Unlocking DTT in Africa and the Middle East - a model for efficient switchover

ITU - EBU

by: Giuseppe Flores d'Arcais

October 27th, 2016

Introduction

DTT switchover - aggregate value to society

Benefits:

- **A** Benefits of citizens of anticipated analogue switch-off
- **B** Value of spectrum
- **C** Broadcaster opportunity costs of Analogue-digital simulcast

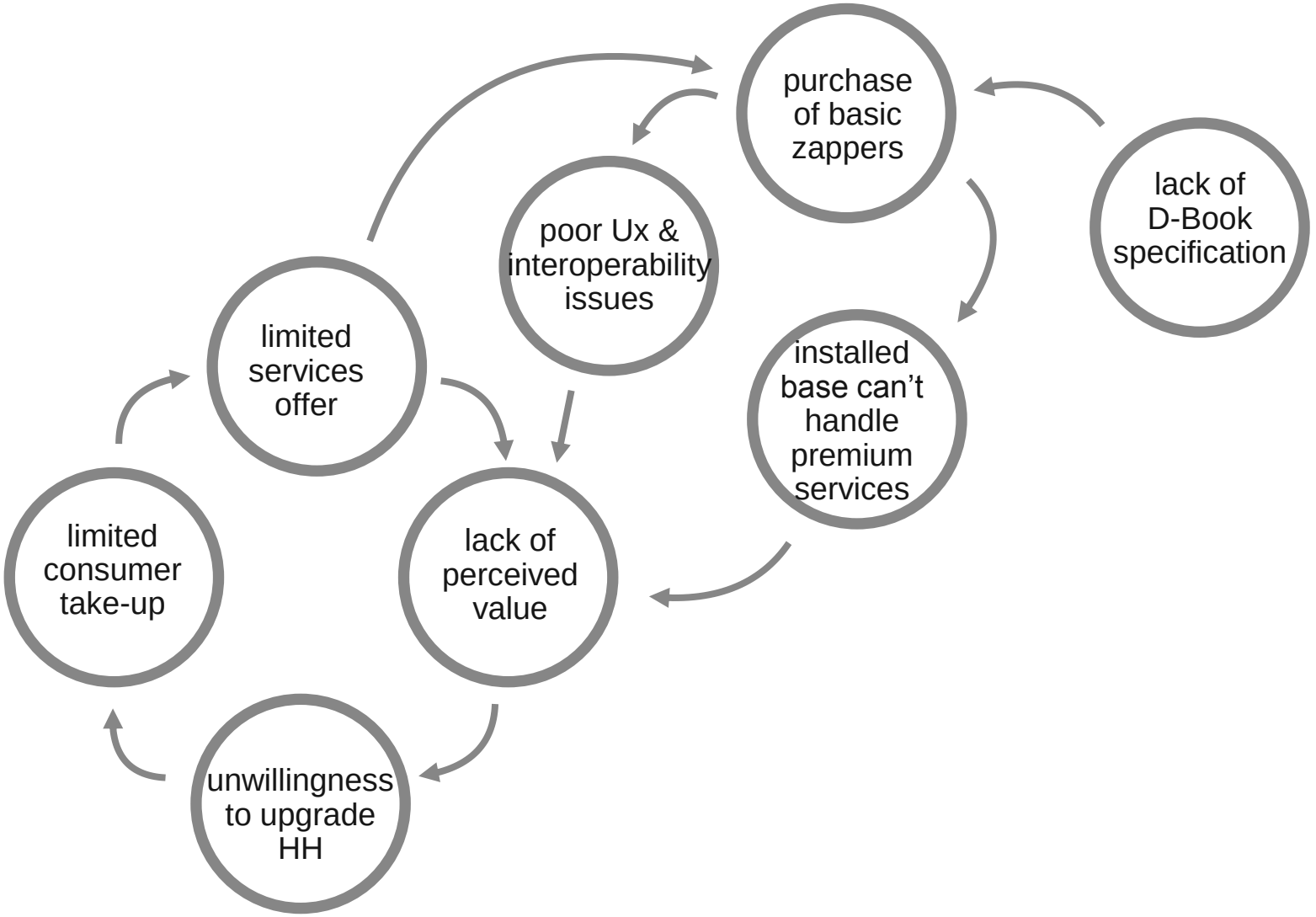
Costs:

- **D** Social costs of adapting non-voluntary households
- **E** Communication-, infrastructure- and project management costs

$$\text{Net Present Value} = \sum (A + B + C) - (D + E)$$

Introduction

Common barriers to switchover



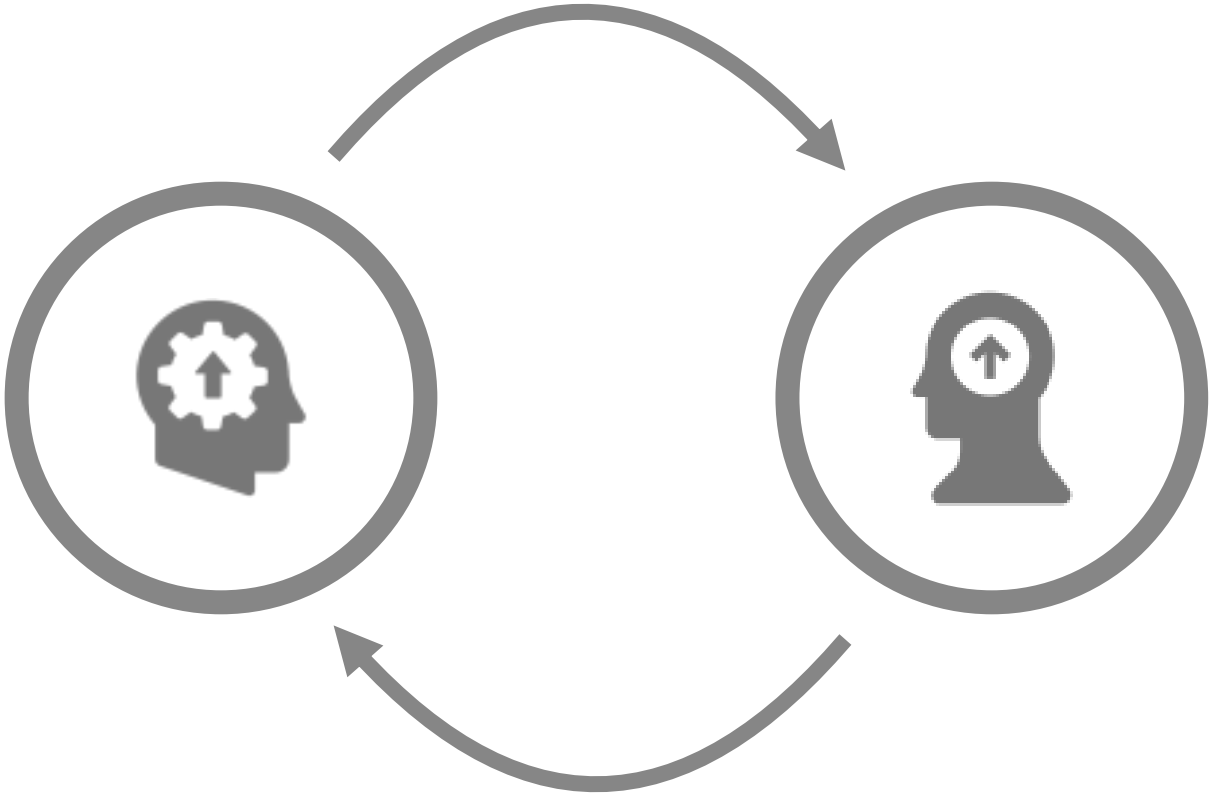
Introduction

Common barriers to switchover

- Lack of perceived value by citizens
- “Competition” from free to air (foreign) DTH services
- Resistance from existing broadcasters
- Insufficient territorial coverage
- Obsolete (MDU) antenna installations
- Obsolete audio-visual legislation & regulation
- Lack of switchover planning

Keys to successfull switchover

Industry stakeholder motivation

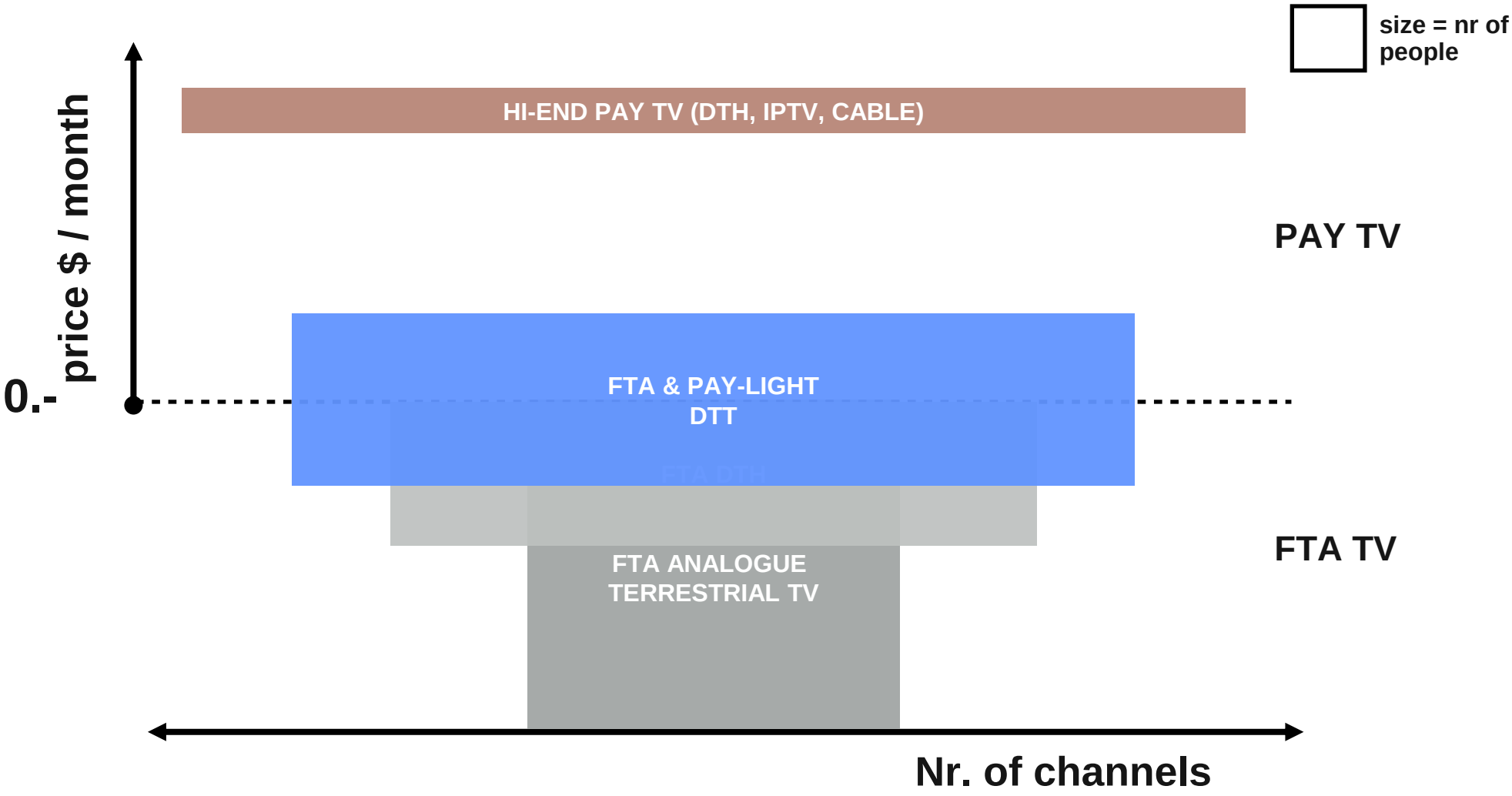


User / consumer motivation

Efficient DTT switchover model

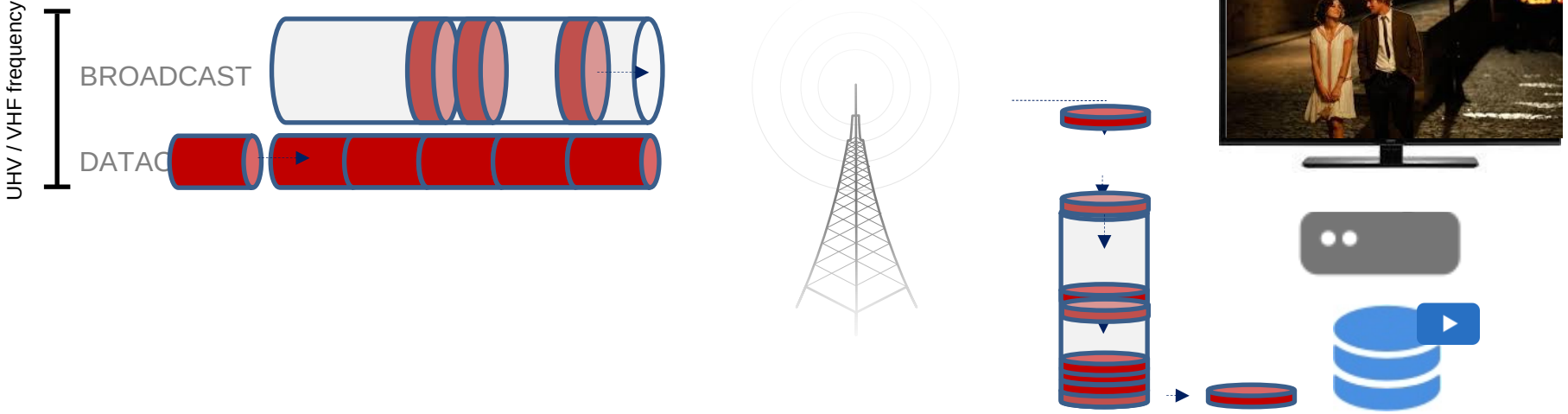
Introduction

Efficient DTT switchover model



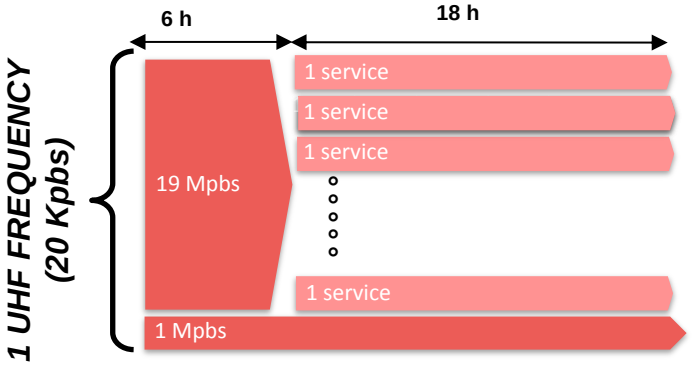
A new model for DTT switchover

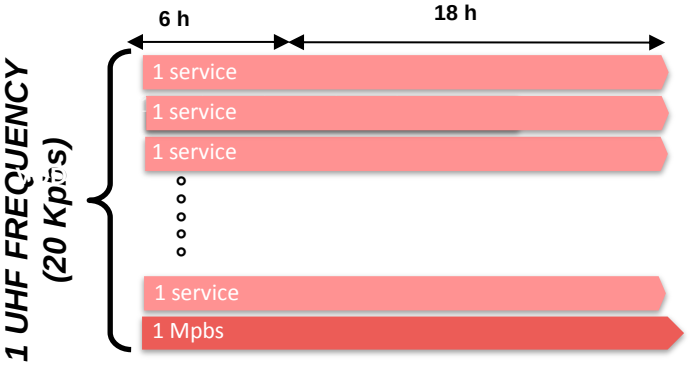
Key elements - cross-MUX datacasting & autorec

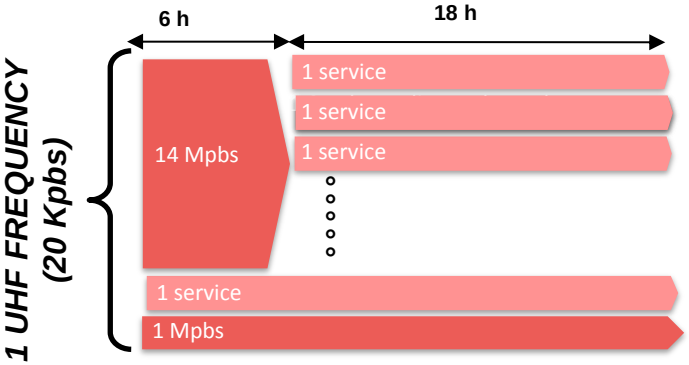


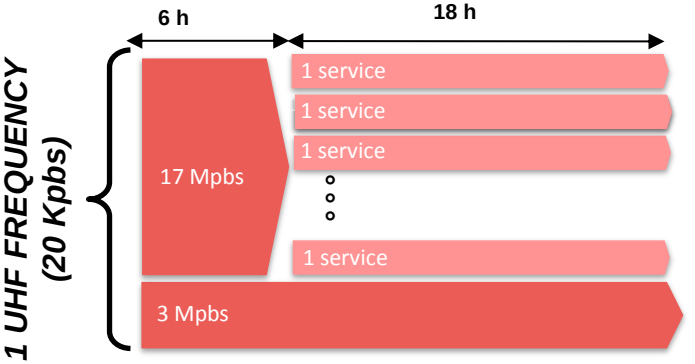
A new model for DTT switchover

Push VOD / dripfeed scenarios





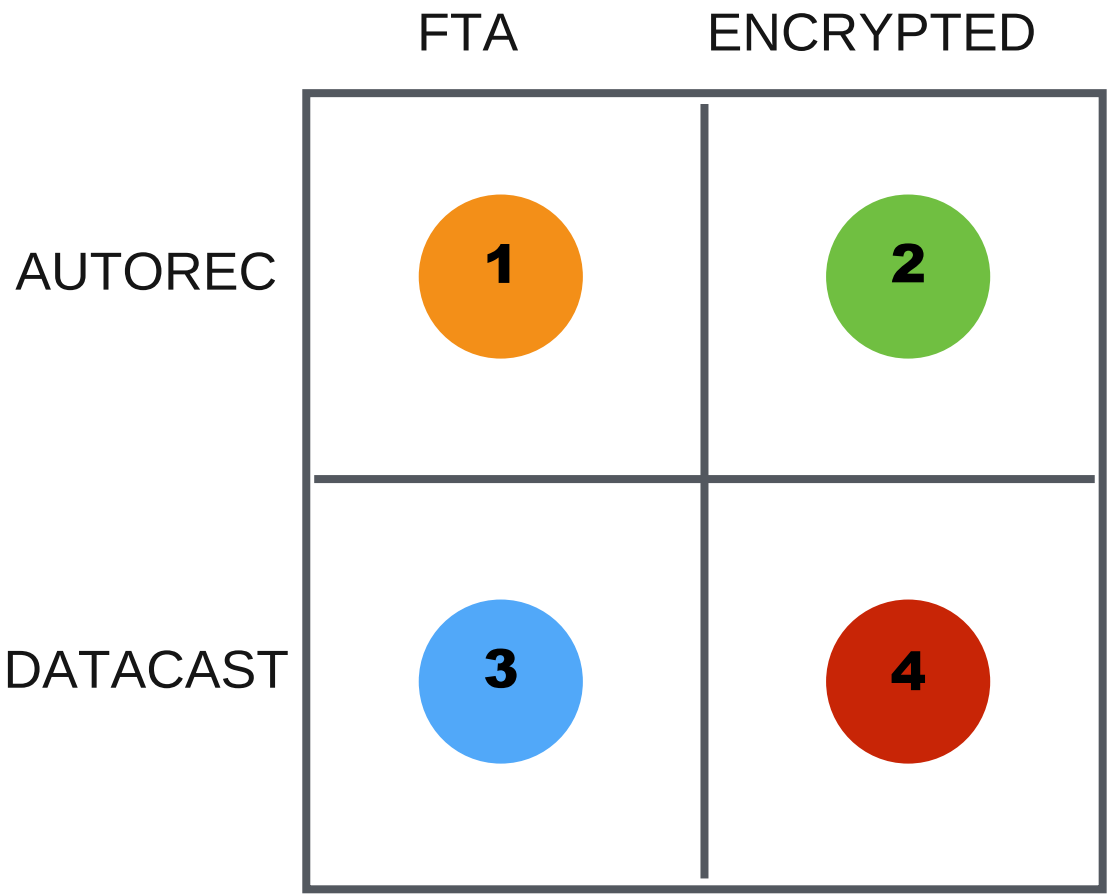




: DATACASTING

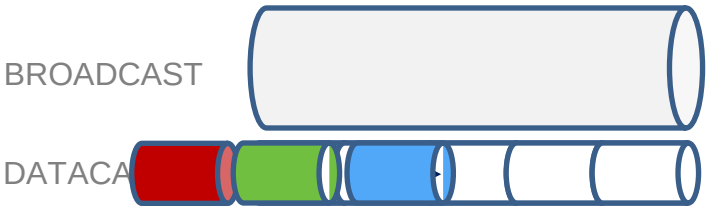
: BROADCASTING

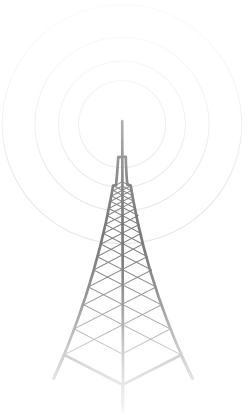
Service configurations

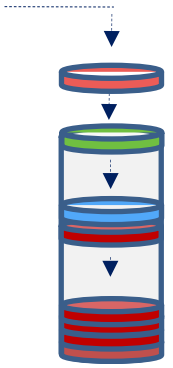


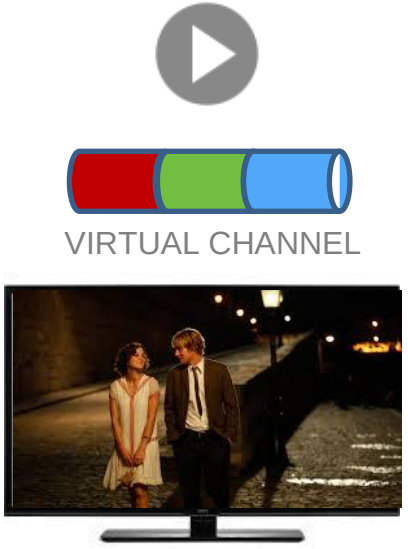
A new model for DTT switchover

Key elements - Virtual Channels



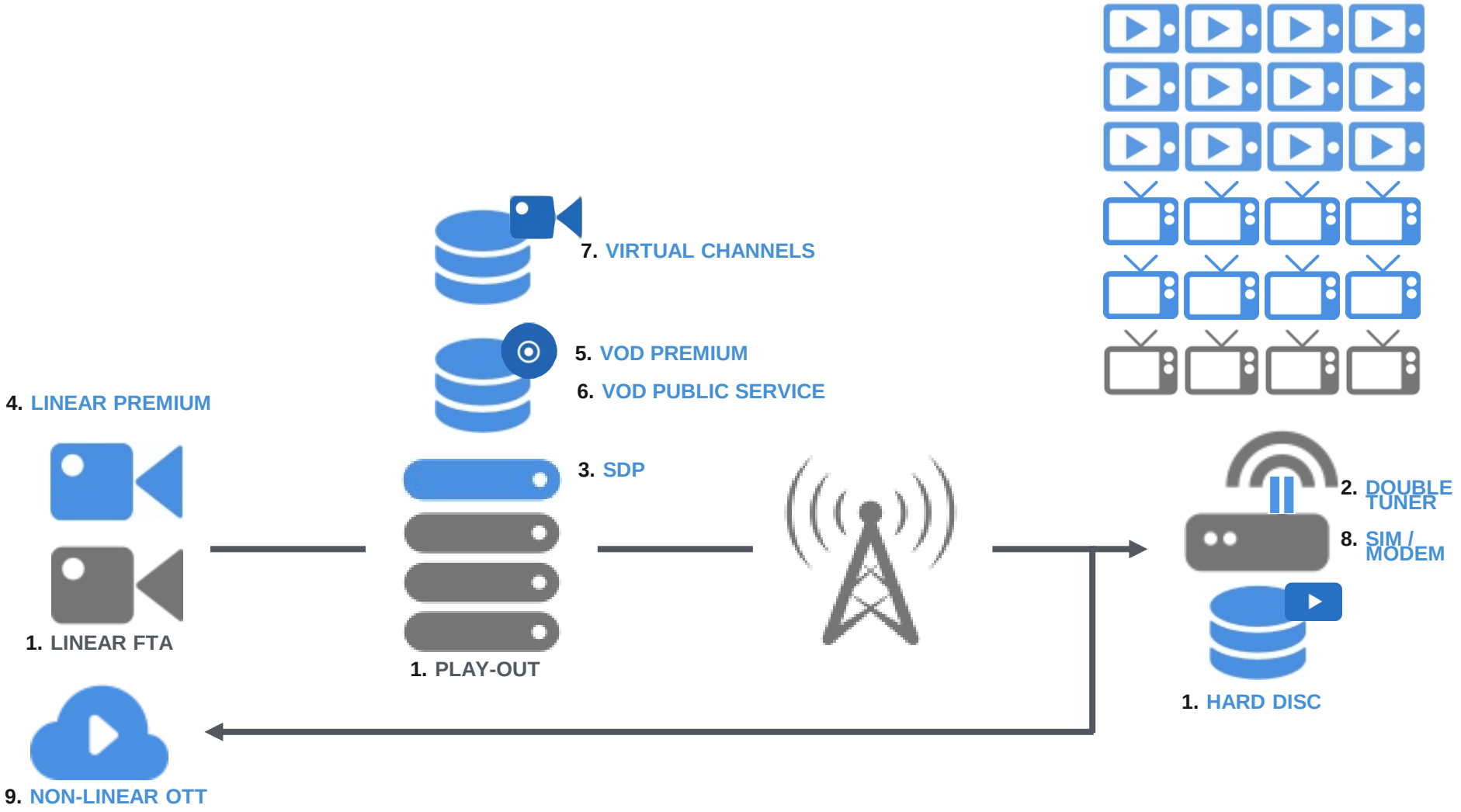






A new model for DTT switchover

Services overview



A new model for DTT switchover

Services overview

1. LINEAR TV FEEDS:
   - FTA
   - PREMIUM
2. VOD CATALOGUE
3. PUBLIC SERVICE CONTENT
4. LOCAL CONTENT
5. BRANDS
6. MARKETING PARTNER / MNO
7. OPEN WEB

8. LINEAR PROGRAM GRID
   - CHANNELS
   - VIRTUAL CHANNELS
9. ON DEMAND CATALOGUE

SAÚDE

EDUCAÇÃO

BANDEIRANTES +

FILME

CANAIS

TELENOVELAS

LAR

FILME

CANAIS DE MÚSICA

BANDEIRANTES +

EDUCAÇÃO

SAÚDE

TELENOVELAS

LAR

Key service elements

- Extended SDP: SVOD, Push-VOD, Autorec, Virtual channels
- Non-linear public service; Education, Health
- Local content
- D-Book, Local manufacturing / assembly
- MNO involvement
- Brand channels, content marketing and targeted advertising

A new model for DTT switchover

Business model

rights

MGs

1/3

"Operator":
- broadcaster
- ,, consortium
- dedicated operator
- MUX operator
- brand partner
- MNO

EXAMPLE

- HDD ALLOCATION:
  - 20% PUBLIC SERVICE
  - 20% BRANDS
    - target advertising
    - brand channels & content marketing
  - 60% PSB & PRIVATE TV SERVICES

$ 35.-

paid for by:

1/3

1/3

1/3

40%

- HDD ACCESS FEE
- VIRTUAL CHANNEL FEE / USER

1/3

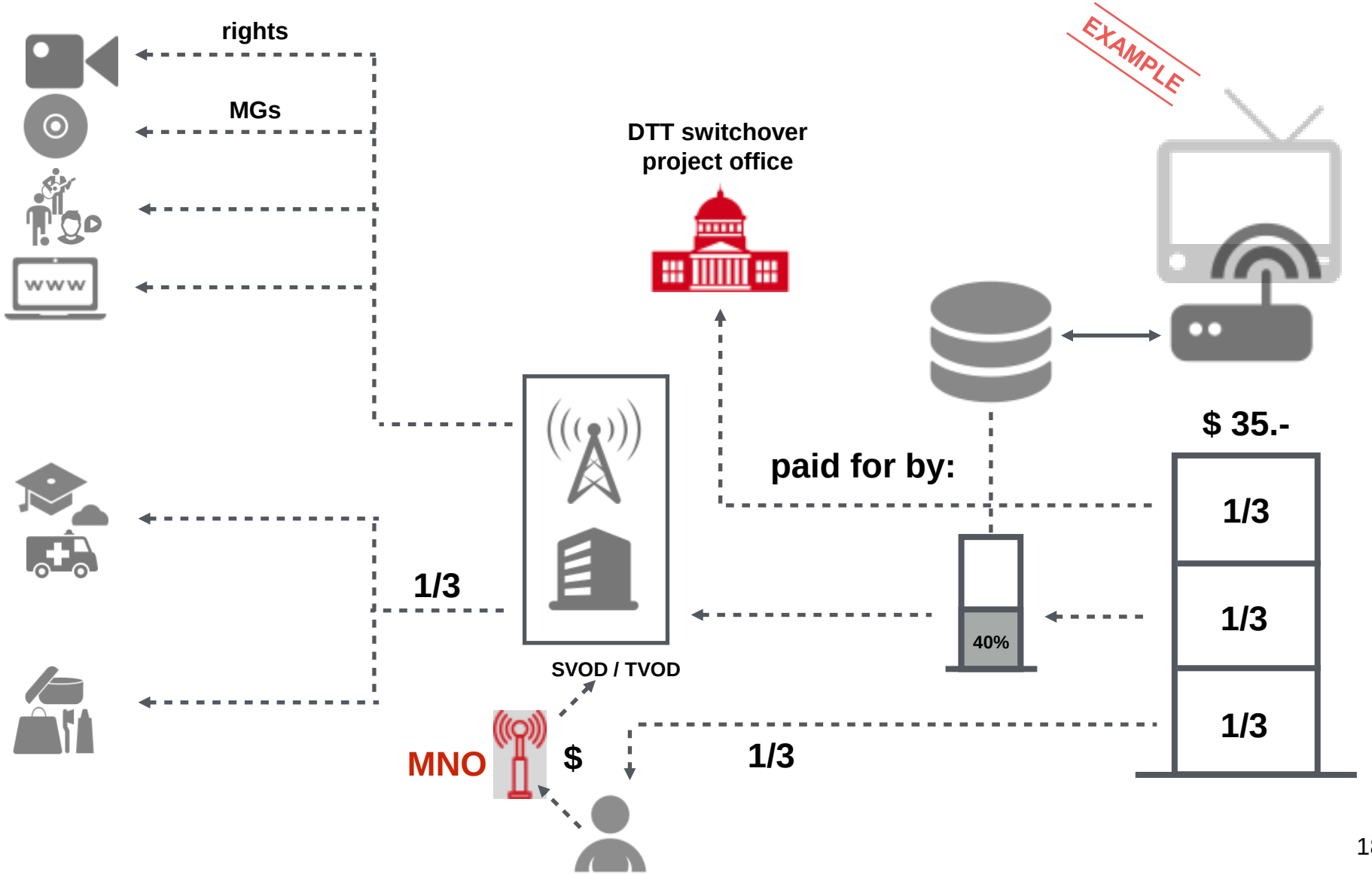
$ SVOD / TVOD

consumer

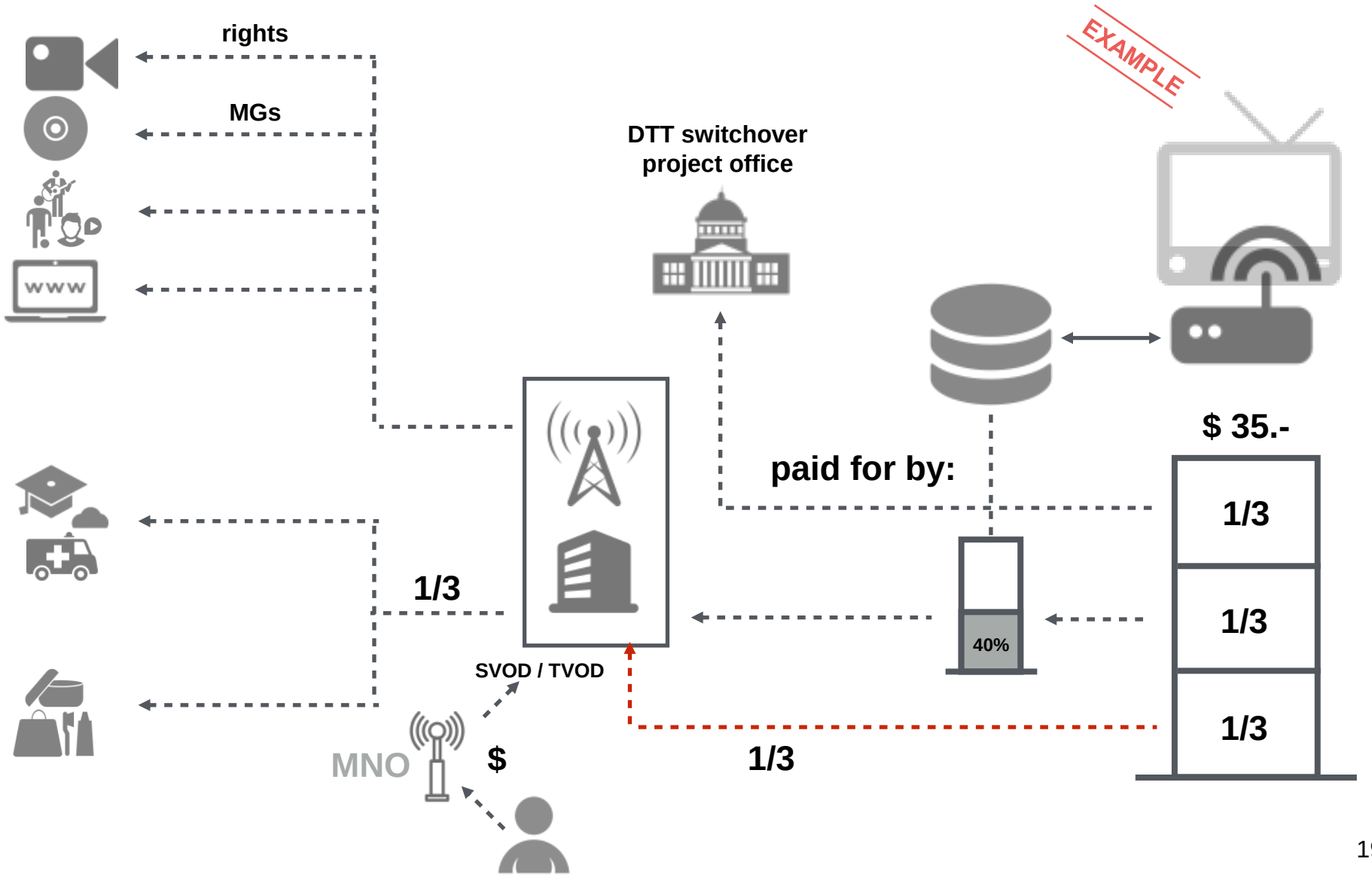
1/3

A new model for DTT switchover

Business model



Business model



Business model elements

- Recurring SVOD revenues
- Recurring HDD access fees
- 2 price point model: entry level & hi-end
- Various HDD solutions possible
- Hybrid DTT-OTT version: further monetisation opportunities
- Localisation
- Business-to-business

Value drivers

SERVICE:	REVENUE SOURCE: Advertisers	Viewer pays per-Event	Viewer pays per-Month	More viewers	Reference Indicators:
VOD / Push VOD	√	√	√	√	2-6 events/month/HH
Catch-up TV	√		√	√	30%-45% of viewing
Plus 1 channel	√		√	√	+10% advertising revs
Virtual channel	√	√	√	√	incr audience share
Virtual VOD category	√	√	√	√	incr audience share
Brand channel	√				$3,- to $8,- / STB / yr
Dynamic Advertising	√				more GRPs, higher price/GRP
Recommendations		√	√	√	incr. Event/Svc purchases
Bookmark TV		√	√	√	incr audience share

EXAMPLE

Cost drivers

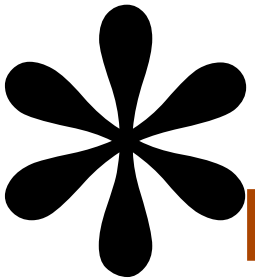
	Cable & IPTV	DTH	DTT
Infrastructure costs			
Content Delivery costs			
Overall Platform costs			

Other considerations

- Content production, local content sindication
- Local STB manufacturing / assembly
- DTH programme for last coverage % or hi-end version
- Mobile-first extension

Regulatory aspects

- Licencing regime: Free vs Pay
- License object: content, channel, frequency
- Mux operator, value added services provider
- Transmission standards, 4K, UHD, D-Book, interoperability
- Switchover legislation, -regulation, -project & -task force
- regulation in support of pluralism, diversity and local content



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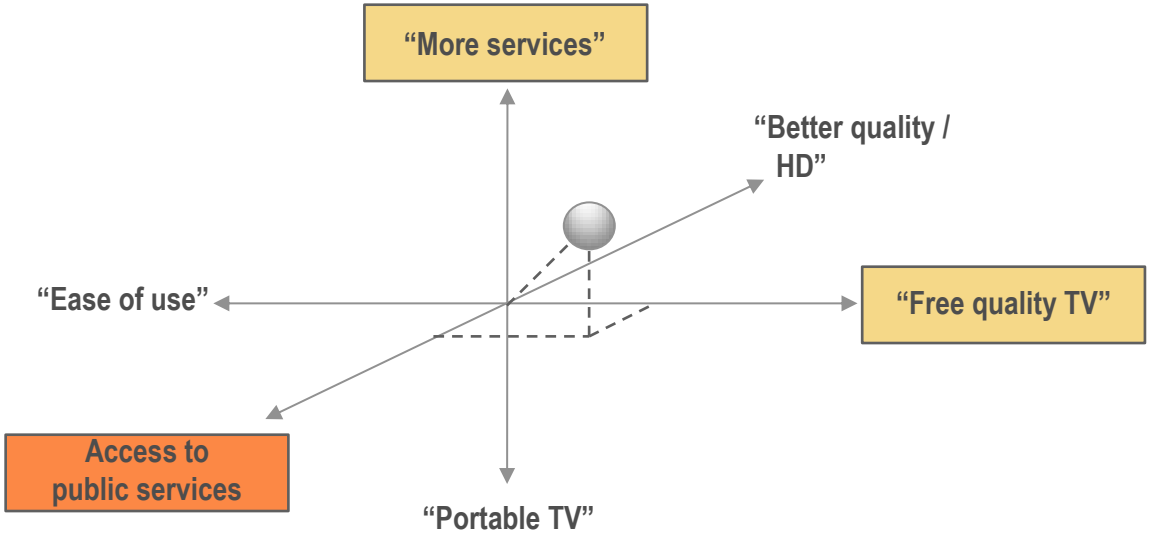
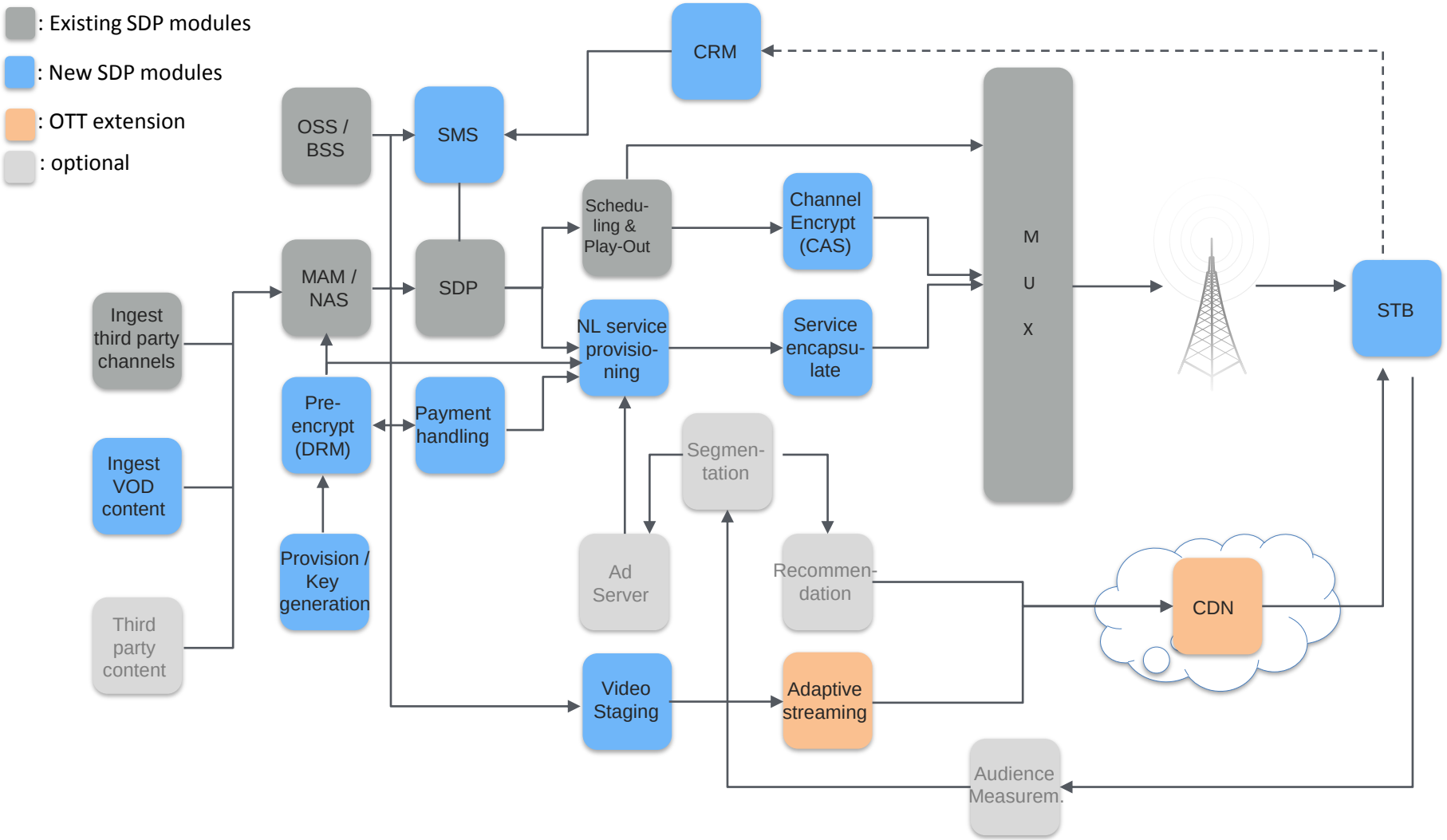
Consumer / citizen positioning



A new model for DTT switchover

System overview



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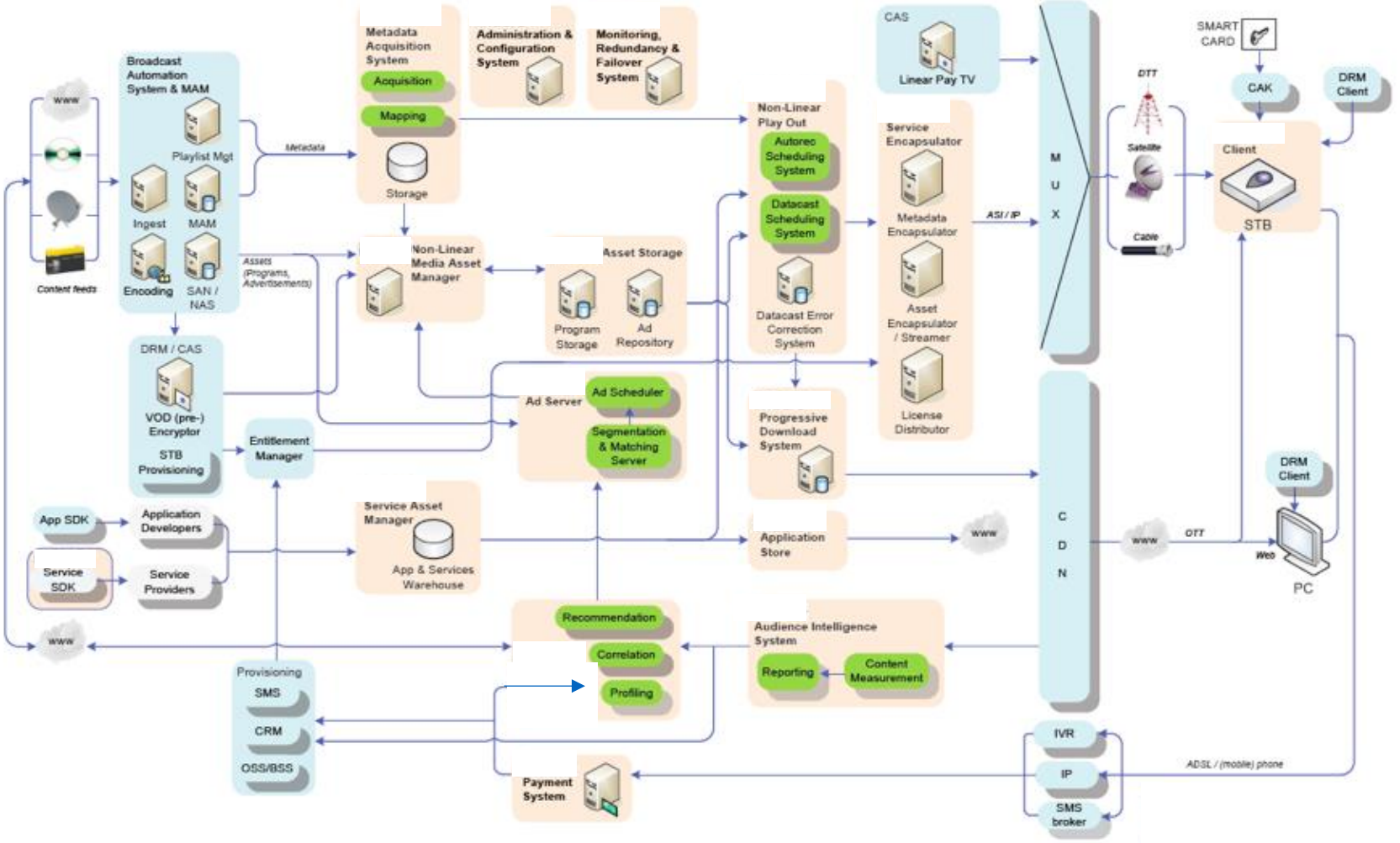
System overview



Keys to successfull switchover

Example Project

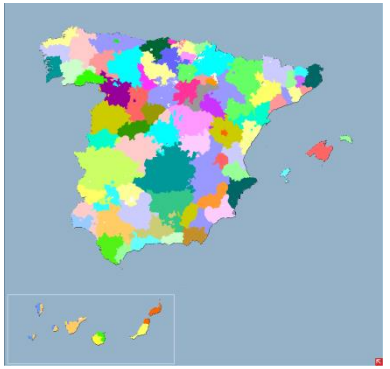
DVB-T switchover Spain

MINISTERIO
DE INDUSTRIA, TURISMO
Y COMERCIO

impulsa tdt

NEXTUDIO

Isdefe



Introduction

- After the first wave of successful analogue-to-digital television switchover projects, a large group of ITU member states is now starting to prepare for DTT switchover. While the level of preparation and starting conditions for fast and smooth switchover differs widely between the different countries, most countries are now aware that a serious project approach is required and that further postponing of the process is no longer possible.

- The switchover to DTT is considered by most countries because it can bring important benefits to citizens, industry and and governments:

BENEFITS TO CITIZENS:

- Increased channel offer
- Reduction of the digital divide
- Improved picture-and sound quality
- Portability of television services
- New television services
- New services for people with disabilities
- Channels for linguistic & cultural minorities
- Protection & strengthening of local TV

BENEFITS TO INDUSTRY:

- Boost to the content production industry
- Stimulation of demand for television sets and set-top boxes
- Upgrade of antenna installations

BENEFITS TO GOVERNMENT:

- Opportunities to improve public service and local / national television
- Improved service for citizens and industry in general
- Opportunity to put order to spectrum utilisation
- Freeing up of spectrum capacity
- Channel for eGovernment services

- While DTT presents clear opportunities to most countries, only few have come to grips with the actual process that should be implemented to facilitate the switchover.

Introduction

- While rapid DTT switchover brings important social and economic benefits, in practice these are hardly obtained, as switchover turns out to be a slow and complex endeavour. Too many regulatory authorities have set ambitious switch-off dates without really contemplating how to achieve them and a growing number of authorities have had to revise the switch-off date, with serious consequences for the credibility of the switchover project and significant social and economic costs.

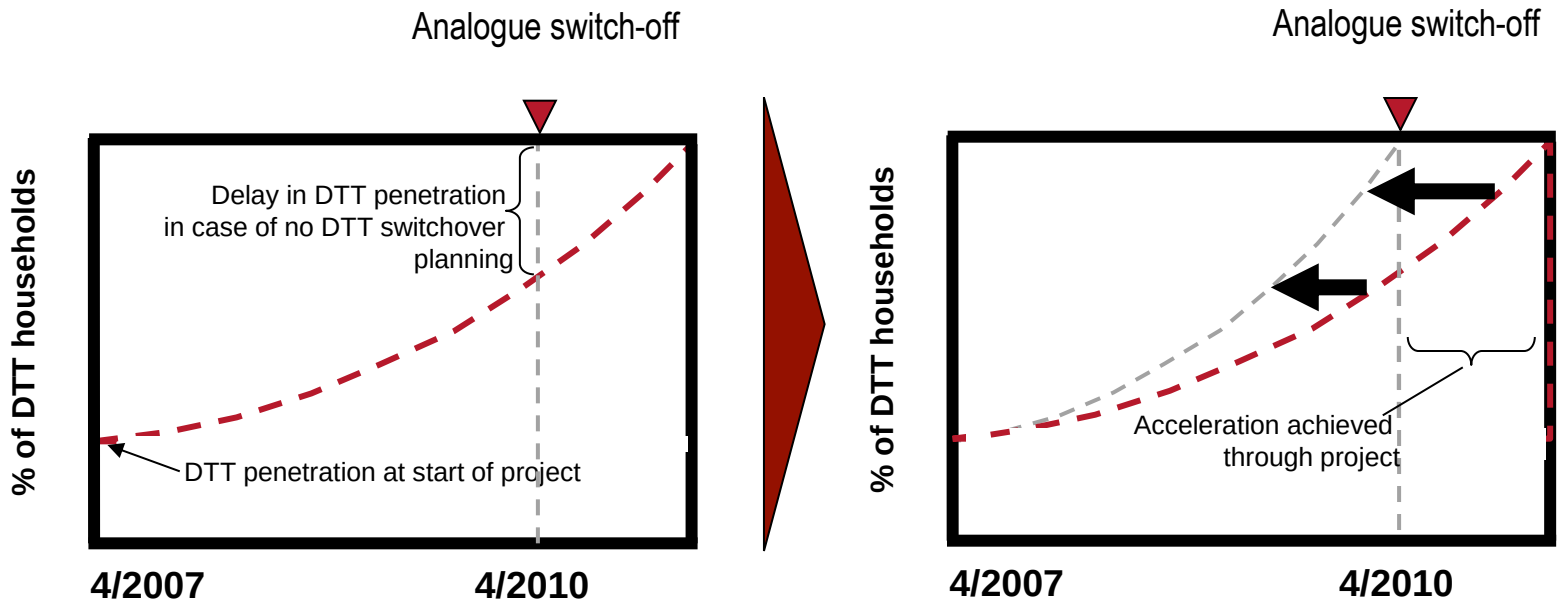
- A DTT switchover project is a complex process that requires careful preparation and detailed planning. The complexity of a switchover project has various causes:

  - First and foremost, DTT switchover is an **enormous social event** that requires the mobilisation of millions of households.
  - DTT switchover is also a **massive engineering effort** requiring the upgrade or redesign of entire transmission networks
  - **Many different entities** are involved in DVB-T switchover; governments, regulatory bodies, broadcasters, network operators, producers, antenna installation companies, consumer organisations, and many others.
  - The shift from analogue to digital television **multiplies the available number of TV channels**, causing profound economic impact in the content industry
  - DTT switchover occurs in a period of **constant technological change**

Methodology

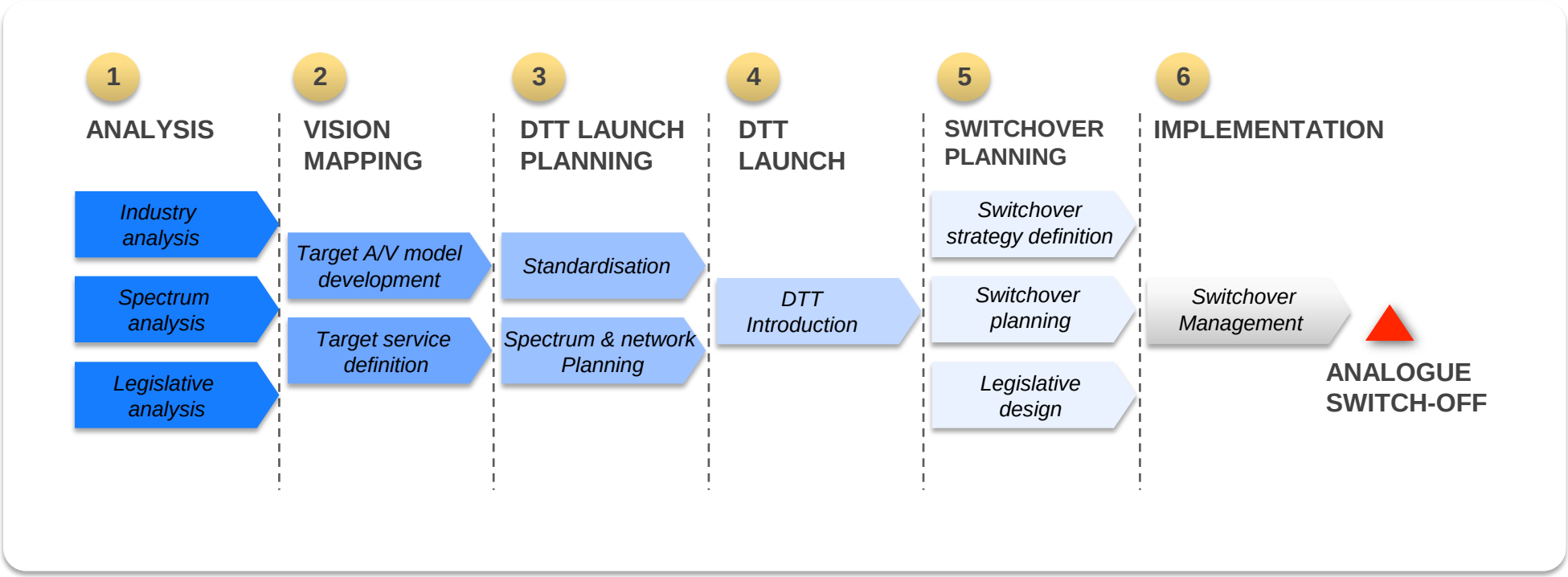
Switchover Project Plan – main goals:

- Increase control of the process
- Increase speed of the process



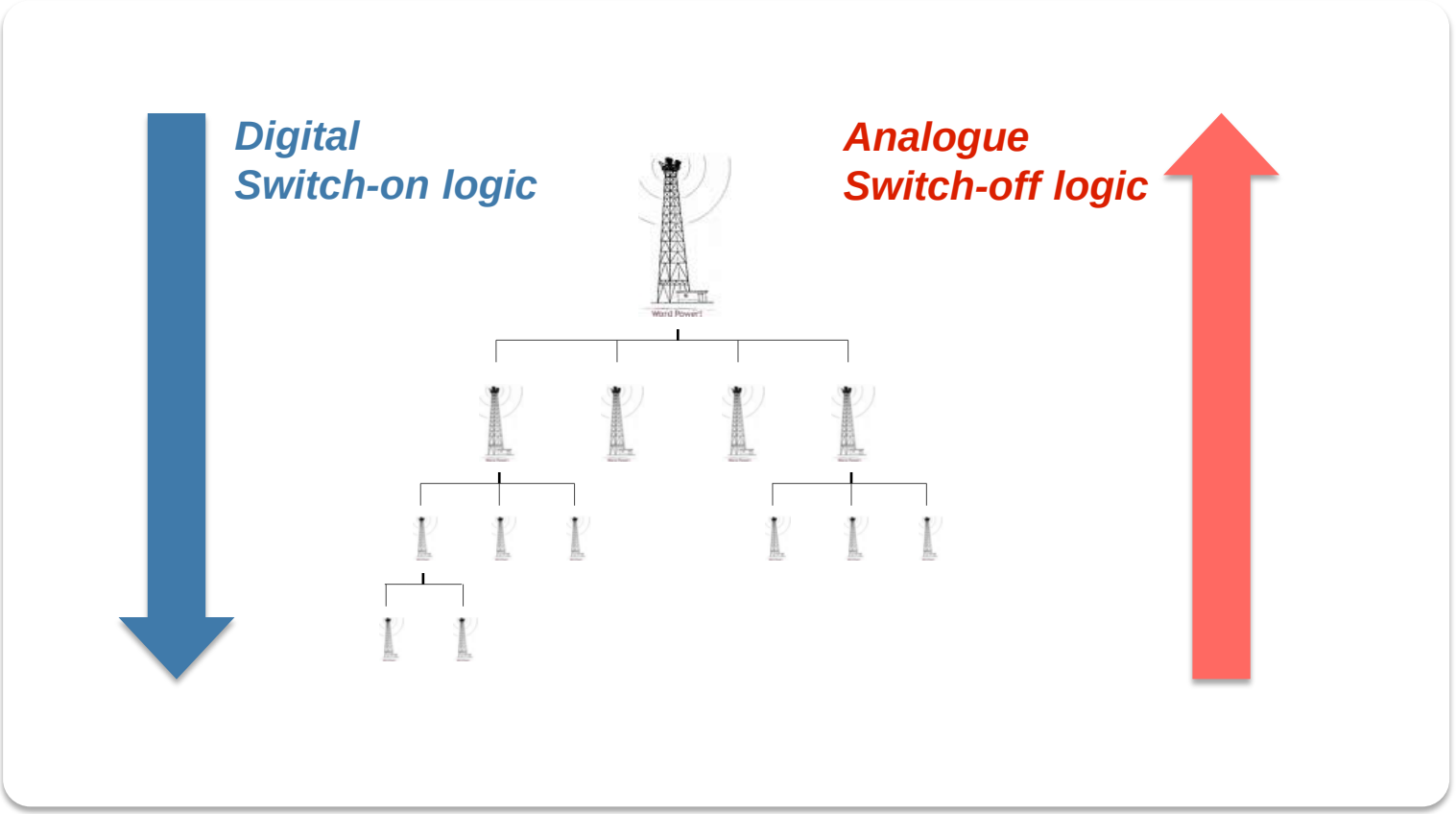
Methodology

- In order to deal with the multiple dimensions of DTT switchover, we have developed a methodology that consists of 6 phases. The implementation of the methodology varies, depending on the status of digital broadcast in a country. Even if some countries may today have skipped some of the mentioned steps, a successful, efficient switchover requires governments and media authorities to address all aspects indicated below in some form.



Methodology

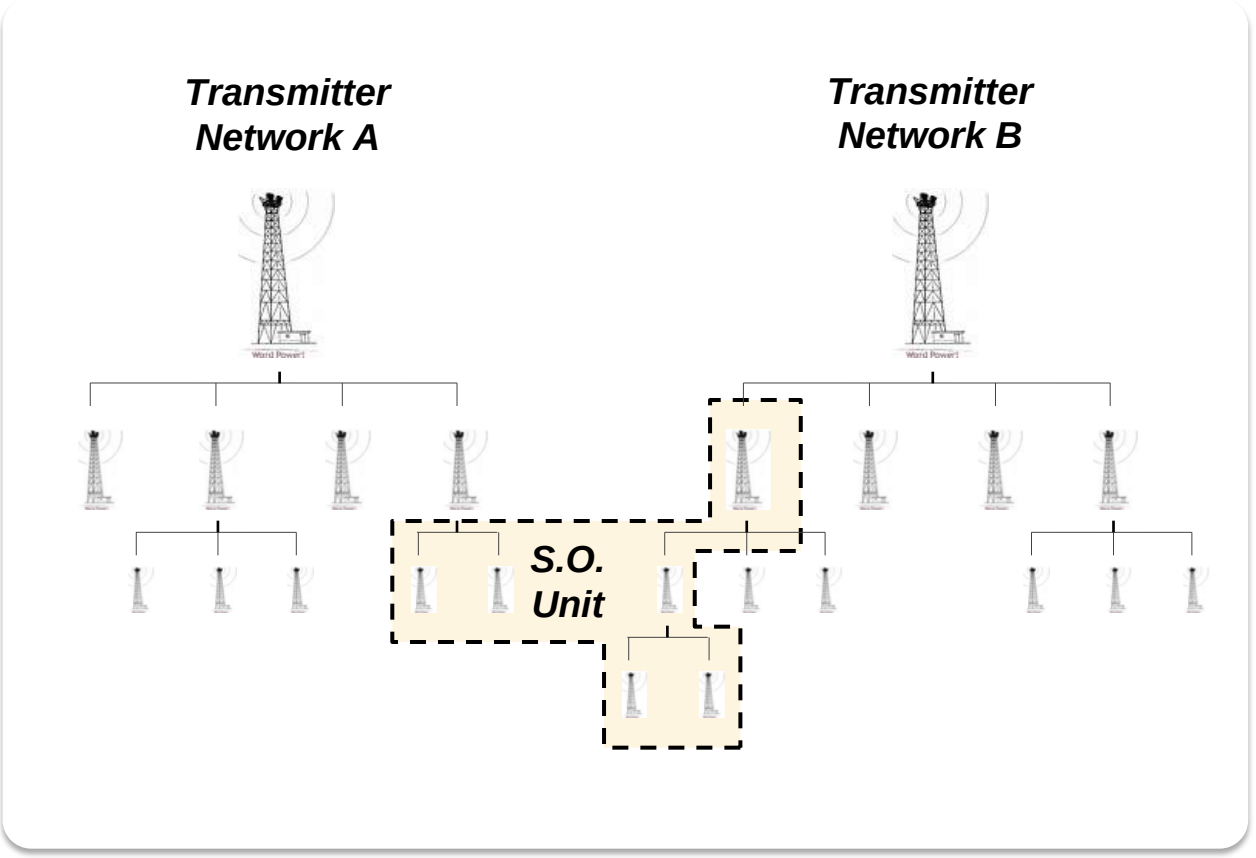
- After “switching on” DTT, the DTT “switch-off plan” (S.O.) had to be prepared. The S.O. plan has to cope with two opposing planning aspects: the top-down expansion of DVB-T transmitters and the bottom-up logic for analogue switch-off. The success of a S.O. plan depends, to a large extend, on how well these two opposing processes are managed..



Methodology

- In order to facilitate the project, S.O. has to be implemented around “manageable units” or Switchover Units (S.O. units).

- Each S.O. unit is a unique identifiable geographical area (and its corresponding transmitters), which:
  - Is defined by analysing analogue broadcast network configuration and the dependencies between parents, child and peers in a broadcast network
  - Can be considered a unity from a social point of view
  - Can absorb project resources in an efficient manner
  - Does not create to many interferences with boundary S.O. units



Methodology

- The definition of S.O. units requires a detailed analysis of service areas of all analogue transmitters of a broadcast network…

Example Catalonia

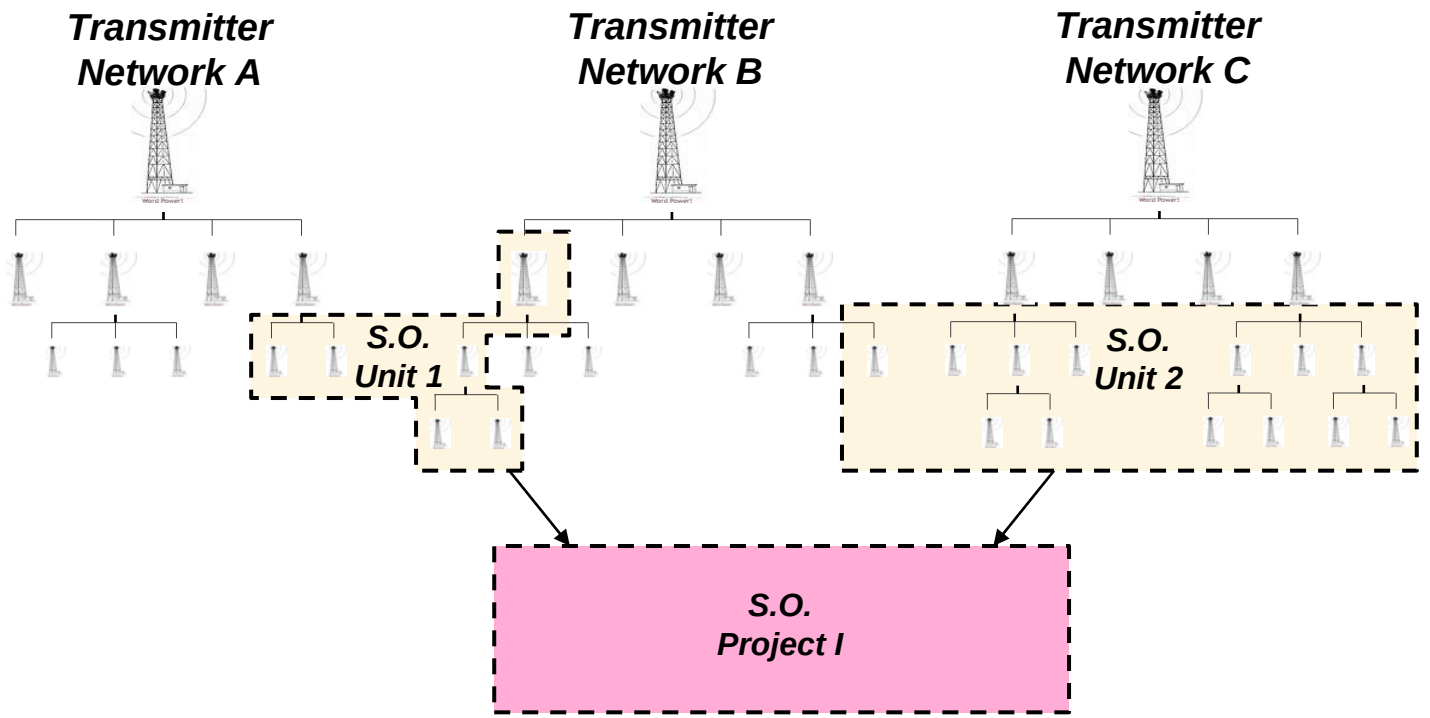
Illa Territorial	Centre emissor	Centre emissor Dependència I	Dependència II	Emisor principal	Comarca	Municipis coberts	% cobertura municipi	Població	Població Coberta	Població Coberta %	% instal.lacions Col.lectius	% instal.lacions Col. ponderat	Total Inst Coll.
1	Igualada								65.231				44%
	Pobla Claramu	Igualada		Collserola	Anoia				4.609			33,24%	2%
				Collserola		Cabrera d'Igualada	0,01%	818	0	0%	0%	0,00%	
				Collserola		Capellades	52,49%	5143	2699	59%	47%	27,53%	
				Collserola		Mediona	0,26%	1757	5	0%	1%	0,00%	
				Collserola		Pobla de Claramunt (La)	69,88%	1942	1357	29%	19%	5,59%	
				Collserola		Torre de Claramunt (La)	18,64%	2936	547	12%	1%	0,12%	
				Collserola		Vallbona d'Anoia	0,01%	1190	0	0%	5%	0,00%	
				Collserola		Vilanova del Camí	0,00%	11121	0	0%	26%	0,00%	
		Igualada		Collserola	Anoia				56.253			46,07%	40%
		Calaf		Monserat	Anoia				4.092			25,58%	2%
		Castellfoll		Monserat	Anoia				277			0,05%	0%
2	Castelldefells								17.088				71%
		Castelldefel	Bellamar	Collserola	Baix Llobregat				10.707			68,90%	43%
		Garraf		St Pere Ribas	Garraf				6.381			74,83%	28%
3	Molins del Rei								70.734				57%
		Begues		Collserola	Baix Llobregat				3.451			2%	0%
		Begues II		Collserola	Alt Penedès				1.116			4%	0%
		Vallirana		Collserola	Baix Llobregat				2.531			19%	1%
		Baix Llobregat		Collserola	Baix Llobregat				21.409			70%	21%
		Palma		Collserola	Baix Llobregat				1.946			3%	0%
		Molins del Rei		Collserola	Baix Llobregat				40.281			62%	35%

ESTACIÓ	EMPLAÇAMENT	MUNICIPI	CODI	% COBERT PER MUNICIPI	POBLACIÓ COBERTA	POBLACIÓ TOTAL	SUPERFÍCIE km²	COMARCA
47	POBLA CLARAMUNT	Cabrera d'Igualada	391850	0,01	0	818	17,14	Anoia
47	POBLA CLARAMUNT	Capellades	390437	52,49	2699	5143	3,04	Anoia
47	POBLA CLARAMUNT	Mediona	384150	0,26	5	1757	47,91	Alt Penedès
47	POBLA CLARAMUNT	Pobla de Claramunt (La)	389907	69,88	1357	1942	18,46	Anoia
47	POBLA CLARAMUNT	Torre de Claramunt (La)	388279	18,64	547	2936	15,13	Anoia
47	POBLA CLARAMUNT	Vallbona d'Anoia	392275	0,01	0	1190	6,57	Anoia
47	POBLA CLARAMUNT	Vilanova del Camí	386449	0,00	0	11121	10,61	Anoia

Source: Generalitat de Catalunya Departament de la Presidència Direcció General de Mitjans i Serveis de Difusió Audiovisuals

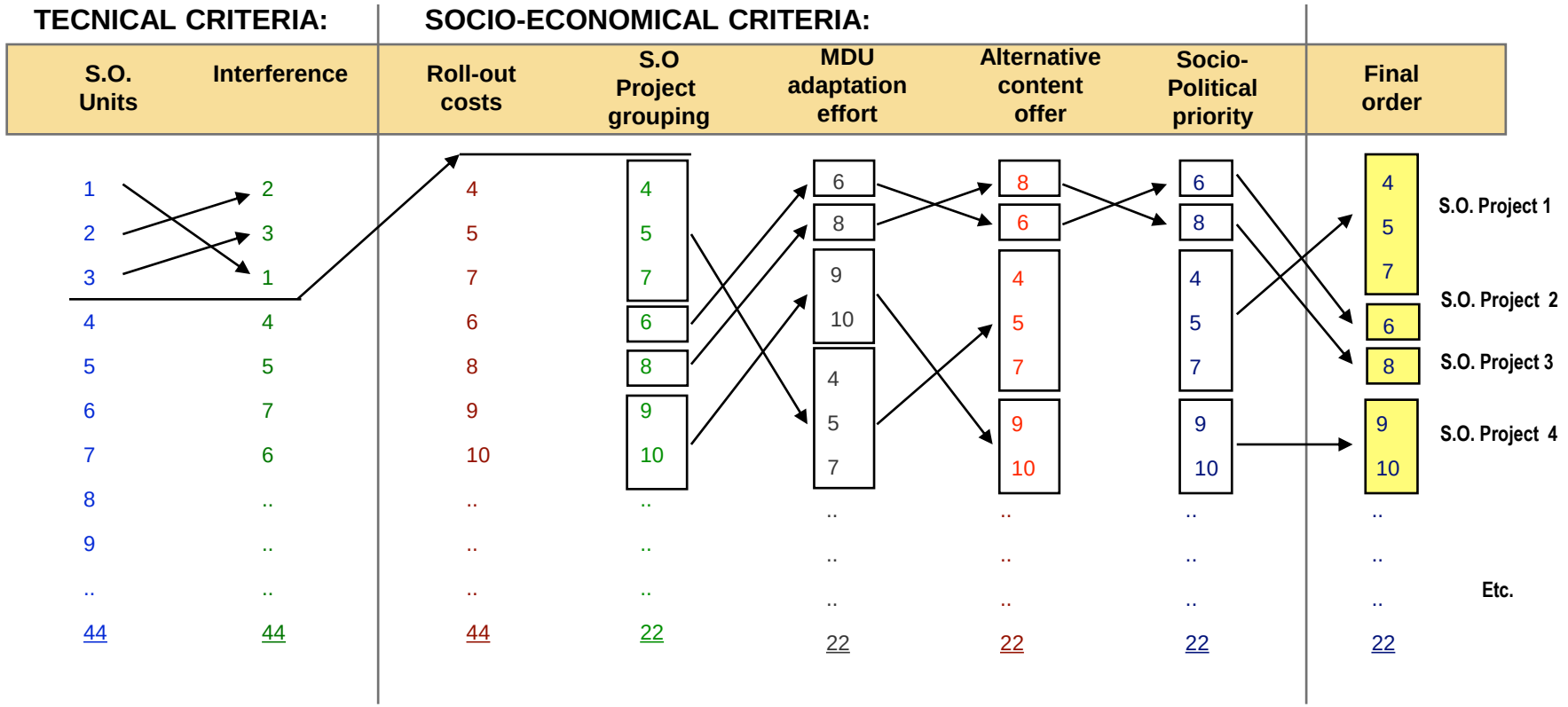
Methodology

- The S.O. units are grouped into “switchover projects” (S.O. projects) that cover areas with between 100.000 and 500.000 inhabitants approximately…



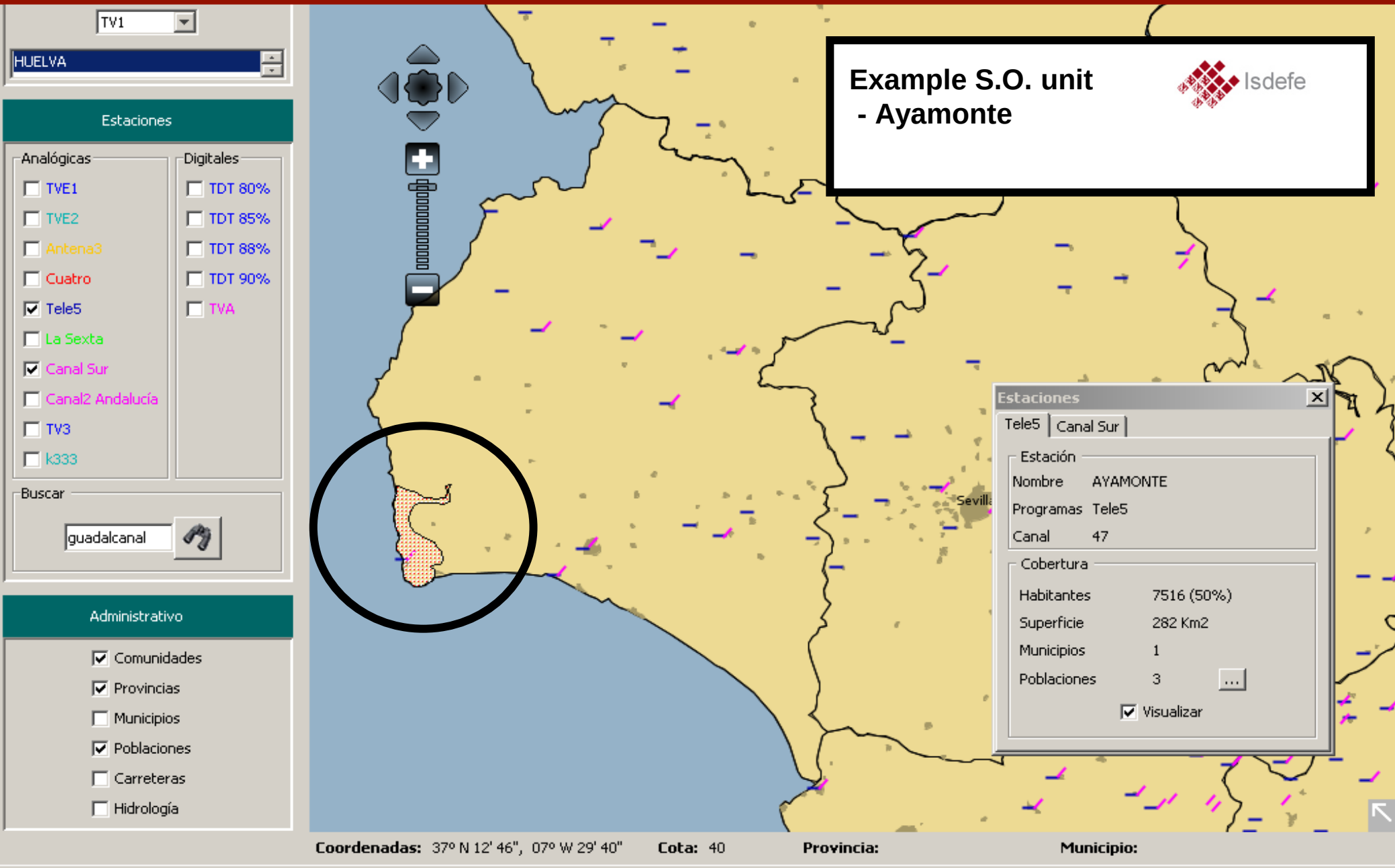
Methodology

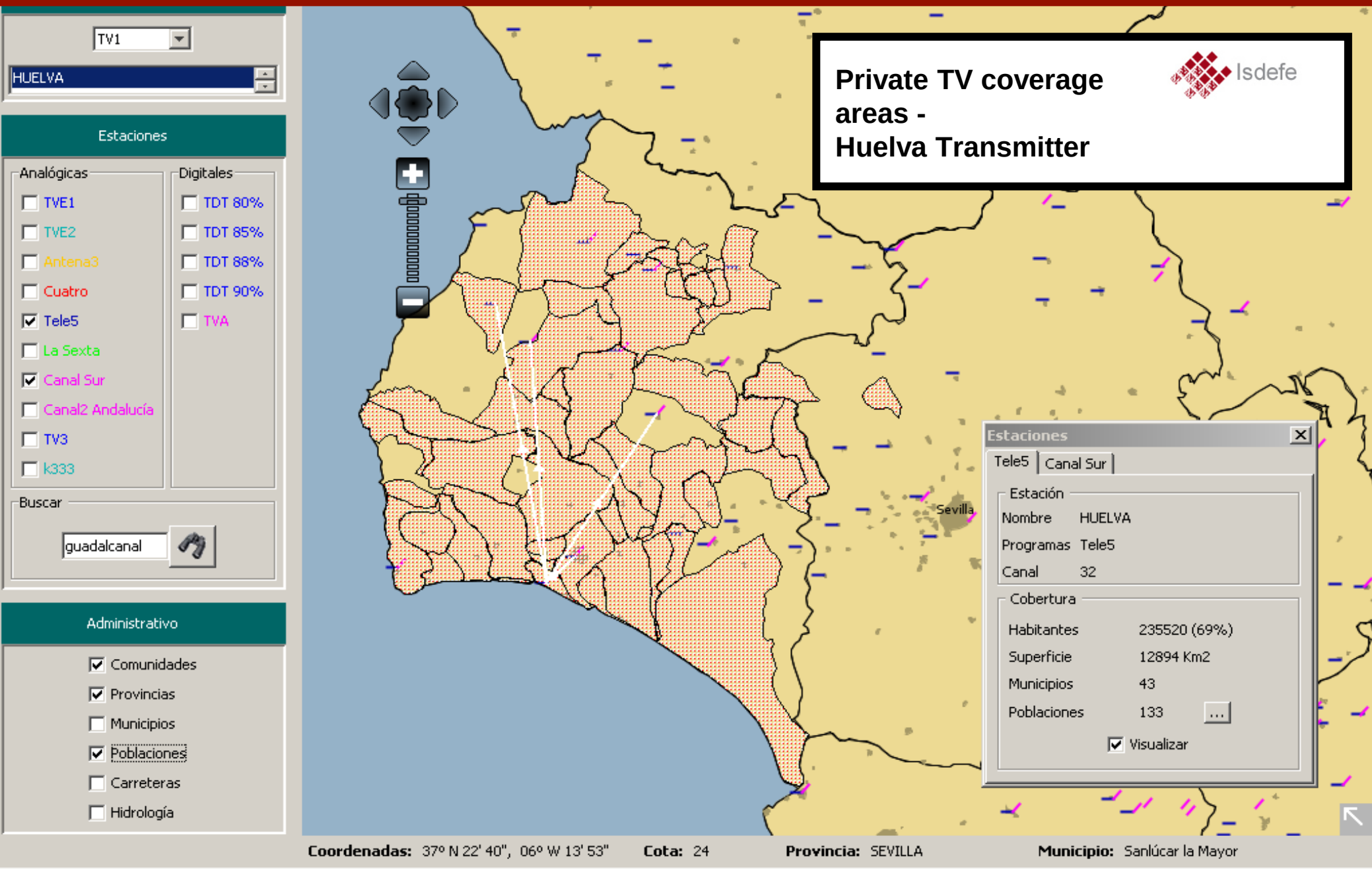
- The S.O. units and S.O. projects are then prioritised on the basis of technical and socio-economical criteria…



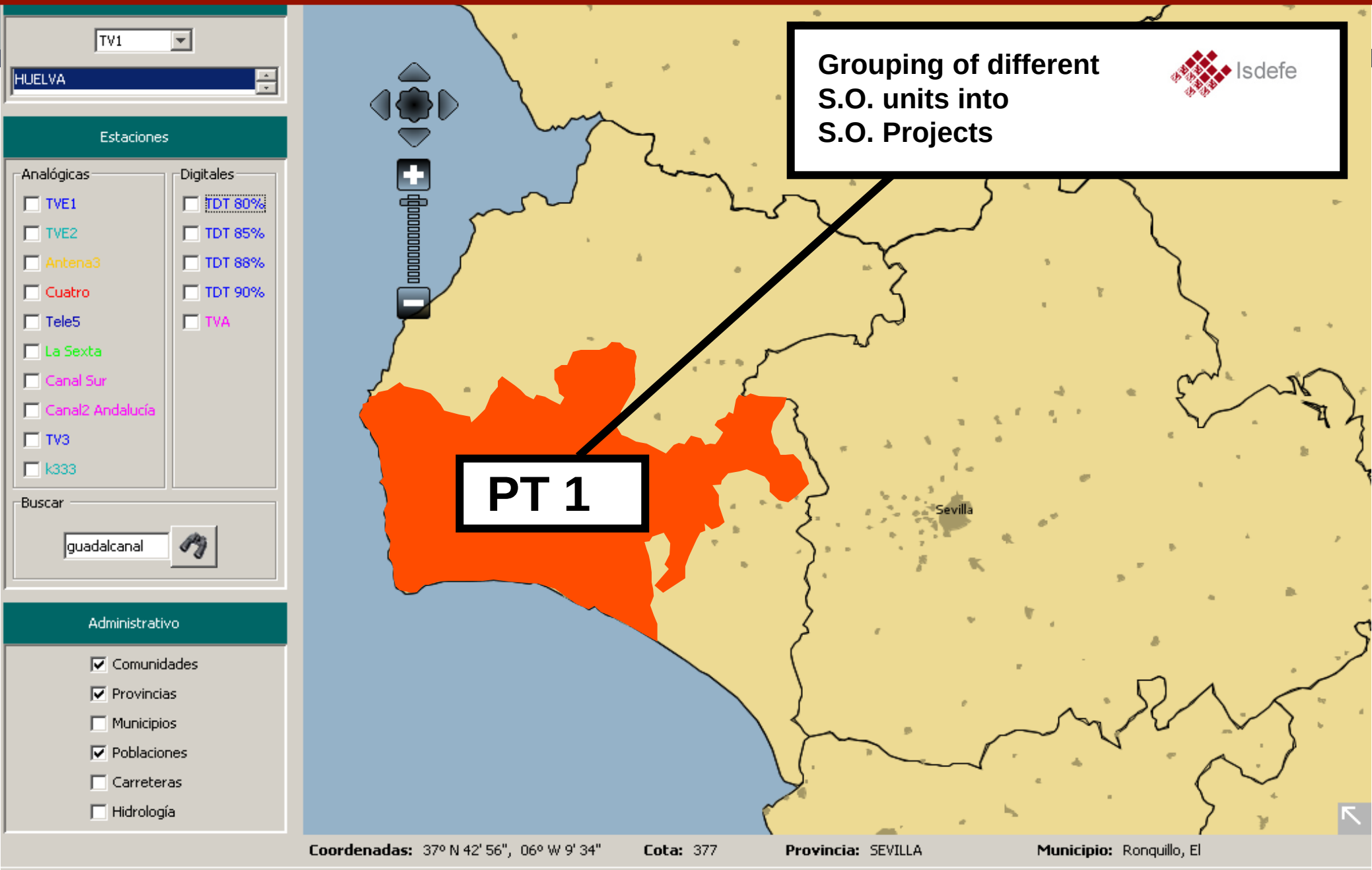
Methodology - tools used

1. Definition of Switchover Units



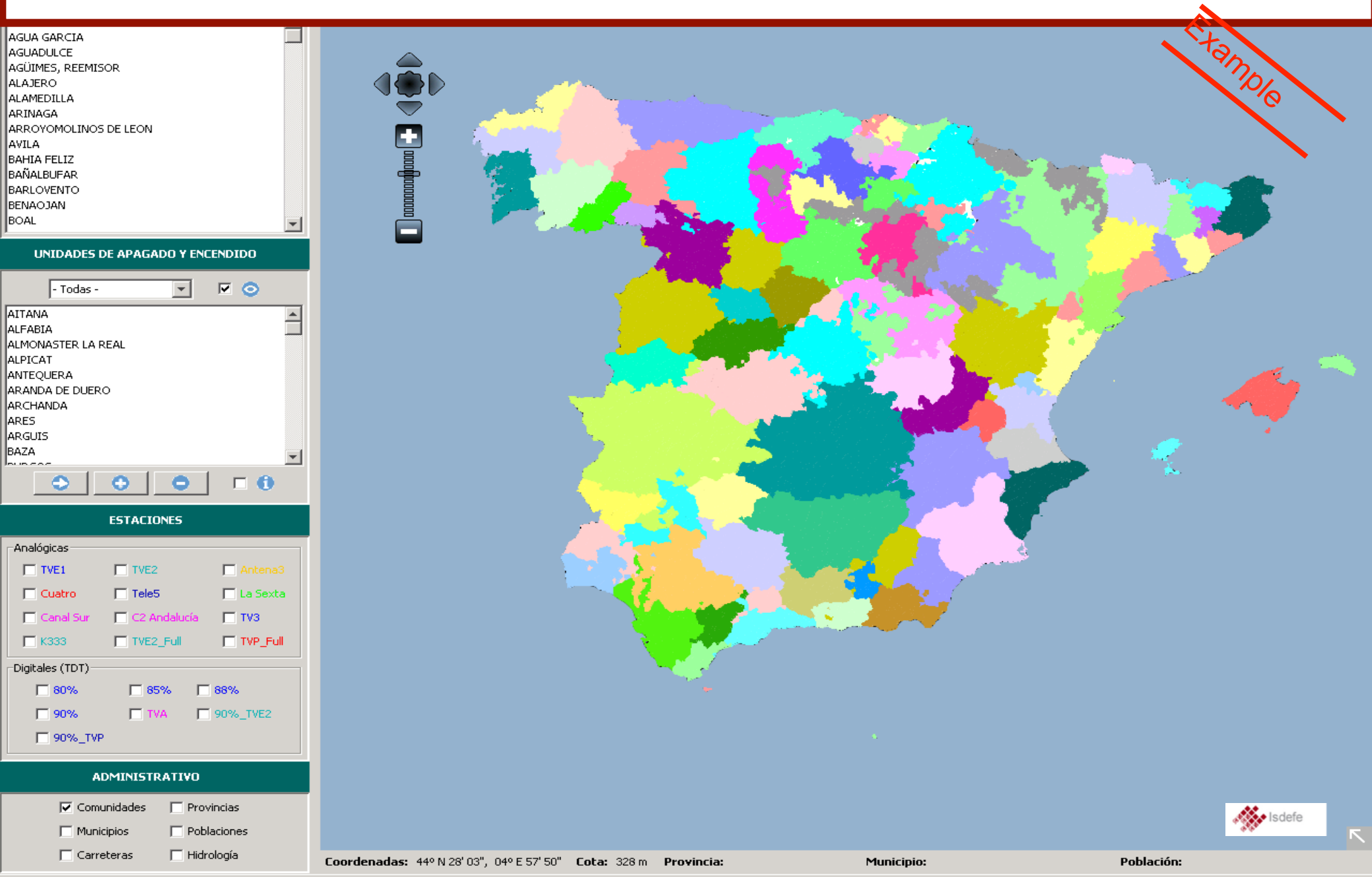

TV1
HUELVA
Estaciones
Analógicas
TVE1
TVE2
Antena3
Cuatro
Tele5
La Sexta
Canal Sur
Canal2 Andalucía
TV3
k333
Digitales
TDT 80%
TDT 85%
TDT 88%
TDT 90%
TVA
Buscar
guadalcanal
Administrativo
Comunidades
Provincias
Municipios
Poblaciones
Carreteras
Hidrología
Private TV coverage areas - Huelva Transmitter
Isdefe
Sevilla
Estaciones
Tele5
Canal Sur
Estación
Nombre HUELVA
Programas Tele5
Canal 32
Cobertura
Habitantes 235520 (69%)
Superficie 12894 Km2
Municipios 43
Poblaciones 133
Visualizar
Coordenadas: 37º N 22' 40", 06º W 13' 53"
Cota: 24
Provincia: SEVILLA
Municipio: Sanlúcar la Mayor

2. Definition of Switchover Projects



Methodology - tools used

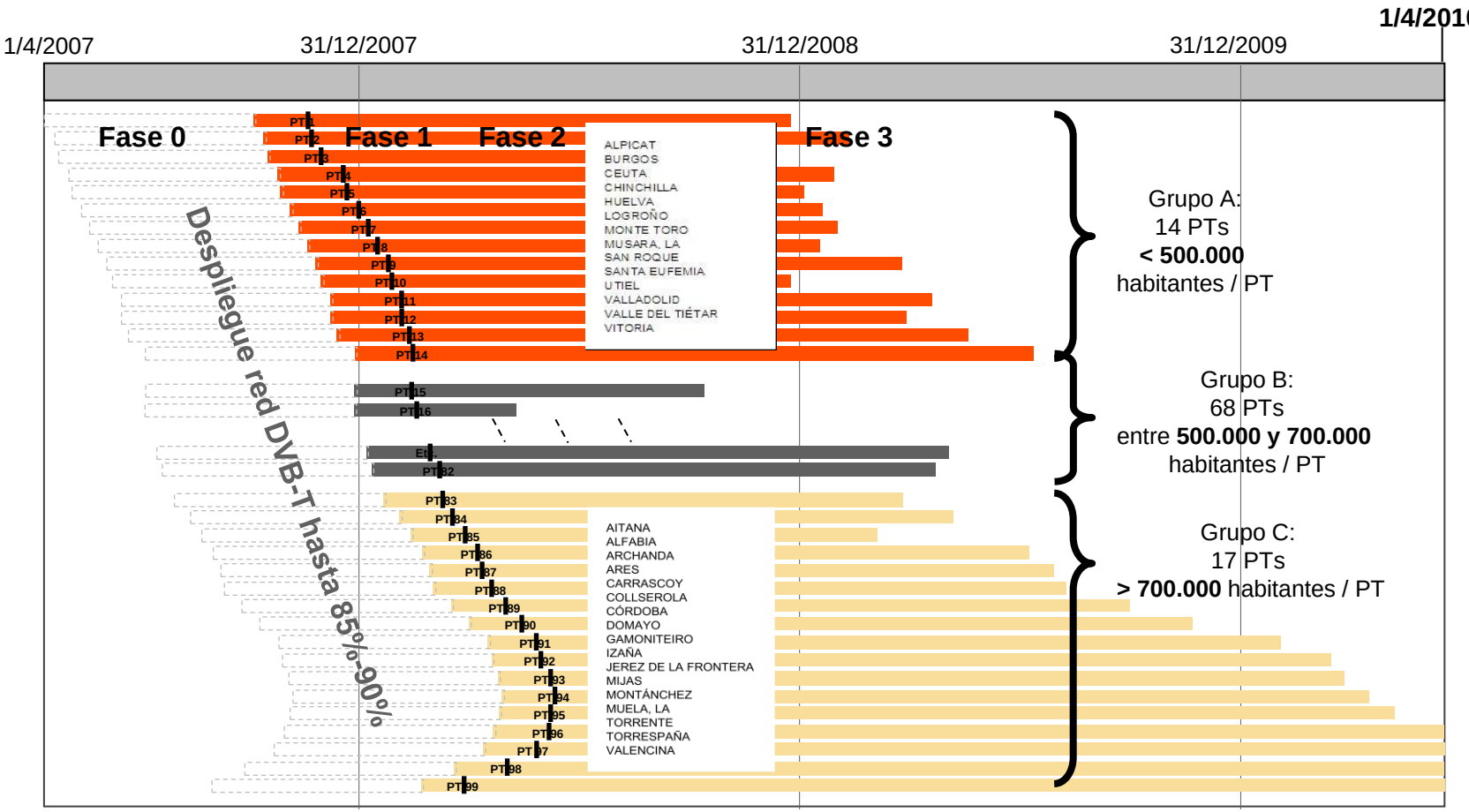
2. Definition of Switchover Projects



Managing the switchover to digital terrestrial broadcast

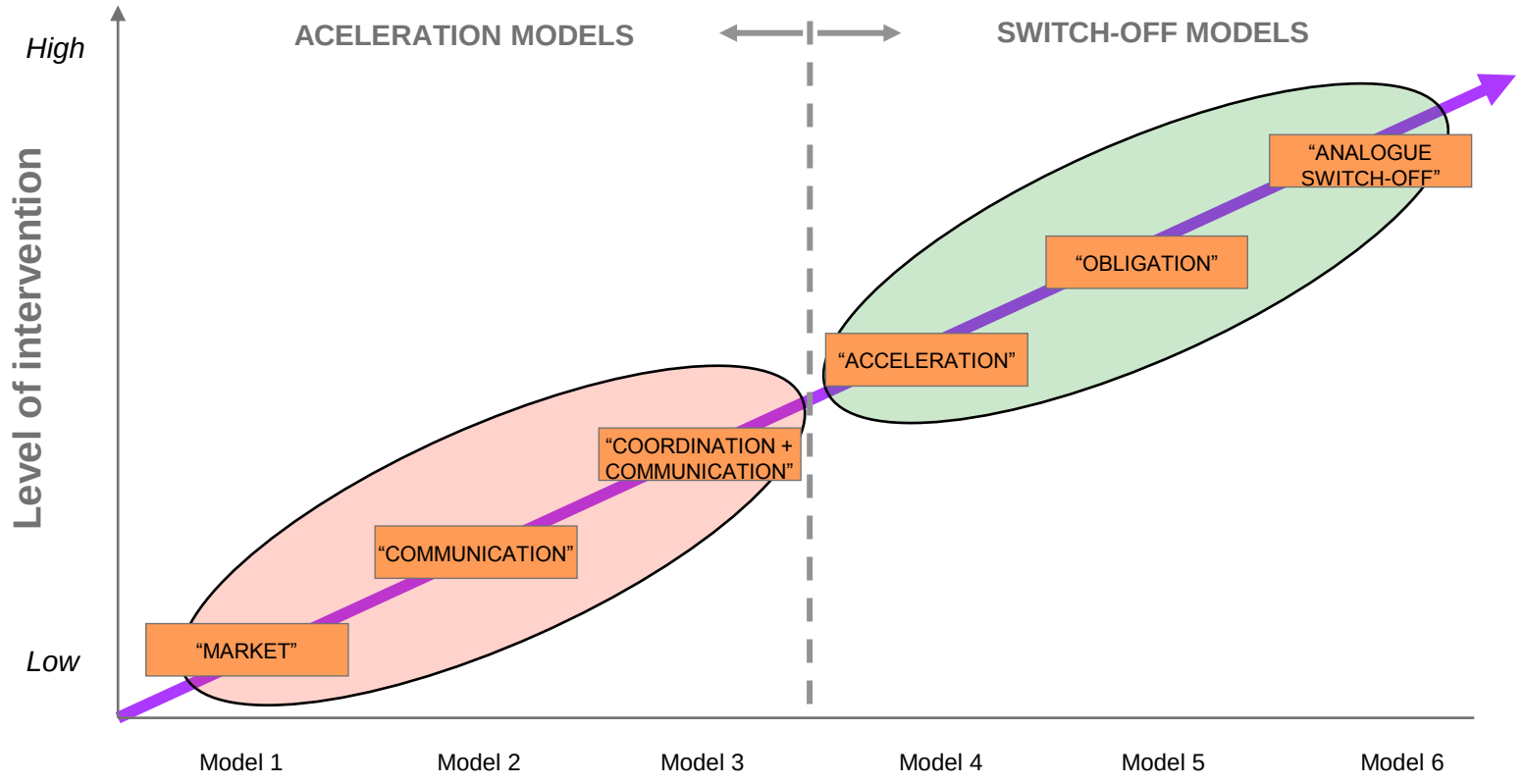
Methodology

Example Spain



Methodology

- The S.O. projects are managed towards complete switchover by implementing different project management models in which communication and industry coordination are gradually increasing the awareness and motivation for citizens and industry to switch…



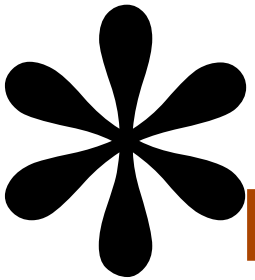
Introduction

- The author assists governments, media regulators and DTT project offices in the definition, planning, and implementation of Digital Terrestrial Television switchover plans.

- The services provided cover the following areas:

  - ✓ **Digital switchover planning**
  - ✓ **Economic analysis and business planning**
  - ✓ **Legislative design**
  - ✓ **D-Book development & Standardisation**
  - ✓ **Institutional support & international coordination**

- For DTT switchover projects, we bring clients an experienced team of seasoned broadcast- and telecommunications professionals and a proven methodology for switchover planning.



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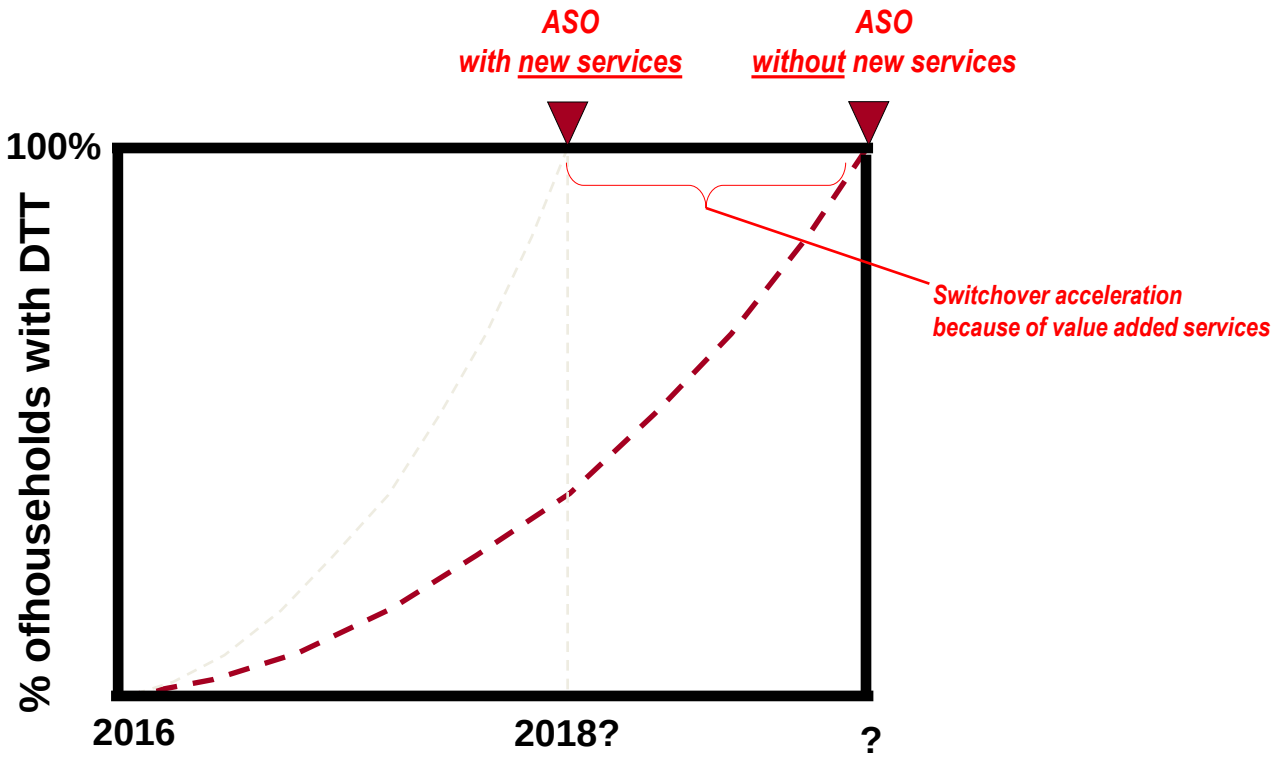
Keys to successfull switchover



Efficient DTT switchover model