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## SeaClouds Project

### D1.4 Detailed Dissemination Strategy & Plan

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## Summary

This document aims at planning the set of actions that will be carried out to raise awareness of the objectives, of the activities and especially of the results achieved during the project lifetime.

This document discusses the objectives of SeaClouds project to express the overall message that the SeaClouds consortium must spread as a result of project development. Then, the targeted audiences are identified (in terms of categories and peculiarities) in order to maximize the effective transmission of the results achieved for each of them.

The report also presents the guidelines that drive the dissemination strategy by focusing on:

- the industrial and research papers to be generated,
- the publicity of SeaClouds source code,
- the scientific and industrial events to be attended and/or organized, and
- the KPIs which will be employed to evaluate the dissemination process.

Finally, the dissemination strategy is summarized in a *Dissemination Roadmap* by chronologically ordering the material to be produced and the events to be attended and/or organized.

## 1. Introduction

This report describes the dissemination strategy for the European project SeaClouds. SeaClouds (Seamless adaptive multi-cloud management of service-based applications) focuses on the development of a novel platform which adaptively manages applications distributed over multiple clouds. In such context, the dissemination activities refer to the spread and circulation of scientific knowledge obtained during the project for the intended audiences. The dissemination strategy will focus on four activities:

1. What type of knowledge will be made public? More precisely, which project assets will be made public?
2. Who will be intended stakeholders (e.g., cloud communities, standard organizations, cloud providers, developers, etc.)?
3. Which means will be used to spread the knowledge? Please note that with means we can refer to electronic and/or print documents as well as to industrial and academic events.
4. Who will actually conduct each dissemination task? More precisely, the dissemination strategy should provide the breakdown of the planned dissemination activities (viz., association of each activity with a schedule, the expected outcomes and the project partner responsible for its execution).

The dissemination activities will guarantee the general visibility of the project and of its results. Such visibility will be achieved by means of a project website, some printed material (e.g., flyers and posters), online presentation videos (hosted on YouTube, Vimeo), social network channels (e.g., Twitter, Google+, Facebook, SlideShare, LinkedIn), Wikipedia, press releases, hosted workshops and webinars.

The dissemination of the project's research results within the (Service-Oriented and Cloud Computing) scientific community will be achieved by promptly publishing innovative results in the major events (e.g., conferences and workshops) and journals. White papers about SeaClouds products will be also useful. The dissemination of the project's result for the industrial stakeholders will be achieved by participating in the major industrial events and fairs related to Cloud Computing with presentations, demos, flyers, posters and event booths.

The strategy will also focus on Key Performance Indicator (KPI). KPI's are generally used to evaluate either the success of a particular activity or progress towards the project's goals. Choosing the right KPIs is important for the project. Although both qualitative and quantitative indicators can be used, quantitative indicators are generally preferred since they can give better insights into the project. Success indicator with each KPI will help to evaluate the success criteria for that particular KPI. Nevertheless, the KPI's proposed by this report will be highly oriented towards the nature of the dissemination activities.

## 2. Dissemination Strategy Overview and Objectives

SeaClouds will be conducting a focused outreach towards market stakeholders to fulfill key objectives in its dissemination plan (Table 1).

Summary of Dissemination Objectives
<b>1. Raise awareness of the project objectives and facilitate a community discussion on common goals and different approaches.</b>
<b>2. Gain interest and participation towards the project's open source development.</b>
<b>3. Leverage prototype for hands-on use and feedback towards project validation, refined development priorities and exploitation plans.</b>
<b>4. Collaborate with standards development organizations (SDO) by participating in both the development and the dissemination of standards.</b>
<b>5. Catalyze early adoption potential in line with SeaClouds' development sustainability plan.</b>
<b>6. Disseminate project results via scientific channels in order to share and motivate the research in the field of cloud computing.</b>

Table 1 Summary of Dissemination Objectives

The strategy presented in this report identifies the target audiences and the stakeholders, the relevant project results that apply to them, and the ideal messaging and activities to facilitate their dissemination.

The main aim of this strategy is to focus on a practical, market-oriented dissemination plan that interacts directly with those who can widely benefit from the SeaClouds' results (and reach a critical mass of interest for eventual uptake). To achieve this, each objective is described below and further referred to in the next sections.

### **Objective #1: Raise awareness of the project objectives and facilitate a community discussion on common goals and different approaches.**

The SeaClouds' objectives are clear:

- Orchestration and adaptation applications and services distributed across multiple clouds,
- Management and monitoring of applications and services distributed across multiple clouds,
- Support of (the development of) cloud interoperability standards such as CAMP and TOSCA.

These objectives are hot research topics in the evolving cloud computing market. A crucial part of the initial phase of the dissemination plan will be to start discussing of these topics with industries and research communities.

**Objective #2: Gain interest and participation towards the project's open source development.**

Open source, transparent development are well known can result in a lot of benefits (e.g., the insurance of stakeholders' awareness, feedback and eventual uptake). Since SeaClouds consortium is aware of such benefits, instead of employing an internal repository and releasing open source prototypes as they become available, the evolution of the project's source code will be made transparent by using the public GitHub repository. This will let the consortium achieve two main goals:

- During development: transparency of code adds another layer of transparency for feedback from both the supply (infrastructure/platform) and demand (application/services) of SeaClouds stakeholders.
- After release: since both the development and the versioning have been done transparently, product releases will be perceived as more reliable by customers. Such a reliability will help the (early) adoption of the project's releases.

**Objective #3: Leverage prototype for hands-on use and feedback towards project validation, refined development priorities and exploitation plans.**

Due to the iterative development plan of SeaClouds (Figure 1 Iterative development plan of SeaClouds) and to the usage of open, public repositories, the project is in such a good position that it will get a lot of external feedback. This feedback will continuously drive the project development priorities (after the initial requirements gathering of WP2). The feedback will be also useful during the project validation phase. For instance, the second task of WP6 will be focused both on the (internal) validation methodology and on the analysis of the (external) stakeholder's feedbacks.

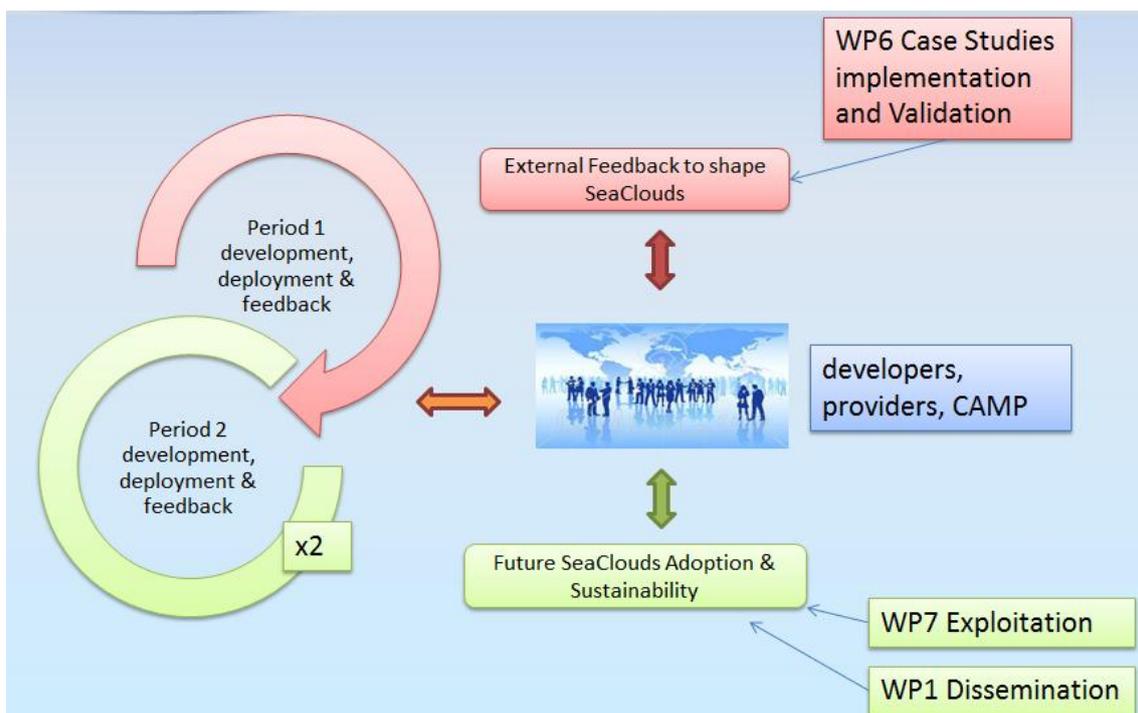


Figure 1 Iterative development plan of SeaClouds

**Objective #4: Collaborate with Standards Development Organizations (SDO) by participating in both the development and the dissemination of standards.**

SeaClouds intends to cooperate directly with two already existing OASIS standard technical committees. A membership will be formalized within such working groups, and effort will be performed in order to synchronize dissemination plans and (subsequently) leverage the adoption of these standards. Please note that, since the specifications are vehicles for SeaClouds sustainability, their wider adoption means larger impact of SeaClouds results.

**Objective #5: Catalyze early adoption potential in line with SeaClouds' development sustainability plan.**

While a more refined exploitation plan will be developed in WP7, the adopters have been identified (i.e., application developers and cloud vendors) and additional vehicles for project impact have been added (i.e., CAMP and TOSCA). By beginning dissemination efforts around the initial prototype, the project can begin stimulating this potential adoption pool from M13 through M30, and will become a primary objective of the campaign, crossing input (evaluation, feedback) with output (adoption, uptake).

**Objective #6: Disseminate project results via scientific channels in order to share and motivate the research in the field of cloud computing.**

Service-oriented computing and cloud computing are two hot research areas. So, a fruitful dissemination of project results will be achieved by promptly publishing them in the major scientific meetings, workshop, conferences, and journals in the aforementioned areas. Furthermore, publications co-authored by different consortium members will be stimulated and encouraged.

Scientific dissemination will be enriched by organizing two scientific workshops on technical topics of WP3 and WP4 (viz., planning and management of multi-cloud applications). The first workshop will be around M14 (with the two-fold objective of disseminating first scientific project results, and to get feedback from the relevant scientific community), while the second one will be held around M24 (with the main objective of spreading the scientific results achieved by the project).

### 3. Target Audiences

The heterogeneity of IaaS and PaaS offerings adds a set of challenges (such as bursting, hybrid (private/public), brokerage and federation) which slows the rise of multi-cloud models. Nevertheless, a lot of people are interested in the high potential of future multi-cloud scenarios. These people will leverage of SeaClouds' results and can be (subsequently) indicated as audiences to be targeted.

From the vendor perspective, interoperability is being addressed to some extent with the push of industry-backed standard. Nevertheless, such a quickly moving landscape often falls back to "de-facto" standards recognized by large first-mover providers. From the application developer viewpoint, the interoperability issue is not addressed. Since multi-cloud scenarios are not yet widely available (apart from some emerging hybrid private/public solutions), wait and see which solutions will become standard. However, these up and coming scenarios will create a demand for more complex applications that can indeed leverage this diversity for better business SaaS-oriented value (i.e., exploiting the strengths and weaknesses of different offerings for particular components of the application).

#### ***How can we face the interoperability issue?***

SeaClouds will support the development and the deployment of complex applications across several, heterogeneous clouds by providing a framework which will manage cloud applications in a standardized way (so to avoid vendor lock-in). Among its main features, we can emphasize:

- support for application deployment and migration to different providers,
- management, monitoring and verification of underlying providers,
- increased availability and higher security,
- better performance and cost optimization,
- low impact on the code, and
- user-friendly interface.

#### **3.1. Cloud Demand: Application Developers and Service Providers**

With current cloud technologies, if a developer needs to migrate a service from one platform to another, she has to do it manually. Since current cloud technologies suffer from a lack of standardization, such process is costly, cumbersome and requires a certain quantity of down-time. This implies that when no down-time is allowed the migration is in turn not feasible. As a result, cloud based applications or services are often tied to a specific cloud offering. Thus, the possibility of designing and delivering new services becomes severely restricted, affecting not only business growth but also innovation capabilities.

The above mentioned issue makes the application developers and the (emerging) cloud providers the main customers of the offer of SeaClouds.

SeaClouds tackles the problem of deploying and managing, in an efficient and adaptive way, complex multi-services applications over technologically heterogeneous clouds. From the developer's standpoint, SeaClouds will offer the possibility to access to computing resources in a dynamic, flexible and scalable manner, regardless of the underlying cloud provider(s).

SeaClouds provides more benefits than only reducing the vendor lock-in. It will accelerate the development and deployment of new services, by giving developers and/or service providers the capability of offering a richer and more reliable portfolio. Thanks to its seamless distribution over several PaaS, developers will be able to design and deliver innovative services taking advantage of:

- higher availability
- higher security
- higher throughput
- higher scalability

At the same time, SeaClouds will help to reduce the cloud computing's adoption barrier, easing the entry the new providers. This will multiply the range of offerings in the market, and therefore, their quality.

### **3.2. Cloud Supply: IaaS and PaaS Providers**

In the last years, numerous and heterogeneous providers have come into the cloud scene by offering a truly diverse range of SaaS, IaaS and PaaS solutions.

However, the main Cloud market is controlled by giant IT vendors, who monopolize it and impede smaller players to join the game. Thus, the restrictions imposed by these vendors, force customers to adapt to the dominant provider and, therefore, reduce their options.

For instance, if a given developer wants to access the cloud but there are no providers fulfilling all the requirements, she would need to distribute its content (data, applications, services, etc.) among different offerings. The existing lack of interoperability between providers makes it unachievable and keeps these potential customers off the cloud. It also punishes those smaller providers that rely on differentiation instead of everything-covered offerings that are beyond their resources.

Thanks to the SeaClouds' orchestrator, providers will be able to leverage interoperability as a competitive advantage in a new demand for multi-cloud scenarios. It will also facilitate more efficient PaaS offerings. Furthermore, SeaClouds added-value capabilities (e.g., SLA monitoring, auditing options) will make customer benefit of better performance-cost ratios.

SeaClouds potential impact is unforeseeable. From the technical viewpoint, all developers, providers, and individuals will have a level of cloud control which was unimaginable a few years ago. From the business standpoint, SeaClouds will impact by enabling new business models.

### 3.3. Standard Development Organizations (SDOs)

SeaClouds will establish a mutually beneficial relationship with the standard bodies. Since it will be developed according to emerging standards, SeaClouds will get constant feedback from their users and, at the same time, will contribute to their dissemination and evolution. The main standards on which SeaClouds will rely are reported in the following paragraphs.

**Cloud Application Management for Platforms:** CAMP aims at defining a harmonized API, models, mechanisms and protocols for the self-service management (provisioning, monitoring and control) of applications in a PaaS, independently of the cloud provider. SeaClouds intends to actively contribute to the standardization effort of CAMP both by implementing a CAMP-compliant interface towards PaaS providers for management, and by contributing review proposals that will possibly emerge while specifying properties of SeaClouds orchestrations, adaptation and monitoring.

**Topology and Orchestration Specification for Cloud Applications:** TOSCA aims at enhancing the portability of cloud applications and services. The main aim of TOSCA is to enable the interoperable description of application and infrastructure cloud services, the relationships between parts of the service, and the operational behavior of these services, independently from the cloud provider. By increasing service and application portability in a vendor-neutral ecosystem, TOSCA aims at enabling portable deployment to any compliant cloud, smoother migration of existing applications to the cloud, as well as dynamic, multi-cloud provider applications. SeaClouds will exploit the TOSCA specification to drive the design of the model for specifying cloud service orchestrations in SeaClouds. In doing so, SeaClouds might actively contribute to the standardization effort of TOSCA, by contributing review proposals that will emerge while trying to devise TOSCA-compliant instances of the SeaClouds service orchestration model. On the other hand, SeaClouds will also focus on developing functionalities that are deliberately out of scope of TOSCA to solve the issues about policies for the dynamic management of service orchestrations.

### 3.4 Research Communities

SeaClouds will mainly target the following research communities.

**Cloud application developers:** SeaClouds will let developers deploy their application over multiple, heterogeneous cloud platforms. In order to make developers aware of such a possibility, the corresponding research community must (and will) be targeted.

**Cloud providers:** Since SeaClouds will allow the deployment of complex application over multiple clouds (and contributes to reduce the vendor lock-in problem), it will deeply influence the Cloud market (making small European cloud provider emerging and leveraging concurrence). So, the cloud provider research community will be targeted so as to make them concentrating (part of) their research on how to benefit from multi-cloud.

**Standardization groups:** Since SeaClouds architecture will be aligned with major standards for cloud interoperability (e.g., Cloud Application Management for Platform, Topology and Orchestration Specification for Cloud Applications), it will aim at influencing these standards. So, the corresponding standardization groups (e.g., OASIS TOSCA TC, OASIS CAMP TC) will be targeted by the scientific dissemination. Furthermore, service orchestration standards (e.g., OASIS WS-BPEL, BPMN) will be also used to describe the specification of the planned orchestration. Thus, SeaClouds will promote all the aforementioned standards in research and industrial communities.

#### 4. SeaClouds' Assets to Disseminate

With the target audiences (stakeholders) of the project identified, the dissemination plan has matched priorities of the larger assets to those that would have greater interest (Table 2). This is to not limit the dissemination to each interested party, but simply to focus future messaging, material and collaboration.

	Cloud Providers	Service Providers	Application Developers	Standards Bodies	Research communities
SeaClouds Architecture	<input checked="" type="checkbox"/>				
SeaClouds IDE		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Standardized Metrics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Automated Auditing & Execution Engine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Unified Management API	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cloud App Dashboard		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

Table 2 SeaClouds' assets to disseminate.

## 5. Dissemination Activities

The SeaClouds consortium will perform various activities in order to properly disseminate the project's results to the target audiences identified above. The plan includes ambitious web strategies, hosted workshops, (scientific/industrial) event participations, and various supporting material.

### 5.1 Web Strategy

SeaClouds will focus its web strategy on the following pillars:

- project website (<http://www.seaclouds-project.eu/>),
- GitHub account,
- social media, and
- online media channels.

#### 5.1.1. Project Website

The project website acts as its primary online footprint, going through various iterations itself to match the evolution of the project:

- **Phase 1 Design and Architecture:** Before the tangible assets become available, the project website acts as a high-level overview of the project itself, mostly oriented towards fellow researchers.
- **Phase 2 Initial Release:** As the project moves into a transition with its initial releases, the website will become crucial to disseminate the produced assets (e.g., by highlighting GitHub access and prototype availability). Content will also be significantly updated to make it focus on the values and benefits proposed by the SeaClouds assets (in addition the project's objectives themselves).
- **Phase 3 Uptake:** Once the initial release will become available, in order to leverage its uptake and adoption, there will be a split of the website: a dedicated "Product" site will accompany the original project's site (which in turn will become more research-oriented). In this way the website will provide a more detailed overview of the achievements and will serve as an easy landing page to jump to the product site (which highlights the open source releases for developers, vendors and SDO's).

#### 5.1.2. GitHub

As already mentioned in the report, the project will use transparent, open source development since the start of the development. More precisely, the GitHub account (<https://github.com/SeaCloudsEU>) will be crucial for the SeaCloud's online strategy. Furthermore, the GitHub account will also feature a SeaClouds' wiki which consolidates the software and content that the developer needs to get the SeaClouds components up and running.

### 5.1.3 Social Media

To accompany a traditional web strategy, SeaClouds will also exploit Twitter, LinkedIn and Facebook social media. Twitter will be used as a primary feed for disseminating projects' news and announcements. LinkedIn and Facebook (Figure 2) will be used to point to the information disseminated through the project Web site, GitHub and Twitter.



Figure 2 SeaClouds' page on Facebook (proposal)

Finally, tools like YouTube or Ted.com could also be used as an additional media channel for the distribution of the audiovisual material.

### 5.1.4. Online Media Channels

The activity of SeaClouds within media channels will be mainly focused on online news sites (possibly oriented towards cloud stakeholders), popular blogs and developer forums.

These outlets will be used for announcements of the project (particularly during its milestones) in order to meet the previously stated objectives of the dissemination strategy. Please note that the SeaClouds consortium shall leverage a “viral” effect: multiple channels will be approached with each announcement, and the web dynamic of cross-coverage blog postings will help expand reach.

Meanwhile, participation in developer forums will act as a conduit to recruit early users in the evaluation program.

SeaClouds will also create a public mailing list for the dissemination of the project activities, to allow everyone interested in the project to join ongoing discussions and access past discussions.

## 5.2 Events

The SeaClouds consortium identifies in the face-to-face dissemination and networking the main dissemination mean. According to that, the project will host its own

workshops and project members will be attending a variety of industrial and scientific conferences.

Please note that the ideal venues for showcasing the SeaClouds' assets (such as product demos, conference talks, etc.) cannot be exactly known at the time of writing this first dissemination report. However, the project consortium recognizes the ideal profiles of such events, and mentions examples below.

### 5.2.1. Industrial Events

The Project consortium members will attend a wide range of industrial events. It is worth noting that the main focus on such events will be after the release of the SeaClouds' initial prototypes (at the end of Year 1) with the aid of hands-on demo experiences which match the expectations of event participants. Chosen venues will be focused on attendance of the project stakeholders (viz., application developers and cloud IaaS/PaaS vendors).

These venues will also be crucial to push additional feedback into the secondary development cycles of the project, as this is best gathered with a tangible approach (i.e., demo, tutorial, GitHub code) rather than a more static asset (i.e., public deliverable).

### 5.2.2. Scientific Conferences

Since service-oriented and cloud computing are two hot research areas, many scientific conferences can be attended in order to both enrich consortium knowledge and disseminate SeaClouds.

In the following, we will list a non-exhaustive set of the conferences which the consortium aims to attend. Since new conferences will appear yearly, such a list will be extended/updated with each dissemination report deliverable.

- INTERNATIONAL CONFERENCE ON SERVICE ORIENTED COMPUTING (December 2014): ICSOC is the prime forum for academics and industry researchers and developers to report and share groundbreaking works in service oriented computing. It brings together scientists, engineers, and practitioners from multiple disciplines to focus on service-oriented, cloud-based innovative for the 21st century enterprises.
- EUROPEAN CONFERENCE ON SERVICE-ORIENTED AND CLOUD COMPUTING (Manchester, UK - September 2014): ESOC is the premier conference on the advances in the state of the art and practice of Service-Oriented Computing and Cloud Computing.
- INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (Florence, Italy - May 2015): ICSE is the premier software engineering conference, providing a forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, experiences and concerns in the field of software engineering.

- IEEE WORLD CONGRESS ON SERVICES (June/July 2015): IEEE World Congress on Services aims to serve as a federation to host the following five theme topic conferences to explore the deep knowledge space of Services Computing in different directions:
- INTERNATIONAL CONFERENCE ON CLOUD COMPUTING AND SERVICES SCIENCE (Barcelona, Spain - April 2014): CLOSER focuses on the emerging area of Cloud Computing, inspired by some latest advances that concern the infrastructure, operations, and available services through the global network. The conference is nevertheless not about the union of these two (already broad) fields, but about Cloud Computing where we are also interested in how Services Science can provide theory, methods and techniques to design, analyze, manage, market etc.
- IBERO-AMERICAN CONFERENCE ON SOFTWARE ENGINEERING (Pucon, Chile - April 2014): CibSE event is a reference in the field of Software Engineering, with the participation of a vibrant Latin American community that is dedicated to research in an area vital to the global economy. Conceived as a space dedicated to the dissemination of research results and activities of the ibero-american community, encourages dialogue between scientists, educators, professionals, students and software industry.
- INTERNATIONAL WORKSHOP ON ADAPTIVE SERVICES FOR THE FUTURE INTERNET (September 2014): WAS4FI addresses different aspects of adaptive Future Internet applications, emphasizing the importance of governing the convergence of contents, services, things and networks in order to achieve building platforms for efficiency, scalability, security and flexible adaptation.
- SOFTWARE ENGINEERING AND TECHNOLOGY OF SOFTWARE DEVELOPMENT (Almeria, Spain - September 2014): SISTEDES conferences are a Spanish national scientific and technical event on software engineering and technologies, which includes: CONFERENCE ON SOFTWARE ENGINEERING AND DATABASES (JISBD), CONFERENCE ON PROGRAMMING AND LANGUAGES (PROLE), and CONFERENCE ON SERVICE SCIENCE AND ENGINEERING (JCIS).
- INTERNATIONAL CONFERENCE ON CLOUD COMPUTING (Alaska, USA - June/July 2014): CLOUD 2014 is the flagship theme-topic conference for modeling, developing, publishing, monitoring, managing, delivering XaaS (everything as a service) in the context of various types of cloud environments.
- IEEE INTERNATIONAL CONFERENCE ON SERVICES COMPUTING (June/July 2014 - Anchorage, Alaska, USA): SCC 2014 is the flagship theme-topic conference for services innovation lifecycle that includes enterprise modeling, business consulting, solution creation, services orchestration, services optimization, services management, services marketing, business process integration and management.
- COMPARCH (Lille, France - June/July 2014): CompArch is a federated conference series bringing together researchers and practitioners from Component-Based Software Engineering and Software Architecture.
- IEEE CONFERENCE ON REQUIREMENT ENGINEERING (Karlskrona, Sweden - August 2014): RE conference series is the premier international forum for researchers, industrial practitioners, educators, and students to present and

discuss the most recent innovations, trends, experiences, results and challenges in the field of RE.

- IEEE/ACM INTERNATIONAL CONFERENCE ON AUTOMATED SOFTWARE ENGINEERING (Västerås, Sweden - September 2014): The IEEE/ACM ASE conference series is one of the world's premier Software Engineering conferences.
- INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING (Hyderabad, India - May/June 2014): ICSE, the International Conference on Software Engineering, is the premier software engineering conference, providing a forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, experiences and concerns in the field of software engineering.
- JOINT MEETING OF THE EUROPEAN SOFTWARE ENGINEERING CONFERENCE AND THE ACM SIGSOFT SYMPOSIUM ON THE FOUNDATIONS OF SOFTWARE ENGINEERING (Bergamo, Italy - August/September 2014): ESEC/FSE 2015, the joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering, is an internationally renowned forum for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, experiences, and challenges in the field of software engineering.

### 5.2.3. SeaClouds-Hosted Activities

As previously mentioned, in addition to the participation in key industry and scientific events, SeaClouds will also host various activities. Most of these activities will be held within the second year of the project, since they depend heavily on the availability of prototypes (for a tangible showcase of SeaClouds stakeholder value and research results). This implies that such activities will get the concrete venues in the first dissemination report (when the event and conferences of the last quarter of 2014 and of the first/second quarter of 2015 will be announced).

In the following we will summarize the activities that will be held by the SeaClouds consortium.

- **Two Scientific Workshops:** The SeaClouds consortium will organize two scientific workshops on technical topics of WP3 and WP4 (viz., planning and management of multi-cloud applications). The first workshop will be organized by UPI around M14 (with the two-fold objective of disseminating first scientific project results, and to get feedback from the relevant scientific community), while the second one will be held by UMA around M24 (with the main objective of spreading the scientific results achieved by the project). We plan to hold both workshops in conjunction with the yearly edition of ESOC (European Conference on Service-Oriented and Cloud Computing).
- **Industry Expo Booth:** The rental of booth spaces (within industrial expos) will make cloud vendors, application developers and service providers very close to the SeaClouds consortium. In such a perspective, the ideal conference for booth space renting is the Cloud Expo Europe (which is yearly hold in London).

- **Developer Conference Tutorial:** A tutorial of the initial prototype will be shown at some developer conferences in order to get hands-on feedback (which will synchronize dissemination with evaluation goals).
- **Cloud Vendor Workshop:** The project will leverage of its collaboration with CAMP and TOSCA Technical Committees to provide a workshop with the key cloud providers (such as RedHat, Oracle, Rackspace, etc.) to bolster the vendor-side adoption goals of SeaClouds multi-cloud enabling assets.
- **Webinar:** A webinar participation (e.g. BrightTALK) will connect SeaClouds to those stakeholders who cannot be physically reached.

### 5.3. Publications

In this section we shall provide an overview of the scientific papers (Section 5.3.1) and the whitepapers (Section 5.3.2) which the SeaClouds consortium aims to publish.

#### 5.3.1. Scientific Papers

Since the consortium is strongly motivated to contribute to the scientific community, it aims at disseminating the project result by publishing them on the main journals/conferences about service-oriented and cloud computing.

The consortium aims at disseminating first the objectives of the project by means of 1 or 2 scientific papers. According to that, consortium members have already submitted two dissemination papers to the “ACM SIGSOFT Software Engineering Notes” and the “CibSE ‘14 conference”.

For each scientific result, the consortium plans to produce 1 or 2 conference papers (one for the preliminary and one for the final result) to be submitted to high-quality venues (e.g., ESOC, ICSE, ICSE). Following is the list of topics in which the consortium expects to obtain the more interesting results:

- ***SeaClouds’ planning strategy,***
- ***SeaClouds’ monitoring,***
- ***SeaClouds’ reconfiguration policy,*** and
- ***Overall results of the project.***

We also plan to submit consolidated versions of the papers to well-reputed international journals such as: IEEE Transactions On Services Computing, IEEE Transactions On Software Engineering (TSE), ACM Transactions On Software Engineering And Methodology (TOSEM), Science Of Computer Programming (SCP), Information And Software Technology (IST), International Journal Of Web Services Research (JWSR), Journal Of Cloud Computing (JCC), International Journal Of Cloud

Computing (IJCC), ACM Transactions On Internet Technology (TIT), Elsevier Journal Of System And Software (JSS).

### 5.3.2. Whitepaper Series

The SeaClouds consortium will publish four whitepapers within the course of the project:

1. **SeaClouds Open Reference Architecture Whitepaper:** A comprehensive architecture and design for the SeaClouds platform will be delivered, as the result of analyzing the requirements and design the SeaClouds platform. We are planning, as dissemination activity, provide a technical white paper about the SeaClouds product with a detailed overview of the SeaClouds open reference architecture available with a detailed description of the required features to use the SeaClouds platform.
2. **Standards-related Whitepaper:** Around M12 of the project (September 2014), a technical whitepaper regarding SeaClouds, CAMP and TOSCA will be published. It will explain the SeaClouds' architecture, the synergy with the specifications and some future work.
3. **Business-related Whitepaper:** Around M16 of the project (February 2015), depending on the initial prototype and exploitation deliverables of the project, a business-oriented whitepaper will be released to present the adoption benefits of SeaClouds (in time for the rise in industry-targeted dissemination). This will then be updated at the end of the project to match the updates to the global exploitation plan.
4. **Project Summary Whitepaper:** A high level project overview, released at the end of the project, will promote the most mature version of the SeaClouds assets. This document will be a combination of both technical and business advantages and will be released with the final version of the prototype.

### 5.4. Supporting Material

A wide range of support dissemination material will be published in order to enforce the previously mentioned dissemination activities.

- **Press releases:** 3 online news announcements will be made, synchronized with the project milestones.
  - A first one will be released during the six first months of the project, to raise awareness of SeaClouds and its objectives
  - A second one to announce the availability of the first prototype
  - A final release will take place when the final project is available
- **Newsletters:** 5 newsletters (every 6 months) will be published to summarize project progress, preview upcoming activities and highlight initial results.
- **Videos:** The project will create two videos in the project lifetime:
  - a screencast based on the M12 prototype
  - a video summary of the SeaClouds "solution", created towards the end of the project to promote the final releases of the assets

- Posters: 3 posters will be made during the project:
  - a poster representing the SeaClouds architecture
  - a poster summarizing the project (in line with M12 prototype release)
  - a large banner for industry events, focusing on the value proposition.

## 6. KPI's

Tables 3 and 4 describe the main KPIs chosen for the SeaClouds dissemination activities.

Dissemination channels	KPI	Success indicator
Conferences, Events (including collaboration events)  Journal publications and Peer reviewed papers	<ul style="list-style-type: none"> <li>Number of publications</li> <li>Number of Peer reviewed papers</li> <li>Number industry workshops and webinars</li> <li>Number of scientific workshops</li> </ul>	<ul style="list-style-type: none"> <li>The SeaClouds consortium will aim at releasing at least 4 journals and 4 conference publications</li> <li>The SeaClouds consortium will aim at releasing at least 6 peer reviewed papers</li> <li>SeaClouds will host workshops at 2 industry events or trade shows to reach its stakeholders, as well as 1 online webinar</li> <li>SeaClouds will host 2 scientific workshops.</li> </ul>
Whitepapers	<ul style="list-style-type: none"> <li>Number of whitepapers produced</li> </ul>	<ul style="list-style-type: none"> <li>The SeaClouds consortium will aim at releasing at least 3 whitepapers</li> </ul>
Project presentations	<ul style="list-style-type: none"> <li>Number of events / conferences participated or organized or with significant presence with (hosted, sponsorship and booths)</li> <li>Number of attendees (registered / estimated)</li> </ul>	<ul style="list-style-type: none"> <li>It is foreseen to present SeaClouds in at least 3 major events</li> <li>The average number of targeted attendees per event is estimated be at least at 30</li> </ul>
Marketing Collateral Materials	<ul style="list-style-type: none"> <li>Number of leaflets / brochures produced</li> <li>Number of posters</li> <li>Number of press releases</li> <li>Number of different demonstration videos produced</li> </ul>	<ul style="list-style-type: none"> <li>Preparation and distribution of 3 different brochures during the project's life cycle</li> <li>The SeaClouds consortium aims at publishing 3 posters during the project's life cycle</li> <li>At least 3 press releases during the project's life cycle</li> <li>At least 2 videos during the project's life cycle</li> </ul>

Table 3 List of KPIs (1).

Dissemination channels	KPI	Success indicator
Social Media	<ul style="list-style-type: none"> <li>• SeaClouds presence in Social Media</li> <li>• Number of existing social media communities relevant to SeaClouds identified</li> <li>• Flow of communication, number of posts</li> </ul>	<ul style="list-style-type: none"> <li>• SeaClouds in Twitter, LinkedIn, and other networks</li> <li>• At least 3 social communities will be used for SeaClouds' activities</li> <li>• Continuous information contribution during the project's life cycle</li> </ul>
Newsletters	<ul style="list-style-type: none"> <li>• Number of newsletters</li> </ul>	<ul style="list-style-type: none"> <li>• The SeaClouds consortium aims at producing and distributing several different newsletter issues (1 each 6 months) during the project's life cycle</li> </ul>
Website	<ul style="list-style-type: none"> <li>• Number of visitors, and Average time on site statistics</li> <li>• Use of landing pages to measure specific dissemination actions and campaign with a clear and unique message</li> </ul>	<ul style="list-style-type: none"> <li>• An average of 1500 visits per year would be a positive result, with at least 40% of users spending more than 2 minutes on the site</li> <li>• Main organized events, software releases, SeaClouds value proposition and feature descriptions should have specific landing pages approaches</li> </ul>

Table 4 List of KPI's (2).

## 7. Dissemination Roadmap

In the following we shall report the list of planned dissemination activities. Each dissemination activity will be presented as:

<Month> (<Leader> [+ <Main contributor>]\*) - <Dissemination activity>.

### PHASE 1 (M1-12): Design and Architecture

- M1 (ATOS) - D1.6 Website.
- M3 (UPI + all) - D1.4 Detail Dissemination strategy and plan.
- M3 (ATOS + NURO) - D6.1 Case study extended description.
- M4 (UPI + UMA) - SeaClouds dissemination paper in ACM SIGSOFT Software Engineering Notes.
- M5 (POLIMI + all) - D2.1 Requirements for the SeaClouds platform.
- M5 - After MS1 (*Availability of Requirement Analysis*), the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M6 (POLIMI) - D7.5.1 Collaboration plan.
- M7 (UMA+UPI) - Dissemination paper in the XVII Ibero-American Conference on Software Engineering.
- M8 (POLIMI) - D5.1.1 Definition of the Software Developing Environment.
- M9 (UMA) - D2.2 Initial Architecture and Design of the SeaClouds platform.
- M9 - After MS2 (*Availability of first SeaClouds Architecture*), the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M10 (CloudSoft) - D2.3.1 Periodic Standardization report.
- M10 - After MS3 (*Availability of first Report on the SeaClouds Standardization Activity*), the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M12 (UPI + all) - D1.5.1 Dissemination Report.
- M12 (UPI) - D1.7.1 First SeaClouds Scientific Workshop.
- M12 (UMA) - D3.1 Discovery, Design and Orchestration functionalities: first specification and prototype.
- M12 (UMA) - D4.2 Cloud API.
- M12 (ATOS) - D5.2.1 Design of the UI.
- M12 (CloudSoft) - D5.4.1 Initial version of the SW platform.
- M12 (CloudSoft + ATOS + NURO) - D6.2 Case Study test-beds and key features mapping.
- M12 (ATOS + NURO) - D6.3.1 Case Studies preliminary implementation.

- M12 (CloudSoft) - D6.4.1 SeaClouds periodic evaluation reports.
- M12 (POLIMI) - D7.5.2 Collaboration activities report.
- M12 - After MS4 (*Availability of first SeaClouds component implementation*), the source code will be available on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M12 - After MS5 (*Availability of mature Market Analysis and Product Definition*), the corresponding work will be disseminated in the industrial community in the form of conference presentations and/or whitepaper(s).

### **PHASE 2 (M13-20): Initial Release**

- M16 (UMA) - D2.4 Final SeaClouds Architecture.
- M16 (UMA) - D4.3 Design of the Runtime Reconfiguration process.
- M16 - After MS6 (*Availability of final SeaClouds Architecture*), the source code will be updated on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M18 (CloudSoft) - D2.3.2 Periodic Standardization report.
- M18 (UPI) - D3.2 Discovery, Design and Orchestration functionalities.
- M18 (UPI) - D4.4 Dynamic QoS verification.
- M18 (CloudSoft) - D4.5 Unified Dashboard and Revision of Cloud API.
- M18 (ATOS) - D5.2.2 Final design of the UI.
- M18 - After MS7 (*Availability of second Report on the SeaClouds Standardization Activity*), the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M18 - After MS8 (*Availability of SeaClouds detailed architecture design*), the source code will be updated on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M19 (ATOS) - D1.7.2 First SeaClouds Industrial Workshop.
- M19 (POLIMI) - D5.1.2 Integrated Platform.

### **PHASE 3 (M21-30): Uptake**

- M22 (UMA) - D3.3 SeaClouds Discovery and Adaptation components prototype.
- M22 (UMA) - D4.6 Prototype and Detail Documentation of the SeaClouds RTE components.
- M22 - After MS9 (*Availability of SeaClouds component implementation, Availability of SeaClouds platform, Availability of Case Studies*), the source code will be updated on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).

- M24 (UPI) - D1.5.2 Dissemination report
- M24 (UMA) - D1.7.3 Second SeaClouds Scientific Workshop.
- M24 (POLIMI) - D5.1.3 Final integrated platform.
- M24 (ATOS) - D5.3 Implementation of the UI.
- M24 (CloudSoft) - D5.4.2 Second version of the SW platform.
- M24 (ATOS + NURO) - D6.3.2 Case Studies second implementation.
- M24 (CloudSoft) - D6.4.2 SeaClouds periodic evaluation reports.
- M24 - After MS10 (*Availability of the joint exploitation feasibility for the SeaClouds results*), the source code will be updated on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M28 (CloudSoft) - D6.4.3 SeaClouds periodic evaluation reports.
- M28 - After MS11 (*Availability of Case Studies performance evaluation*), the source code will be updated on public repositories and the corresponding work will be submitted in the form of (workshop/conference/journal/etc.) paper(s).
- M29 (CloudSoft) - D5.4.3 Final version of the SW platform.
- M30 (UPI) - D1.5.3 Dissemination report.
- M30 (ATOS) - D1.7.4 Second SeaClouds Industrial Workshop.
- M30 (CloudSoft) - D2.3.3 Periodic Standardization report.
- M30 (ATOS + NURO) - D6.3.3 Case Studies final implementation.
- M30 (POLIMI) - D7.5.3 Collaboration activities report.

## **8. Conclusions**

In this report, we have described the dissemination strategy plan for the European project SeaClouds. This document describes the strategy and the objectives of the dissemination. More precisely, after describing which audiences are targeted by the project, it explains where and how to disseminate the assets of SeaClouds. Finally, in order to evaluate the quality of the dissemination results, a set of KPIs is provided.