

# **Tutorial on Audio Visual Media Accessibility**

**(New Delhi, India, 14-15 March 2012)**

## **5. Accessibility and business models**

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**<http://www.itu.int/en/ITU-T/focusgroups/ava/Pages/default.aspx>**

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## FG AVA

### Focus Group on Audiovisual Media Accessibility (FG AVA)

(In operation since 2011-05)

ITU-T Focus Group on Audiovisual Media Accessibility (FG AVA) was proposed by ITU-T Study Group 16 for creation in-between TSAG meetings. The Terms of Reference of the Focus Group are available [here](#).

The main objective of this Focus Group is to address the need to make audiovisual media accessible for persons with disabilities. The Focus Group encourages participation of all standards development organizations (SDOs) working in this area. The Focus Group will encourage:

- people to become involved in the accessibility work of ITU.
- the participation of persons with disabilities.
- the participation of universities.
- the participation of company accessibility departments

[ITU-T SG16](#) is the parent group of this Focus Group.

#### FG AVA Management

- Chairman: [Peter Olaf Looms](#) (European Broadcasting Union and Denmark)
- Vice-Chairman: [Masahito Kawamori](#) (NTT, Japan)
- Vice-Chairman: [Clyde D. Smith](#) (Fox News Network, USA)
- Vice-Chairman: [Axel Leblois](#) (G3ict)

#### FG AVA Meetings

**TIES** or **Guest** account required

**4th FG AVA Meeting:**  
**13 March 2012,**  
**New Delhi, India**

- [Meeting Announcement](#)
- [On-line registration](#)
- [Visa requirements](#)
- [Meeting Documents](#)

#### Standards Q&A

**Standards Q&A** is an open forum for questions concerning the standardization work of the International Telecommunication Union (ITU). It offers a unique opportunity to engage with the experts that develop the standards that underpin ICTs.

[Ask the experts!](#)

#### Newslog

**ITU-T Newslog - Focus Groups**

[First meeting of FG Innovation and Workshop on ICT Innovation, Geneva,](#)

# Content

## What does this tutorial cover?

- Costs and accessible TV
- Business models for TV accessibility
- Incentives and sanctions for promoting accessible TV

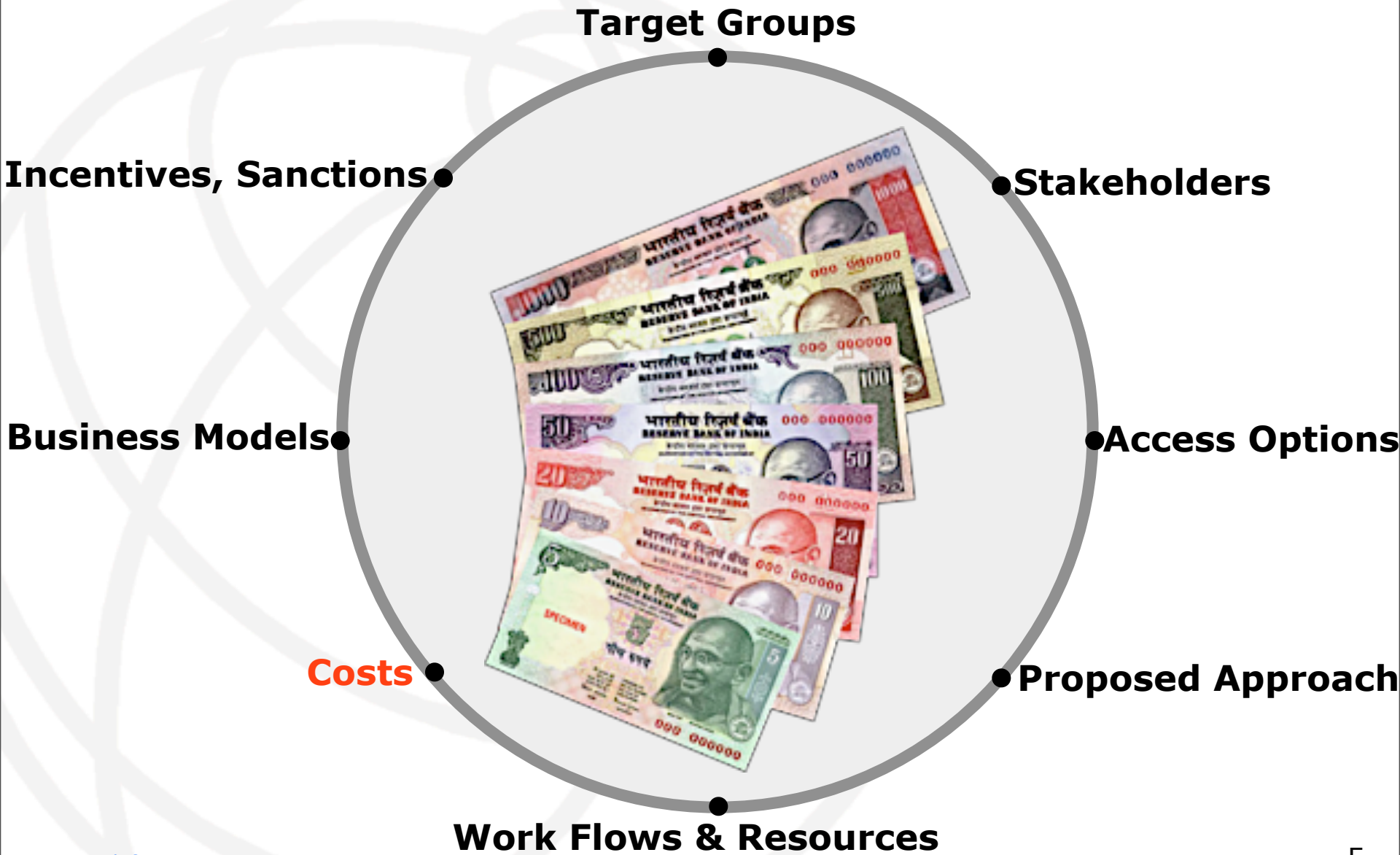
# Outcomes

## What will I be able to do?

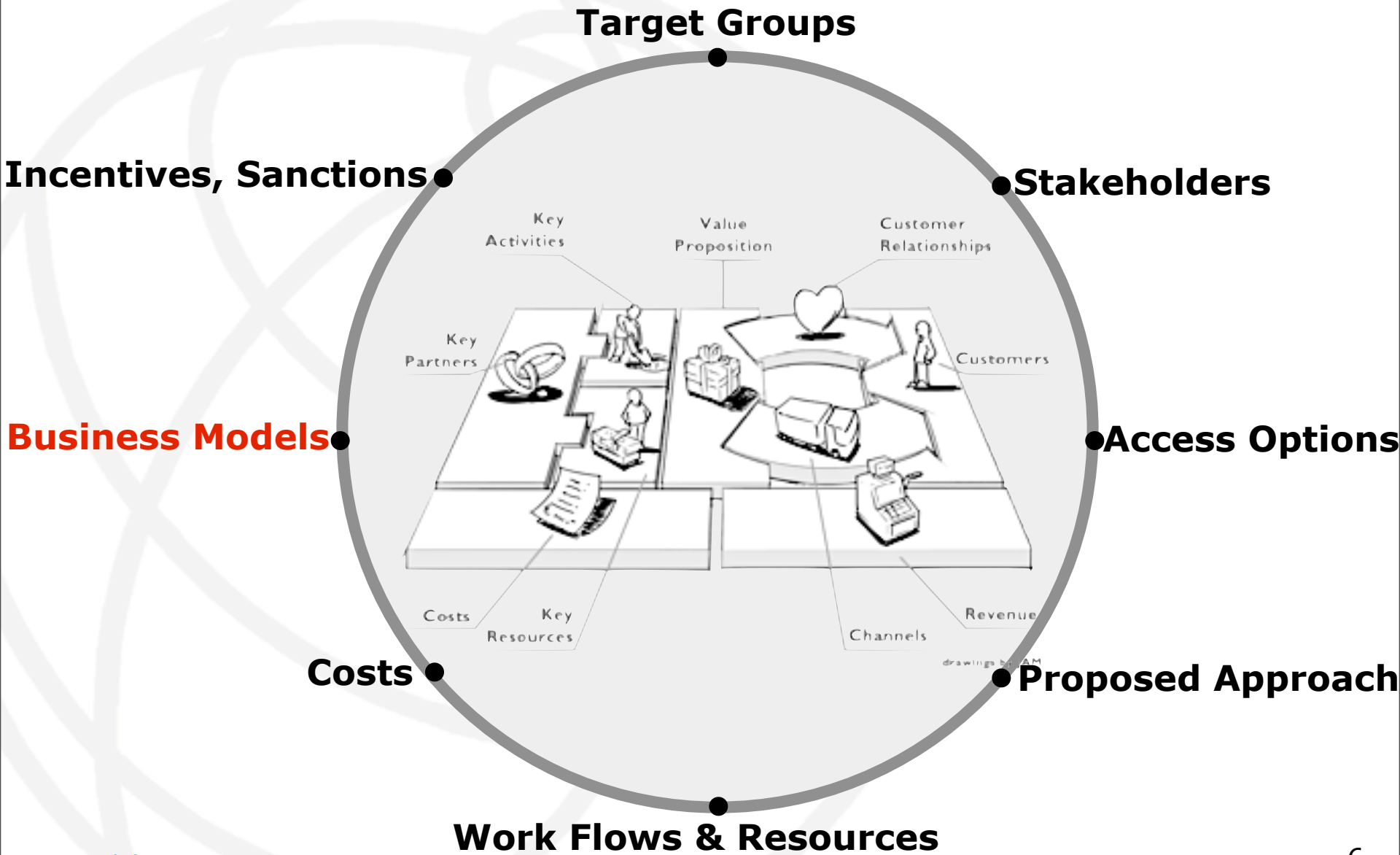
At the end of this session, you should answer questions such as:

- Costs – what resources are needed and what do they cost?
- What is a business model?
- Are there business models for accessible television receivers?
- What are the common business models for television access services?
- Legislation, regulation and standards – how do we turn vision into reality?

# Check list



# Check list



# Check list







# What does accessibility cost?

- Absolute costs
  - ➔ Capital costs of the infrastructure and bandwidth for producing and delivering
  - ➔ Variable costs of producing and delivering access services
- Accessibility costs relative to existing budgets
  - ➔ The supplier of accessible TV
  - ➔ The viewer

# Pre-prepared same-language captioning

## CAPTIONING INPUTS

**Video copy of the production with time codes**

**Desirable: a copy of the dialog list/script**

**Desirable: a glossary of unusual words, names and special references**

Cue  
the in and out  
time codes of  
each  
dialog utterance

Transcribe  
the  
dialog

Add  
important  
information from  
soundtrack

Compress  
the dialog  
where permitted  
and required

Format and colour-  
code captions  
and check  
for uniform  
reading speed.

## CAPTIONING OUTPUTS

**Video copy of the production with time codes**

**Captioning file in internal format**

**Captioning file in interchange format**

# Pre-prepared foreign-language captioning

## CAPTIONING INPUTS

**Video copy of the production with time codes**

**Desirable: a copy of the dialog list/script in the foreign language**

**Desirable: a glossary of unusual words, names and special references**

Cue  
the in and out  
time codes of  
each  
dialog utterance

Translate  
the  
dialog

Add  
important  
information from  
soundtrack

Compress  
the dialog  
where permitted  
and required

Format and colour-  
code captions  
and check  
for uniform  
reading speed.

## CAPTIONING OUTPUTS

**Video copy of the production with time codes**

**Captioning file in internal format**

**Captioning file in interchange format**

# Live same-language captioning

## CAPTIONING INPUTS

Live feed of the production (with time codes)

Desirable in advance of the live captioning session:  
a glossary of unusual words, names and special references that  
can be added to the re-speaking system

Cue  
the in and out  
time codes of  
each  
dialog utterance

Transcribe and compress  
the dialog where permitted and required;  
add important information from the soundtrack where feasible

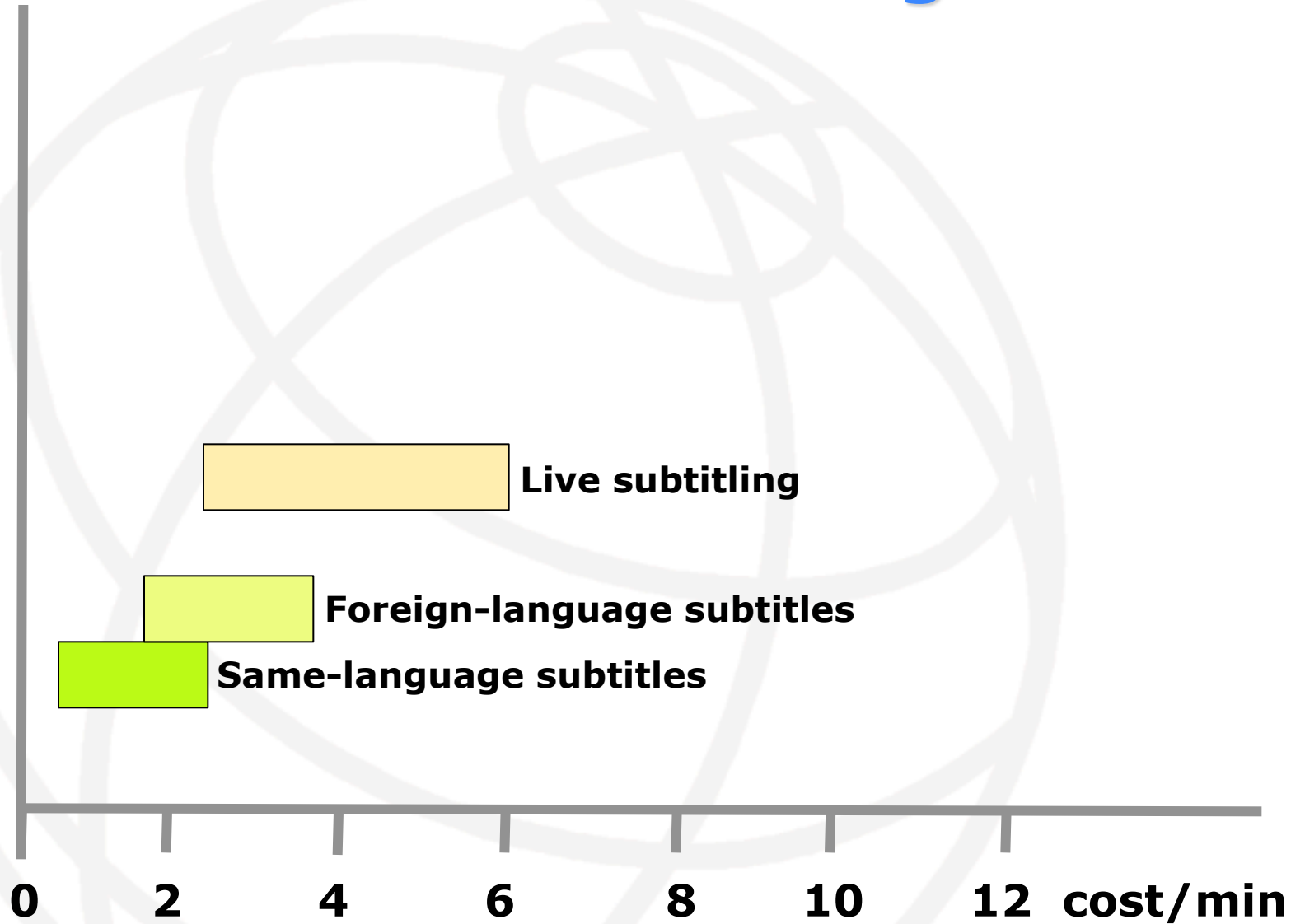
Format and colour-  
code captions  
and check  
for uniform  
reading speed.

## CAPTIONING OUTPUTS

Live feed of the production with time codes

Captioning text and cues to play-out centre

# Unit costs of selected access services subtitling



# Audio (spoken) captions - broadcaster

## AUDIO (SPOKEN) CAPTIONS - INPUTS

Live feed of the production with time codes

Live feed with the captions for the production

in the receiver

Parse the captions

Check that each dialog utterance can be done in the time allowed

Synthesize and play-out the spoken captions

Mix the spoken captions with the existing audio track(s)

Check the levels of the resulting mix

## AUDIO (SPOKEN) CAPTIONS - OUTPUTS

Live feed of the production with time codes

Additional audio channel with the spoken captions

# Audio (spoken) captions - in the TV

## AUDIO (SPOKEN) CAPTIONS - INPUTS

Live feed of the production with time codes

Live feed with the captions for the production

## in the receiver

Parse the captions

Check that each dialog utterance can be done in the time allowed

Synthesize the captions

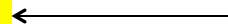
Mix the spoken captions with the existing audio track(s)

Check the levels of the resulting mix

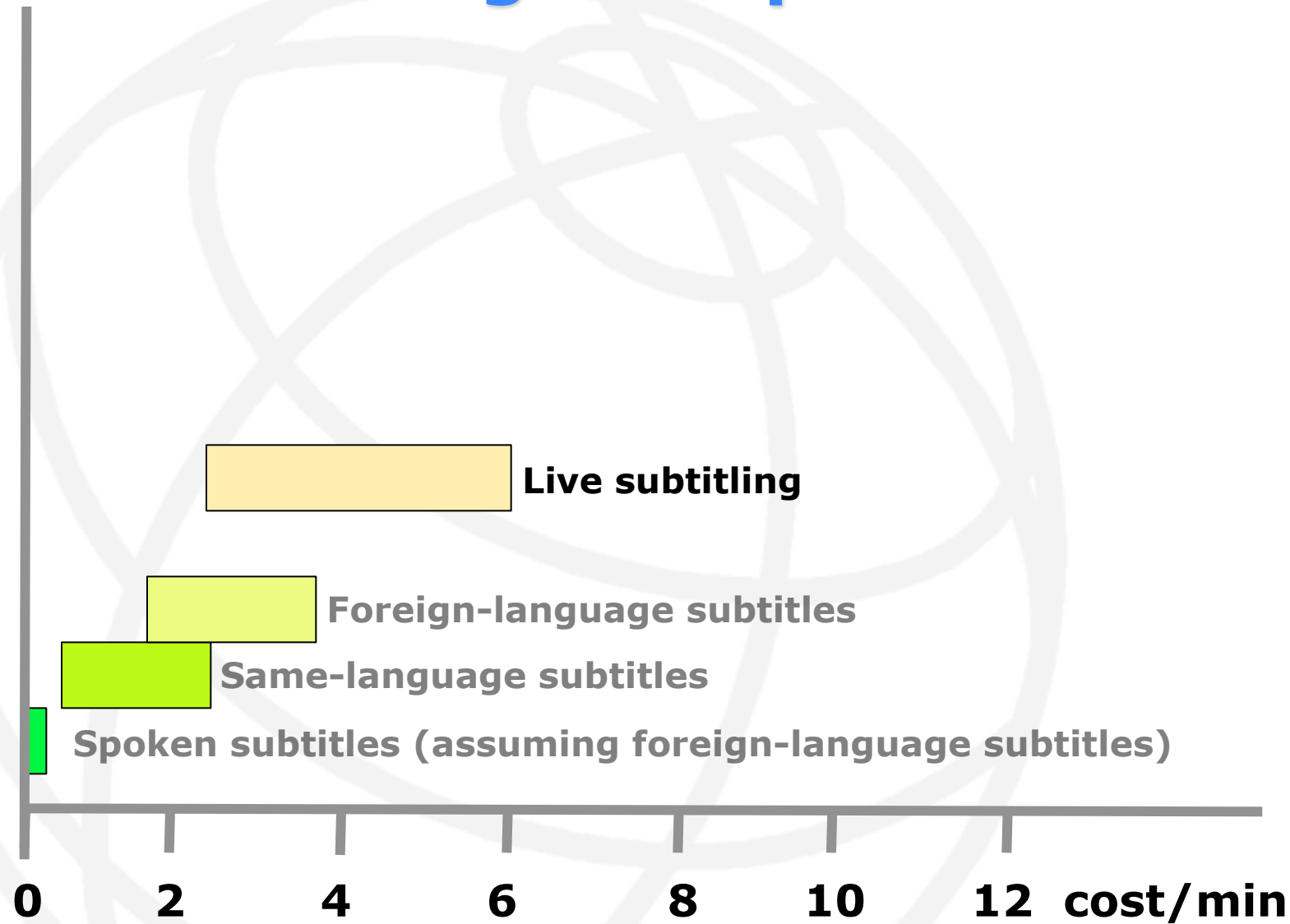
## AUDIO (SPOKEN) CAPTIONS - OUTPUTS

Live feed of the production with time codes

Time codes with cue for fades for use in the receiver

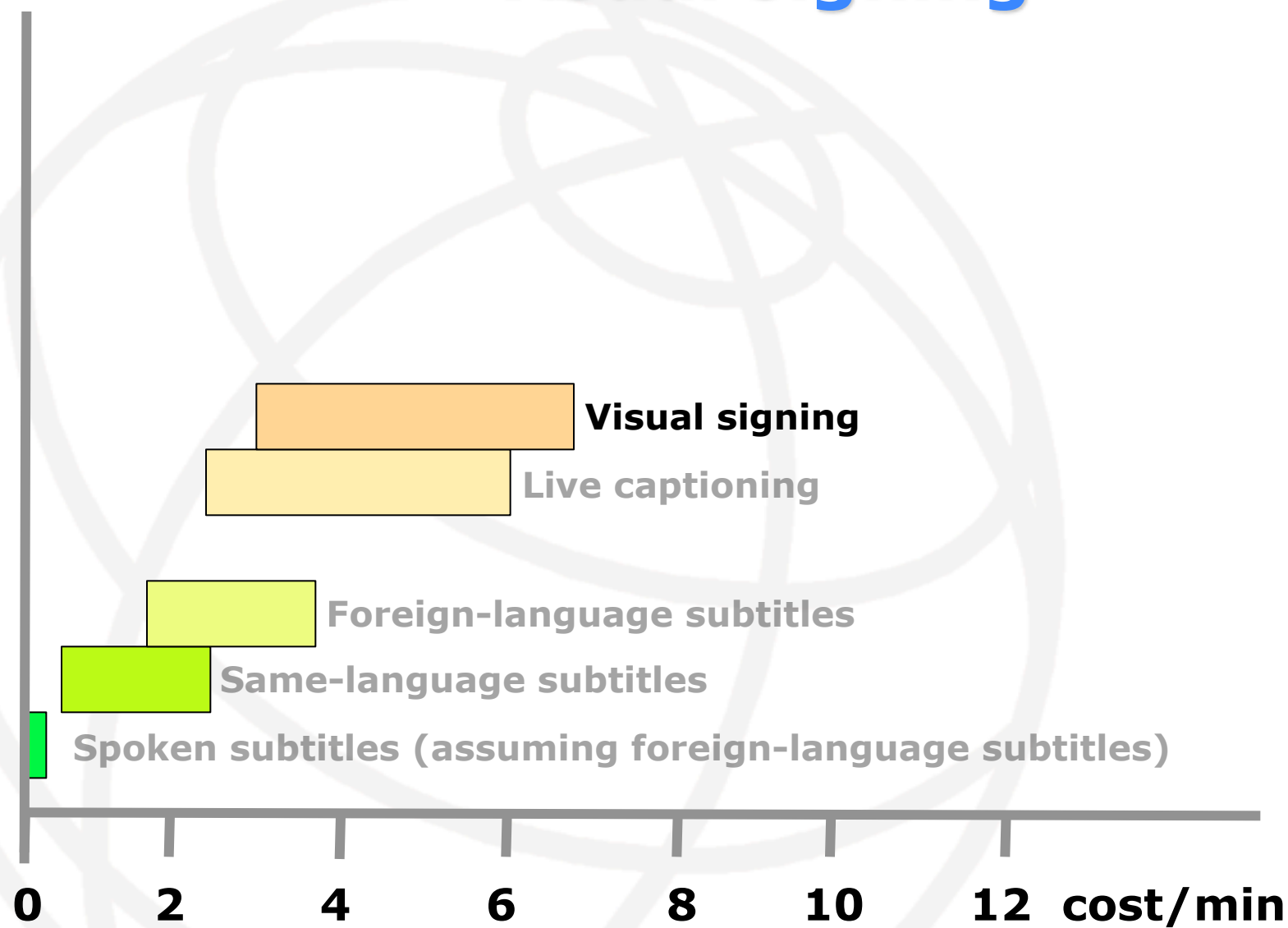


# Unit costs of selected access services subtitling and spoken subtitles





# Unit costs of selected access services visual signing



# Unit costs of selected access services visual signing

## Many options:

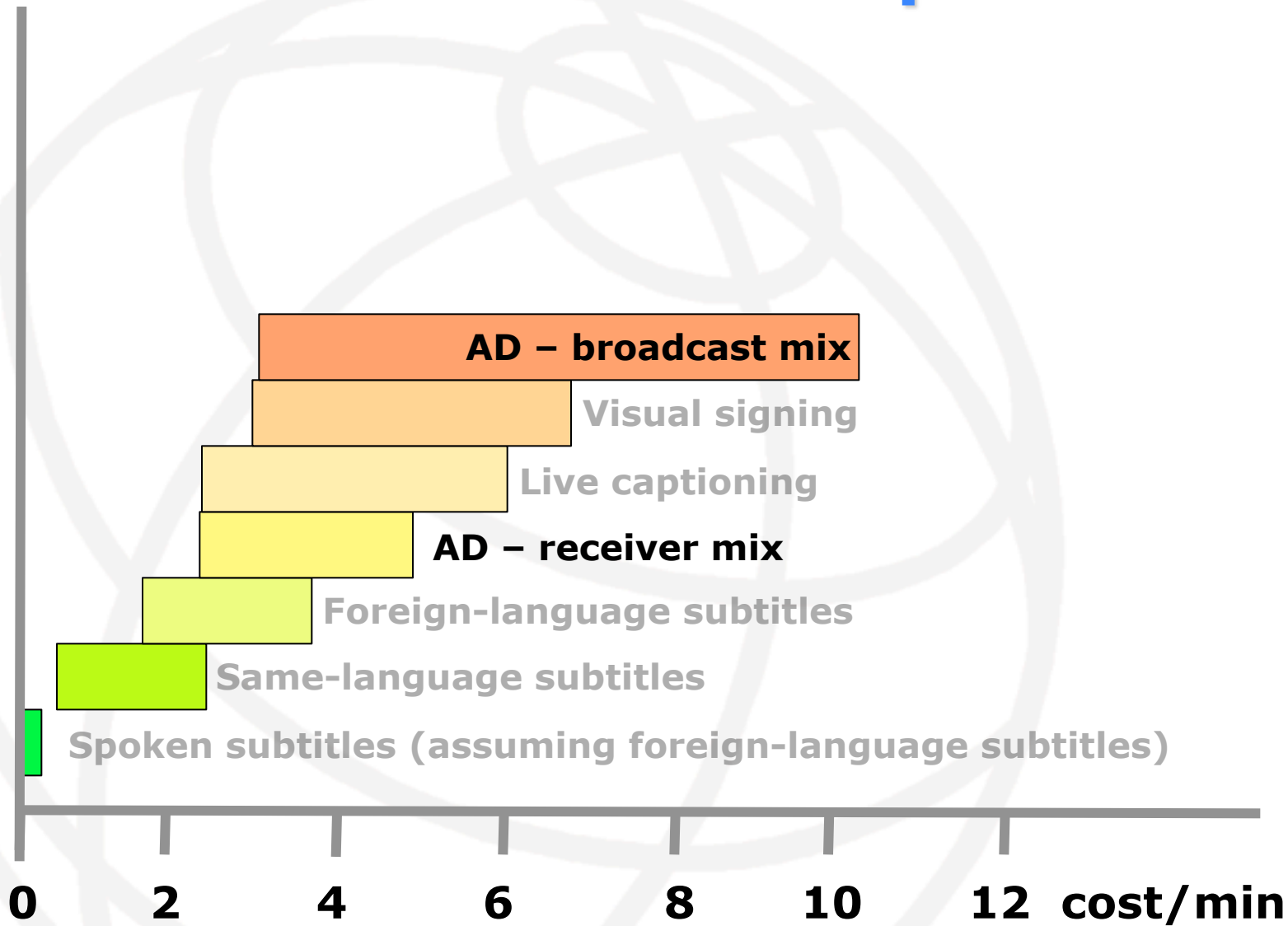
- Interpreter
- Avatar
- Blue screen insert
- In window
- Widget (hybrid)
- 2nd screen delivery (smartphone, tablet)



Visual signing

0 2 4 6 8 10 12 cost/min

# Unit costs of selected access services audio description



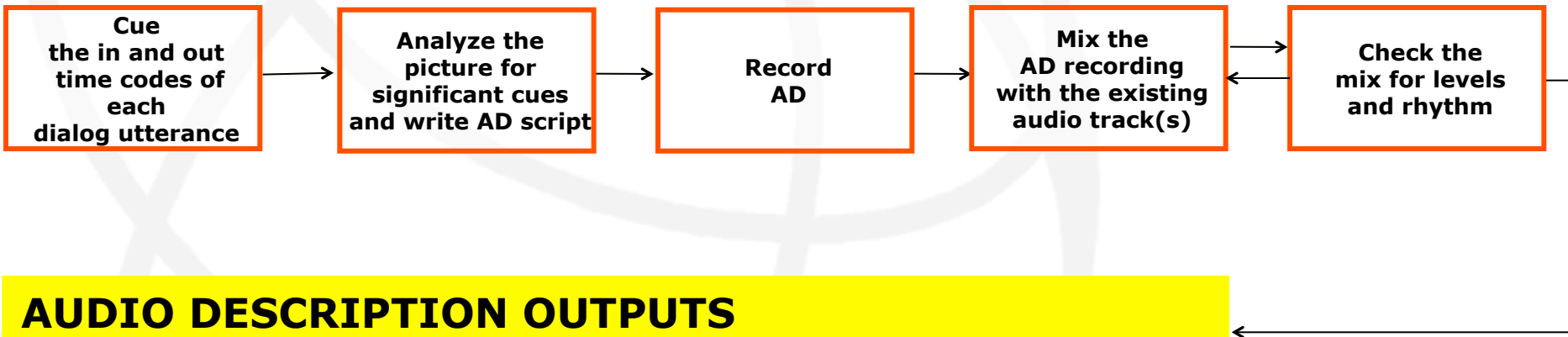
# Audio Description - broadcast mix

## AUDIO DESCRIPTION INPUTS

**Video copy of the production with time codes**

**Desirable: a copy of the dialog list/script in the foreign language**

**Desirable: a glossary of unusual words, names and special references**



## AUDIO DESCRIPTION OUTPUTS

**Video copy of the production with time codes**

**Mono audio file with cue for fades OR**

**Stereo / multitrack audio file with final mix**

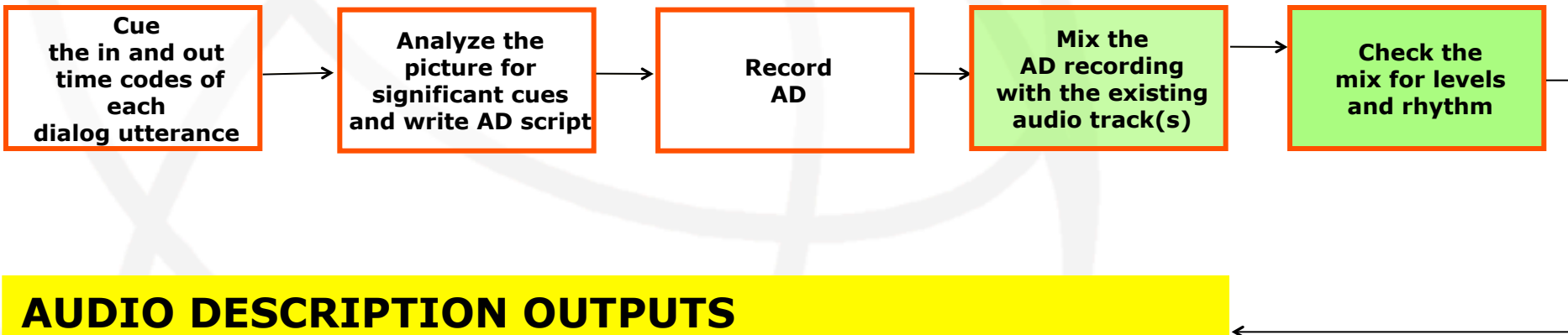
# Audio Description - receiver mix

## AUDIO DESCRIPTION INPUTS

**Video copy of the production with time codes**

**Desirable: a copy of the dialog list/script in the foreign language**

**Desirable: a glossary of unusual words, names and special references**



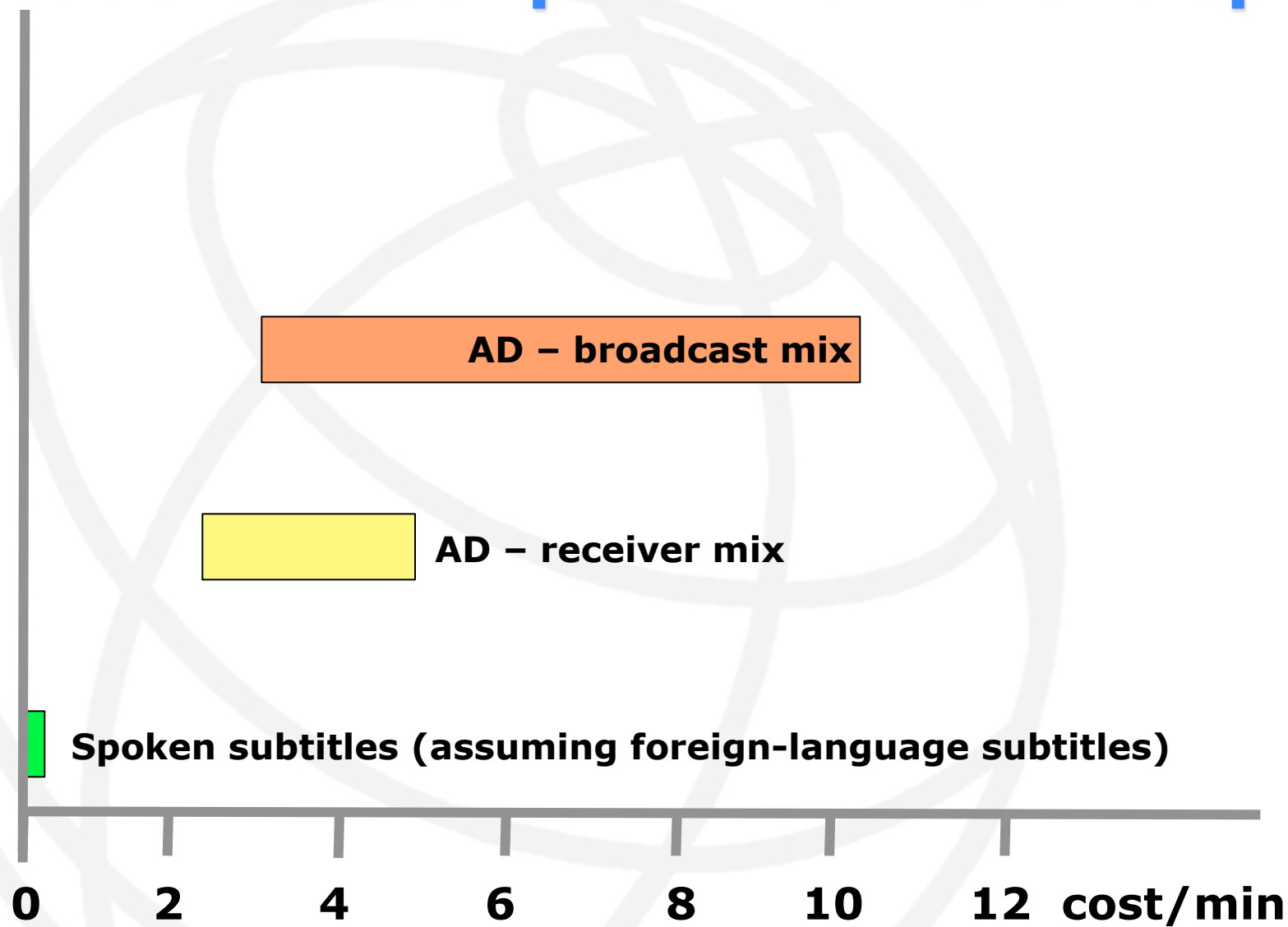
## AUDIO DESCRIPTION OUTPUTS

**Video copy of the production with time codes**

**Mono audio file with cue for fades OR**

**Stereo / multitrack audio file with final mix**

# Unit costs of selected access services audio description - different options



# The big picture - who pays?

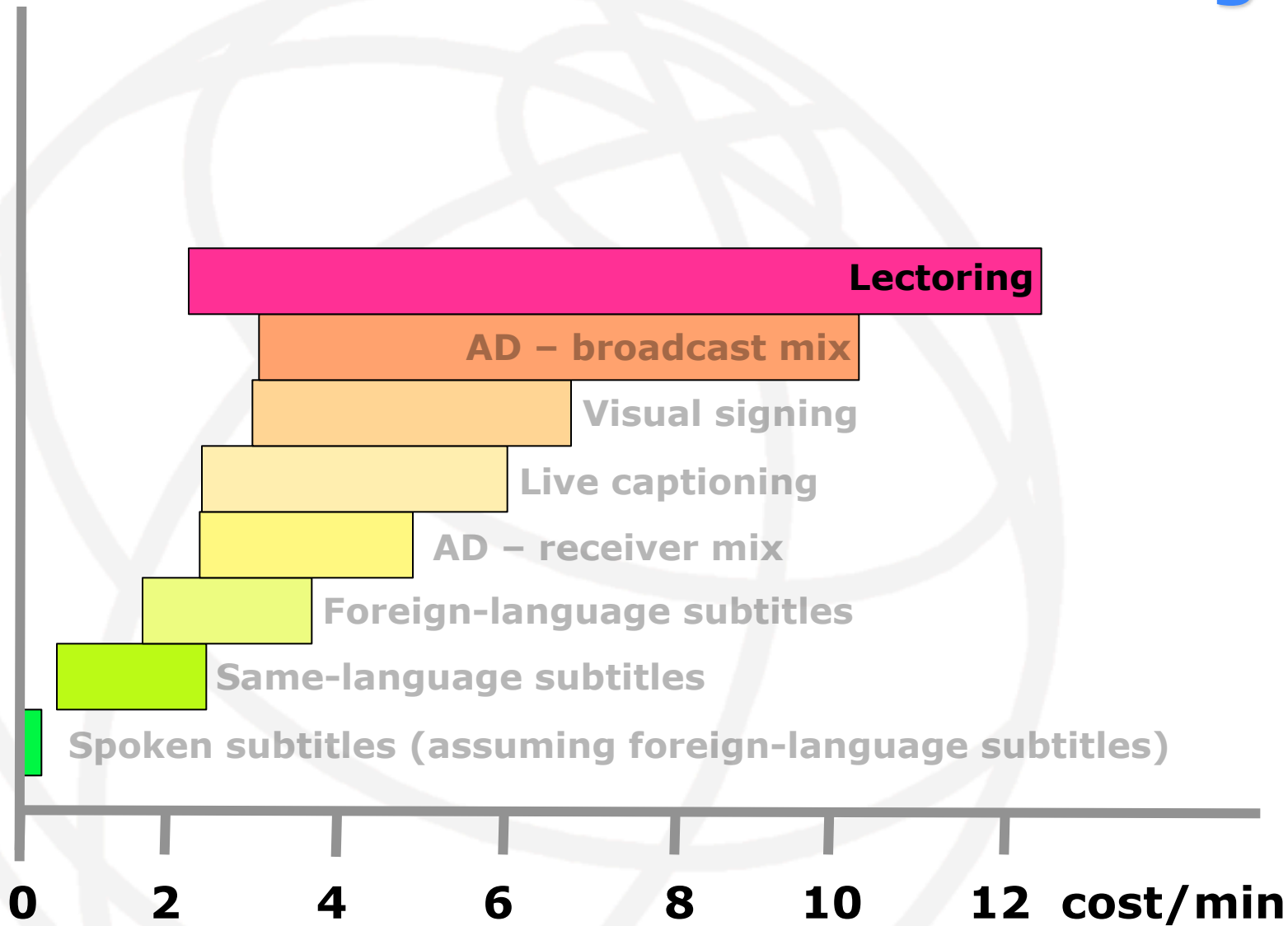
Broadcaster mix (€300-385k per annum)

Text To Speech-TTS (€60-63k per annum)



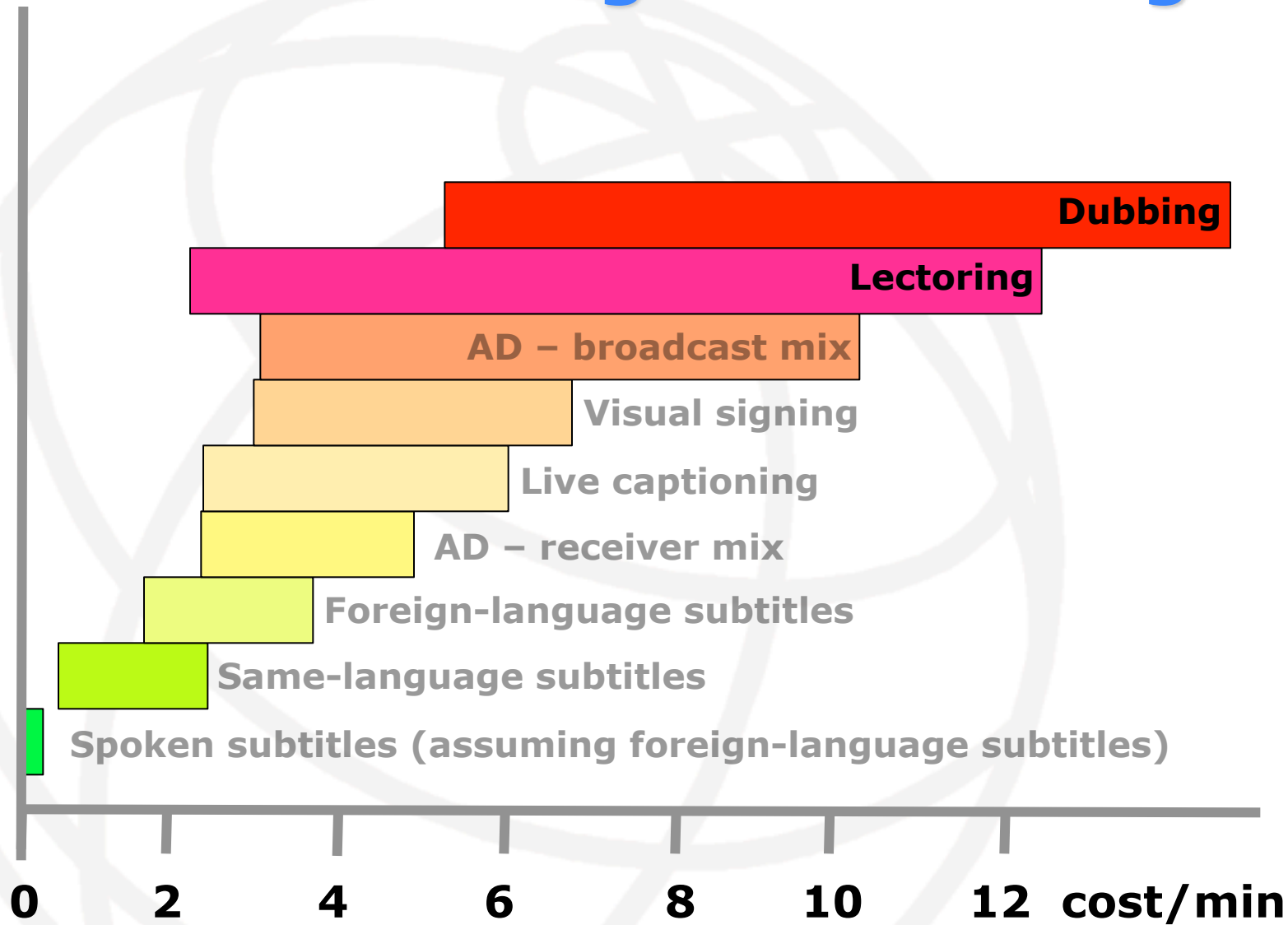
	Production of access service and access metadata	Aggregation into DTV channel	Aggregation into DTV service	Contribution	Distribution	(Conditional Access)	DTV receiver
Audio Description (Broadcaster mix - Stereo) 100 hours per annum; 1 repeat per programme (i.e. 100 hours repeats)	€ 300,000	256 kbit/sec			DVB-T €3,000 - 85,000 Per annum  DVB-T2 €2,500 - 70,000 Per annum		
Audio Description (TTS) 100 hours per annum; 1 repeat per programme	€60,000	10 kbit/sec			€120-3,000 Per annum		Receiver initially €90 more expensive, falling to a premium of €10 per set

# Unit costs of selected access services voice-overs and lecturing

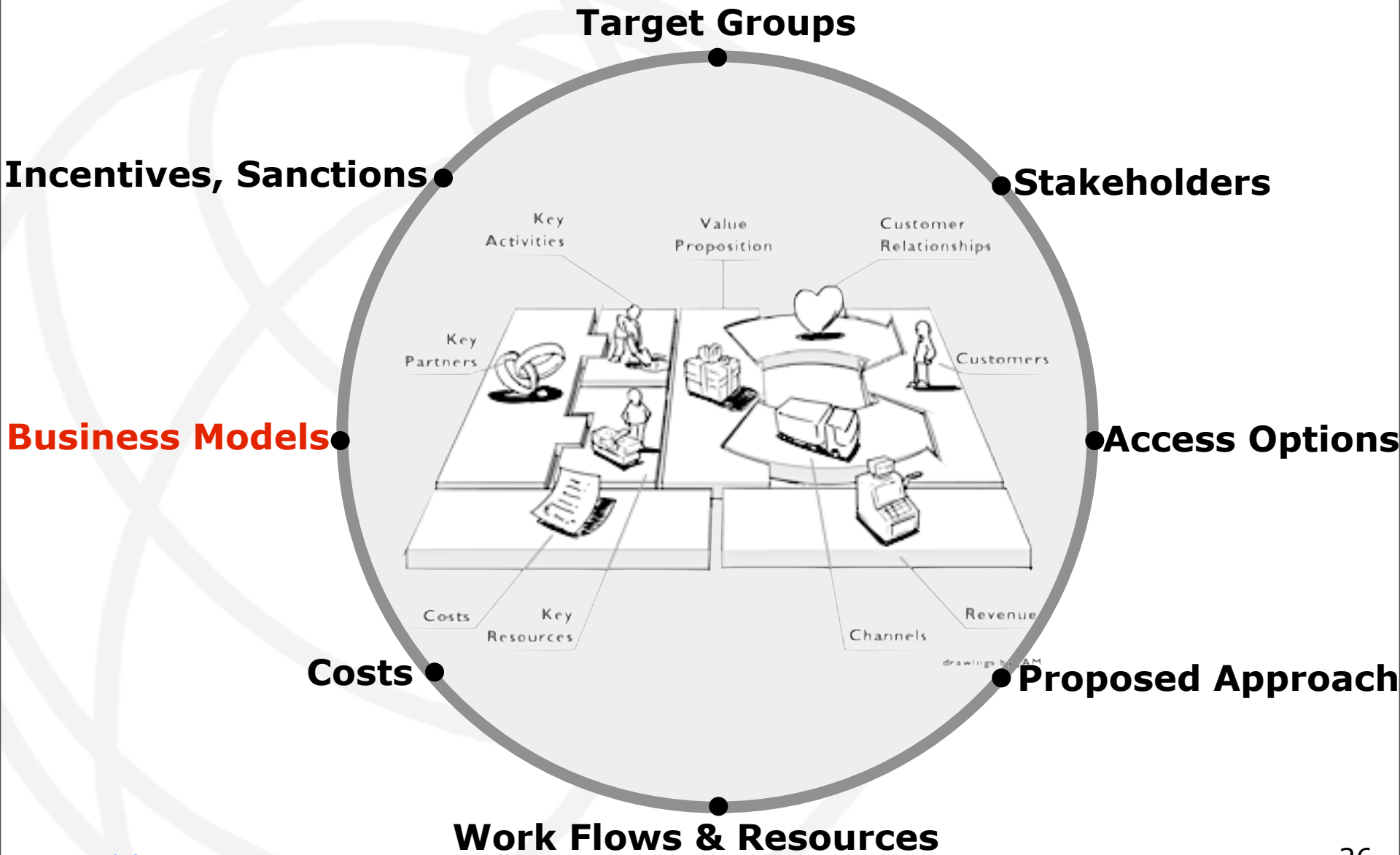




# Unit costs of selected access services dubbing and lecturing



# Check list



Target Groups

Incentives, Sanctions

Stakeholders

Business Models

Access Options

Costs

Proposed Approach

Work Flows & Resources

# Business models

## The Business Model Canvas

Designed for:

Designed by:

On: Day Month Year

Iteration: No.

### Key Partners



Who are our Key Partners?  
Who are our key suppliers?  
Which Key Resources are we acquiring from partners?  
Which Key Activities do partners perform?

**KEY RESOURCES**  
Organizational and economic  
Reduction of risk and uncertainty  
Acquisition of particular resources and activities

### Key Activities



What Key Activities do our Value Propositions require?  
Our Distribution Channels?  
Customer Relationships?  
Revenue streams?

**KEY RESOURCES**  
Production  
Problem Solving  
Platform/Network

### Value Propositions



What value do we deliver to the customer?  
Which one of our customer's problems are we helping to solve?  
What bundles of products and services are we offering to each Customer Segment?  
Which customer needs are we satisfying?

**KEY RESOURCES**  
Newness  
Performance  
Customization  
"Beating the odds story"  
Design  
Brand/Status  
Cost Reduction  
Risk Reduction  
Accessibility  
Convenience/Usability

### Customer Relationships



What type of relationship does each of our Customer Segments expect us to establish and maintain with them?  
Which ones have we established?  
How are they integrated with the rest of our business model?  
How costly are they?

**KEY RESOURCES**  
Personal assistance  
Dedicated Personal Assistance  
Self-service  
Full-service  
Commoditized  
Co-creation

### Customer Segments



For whom are we creating value?  
Who are our most important customers?

**KEY RESOURCES**  
Mass Market  
Niche Market  
Personalized  
Cross-sell  
Multi-sided Platform

### Key Resources



What Key Resources do our Value Propositions require?  
Our Distribution Channels? Customer Relationships?  
Revenue Streams?

**KEY RESOURCES**  
Physical  
Intellectual (brand, patents, copyrights, data)  
Human  
Financial

### Channels



Through which Channels do our Customer Segments want to be reached?  
How are we reaching them now?  
How are our Channels integrated?  
Which ones work best?  
Which ones are most cost-efficient?  
How are we integrating them with customer routines?

**CHANNEL PROSES**  
1. Direct sales  
2. Indirect sales  
3. Partners  
4. Self-service  
5. Multi-channel  
6. Co-creation  
7. Other

Cost Structure

Revenue Streams

# Business models - access services

## Cost Structure

- Costs vary greatly from one access service to another
- Relative costs depend on
  - ➔ market size
  - ➔ no. of languages to be offered
  - ➔ availability of key technologies including Text To Speech (TTS) and Voice Recognition for the languages required

# Business models - access services

## Revenue Streams

- Public funding (subsidies)
- Co-funding
- Sponsorship & advertising
- Own funding - out of existing production budget

# Business models - TV receivers

## Cost Structure

- Costs for TV receivers drop with increasing market size
- Costs rise with market fragmentation
  - ➔ DTG and NORDIG work to produce open standards for DVB
  - ➔ Use what is already in the standard
  - ➔ Work together to implement what is missing

# Business models - TV receivers

## Revenue Streams

- Public funding (subsidies) for proof of concept
- Free market (“separate but equal”) from companies like Sony
- Universal design (everybody benefits at some point so everyone contributes).

# Business models

## Television receivers

<b>Television access services</b>		<b>Public funding (subsidies)</b>	<b>Free market "Separate but equal"</b>	<b>Universal design (everyone pays &amp; benefits)</b>
	<b>Public funding (subsidies)</b>	<b>1</b>	<b>2</b>	<b>3</b>
	<b>Co-funding</b>	<b>4</b>	<b>5</b>	<b>6</b>
	<b>Sponsorship &amp; advertising</b>	<b>7</b>	<b>8</b>	<b>9</b>
	<b>Own funding - existing production budget</b>	<b>10</b>	<b>11</b>	<b>12</b>



# Business models

## Television receivers

<b>Television access services</b>		<b>Public funding (subsidies)</b>	<b>Free market "Separate but equal"</b>	<b>Universal design (everyone pays &amp; benefits)</b>
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# Business models

## Television receivers

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# Business models

## Television receivers

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	<b>Public funding (subsidies)</b>	<b>1</b>	<b>2</b>	<b>3</b>
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# Business models

## Television receivers

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	<b>Public funding (subsidies)</b>	<b>1</b>	<b>2</b>	<b>3</b>
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	<b>Sponsorship &amp; advertising</b>	<b>7</b>	<b>8</b>	<b>9</b>
	<b>Own funding - existing production budget</b>	<b>10</b>	<b>11</b>	<b>12</b>

# Activity 10 business models for accessible TV

- Instructions.
- Work in groups.
- Compare DD and Star TV
  - ➔ In terms of languages, to what extent is the accessibility challenge the same or different for these two organisations?
  - ➔ What are the revenue streams for access services?
  - ➔ Where do the accessible TV receivers come from?

# Legislation and regulation

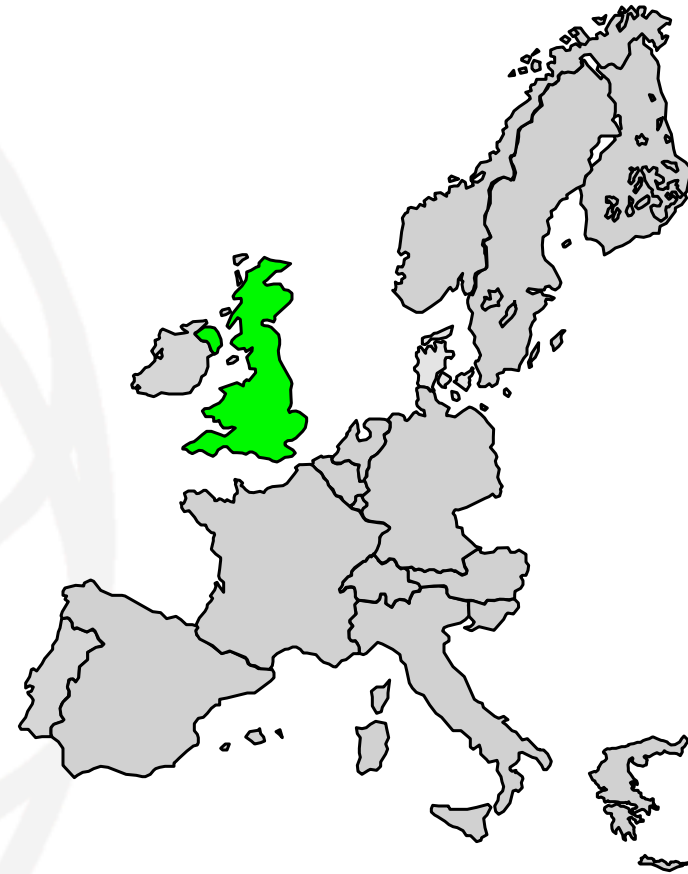


# Examples of national approaches



# United Kingdom

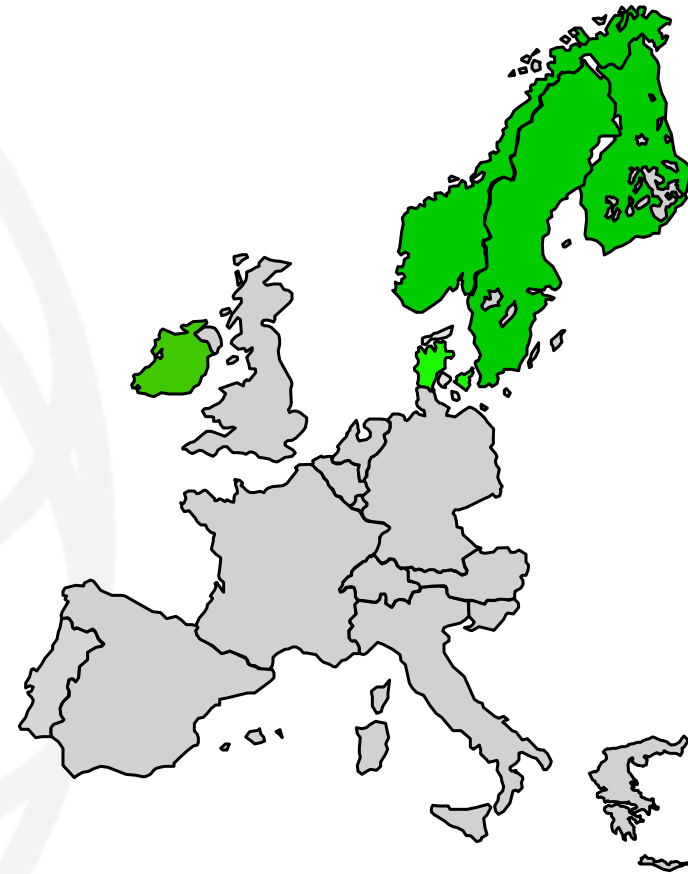
- Competitive TV market
- Legislation: 2003 Communications Act
- OfCom:
  - ➔ market impact studies
  - ➔ hearings
  - ➔ consensus on targets
  - ➔ buy-in
- DTG: direct impact on Freeview and Freesat & indirect impact on Pay-TV / IPTV market





# Denmark

- Competitive TV market
- Four-year media accord with accessibility targets for all with a public service remit
- Regulator:
  - ➔ consensus on targets
  - ➔ buy-in
- NORDIG: direct impact on free-to-air DTV & indirect impact on Pay-TV / IPTV market



# Portugal

- TV market dominated by major player
- Long tradition from analogue TV.
- Public service broadcaster providing access services for persons who are blind (audio description and visual signing)



# Activity 11 Carrots and sticks

Instructions.

■ Work in groups.

■ Compare DD  and Star TV 

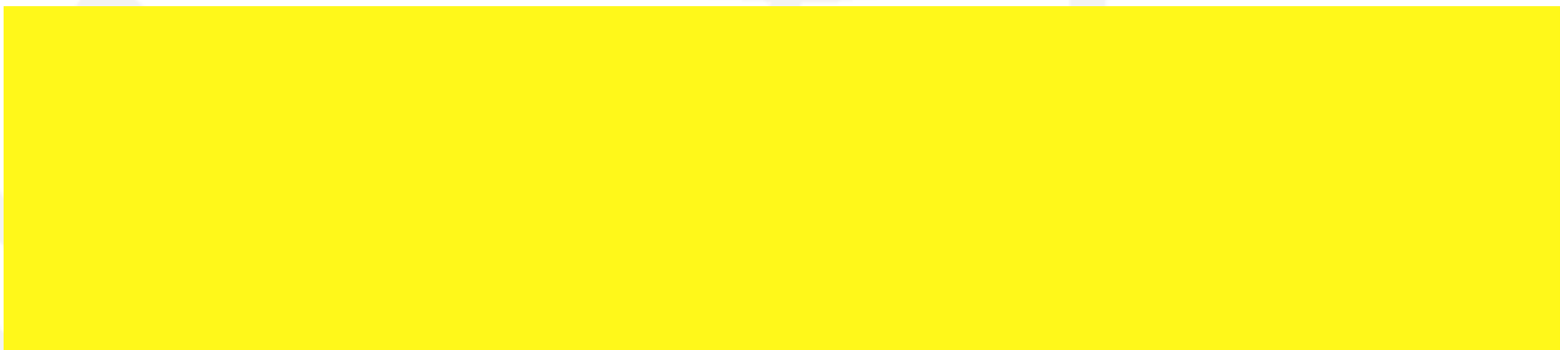
- ➔ What are the main incentives for offering access services?
- ➔ What mechanisms exist to ensure the provision of TV that is accessible?

# Activity 11 Carrots and sticks

- What are your conclusions?



- What points are worth noting?



# Outcomes

## What will I be able to do?

At the end of this session, you should answer questions such as:

- Costs – what resources are needed and what do they cost?
- What is a business model?
- Are there business models for accessible television receivers?
- What are the common business models for television access services?
- Legislation, regulation and standards – how do we turn vision into reality?

# Reading

- What does it cost to set up and run a given access service for audiovisual content? (chapter 6)
  - a) What capital investments will be needed throughout the value network to get the accessibility action going?
  - b) What are the annual operational costs for the accessibility action for each of the stakeholders in the value network?
- Business models Is there a business model so that access services can be offered on a sustainable basis? (chapter 7)
  - a) Is there a business model for the access service provision itself and is it sustainable?
  - b) Is there a business model for the consumer hardware needed for the service and is it sustainable?

# Reading (continued)

- **Introducing and/or scaling up an access service (chapter 8)**
  - a) What metrics and key performance indicators are proposed to ascertain whether the planned accessibility measure meets its objectives?
  - b) How is the planned access service measure going to be planned and implemented?
  - c) What plans exist to ensure an alignment of stakeholder interests?
- **Incentives and sanctions What mechanisms exist to promote access service provision? (chapter 9)**
  - a) What conventions and directives as well as national legislation and guidelines govern media accessibility in the territory in question?
  - b) What international and industry standards apply to media production and distribution?
  - c) Is there a commercial case for for accessibility action?