Live subtitle-
and timed data transport
from a broadcaster perspective

EBU-TT / W3C joint TTWG meeting – Geneva, February 1st 2019 - Marco Slik – marco.slik@npo.nl
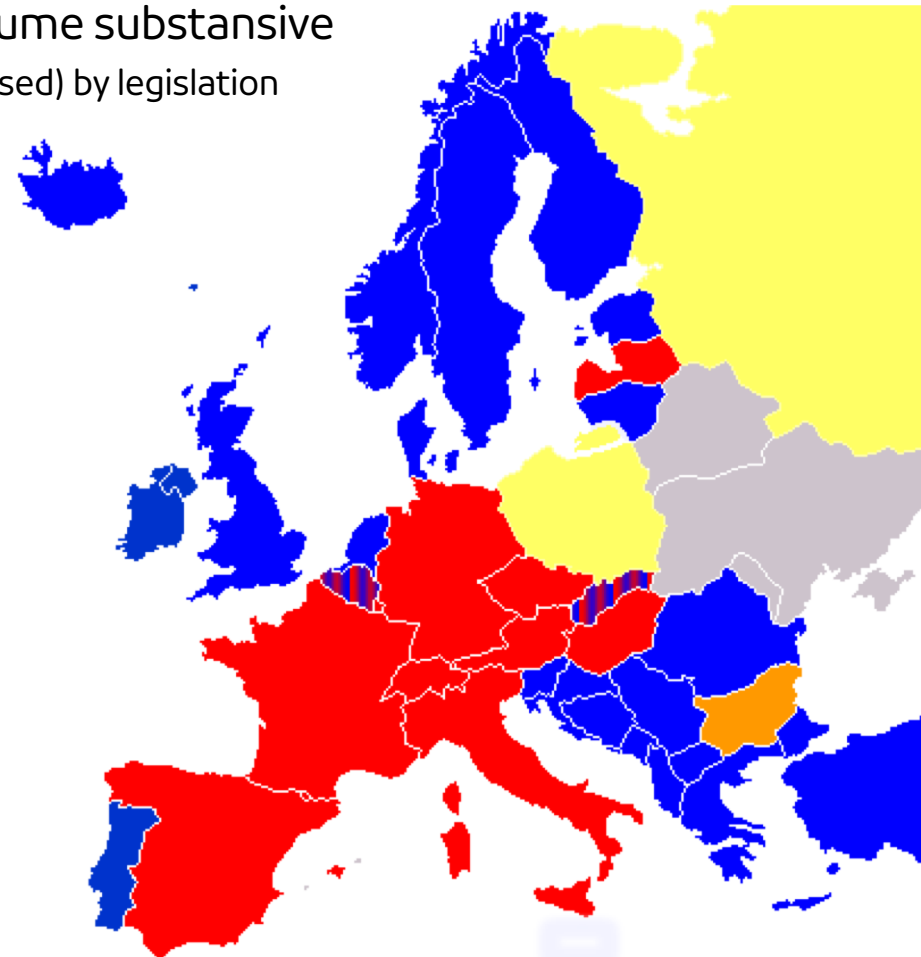
Status subtitle market

- Europe subtitling volume substansive
  - Hearing impaired (closed) by legislation
  - Translating › 50%

- NPO
  - HI 95% on all outlets
  - Translating 100%

European countries and their common methods to dub films

Dubbing only for children: Otherwise solely subtitles

Mixed areas: Countries using occasionally full-cast dubbing otherwise solely subtitles

Voice-over: Countries using usually one or just a couple of voice actors whereas the original soundtrack persists

General dubbing: Countries using exclusively a full-cast dubbing, both for films and for TV series

Countries which occasionally produce own dubbings but generally using dubbing versions of other countries since their languages are quite similar to each other and the audience is also able to understand it without any problems. (Belgium and Slovakia)

nederlandse
publieke
omroep

Status subtitle market

- Shift linear broadcast to on-demand and OTT
  - Different devices not knowing teletext

- Teletext being phased out
  - No vendor support current systems
  - No support in new lots, i.E. broadcast encoders
  - Page 888 for end-user hearing impaired elapses
  - Transport route elapses as well (VBI data insertion in SDI)

- IP infrastructure
  - Requires IP based protocols next to
    AV elementary streams (SMPTE2110)

Status subtitle market

- Caving traditional subtitle vendor market

- New players in the market
  - IT based startups
  - Cloud metadata enrichment services

- Increasing demand for good access services
  - Customizable
  - New forms (i.E. avatar sign language)

- New use cases create new volume:
  - non-audio subtitled video
  - timed metadata

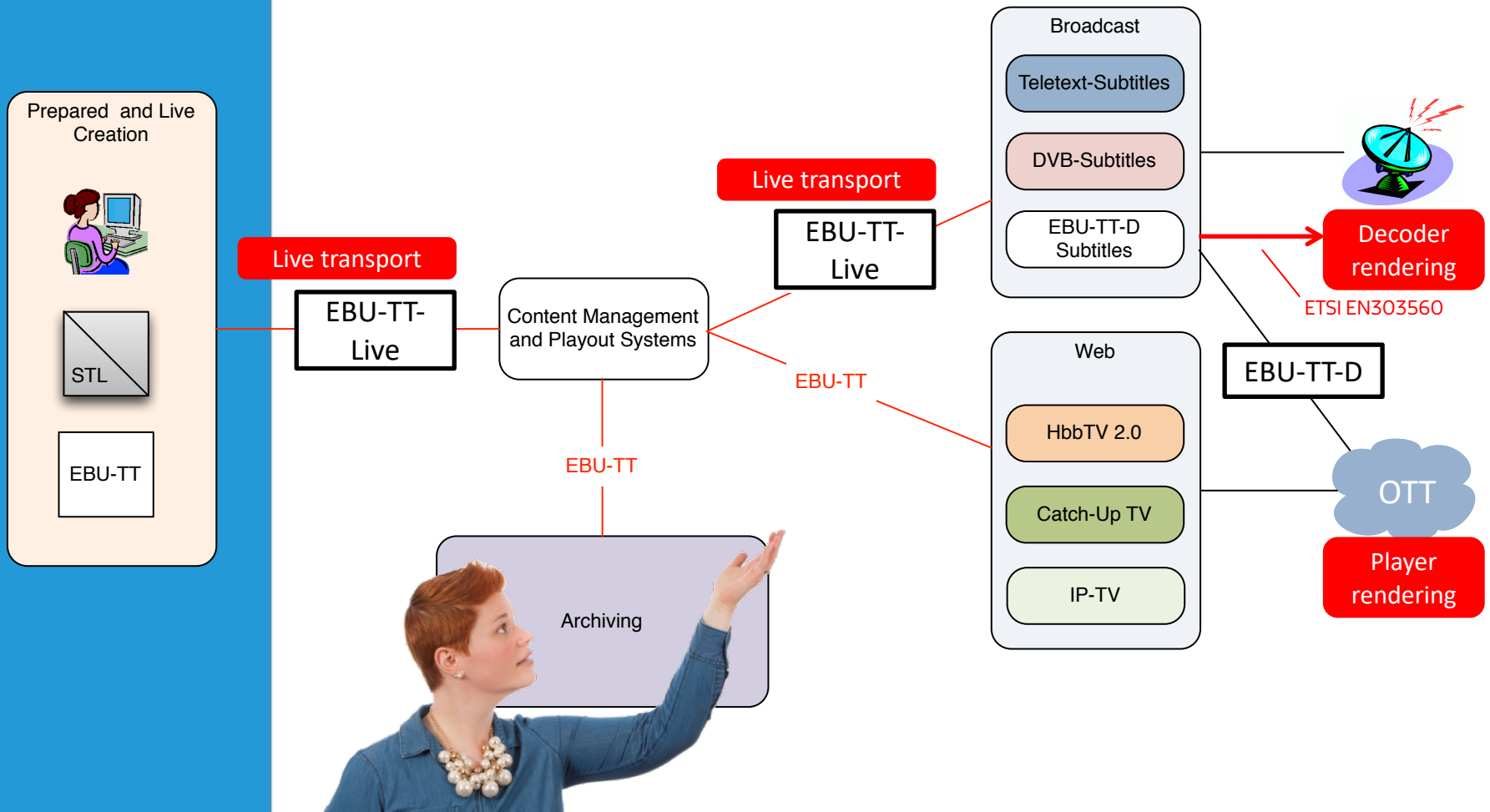→ Essential to move to IT / online based standardization

EBU-TT as replacement

- Legacy file formats
  - Cavena, Pac
  - STL
  - …

- Teletext based transport interfaces
  - Cyclone (GV proprietary)
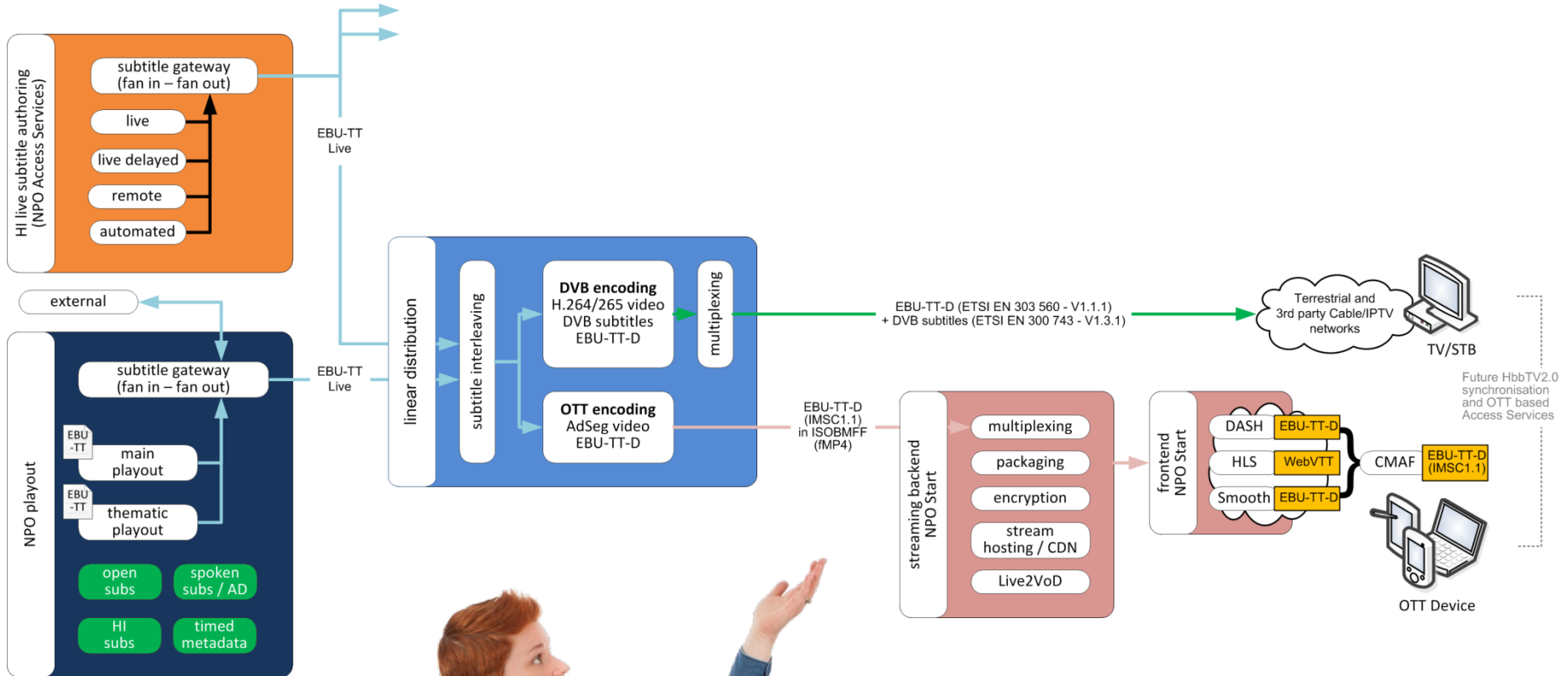 - XAP (GV proprietary)
  - Newfor
  - …
  - Not to forget: WST in VBI
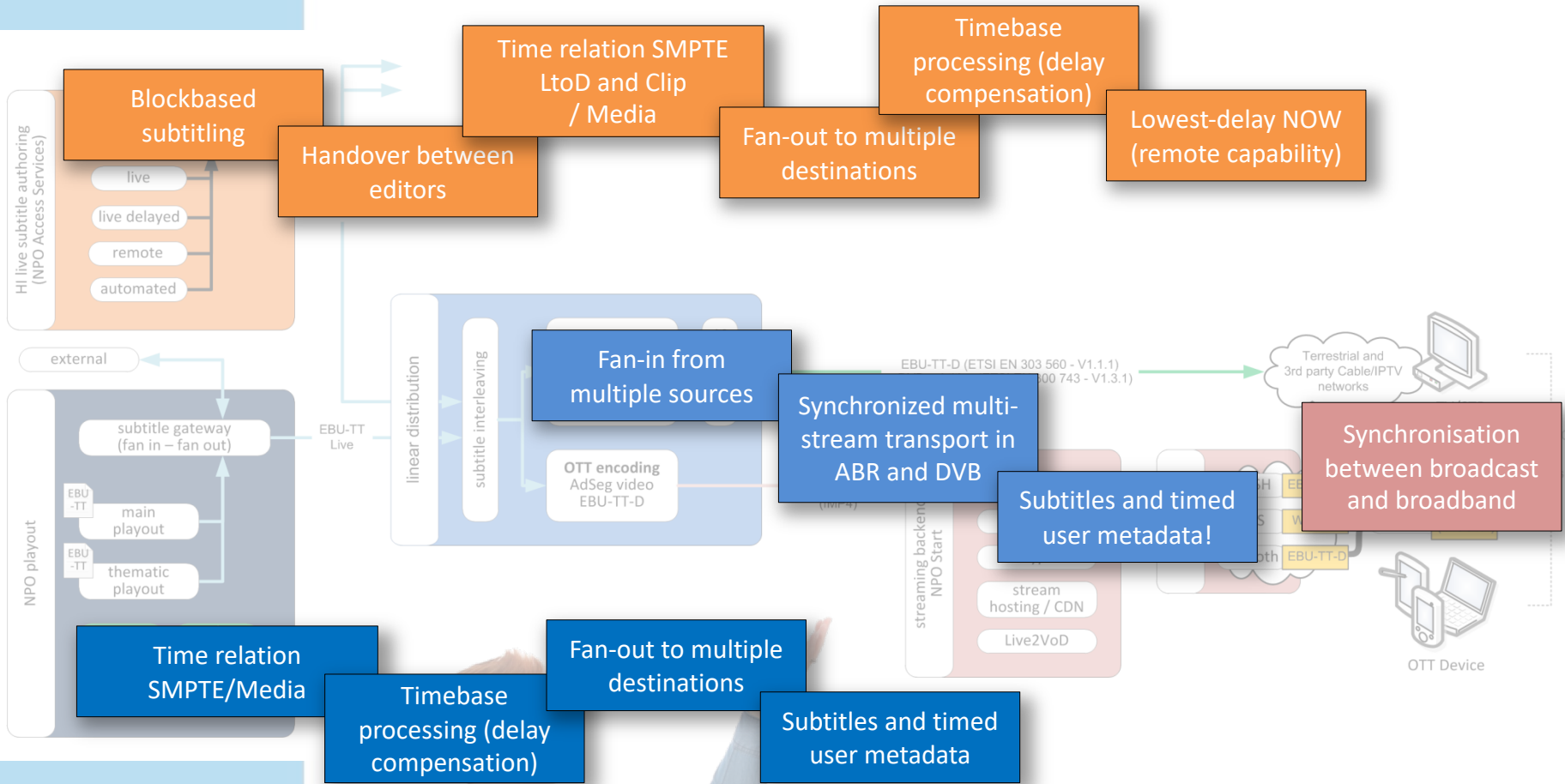
Live transport in the chain
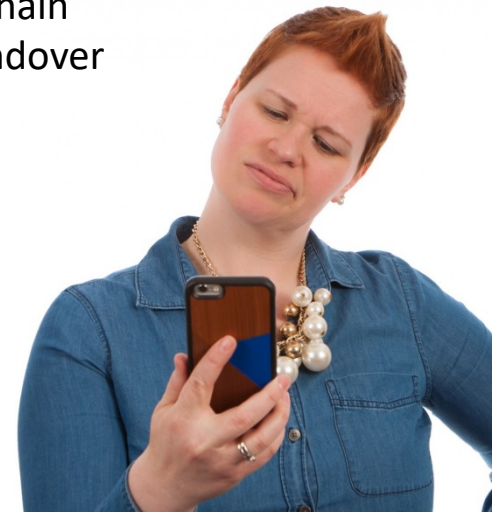
NPO's live subtitle chain

NPO's live subtitle chain

Needed

- Widest standardization as possible
  - Simple and effective transport of subtitling AND character based timed metadata
  - For all platforms, devices and screen formats
  - For multiple languages (incl. right to left)
  - Near realtime
    - TCP/IP transport within the broadcast chain with fan-in, fan-out, processing and handover (ideally enriching the SMPTE2110 set)
    - Encapsulated end-user distribution to local renderers (players, devices)
  - Supporting transition from the 'old world

Thank you

- For considering our usecases and interest