Recommendations for successful European Converged Media

During last two years, Vital Media project[1] has been working on establishment of research and innovation strategy of the media community for next 5-10 years. In order to establish the community strategy, the Vital Media project was closely working with the NEM Initiative[2]. Based on the gathered community contributions, summarized in a number of NEM strategic documents[3], the Vital Media project defined **Recommendations to decision makers at European Commission and on the EU Member States level for successful European Converged Media,** addressing also the next EU research and Innovation framework program **Horizon Europe (FP9)**, which are summarized in this document.

Needed policy measures and regulation

The most important **trends**, **challenges, and opportunities Next Multiannual Financial Framework**[4]:

1) **Prominent presence of media sectors in Horizon Europe** and **stronger synergies between** the relevant **programs at European level**

- Establishing a gateway between Horizon Europe, Digital Europe and Creative Europe for Media
- Focusing on media innovation sectors in Horizon Europe program, its second and third Pillars

2) Support for **European cooperation in media** sector, ensuring its **high competitiveness world-wide**

- Support to European stakeholders to overcome market fragmentation, boosting capacity of collaborating at international level, adoption of innovative and alternative business models

3) **Dedicated investments** in the latest technological advances, **bridging innovation and creativity**

- Introducing policies and actions that clearly address the media sector,
- Ad hoc initiatives supporting infrastructures and technologies along the media value chain[5].

Based on the requirements defined in the Vital Media strategic documents, the following **regulatory measures** have been recommended: A clear framework for on-line services and content to overcome the existing complex regulatory and to promote accessibility issues cross Europe in a digital single market of media services through hyper-personalization and adoption of principles "Designed-for-All". From the **Social Media** perspective, regulation should address the issue of concentration and potential user lock-in within few global social media platforms, fostering the possibility of users to move freely between

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[1] Vital Media is a support action project under the Horizon 2020 Programme of the European Union, number 688310, project duration June 2016 – June 2018; https://nem-initiative.org/vital-media-project/.

[2] The NEM Initiative – New European Media Initiative – is a European Technology Platform, fostering the convergence among Media, Content, Creative industries, Social Media, Broadcasting and Telecom sectors, as well as Consumer electronics to develop a common innovation environment for the new European media landscape – www.nem-initiative.org.

[3] Documents area available at https://nem-initiative.org/documents/ (sub-pages on SRIA and position papers).

[4] "Policy Recommendations for the Next Multiannual Financial Framework", Joint White Paper by Vital Media, I[3] and MediaRoad projects

[5] AR/VR, 5G, blockchain, hybrid distribution models, AI, meta- and big data analytics, etc.

platforms, and creating a common reference model for user information in media in general. Furthermore, self-regulation is considered as the most appropriate solution for Social Media, ensuring right to seek, receive, and influence the (right) information by the consumers / social media users. Here, the most challenging issue is creation of an independent and efficient self-regulation body, including its funding, to be established by the platforms with a limited involvement of public authorities, e.g. EC.

In respect to **standardization activities**, topics related the **3GPP 5G** system, addressing media and entertainment as vertical sector but also addressing converged media as enabler for other vertical sector scenarios, should become focus of the European media community.

Towards new business models in media sector

There is a need for **novel business models** in the media sector, going beyond traditional, mainly advertising revenues streams, to cope with current and further technology innovation which will allow the media sector GDP share to grow, along the following main trends:

- Irruption of data as enabler of value generation within the data-driven economy,
- Convergence of business models of stakeholders from media, content, telecom and broadcaster,
- Customization of products and services aiming at empowering users and offering differentiation.

The most business models in **Social Media** today are based on end-user attention and targeted advertising, which offers opportunities for disinformation gaining from such models. Possible directions towards new and appropriate Social Media business models include evolution of traditional news publisher models and the awareness on critical economic value and relevance of the user and her/his data. Here, algorithms able to convert massive amounts of data into actionable insights are becoming a new competitive advantage and will be central to the next wave of economic growth in this area.

Future technologies for media sector

In accordance with the discussions on strategic technologies and directions for the media industry sector, the Vital Media project has defined the following **research priorities** for the upcoming period:

1) Immersive technologies including the Immersive Cloud platform[6]

Immersivity is the most impacting media technology, incorporating a number of further technology enablers; visual rendering and capturing, gaze, gesture, physiological and psychological tracking, etc. Here, the Vital Media project fully supports establishment of a focused research and innovation program (e.g. a PPP) focused on immersive technologies.

2) Artificial Intelligence and Machine Learning

Current AI applications are used for marketing, service comprehension, search, etc. but are offering large potential to completely reshape products and services in media and creative industries. Machine Learning is a powerful tool able to learn from the data and provide predictions important for future media services.

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[6] I²C concept, https://nem-initiative.org/i2c-ppp/

3) Content distribution (with particular focus on future 5G networks)

Media is moving to concede more power to users and achieve higher levels of personalization, which needs to be addressed by consolidating new network capabilities becoming a cornerstone of the New Generation Internet.

4) Hyper-personalization, including personal data management

Hyper-personalization, as an advanced and real-time customization process aiming at closing the gap between consumers' desires and offers, takes into consideration the different aspects of maximizing opportunities to customize the content and drives engagement among media audiences.

5) Social media[7], including social IoT

The social media platforms have a relevant impact on the modern society since they have increasingly been changing people's way of living and interacting with the rest of the world. Taking advantage of user interaction within the community, and by means of Big Data collection and analytics, Social Media platforms can generate useful insights to update and optimize the existing services and to create new services.

Detailed description of concrete topics related to the research activities presented above, can be found in the latest version of the NEM Strategic Research and Innovation Agenda – NEM SRIA 2025 – and recent NEM position papers (all documents available on the NEM website at www.nem-initiative.org). A **high level roadmap** towards implementation of the research priorities and related topics can be found in Annex of this document.

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[7] The topic should also be considered in the scope of priorities 1-4 contributing to future social media landscape in Europe

VITAL MEDIA

Annex

Enhanced media applications Storytelling, Education, …

Content discovery Multi-modal content

Data annotation

Interoperability of user data

Data visualization /presentation

Interoperable DRM

Metadata for media (Big Data) Interpretative semantic Personal data management

Enhanced accessibility solutions

Human-machine interact. devices

Human-machine interaction AI based multilingual techniques

IoT for Immesivity Augmented and Virtual Reality Enhanced security in media (including and beyond blockchain)

Interpretive sensing Holography Enhanced content distribution (5G slicing for media, end2end QoS, multi-cloud on demand, …)

Phase 1   Phase 2   Phase 2

Future Media Apps

Data for Media and Data Protection

Immersive Interfaces

Specific Media Technology Enablers