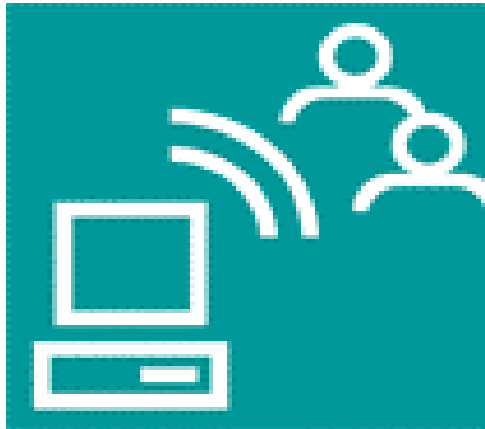




ANDERSEN

Business Consulting

Technology, Media & Communications



Outlook of the development of technologies and markets for the European Audio-visual sector up to 2010

June 2002



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- The current European audio-visual market (trends 1995-2000)
- The likely future (up to 2010) balances between interactivity and full personalisation
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Background of the study

The purpose of this study is to provide scenarios for the likely development of European audio-visual services up to 2010, the prevailing business models and the associated changes in consumer behaviour

In order to define the future state of the industry, Andersen has worked out possible scenarios that address the following questions:

- How will the economic viability of the sector and its operators evolve in the future?
 - *The size and the evolution of the two main revenue sources of the industry: the advertising flows and the subscription and consumer spending flows (Public funding has been considered as a given “exogenous variable”)*
 - *The size and the evolution of the revenue flows of the key industry stakeholders, that have been regrouped in three categories (content producers and rights holders, programme packagers, networks and access providers)*

- How will consumer choice and control evolve in the future?
 - *Consumer choice and control has been retained as a quantitative and identifiable variable in order to estimate the consumers' welfare in terms of audio-visual offering and more generally as an effective dimension to synthesise the achievement of general interest objectives such as cultural diversity and pluralism*
 - *The main quantitative variable used in this prospective is the number of channels available in each country. Yet the number of channels needs to be supplemented by other qualitative variables, especially in the personalisation scenario. In this scenario, the faculty to broadcast, record and release content on demand enables the user to benefit from a larger choice than traditional TV channels.*



Trends in the audio-visual industry (1995-2000)

- **Trend 1** - Continuing growth of multi-channel and/or digital platforms
- **Trend 2** - Public service and commercial free-to-air channels maintain their audience share
- **Trend 3** - Decreasing financial strength and progressive consolidation of all operators
- **Trend 4** - Creation of large integrated and international groups
- **Trend 5** - Subscription revenues gain relative weight



Overview of the scenarios

Key dimensions of the scenarios

Scenario 1: Business-as-usual scenario

- Technology disruptive factors will not impact service offerings and consumer behaviour
- Economic and market trends that have been identified between 1995 and 2000 will continue

Scenario 2 : Interactivity

- The television screen will be used to access more and new entertainment services
Consequently, viewing time will be fragmented over television's different uses

Scenario 3 : Personalisation

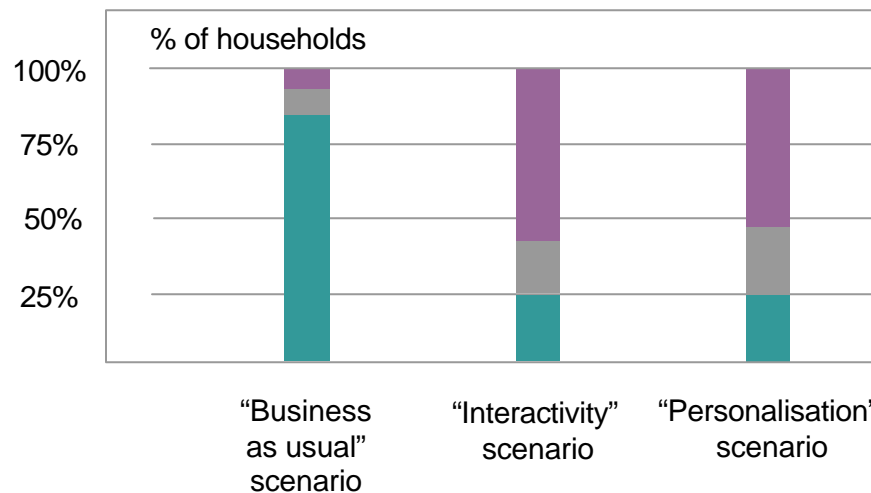
- A paradigm shift will occur from channel-based viewing to programme-based viewing:
 - Simultaneous TV viewing at the time it is broadcast will be reduced
 - Most content will be pre-recorded and accessed “on demand”



Overview of the scenarios

Disruptive factors will interact with different levels of intensity in each scenario

- Consumers will embrace the new services differently:
 - Some will fully embrace the new services and radically change their behaviour
 - Other will have access to the new services but will only partly make use of them
 - Finally, a third category of consumers will not subscribe or not have access to these services



Key

- Households that regularly use new services
- Households that have access to new services but don't use them
- Households that don't have access to new services

- New services are both services that relate to interactivity and personalisation
- The relative importance of "interactivity" or "personalisation" will depend on the scenario



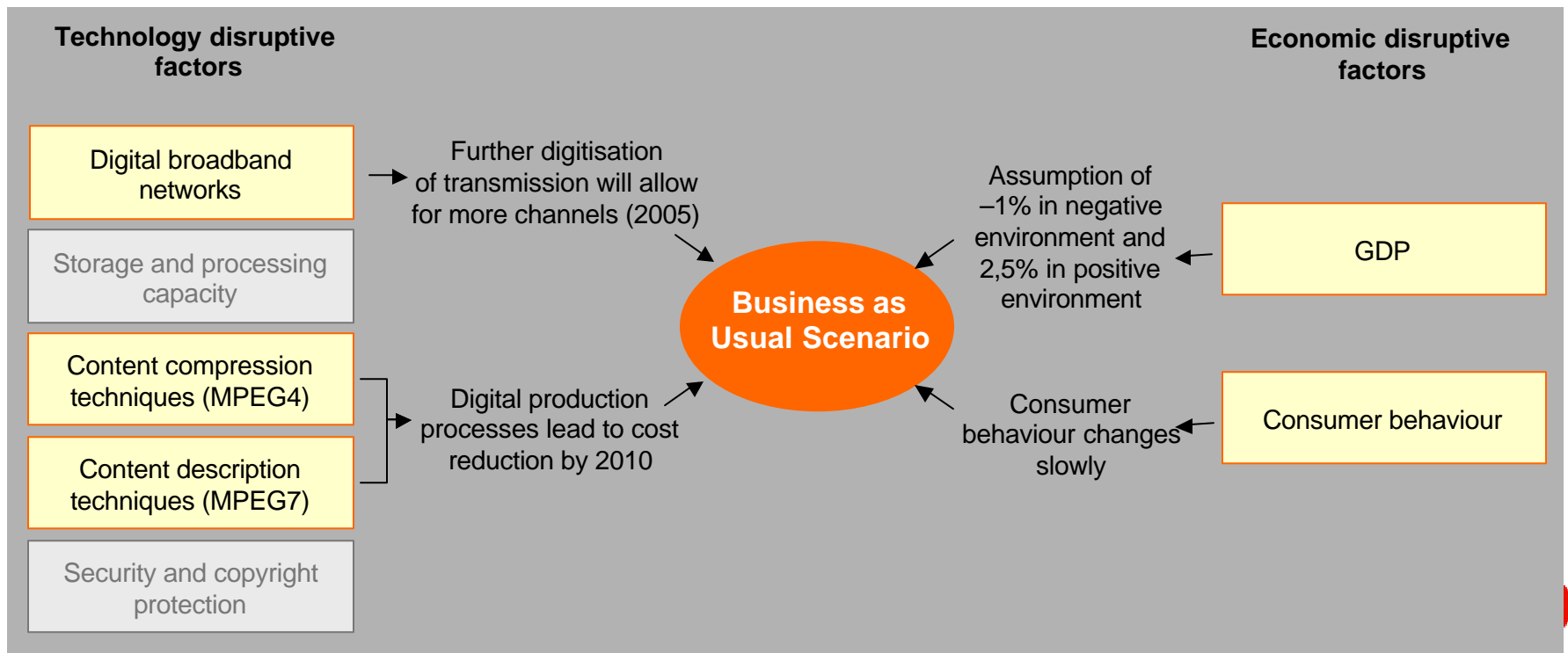
1. The 'Business-as-usual' scenario

Key hypotheses for a 'business-as-usual' scenario

Key hypotheses

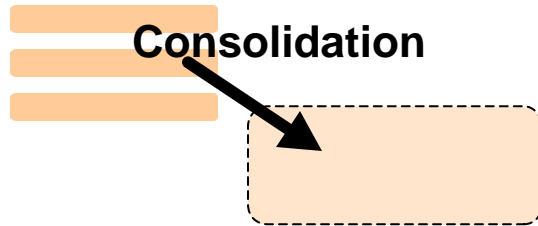
"Technology disruptive factors will not impact the service offerings nor consumer behaviour"

"Economic and market trends that have been identified between 1995 and 2000 will continue"



1. 'Business-as-usual' scenario

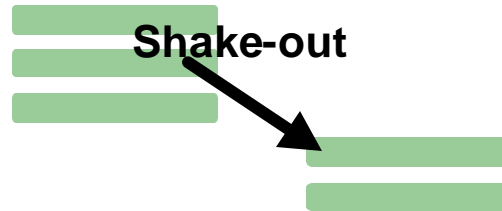
The likely impact on key stakeholders



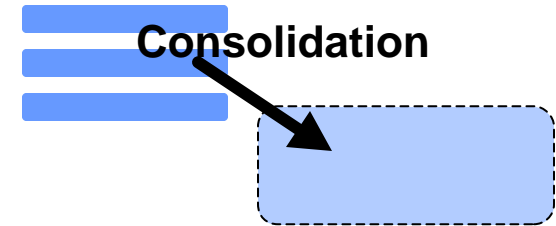
- 1 The European content production market remains fragmented despite the **consolidation** of the top-end players and the shake-out of the low-end of the market

Increase of costs of rights will be limited, partly due to the slowing down of advertising market and the fact that subscription revenues are still limited.

Profitability will further decrease



- 2 **Shake-out** of the number of pay-TV operators, especially in the large markets



- 3 Continued **consolidation** of the access provisioning industry and repricing of the infrastructure



2. 'Interactivity' scenario

The combination of disruptive factors that produces "Interactivity"

Key hypotheses

"The television screen will be used to access more and new entertainment services. Consequently, viewing time will be fragmented over television's different uses"

Technology disruptive factors

Digital broadband networks

Storage and processing capacity

Content compression techniques (MPEG4)

Content description techniques (MPEG7)

Security and copyright protection

Two-way capacity (by 2010)

Intelligent end-user devices allow interactivity (by 2004)

Interactivity

Assumption of -1% in negative environment and 2,5% in Positive environment

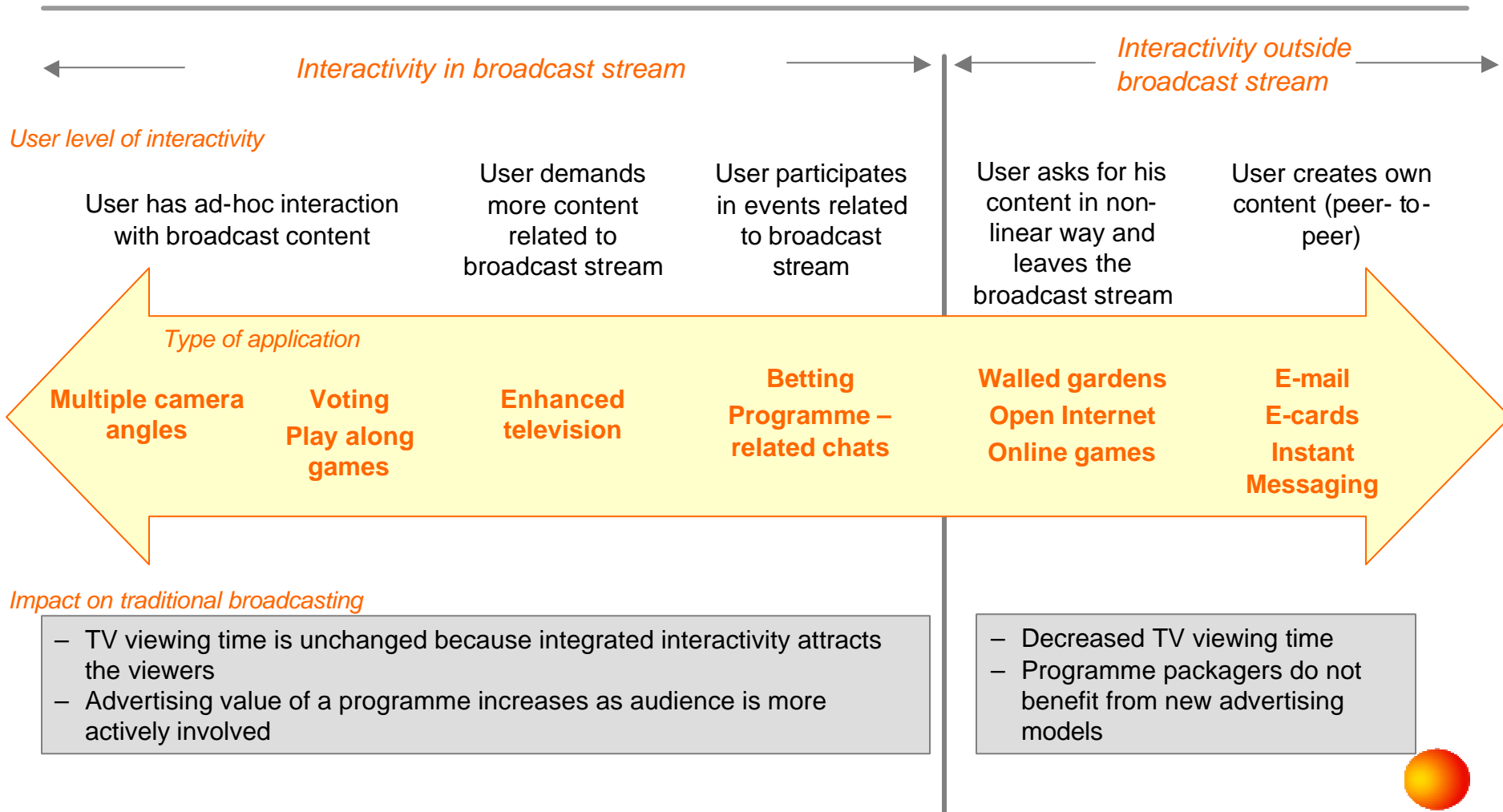
Economic disruptive factors

GDP

Investments network operators

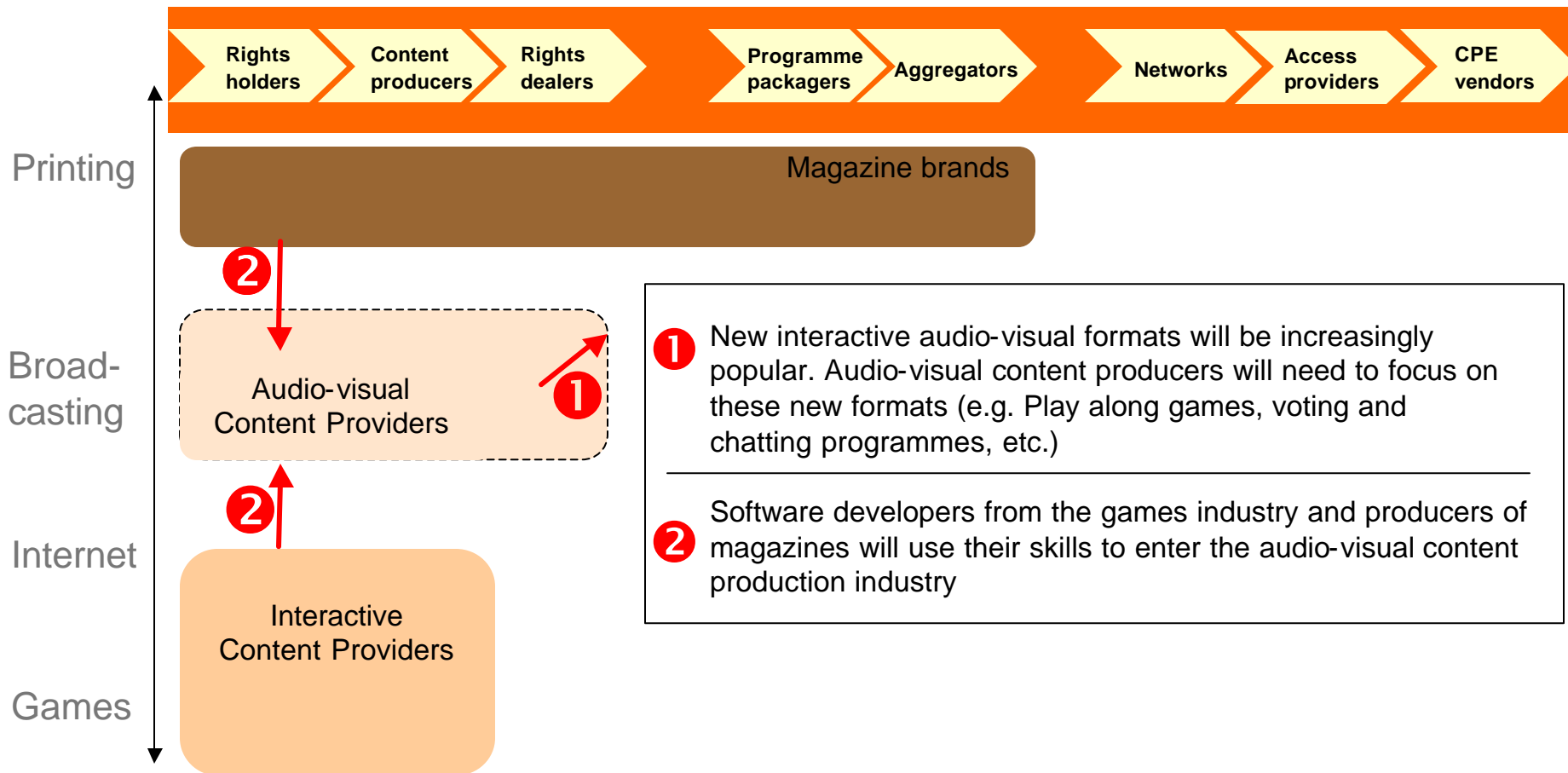
2. 'Interactivity' scenario

New functionalities available to the consumer



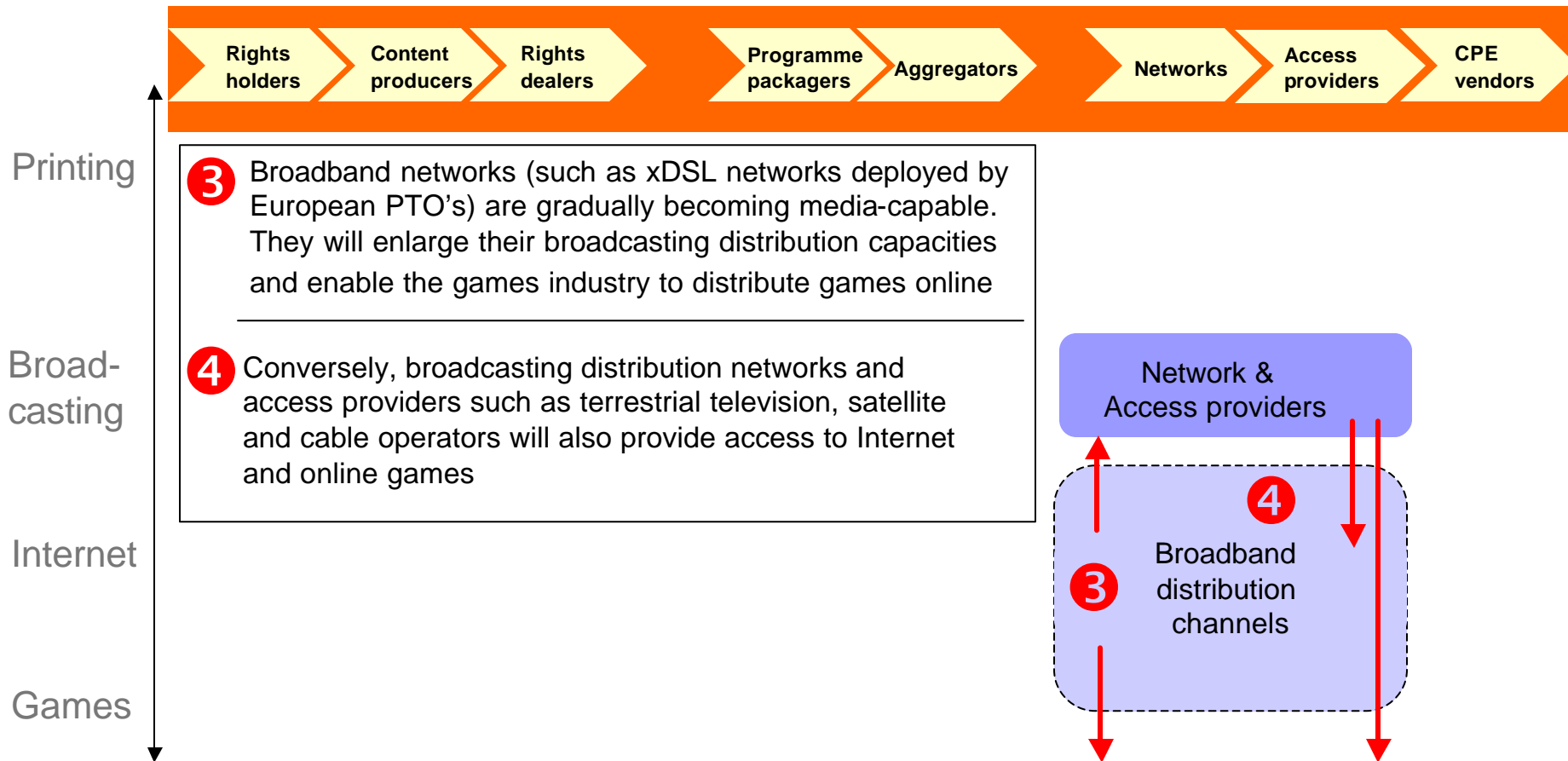
2. 'Interactivity' scenario - Likely impact on key stakeholders

The content production industry is expected to focus on new interactive formats



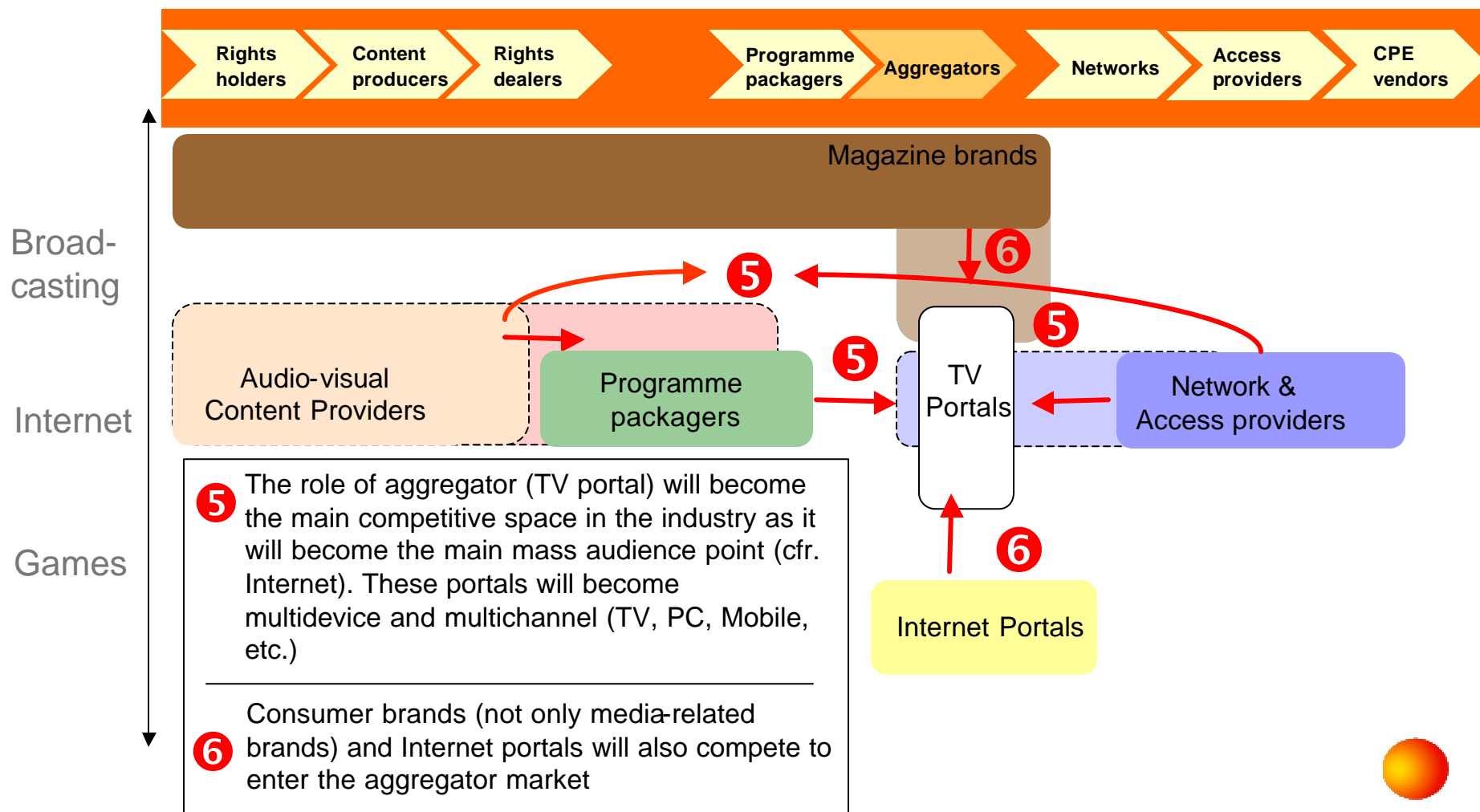
2. 'Interactivity' scenario - Likely impact on key stakeholders

Technological convergence will likely occur between broadcast networks and broadband distribution channels



2. 'Interactivity' scenario - Likely impact on key stakeholders

Aggregation becomes a viable stand-alone position



2. 'Interactivity' scenario - Likely impact on key stakeholders

Overview of the likely evolution in market strength of the key stakeholders



Evolution of role in a positive economic climate

- New types of content producers will enter the market (software developers, game developers, magazines)
- A new competitive space could be created. The audiovisual industry could win if it is able to acquire the skills to develop interactive content (software engineering, interactive storyboarding, etc.)

- More competitors for viewing time from new applications
- Decreasing bargaining power as a consequence of market fragmentation

- Aggregator will be the TV portal
- New mass audience applications (advertising opportunities)
- New entrants (publishers, Internet)
- Could dominate customer relation or become content trader

- Television will be used to access more content types
- Large part of the interactivity is platform provided (new revenues)
- Monetisation of audience data (interactive advertising)

Evolution of relative strength in the value chain

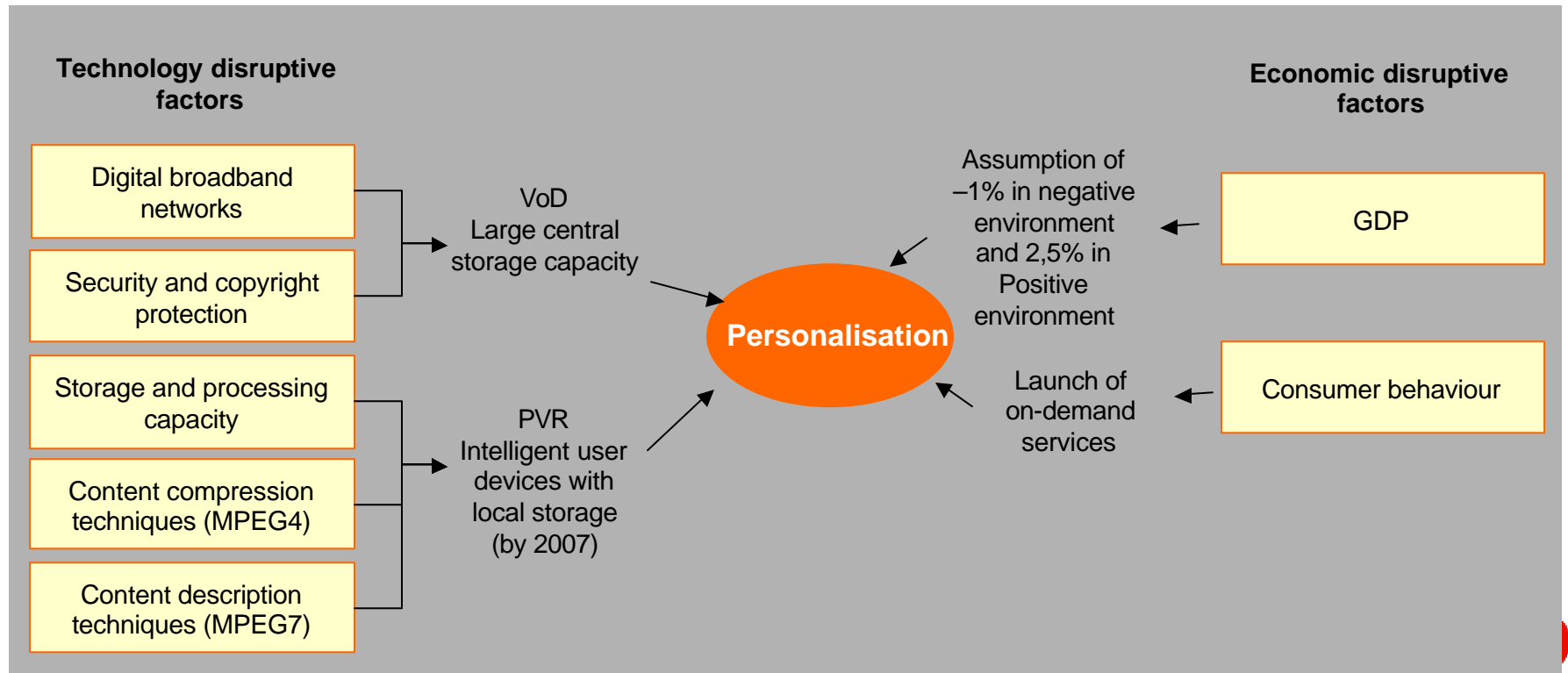


3. 'Personalisation' scenario

The combination of disruptive factors that produces "Personalisation"

Key hypotheses

"There will be a paradigm shift from channel-based viewing to programme-based viewing"



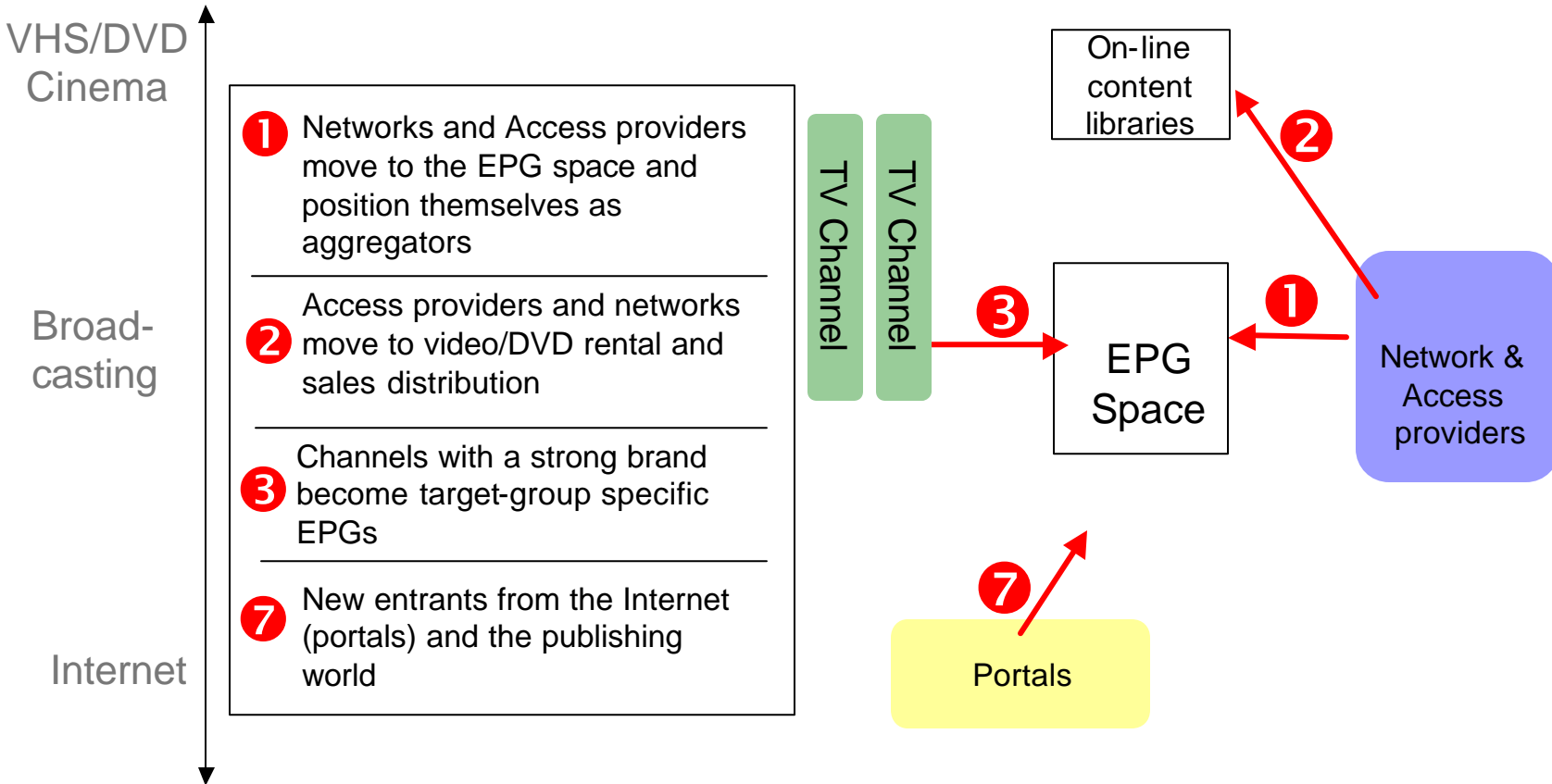
3. 'Personalisation' scenario

New functionalities available to the consumer

<ul style="list-style-type: none">▪ VOD services allow users to search and select programmes centrally stored▪ A PVR (Personal Video Recorder) is a device that allows users to search, select, record and replay programmes▪ These systems have following main characteristics:<ul style="list-style-type: none">– They have a user-friendly on-screen interface– They (centrally or locally) store and interpret metadata	<ul style="list-style-type: none">▪ Time shifting	<ul style="list-style-type: none">▪ Pause live TV programs▪ Rewind live TV programs
	<ul style="list-style-type: none">▪ Channel schedule independence by easy recording of multiple programmes	<ul style="list-style-type: none">▪ Less live TV viewing▪ Individual channel creation▪ Availability of previously “unreachable” programmes because of timing▪ Skipping inter-programme commercials
	<ul style="list-style-type: none">▪ New services	<ul style="list-style-type: none">▪ Electronic programme guide (EPG)▪ Searchable content libraries (VoD)▪ Real-time or “download” based VoD for specific content▪ Virtual channels (aggregators using search engines and VoD solutions to create a channel)

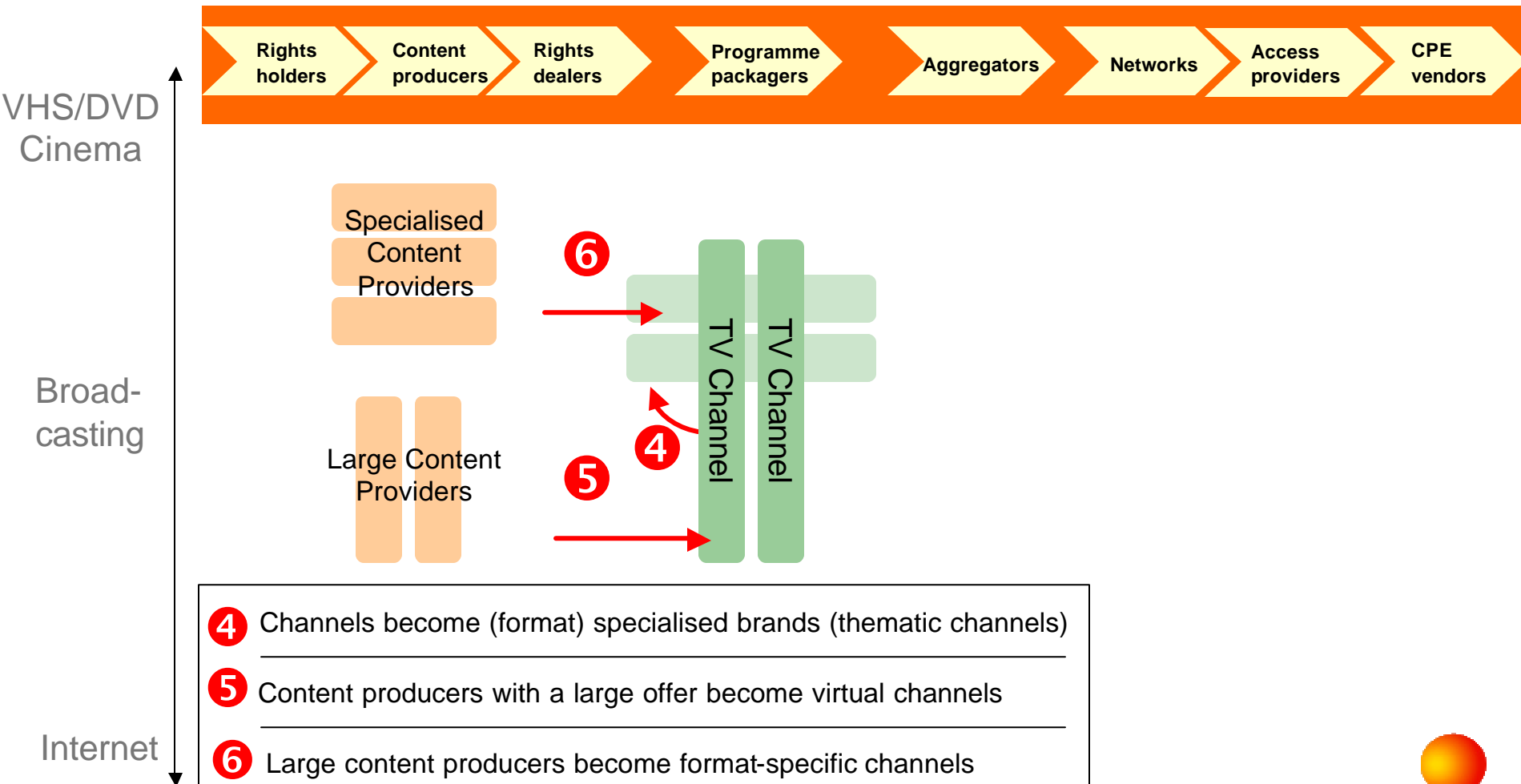


3. 'Personalisation' scenario - Likely impact on key stakeholders *EPG's are likely to become the main competitive space*



3. 'Personalisation' scenario - Likely impact on key stakeholders

Specialised content providers and channels could become specialised brands and evolve towards niche channels



3. 'Personalisation' scenario - Likely impact on key stakeholders

Overview of the likely evolution in market strength of the key stakeholders



Evolution of role or power in the chain

- Will form direct links with the aggregators
- Market for content will further expand (Pay-TV expansion)

- Free commercial broadcasters lose revenue model
- Pay-TV operators can expand further
- Role of public service broadcast is questioned

- Stand-alone role sustainable
- Will gain advertising revenue

- Develop new services around (download) VoD
- Build on aggregator role

Evolution of relative strength in the value chain

+

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Scenario conclusions

Impact on the industry revenues

- The previous scenarios highlight extremes in the possible evolution of the future and do not predict the exact future. It is unclear at the moment in which direction the European audio-visual market will evolve
- The European audio-visual industry as a whole would mostly benefit from an evolution towards the interactivity scenario (in both economic environments)
- But individual industry stakeholders have other economic interests

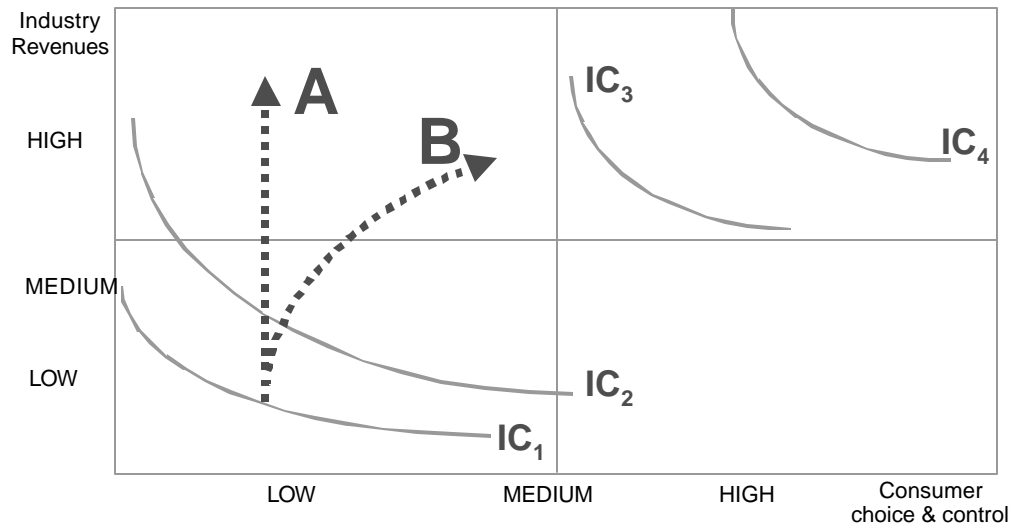
Overview of the industry stakeholders revenues in 2010		Content		Packaging		Diffusion		Overall Industry Revenues	
		Bio Euro	Ranking	Bio Euro	Ranking	Bio Euro	Ranking	Bio Euro	Ranking
1999		14,5		37,9		14,5		52,5	
Positive Economic Environment	Business as usual Scenario	21,8	1	52,8	1	28,4	3	81,3	2
	Personalisation Scenario	20,4	3	49,4	3	36,2	2	81,2	3
	Interactivity Scenario	20,8	2	50,3	2	39,1	1	89,4	1
Negative Economic Environment	Business as usual Scenario	16,3	1	40,6	1	20,1	3	60,7	2
	Personalisation Scenario	15,3	3	38,1	3	25,4	2	60,7	2
	Interactivity Scenario	15,6	2	38,9	2	27,4	1	66,3	1



Conclusions and recommendations

Stimulation of the audio-visual industry

- Regulators could stimulate the audio-visual industry by developing specific industrial policy measures in order to increase the global level of satisfaction
- Possible levers are:
 - Regulatory packages such as equal access to networks and associated services
 - European support mechanisms
 - Other mechanisms such as the “i2i-audio-visual” programme
 - Tax incentives
 - Establishment of a ‘one-stop shopping procedure’
- The immediate impact of these levers would be to increase industry revenues (see arrow A). The longer-term impact would also to increase consumer choice and control (see arrow B)



Conclusions and recommendations

Balancing individual and general interests

- Regulators could intervene if consumer choice and control is inadequate. In a given economic context and on the short-term, this is often associated with increased pressure on industry revenues
- Possible regulatory levers are:
 - Must carry rules
 - The “major events” regulation
 - Quota’s
 - Regulation relating to advertising, sponsorship and teleshopping

