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Business Models and oportunities

DVB-H in Spain

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20/09/06

DVB-H

Driving Mobile Television
A high level Seminar from DVB Project

Index

Company overview

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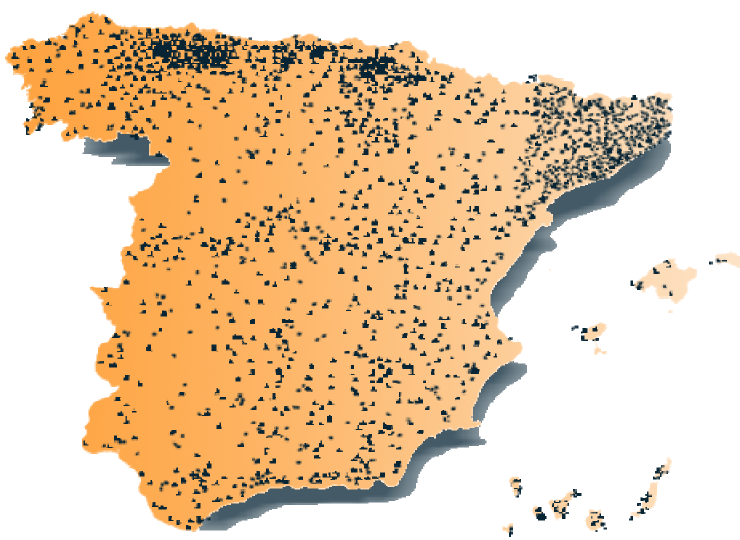
- retevisión (100%)
- tradia (100%)
- overon (51%)



Leader in Spanish Broadcasting Market

- **61%** share of total broadcasting market
- **89%** share of TV broadcasting market
- **>99%** Analogue TV coverage
- 80% **DTT** coverage

Main Activities

- Digital and analogue TV broadcasting
- Digital and analogue radio broadcasting
- Transport
- Wholesale
- Occasional Contribution

Sites

- More than 3,200 operative sites throughout the country that allows us to offer national wide broadcasting services, collocation services, O&M services and leased transport capacity.
- National Transport Network
- More than 80% of sites are multiservice -multioperator

Industry & analysts say

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Television on a mobile phone a good or excellent idea for 77.8% of respondents

(bmco research)

Between 40-60% of mobile phone users interested in receiving television

(IPDC Forum research)

Sales of TV on mobile phones will surpass sales of fixed TV sets by 2010

(Strategy Analytics)

Mobile TV users to reach 446m by 2011

(IMS Research)

Broadcast mobile TV revenues to hit $11.7bn by 2011

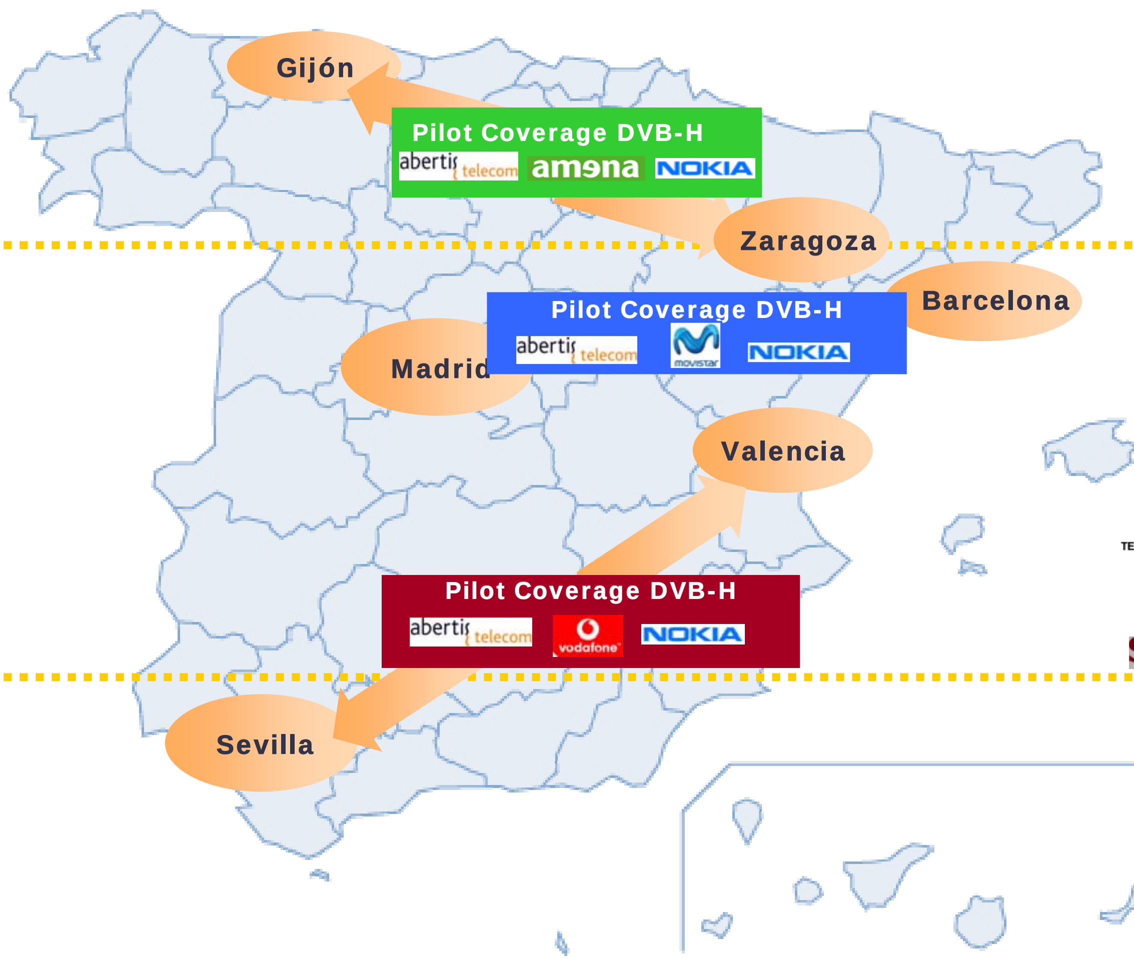
(Juniper Research)

But need to beware of the hype

DVB-H Pilots

ROLL-OUT EXPERIENCE

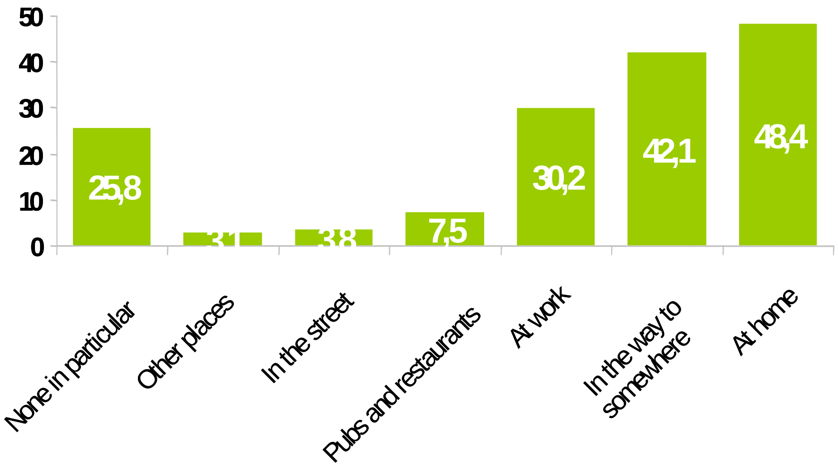
Abertis sponsored Mobile TV trials with all mobile operators in Spain involving all national broadcasters.



DVB-H Pilots

TELEFONICA TRIAL RESULTS

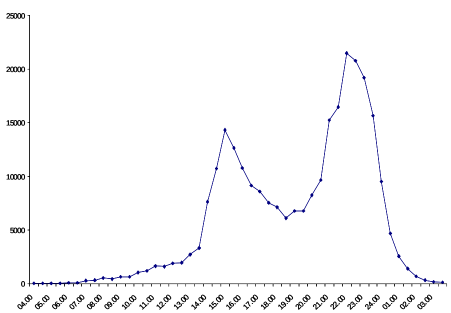
Average daily usage: 16 minutes
71% of active customers use the service between 15 and 20 minutes a day.
17% of active customers use the service more than 25 minutes a day.



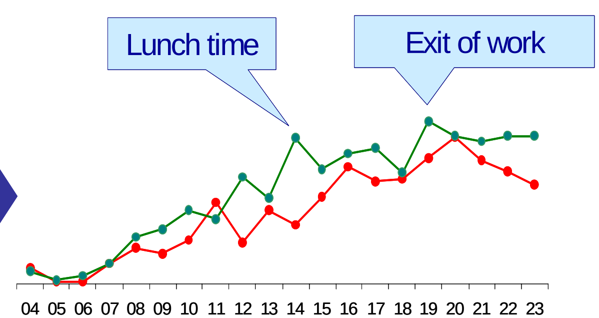
Almost 75% of the customers would recommend the service. Over 55% would go on using it, even if they had to pay for it.

58.5% of the customers are willing to have contents designed for the mobile.

The programs watching patterns replicate those in conventional TV, although it is remarkable the high audience of music programs (TV as a personal music device).



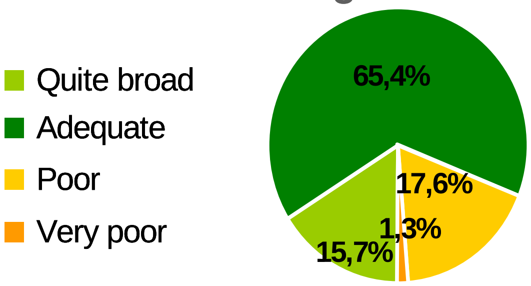
Typical TV watching pattern in Spain



Trial watching pattern

- Average users (festive days)
- Average users (working days)

Service offering valuation



DVB-H Pilots

VODAFONE TRIAL RESULTS

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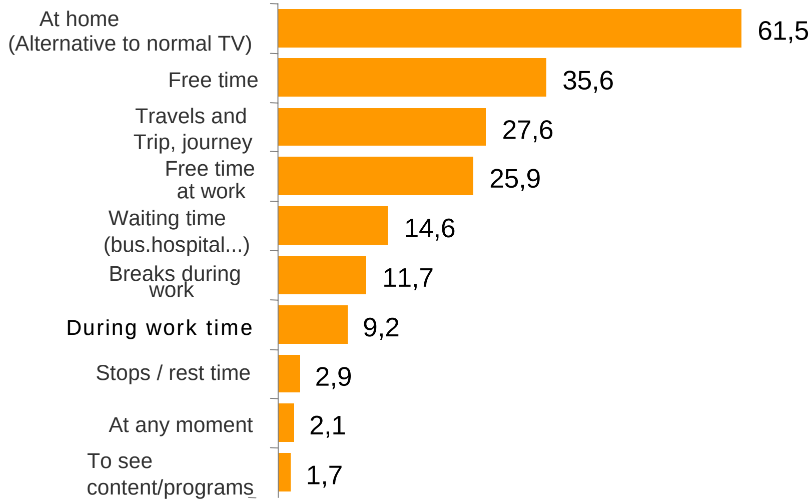
vodafone

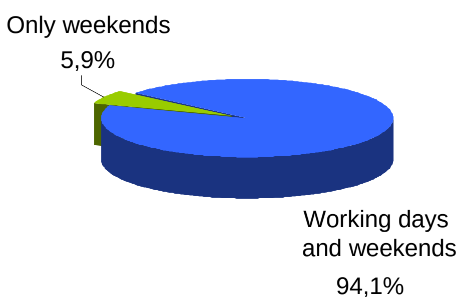
Average daily usage: 20-25 minutes
29,4% of active customers use the service between 31 and 60 minutes a day.
50% of active customers use the service more than 20 minutes a day.

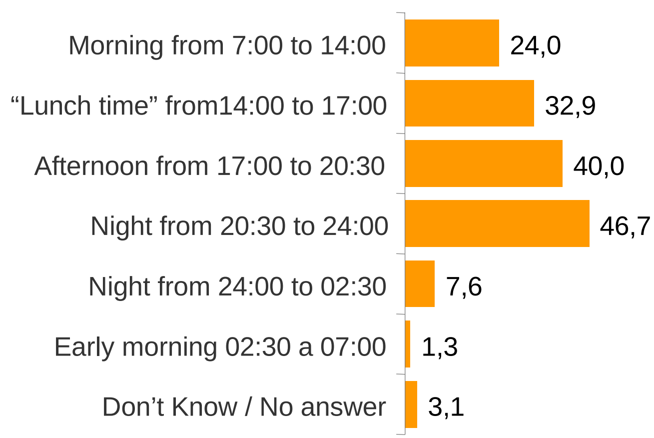


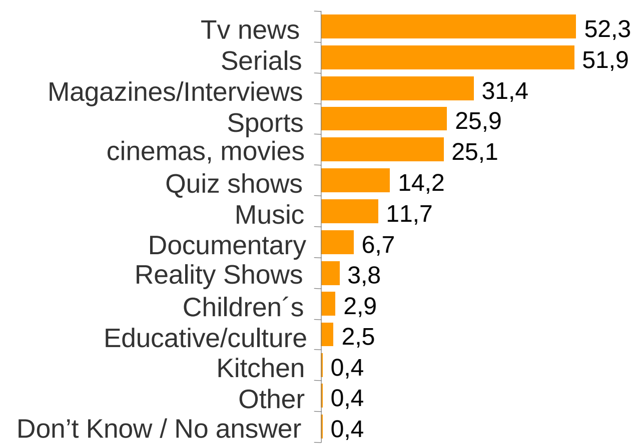
80% of the customers would recommend the service. Almost all customers asume they will have to pay for it, and 50 % would pay between 5 and 10 euros per month .

Tv news, serials and magazines are, in this order, the favorite programs for customers.

80% of trial customers consider the service as "very easy to handle" .







Where to start from?

	9	8		6	5			3
2					3		1	5
	1				9			8
5	7				4		8	
	3		9	7			2	
	4		8				7	1
4			3				9	
1	2		6					7
6			5	4		1	3	

9 Key Questions

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What can be offered to viewers?

What do viewers want?

Who can develop appealing content?

Who has access to the necessary resources (spectrum content, networks)?

DVB-H vs. 3G ?

What are the investment capabilities of the partners?

What billing mechanism – if any – will be used to generate income?

Who inserts advertising? New Ads model?

Who manages the end-relationship with the viewer and can market the offering?

Which is the targeted platform? Mobile phones only?

?

Broadcasters and telecom operators may need to work together

DVB-H Devices

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The portable concept is everywhere. A unique terminal seems preferable, but devices are not just only for cell phones...

The New SD/SDIO DVB-H Cards allows to introduce DVB-H everywhere !

.. are also for PMP,PVR's, Laptops, PDA's, cameras ...

Convergence between MNO & BCAST

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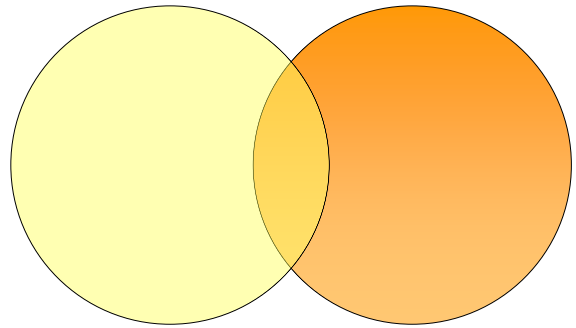
Mobile Operators



Broadcasters

Mobile Operators	Broadcasters
Mobility	Content, content, content
Secure personal interaction	High brand awareness
One-to-one relationship with end user	One-to-many scalability
Investment capabilities	High transmission bandwidth

But need a suitable business model

Implications for Broadcasters

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1. Importance of content gives broadcasters an advantage
2. Alternative use of broadcast Spectrum
3. May dilute direct relationship with viewer

Unique features of mobile TV

- Viewer availability
- Screen-size
- Interactivity (revenue opportunities)

What role do broadcasters want?

Implications for Mobile Operators

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① Direct billing relationship with viewers

② New service offering; increased ARPU

③ Less time spent making/receiving telephone calls

New opportunities for leveraging on-demand (3G) services

What role do mobile operators want?

Implications for Network Operators

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① Mobile infrastructure used may blur relationship

② Existing broadcast infrastructure can be re-used

③ Opportunities for new revenue streams

New role in the value chain:

- content aggregator
- service provider
- broadcast network operator

What role do network operators want?

Mobile Tv Business Models

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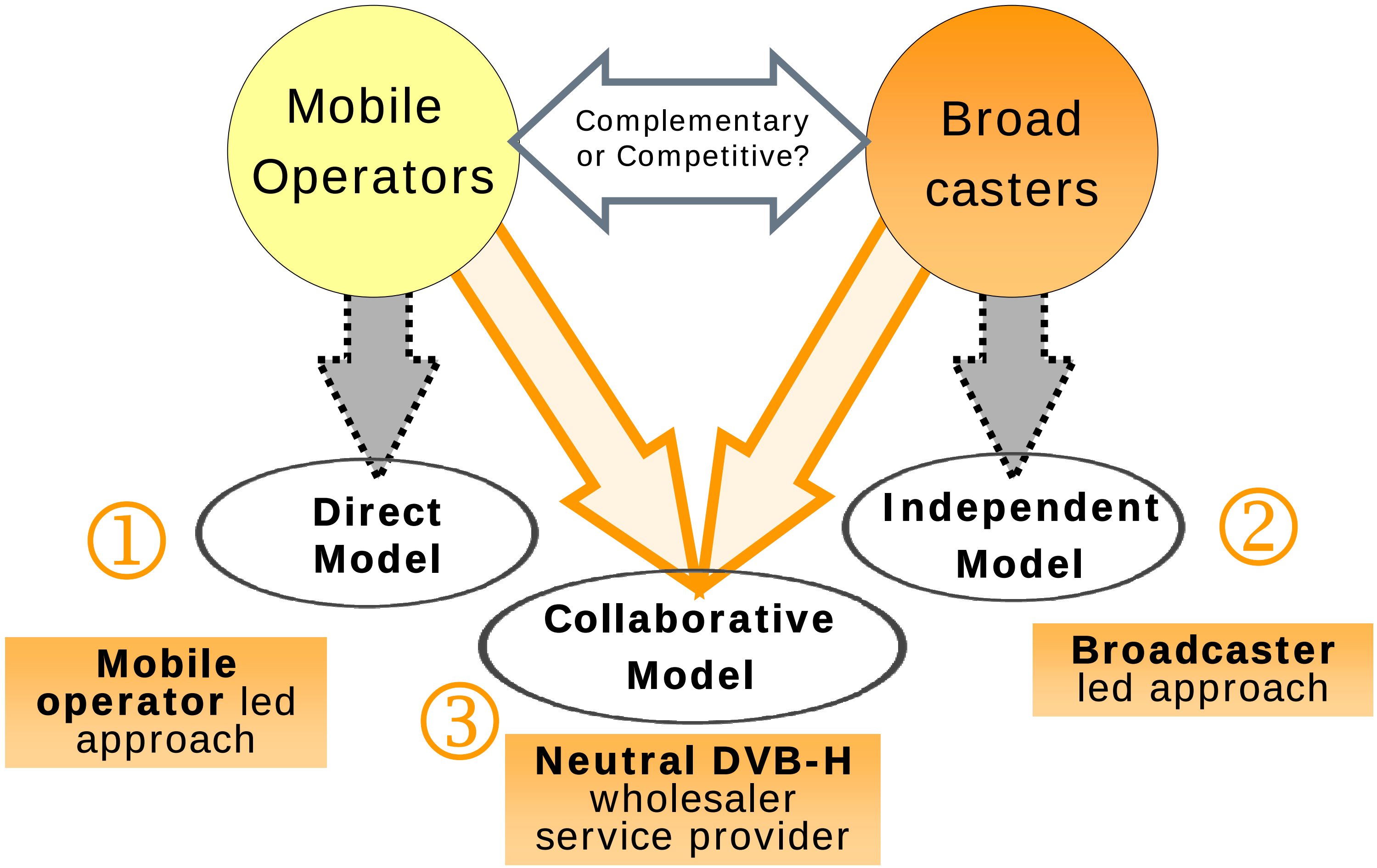

Mobile Operator led approach

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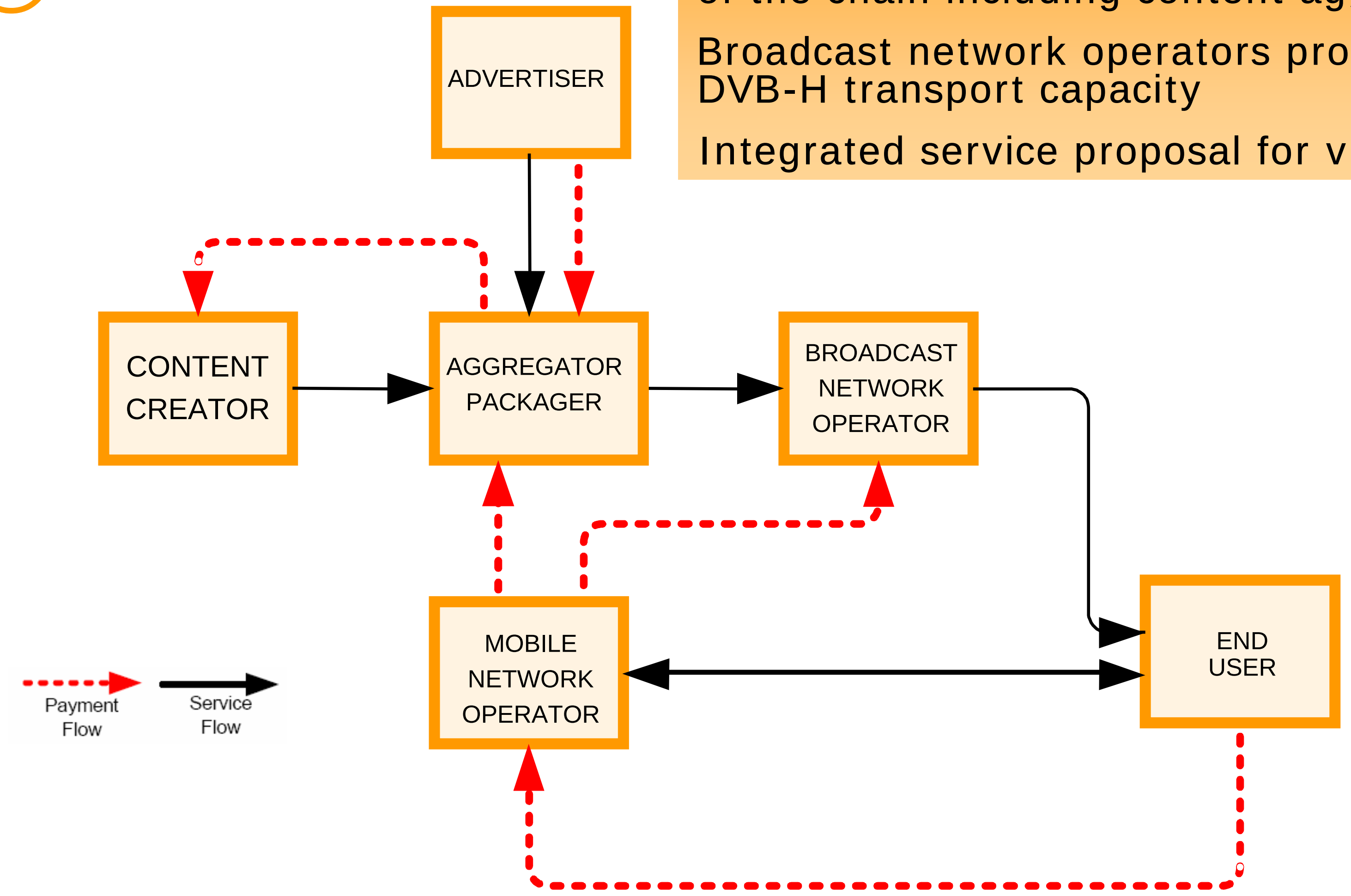
① Direct Model

Mobile operator responsible for all aspects of the chain including content aggregation

Broadcast network operators provide the DVB-H transport capacity

Integrated service proposal for viewers



Broadcast led approach

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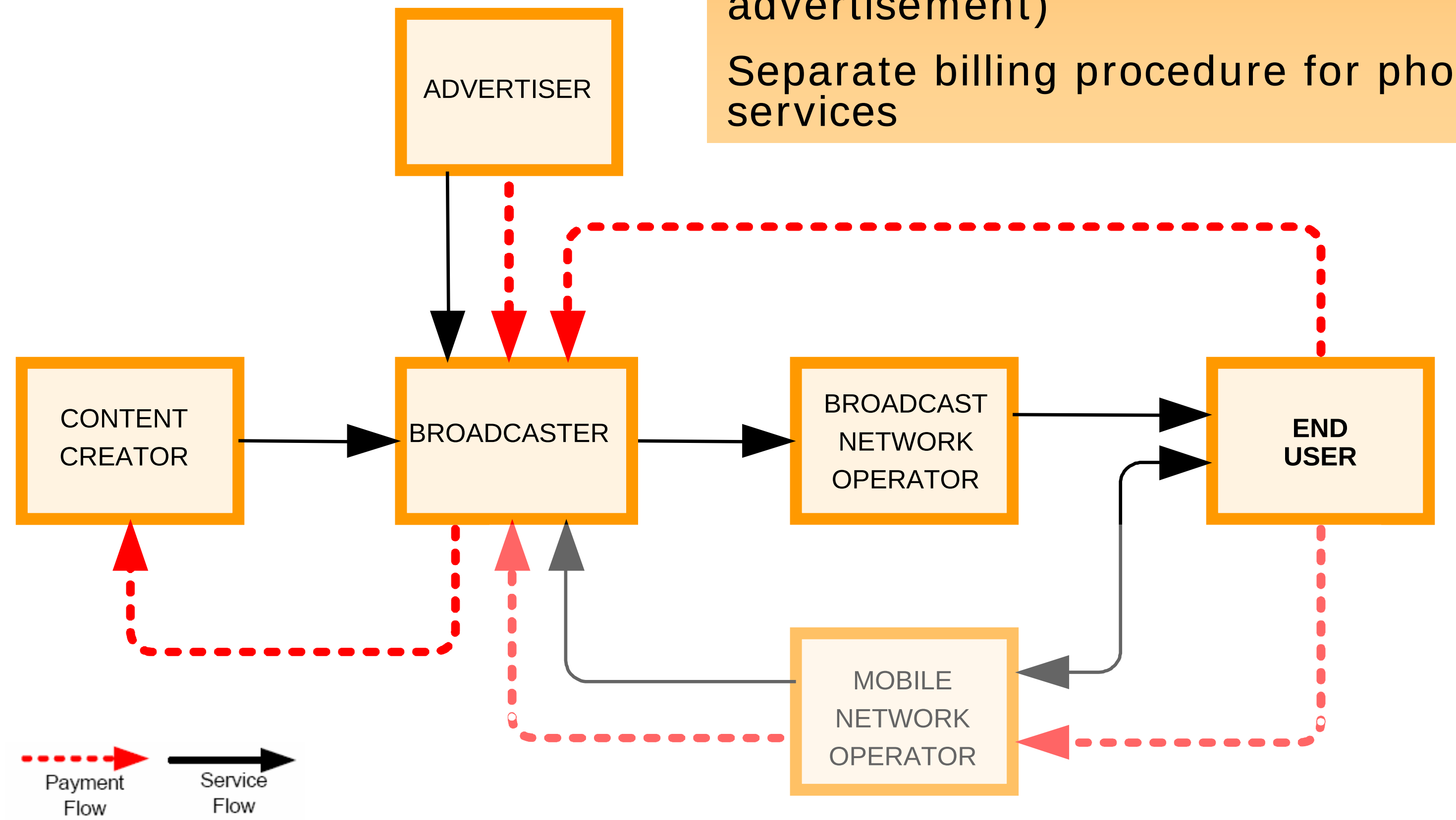
② Independent Model

Broadcasters manage end relationship with viewers

Broadcaster receives payment for services (pay services, licence fee, advertisement)

Separate billing procedure for phone services



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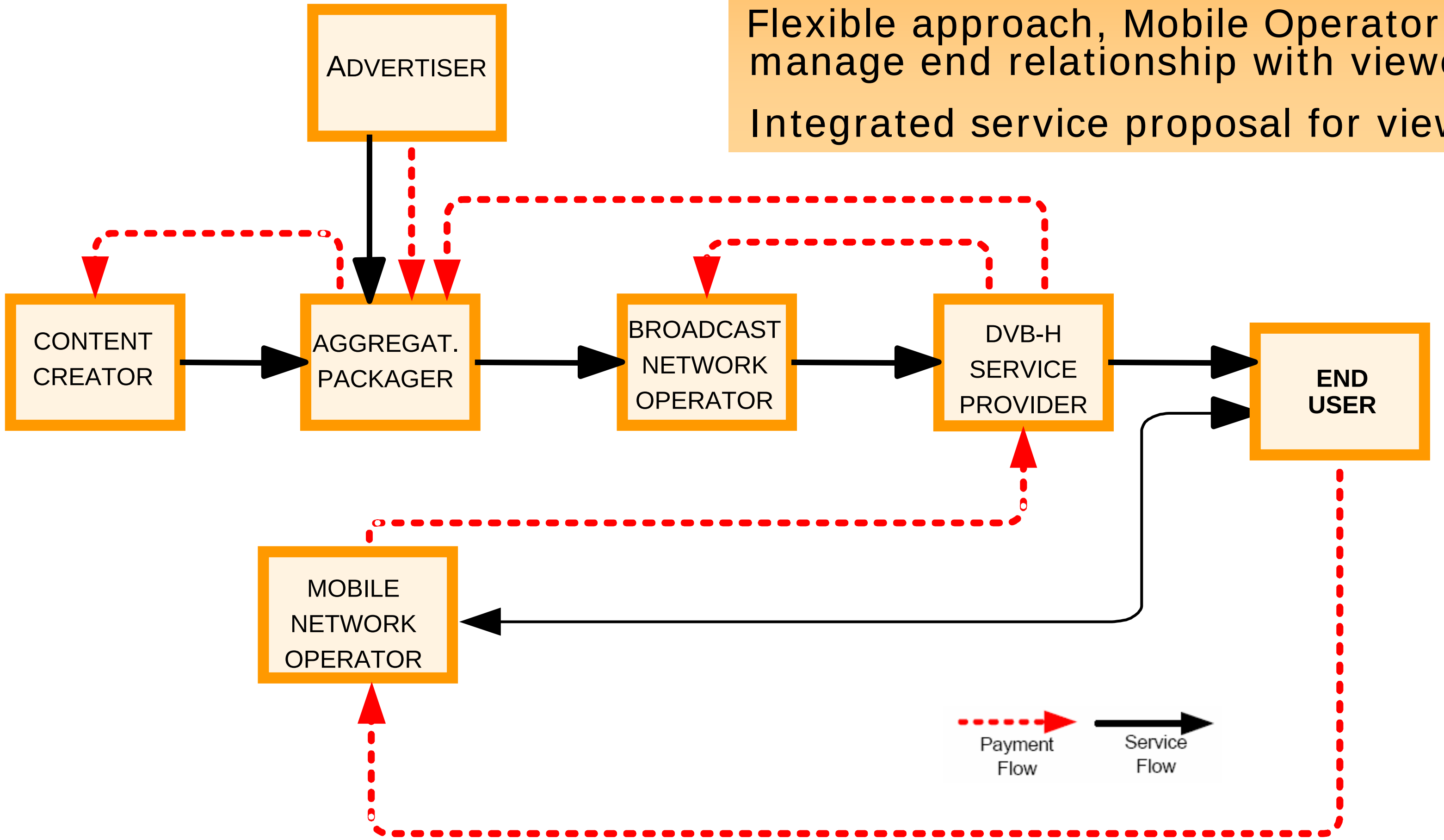
③ Collaborative Model

Independent service provider acts as wholesale facilitator for content aggregation and use of spectrum

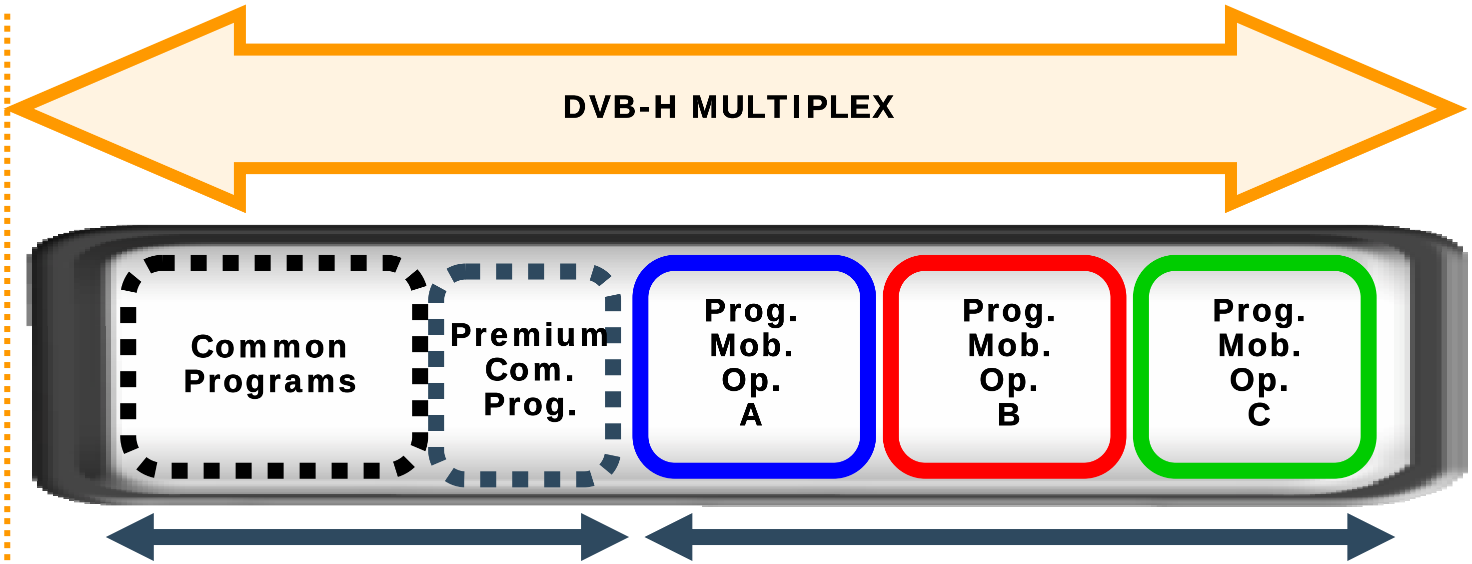
Flexible approach, Mobile Operator can manage end relationship with viewers

Integrated service proposal for viewers



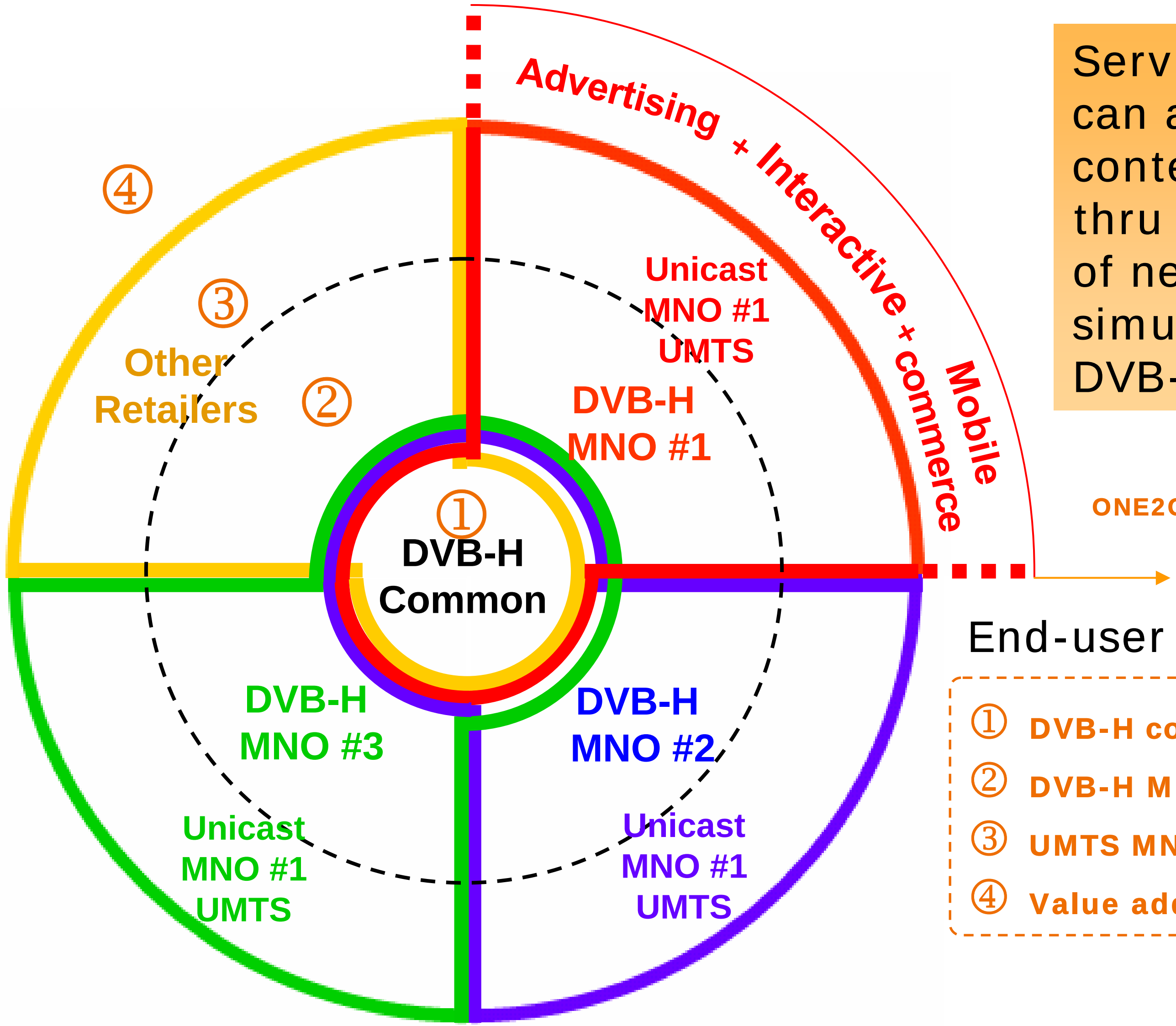
Collaborative model

The collaborative model can be achieved with the presence of a wholesaler of the service acting as Datacast Operator.



Licensing flexibility is highly required and a wholesale approach should allow a content offer adaptable to the market requirements that may change during lifetime

Collaborative coexistence



Service providers can aggregate contents delivered thru different type of networks simultaneously, DVB-H and 3G

End-user Content Offer

① DVB-H common content
② DVB-H MNO specific content
③ UMTS MNO VOD content
④ Value added content

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Collaborative Model can be the answer in a scarcity of resources –UHF- scenario

7	9	8	1	6	5	2	4	3
2	6	4	7	8	3	9	1	5
3	1	5	4	2	9	7	6	8
5	7	1	2	3	4	6	8	9
8	3	6	9	7	1	5	2	4
9	4	2	8	5	6	3	7	1
4	5	7	3	1	2	8	9	6
1	2	3	6	9	8	4	5	7
6	8	9	5	4	7	1	3	2

Conclusions

- User demand is there now
- DVB-H at UHF Band fulfills the commercial requirements
- Target audience should consider all type of devices
- Flexible solutions and models required, an oriented wholesale approach leaves potential retailers (Broadcasters and Mobile Operators) negotiate a sustainable business case

However there are some issues yet to be resolved at European level and to be considered:

- Harmonized bands: Frequency availability and planning approach.
- Interoperability: Content protection standards fragmentation.
- It's linear television: Content rights in accordance with Terrestrial TV distribution.

Opportunities ahead!

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Many Thanks

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With thanks to DigiTAG *for presentation material used.*