

# TECHNOLOGY & INNOVATION

# **WORKPLAN UP TO 2023**



# **ABOUT THE EBU**

The **European Broadcasting Union (EBU)** is the world's foremost alliance of public service media (PSM). Our mission is to make PSM indispensable.

We represent 115 media organizations in 56 countries in Europe, the Middle East and Africa; and have an additional 34 Associates in Asia, Africa, Australasia and the Americas.

Our Members operate nearly 2,000 television and radio channels alongside numerous online platforms. Together, they reach audiences of more than one billion people around the world, broadcasting in almost 160 languages.

We strive to secure a sustainable future for public service media, provide our Members with world-class content from news to sports and music, and build on our founding ethos of solidarity and co-operation to create a centre for learning and sharing.

Our subsidiary, Eurovision Services, aims to be the first-choice media services provider, offering new, better and different ways to simply, efficiently and seamlessly access and deliver content and services.

We have offices in Brussels, Rome, Dubai, Moscow, New York, Washington DC, Singapore, Madrid and Beijing. Our headquarters are in Geneva.

Discover more about the EBU at www.ebu.ch

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## INTRODUCTION

This is the Workplan of the European Broadcasting Union's Technical Committee (TC) for the period of June 2019 to June 2022, and extended with this update to 2023. The present version contains updates made in spring 2022 for presentation to the Technical Assembly in June 2022. The newly elected TC will commence work for the next Workplan towards the second half of 2022.

The TC has developed a strategy statement which outlines four strategic themes that underpin and inform this TC Workplan. This strategy statement is available as ANNEX A: TC STRATEGIC STATEMENT

Endorsed by the EBU Technical Assembly (TA), the Workplan is put into action by the elected TC and its Strategic Programmes (SPs). The day-to-day work is coordinated by the EBU Technology & Innovation Department (T&I).

#### **SUMMARY OF CHANGES FROM THE PREVIOUS VERSION**

- This Workplan reflects changes in the industry as well as new Member requirements and priorities that have emerged as a consequence of the COVID-19 crisis and the accelerated digital transformation of public service media (PSM) organizations.
- The number of Strategic Programmes (SPs) remains unchanged. However, their scope, objectives and deliverables were updated.
- Deliverables are continuously updated and shown on the respective web pages of the SPs and their sub-groups.
- Examples of major changes include:
  - New projects on 'LED Virtual Production' and 'CG Animations in real-time' (see SP Digital Media Production)
  - New project on Gaia-X (see SP Media Infrastructures and Security)
  - Studies on 'Metaverse' and 'NFTs' (see SP Digital Media Production)
  - Monitor and investigate optical fibre roll-out and deployment in EBU Member countries (see SP Distribution)
  - New projects on 'HbbTV', 'Modular Content and Segmentation', 'Connected Cars' (see SP Platforms)
  - Transversal study on PMSE to understand and secure the future spectrum needed for content production (between SP Spectrum, SP Digital Media Production and SP Distribution)
  - New transversal task force on the 'Newsroom of the Future' (see SP Digital Media Production)
  - Closure of the group on 'Radio Production' and of Communities of Practice on 'Archives' and 'NLE Systems'
  - Revised scope for SP Digital Media Production and SP Media Infrastructures
     & Cybersecurity
- Note that the activities of the Technical Committee also depend on available resources from Members, including sufficient interest, commitment, and engagement.

### **WORKING STRUCTURE**

The Workplan is carried out through the **TC's Strategic Programmes (SPs)** and **Project Groups**, as well as **Communities of Practice** and **Collaborative Developments**. This work is supported by a range of **Ancillary Activities**.

TECHNICAL COMMITTEE					
TC Liaison	TC Liaison	TC Liaison	TC Liaison	TC Liaison	
SP Digital Media Production	SP Media Infrastructures & Cybersecurity	SP Distribution	SP Platforms	SP Spectrum	
Project Groups	Project Groups	Project Groups	Project Groups	Project Groups	

#### Communities of Practice<sup>1</sup>:

Implementing Open Innovation, New Builders, Metadata Developer Network, Hybrid and Cloud-based Production, DTT Promotion & Monitoring, Next Generation Audio, Newsroom Systems

#### **Collaborative Developments:**

'A European Perspective', EuroVOX, PEACH, Eurovision FLOW, LIST, MCMA, Lynx (Fake News), STT benchmarking, Sharing and Planning of Terrestrial Services

#### STRATEGIC PROGRAMMES

The Technical Committee has defined a comprehensive set of **primary strategic goals**, grouped under **five overarching Strategic Programmes (SPs)**. The current set was defined after surveying the existing Strategic Programmes themselves, the Members' Technical Liaison Officers, as well as other EBU departments and statutory committees.

Purpose: To consider technological and economic aspects in addressing the mid and

long-term strategic challenges of EBU Members

**Leadership:** Chair and one or more Vice-Chairs from EBU Members

**Coordination:** EBU T&I staff

**Participants:** Employees of EBU Members

**Oversight:** Technical Committee and dedicated TC Liaison

Each SP is tasked with organizing itself to meet the goals set in the Workplan in the most efficient way, and by taking into account the available resources from Members and EBU T&I. Agile practices and working methods shall be applied where possible.

Each SP shall maintain a list of deliverables and actions, for reference by the Technical Committee, Technical Liaison Officers (TLOs) and EBU Members, on the groups' respective web pages.

<sup>&</sup>lt;sup>1</sup> Additional Communities of Practice will be established as required

#### **PROJECT GROUPS**

SPs create **Project Groups**, gathering Members and industry experts to undertake activities in specific areas, but the parent SP retains overall responsibility for those activities. Generally, one or more deliverables and an associated timeline are defined.

**Purpose:** Carry out dedicated tasks and undertake R&D in specified areas of

the parent SP's domain

**Leadership:** Chair (EBU Member)

Coordination: EBU T&I staff

**Participants:** Employees of EBU Members and relevant industry experts

**Oversight:** The group's parent SP

#### **COMMUNITIES OF PRACTICE**

Designed to facilitate sharing and learning around specific topics of interest or common operational areas. Communities of Practice (CoPs) can work with high levels of confidentiality or as open forums. While linked to a specific SP, communities can operate transversally across all SPs and together with other EBU departments.

**Purpose:** Facilitate sharing and learning between Members

**Leadership:** Chair (EBU Member, or EBU staff)

Coordination: EBU T&I staff, along with staff from other EBU departments as appropriate

Participants: Employees of EBU Members

**Oversight:** Communities are linked to, and overseen by, a specific SP

#### **COLLABORATIVE DEVELOPMENTS**

Collaborative Developments are established by EBU T&I or based on the EBU's strategic planning in agreement with the Technical Committee. They are designed to respond to the growing demands for prototyping, the creation of minimum viable products, and product development. They may call on expertise from SPs, Communities of Practice and other EBU statutory committees.

**Purpose:** Contribute to specific products or services

**Leadership:** EBU staff with a steering board of relevant experts, including from Members

Coordination: EBU T&I staff

Participants: Employees of EBU Members who contribute to the work

**Oversight:** Regular reports to a specific SP and to the TC

#### **ANCILLARY ACTIVITIES**

This workplan also outlines other activities of EBU T&I, such as Research & Development coordination, interdepartmental work, leadership of, and contributions to, external organizations, EU projects, regular and one-off conferences, and a wide range of publications. Our website tech.ebu.ch contains the most up-to-date information about ongoing work.

The following pages outline the scope and primary goals of each SP and list the related Project Groups, Communities of Practice and Collaborative Developments.

Additional goals, as proposed in surveys or identified by SPs, will be published on the website. The corresponding deliverables for the primary goals will be defined by each SP, Community of Practice or Collaborative Development and published on their respective web pages.

### SP DIGITAL MEDIA PRODUCTION

The main objective of the SP Digital Media Production (comprising video, audio, data) is to facilitate the digital transformation from the traditional world of linear production in Radio and Television towards a multi-service and audience-centred digital media production which enables new ways of storytelling and innovative media experiences. This includes the development of technology roadmaps with a primary focus on empowering the creatives in media production, as part of both linear and digital media supply chains. The work objectives are to focus on concrete technology deliverables enabling more efficient, faster and more flexible workflows, and on enhancing the technical value of content to audiences. This comprises several aspects of being at the forefront of innovation by understanding the impact of emerging media technologies, new standards, and industry groups, and to facilitate the concrete collaboration and co-developments between Members.

The SP also anchors the transversal project on Sustainability. This project undertakes a variety of activities, investigating sustainable practices and technologies in all areas of production and distribution, across several SPs.

#### PRIMARY STRATEGIC GOALS

- Assist Members in developing and using efficient production workflows
- Track the evolution of post-production, news systems and archive systems
- Enable Members to
  - transition toward UHDTV, including HDR and live production workflows
  - transition to Personalized Sound Experiences, including ADM-based tools development and implementation
  - implement adaptable production workflows for audio, video and data
- Provide guidance for Members on
  - production and contribution codec quality based on testing and benchmarking
  - cloud-based production and future newsroom systems
  - LED wall-based virtual production and CG animation in realtime without mocap suits
  - the future spectrum needs for content production to the SP Spectrum (PMSE)
- Investigate the Members' benefits regarding
  - cloud-agnostic microservice frameworks for media
  - the impact of metaverse technologies
  - object-based media for accessibility
- Study and foster Member knowledge sharing regarding
  - processing for multi-versioned content for live and non-live applications
  - using NFTs e.g., for content repurposing or archives
  - sustainability in production, developing recommendations and best practice, incl. sets, audiences, and strategies
- Ensure and improve the end-user Quality of Experience
- Provide a common Quality Control language and a database of QC terms, templates and initiate a developers' area
- Ensure knowledge sharing on the topics of metadata, machine learning, and computing architectures
- Develop
  - Al benchmarking framework for facial recognition and an EBU metadata standard (EBU Core, EBU CCDM)
  - Cloud-hosted metadata exchange platform for archives
- · Leverage AI to support all aspects of content production, including the areas of
  - fake news detection, incl. product development
  - serverless cloud workflows
- Improve accessibility through 'Seeing, Hearing, Participating and Understanding' personalized services, incl. a focus on moving from linear to non-linear services
- Continue to promote the use of R 128 for loudness control across all content, platforms and devices, incl. radio, streaming, cinematic content and NGA platforms and devices

#### CHAIR

Stephan Heimbecher (SWR)

#### VICE-CHAIRS

Robert Amlung (ZDF), Werner Bleisteiner (BR), Morten Brandstrup (TV2 Denmark), Florian Camerer (ORF), Ultan Courtney (RTÉ), Eileen Duggan (RTÉ), Andrew Dunne (BBC), Conrad Gouws (RTÉ), Jürgen Grupp (SWR), Philip Holdgate (ITV), Xaviere Farrer Hutchinson (France Television), Roberto Iacoviello (RAI), Philip Klenk (SWR), Yioula Kyriacou (CyBC), Dave Marston (BBC), Jeremy Mathieu (BBC), Nigel Megitt (BBC), Alberto Messina (RAI), Tatjana Mladenovic (BBC), Karl Petermichl (ORF), Andy Quested (ITU), Wolfgang Rein (SWR), Jeremy Tarling (BBC), Simon Thompson (BBC), Kim Viljanen (YLE)

#### TC LIAISON

Thomas Saner (SRG), Michael Eberhard (SWR)

#### **WEBSITE & CONTACTS**

tech.ebu.ch/production

#### PROJECT GROUPS OVERVIEW

#### Audio

- Audio Systems and Workflows
- Personalized Sound Experiences
- Loudness

#### Video

- Video Systems and Workflows
- UHD TV Strategy Support
- HDR Implementation Task Force
- Video Evaluation
- Quality Control ebu.io/qc

#### Data

- Metadata & Al
- Metadata Models
- Al Benchmarking
- Al and Automatic Metadata Extraction
- Media Cloud & Microservices (MCMA)

#### Accessibility

Timed Text

#### Sustainability for PSM

- Sustainability for PSMs
- Green Production

#### Workflows

- Newsroom Workflows
- LED Virtual Production
- CG Animation in realtime

#### **COMMUNITIES OF PRACTICE**

#### Implementing Open Innovation

Explores strategies for innovation and how to successfully take good ideas from proof-of-concept to operation. Jointly run by EBU T&I and the EBU Academy.

#### **Hybrid and Cloud-based Production**

This transversal community with SP Media Infrastructures & Cybersecurity helps Members to share the best approaches to (live) cloud production.

#### Metadata Developer Network

Runs an annual workshop covering the three pillars of broadcasters' activities related to data, metadata, machine learning, and computing architecture.

#### **COLLABORATIVE DEVELOPMENTS**

#### Al Benchmarking, with speech-to-text and facial recognition

Develops an opensource software to allow for a more objective performance comparison of AI facial recognition and speech-to-text systems.

#### LvnX

Develops a tool for the detection of fake news as well as other applications such as author identification.

#### **MCMA**

Develops a cloud-agnostic microservice framework for media and works towards a standardization of key aspects to facilitate the creation of bespoke workflows by users.

# SP MEDIA INFRASTRUCTURES & CYBERSECURITY

The focus of the SP Media Infrastructures & Cybersecurity (MICS) is on the evolution of broadcasters' media production infrastructures and architectures to enable greater efficiency, flexible and secure on-site and remote workflows, as well as greater share-ability and find-ability of content.

The primary objective is the transformation from traditional broadcast media production infrastructures towards network, software, and cloud-based architectures, and much higher automation in digital media production workflows.

In addition, media cybersecurity and trusted data exchanges are also key topics, especially in the context of this transformation to software, IP-based, Cloud, and data-driven workflows.

As global industry players provide the hardware and software for media infrastructures that Members deploy in their media organizations, the SP engages with the industry in the very early stages of the development of emerging technologies, in standards development, EU bodies and industry groups. It also facilitates concrete innovative collaboration and co-developments between Members.

This SP also anchors the transversal activities on Media Cybersecurity and Gaia-X.

#### PRIMARY STRATEGIC GOALS

- Enable Members' transition to IP and software-based facilities as well as on-premise and public cloud-based production environments, to increase efficiency, reduce cost and provide scalability and flexibility in programme production.
- Ensure that Members have access to on-premise and cloud-based media production platforms that are secure, interoperable, portable and energy efficient, and that guarantee data privacy and data sovereignty.
- Ensure that Members can fully leverage their data and exchange it with partners within trusted dataspaces.
- Investigate and assess production connectivity solutions (e.g. SRT, RIST, and 5G and satellite in collaboration with SP Distribution).
- Influence the standardization of new infrastructure technologies in line with the requirements of EBU Members and perform interoperability testing and associated development.
- Establish security strategies and best practices in media cybersecurity across the media supply chain, incl. the cloud.
- Assist Members' strategic planning with frameworks and tools to improve the maturity of core organizational functions.

#### CHAIR

Phil Tudor (BBC)

#### **VICE-CHAIRS**

Willem Vermost (VRT), Peter Brightwell (BBC), Rainer Jochem (SWR), Tulla Onstad (NRK), Nick Hopewell (BBC), Jüuergen Grupp (SWR), Louis-Cyrille Trebuchet (FTV)

#### **TC LIAISON**

Brian Wynne (RTÉ)

#### **WEBSITE & CONTACTS**

tech.ebu.ch/infrastructures

#### **PROJECT GROUPS**

- System Design & Automation
- Media Cybersecurity (transversal across SPs)
- Gaia-X
- Capability Framework

#### **COMMUNITIES OF PRACTICE**

#### **New Builders**

Gathers EBU Members who are in the process of planning or constructing new broadcast and production facilities to share, learn and act with common interest. This CoP collaborates with a subgroup on Newsroom Systems (see SP Digital Media Production). Jointly run by EBU T&I and the EBU Academy.

#### Hybrid and Cloud-based Production (transversal with SP Digital Media Production)

A community for EBU members to share experienceexperiences and learn about practical cloud-based and hybrid production tools and workflows. Transversal with SP Media Production Technology.

#### **COLLABORATIVE DEVELOPMENTS**

#### EBU Live IP Software Toolkit (LIST)

The Live IP Software Toolkit enables advanced measurements in IP-based, cloud-based and live production facilities, including contribution links via SRT and RIST protocols.

## SP DISTRIBUTION

This SP investigates and influences the evolution and development and of media transmission and distribution network technologies. The overarching objective is to ensure that these technologies are capable of meeting EBU Members' distribution requirements. The scope of the SP Distribution covers Radio, TV and other media services.

#### PRIMARY STRATEGIC GOALS

- Study the relevance and benefits of different media distribution options for EBU Members, including conventional broadcasting and fixed and mobile communications networks, as well as their evolution, in particular in terms of reach, quality, costs, and market position.
- Influence the standardization of new distribution technologies and build cross-industry support for solutions in line with EBU Members' requirements.
- Assist EBU Members in assessing emerging distribution technologies, including 5G, aiming to
  increase reach, address new markets, and provide improved services. This includes the technical,
  economic, and regulatory framework for the distribution of content and services and 5G-based
  production and contribution.
- Investigate broadband distribution architectures including CDN-based solutions and possible alternatives, gather best practices and facilitate information sharing among EBU Members.
- Investigate the opportunities and threats of OTT-only based distribution of EBU Members' content and services including PSM's own platforms and third-party platforms.
- Monitor and investigate fibre roll-out and deployment in EBU Member countries, exchange best practices amongst EBU Members, and identify possible actions for EBU.

Note: Some of these goals require appropriate collaboration with other Strategic Programmes and with the EBU Legal & Policy and Media communities.

#### CHAIR

Roland Beutler (SWR)

#### **VICE-CHAIRS**

Andrew Murphy (BBC), Jan Devos (VRT), lan Wagdin (BBC)

#### **TC LIAISON**

Michael Nugent (ERT)

#### **WEBSITE & CONTACTS**

tech.ebu.ch/distribution

#### **PROJECT GROUPS**

- Mobile Technologies and Standards
- Broadband Distribution Architectures
- 5G in Content Production

#### **COMMUNITIES OF PRACTICE**

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#### **COLLABORATIVE DEVELOPMENTS**

#### **Eurovision FLOW**

Eurovision FLOW was developed by the EBU. The consensus among EBU Members and the industry is that a Multi-CDN approach is necessary to meet the growing demand for video delivery, both regionally and in terms of throughput. Following a successful pilot in 2017, the service was commercially launched as Eurovision FLOW, operated by EBU through an external partner.

### SP PLATFORMS

The scope of SP Platforms covers online applications, radio, TV and other media services. It comprises the development of any applications above layer three (application, presentation) to deliver the best experience to the end user on any device and at any time.

#### PRIMARY STRATEGIC GOALS

- Ensure PSM access and prominence on emerging connected devices, including automotive, smart speakers, smart TVs, and apps enabling access to AV service offers.
- Provide tools and solutions to enable Members to develop competitive experiences for online and hybrid platform offerings, for all end users, anywhere, anytime, and on all devices. This includes recommendation, personalization, accessibility, discoverability, and translation technologies.
- Assess the opportunities for PSM to build their own digital assistants.
- Exchange best practices and code for better accessibility and additional HbbTV services on smart TVs and related devices.
- Explore the use and training of language models in order to increase accessibility and enable digital participation, including through voice enabled services, especially in small language areas.
- Assess opportunities for common platform components that are usable by all Members for linear and non-linear media services.
- Support and promote the collaborative development of innovative services for Members to share content, form new alliances and broaden their reach, and respond to relevant EU projects. Example: 'A European Perspective'.
- The group will follow the development and potential application of DVB-I for PSM.

Note: Many of the objectives have transversal interest, especially with the EBU Media Department, and thus appropriate coordination will be ensured.

#### CHAIR

Jörgen Bang (SR)

#### **VICE-CHAIRS**

Paolo Casagranda (RAI), Elisha Sessions (BBC), Christian Klöckner (WDR), Remo Vogel (RBB)

#### TC LIAISON

Gino Alberico (RAI), Karl Petermichl (ORF)

#### **WEBSITE & CONTACTS**

tech.ebu.ch/platforms

#### **PROJECT GROUPS**

- Connected Cars and Devices (incl. Radio)
- HbbTV
- Modular Content and Segmentation

#### **COMMUNITIES OF PRACTICE**

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#### **COLLABORATIVE DEVELOPMENTS**

#### **EuroVOX**

An open ecosystem for the transcription and translation of PSM audio-visual and text content, both on-demand and near real-time, using open APIs and standards.

#### **PEACH**

The personalization and recommendation ecosystem built by broadcasters for broadcasters, enabling Members to provide a personalized cross-device experience to the end-user. Also includes discussions on data science, analytics, algorithms, and user profiling.

#### 'A European Perspective' (formerly News Pilot)

An online news initiative aimed at building a trusted information space based on shared public service values. This project uses automatic translation, Al and recommendation algorithms to provide the tools that journalists need for news monitoring across Europe, and an exchange of digital news stories able to be displayed to audiences on member's own websites in their native language, regardless of the source.

# SP SPECTRUM

The scope of the SP Spectrum includes the protection of frequency rights, the definition of policies and regulatory frameworks, as well as broadcast network planning aspects to support the success of media services in the short, medium and long term.

#### PRIMARY STRATEGIC GOALS

- Promote Members' interests in preparatory work for WRC-23 agenda item 1.5, through cooperation with the global broadcast community, and engaging with ITU, EU and CEPT. This includes contributing to spectrum use and requirement forecasts for DTT and PMSE, as well as to sharing studies and regulatory options.
- Promote Members' interests in other WRC-23 agenda items as required, through cooperation with the global broadcast community, and engaging with administrations from Europe, and more widely where appropriate.
- Work to protect rights to satellite frequencies in order to secure direct-to-home (DTH) and satellite news gathering (SNG) services.
- Assess the implications of electromagnetic interference to broadcasters and promote and enforce protection against them (e.g. through the development and approval of standards) to ensure quality of reception of broadcasting services at user premises. Provide suitable advice to Members on RF hazard issues with regards to human exposure and safety, including methods of measurement.
- Provide EBU Members with guidance on system, network planning and spectrum aspects of 5G Broadcast deployment, as well as on other broadcast technologies (e.g. DAB, DVB-T/T2) as needed. Study improvement of current coverage planning predictions and monitor the quality of existing prediction technologies.
- Gather and analyse information from Members about the existing and predicted use of PMSE, and promote Members' interests in relevant regulatory groups.
- Influence regulatory and standardization organisations on sustainability of broadcast distribution.

#### CHAIR

David Hemingway (BBC)

#### **VICE-CHAIRS**

Cath Westcott (BBC), Susanne Rath (ARD/BR), Walid Sami (EBU), Jochen Mezger (ARD/BR)

#### **TC LIAISON**

Per Björkman (SVT)

#### **WEBSITE & CONTACTS**

tech.ebu.ch/spectrum

#### **PROJECT GROUPS**

- Sharing and Planning of Terrestrial Services
- Electromagnetic Interference and Compatibility
- Programme Making and Special Events (PMSE)
- Broadcast Coordination Group on Spectrum

#### **COMMUNITIES OF PRACTICE**

#### **DTT Promotion & Monitoring**

Monitors the development of DTT worldwide, with a focus on Region 1, offering assistance to administrations and broadcasters as required.

#### **COLLABORATIVE DEVELOPMENTS**

#### **Sharing and Planning of Terrestrial Services**

The Sharing and Planning of Terrestrial Services project group is a collaborative project group cochaired by EBU and Broadcast Networks Europe (BNE).

#### Matlab spectrum codebase

Development of a Matlab codebase to support sharing studies and broadcast network planning.

# **ANCILLARY ACTIVITIES**

#### OTHER COLLABORATIVE PROJECTS

EBU T&I is engaged in collaborative projects with other EBU departments and Members. Examples of this are the PEACH recommendation system, the EuroVOX transcription and translation toolkit, and the roll-out of the pan-European news sharing service 'A European Perspective' (formerly News Pilot), as well as training and workshops offered by EBU Academy and activities with Eurovision Services.

#### **EXTERNAL PROJECTS (EU HORIZON EUROPE AND OTHER PROGRAMMES)**

EBU T&I undertakes a variety of activities towards the European Commission and other European organizations (e.g. ESA). These activities comprise feedback to open consultations, such as the future Horizon Europe programmes, as well as concrete project participation in funded EU R&D projects. Prominent examples are the EU Horizon Europe project '5G Records' (5G in production), 'Stadiem' (Startup-driven Innovation in European media) and '5G Emerge'. The aim of these engagements is to create synergies between the activities of this Workplan and pan-European research consortiums, and to make contributions to future EBU services for Members (e.g. 'A European Perspective' and respective EU funded projects).

#### FLAGSHIP CONFERENCES AT THE EBU

Together with the SPs and Members, the EBU T&I department organizes workshops, conferences and webinars throughout the year to investigate emerging issues. A series of flagship conferences take place on an annual basis as follows:

- Production Technology Seminar (January)
- Sustainability Summit (April)
- Metadata Developer Network (June)
- Technical Assembly (June)
- Network Technology Seminar (June)
- Media Cybersecurity Seminar (October)
- Horizons (November; combines the previous Digital Radio Summit, BroadThinking and FORECAST conferences)

#### **INTERNATIONAL BROADCAST CONVENTION (IBC)**

Each year, the EBU T&I department organizes a showcase of the EBU's technical activities at IBC. The department, the Technical Committee and the SPs are involved in the preparation of a stand at the exhibition, in addition to papers and a session at the conference.

#### **TECH-I MAGAZINE AND EBU TECH REVIEW**

The EBU T&I department publishes the quarterly magazine tech-i, designed for technical staff and managers of EBU Members and other broadcast-related companies. The EBU also publishes the online journal EBU Technical Review, which includes more in-depth technical papers and articles.

#### **BROADCAST TECHNOLOGY FUTURES GROUP**

The BTF group consists of the heads of R&D and innovation departments of BBC, YLE, RAI, CBC, NHK, VRT, ARD competence centres and invited guests. It has been working on a reimagination process to open up to more Members. The group is led by EBU T&I. A prime objective of this group is to coordinate and share R&D strategies and establish joint R&D and innovation activities when required. In addition, the group proactively influences the research agenda of the European Commission and coordinates submissions and open consultations.

#### **FAME (FORUM FOR ADVANCED MEDIA IN EUROPE)**

FAME brings together various stakeholders in Europe to discuss and share developments in the field of media. It covers PSM, private broadcasters, and industry representatives from the B2B and consumer domain.

#### AI AND DATA INITIATIVE

The AI and Data Initiative is mandated by the EBU Executive Committee and engages in a cross-disciplinary exploration of the opportunities and challenges of AI and Data in PSM, including regulatory aspects, technologies, organizational matters, skills, strategy and content developments. This transversal initiative provides, among other things, monthly community discussions, regular micro-workshops, conferences, publications, and educational opportunities, with the aim to share knowledge and best practice, integrate efforts, and collaboratively identify needs and priorities. AIDI liaises with SPs and other EBU departments on AI and Data-related matters, and engages in dialogue and collaborations with international organizations on this topic. The Initiative is chaired by Bob van de Velde (NPO) and Léonard Bouchet (RTS), and coordinated by EBU T&I.

#### 5G MEDIA ACTION GROUP "(5G-MAG)"

Initiated by EBU T&I, this independent organisation brings together stakeholders from across the media value chain and beyond. It aims to facilitate innovative approaches to providing 5G coverage and capacity, in particular through promoting 5G Broadcast and collaborative network solutions, including in the automotive sector. It also aims to encourage the development and commercialization of the necessary 5G chipsets and user terminals.

# REPRESENTATION AT INDUSTRY STANDARDARDIZATION AND REGULATORY FORUMS

EBU T&I and its staff retain several administrative and senior management functions within partner organizations internationally. Examples are DVB, HbbTV, WorldDAB, RadioDNS, SMPTE, AMWA, ETSI, 5G-MAG, 3GPP, the InterSDO group, and others. EBU T&I in collaboration with Members also represents Members' interests in international regulatory organisations, in particular ITU, CEPT and towards the European Commission, RSPG, and BEREC. These functions are closely linked to many of the Technical Committee's objectives. A complete list of EBU T&I engagements is available online.

#### TECHNICAL COMMITTEE ANNUAL STUDY MISSION

Technical Committee members and Technical Liaison Officers undertake an annual study visit to a country or region where there are major technical developments under way that may have an impact on the EBU and its Members. Their findings are reported to EBU Members.

#### **ADDITIONAL CROSS-EBU ACTIVITIES**

The EBU T&I department actively collaborates with colleagues in other EBU departments. Some specific examples are listed here:

- Training programmes established in collaboration with the EBU Academy (Live IP curriculum, AI Training initiative, ASBU training, and other initiatives).
- VOX (voice user interface) with the Media Department.
- Regulatory and EU consultations, in collaboration with the EBU Legal department and Brussels
  office (e.g. on platform regulation, AVMS review, net neutrality, data regulation, radio spectrum
  policy, WRCs).
- 'A European Perspective' (formerly News Pilot) and several EU project funding submissions.
- Access Services knowledge sharing, with the Media Department's Access Services group
- Regular T&I contributions on media technology developments to the workshops and peer reviews of the EBU Digital Transformation Initiative (DTI).
- Alignment with the Digital Steering Committee on topics of common interest.
- Collaboration with Eurovision Media Services (e.g. joint tests and training).
- Collaboration with EBU News and Sports (e.g. newsroom planning, advice on innovation in relevant technologies).

# **NEXT STEPS**

By working together through Strategic Programmes, Project Groups, Communities of Practice and Collaborative Developments, EBU Members are able to achieve much more than by working in isolation.

The success and progress of the activities depends on the resources provided by the Members and the Technology & Innovation department.

For information about how to get involved in our work please contact the respective coordinators of the Strategic Programmes.

For more detailed descriptions of the roles of the Technical Committee, Technical Liaison Officers and the Technology and Innovation department please see: <u>tech.ebu.ch/aboutus</u>

#### **APPENDIX A: TC STRATEGY STATEMENT**

#### tech.ebu.ch/workplan2022-A

This TC Strategy Statement outlines four strategic themes that underpin and inform this Workplan.

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