

# Integration business models

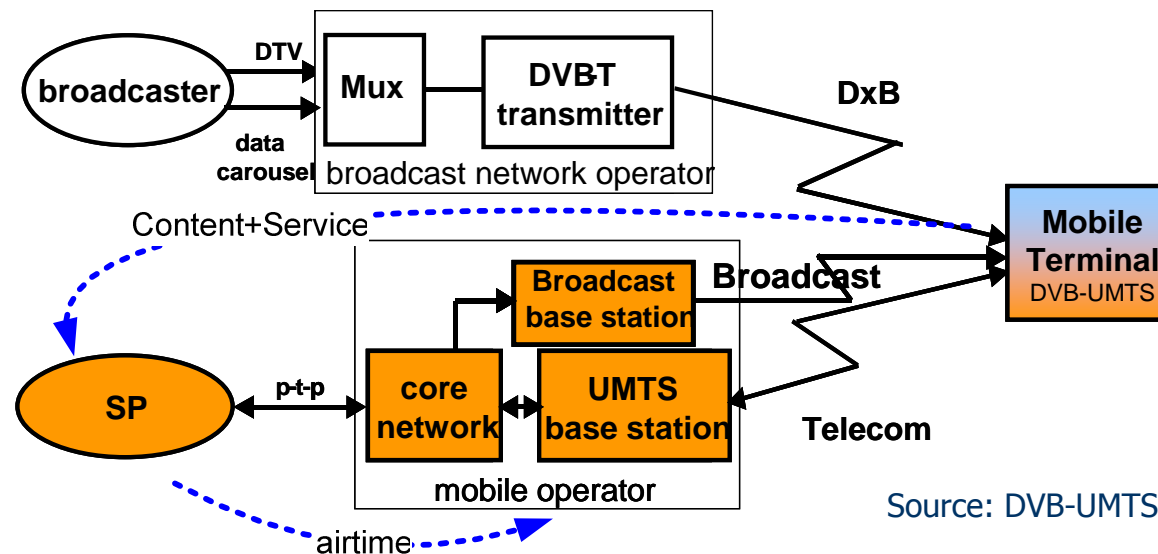
- Broadcast data services (SP oriented)
  - Data services provided by an SP, non broadcast associated
  - Broadcast network provides multicast data
  - Mobile networks provides AAC
  - Bi mode terminal



Source: DVB-UMTS

# Integration business models

- Broadcast services through mobile network (telco oriented)
  - Integration of a broadcast bearer in the mobile network
  - MBMS (Multimedia Broadcast / Multicast Service) / WLAN
  - Not necessary a bi mode terminal



Source: DVB-UMTS

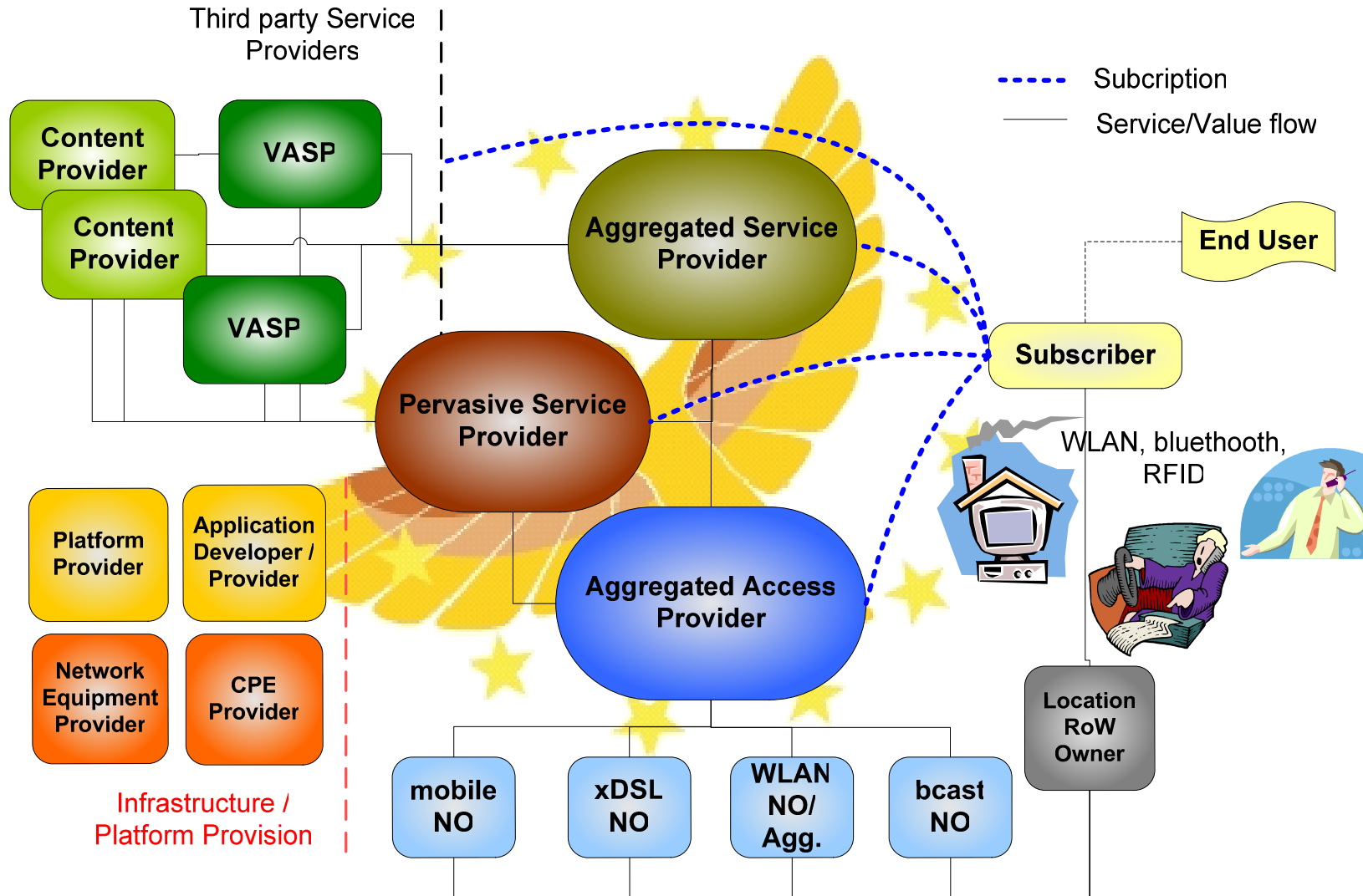
# Will it work?

- Mobile TV
  - Research shows incremental revenue at relatively conservative take-rate 20-30%
  - But...
    - Take-rate will vary by cultural heterogeneity in Europe (TV viewing rates, commuting time, technology adoption,...)
    - High unwillingness to pay
    - Finding out what content works will be very difficult: the unique attributes of the mobile environment will render decades of consumer TV viewing data irrelevant!
  - So...
    - Probably not mass market before another 5 years
    - Probably not a “killer” app
    - Precarious business case for Operator’s CAPEX depending on integration business model
- Value Added Broadcasting services (telematics, download services etc)
  - Can be more promising, but...
  - Require extensive market research for clever personalised services, and simple charging

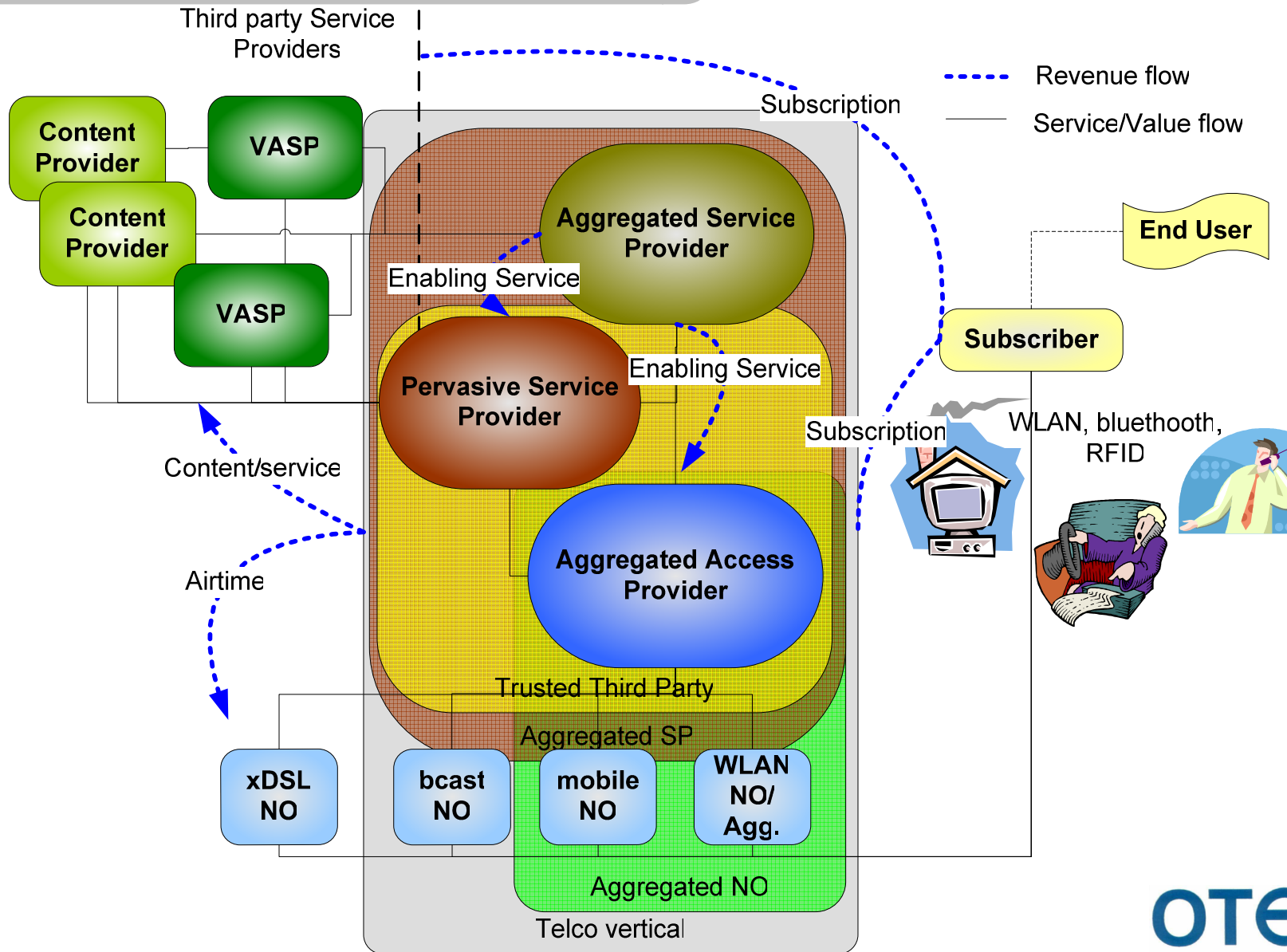
## Can DAIDALOS help?

- Targeting nomadic TV and Value Added broadcast services rather than mobile TV...
  - With Pervasiveness and VIDs
    - Integrated personalisation of content and services (across networks and CPs)
    - Seamless discovery of proximity terminals (e.g. reception of broadcast content on remote TV using own subscription)
    - Service provisioning transparent of the underlying network technology
    - Enabling technology for design and deployment of sophisticated Value Added broadcast services
  - With Federation
    - Content/services available anywhere anytime – nomadic user (home content and services when roaming)
    - Easy mix of different business models
    - Seamless convergence with other networks (fixed, WLAN)

# DAIDALOS Business Model



# DAIDALOS Business Model



**Thank you!**

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