

D2.2: User communities engagement and dissemination strategy

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Abstract:

This report details the identified user communities and the actions to engage the stakeholders. The latter will include the dissemination plan which will be used as a guide during the entire project lifetime to convey the right message and implement the actions for the communication and promotional campaigns.

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EXECUTIVE SUMMARY

EUBra-BIGSEA (Europe-Brazil Collaboration on Big Data Scientific Research Through Cloud-Centric Applications) is a collaboration project funded under the third Europe-Brazil coordinated call which aims to develop a set of cloud services empowering Big Data analytics to ease the development of massive data processing applications. EUBra-BIGSEA develops models, predictive and reactive cloud infrastructure QoS techniques, efficient and scalable Big Data operators and a privacy and quality analysis framework, exposed to several programming environments.

The present deliverable highlights the user communities engagement work being done under the EUBra-BIGSEA WP2 “Community Engagement, Communication & Impact”. The main objective of WP2 is to support the project goals through an effective communication and engagement approach, which ensures the wide promotion and high visibility around the innovation and benefits provided by the EUBra-BIGSEA to its stakeholders and particularly its user communities. Tailored messages are delivered to the different target groups while also highlighting the importance of EU-BR co-operation and its socio-economic impact.

This deliverable provides an overview of the identified user communities and documents the actions defined to engage the target audiences. It includes the engagement plan to be used as a guide during the entire project lifetime to convey the right message and implement the focused actions for the communication and services and components uptake campaigns.

Together with the Communication strategy, the implementation of the present engagement plan is the responsibility of two communication teams in Europe and in Brazil, coordinated by Trust-IT Services and Federal University of Campina Grande (UFCG) that work together to ensure a continuous effort to keep an open dialogue and aggregate the different communities from research, industry and the public sector and policy makers from Europe and Brazil around the EUBra-BIGSEA offer.

The results of the activities designed to raise awareness about the EUBra-BIGSEA offer and engage the various target audiences to support contributions and the adoptions of the project outputs will be feed into the WP8 “Long term Co-operation, Sustainability & Commercial Impact” work plan which will underpin the EUBra-BIGSEA sustainability and business models and map assets to potential user communities and stakeholder groups.

1. INTRODUCTION

1.1. Scope of the Document

The scope of this document is to provide an overview of the user communities targeted by EUBra-BIGSEA as relevant stakeholders to facilitate the sustainability of the project on the one hand, and on the other hand to lay the ground for the technology transfer of the EUBra-BIGSEA assets. It leverages the analysis made in D2.1 to identify the stakeholders, classify them, and determine the right messaging to convey to engage them.

The first outcome of this document is the definition of a clear Engagement and Dissemination strategy targeting the different EUBra-BIGSEA User Communities. Then, the second outcome is a set of individual engagement plans including activities, tools and expected impact for each one of the identified communities.

The Engagement strategy and plans targeting the user communities are an important step to maximise the impact of the project. The outcomes will be the basis for the work that will be carried in WP8 to define the exploitation and sustainability plans.

1.2. Target Audience

The document is mainly intended for internal use, but is publicly available for consultation.

The implementation of the Communication, Stakeholder and User Communities engagement plans are the responsibility of two communication teams in Europe and in Brazil, coordinated by Trust-IT Services and Federal University of Campina Grande (UFCG). All communication and outreach activities are to be synchronized with and designed to support the technical developments (WP3 to WP6) and use case evolution (WP7) by defining the benefits and advances enabled by EUBra-BIGSEA through key messaging and value statements. As such, all technical partners will support the activities to maximise the impact and leverage the partner network as primary source of user communities members.

The information related to this document will be periodically updated in the internal wiki, following the progress of the project, publication of outputs as well as other dependencies including events calendar and publications, media coverage and dissemination material production. The strategy will be updated in the second period of the project to be aligned with the results of the market analysis and preliminary exploitation plans of the partners that will be defined in WP8 at M12.

1.3. Document Structure

The document starts with an introduction highlighting the engagement and dissemination strategy objectives, the EUBra-BIGSEA overall offer, and the user communities' reference classification.

Section 3 is divided in 2 subsections following the breakdown of the user communities into two categories: Architecture & components user communities and Use case / Application field user communities. Each subsection is organized to extensively discuss the representatives of these communities and the action plans to engage.

Engagement objectives, tools and expected impact for each of the 6 identified user communities are detailed together with a subsection dedicated to cross-communities engagement activities and tools.

Section 4 concludes the document and highlights the next steps in terms of strategy plan update.

2. USER COMMUNITIES ENGAGEMENT & DISSEMINATION STRATEGY – OVERVIEW

2.1. Main goals

In the context of the EUBra-BIGSEA WP2 “Community Engagement, Communication & Impact”, the engagement focuses on the outreach activities towards user communities. The aim is to support those identified groups and to raise the interest in the project results to integrate them as active users of the EUBra-BIGSEA components and outputs. To achieve this objective, the engagement strategy analyses the rationale and the motivations underneath the needs to drive the implementation and definition of the software components, thus maximizing the impact of the project by reaching these communities at large.

EUBra-BIGSEA engagement and dissemination activities target a defined set of user communities. Each group has its own messaging, channels, communication activities, events with associated targets, outputs and KPIs, and the nature of collaboration is tailored according to the target and the added value that EUBra-BIGSEA brings.

All activities are subscribed to two project key **communication and engagement goals**:

- To showcase the benefits of the EUBra-BIGSEA project to stakeholders and user communities, engage all target audiences and establish close synergies with related initiatives, multipliers and community gatekeepers.
- To maximise the visibility of the project outcomes and impact through utilization and management of appropriate communication channels, and also to promote the technical developments and user scenarios through multiple formats and channels spanning from journalistic texts to multimedia and user-focused events.

Even though the stakeholder engagement is administratively divided into separate groups, it must be noted, that the division into different stakeholder groups, and even within them, is in many cases artificial as these actors do not operate in vacuums. In the end, the results and impact of EUBra-BIGSEA activities derive from addressing various stakeholders and user communities that also have an effect on each other. Therefore, some of the activities will span multiple user communities at once or if there is the need to specifically engage convey a specific message to a single user community, narrow approaches will be selected to address each one of the different target stakeholders, and tailor the action based on the specific knowledge, expertise, needs and mandate of each of them.

2.2. The EUBra-BIGSEA offer

The EUBra-BIGSEA aims to develop a QoS-aware, reliable and trustworthy platform and offer on top a set of cloud services designed to enable Big Data analytics and facilitate the development of massive data processing applications.

The EUBra-BIGSEA general Infrastructure comprises four main blocks:

- *QoS Cloud Infrastructure services*, which integrates the workload modelling, resource monitoring, the implementation of vertical and horizontal elasticity and the contextualization service.
- *Big Data Analytics services*, which provide operators to process huge datasets and which can be integrated in the programming models. Analytics services are characterized in the QoS cloud infrastructure models of the underlying layer, which automatically (or explicitly driven by the analytics services) will adjust resources to the expected workload considering its specificities.
- *Programming Models*, which provide a higher-level programmatic framework (Python, Java, Spark) and are also characterized by the infrastructure models. The programming models will ease the parallelisation of the applications developed on top of them.

- *Security framework*, which provides the means to annotate data and processing while ensuring the proper protection of privacy and security.

On top of those four blocks, applications are developed using the programming models and the data analytics extensions. Application developers are expected to use the programming models and may use other features of underlying layers, such as the user-level QoS metrics.

Although it aims to cover requirements from multiple application areas, the project delivers an application to showcase the processing of data produced by massively connected societies, particularly focusing on traffic recommendation. The use case scenario has a high social and business impact for both Europe and Brazil and primarily targets two groups of end-users: general public/citizens and public sector representatives, in particular urban planners.

A high level view of the EUBra-BIGSEA architecture and interactions between the main blocks and the Use Case is illustrated in Figure 1¹.

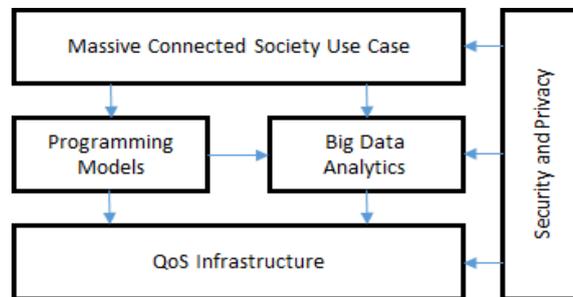


Figure 1 High-level view of the EUBra-BIGSEA Architecture

The first steps in the project has been a detailed analysis of the user requirements, detailed in deliverable D7.1 “*End-User Requirements Elicitation*”, to drive the definition of the requirements of components to follow a user-centric approach, dedicating effort to user-driven developments and integration and community engagement.

2.3. EUBra-BIGSEA User communities and Stakeholders

The user communities analysis builds on the previous initial mapping discussed and presented in deliverable D2.1 “*Communication strategy and web platform development.*”

As stated in D2.1 target audiences definition and segmentation are crucial to select the most appropriate messaging tools and communication channels, thus maximising the results. We consider that a key step in building a consolidated engagement strategy requires to clearly identify the project user communities in the pool of stakeholders building around the project activities.

We specifically consider a very broad definition of project stakeholders: any person, organisation or group with an interest in the project and that might, at some point in time, be affected by the progress or outcomes. Users are the most obvious group of stakeholders and are ultimately the people who make use of or are intended to make use of a particular product or service developed by the project. Based on their specific requirements, use, context etc. users are classified in different groups often referred to as user communities.

As not all project stakeholders are also users, and based on their characteristics and relationship to the EUBra-BIGSEA project outputs, the following User communities have been identified and defined (see also Figure 2):

- **Architecture & components user communities.**

¹ EUBra-BIGSEA Deliverable 7.1: End-User Requirements Elicitation, p. 19

- Data scientists.
- Administrators & Infrastructure providers.
- Open source communities and application developers.
- Private sector: SMEs, Start-Ups, large enterprises.
- **Use case / Application field user communities.**
 - Public sector: Public authorities; Urban planners.
 - General public – citizens.

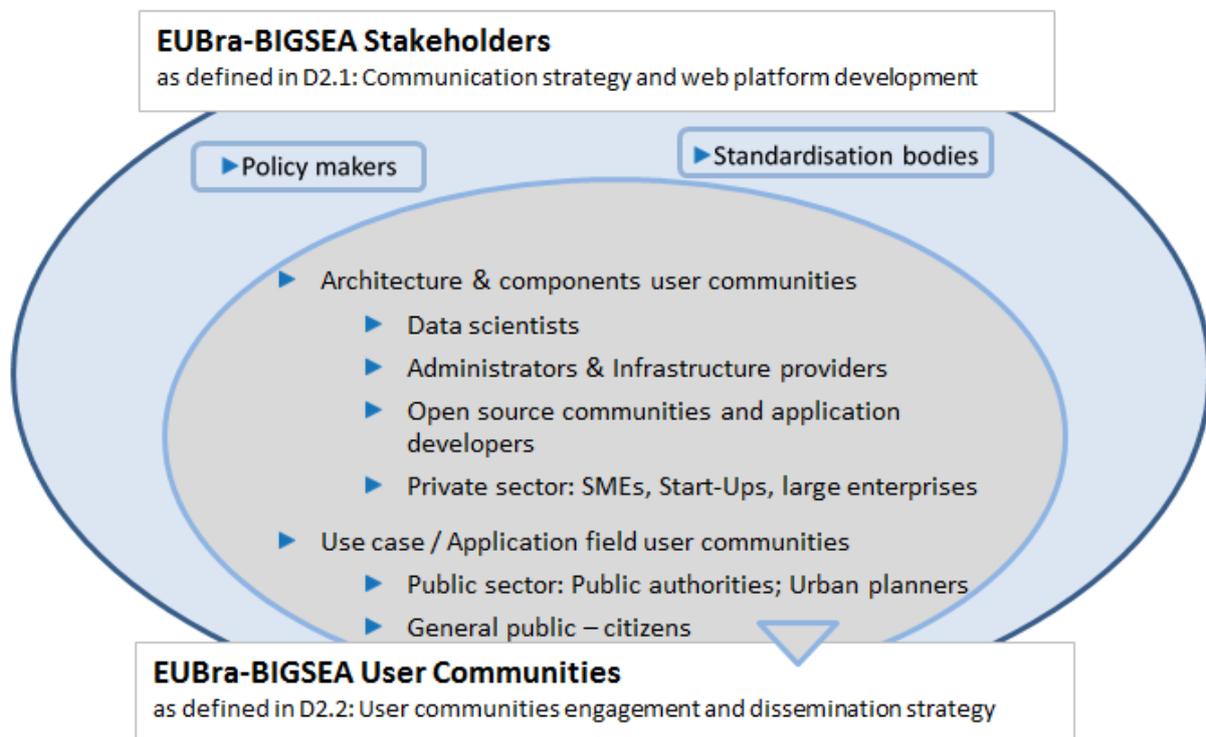


Figure 2 - EUBra-BIGSEA Stakeholders and User communities

The following sections describe the adopted engagement strategy, documents the tools and dissemination strategy towards the user communications. Further, the planned activities are discussed for each one of the identified user communities as well as the cross-communities activities and tools to address jointly multiple communities because they do not exist in isolation but mostly interact with each other.

3. USER COMMUNITIES: ENGAGEMENT AND EXPECTED IMPACT

3.1. EUBra-BIGSEA framework & components user communities

3.1.1. Data scientists & domain researchers

The domain researchers, together with their affiliated data scientists practitioners and the e-Infrastructures they are collaborating with, are the main producers and consumers of scientific data. Better data practices and improved data technologies in the research domain make a large difference for the scientific discovery and innovation.

This stakeholder group is a very important user community for EUBra-BIGSEA. It includes many "sub-communities" working on particular scientific fields, and within particular institutions, as such interdisciplinary and cross-institutional activities are also significant.

We define data scientists, and domain researchers in this context, as data managers and data providers belonging to different domains. To enable the full strength of adoption of the EUBra-BIGSEA outputs, and to take profit from latest technological insights, close collaboration with these stakeholders is crucial. In most cases, the domain specific and cross-domain data professionals are in close interaction with each other to tackle scientific challenges, EUBra-BIGSEA supports interaction and synergies and the multiplying effect they have.

Engagement motivation

EUBra-BIGSEA's focus on this target audience is twofold - both as contributors as well as end-users. Understanding and mapping the different community needs is crucial to engage researchers and specific research community specialists in the framework development process, as well as for the validation and uptake of the final project outcomes.

Expected Impact & tailored offer

EUBra-BIGSEA is an API-oriented project whose main aim is to develop open-source software leveraging active and reasonable mature components. It is committed to support data scientists and domain researchers pushing for the advancement of science, in particular within areas of massive and big data analysis and usage of computational resources with a specific budget.

EUBra-BIGSEA is looking to engage data scientists that are working to set-up an environment to run their applications in Spark, OPHIDIA or directly in high-level languages such as Python or Java on top of scalable systems. The project is also actively investigating the need to engage with research infrastructures (RIs) or initiatives such as the Future and Emerging Technologies (FET) Flagship Initiatives² that are exploring needs of their user communities. The latter are key instruments in bringing together a wide diversity of stakeholders to look for solutions to many of the problems science is facing today.

Within this community of users, EUBra-BIGSEA is looking to engage an international community of research collaborations usually represented by FP7 and Horizon2020 projects at the European scale, and by similar-size Brazilian national projects.

Dissemination activities, tools & KPIs

The engagement channels will leverage particularly events and associated engagement tools, such as conference papers, project flyers, and presentations as well as scientific posters.

² FET Flagship Initiatives: <http://cordis.europa.eu/fp7/ict/programme/fet/flagship/>

Tools	Description	Outputs ³
Project flyers	Flyers focus on the promotion of EUBra-BIGSEA activities and offers – to be distributed at specific events and meetings.	1 project flyer targeting data scientists
Posters	Posters – general or scientific – to be presented at events to showcase on-going activities and project outcomes.	1 project poster jointly targeting Data Scientists & Administrators & service providers
Project presentations	General and specific presentations of the project – readily available or produced upon request under a slide deck format to be showcase at specific events or meetings.	2 presentations targeting Data Scientists
Postcards & bookmarks	Simple and easy to read formats that support key messaging to be delivered at events and meetings for a quick introduction into the project goals and outputs.	1 postcard/bookmark targeting Data Scientists
Event participation	EUBra-BIGSEA actively participates in events targeting the Data Scientists.	Participation to at least 5 events targeting data scientists
Webinars/demos	The EUBra-BIGSEA technical developments, the QoS cloud services, Big Data Analytics, Security and Privacy Assurance and Programming Abstractions Layer, can be presented via demonstration prototypes.	1 webinar dedicated to data scientists
Scientific Papers & publications	Scientific papers and publications are key channels to validate and disseminate research activities, advances, and results.	15 scientific papers or publications
Dedicated “EUBra-BIGSEA for Data Scientists” web section	A web area focusing on the EUBra-BIGSEA offer for the Data Scientists.	1 Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities targeting data scientists
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media.	10 to 15 % of dedicated content creation targeting data scientists

³ Foreseen quantity over the project lifetime

Key achievements so far

- Participation to **ACM International Conference on Computing Frontiers 2016 - Big data analytics workshop (16 -18 May 2016, Como, Italy)** – EUBra-BIGSEA acknowledged in the **paper** authored by project partner CMCC
- **4th BDEC workshop-Big Data and Extreme-scale Computing (BDEC) (15-17 June 2016, Frankfurt, Germany)** - Contribution from project partner CMCC submitting a **position paper** on data analytics for climate
- **HPCC2016 - International Advanced Research Workshop on HPC - From Clouds and Big Data to Exascale and Beyond (27 June - 1 July 2016, Cetraro, Italy)** – Poster presentation and dissemination material
- Presentation on scientific data management and use cases based on Ophidia & EUBra-BIGSEA overview at **ISSAOS International Summer School on Atmospheric and Oceanic Sciences (29 August - 2 September 2016, L'Aquila, Italy)**
- Scheduled **dedicated session “EUBra-BIGSEA: cloud services with QoS guarantees for Big Data Analytics” & poster** during the **Digital Infrastructures for Research Conference (28-30 September 2016, Krakow, Poland)** <http://digitalinfrastructures.eu/content/eubra-bigsea-cloud-services-qos-guarantees-big-data-analytics>

3.1.2. Administrators & cloud service providers

The programming layer needed to enable the applications access to the Big Data analytics functionalities and the computational infrastructure represents a central part of the EUBra-BIGSEA framework. The EUBra-BIGSEA initiative addresses most of the challenges related to the composition of Big Data applications and their deployment on the cloud platform with a specific highlight on QoS. The adoption of standards and widely used interfaces ensures interoperability with existing data frameworks and alignment with the global activities on the development of Big Data architectures.

Engagement motivation

The advanced solutions developed by EUBra-BIGSEA consortium are aimed to enhance QoS in cloud services and are foreseen to lead to significant strategic advantages for European and Brazilian infrastructure and Cloud providers, especially considering the expected growth of Big Data and data intensive applications in general.

Expected Impact & tailored offer

EUBra-BIGSEA targets resource administrators, infrastructure and cloud providers, who would like to set up a framework that deals with multiple types of data analytic workloads and with the capability of automatically scaling-up and down, thus optimizing the usage of the resources, possibly terminating the computation within a budget.

EUBra-BIGSEA needs to establish partnerships with administrators and cloud service providers that can be engaged at different levels: integrate EUBra-BIGSEA QoS management algorithms or/and programming models. The Engagement plan needs to cover the specific characteristics of these levels in order to be able to choose suitable and effective engagement approaches and priorities.

Dissemination activities, tools & KPIs

The engagement channels will leverage in particular events and associated engagement tools, such as conference papers, project flyers, and presentations as well as scientific posters.

Tools	Description	Outputs ⁴
Posters	Posters – general or scientific – to be presented at events to showcase on-going activities and project outcomes.	1 project poster jointly targeting Data Scientists & Administrators & service providers
Project presentations	General and specific presentations of the project – readily available or produced upon request under a slide deck format to be showcase at specific events or meetings.	2 presentations targeting Administrators & service providers
Postcards & bookmarks	Simple and easy to read formats that support key messaging to be delivered at events and meetings for a quick intro into the project goals and outputs.	1 targeting Administrators & service providers
Event participation	EUBra-BIGSEA actively participates in events targeting the administrators & Infrastructure providers.	Participation to at least 5 events
Webinars	The EUBra-BIGSEA technical developments, the QoS cloud services, Big Data Analytics, Security and Privacy Assurance and Programming Abstractions Layer, can be presented via demonstration prototypes.	1 webinar/demo dedicated to Administrators & cloud service providers
Scientific Papers & publications	Scientific papers and publications are key channels to validate and disseminate research activities, advances, and results.	5 scientific papers or publications
Dedicated “EUBra-BIGSEA for Administrators & Infrastructure providers” web section	A web area focusing on the EUBra-BIGSEA offer for the administrators & Infrastructure providers.	Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities targeting Administrators & cloud service providers
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media.	10 to 15 % of dedicated content creation targeting Administrators & cloud service providers

⁴ Foreseen quantity over the project lifetime

Key achievements so far

- Contribution to the **EUBrasilCloudForum concertation meeting (18 March 2016, Rio de Janeiro)** – General project presentation & asset identification
- Overview of the **Free Flow of Data Workshop & Public consultation (18 May 2016, Brussels, Belgium)** <http://www.eubra-bigsea.eu/news/consultation-workshop-free-flow-data-18-may-2016-brussels>
- Participation to **WRNP Workshop of the National Network of Education and Research (30-31 May 2016 Salvador, Brazil)** project partners from UFMG promoted the EUBra-BIGSEA objectives and offer via **promotional material** and a **scientific poster**
- Workshop on **Cloud Networks & Cloudscape Brazil (co-located with CSBC 2016, 4-7 July 2016, Porto Alegre)** - Position Paper and) - Position paper EU & Brazilian Project coordinators participated as speakers & session moderators. A dedicated event summary covered the outcomes of the event.
- **Paper** by Giovanni Paolo Gibilisco, Min Li, Li Zhang, Danilo Ardagna. **Stage Aware Performance Modeling of DAG Based in Memory Analytic Platforms in Proceedings of the IEEE International Conference on Cloud Computing**

3.1.3. Open source communities and application developers

The EUBra-BIGSEA project will leverage existing open source software for the development of the platform and big data analytic services, including programming models. Furthermore, the resulting code developed in the framework of the project will be released under open source licence. The reason of building the EUBra-BIGSEA programming platform and services on open source software is twofold. On the one hand reusing existing open source software does not require a clean slate implementation and on the other hand it guarantees the presence of a developers community that could test and validate the code, thus providing an indication of the trustworthiness and quality of the code.

The project will specifically engage with these open source communities, including open source developers, to identify the drawback of existing technologies and enrich them with additional features based on the requirement analysis carried out in the technical work packages to facilitate the penetration to the market of the resulting software, in addition to the sustainability of the results after the end of the project.

Engagement motivation

More than simply publishing the code, open source is about engagement and building communities around shared challenges. Open source software is a vehicle for re-usability and results sharing, accelerating technology transfer and uptake. EUBra-BIGSEA widely supports openness and the OSS community, through the collaboration between projects and initiatives, and fostering interoperability between trending technologies.

Expected Impact & tailored offer

EUBra-BIGSEA aims to deliver software under open-source licenses, and will keep the pieces of software developed available and maintained at least for two years beyond the end of the project.

The project also implements open source strategies defined through on-going clustering activities and contribution with code to establish relevant synergies with the developers' community. The purpose is to provide general-purpose tools that can be leveraged and used in context wider than the ones addressed within EUBra-BIGSEA and the massively connected society.

Dissemination activities, tools& KPIs

Tools	Description	Outputs ⁵
Project flyers	Flyers focus on the promotion of EUBra-BIGSEA activities and offers – to be distributed at specific events and meetings.	1 project flyer jointly targeting Open source communities & application developers & private sector
Project presentations	General and specific presentations of the project – readily available or produced upon request under a slide deck format to be showcase at specific events or meetings.	2 presentations targeting Open source communities & application developers
Event participation	EUBra-BIGSEA actively participates in events targeting the open source communities and application developers, like plugfests.	Participation to at least 5 events targeting Open source communities & application developers
Webinars	The EUBra-BIGSEA technical developments, the QoS cloud services, Big Data Analytics, Security and Privacy Assurance and Programming Abstractions Layer, can be presented via demonstration prototypes.	1 webinar/demo dedicated to Open source communities & application developers
Dedicated “EUBra-BIGSEA for open source communities & application developers” web section	A web area focusing on the EUBra-BIGSEA offer for the open source communities and application developers. The technical assets of the project will be mapped to specific software packages and the link to the development sites will be provided as well.	Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities

⁵ Foreseen quantity over the project lifetime

		targeting Open source communities & application developers
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media.	10 to 15 % of dedicated content creation targeting Open source communities & application developers

Key achievements so far

- Participation to the **2nd International Workshop on Quality - Aware Devops (Qudos2016) (21 July 2016, Saarbrücken, Germany)** Project Partner POLIMI gave a **presentation** covering the project objectives and technology. **Promotional material** was also distributed at the event

3.1.4. Private sector: SMEs, Start-Ups, large enterprises

Engaging the private sector comes with a specific set of challenges and a well-defined approach focused on identifying the private organisations (SMEs, large enterprises, etc.) with interest to collaborate, defining clear value proposition for each category, possibly tailor made for each organisation, and creating a formal engagement relationship with an associated business model for the uptake and adoption. EUBra-BIGSEA is particularly focusing on the engagement of the private organisations from the ICT sector, transportation and mobility, as its use case focus, but also other ICT intensive industry sectors that can potentially benefit from the project outputs.

Engagement motivation

Beyond the valuable knowledge and technology transfer, the engagement of the private sector can open new collaboration perspective for the development of added-value services for reusing open data sets and bringing benefits to both sides in terms of increased visibility, reduction of learning curve and ensuring faster and trustable results. Furthermore initiatives such as EUBra-BIGSEA need to demonstrate that their outputs have a positive impact onto business and society and are sustainable.

Expected Impact & tailored offer

The EUBra-BIGSEA relevance for the private sector is demonstrated by the use case addressing massively connected societies and smart cities, but it is also extended to all components and assets that the project is developing. Fostering this critical dialogue with the private sector maximizes the industrial impact of EUBra-BIGSEA, by lowering the barriers for uptake and facilitating exchange and participation.

In private sector, the primary target audiences are the application and service developers, who can benefit from the versatile programming framework and data analytics tools to implement new services addressing new market trends, and to create new business values for their organisations.

The private sector engagement is particularly important for the project outcomes validation and technology transfer. The knowledge sharing between the two is crucial for the project sustainability. It also brings some important benefits to the private sector by providing the access to innovation and leading research.

Dissemination activities, tools& KPIs

Tools	Description	Outputs ⁶
Project flyers	Flyers focus on the promotion of EUBra-BIGSEA activities and offers – to be distributed at specific events and meetings.	1 project flyer for the Private sector: SMEs, Start-Ups, large enterprises
Project presentations	General and specific presentations of the project – readily available or produced upon request under a slide deck format to be showcase at specific events or meetings.	2 presentation targeting the Private sector: SMEs, Start-Ups, large enterprises
Event participation	EUBra-BIGSEA actively participates in events targeting the developers and private organisations interested in open source technology.	Participation to at least 5 events targeting the Private sector
Webinars	The EUBra-BIGSEA technical developments, the QoS cloud services, Big Data Analytics, Security and Privacy Assurance and Programming Abstractions Layer, can be presented via demonstration prototypes.	1 webinar/demo dedicated to the private sector
Dedicated “EUBra-BIGSEA for SMEs” web section	A web area focusing on the EUBra-BIGSEA offer for the SMEs and private organisations, including large companies and start-ups.	Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities targeting the private sector
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media.	10 to 15 % of dedicated content creation targeting the private sector

⁶ Foreseen quantity over the project lifetime

Key achievements so far

- Participation to **Net Futures (20-21 April 2016, Brussels, Belgium)** - Dissemination material & contribution to the **EU-Brazil joint exhibition booth**
- Participation to **Cloudscape 2016 (8-9 March 2016, Brussels, Belgium)** - Dissemination material

3.2. Use case / Application field user communities

A socially-relevant use case scenario on Massively Connected Society has been defined in order to inject requirements and validate the EUBra-BIGSEA results and outputs. As mentioned already, the focus of this application use case is on traffic management and mobility systems improvement. The ultimate objective is to develop an application that will help public authorities, urban planners, and citizens to improve the mobility system of the city, providing users information about location, traffic, and spaces.

The principal user communities of the use case are the Public sector & Urban planners and citizens (or general public), acting both as providers for data inputs and as final target users of the application.

3.2.1. Public sector: Public authorities; Urban planners

Public sector representatives are encouraged to benefit from the EUBra-BIGSEA innovative technologies, which help to tackle some city management challenges in the quest for smarter services and to significantly improve urban environments for citizens, businesses, and visitors. The public sector will be also motivated by considerable socio-economic drivers for change including higher efficiency and better services to improve the citizens' daily life.

The public sector, especially the public administration, is envisioned as end-users of the project final outputs under the form of the applications supporting them in providing better and smarter services for the citizens while saving on the costs.

Expected Impact & tailored offer

As detailed in Deliverable D7.1 "End-User Requirements Elicitation", the goal of EUBra-BIGSEA is to provide a descriptive view on the state of the mobility in the city as a whole, identifying its status, trends and the impacts of relevant events. The use case application in this perspective is to use data mining descriptive models and to allow urban planners to interactively explore it, as well as, to provide notifications and alarms for these stakeholders. The application provides valuable information for public authorities and urban planners in both operating and planning transportation systems in a more effective way.

Reaching the attention of the public sector also fosters the adoption and innovation of cloud services in the region. Companies providing cloud services and research initiatives in the domain can access a new potential market driven by relevant socio-economic incentives provided by the public sector looking to promote social innovation and improve urban environments.

With the support of the public sector the capturing, federating, and annotating activities for large volumes of data can expand their impact (also gathering a larger quantitative of data) if supported by incentive and promotion of public authorities.

Moreover the Brazilian and European public authorities can foster the adoption of the EUBra-BIGSEA technology delivered through the project to a real user scenario, involving the local environment and local open data collected.

Dissemination activities & tools

Tools	Description	Outputs ⁷
Project flyers	Flyers focus on the promotion of EUBra-BIGSEA activities and offers – to be distributed at specific events and meetings.	1 project flyer jointly targeting the 2 application user communities
Posters	Posters – general or scientific – to be presented at events to showcase on-going activities and project outcomes.	1 project poster jointly targeting the 2 application user communities
Project presentations	General and specific presentations of the project – readily available or produced upon request under a slide deck format to be showcase at specific events or meetings.	2 project presentation dedicated to Public sector
Event participation	EUBra-BIGSEA actively participates in events targeting public authorities and urban planners	Participation to at least 5 dedicated events
Webinars	Prototypes and a comprehensive and complete demonstrator addressing the Massively Connected Societies Use Case, oriented to Smart Traffic will be envisioned to illustrate the User scenario outputs and benefits for the public authorities & urban planners.	1 webinar/demo dedicated to the public sector
Dedicated “EUBra-BIGSEA for Public authorities & Urban planners” web section	A web area focusing on the EUBra-BIGSEA offer for the public authorities and urban planners.	Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities targeting the public sector
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media.	10 to 15 % of dedicated content creation targeting the public sector

⁷ Foreseen quantity over the project lifetime

Key achievements so far

- **Participation to SMARTGREENS2016 (23-25 April 2016 Rome, Italy)** – project partner UTFPR showcased the EUBra-BIGSEA project offer via **promotional material** and **2 papers** published in the Conference proceedings
- **Participation to the Beyond2020 - Towards Open Data Open data, Smart cities, Social Innovation (27-29 July 2016, Olinda - Pernambuco, Brazil)** – EUBra-BIGSEA partner UFCG gave a **presentation** during the session on “The Importance of Open Sources to the Cities”.

3.2.2. General public – citizens

Citizens are the ultimate users of the application that will be developed in the massively connected scenario. They will directly benefit from the innovation driving the use case, as such they will be the primary validator of the usage of the technology in a real context.

Engagement motivation

The use case developed during EUBra-BIGSEA project lifespan will implement an application to provide the interested stakeholders, in particular citizens, information about location, traffic and spaces in the city.

EUBra-BIGSEA will actively put in action specific dissemination and communication activities targeting the general public, considering the crucial importance that these stakeholders have in particular for the collection of data and metadata. Georeferenced data from multiple sources are at the basis of the use case.

Objectives & tailored offer

From a citizen perspective, the EUBra-BIGSEA application provides mobile and web interfaces allowing the citizen to query for the state of the route options available for a given trip. Once the citizen manifests a travel need, the system will provide multiple route options that maximize different criteria in addition to travel time, such as likely stress, pleasantness, interestingness and liveliness of the routes (according to parameters such as day of the week, hour and location). Such route recommendations are determined by processing both long-term historical data, to identify trends, and short-term data focusing on recent and relevant events. Furthermore, recommendations will be provided through state-of-the-art and novel predictive models from Data Science.

The general public can have an active role in the assessment of EUBra-BIGSEA technology outcomes, particularly evident in the use case application processes and end-user testing, where citizens can also act as relevant validators.

Dissemination activities, tools & KPIs

Tools	Description	Outputs ⁸
Project flyers	Flyers focus on the promotion of EUBra-BIGSEA activities and offers – to be distributed at specific events and meetings.	1 project flyer jointly targeting the 2 application user communities

⁸ Foreseen quantity over the project lifetime

Posters	Posters – general or scientific – to be presented at events to showcase on-going activities and project outcomes.	1 project poster jointly targeting the 2 application user communities
Postcards & bookmarks	Simple and easy to read formats that support key messaging to be delivered at events and meetings for a quick intro into the project goals and outputs.	1 postcard/ bookmark dedicated to the general public
Webinars	Prototypes and a comprehensive and complete demonstrator addressing the Massively Connected Societies Use Case, oriented to Smart Traffic will be envisioned to illustrate the User scenario outputs and benefits for the general public.	1 webinar dedicated to the general public on the final app
Dedicated “EUBra-BIGSEA for Citizens” web section	A web area focusing on the EUBra-BIGSEA offer for the general public.	Web section
Social Media	Engagement via social media – dedicated posts and direct interaction.	10 to 15 % of Social media activities targeting the general public
Dedicated content generation	Focus content including news pieces, articles and event promotion – published online and via press and media	10 to 15 % of dedicated content creation targeting the general public

Key achievements so far

- **Participation to the Beyond2020 - Towards Open Data Open data, Smart cities, Social Innovation (27-29 July 2016, Olinda - Pernambuco, Brazil) – EUBra-BIGSEA partner UFCG gave a presentation during the session on “The Importance of Open Sources to the Cities”.**

3.3. Cross – communities engagement activities & tools

EUBra-BIGSEA looks into defining and implementing the best mix of dissemination and engagement activities and tools tailored for each of its user communities, as presented in the previous sections.

The activities and tools detailed below are being used across diverse strategies targeting different communities, and are thus addressed distinctively with references to achievements so far and relevant KPIs.

Virtual catalogue of services

A virtual catalogue of services will be prepared to include the detailed descriptions of the available services and/or components, specifying the standards used, and in which context the service can be used. The goal objective is to define an EUBra-BIGSEA service portfolio to be improved and adapted to specific user groups according to new requirements. The catalogue allows updates based on progress, and sustainability plans and adoption.

The virtual catalog will be hosted by the eubra-bigsea.eu website and its effectiveness tracked using the number of accesses and downloads as the main KPI.

eubra-bigsea.eu website

The website through the sections dedicated the EUBra-BIGSEA technology is a key engagement and dissemination tool, regularly updated to target audiences more efficiently.

The website is envisioned as a repository of information with sections dedicated to user communities and stakeholders, messaging and focus placed on the benefits of the services and how they meet the needs of end users.

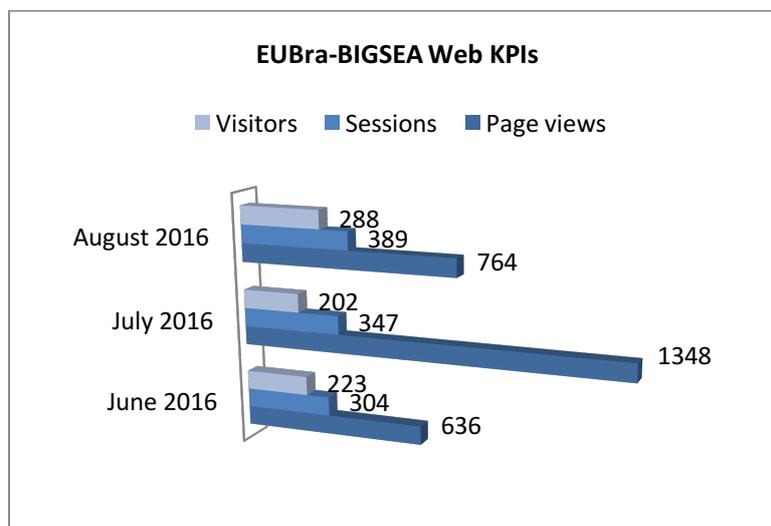
As such the website hosts:

- Informative materials & resources
- Event registry – showcasing relevant conferences & workshop for the communities to join and highlight the EUBra-BIGSEA offer
- Publications repository
- News & Updates section
- Virtual catalogues of services and components⁹

Key achievements so far

The website is regularly updated to highlight the project activities as well as relevant developments for in the areas addressed by the project.

As detailed in D2.1, a Google Analytics account has been associated to the website in order to monitor web traffic and activity. The main KPIs monitored regard the number of sessions, unique visitors, page views, and the actual time spend by the users on the web platform, translated in the duration of the session. The figure 3, below, illustrates the growth in the number of monthly sessions and visitors over the latest quarter, June –August 2016.



⁹ Under definition at the time of writing this deliverable.

Figure 3 - eubra-bigsea.eu web KPIs

Event participation

External events, not organised by EUBra-BIGSEA, represent excellent opportunities for dissemination and engagement. Considering their audiences the following events have been prioritized for the upcoming period:

Event	Audience	Dates	Location
ISSAOS	Scientists, researchers, post-doc	29 August, 2 September	L'Aquila, Italy
IEEE Smart Cities	Citizens, policy makers, administrators, infrastructures, industry, economists & researchers	12-15 September	Trento, Italy
International Data Week - RDA 8th Plenary	Data practitioners, researchers, policy makers, Infrastructures & industry	14-17 September	Denver (CO), USA
ICT Proposers' Day 2016	European ICT Research & Innovation stakeholders, focus on the Horizon 2020 Work Programme for 2016-17	26-27 September	Bratislava, Slovakia
Digital Infrastructures for Research	researchers, infrastructures, developers and service providers	28-30 September	Krakow, Poland
CloudForward	Cloud computing experts, developers, policy makers, SMEs	18-20 October	Madrid, Spain
EuroCloud forum 2016	Cloud Service Providers	5-6 October	Bucharest, Romania
Super Computing	HPC professionals	13-18 November	Salt Lake, USA
EuroCities	IT professionals & policy makers: smart cities	16-18 November	Milan, Italy
ESGF 2016 Conference	Researchers and climate scientists	5-9 December	Washington DC, USA
AGU2016 Conference	Geophysical community at large (including computational scientists/experts)	12-16 December	San Francisco, USA

Key achievements so far

During the first 8 months of the project EUBra-BIGSEA has made an active participation to close to 15 events, listed above as key achievements so far. The contributions made include project presentations, participation to panel discussions or poster sessions, networking activities and participation to promotional stands, communication and dissemination material distribution.

Content generation & Press & Media Coverage

In support of EUBra-BIGSEA awareness raising and visibility a selection communication content has been generated and promoted via media collaborations and results monitored.

Achievements so far

A sample of the press releases and articles produced so far and related press clippings is illustrated below:

Press releases/ Articles/ News

- EUBra-BIGSEA Responds To The Europe-Brazil Information Society Dialogue <http://www.eubra-bigsea.eu/eubra-bigsea-responds-europe-brazil-information-society-dialogue> (April 2016)
- Consultation Workshop On The Free Flow Of Data, 18 May 2016, Brussels - <http://www.eubra-bigsea.eu/news/consultation-workshop-free-flow-data-18-may-2016-brussels> (June 2016)
- EUBra-BIGSEA contributes towards EU-Brazil Research & Business Innovation – Cloudscape Brazil 2016, Porto Alegre, Brazil - <http://www.eubra-bigsea.eu/news/eubra-bigsea-contributes-towards-eu-brazil-research-business-innovation-%E2%80%93-cloudscape-brazil> (July 2016)
- EUBra-BIGSEA presented at QUDOS 2016, 21 July 2016, Saarbrücken, Germany - <http://www.eubra-bigsea.eu/news/eubra-bigsea-presented-qudos-2016-21-july-2016-saarbr%C3%BCcken-germany> (July 2016)
- Showcasing EUBra-BIGSEA “Cloud services with QoS guarantees for Big Data Analytics” @Digital Infrastructures for Research Conference in Krakow, 28-30 September 2016 <http://www.eubra-bigsea.eu/news/showcasing-eubra-bigsea-%E2%80%9Ccloud-services-qos-guarantees-big-data-analytics%E2%80%9D-digital> (July 2016)

Partner press & media activities have generated multiple press clippings monitored as part of the communication and dissemination efforts:

Title	Link	Media	Reference date
Proyecto liderado por UPV permite usar la ruta más eficiente para desplazarse	http://www.lavanguardia.com/ocio/viajes/20160221/302325025616/proyecto-liderado-por-upv-permite-usar-la-ruta-mas-eficiente-para-desplazarse.html	La Vanguardia	21/02/2016
Quase no Infinito - UFMG participa de projeto internacional que investiga p uso de plataformas em nuvem para armazenamento de dados	https://www.ufmg.br/boletim/bol1929/4.shtml	UFMG	22/02/2016
EUBra-BIGSEA - La UPV lidera un proyecto intercontinental de recomendación de itinerarios aprovechando el potencial de big data	http://www.upv.es/noticias-upv/noticia-8028-eubra-bigsea-es.html	UPV Noticias	23/02/2016
Using big data to plan routes according to multiple criteria	http://ruvid.org/ri-world/using-big-data-to-plan-routes/	R&I World.	08/03/2016
European-Brazilian collaborative projects together to innovate the Cloud Computing sector	https://sciencenode.org/announcement/european-brazilian-collaborative-projects-together-to-innovate-the-cloud-computing-sector.php	Science Node	10/04/2016

Contact database

The EUBra-BIGSEA Communication and dissemination database is a key instrument for community engagement and growth. A target of 1000 contacts has been set for the end of the project.

Achievements so far

The current community database counts 525 contacts, contacts are incremented by the project partners, through social networks, participation to events, synergies and other related activities. Particular effort is dedicated to categorizing the contacts for the target messaging and mapping them to the different user and stakeholder communities identified. The figure 4, below, highlights the breakdown on a sample of 100 contacts:

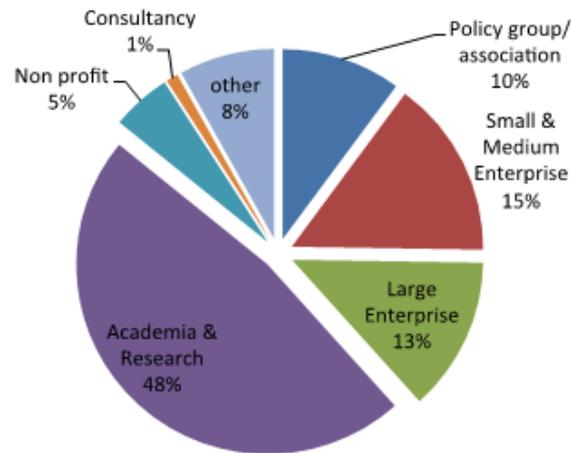


Figure 4 - Sample contact database breakdown by type of organisation

Activities timeline

Clustered around the key user communities, the activities will follow the timeline defined in deliverable D2.1: Communication Strategy and Web Platform Development reported in Figure 5.

		2016												2017											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Communications & Outreach																									
Project Fliers	4																								
Banner	2																								
Poster (generic & scientific)	4																								
Give-aways	2																								
Infographics	1																								
Postcards & bookmarks	3																								
Webinars / Demos	6																								
Scientific papers in journals and conferences/workshops	20																								
Joint EU-Bra publications	5																								
Project presentations	10																								
Newsletters	12																								
Press Releases / Articles	10																								
Testimonials	10																								
Events																									
Participation to industry/research/ SDO events	30																								
Participation to policy/ joint dialogue events	2																								
Community																									
Community Database	1000																								
Tweets	500																								
Twitter followers	200																								
LinkedIn posts	30																								
LinkedIn connections	300																								
Slideshare uploads	10																								
Slideshare views	1500																								
Web KPIS																									
Sessions (250x24)	6000																								
Unique visitors	3000																								
Session duration	02:00																								
Page views	18000																								

Figure 5 - KPIS & related activities timeline

4. CONCLUSIONS

The present deliverable details the engagement activities targeting each of the six identified user communities. Tailoring the outreach and engagements plans while considering the particularities of each community offers a clear summary facilitating the implementation as well as tracking and assessing of the impact of the engagement activity. The individual plans also provide enhanced operational flexibility as components, messaging and tools, can be adapted based on progress.

The approach detailed in the deliverable highlights how the engagement, dissemination and communication are interlinked activities, sharing goals that are streamlined with the other WPs objectives and the overall project vision. The optimal mix of tools is used to publicly disclose the results of the project to ensure the highest impact and make sure all communities make the most of the project outputs. The activities target each one of the individual communities and span across them by leveraging the common interest in the technology. For instance, cross-engagement activities address the researchers who will have better services for the advancement of scientific discovery, the service providers that can take advantage of the EUBra-BIGSEA programming framework and data analytics tools to create new services and new business values for their organisations.