D6.4: FMI Engagement Report and Updated Plan

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Throughout the first year of the project, FLAME has established the foundation of the infrastructure required to create and grow a sustainable Future Media Internet (FMI) ecosystem designed to ensure broad socio-economic impact creation. This foundation was achieved through a grounded and well-articulated engagement strategy and ongoing schedule of dedicated community building and communication activities.

This document describes the main activities pursued in year 1, the initial results, and those revisions to the strategy as presented in deliverable D6.3 that were necessitated to track the progress of the project and the changing boundary conditions.

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EXECUTIVE SUMMARY

FLAME aims to establish a **Future Media Internet** (FMI) ecosystem based on the Experimentation-as-a-Service paradigm that supports large-scale experimentation of novel FMI products. This document reports on the activities undertaken in the first year of the project to ensure that the FLAME ecosystem is successfully created and the appropriate stakeholders identified, approached, and engaged.

To establish and grow a sustainable Future Media Internet ecosystem and ensure effective impact creation, a comprehensive set of activities has been undertaken by all partners are pursuing. This document outlines the measures taken, their results as of the end of Y1, and the strategies and planning for the remainder of the project. These include:

➜   Communication and dissemination activities completed

➜   Overview of events and publications

➜   KPIs and current performance metrics

➜   Strategic positioning for project and partners

➜   Forward perspective for 2018

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ABBREVIATIONS

3GPPP	3rd Generation Partnership Project
BarBOF	A casual Birds Of a Feather founding meeting
CDT	Centre for Doctoral Training
CTN	Comité Técnico de Normalización
DoA	Description of Actions
DWG	Dissemination Working Group
EaaS	Experimentation-as-a-Service
EIB	Experimentation Impact Board
EPSRC	Engineering and Physical Sciences Research Council
ETSI	European Telecommunications Standards Institute
FEC	FIRE Engineering Conference
FLAME	Facility for Large-scale Adaptive Media Experimentation
FMI	Future Media Internet
ICN	Information-Centric Networks
ICNRG	Information-Centric Networking Research Group
ICT	Information and Communication Technology
IETF	Internet Engineering Task Force
IOS	International Organization for Standardization
IoT	Internet of Things
IRTF	Internet Research Task Force
ITU	International Telecommunication Union
MEC	Multi-access Edge Computing
NFV	Network Function Virtualization
NGI	Next Generation Internet
NIST	National Institute of Standards and Technology
OTT	Over-The-Top

PIML	Personalized, Interactive, Mobile and Localized
QoS	Quality of Service
RC	Release Candidate
RoR	Rate of Return
SDN	Software Defined Networks
SDO	Standards Developing Organization
SFC	Service Function Chaining
SFC WG	Service Function Chaining Working Group
WG	Working Group

1   INTRODUCTION

This document reports on the activities that have been pursued during the first year of the project to ensure the successful creation of an ecosystem gathering around the FLAME knowledge, resources and activities for broad inclusion of innovative players in Europe and engagement of target stakeholders into the project's vision and work. Communication, dissemination and dedicated community building activities have been pursued in order to ensure broad impact will be achieved beyond the end of the project's duration.

FLAME aims to establish a **Future Media Internet** (FMI) ecosystem based on the Experimentation-as-a-Service paradigm that supports large-scale experimentation of novel FMI products and services using real-life adaptive experimental infrastructures, encompassing the compute and storage facilities and underlying software-enabled communication infrastructure.

More specifically, the FLAME's proposition is based on using **software-defined infrastructures** to achieve a tight yet flexible integration between services and an underlying distributed infrastructure operated by anyone with infrastructure (e.g. cities, transport infrastructure operators, and buildings) as well as the telcos themselves.

This ecosystem has a large variety of different stakeholders that are shifting in roles:

- ➔   Digital platforms of telcos (i.e. *Imagenio Telefonica*).
- ➔   Broadcasters offer its own media player 'a la carte' (i.e. *BBC iPlayer*).
- ➔   User device manufacturers that become content aggregators (i.e. *AppleTV*).
- ➔   Content aggregators become content producers (i.e. *Netflix originals*).
- ➔   Content producers aim at becoming direct distributors (i.e. *Disney*).
- ➔   The appearance of super-web platforms (i.e. *Amazon video/prime*), etc.

The ultimate ambition is specifically to enable a variety of media scenarios in which the user is at the centre of the whole FMI ecosystem.
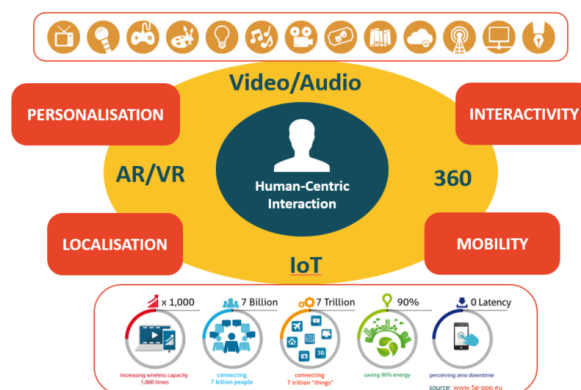

Figure 1. FLAME - Enabling Human-centric Media Scenario

FLAME's ambition is to support greater content **personalisation**, **interactivity** and **mobility** through an infrastructure that flexibly adapts to increasingly diverse demands.

- ➔   A platform providing low latency, efficient routing, multicast delivery, net-level indirection, secure end-to-end content, cross layer information sharing.

➡ A set of foundation media services integrated and benefiting from the platform made available for trials and experimentation.

1.1 THE FLAME MARKETING AND COMMUNICATION APPROACH – OVERVIEW OF YEAR 1 RESULTS

In order to meet its ambitious vision, to attract newcomers to FLAME and engage them in the adoption of the project concepts, outcomes, tools and technologies, a comprehensive and well-articulated set of communication and marketing activities have been planned (as presented in more details in deliverable D6.3), relying on a step-based approach, see Figure 2.

Figure 2. A step-based approach to build the FMI ecosystem

Phase 1 - Stakeholder Engagement

During Phase 1, which covered the first 6 months of the project, FLAME aimed to **create awareness among the target stakeholders** and the general audience, while laying down the foundation for the overall FMI engagement Strategy and Plan as described in deliverable D6.3.

Notice that awareness creation as such will continue to be pursued also beyond month 6 throughout the whole project duration as an essential aspect that is part of the overall promotional and marketing activities.

During phase 1, specific measures have been put in place in a successful way. An overview of the main results follows:

➡ FLAME Identity Toolkit, deliverable D6.1

➡ The FLAME web site, www.ict-flame.eu, launched at the very beginning of the project and continuously updated, deliverable D6.2. This includes:

- Animation of the FLAME blog.

- Animation of the News channel.

- Events' area.

➡ The establishment and animation of the FLAME media channels.

➔ Promo materials (flyers, posters, roll-ups, videos).

➔ Presence at major events.

➔ FLAME presentations.

➔ 1st edition of the FLAME newsletter

➔ Initial liaisons established with former FIRE and IoT communities, as well as 5G PPP and Next Generation Internet initiative.

Phase 2 - Stakeholder Engagement

The second phase started in July 2017 and goes on until December 2017 marking a transition towards dedicated stakeholder engagement activities, supported specifically by tasks on "Accelerating SME engagement in the FMI Ecosystem" and "3rd Party Ecosystem Investment Strategy, Management and Ethics".

FLAME aimed to establish the FMI ecosystem by engaging stakeholders into the adoption of initial FLAME outcomes and concepts. Specific focus has been given to generate demand for the FLAME technologies and services, create potential synergies and collaboration opportunities both within the FMI ecosystem and related initiatives and advertise the first FLAME Open Call to be launched in spring 2018.

During phase 2, that is still ongoing when writing this document, specific measures have been put in place in a successful way. An overview of the main results follows:

➔ Activation of the Experimentation Impact Board, EIB**,** through dedicated emails based discussions, a first remote meeting (conf. call) and a second physical face-to-face meeting in Madrid at the FLAME workshop (co-located with the NEM Summit) on the 30th November, where all EIB members have been invited as panellists.

➔ Organisation of two stakeholders' engagement workshops in Bristol and Barcelona.

➔ Organisation and animation of the 1st FLAME outreach/community building workshop, co-located with the NEM Summit on the 30th November.

➔ 2 videos produced- the first one published in November 2017, before the FLAME workshop, presenting FLAME, its objectives and its ambition, while the second one in production, planned to be released early January 2017, which collects interviews from the Experimentation Impact Board members, in view of promoting FLAME and its offering.

➔ Created database mapping more than 400 players in the ICT/media/creative content domains to be targeted for engagement into FLAME.

➔ 2nd edition of the newsletter published.

➔ Continuous updates on web site, blogs, news events and animation of social media.

➔ Open call preparation and start of promotion.

Notice that both Phase 1 and Phase 2 are not considered to simply "end". They should rather be considered parallel activities streams that, as appropriate, will be pushed forward in Phase 3, starting

in year 2, which is geared at the creation of the FMI ecosystem as a sustainable and larger community that will be able to use, validate and exploit the FLAME outcomes and create impact at various levels both in a scientific and socio-economic perspective.

1.2 DOCUMENT LAYOUT

The document is organised to first present the progress and achievements in engagement activities that took place over the course of Y1, with special focus on the individual components of the engagement campaign, their initial concept and expectations, and their current status including any deviations from their projected implementation. This is followed by an overview of the events hosted and attended by FLAME, its inter-project liaisons, and the outreach KPIs.

The document concludes with an update to the FLAME engagement strategy and planning, and an overview of all partners' current status and activities.

2   ENGAGEMENT PROGRESS AND ACHIEVEMENTS

The FLAME engagement approach to date has been based upon a broad platform of active outreach and communication activities, designed to target the correct stakeholders and gain their buy-in to FLAME activities and their outcomes. The previously defined stakeholder groups have been refined into four general target audiences:

➔ **SMEs and startups.** The fast-moving innovators working in the field which can benefit most from the FLAME programme and Open Calls.

➔ **Academic and civil institutions.** Those academic and civil research and innovation centres focused on media innovations and smart cities.

➔ **Incubators, hubs and accelerators.** The innovation centres focused on the junction between SMEs and startups and industry.

➔ **Industry players.** Those key industry representatives with a vested interest in the technology and its growth and success.

The first stage of the engagement campaign is concluding, with all major channels established, functioning and growing.

2.1 COMMUNICATION AND MARKETING ACTIVITIES

The set of community building and dissemination activities as originally proposed in deliverable D6.3 FMI Ecosystem Engagement Strategy and Plan reflected the anticipated nature of the FLAME project at launch. They were designed to communicate the FLAME project across the widest base of potential stakeholders, to promote the FLAME project and FMI ecosystem to these multi-faceted target communities, and to stimulate engagement and impact creation.

2.1.1   Identity Toolkit

The FLAME identity toolkit, as presented in D6.1, has been created to provide a distinctive brand identity for FLAME, supported by all those collateral materials necessary to support the brand, such as an immediately identifiable logo, brand usage guidelines, and shareable templates for presentations and deliverables.

The toolkit used by all partners to create and disseminate their FLAME related communications in a visually-appealing, engaging and consistent manner, has proved to be a very important and useful instrument.

Status: Created and successfully deployed.

Figure 3. The FLAME branding toolkit

2.1.2   Website and Presence

The FLAME web-site, as described in D6.2, is a modern, fresh and fully functional website which serves as the entry point and source of truth for all the interested stakeholders at www.ict-flame.eu. It contains all relevant FLAME news and information; subscription, social media, and contact information; and is fully compliant with the project branding and visual identity.

Status: Created and deployed on 6 February 2017, and maintained and updated as needed. As of submission, traffic statistics are:

➜   1753 unique users

➜   9040 page views

➜   6784 unique page views

➜   56 downloads of D3.1

➜   48 downloads of D3.3

➜   38 downloads of the EuCNC 2017 short paper

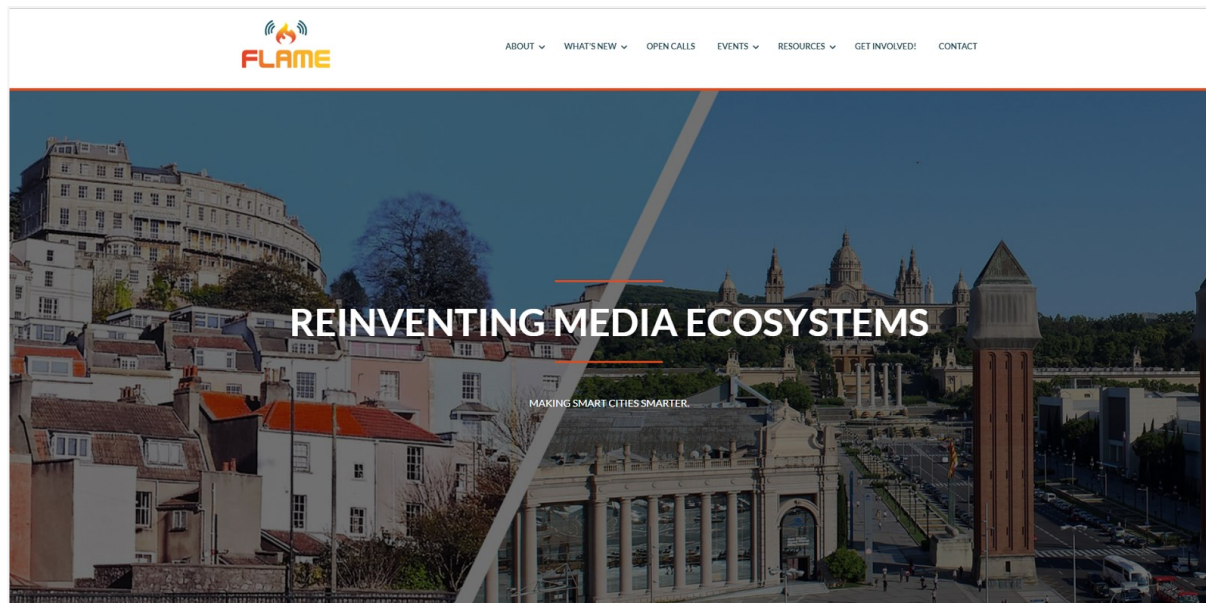➜   27 downloads of the FLAME overview presentation

Figure 4. Home page of the FLAME website

2.1.3   Social Media Outreach

FLAME is present and active on all relevant social media channels, namely Twitter, YouTube and LinkedIn. These channels have been successfully initiated and are maintained and regularly populated with appropriate content. This serves to better promote the FLAME project's activities and results, drive engagement and event attendance, and increase overall visibility in the target audience.

Status: All channels activated and growing.

➔ Twitter (@ICT_FLAME). The primary channel for social dissemination, since launching in February, FLAME's twitter outreach statistics are:

- 166 followers

- 479 tweets

- Upward trending impressions and reach

    ▪ Approximately 22,500 impressions in November 2017

    ▪ 803 average impressions/day in November 2017

    ▪ 423 average impressions/day since launch

    ▪ Top tweet 5,544 impressions

Figure 5. FLAME twitter analytics

➡️ **LinkedIn** (https://www.linkedin.com/groups/8579978). LinkedIn groups are an effective forum for engaging with professional peers. Due to its nature, outreach relies more upon direct interpersonal communication than twitter. To ensure its value is maximized, a campaign is currently active within the project partners to expand the group's LinkedIn network.

▪ Active with 39 members

➡️ **YouTube** (https://www.youtube.com/channel/UCToDRyvcoPQOPO2KxEpqsMA). Established November 2017, the FLAME YouTube channel will be the primary vehicle for disseminating broad based calls to action, as well as community engagement and event videos. Through engaging and entertaining video content, FLAME is able to access and engage with a wider audience as well as benefit from increased social media virality.

▪ 1 video launched
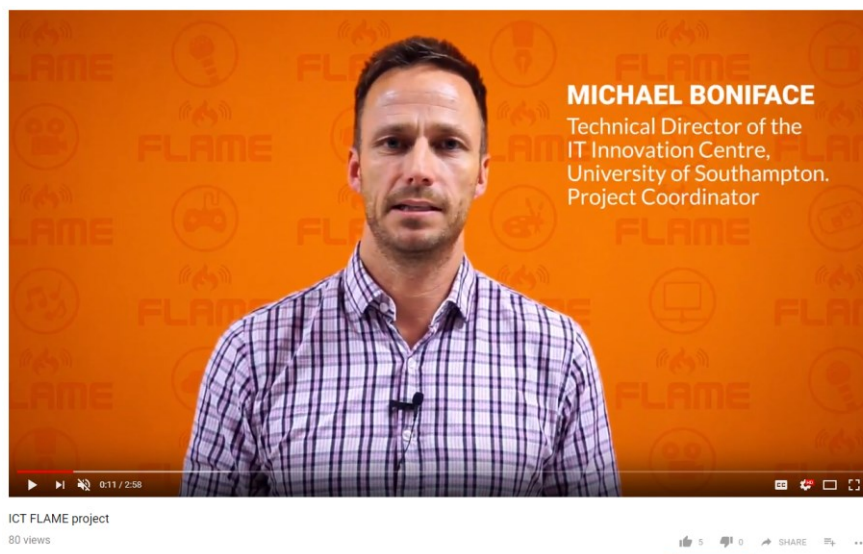
▪ 2nd video to be published mid-January

Figure 6. Screencap of FLAME YouTube video

2.1.4   Technical Blog Corner

Initially conceived to be a blog to publish news regarding FLAME project activities and results, as well as related topics, the news and blog content was split to better serve the technical and social stakeholder groups (see 2.1.7 Media and Press presence, below).

The blog showcases technical commentary on FLAME and FMI relevant aspects, technologies, trends and more to actively engage with the FMI stakeholders beyond our own project results.

Status: The blog is underway and building momentum. Due to other time commitments, three of the scheduled blogs have been postponed to Q1 2018.

➔   As of submission, 7 blogs have been published.

➔   461 total views

➔   By year's end, 5 partners will have contributed

The news has been given its own section, and is updated regularly. The news section carries FLAME relevant news articles as well as calls-to-action for participation in related events.

2.1.5   Scientific Publication

One scientific publication has been released, *Experimentation-as-a-Service Methodology for Building Urban-Scale Media Ecosystems*, for the poster session at EuCNC 2017, on the 12-15 June in Oulu, Finland.

No further publications were possible, even if several papers have been submitted in 2017, due to the early stages of the project and its resulting lack of reportable, fully-realized scientific results. It is expected that scientific publications will become more prominent in 2018, when the foundational work conducted in Y1 will reach maturity and technical experimentation will begin.

Table 1. Scientific Publication

Publication Title	Submission to	Leading Partner
M. Boniface, S. Crowle, S. C Phillips, D. Trossen, G. Carrozzo, "Experimentation-as-a-Service Methodology for Building Urban-Scale Media Ecosystems", EuCNC 2017, 12-15 June, Oulu, Finland	EUCNC 2017 – Poster session	ITInnov, IDE, NXW

Figure 7. The EuCNC17 poster

2.1.6   Miscellaneous Dissemination Material

For deployment as needed at events and conferences, a variety of engaging, FLAME-branded materials have been created and deployed, including:

➡ **Flyers.** For use in promoting FLAME at events and conferences, visually-appealing flyers have been created and distributed.

- 450 copies of FLAME postcard flyer printed and distributed

- 16 downloads for print by partners of FLAME postcard

- 200 copies of Save the date for Workshop @ NEM printed and distributed

- 3 downloads for print by partners of Save the date for Workshop @ NEM

Figure 8. FLAME flyers

➡ **Rollups.** Made for events, rollups give more real estate to promoting FLAME on the event floor than the flyers. By using the FLAME visual identity joined to informative content, they bring interested stakeholders to the FLAME area to learn more.

- 1 copy printed

- 5 downloaded for print by partners

Figure 9: Rollup in situ the i2cat booth during the SCEWC 2017

➜ **Twitter cards.** Designed for events and specific speakers, twitter cards give visual impact to tweets.

▪ More than 20 created for events such as NEM Summit 2017

▪ 200+ average impressions

Figure 10. Sample tweet cards

➜ **Presentations.** As needed, impactful and engaging presentations have been made for events and meetings.

▪ the FLAME overview presentation has been downloaded 27 times

➜ **Videos.** Videos are shot to promote FLAME and document events as needed.

2.1.7 Media and Press Presence

Preliminary outreach to the media has been achieved through press releases through partners such as IDE, and the establishment and population of the news section on the FLAME website.

The published news includes event notices and reports, key milestones in the project, and partner achievements related to FLAME. As of submission:

➔ 20 news items published

➔ 641 news viewed

This foundation will be expanded in Q1 2018, when specific members of the media are targeted in Stage 2 of the SME engagement campaign (see SME engagement in section 2.2.4 Targeted outreach and community building activities below).

2.2 OUTREACH AND COMMUNITY BUILDING ACTIVITIES

2.2.1   FLAME Events

To build the Future Media Internet ecosystem, FLAME has started from a solid and vast network of contacts the partners have within several related initiatives that can facilitate reaching the target groups of stakeholders. In this respect, the FLAME partners have played an active role from the very beginning of the project to ensure a broad outreach. This, on the one hand, to create awareness and visibility about the FLAME work and planned outcomes and, on the other, to better understand how to position the project's technical work and overall offering in the broader ICT context.

Outreach and community building in year 1 has been specifically targeted at the following main related ecosystems:

➔ The **5G PPP initiative**, including the 5G PPP SME Working Group, the Networld2020 European Technology Platform and the 5G Infrastructure Association via regular emails and tweets on their channels about FLAME. Moreover, initial connections with ongoing 5G PPP projects focused on media, such as 5GCity, 5G Media, 5GXcast, have been initiated to identify how to create closer synergies. At the time of writing this email, initial plans for a common session at EuCNC 2018 are being discussed.

➔ The **Future Internet Experimentation Research – FIRE** - community via regular advert of FLAME via Fed4FIRE+ contacts and distribution of promo materials at the various FEC Conferences editions (FEC 1 in Ghent, April 2017, FEC 2 in Volos, October 2017). Even though the FIRE initiative as such has ended, FIRE community is still gathered around a number of ongoing projects (such as eWINE, ORCA, MAMI, MONROE, Fed4FIRE+, etc.). At the time of writing this deliverable, Martel and IT Innovation are discussing the colocation of a dedicated FLAME session (focus on SDN) at the FEC3 conference planned to take place in Paris 14-16 March 2018.

➔ The **Next Generation Internet** (www.ngi.eu) initiative. Martel is coordinating the first NGI Coordination and Support Action called HUB4NGI (www.hub4ngi.eu). In doing so several events have been organised to promote the NGI initiative. Dirk Trossen, the technical manager of FLAME was invited to the NGI Forum (September 2017 in Barcelona) and this gave the opportunity to present the vision of Future Media Internet FLAME is working on. Cross-communication and promotion via various media channels have also been ensured and will continue also in the months to come.

➔ 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. In this respect, close synergies have been fostered and the first FLAME outreach workshop was organised within the context of the NEM Summit 2017. Cross-communication and promotion via various media channels have also been ensured and will continue increasing the visibility of FLAME into the media and creative innovation landscape in Europe. Discussions are planned on how to possibly present FLAME at next future media/creative events within the NEM ecosystem.

2.2.1.1 Bristol Stakeholder Engagement Workshop

Bristol Is Open (BRISTOLOPEN) organised and managed a stakeholder engagement workshop in the Engine Shed in Bristol on October19th, 2017. Many different stakeholders participated, representing industry players such as: Vodafone, British Telecom, FirstBus, VR Lab, Limelight Networks, Knowle West Media Centre, Watershed, University of Bristol, NEC, Zeetta Networks and some of the project members. (Interdigital and ITINNOV).

The aim of the workshop was to bring together the various types of stakeholders FLAME would like to engage, i.e. telcos, infrastructure providers, city service providers, and media companies. BRISTOLOPEN and the FLAME partners introduced the stakeholder to the FLAME platform, its technical capabilities, and updated them on the status of the project. During the workshop stakeholders were invited to provide information on their current work and how they envision the FLAME platform benefiting their services, infrastructure capabilities or media offerings. This enabled a collaborative discussion amongst the stakeholders, and the FLAME partners.

BRISTOLOPEN is following up on the event with continued engagement with these stakeholders to keep them updated on the FLAME project. Further details are included in BRISTOLOPEN's updated plans in section 3.2.

2.2.1.2 Barcelona Stakeholder Engagement Workshop

I2CAT organized the Barcelona FLAME stakeholders' engagement workshop the 15th of November 2017 in the scope of the Smart City Expo World Congress. The meeting was attended by 15 people, including local and international representatives from the industrial and SME sector, the academic and research area, the city government and other H2020 projects related with Smart City deployments; among them Cellnex, Watchity, Beteve, the Barcelona Supercomputing Centre (BSC), the Barcelona Municipality, the Growsmarter project and the 5GCity project.

Local stakeholders focused on the provisioning of infrastructure, media content and media services were invited to participate in a round-table explaining their business use cases, their current needs and limitations and to provide some feedback and their impressions about the FLAME platform and its objectives. Five FLAME partners participated in the workshop in order to present and provide a better understanding of the FLAME platform and the real city testbed that will be replicated in Barcelona.

Interdigital, as technical coordinator of the project, highlighted the benefits and features of the FLAME platform and gave a technical insight of its main components. I2CAT, as infrastructure provider of the Barcelona testbed, presented the capabilities and functionalities that the Barcelona infrastructure will offer to potential experimenters. BRISTOLOPEN contributed to the workshop sharing the experiences gained during the first stakeholders engagement workshop organized in Bristol. VRT presented their involvement as experimenters in the FLAME platform to find existing synergies with potential local stakeholders, such as Watchity and Beteve, interested in running experiments and provide some first-hand orientation about the usage of the FLAME platform. Finally, IMI informed about the future open call possibilities in FLAME.

Figure 11. The Barcelona Workshop in progress

2.2.1.3   First FLAME Community Workshop at the NEM Summit 2017

The 1st FLAME workshop gathered leading experts working in the areas of digital media and communications to explore the structural change occurring across Europe and the world. Immersive media, such as 3D tele-immersion and mixed reality, are highly interactive and time critical. Infrastructure performance matters much more to user experience, much more than for today's on-demand streaming services. Getting the performance at scale at acceptable costs will be essential for adoption of future media services.

The workshop (https://www.ict-flame.eu/event/flame-workshop-nem-summit-2017/), which was co-located with the NEM Summit and run as part of the overall conference programme (https://nem-initiative.org/nem-summit-2017-program/), gave the opportunity to:

➔ Discuss new forms of social and interactive media experience building on emerging 5G networks and the Next Generation Internet with presentations and interventions from leading broadcasters and media service companies working in areas such as participatory media, highly mobile media, AR and VR.

➔ Gain insight into the FLAME project. What's different with FLAME is the possibly tighter integration of media services with the programmable compute, storage and communication infrastructure of telcos. This allows placement of media services deep in the network, in metro data centres as well as at the very edge of the network in street cabinets.

➔ Share information on how to get involved in realising the vision. FLAME is offering over 2 Million Euros to organisations wanting run trials and experiments through open calls. Open calls provide the creative industries, telecommunications industries and smart cities stakeholders the opportunities to explore performance, acceptance and viability of highly localised media products and services. Participants get access to a programmable city infrastructure, testing tools, knowledge bases and expertise to scale solutions.

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The first of the FLAME sessions, "The Future of Digital Media", was introduced by the Project Coordinator Michael Boniface of the IT Innovation Centre and included keynotes from Dries De Roeck of Studio Dott on Future Design and Digital Media, and the Technical Manager of FLAME Dirk Trossen from InterDigital on Vision for software infrastructures. These were followed by an interactive, audience-participatory panel debate with Francesco D'Andria (Atos), Michel De Wolf (DWESAM), Ingrid Willems (DataScouts), Pierre-Yves Danet (Orange), Jean Dominique Meunier (Technicolor), chaired by the Project Coordinator Michael Boniface.

The second session, "Building the FMI Ecosystem Through Experimentation", began with Michael Boniface presenting FLAME Offering: a flexible delivery platform for media services, followed by a session on Early trials and experiments from broadcast, transmedia and gaming, with Mike Matton from VRT speaking about personalised and participatory media, and Julia Chatain from ETH Zurich talking about collaborative transmedia. The event was closed out with Monique Calisti of Martel Innovate presenting how to get involved in the FMI Ecosystem and FLAME Open Calls, and taking questions from the audience.

More than 50 people attended the session and contributed to animate interesting discussions.

Figure 12. The NEM workshop banner ad

2.2.2   Events FLAME Attended

The events attended by FLAME partners are listed below.

Table 2. Events attended by FLAME partners

Event Name	Date/City/Country	Category of Dissemination	Type of Audience/Target Stakeholder	Partners involved
MWC 2017	February 2017 Barcelona, Spain	Demo, Presentation, Flyers	Telco vendors and Operators, Media, Industry, SMEs, Startups	IDE, IMI, i2CAT, Martel

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Event Name	Date/City/Country	Category of Dissemination	Type of Audience/Target Stakeholder	Partners involved
EuCNC 2017	June 2017, Oulu, Finland	Presentation, Poster, Promo material	Researchers (both corporate and academic), 5G PPP stakeholders, SMEs, Startups	IT Innovation, Martel
IETF 99	July 2017, Prague, Czech Rep	Presentations	IETF SFC and IRTF ICNRG members and organization of SROL barBOF	IDE
ETSI MEC Congress	September 2017, Berlin, Germany	Presentation, Demo, flyers	Telco vendors and operators, SMEs and startups	IDE, BRISTOLOPEN
ETSI MEC Congress	September 2017, Berlin, Germany	Demo, presentation, flyers	Industry	IDE
NGI Forum	September 2017, Barcelona, Spain	Presentation, promo material	NGI practitioners	IDE, Martel
FEC2	4-6 Oct 2017, Volos, Greece	Presentation	Researchers	IT Innovation
Stakeholder Engagement Workshop	19 October 2017, Bristol, UK	WP2 stakeholder engagement workshop	FLAME stakeholders	IT Innovation, BRISTOLOPEN, IDE, UNIVBRIS
Zurich meets Hong Kong - Science Museum	October 2017, Hong Kong, China	Presentation, demo	Various	ETH
Zurich meets Hong Kong - Baptist University	October 2017, Hong Kong, China	Presentation, demo	Various	ETH
Cambridge Wireless Virtual Networks SIG	November 2017, Cambridge, UK	Presentation, demo	Telco vendors and operators, SMEs	IDE
IETF100	November 2017, Singapore	Presentations	IETF SFC and IRTF ICNRG members and organization of SROL barBOF	IDE
Stakeholder Engagement Workshop	November 2017, Barcelona, Spain	WP2 stakeholder engagement workshop	FLAME stakeholders	IT Innovation, BRISTOLOPEN, IDE
Zurich Game Show Event	November 2017, Zurich, Switzerland	Presentation, demo	Various	ETH

Event Name	Date/City/Country	Category of Dissemination	Type of Audience/Target Stakeholder	Partners involved
NEM Summit	29-30 November 2017, Madrid, Spain	Workshop, several presentations, Promo material	Researchers (industry and academic)	IT Innovation, IDE, Martel, VRT, ETH

2.2.3   Liaisons with Related Projects

2.2.3.1   FED4FIRE+

Fed4FIRE+ is an Integrating Project under the European Union's Programme Horizon 2020, addressing the work programme topic Future Internet Research and Experimentation. It started in January 2017 and will run for 60 months, until the end of September 2021. The Fed4FIRE+ project is the successor of the Fed4FIRE project.

Fed4FIRE+ will establish a common federation framework by developing, adapting or adopting tools that support experiment lifecycle management, monitoring and trustworthiness. A large number of existing experimentation facilities in Europe will be adapted to seamlessly integrate in the federation. Such facilities typically focus on different kinds of networking related research or on different communities regarding services and applications. Example domains are optical networking, wireless networking, software defined networking, cloud computing, grid computing, smart cities, etc. Therefore, the federation will have to support a very heterogeneous set of requirements. To guarantee that the federation framework meets all of them, representatives of all these FIRE research communities will be actively involved in the definition of the federation architecture. Each of them will also lead the uptake of the Fed4FIRE+ platform in their specific community.

FED4FIRE+ engagement is an important part of the FLAME strategy. FLAME was funded within the former FIRE+ unit and even though this unit has been dissolved and its activities integrated into other units, experimentation activities continue through the FED4FIRE+ project over the next 5 years.

FLAME intends to join the FED4FIRE+ federation as an Associated Member[1]. FLAME will then benefit through marketing within the European experimentation community and an opportunity to influence the direction European experimental platforms based on our results.

IT Innovation has contacted the FED4FIRE+ coordinator IMEC to make them aware of our intentions and for Associate Membership to be secured shortly after the launch of the FLAME service in Mar-18. Martel and IT Innovation participated in the 2nd FIRE Engineering Conference (FEC2) providing FLAME input in the area of multi-stakeholder experimental data management. For FEC3, that will take place in March 2018 in Paris, FLAME is proposing to contribute to a session based on FLAME results or collaborating with another project working on similar issues. FLAME believes this is a great opportunity to foster some debate, especially if there are complimentary views. Martel and IT Innovation as partners in both projects are facilitating coordination and organisation of the FLAME session at FEC3.

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[1] https://www.fed4fire.eu/add-your-facility/

2.2.3.2   5G-TANGO

FLAME partners have identified a possible liaison between FLAME and 5G-TANGO, which is coordinated by ATOS. **5G-TANGO** is a 5GPPP Phase2 Innovation Action that enables the flexible programmability of 5G networks with: a) an NFV-enabled Service Development Kit (SDK); b) a Store platform with advanced validation and verification mechanisms for VNFs/Network Services qualification (including 3rd party contributions); and, c) a modular Service Platform with an innovative orchestrator in order to bridge the gap between business needs and network operational management systems. One of the scenarios considered in 5GTANGO is the transmission of media services based on VNFs. Thus, FLAME and 5GTANGO share some technological characteristics and approaches.

2.2.3.3   5G-MEDIA

NXW could act as bridging partner with the 5G PPP Phase 2 project 5G-MEDIA, which started on June 1st 2017. **5G-MEDIA** is developing the concept of a programmable edge-to-cloud virtualization fabric for the media industry in 5G networks. Aspects of the PMM use case and cross-layer control and orchestration to be developed in FLAME could be of interest for a potential liaison between the two projects.

2.2.3.4   H2020 POINT & RIFE

IDE continued its efforts with the **H2020 POINT and RIFE** projects to develop crucial solutions for the IDE FLIPS platform. IDE also conducted a trial at Bristol-is-Open (BRISTOLOPEN) during June and August 2017 to showcase the FLIPS capabilities, albeit still based on the original POINT proof-of-concept, the predecessor to the FLIPS platform that is being utilized in the FLAME project. IDE also contributed to the RIFE trial at guifi.net, conducted in Tarragona, Spain, showcasing the software-only innovation of FLIPS based on SW-based rather than HW-based SDN switching.

2.2.4   Targeted Outreach and Community Building Activities

The targeted outreach and community building activities are intended to directly access stakeholders with a direct interest in FLAME, the FMI, and how these programmes affect the European ICT landscape. The outreach consists of two parts:

Newsletter

A biannual newsletter is sent to all subscribed stakeholders, to inform them of FLAME's activities and upcoming events, as well as serve as a call to action. The newsletter also links back to the website and social media platforms, to organically increase engagement across all channels. Samples of the newsletter can be seen in the Appendix 1.

➔ **Newsletter 1** was sent on June 28th to 86 recipients. It contained a roundup of the most recent FLAME news, recaps of the vision, a call to action to join the FMI ecosystem, and a report on FLAME at EuCNC 2017

➔ **Newsletter 2** was sent on December 18th to It contained a summary of FLAME's activities over its first year, reports on the two stakeholder events and the FLAME Workshop at the NEM Summit 2017, a look forward at the main events in 2018, and a call to action for interested stakeholders to join the upcoming Open Calls.

SME engagement campaign.

Designed to primarily engage with SMEs, hubs, incubators and accelerators, the outreach program consists of three stages and started in September 2017. Specific focus was given to target key players in the market. The goal of the campaign is to generate demand for the FLAME technologies and services, create potential synergies and collaboration opportunities both within the FMI ecosystem and related initiatives and advertise the first FLAME Open Call to be launched in spring 2018.

➡ Stage 1

- **Targeting (September-October 2017).** Approximately 500 European SMEs, hubs, incubators and accelerators were identified as being potential FLAME stakeholders.

- **Materials development (November 2017).** Suitable collaterals for the outreach were developed and approved.

- **Initial contact (mid-December 2017).** Personal emails were sent to all targeted potential stakeholders with a link to the FLAME website and materials.

➡ Stage

- **Personal outreach (Q1 2018).** Direct emails with all stakeholders who engaged with Stage 1 campaign, with specific CTA for Open Calls.

- **Media outreach (Q1 2018).** Personal contact to selected media members interested in covering the FLAME project and outcomes.

➡ Stage 3

- Maintenance of all contacts established in Stage 2 through direct emails, newsletters, and event updates, modifying as necessary to match the project evolution.

2.3 KEY PERFORMANCE INDICATORS

The status of project's dissemination and communication KPIs is shown below.

Table 3. Key Performance Indicators

Measure	Indicator	Target value	Value at the end of Y1	Source and Methodology
Project Brochure	No of brochures created (updated once a year) and distributed	At least 3500 copies by the end of the project	1 project brochure (more than 1000 copies distributed) and 1 save the date flyer for NEM workshop (250 copies distributed)	Distribution via participation to and organisation of dedicated events and electronically via the FLAME website

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Measure	Indicator	Target value	Value at the end of Y1	Source and Methodology
Press Releases	No of Press Releases published	5 by the end of the project	1	Engagement with the press by partners and the project
FLAME Poster	No of poster created (updated as appropriate)	At least 3 by the end of the project.	1 poster and 1 roll up	Presentation via participation to and organisation of dedicated events and electronically via the FLAME website
FLAME presentations	No of presentations (updated as appropriate) to be made available	At least 4 per year	More than 7 presentations (also available from the web)	Presentation via participation to and organisation of dedicated events and electronically via the FLAME website
Videoclips / Creative storytelling videos	No of videos published on the FLAME YouTube channel and average number of views	5 by the end of the project, with 200 views per video	1st video with almost 100 views in less than 2 months 2nd video in editing process to be published in Q1 2018	Creative story telling through involvement of both FLAME partners and FLAME Champions and experimenters
Project Website	No of unique visitors to the website (average per year)	At least 2000 unique visitor to the web site per year on the average	1753 unique users, 9040 page views, and 6784 unique page views	News, Publications, Videos, Newsletter, Technical blogs
Social networks	No of followers in Facebook, LinkedIn, Twitter, YouTube (average new followers per year)	Number of followers > 100	Twitter: 166 followers and 479 tweets LinkedIn: 39 members	Keeping FLAME profiles on such networks alive via regular posting and monitoring
Newsletters	No of subscribers (by the end of the project)	At least 500 subscribers	2 Newsletters published, 136 subscribers	Recording of subscribers to the electronic newsletter
Publications	No of peer-reviewed publications in journals, conferences and workshops	3 per year	1 (paper at EUCNC 2017)	Articles and papers presented and published in high-quality venues

Measure	Indicator	Target value	Value at the end of Y1	Source and Methodology
Technical Blogs	No of blogs published via the FLAME website	10 in year 1	6 at time of submission, 7th to be published before 31/12	Short articles and technical news from ongoing project's activities published via the technical blog
Webinars	No of webinars No of participants	1per year >15 participants per webinar	The 1st webinar is planned in Q1 2018 to advertise the 1st Open Call	Advertisement of offered webinars via project web-site and social media channels
Startup Events Media Hackathons	Average number of participants per each organised stakeholders' engagement event	3 hackathons to be organised in year 2 and 3	N.A.	Attendance proof, presented material, photos, animation of social media channels, events' reports
Outreach / community building workshops	Average number of participants per workshop	One per year with more than 50 participants per workshop	1 workshop co-located with NEM Summit and more than 50 participants	Attendance proof, presented material, photos, animation of social media channels, events' reports
Co-creative / user requirements workshops	Average number of participants per workshop	2 workshops with at least 15 participants	1 workshop in Bristol (Oct 2017) and 1 workshop in Barcelona (Nov 2017)	Attendance proof, presented material, photos, animation of social media channels, events' reports
Educational / training events	Average number of participants per summer school edition (UNIVBRIS)	2 editions with at least 40 participants, one in year 2 and one in year 3	N.A.	Attendance proof, presented material, photos, animation of social media channels, events' reports
Attended external events	No of events where FLAME is presented, demonstrated, promoted	At least 4 per year	15 events attended in 2017 (see Table 2)	Attendance proof, presented material, photos, animation of social media channels, events' reports

2.4 THIRD PARTY ENGAGEMENT

The ultimate goal of the 3rd party engagement strategy is to create demand from the FMI ecosystem for Experimentation as a Service (EaaS). As already described in D6.3, the creation of this demand would enable the transition from experiments funded by the project to customers willing to pay for experimentation services. In order to achieve this goal, after validation experiments have been performed by the responsible partners, FLAME will launch a series of Open Calls (fig 13) to expand the range of vertical areas so to include ISPs, telco vendors and other parts of the creative industries. The 3rd party engagement activities will also aim to attract strategic partners willing to use FLAME for experiments funded from their own resources.
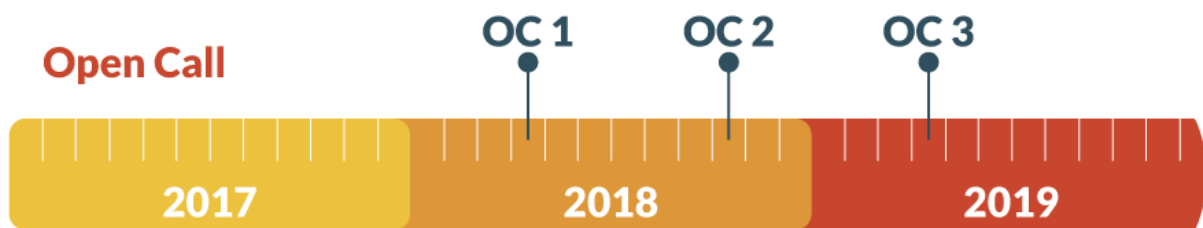
Figure 13. Timeline of FLAME open calls

The 3rd party investment approach will primarily target the following:

➜ **Industries.** Including the multimedia and creative industries, investment industry as well as technology providers. The aim is to formulate business models that are deemed suitable for a long-term sustainability with a drive to commercialization.

➜ **SMEs/Startups**. R&D Small Medium Enterprises technologically involved in the field of multimedia. Via 3rd party engagement, FLAME will ensure that the expectations of SMEs are aligned with the FLAME's offer.

➜ **FLAME replicators**. Research and innovator actors which will be supported in the planning process creating the plans and visions for a city and in the replication of the FLAME platform itself.

The experimentation strategy followed by FLAME is based on the relationship between facility maturity and the business maturity of the target groups. This is due to the fact that the Rate of Return (RoR) for large industry, SMEs and startups are different. For example, the RoR for SMEs/entrepreneurs is shorter than Industry and Universities. Based on this knowledge, FLAME will engage the target groups at different times in the lifecycle of the project and as the maturity of the platform increases, the number of SMEs/Individual experiments will also increase.

Experimentation Impact Board: Inputs and suggestions to feed into the plan

The Experimentation Impact Board (EIB), which includes various Consortium Partners from Industry as well as External Advisors, is responsible for providing external steering on vision, priorities and challenges for the FMI ecosystem. The EIB is expected to meet twice a year and provide feedback on the effort made by the project to establish strategic priorities for FMI experimentation and impact.

In this first year, the EIB has met twice: once in a conference call on the 16th of October and once face to face at the NEM summit where an EIB meeting was held following the FLAME workshop.

During each of these meetings, the EIB members were updated on the status of project as well as the Open Calls, and asked to provide feedback and suggestions on the Open Call investment strategies.

The feedback provided so far by the EIB, although not directly addressing the dissemination and communication activities, has a relevant impact on the engagement strategy.

In particular, one of the suggestions from the board is to engage SMEs through existing accelerators and hubs, as a complimentary alternative to the industrial engagement in the first open call. As described in paragraph 2.2.4, specific measures are being taken to increase the engagement of SMEs.

2.4.1 First Open Call: Raising Awareness

The first Flame Open Call will be announced in April 2018. This Open Call will allow potential experimenters to design and run experiments on the first release of the FLAME platform. The stakeholder groups targeted by this call are:

➜ **Industry Trials** (duration 12 Months): technologies with large scale and significant sectorial impact on beta platform.

➜ **SME Trials** (duration 6 Months): innovative OTT media technologies, ISPs and Vendors.

Even though still early in the process of the preparation of the platform for the Open Call, in order to raise awareness and ensure to reach the right groups of stakeholders, the consortium and in particular WP6 has already been engaging in different activities to advertise the call. In particular:

➜ **FLAME web site and social media:** News and tweets are being sent out regularly to bring attention to the Open Calls and to the opportunities that they represent for the whole FMI ecosystem.

➜ **FLAME Video:** First steps towards producing a video advertising the Open Calls has been taken. During the NEM Summit, the external advisors from the EIB were invited to share on video the reason why in their opinion an experimenter should participate to the FLAME Open Call. The different takes will then be used to produce a unified video that will be released early Q1 2018 to advertise the Open Call

➜ **Communication and media channels of whole FLAME partners:** All partners echoed the open calls via their channels, leveraging their network for maximum reach.

➜ **Presence with flyers and brochures advertising the Open Calls at different events:** The list of events where the Open Calls were advertised with flyer and brochures can be found in Table 2.

➜ **Presentation of the Open Calls at different events:**

- **Bristol Workshop- 19ᵗʰ of October 2017.** As described in paragraph 2.2.1.1, a stakeholder engagement workshop was organized in Bristol. The event was taken as an opportunity to reach different stakeholders different sides of the industry such as: Vodafone, British Telecom, FirstBus, VR Lab, Limelight Networks, Knowle West Media Centre, Watershed, NEC, and Zeetta Networks.

- **Barcelona workshop - 15ᵗʰ of November 2017.** The workshop (see paragraph 2.2.1.2) was attended by 15 people, including local and international representatives from the industrial and SME sector, the academic and research area, the city government and other H2020

projects related with Smart City deployments; among them Cellnex, Watchity, Beteve, the Barcelona Supercomputing Centre (BSC), the Barcelona Municipality, the Growsmarter project and the 5GCity project. The Open Calls were presented to the audience. Related information was provided, especially regarding the 1st Open Call.

- **FLAME workshop @ NEM - 30th of November 2017**. Considering that the NEM Initiative (described in 2.2.1.3) includes media, content, creative industries, social media, broadcasting and telecom sectors, as well as consumer electronics in Europe, the FLAME workshop at NEM 2017 represented a great opportunity to introduce the FLAME Open Calls to the targeted groups of stakeholders. How to join the FMI ecosystem as well as the Open Calls were presented during the event together with a FAQ session allowing the audience to ask any question related to the platform and possible experiments, as well as funding and evaluation mechanisms.

- **Media Fast Forward (MFF) - 5th of December 2017.** The FLAME Open Calls were presented at the event. MFF is the yearly networking and inspiration event that focuses on the latest trends in media innovation.

2.4.2   From Raising Awareness to Active Engagement

The three rounds of Open Calls will be executed in years 2 and 3 of the project. In order to achieve the broadest outreach and the best outcome, WP5 and WP6 will be actively collaborating on a number of activities including:

➔ Advertising via F6S channels. F6S is the largest social network for startups in the world. With over 1.8 million profiles for the startup/ SME community and more than 695,000 startups. F6S can be used for creating effective recruitment campaigns, for targeting SMEs/startups and for disseminating funding opportunities, including Open Calls, to a very broad audience.

➔ In order to create awareness about the 3rd party opportunities to join FLAME and the FMI ecosystem, all partners will engage in targeted dissemination and communication activities. These include promoting and echoing the information related to the Open Calls via Twitter, distributing flyers whenever possible, and giving presentations at different events to promote participation.

➔ Participation to Startup Weekends in Europe, as well as the FLAME Media Startup Bootcamp and the FLAME Media Hackathons will be opportunities to bring the attention of the Multimedia world and not only to the open calls.

➔ All the events organized by FLAME will be arranged in a timely manner to support a wider advertisement of the 3rd party engagement activities.

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3 UPDATE ON STRATEGY AND PLANS

3.1 PHASE 3

As already introduced in D6.3 (updated from 5.3), Phase 3 will start in January 2018 and will mark a transition towards the creation of the FMI ecosystem as a sustainable and larger community that will be able to use, validate and exploit the FLAME outcomes and create impact at various levels both in a scientific and socio-economic perspective.

In order to actively grow the FLAME ecosystem and engage all target stakeholders in the creative and collaborative development of novel FMI solutions and FLAME Replicator locations, a rich set of measures will be pursued.

Dissemination and Communication:

➜ The animation of the FLAME media channels will continue targeting the effort as appropriate, and will accelerate and diversify as the time of the Open Calls announcement approaches.

➜ Regular updates of the FLAME web site will continue, and it will be reviewed, extended and upgraded to meet the needs of the Open Call campaign.

➜ Bi-yearly e-newsletter publication as in Year 1 to maintain and grow FLAME's stakeholder community.

➜ Creation and updating of promo material as needed to support all targeted marketing activities.

Training and Webinars

➜ **Summer Schools.** Two summer schools will be organized to provide educational and training. UNIVBRIS, responsible for the organization, will use the FLAME platform to provide demonstrations. The summer schools will target participants from both the UK and Europe. A first edition is planned to take place in July 2018 in Bristol.

➜ **Tutorials and webinars.** Organized specifically in regard to the planned open calls, to advertise them and inform potential applicants about the Open Calls focus and objectives, participation conditions and rules.

Scientific Publications and Standardization Activities

➜ **Scientific publications.** Once the FLAME platform reaches an adequate maturity, the partners will start submitting to, and publishing in high-level conferences and journals such as IEEE ICC 2018, IEEE Network, IEEE Transactions on Communications, IEEE Communication magazine, and more as listed in Deliverable 6.3.

➜ **Input into standardization.** During this later stage of the project, we expect concrete activities in the service routing, orchestration and media service management areas, with target SDOs being the IETF, ETSI MEC as well as ETSI NFV.

3rd Party Engagement

➔ **Promotion of the 3rd Party Activities**, in close collaboration with WP5. As outlined in the previous section, the 3rd party investment is an essential part of the FLAME strategy to grow an exciting, creative and vibrant FMI ecosystem through open calls and unfunded experiments. **Advertising campaigns** are underway and promotional material has been prepared to ensure broad reach of target stakeholders. **Marketing activities** have already begun, and will continue into Q1 2018 to exploit a variety of media and traditional press channels in addition to dedicated webinars and presentations aimed at expanding the FMI ecosystem and gaining stakeholder engagement.

Events

➔ **Organisation of events**. Co-location with other major conferences and workshops has been successful, and will be continued a way to maximize the reach and gather a high number of participants.

- FLAME Media Hackathons will be held in collaboration with UNIVBRIS, I2CAT and other FLAME Replicators to promote the usage and experimentation of FLAME technology in developer communities. FLAME plans to host 3 of these events with the goal to raise interests in different local developer communities. Hackathons will last 48 hours and will be preceded by FLAME training where developers will be able to get insights on FLAME platform offering. FLAME will provide prizes in hardware or participation to key events to the best prototypes.

- FLAME outreach/community building workshops: one in year 2 and one in year 3 will be organised to engage stakeholders into adoption and deployment of the FLAME concepts, technologies and platform. Timing of these events will be synchronised with the planned launch of the Open Calls, typically about one month before each call is opened and with major conferences/events to co-locate with. This will allow creation of an informed audience of potential third parties participants, but also contribute to broad dissemination of project results to foster uptake. Typically FLAME partners will serve as main presenters (demonstrations will also be organised especially in order to provide details on the latest technical progress of the project), but will also aim at inviting one or two selected experts from the EIB and dedicate part of the event to an interactive session giving the opportunity to the participants to play an active role in round table discussions guided by the FLAME leaders.

➔ Participation in relevant events will provide an opportunity to give demonstrations and presentations about FLAME progress, offering and funding opportunities. A refined list of which events will be attended by FLAME is continuously maintained by the consortium partners. As of today, we can anticipate that during year 2, the plan is to ensure presence of FLAME at selected future events:

- **Mobile World Congress 2018.** A four-day event taking place from February 26 – March 1 in Barcelona, Spain, where more than 108,000 mobile professionals will network, showcase and exchange ideas.

- **Fed4Fire Engineering Conference 3.** The engineering conferences are a series of technical events organized by Fed4FIRE+ project to strengthen the interaction among the different stakeholders involved. FEC3 is scheduled for March 13-15 2018 in Paris, France.

- **EuCNC 2018.** Taking place the 18th – 21st June in Ljubljana, Slovenia, the 27th edition of a successful series of a technical and scientific conference open to the world research community and sponsored by the European Commission in the area of Telecommunications.

- **IBC 2018.** This conference takes place 13th – 17th September in Amsterdam, the Netherlands, with more than 57,000 attendees coming for discussion and debate about the many different challenges facing the electronic media and entertainment industry.

- **SCEWC 18.** Taking place in Barcelona, Spain, the Smart City Expo World Congress is a key event for smart cities around the world.

3.2 UPDATE ON INDIVIDUAL PARTNERS' ACTIVITIES

VRT

Strategy. The engagement strategy of VRT aims to connect with relevant cities, institutions and organisations to achieve our goals in FLAME.

Activities.

➔ VRT Innovation presented the FLAME projects at the Media Fast Forward (MFF) event in Brussels Belgium (05/12/2017). MFF is the yearly networking and inspiration event that focuses on the latest trends in media innovation. This special edition was hosted by VAR (www.var.be), BOZAR (http://www.bozar.be) and VRT Innovation (http://innovatie.vrt.be/events/media-fast-forward-2017/). The FLAME Open Call initiative was explained, and the timing of the 1st Open Call highlighted.

➔ VRT Innovation contributed to the FLAME workshop at the NEM Summit 2017 in Madrid, Spain. Early trials and experiments were explained, and the value of the FLAME platform for the deployment of participative media experience experiments by the broadcaster was illustrated.

➔ VRT Innovation participated in the FLAME stakeholder engagement workshop, Barcelona Spain, 2017.

➔ VRT Innovation plans to contribute to the upcoming FLAME Summer School hosted by the University of Bristol and organized by the High-Performance Network Laboratory. The concept of Experimental design and Future Media experiences will be explored in a hands-on workshop (July 2018).

DRZ

Strategy. Through the FLAME partnership, DRZ will advance its overall mission to drive value for The Walt Disney Company by delivering scientific and technological innovation Company-wide. Our world-class research talent invents and transfers the most compelling technologies enabling the Company to differentiate its content, services, and products. Disney Research combines the best of academia and industry, by doing both basic and application-driven research. We utilize publication as a principal mechanism for quality control and encourage engagement with the global research community. Our research applications and technology are experienced by millions of people. We honour Walt Disney's legacy by deploying our innovations on a global scale.

The marketing strategy of DRZ is aligned with the needs of FLAME, which is to demonstrate the value of city-wide storytelling enabled by FLAME infrastructure. We aim to develop prototypes, which are evaluated through user tests to explore the potential value of our technology. Our results will be disseminated through publications and technology demonstrations, which will help to attract OTT media service providers and content providers to the FLAME platform.

Part of DRZ's strategy is to explore if research achievements can impact business units of The Walt Disney Company. For example, FLAME technologies may be of interest within Disney's theme parks. Walt Disney Attractions had attendance of over 140 million in 20162. The Magic Kingdom alone averages over 50,000 guests per day. The theme parks must operate like a small city to support these visitors. Smart city infrastructures offer new opportunities for engaging guests with innovative media services.

Storytelling is also a core part of the theme park experience. In recent years, there have been early trials using existing technologies to tell stories that span a park environment. For example, an EPCOT theme park attraction, called "Kim Possible", offered guests an interactive game/scavenger hunt experience3. Guests explored the park as a secret agent tasked with various missions. A GPS-enabled cell phone (aka "Kimmunicator") was provided to guide the user to experience the intended narrative. An attraction at the Magic Kingdom theme park, called "Sorcerers of the Magic Kingdom", is a game in which guests interact with physical and virtual objects throughout the park using collectable playing cards4. These theme park experiences inspire the city-wide storytelling experience explored within FLAME.

FLAME technologies may be of interest for other Disney-related activities. For example, Adventures by Disney provide guided family vacations to various international destinations. Disney-trained adventure guides are described as being 'part concierge, guide and storyteller5. The Disney Cruise Lines also operate like a small city with people living on-board for up to 2 weeks. Disney also owns an island in the Bahamas. There is potential for installing or utilizing smart city technologies in these locations. DRZ aims to explore novel capabilities offered by FLAME technologies.

Activities. The engagement plan of DRZ is guided by our mission as described above. Our activities include the development of technologies that leverage unique capabilities offered by FLAME to deliver a city-wide storytelling experience. We will conduct experiment trials to validate the technology as well as to validate the user experience in real, urban environments. The results not only guide further refinement of our technology, but will also be presented in scientific venues through publications and technology demonstrations. We leverage the review process of leading conferences to ensure that we produce high quality results of relevance to the greater community. The visibility of these results will demonstrate the value of FLAME methodologies and capabilities, and they will generate success stories for global promotion.

Our current dissemination activities focus on developing prototype technologies, which will demonstrate city-wide storytelling using the FLAME infrastructure. We are currently working to publish papers describing the technologies and resulting prototype. For us, publication is the first step

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2http://www.teaconnect.org/images/files/TEA_235_103719_170601.pdf

3http://disney.wikia.com/wiki/Kim_Possible_World_Showcase_Adventure

4https://disneyworld.disney.go.com/attractions/magic-kingdom/sorcerers/

5https://en.wikipedia.org/wiki/Adventures_by_Disney

to dissemination. We have developed a process for producing press releases for a subset of our publications, which have global reach. We will also provide technology demonstrations at major conferences or industry events with FLAME participation. Our most immediate planned outreach event is a presentation of Narrative Technologies, including city-wide storytelling with FLAME, at the Ludicious Zurich Game Festival in January 2018.

NXW

Strategy. NXW is using the work in FLAME on the PMM use case to progress on the definition of an evolution strategy of Symphony6 towards virtualized environments and Smart Cities infrastructures. The continued design and findings from the definition of the "My screen follows me" service is influencing design decisions of the product development group for the virtualized decomposition of Symphony services, with the further potentials of the planned PMM demonstrator in Barcelona to further assess and clarify benefits of this strategy in terms of marketability of the system for various potential customers. In fact, with the work in FLAME NXW expects to be able to showcase Symphony product to a real and large Smart City community, being also capable to expand the Symphony market from luxury villas and motor-yachts to Smart City platform operators and broadcasters. The expected market impact for the engineering of the FLAME use case is the next 2–3 years from the completion of project activities, once the proper market opportunities in large Smart Resorts and Smart Cities which are expected have consolidated at scale and an advanced product like the one envisaged will be well received.

Activities. The engagement plan of NXW mainly consist of leveraging FLAME-sponsored events to showcase the "My screen follows me" service (i.e. project workshops at international events and meetings with stakeholders involved in the use case demonstration, possibly sponsored by the Smart City municipalities). These actions will be scheduled more specifically once a first integration of the PMM with the FLAME stable software release will be made available in Barcelona. NXW plans to use the great attraction of a worldwide event in the city like the Mobile World Congress to run a use case demonstration and product exhibition. Outside the project-driven activities, NXW will also use results from the use case demonstration in FLAME to contact the current Symphony customers and propose them a service upgrade.

ETH

Strategy. As one of the world's top universities, ETH Zurich pursues a mission of excellence through three major international engagements: research, education, and outreach. As part of ETH Zurich, the Game Technology Center (GTC) shares these engagements. The GTC has been growing expertise in the field of gaming, exploring how video game technology can serve those three purposes.

In this regard, the GTC plays a special role in the FLAME project, connecting the platform and its ecosystem with the gaming community at several levels: from the game developers, acting as content providers, to the players themselves, acting as content consumers.

The mission of the GTC in FLAME is twofold. Focusing on research, the GTC develops FLAME's city-wide gaming technology, acting as an example for other actors of the field to envision the benefits of the platform. Moreover, the GTC contributes to outreach and education around FLAME by presenting the

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[6]http://www.nextworks.it/en/products/brands/symphony

project to both academic and industry audiences and by providing the tools to assist future FLAME stakeholders and consumers.

Activities. The GTC has been developing "Gnome Trader", a city-wide augmented reality game based on the FLAME platform. To ensure the quality of the final result, for both the FLAME consortium and the gaming actors, the development happens in an iterative manner, including phases of designing, developing, testing, and refining.

To complement this effort, the GTC presents the project world-wide at various events, from game festivals to research conferences. More than just pursuing the outreach mission of the GTC, these presentations will later also be an excellent way to advertise for the coming Open Calls.

Publications. For this project, the research phases will focus on two main topics:

1. First, by analysing the gaming experience, the GTC hopes to gain unique and valuable data describing how players behave when engaging in city-wide games, how they interact with the FLAME features, and how they benefit from them.

2. Second, the GTC will explore the real-time generation of flora elements for video games, and in particular how network platforms such as FLAME can improve the results of such constrained generation, storage, and delivery of procedural content.

Resulting from these research phases, the GTC targets two publications: one in 2018, which presents the analysis of human behaviour in city-wide games, and one in 2019 focusing on flora generation. For each publication, we estimate an effort of 1 PM to produce results and 1 PM to write the paper. Candidate conferences for these two publications are IEEE CogInfoCom, CVMP (European Conference on Visual Media Production), Eurographics, CHI Play, AIVRAR (Workshop on Artificial Intelligence Meets Virtual and Augmented Worlds), and GET (International Conference on Game and Entertainment Technologies).

Outreach. More than providing first experiments for the FLAME platform, this project also offers the chance to connect with the different major actors in the gaming industry. The following are our planned outreach actions:

*   Code examples relevant for FLAME will be open-sourced to share first demonstrations of using the platform with future game developers willing to exploit FLAME possibilities.

*   As an incentive to engage the game developers' community, the GTC plans to organise a one-day game design workshop together with the Zurich University of the Arts (ZHdK). The participants will be invited to develop new ideas and designs for future FLAME-powered video games. This workshop focuses on design and will be hosted in Zurich.

*   Moreover, a more technical-oriented workshop will be organised with the FLAME consortium. The workshop will last for one day and will be composed into two phases. In the first phase, consortium members present the platform and its possibilities. Additionally, ETH will present the results from the previous game design workshop. The second phase will focus on hands-on activities such as tutorials on how to use the provided open-source code for further projects. Target venues for this workshop are CES Unveiled Amsterdam 2019, NEM Summit 2019, and Ludicious Zürich Game Festival 2019.

The output of the two workshops will be used to promote FLAME and inspire more actors in the community.

Further outreach. Members of the GTC continuously present their latest results at invited talks. In 2017, FLAME results were presented at Zurich Meets Hong Kong and NEM Summit. In 2018, a presentation is planned for the World Web Forum and more may follow. We reserve 1 week per year (0.125 PM) to prepare future special demo versions of Gnome Trade to be presented. In 2017, the effort was 2 weeks.

Finally, the GTC is exploring a partnership with Tamedia AG, which is the leading Swiss media group, to use their infrastructure, such as newspaper boxes, as ubiquitous augmented reality markers in Switzerland, and to invite the readers of the newspaper to join the game.

IDE

Strategy. Through the FLAME project, IDE will inject innovative routing and service-level solutions into the overall FLAME platform, providing a large-scale showcase for the capabilities that these solutions provide. With this, FLAME will provide the necessary reduction to practise that will drive the possible adoption of these technologies in relevant SDOs. Apart from the replication of FLAME in other sites, IDE sees the adoption in SDOs as crucial at the level of the platform they are operating. For this, IDE will utilize effective means of marketing and technical reduction to practise in working prototypes.

Activities. For the realization of our aforementioned strategy, IDE will utilize its presence in key SDOs such as IETF, ETSI and 3GPP to drive standardization efforts in the various areas. To this end, IDE has already started activities in IETF with the organization of an SROL (service routing over L2) barBOF, positioning its FLIPS solution as a suite of protocols to solve emerging problems arising from the proliferation of service-rich environments at the edge of the network. IDE will continue driving these specific efforts in order to determine the right WG (either an existing or a to-be-created new WG) in the IETF for dissemination of FLAME results in the FLIPS domain. IDE has already and will continue to submit IETF drafts in relevant WGs, such as the Service function chaining (SFC) WG, the Binary Explicit Replication (BIER) WG and the Information-centric networking (ICN) RG. IDE has currently four active drafts in those WGs/RGs, which it intends to either fold into a future new SROL WG or continue for adoption of those drafts as WG item.

 IDE also actively drives activities in the 3GPP SA2 WG on service-based interfaces (SBI) with FLIPS as a possible solution to flexible control plane routing for 5G. To that extend, IDE is planning demonstration and SBI system work that directly feeds into future Rel16 work in 3GPP, utilizing the FLIPS technologies of FLAME in this particular 5G area. IDE also plans to continue its involvement in ETSI Multi-Access Computing (MEC) forums for requirements definition in the service routing space, relevant for normative efforts in other SDOs such as the IETF. Supporting such activities are those by IDE in the ITU IMT2020 efforts related to ICN study items or control plane solution. We will support these SDO-centric activities through active publication, both at research but also at technical marketing level. Specifically, IDE will likely release news as press releases, such as those done for the 2017 BRISTOLOPEN trial, conducted by the POINT project. We will also utilize our usual presence at major trade shows, most notably the Mobile World Congress as well as the ETSI MEC Congress, to demonstrate, disseminate and engage with potential partners at a global level.

ITINNOV

Strategy. No update since D6.3.

Activities.

➔ **FIRE:** ITINNOV is at the heart of the FIRE initiative having participated significantly (including member of the FIRE Board) in the programme since 2010 with ongoing projects (e.g. FIESTA,

FIREStudy, FED4FIRE+) in addition to FLAME. ITINNOV plans to maintain the relationship with the FIRE through participation in community events such as FEC and workshops especially in relation to the EaaS approach. ITINNOV will act as the point of contact for federation with FED4FIRE+

➜ **NGI:** ITINNOV is a leading player driving the Next Generation Initiative through white paper publications, expert consultations and community workshops. FLAME's human-centric media approach, the advancement of software-defined infrastructures and the innovative ecosystem engagement activities with SMEs and Entrepreneurs is directly aligned with the NGI strategy. ITINNOV will use concepts and results to help steer future NGI work programmes and the uptake of FLAME results within the emerging programme.

➜ **NEM:** ITINNOV is a long-standing member of the NEM Steering Board. ITINNOV will ensure that NEM strategy considers FLAME's strategy and vision for the Future Media Internet by contributions to white papers, direct communication at steering board meetings and paper presentations and NEM events. ITINNOV is co-leading the organisation of the FLAME workshop with Martel

➜ **Publications:** ITINNOV plans to champion research results through publications in relevant channels as described above. ITINNOV led a paper accepted for EUCNC2017 "Experimentation-as-a-Service Methodology for Building Urban-Scale Media Ecosystems" following an earlier paper presented at the NEM Submit 2016 "Tackling user-centric media demands through adaptable software defined infrastructures".

➜ **Press Release:** ITINNOV plans to promote stories of public and industrial interest through press releases. ITINNOV published a 1st press release on 14th Feb 2017 announcing the project kick off (http://www.ecs.soton.ac.uk/news/4995) and will continue to seek stories that can raise awareness of and engagement with FLAME.

IMI AND I2CAT

Strategy. No update since D6.3.

Activities. No update since D6.3.

ATOS

Strategy. Through the participation in FLAME, ATOS will strengthen its expertise in new networking paradigms, such as virtualisation of network functionalities, experimentation as a service and software-defined networks, which are strategic research areas for the concrete market of ATOS Research & Innovation that is participating in FLAME. The development of media services is another key element of the ATOS strategy since ATOS is a world leader in the provision of IT and media services, including major events, such as the Olympic Games. In this sense, the experience gained by ATOS in the project will allow to enrich the overall knowledge of the company and the value proposition that the company offers to its clients.

Activities. To carry out this engagement and marketing strategy, ATOS has planned two kinds of activities. On one hand, ATOS will participate in conferences, workshops and exhibitions to present the advancements achieved in FLAME by means of the new network paradigms and FLAME specific technological advantages. For this purpose, ATOS has identified a set of key events where stakeholders could participate, after analysing the companies and institutions that could be interested in FLAME use. On the other hand, ATOS will utilise the internal channels and events of the company to create

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awareness about the exploitability of the project results. In this sense, during the last months the ATOS market that is participating in the project has kept the contact with the ATOS community management team to involve the corporate social media accounts in the FLAME dissemination. Since ATOS is a large company and widely followed in such social networks, this new strategy aims to amplify the reach of the dissemination made by ATOS in the project.

BRISTOLOPEN

Strategy. BRISTOLOPEN will provide the test-bed environment in Bristol to host FLAME's FMI platform. The city-wide test-bed will provide expansive opportunities for experimentation. The 144 core fibre ring which makes up part of the test-bed has four host node partners, Watershed, Engine Shed, @Bristol (science museum) and the High Performance Network Labs at University of Bristol. These are BRISTOLOPEN's primary stakeholders along with Bristol City Council. This ecosystem of stakeholders each bring with them access to a broad range of organizational links within the broadcasting, media and digital media space, along with communities and citizens. Following on from the Stakeholder Engagement Workshop in October 2017, BRISTOLOPEN will continue to engage with these new relationships, updating them on the developments within the FLAME projects and Open Calls.

BRISTOLOPEN will also focus its engagement and marketing within the wider network across Bristol to respond to the open calls. Keeping the experimentation focused around Bristol needs, working with consortia expertise and the successful experimenters to develop solutions on the FMI platform. BRISTOLOPEN will in partnership with FLAME consortia members, mentor and support the experimenters. BRISTOLOPEN is establishing a strategy for coordinating mentoring for third party experimenters ensuring the sustainability of these projects and future open calls.

Activities.

➔ BRISTOLOPEN will continue to engage stakeholders across Bristol, University of Bristol and the City Council, and further their reach to the stakeholders who attended the October workshop. This would involve social media, PR, blogs and emails to engage a wider group and inform about the open calls to gain interest about applications and the hackathon.

➔ BRISTOLOPEN will begin planning a hackathon to work closely with the technical stakeholders across the Bristol programming community targeting skills development in the industrial R&D and wider regional user communities.

➔ BRISTOLOPEN as leader of T4.5 will coordinate the mentoring strategy for the first Open Call. The proposed strategy will involve communicating with Third part experimenters ensuring the OCSC remain up to date on project progression and risks. Successes heard through these channels should be communicated through social media and blogs.

MARTEL

Strategy. The Martel Media department leads the dissemination and communication activities within FLAME, and has been responsible for their effective execution from the very beginning of the project. This is strategic for Martel Media as it provides the opportunity to consolidate and enhance its experience and expertise in the area of creative, participatory and social media technologies, tools and solutions. By driving the FLAME's community building and stakeholders' engagement activities through targeted outreach, promotional events, web and social media management, design and production activities and ensuring participation to selected conferences, Martel Media will strongly contribute to the success and impact of the overall project's work. Moreover, Martel is playing a central role in the engagement of 3rd party organisations into the FMI ecosystem via the planned open calls.

Activities. Martel, as leader of the overall marketing and communication activities within FLAME, has completed several key promotional tasks that affect the FLAME work and outcomes and bolster the creation of the FMI ecosystem. The major activities include:

➔ FLAME web site design and management.

➔ FLAME social media animation and biannual newsletter creation and distribution.

➔ Promotional material creation and distribution (slides, posters, flyers, roll-up, videos).

➔ Organisation of 1 outreach/community building workshop per project year, which was held in Madrid on the 30th November in co-location with the NEM SUMMIT 2017.

➔ Liaisons and communication towards related communities Martel is actively engaged in. This includes:

● The 5G PPP /Networld2020ecosystem via regular emails and tweets on their channels about FLAME. Moreover, Martel has started approaching ongoing 5G PPP projects with a media focus, such as 5GCity, 5G Media, 5GXcast, to identify how to create closer synergies.

● Future Internet Experimentation Research via regular advert of FLAME via Fed4FIRE+ contacts (Martel is also involved in Fed4FIRE+) and distribution of promo materials at the various FEC Conferences editions (FEC 1 in Ghent, April 2017, FEC 2 in Volos, October 2017). At the time of writing this deliverable, Martel and IT Innovation are discussing the colocation of a dedicated FLAME session (focus on SDN) at the FEC3 conference planned to take place in Paris 14-16 March 2018.

● Next Generation Internet. Martel is coordinating the first NGI Coordination and Support Action called HUB4NGI (www.hub4ngi.eu). In doing so several events have been organised in order to promote the NGI initiative. Dirk Trossen, the technical manager of FLAME; was invited to the NGI Forum (September 2017 in Barcelona) and this gave the opportunity to present the vision of Future Media Internet FLAME is working on. Crossed-communication and promotion via various media channels have also been ensured and will continue.

● New European Media. Martel has been liaising with the NEM community and in particular with the NEM Summit organisers in order to ensure the 1stFLAME workshop to be co-located with the conference that took place 29th and 30th of November 2017 in Madrid. Crossed-communication and promotion via various media channels have also been ensured and will continue increasing the visibility of FLAME into the media and creative innovation landscape in Europe. Discussions are planned on how to possibly present FLAME at next future media/creative events within the NEM community.

Martel's active engagement and marketing activities in FLAME will be leveraged through a number of other related innovation projects, i.e., ORCA, eWINE, RIFE, FI-NEXT and ChiC, and promotional frameworks Martel is involved in, giving the opportunity to reach a broad audience and ensure effective establishment and sustainable growth of the FMI Community.

4   CONCLUSIONS AND NEXT STEPS

FLAME aims to establish and grow a sustainable Future Media Internet, FMI, ecosystem to ensure effective impact creation through a comprehensive and well-articulated set of activities which all partners are pursuing. Through the development of a platform seeding strategy, FLAME intends to create demand for services for the FMI ecosystem. The strategy is designed to grow the FLAME FMI ecosystem throughout the project in accordance with market positioning, infrastructure sustainability models and platform exploitation.

FLAME's approach is to put marketing, communication and dissemination at the service of the engagement activities. To this purpose, dedicated measures have been implemented from the very beginning of the project and are being refined according to the partner needs, according to the feedback from the broad community and to suit the overall promotional opportunities as they arise. In doing so, FLAME follows a phased approach to better focus and organise the planned activities in relation to progress and maturity of the outcomes of the other work packages. In year 1, the first two main phases have taken place: stakeholders' awareness [M01, M06] and stakeholders' engagement [M07, M12], as reported in this deliverable.

Phase 3, sustainable ecosystem and market outreach [M13, M36], will start in January 2018 and will mark a transition towards the creation of the FMI ecosystem as a sustainable and larger community that will be able to use, validate and exploit the FLAME outcomes and create impact at various levels both in a scientific and socio-economic perspective. While stakeholders' awareness and creation remain key for the whole project's duration, the emphasis will be on promoting uptake of the FLAME offering though a comprehensive 3rd party engagement strategy that will start with the first two Open Calls planned for April and November 2018.

Other activities in the pipeline for year 2 include dedicated promotional activities for the Open Calls (webinar, promo materials, video, etc.), a number of scientific publications, the organisation of the 1st FLAME Summer school in July 2018 in Bristol, the organisation of a FLAME session at FEC3 in March, the organisation of the 2nd FLAME outreach/community building workshop – possibly at EuCNC 2018, and participation to a number of important events (e.g., MWC 2018, IBE 2018) where to promote FLAME.

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APPENDICES

APPENDIX 1: FLAME NEWSLETTER SAMPLE