

## D4.1 Communication Strategy & Plan



[www.CloudWatchHUB.eu](http://www.CloudWatchHUB.eu)

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The purpose of this document is to define the focused actions that the project will undertake to ensure active engagement with CloudWATCH target audiences. The document outlines the objectives to achieve this and the stakeholder groups that the project will be targeting. Namely, European projects, small businesses, and, government and public authorities. Core messaging and a clear plan for how the project will impact on these groups is identified through community building, website, online tools, outreach events (both project-organised and external events), and social media campaigns.

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## CloudWATCH2 Mission

It is only when the innovation process is inclusive and open that we truly advance technology for humanity – from small businesses to public sector organisations and citizens as the new digital consumers. The use of open source software and open standards are becoming increasingly seen as enablers and levellers for public and private sectors alike, bundling skills to create new services and applications.

To support this CloudWATCH2 takes a pragmatic approach to market uptake and the exploitation of results coming from European sustainable competitiveness for wider uptake and commercial exploitation. It provides a set of services to help European R&I initiatives capture the value proposition and business case as key to boosting the European economy.

CloudWATCH2 services include:

- ◆ A cloud market structure roadmap encouraging transparent.
- ◆ Mapping the EU cloud ecosystem of products, services and solutions emerging from EU R&I projects. Identifying software champions and best practices in mitigating risks associated with open source projects, and ultimately, enable faster time-to-value and commercialisation.
- ◆ Impact meetings for clustering and convergence on common themes and challenges. Re-use of technologies will also be of paramount importance.
- ◆ Promoting trusted & secure services through roadshows and deep dive training sessions. Giving R&I initiatives a route to users at major conferences or in local ICT clusters.
- ◆ A portfolio of standards for interoperability and security that can facilitate the realisation of an ecosystem of interoperable services for Europe.
- ◆ Cloud interoperability testing in an international developer-oriented and hands-on environment. Findings will be transferred into guidance documents and standards.
- ◆ Risk management and legal guidelines with practical examples of cloud contracts' clauses that need to be assessed before purchasing cloud services to the cloud for private and public organisations to lower barriers and ensure a trusted European cloud market.

### Disclaimer

The CloudWATCH2 (Think Cloud Services for Government, Business and Research) is funded by the European Commission's Unit on Software and Services, Cloud Computing within DG Connect under Horizon 2020.

The information, views and tips set out in this publication are those of the CloudWATCH2 Consortium and its pool of international experts and cannot be considered to reflect the views of the European Commission.

## Document Information Summary

<b>Document title:</b>	D4.1 - Communication Strategy & Plan
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<b>Target audiences:</b>	CloudWATCH2 consortium
<b>Keywords:</b>	cloud, software, services, communication, social media, small and medium-sized businesses, government and public administration
<b>Deliverable nature:</b>	Report
<b>Dissemination level: (Confidentiality)</b>	Public
<b>Contractual delivery date:</b>	M3 (30 November 2015 )
<b>Actual delivery date:</b>	26 February
<b>Version:</b>	vFinal
<b>Reference to related publications</b>	D4.2 & D4.3 Roadmap to a Cloud Market Structure encouraging Transparent Cloud Pricing

## Executive Summary

This document provides a plan for Communication and outreach activities as part of WP4. The document identifies a set of objectives for this and details the different stakeholder groups that the project targets. Namely, EC-funded projects who are part of the research and innovation (R&I) community, in particular projects funded under Framework Programme 7 and Horizon 2020 which are part of Unit E2 Software & Services, Cloud Computing; small and medium sized enterprises (SME); governments.

The document first briefly outlines the legacy of CloudWATCH1 and goes on to outline main objectives and outputs of the CloudWATCH2 project. The central role of WP4 in communicating and relaying project results to target audiences is highlighted as well as the approach that will be taken to achieve these actions. The document then provides a set of objectives specific to communication and outreach activities as well as an overview of channels to achieve this and an overview of the current CloudWATCH2 community. In addition, the document describes sustainability plans for the CloudWatchHUB. Information is also provided on the Roadmap to a cloud market structure encouraging transparent cloud pricing. The first iteration of this document examines the future of the cloud market and seeks to ensure that there is no future global cloud crisis following.

A specific dissemination and outreach strategy for each target stakeholder group is then outlined and a timeline for activities. This identifies core messages that are to be conveyed, the channels that are to be used and the means or tools that will be employed, taking into account current adoption trends and concerns.

**European projects** need to overcome several challenges to increase the visibility of their results and facilitate uptake. CloudWATCH2 will actively promote European projects and support common approaches to converge and cluster on both technical aspects: through technical clustering, adoption deep dive events and interoperability plugfests; and market uptake: through validating market readiness of services, providing practical tips and guidance on achieving market impact at Impact meetings, and participation at market uptake workshops.

**Small Businesses** are the second target group. This group face problems of time, resources and expertise when it comes to cloud adoption. CloudWATCH2 facilitates the adoption of cloud services by small businesses across the European Union through a suite of tools and practical guides. A sample of core messaging is identified on overcoming barriers to adoption. CloudWATCH2 provides neutral information on topics such as security, cloud pricing, and being aware of legal issues.

CloudWATCH2 also targets **governments and public administrations** with tools and services to ensure they make an informed decision before adopting to the cloud services.

Finally, the consortium has pooled together a group of experts who will contribute to activities during the project lifetime.

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## 1 Building on the legacy of CloudWATCH1

CloudWATCH was charged with accelerating the adoption of cloud services across the public and private sectors. Throughout the two years of CloudWATCH, the consortium placed a strong focus creating services and information for SMEs and public authorities (PA) in order to raise awareness of cloud computing so that they are able to make informed decisions on adopting the cloud. CloudWATCH focussed on trusted cloud services based on open standards as key to innovation and opening up market access. It worked very closely with European cloud computing initiatives to track and profile standards implementation to improve quality and interoperability and advance uptake in Europe’s future digital single market (DSM). The main outputs of the project are described in this document and are listed below:

- CloudWatchHUB.eu & tools and services to support SMEs.
- Promoting R&I results, clustering and convergence at Concertation Analysis.
- Mapping tool and analysis of the cloud landscape for greater convergence .
- Cloud standard profiles and methodology towards a commoditised cloud.
- Security & legal recommendations for trust and transparency.

Figure 1 CloudWATCH impact in numbers

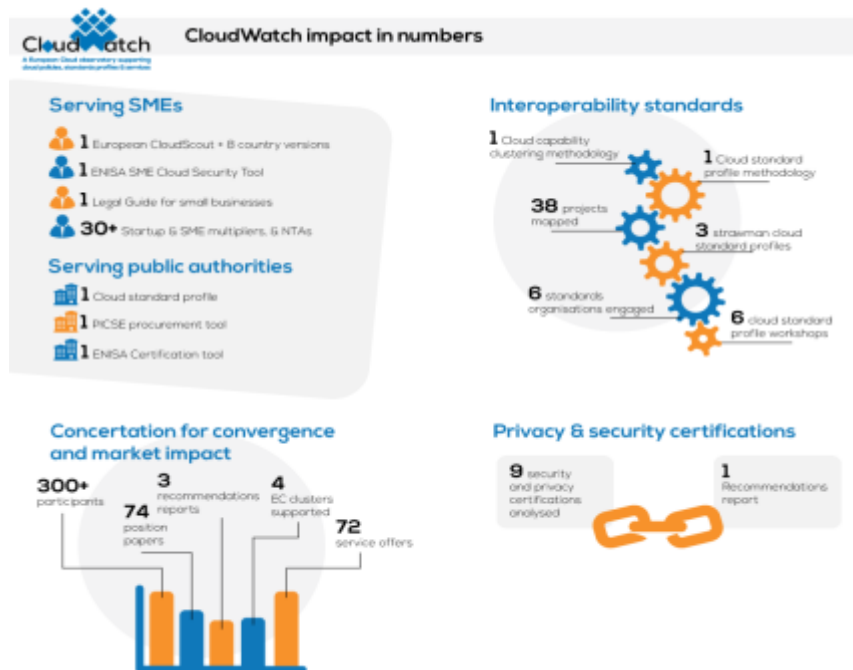
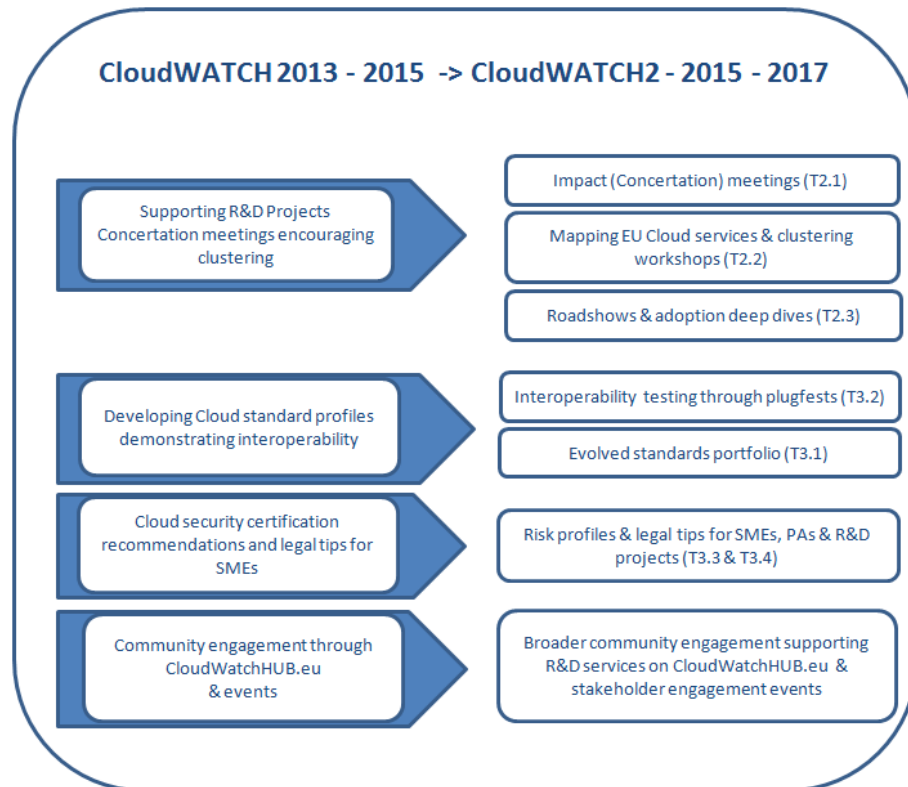


Figure 2 shows how and where CloudWATCH2 will leverage the outputs of CloudWATCH.

Figure 2 How CloudWATCH2 builds on the outputs of CloudWATCH



## 2 Scope of the CloudWATCH2 Communication Strategy and Plan

### 2.1 Activities and Outputs of CloudWATCH2

CloudWATCH2 is a service-oriented approach to operating and sustaining a research and innovation hub ([www.cloudwatchhub.eu](http://www.cloudwatchhub.eu)) mainly targeting small businesses, government, and open source communities. CloudWATCH2 builds on the outputs of CloudWATCH. Its four objectives are to:

- ◆ Promote technology advances in cloud computing, software and services, and support open source re-usability.
- ◆ Analyse and champion standards for interoperability and security with particular reference to open standards.
- ◆ Provide a preliminary roadmap on the cloud market structure encouraging transparent pricing.
- ◆ Offer educational services on risk management and legal issues to lower adoption barriers for small firms and public sector organisations.

The following section gives an overview of CloudWATCH2 outputs shown in the figure below and the specific stakeholders they target.



Figure 3 CloudWATCH2 Outputs



**WP2 - Concertation, Clustering and Convergence** activities will map project technical outcomes and services, identifying the level of market readiness. Status of software developments, potential for re-use, gap analysis as well as the outcomes of project collaborations will also be targeted at Impact meetings.

- ◆ **Concertation and Collaboration:** along market sectors and software developments, encouraging re-use of research and innovation results, e.g. through direct uptake or further open-source software (OSS) developments.
- ◆ **European cloud ecosystem outlook:** Mapping of European services through the CloudWATCH Cloud landscape clustering tool, encouraging clustering and collaboration on technical objectives.
- ◆ **Deep Dive activities:** OSS development practices, application and data design models, utilisation and re-use of common software, services, libraries, standards and strategies to sustain the software. Enable common approaches to similar challenges and facilitate re-use.

**Targets:** Project coordinators, technical leads and development teams and EC Clusters<sup>1</sup>

**WP3 – Standards, Specifications, Risks and Legal Recommendations** maps the use of standards by R&I projects and will evolve the standards portfolio established in CloudWATCH. This activity will support projects in identifying common needs and appropriate interoperability standards. It will also collect security requirements and create risk profiles and appropriate matching security standards.

- ◆ **Standards usage and evolving portfolio:** monitoring the standards landscape, identifying necessary extensions and profiles and engagement with standards groups. Identify

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<sup>1</sup> <https://eucloudclusters.wordpress.com/>

contributions to existing and developing standards. Provide evidence of gaps identified in current standards. Propose new standards items through the CSA Internal Standardisation Council, which has a liaison with ISO/IEC JTC 1/SC27 and 38 with particular emphasis on security and interoperability.

- ◆ **Interoperability plugfests and adoption gauges:** testing of implementations of a given standard such as reference implementations coming from standards groups or policy organisation, e.g. ENISA. Promotion of plugfests and audience takeaways, publication of a standards directory on [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu).

**Targets:** Project technical leaders, EC clusters and standards organisations and groups<sup>2</sup>

- ◆ **Risk Profiles:** Facilitate the assessment of risks associated with different cloud services. Engagement with ENISA, national supervisory authorities and data protection agencies. Provide a set of risk profiles for SMEs and public authorities and advise a minimum set of security measures associated with different levels of risk. Publish and promote the risk profiles and associated measures on [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu).
- ◆ **Legal recommendations:** Making the cloud more transparent to potential adopters. Facilitate small tech businesses and public sector organisations in understanding relevant contractual aspects and on the European Data Protection framework. Provide recommendations and checklists and sample cloud contractual clauses before they enter into an actual service agreement. Ensure the legal recommendations are also useful for cloud service providers.
- ◆ **CloudWATCH2** will host a series of specialised virtual events on legal aspects, security, risk profiling and cloud pricing, and, upon request, co-locate focused workshops, e.g. with the support of national trade associations and CSA chapters in Europe.

**Targets:** SMEs and public sector organisations. Risk profiling also targets policy makers and regulators, helping to increase understanding also on the benefits of cloud services.

**WP4 - Communication, Engagement and Market Structure Roadmap** supports the activities of both WP2 and WP3, as can be seen in figure 4. It coordinates the promotion of European research and innovation outcomes, facilitating engagement with potential user communities and providing a preliminary roadmap on cloud pricing.

- ◆ **Promotion of project outputs from WP2 & 3:** through the CloudWatchHUB, Social media activities and promotion of project events including three stakeholder engagement events.
- ◆ **Creating a European Research & Innovation hub:** Through outreach and dissemination activities including the CloudWatchHUB the project will provide up-to-date information on cloud services and how the cloud market is developing.

**Targets:** SMEs, cloud service providers, public authorities, EC projects

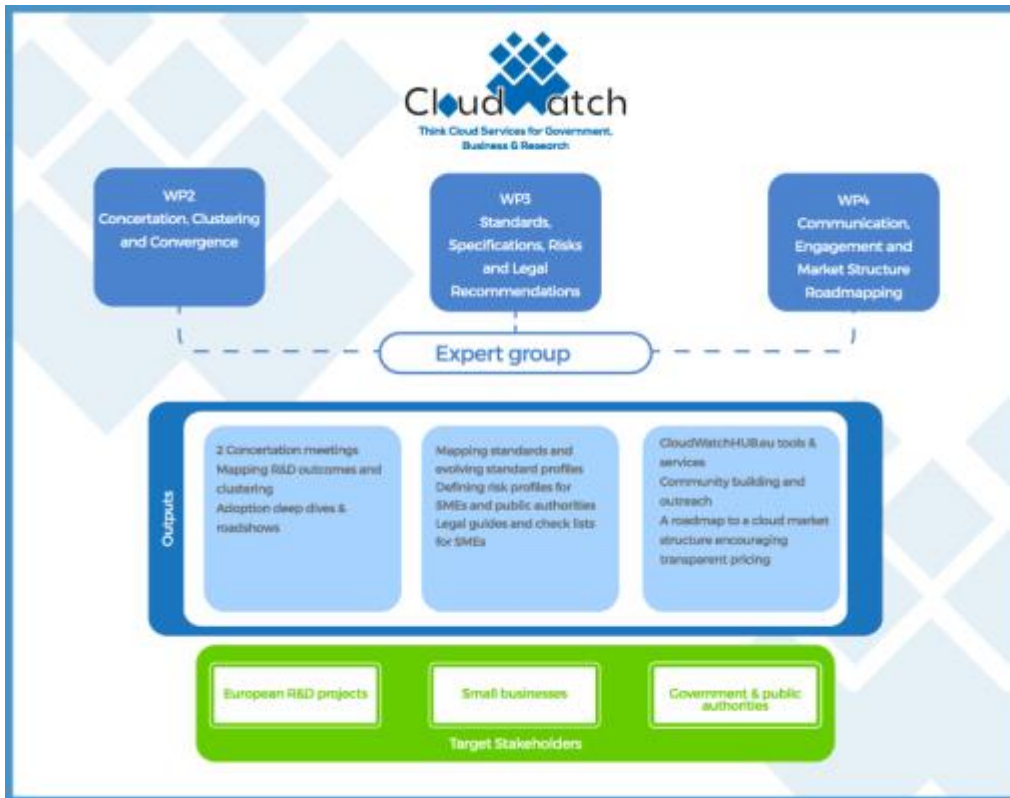
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<sup>2</sup> e.g. OGF, DMTF, ISO, IEEE, NIST, ENISA, ETSI CSC etc.

- ◆ **Roadmap to a cloud market structure encouraging transparent cloud pricing: Published in M5 (D4.2) and M23 (D4.3) the roadmap** provides analysis of the current IaaS market and recommendations regarding actions before regulation is put in place.

**Targets:** European Commission and policy makers, cloud service providers

Figure 4 CloudWATCH2 at a glance



## 2.2 Communication and outreach objectives

The main objectives of the CloudWATCH2 Communication Strategy and Plan are to:

→ **Create a European research and innovation hub, [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu), to ensure cloud users and European initiatives have up-to-date information on market developments.**

- Showcase European best practices, including the use of open source, open standards, risk management practices, explaining their benefits in simple terms that all target audiences can understand.
- Facilitate opportunities for market uptake of European software and services by developing and promoting an online catalogue of services and through direct interaction.
- Give user-friendly examples of how cloud-based European services are creating innovation and increasing the competitive advantage of the companies involved in R&I.

→ **Provide practical information on cloud adoption including security and legal tips, checklists and cloud pricing.**

- Enhance and update sections on legal tips and security
- Identify and publish user stories with a focus on business requirements and benefits.
- Promote “Q&A” forums in the form of specialised weeks focussing on legal, security and cloud pricing e.g. CloudWATCH2 Legal Week
- Provide samples of cloud contractual clauses relevant to user needs

→ **Coordinate stakeholder engagement and events promoting the trusted European cloud ecosystem to potential users through 3 dynamic and interactive workshops in different European cities, leveraging activities of business multipliers.**

- Provide a Practitioner’s Guide to the Cloud with a practical “how-to” focus.
- Showcasing value propositions of services and products emerging from EC projects to target stakeholders
- Helping to overcome barriers to cloud uptake with practical legal and security tips

→ **Increase adoption potential by SMEs by creating online tools and a dedicated section on CloudWatchHUB.eu, providing SMEs a set of resources to carefully plan their journey to cloud adoption.**

Core messaging that talks directly to SMEs, reducing barriers to uptake by addressing common concerns. Messaging also draws on practical tips and guidelines from experts in the CloudWATCH network.

- Practical guide on cloud services (IaaS, PaaS and SaaS), helping SMEs to match their specific requirements with services on the market.
- Hosting of the European CloudScout interactive survey tool.
- Embed legal tips and guide to data protection in cloud contracts.

→ **Expand the dedicated area for government and public administrations on the CloudWatchHUB.eu, covering:**

- Guidelines on cloud migration, with special attention to regulatory issues and security concerns.
- Portfolio of user stories highlighting benefits and new capacities from a service-driven approach.
- Showcase of EU Tech industry innovations for the public sector, highlighting best practices including from an EU data protection perspective.

→ **Implement the sustainability plan for the CloudWatchHUB identified during the CloudWATCH project.**

As recommended at the final CloudWATCH review, CloudWATCH2 will already put into place phase 2 of the CloudWatchHUB sustainability plan. An analysis will identify potential revenue streams, such as sponsors, advertising banners or other commercial agreements and define the necessary steps for the

business model, which will be based on the 9 elements of the Osterwalder canvas. Actions related to the business model definition, include

- Impact analysis of [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu) from a market perspective and assessment of competitor websites, defining the CloudWATCH hub value proposition.
- Review of the maintenance and operational costs, including staff and hosting costs based on different scenarios (e.g. different revenue streams coming from sponsors, advertisers etc.).
- Business model building blocks: definition of the final value proposition and analysis of customer segments, customer relationships, channels for reaching the customer, key activities and resources (services and assets required), revenue streams, cost structure and partnerships.
  - Channels should ideally be multipliers that can increase customer reach, e.g. small business associations.
- Database of potential sponsors and advertisers, indicating reasons for selection and recruitment processes.
- Evaluating the business model and testing assumptions.

## 2.3 Overview of channels

### 2.3.1 Channels

CloudWATCH2 will use a variety of channels to promote its activities, ranging from the CloudWatchHub, social media and professional channels, to physical and virtual events (e.g. Legal Week), concertation and deep dives for European projects. CloudWATCH2 will draw on the current community and the consortium's collective network.

- **CloudWatchHub** – [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu): services supporting European projects (e.g. updated service portfolio, new catalogue of services and software), small businesses and public sector organisations.
- **Twitter and LinkedIn Group**: Building on a Twitter community of almost 500 followers, starting with 476 at the end of CloudWATCH1, giving greater priority to each of the three main targets (open source community, SMEs and public sector). Building up the industry members in the LinkedIn group and encouraging regular debate and information sharing by European project representatives. In doing so CloudWATCH2 could also use the advertising tools offered by the mentioned social media to target specific audiences when promoting initiatives and contents.
- **Events and Q&A forums for SMEs**: building on links with national trade associations and CSA chapters across Europe, CloudWATCH2 will host a series of virtual events (including webinars and live Q&As) on key barriers to cloud adoption such as security, risk management, lack of cloud transparency and legal aspects. These will be planned to run in parallel with events and associated #hashtags. CloudWATCH2 will define a campaign for each event in synergy with the above-mentioned multipliers. When possible, we will use event registrant list or catch some of the more active and influential social media users, and invite them to participate in the debate, or ask them to retweet links.

- **Impact Meetings, Deep Dives and Roadshows:** supporting European project in packaging their outputs into exploitable assets with clearly identified audiences, benefits and instructions on how potential adopters can get started.
- **Press and media:** cross-sector media channels to promote the major achievements of CloudWATCH2, especially the roadmap. Awareness-raising of the roadmap will target most of the channels cited in this plan and involve the CloudWATCH experts in providing inputs and feedback on the two iterations of the roadmap.
- **Mailing lists and individual mailing:** With a mailing list of over 250 participants of CloudWATCH Concertation meetings (2013 – 2015), CloudWATCH2 has a large reach within the R&D community in particular participants of present and past Unit E2 projects. Similarly, partner networks can be reached through individual emailing.
- **Direct email Marketing Campaigns:** Targetting in particular the SME audience, CloudWATCH2 will distribute compelling messages to databases of contacts which include this target group in order to publicise SME tools and services on the CloudWatchHUB.

### 3 Stakeholder groups targeted by CloudWATCH2

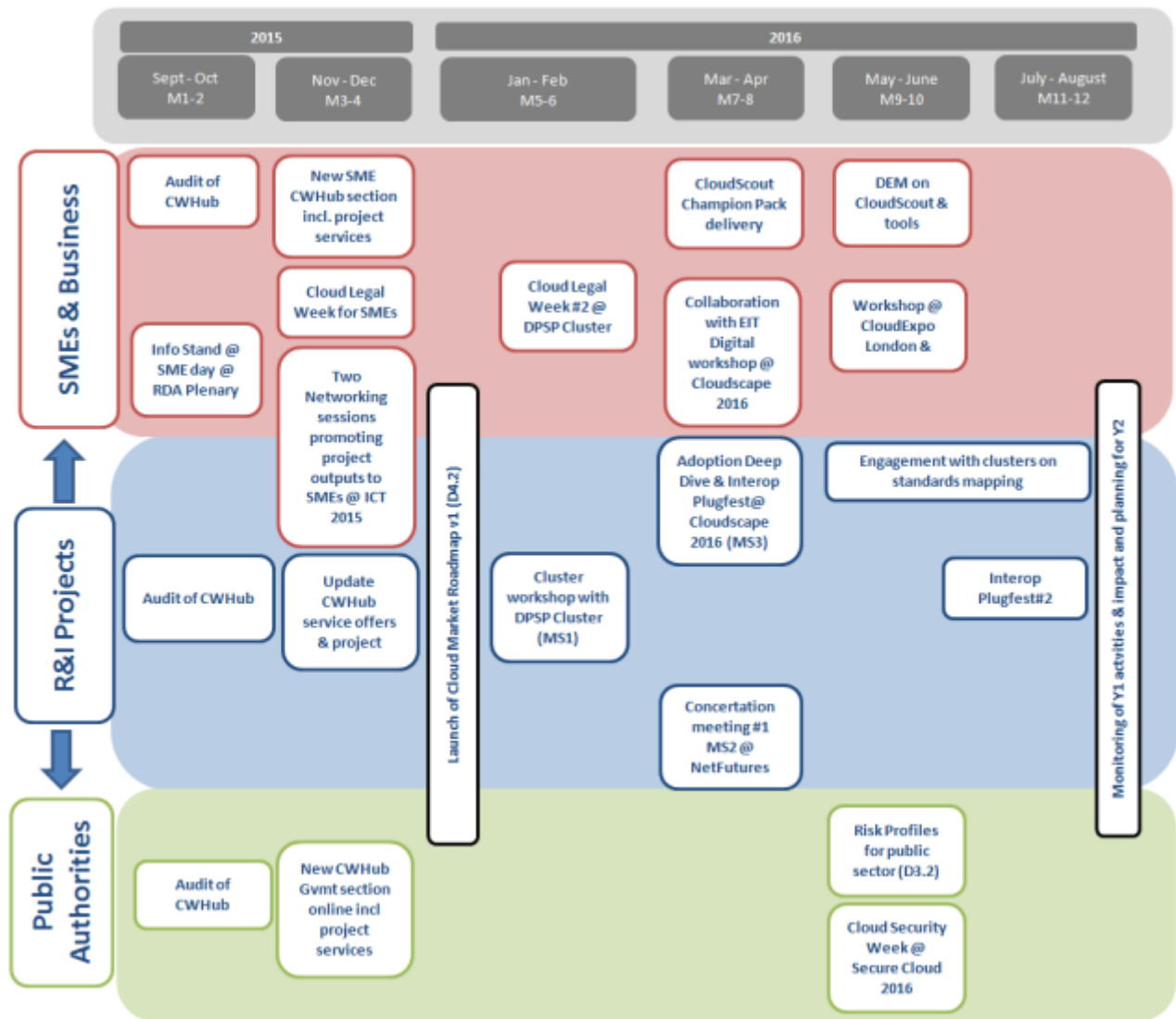
This section highlights the main three stakeholder groups that CloudWATCH2 targets:

- European projects
- Small businesses
- Government and public authorities

We provide an overview of the current community network for each group, a snapshot of needs, core messaging and relevant activities planned.

Figure 4 provides a brief snapshot of activities for M1-12. Activities already complete will be reported in detail in the M1-12 Activity Report.

Figure 5 Communication and outreach activities M1-12



### 3.1 Community network

CloudWATCH2 has continued to build upon the community built up during CloudWATCH. The table below shows the community break down in M3 of the project. The table highlights the split between stakeholder groups. The first three months of the project has seen focus on reaching out to the business community including **SMEs and big corporations who now make up 44% of the community**. Actions included improvements on the CloudWatchHUB and social media activity.

Table 1 CloudWATCH2 community breakdown (M3)

Businesses	Research & universities	Public sector	Standards
<p><b>835 total</b></p> <p>474 Start-ups &amp; SMEs 331 big corporations 30+ multipliers</p>	<p><b>670 total</b></p> <p>-370 from R&amp;I projects - 300 network contacts</p>	<p><b>390 total</b></p> <p>- IT decision makers &amp; procurement officers</p>	<p><b>6 standards groups</b></p> <p>- 150 individuals</p>

## 3.2 European Projects

CloudWATCH2 actively promotes European projects, their advances and services. CW2 will support common approaches:

### Technical aspects:

- Identifying areas of commonalities for collaboration through an extension of the methodology for the technical clustering developed in CloudWATCH1. This will enable clusters to identify clusters and commonalities within their respective group (T2.1).
- Participation by projects at CW2 Adoption Deep dives around common technical themes to promote project results to end users and validate ‘market readiness’ of services and solutions (T2.2)
- Continued standardisation mapping activity to identify the most commonly used security and interoperability standards in the market in the context of EC funded projects Identify extensions, refinement and gaps (T3.1).
- Participation by projects at CW2 cloud interoperability plugfests as part of WP3 activities (T3.2).

### Market uptake:

- Validating the market readiness of services and solutions through WP2 activities and adaption of clustering methodology on this topic (T2.2).
- Providing practical tips and guidance on achieving market impact at CW2 Impact meetings (T2.1).
- Participation at market uptake workshops (T4.2)

### 3.2.1 Community Building

European research priorities have increasingly adapted to the fast evolution of cloud and related services. Developments taking place today in FP7 ICT (e.g. Call 8 & Call 10) and now demonstrated with successful Call 1 projects from H2020, range from big data and content, to the Internet of Things (IoT), cloud computing and the Internet of Services. These research and innovation activities will take us to a new era



of digital societies and economies based on an agile, adaptive and dynamic collaboration between organisations, communities and individuals, with ubiquitous and instant access to information.

The table below shows the active projects as we move into 2016 and who will be targeted by CW2.

Table 2 Unit E2 projects targeted by CloudWATCH2

Call: FP7/H2020	No. of projects still active (December 2015)
FP7 Call 8 – Cloud computing, internet of services and advanced software engineering	1 project <sup>3</sup>
FP7 Call 10 – Software engineering, services and cloud computing	13 projects <sup>4</sup>
FP7 EU-Japan	1 project (CLOUT <sup>5</sup> )
H2020 Call 1 – Advanced cloud infrastructures and services	32 projects <sup>6</sup>
H2020 EU-Japan	1 project (IKAAS <sup>7</sup> )

### 3.2.2 Challenges facing European projects

European projects need to overcome several challenges to increase the visibility of their results and facilitate uptake. It is fundamental that European projects design their websites and messages for external audiences who are not aware of them in general and do not understand the use of project acronyms. CloudWATCH2 will provide projects information on how to:

- **Become more market-facing:** Shake off the typical project “look and feel” by evolving the website design and messaging based on a service-oriented approach tailored to the audiences they are targeting. The website, especially the home page, needs to include:
  - Provide taglines on the benefits, clearly matching services/software benefits with the target audience(s).
  - Package service offers with clear how-to-get-started messages and links.
  - Leverage the experiences of early adopters (where involved) so other users can identify with similar requirements and benefits, based on a CloudWATCH2 template<sup>8</sup>.
  - Feature quotes from early adopters or people from outside the consortium highlighting the added value of the project.

<sup>3</sup> <http://www.cloudwatchhub.eu/service-offers-2015-2016>.

<sup>4</sup> <http://www.cloudwatchhub.eu/service-offers-2015-2016>.

<sup>5</sup> <http://www.cloudwatchhub.eu/serviceoffers/clout-cloud-things-empowering-citizen-clout-smart-cities>.

<sup>6</sup> <http://www.cloudwatchhub.eu/service-offers-2016-2018>.

<sup>7</sup> <http://www.cloudwatchhub.eu/serviceoffers/ikaas-intelligent-knowledge-service-platform>.

<sup>8</sup> See, for example, the user stories from MobiCloud (CIP): <http://www.cloudwatchhub.eu/mobicloud-and-tbak-user-centric-agile-project-delivery> and <http://www.cloudwatchhub.eu/construction-company-transforms-workforce-efficiency-mobicloud>.

- **Bridge the communication gap:** Facilitate interaction between marketing and communication experts in the consortium, especially business partners and encourage technical experts to convey the benefits in a language that speaks to the specific audiences targeted beyond the project focus.
- **Reduce the challenge of marketing open source:** Capitalise on the increasing interest in and use of open source software and learn from open source software success stories.

### 3.2.3 Open Source Software (OSS) Usage

The 2015 Future of Open Source Survey received 1,300 responses and revealed that corporate open source use and participation has reached an all-time high<sup>9</sup>. The main survey responses are:

- 78% of respondents said their companies run part or all of its operations on OSS.
- 66% said they take an open source-first approach to software.
- 64% of companies currently participate in open source projects.

Over the next 2-3 years, 88% of companies are expected to increase contributions to open source projects over the next 2-3 years, 88 percent are expected to increase contributions to open source projects. 55% believe open source delivers superior security compared to proprietary solutions<sup>10</sup>.

The trend of Open Source driving new technologies continues, with cloud computing (39%), big data (35%), operating systems (33%) and the internet of things rising (31%) topping the list. These technologies are also expected to have the biggest impact over the next 2-3 years. The “most valuable” OSS projects are: Open Stack, Docker, Drupal, LibreOffice, Linux, Ubuntu, and PostgreSQL.

Security is a key issue for all technology solutions with confidence continuing to rise in open source software’s ability to deliver secure solutions:

- 55% of the respondents believe open source delivers superior security when compared with proprietary solutions.
- 45% of the respondents say open source options are given first consideration when evaluating security technologies for internal use.
- 61% is expected to be the level of superior security of open source perceived within the OSS community over the next 2-3 years.

### 3.2.4 Core messaging and Channels

With CloudWATCH2’s strong emphasis on supporting projects to think strategically about the importance of exploiting results and market impact, including showcases of early adopters. The Box below provides examples of how CloudWATCH2 helps promote outcomes to a wider audience through its hub, [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu), including updated service cards to reflect final outputs.

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<sup>9</sup><https://www.blackduckssoftware.com/news/releases/seventy-eight-percent-companies-run-open-source-yet-many-lack-formal-policies-manage#sthash.ulcUzKcm.dpuf>.

<sup>10</sup><https://www.blackduckssoftware.com/resources/webinar/2015-future-open-source-survey-results#sthash.UN50JTtS.dpuf>.

### 3.2.4.1 Visibility of results and services

Table 3 Value add of European project results

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#### Services, Software and Solutions for the Cloud

##### **MODAClouds releases DevOps Toolkit for Multi-Clouds**

Now you can make the most of multiple clouds with the MODAClouds MultiCloud DevOps Toolbox while retaining control. Use the toolbox to make sure your infrastructure and services always meet your business requirements.

The MODAClouds MultiCloud DevOps Toolbox comes with a set of tools and a methodology to improve or rectify cloud applications. The toolbox takes the requirements from Dev teams, applies them on the Ops side, and closes the circle by feeding information and insights from running environments back to the Dev side.

Walkthrough the MODAClouds MultiCloud DevOps Toolbox: <https://youtu.be/Afa6Gfz5JdE>

Public demonstrator tools: [MultiCloudDevOps.com](http://MultiCloudDevOps.com) to test the technologies

The MODAClouds MultiClouds Alliance promotes and evolves technologies focused on Multi-Clouds, DevOps and Business-Driven Quality of Service.

##### **HARNESS brings new efficiencies to cloud computing**

HARNESS enables a new generation of cloud computing platforms, significantly increasing performance, reducing energy consumption and lowering costs.

Industrial partners like Mazeler Technologies and SAP AG are already exploiting the technology created. HARNESS is now pulling together a full, top-to-bottom demonstration of the HARNESS platform, its integration with OpenStack, and its deployment in three different cloud environments.

HARNESS in action: <https://youtu.be/3Fm6QPkiCDc>

**Updated service card:** <http://www.cloudwatchhub.eu/harness-hardware-and-network-enhanced-software-systems-cloud-computing>

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The figure below shows two examples of how CloudWATCH2 promotes the results of European projects through the project's twitter account.

Figure 6: Promotion of projects delivering public services



### 3.2.4.2 Messaging on open source and open standards

Championing open source software (OSS) and open standards both play a central role in our communication plan, including the outcomes of the ETSI Cloud Standards Coordination – Phase 2 and how European projects have contributed to it. An example is showed in the figure below.

Figure 7: Top Tweet November 2015



The boxes below show examples of core messaging on the value of open source and open standards.

Table 4 Value add of Open source

<b>Open source</b>
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*Open source continues to speed innovation, disrupt industries, and improve productivity. The growing corporate usage is attributable to the advantages provided by Open Source.*

*Key advantages are the focus on attracting top IT talent to the organisation and the ability to innovate and create competitive advantage for businesses. Comparing Open Source more specifically to Proprietary software, open source wins in features, ease of deployment, and ability to scale.*

*Moving forward 2-3 years, some factors that have held back Open Source will become the key attributes of Open Source vis-à-vis the alternative choice of proprietary software, Security, Quality, and Ease of Deployment among them. These attributes are shaping the future of technology and security.*

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Table 5 Value add of open standards

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### Open standards

*Agility and flexibility comes with a cloud based on open standards. This allows organisations to pick up and mix the elements they need to build solutions, to meet the specific needs of their business and customers, while continuously making improvements.*

*The movement towards open standards will prove a real leveller and enabler. Niche developers from small companies will be able to work together, bundling their skills like fusion cookery.*

*The result will be plug-and-play, hybrid applications with the potential to deliver true innovation, and constantly evolve to meet the ever-changing demands of the digital consumer.*

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## 3.2.5 Channels and Community network

### 3.2.5.1 Web developments

CloudWATCH 1 pioneered a new service-oriented approach to European projects on cloud, software and services. A key output is the **Service Portfolio** published in March 2015<sup>11</sup>. The portfolio comprises 72 service cards that focus attention on user need or pain point and benefits the project will bring by advancing cloud technology, software and services.

→ CloudWATCH2 is enhancing and updating the online service portfolio as projects deliver new outputs, including press releases, demos and videos in the dedicated section on the hub: <http://www.cloudwatchhub.eu/service-offers>.

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<sup>11</sup> [http://www.cloudwatchhub.eu/sites/default/files/A-portfolio-of-offers-for-trusted-and-secure-services\\_Web.pdf](http://www.cloudwatchhub.eu/sites/default/files/A-portfolio-of-offers-for-trusted-and-secure-services_Web.pdf).  
Online version: <http://www.cloudwatchhub.eu/service-offers>.

### 3.2.5.2 New online catalogue of services

→ CloudWATCH2 will promote Open Source services from projects through its own **Online Catalogue of Services and Software** for those projects that have reach maturity level, whether for market uptake or re-use of OSS. The catalogue will leverage the inputs of **Task 2.2 – Mapping of European R&D project technical outcomes**, and **D2.2 and D2.4 – Mapping of European Cloud Services, Solutions and Technological Readiness** (month 12 and month 24 respectively) to further facilitate the projects in conveying their results, improving the service cards and in designing the catalogue.

In addition CloudWATCH2 will build on collaboration with the AppHub project by linking directly from the CloudWatchHUB to the AppHUB Directory<sup>12</sup> and Store. The directory includes information on projects and software assets which can be downloaded in the Store. The AppHub Factory can then be used to fine-tune the templates to the specifics of the target execution environment.

### 3.2.6 Sample of channels for promotion and community building

CloudWATCH2 will use a variety of channels to promote European projects, open source and open standards. The table below shows a sample of such channels.

Table 6 Channels for European projects

<b>Channels for European projects</b>	All European projects, and all projects using social media. The target audiences of European projects: SMEs and governments/public administration ( <i>See Sections 3 and 4</i> ).
<b>Open source communities</b>	OSSWATCH - University of Oxford, @osswatch <a href="http://oss-watch.ac.uk/resources/howtobuildcommunity">http://oss-watch.ac.uk/resources/howtobuildcommunity</a> @AppHub_eu, <a href="http://www.apphub.eu.com/bin/view/Main/">http://www.apphub.eu.com/bin/view/Main/</a> @OpenForumEurope   @OpenStackClouds   @OpenStack   @opensourceway   @OpenSourceOrg
<b>Standards Groups</b>	@ETSI_STANDARDS   @OGFStandards   @CloudPlugfest   @ISOstandards   @IECstandards

With a large emphasis on reaching out and providing support in particular to Unit E2 projects, CloudWATCH2 currently has a community of 670 including 370 representatives from R&I projects and 300 network contacts created through social media activities and events. This also includes the [Concertation@cloudwatchhub.eu](mailto:Concertation@cloudwatchhub.eu) mailing list which includes representatives from all Unit E2 projects and participants from CloudWATCH Concertation meetings.

### 3.2.7 Events, Clustering and Convergence

CloudWATCH has transformed Concertation Meetings from “have to attend” to “WANT TO ATTEND” events which have seen over 300 participants at three events. CloudWATCH2 will further this as part of WP2 by including a part of the workshop dedicated to helping projects improve their impact plans. Two Concertation meetings are planned as part of WP2 activities and both will be held at Net Futures events (2016 (M8) and 2017 (M20) respectively). The events will promote services coming out of the EU Software, Services & Cloud unit with emphasis on supporting impact on the single market (economy

<sup>12</sup> <https://directory.apphub.eu.com/>

booster). Impact meetings are to be market facing and focus on project impact. The meetings will encourage projects to:

- Focus on their innovation for the marketplace and/or open-source community.
- Identify the game changer in their service
- The end-user pain point they are addressing

Meetings will see projects presenting impact plans and receive feedback and coaching on those plans. Sessions will include topics such as how to spin off a commercial entity from your H2020 project, information on innovation calls and other funding opportunities to help make impact on market. Awards ceremony for best plan with prizes including a 2 page in a cloud journal or similar, information on other EU funding avenues.

A key theme throughout CloudWATCH was clustering and convergence between projects on common themes and challenges, and re-use of technologies and transferrable knowledge, or that which may be considered “transferrable learning or expertise” between projects. On the basis of these meetings core clusters of projects were formed and are supported by the European Commission.

- Software Engineering for Services and Applications.
- Inter-cloud Challenges, Expectations and Issues.
- Data Protection, Security and Privacy in the Cloud.
- New Approaches for Infrastructure Services.

A common goal is to create an environment where synergies are exploited to the benefit of the beneficiaries of H2020 grants. In particular clusters collaborate on technical aspects, and also to identify trends in the market and engage in innovative ways to address such trends, beyond the usual dissemination and exploitation activities (normally covered by each Grant Agreement). Concertation meetings will also act to promote results from the clusters while WP2 and WP3 activities will support the mapping of project priorities and of standards usage and gaps.

### 3.3 Small Businesses

Based on analysis of this community in designing the CloudWatchHUB, the consortium can conclude that the main challenges facing small businesses are:

- Lack of time, money and the human resources to dedicate to investigating ways to innovate in the marketplace. The number of small businesses with technical staff is low (less than 30% of firms have an IT manager).
- SMEs need a stepwise fashion to the adoption of cloud computing, building up their knowledge gradually through clearly defined steps.
- SMEs need tools and practical guides, above all from a legal and technological viewpoint, that help map their business requirements with the services and software available to them.

CloudWATCH2 facilitates the adoption of cloud services by small businesses across the European Union through a suite of tools and practical guides, spanning the EU CloudScout, ENISA SME Security Tool, Legal Tips, Guides to Risk Management and Cloud software and services for SMEs.

Such services will be further enhanced through engagement with complementary outputs from other H2020 projects such as AppHub, SLALOM and SLA-Ready.

### 3.3.1 Core Messaging and Channels

CloudWATCH2 promotes the benefits of the cloud for all types of small businesses by offering practical guides and tools that help overcome barriers to adoption. The box below shows an example of the messaging we are tailoring to small businesses.

Table 7 Messaging for small businesses

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***Don't get left behind. Plan, Test, Deploy!***

*Cloud computing is not just super-high-tech companies. The cloud has life-giving properties that are helping many new firms build their business mostly or entirely on the cloud. Why? Because it helps them bring together business processes at a single access point and an ability to work anywhere from any device. New micro firms are also increasingly using cloud-based administration tools to keep track of their revenue. Read our user story on Conversion Garden, which runs entirely in the cloud.*

*One of the key benefits of the cloud is its ability to level the playing field. Because cloud removes much of the initial up-front costs, it allows small- and mid-sized businesses to compete with their larger rivals and in some instances to surpass them. Read our user story on how iMinds helped a Belgian startup move to the cloud.*

*Not surprisingly, the cloud is increasingly becoming a staple for start-ups, giving them entry to almost any sector, and an opportunity to disrupt the market<sup>13</sup>.*

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#### 3.3.1.1 Messaging on tools for small businesses

CloudWATCH2 continues to promote the EU Cloudscout to SMEs across Europe as the first stepping stone towards the adoption of a cloud-based services<sup>14</sup>. To this end, it is maintaining links to the European trade associations that supported EU Cloudscout since the beginning, while also creating strong links with other business multipliers.

On the hub, [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu), we have created core messaging on EUCloudscout on pages dedicated to small businesses, e.g. <http://www.cloudwatchhub.eu/taxonomy/term/85>.

### CloudWatchHUB Champion packs

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<sup>13</sup> <http://www.cloudwatchhub.eu/taxonomy/term/85>.

<sup>14</sup> <http://cloudscout.cloudwatchhub.eu/#/app/home?lang=en&code=en>.



In order to further impact and use of CloudWatchHUB services such as EUCloudScout, champion packs will be created for potential multiplier organisations, SME associations, and influential individuals who could both provide or promote these CloudWATCH tools and services to their members or followers. The champion packs will give background information and reasons why the services are useful. The neutrality of the services will be stressed in particular.

As part of this activity, a set of CloudWATCH2 Champions will also be identified. These could range from multiplier organisations or SME associations to individuals (such as SME founders or CEOs) who are influential on their peers. It is important that such champions understand the services we provide and are clear on the benefits to stakeholders.

Table 8 Promotion of EUCloudscout

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### **EUCloudScout: Start planning your journey to the cloud with our tools for small firms**

*European CloudScout: Interactive questionnaire (14 questions) - easy first look into cloud-based services. Upon completing the survey, you get a personalised report on issues to take into account when making decisions about which services to use. Available in: English (EU & UK versions), Dutch, Finnish, French, German, Hungarian, Slovak and Spanish. This tool is supported by the National Trade Associations in the UK, Netherlands, Belgium, Germany, Hungary, Slovakia and Spain.*

***ENISA SME Cloud Security Tool:** Rating the security risks and opportunities of using different cloud services. This tool generates a list of security questions to understand the main features of the cloud service. It can also calculate and visualise risks and opportunities. Use the results as a customised set of security questions to ask before choosing a service.*

***Legal Guide - How to protect personal data in cloud service contracts:** Find cloud service contracts hard to understand? Use our Legal Guide to the Cloud for SMEs as a guide to fulfilling duties as a data controller under EU law towards data subjects and Data Protection Authorities. It also helps clarify typical contractual issues you need to be aware of.*

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CloudWATCH2 has also improved and added to the section on user stories covering the adoption of cloud-based services by SMEs, as shown in the figure below.

Figure 8 Sample of user stories for SMEs

#### Conversion Garden – How one start-up is running in the cloud



First the Internet, now the cloud is breaking down barriers for start-ups and small businesses- Not only is the cloud helping small businesses achieve more work in a typical day, it is enabling entry into almost any sector. Conversion Garden is one of a growing number of small firms running their business in the cloud.

[Read more](#)

#### How iMinds helped one Belgian startup become a global player



Belgian startup POSIOS launched in 2012 with an innovative point of sale (POS) solution and the ambition to become the world's top POS app for the hospitality industry – specifically restaurants.

In just two years, the company has grown from a local team of three to an international business of 23 employees and more than 700 customers worldwide. That rapid expansion caught the eye of Canada's Lightspeed, the global leader in retail POS solutions.

[Read more](#)

### 3.3.2 Special Service Weeks and Q&A Forums

Special service weeks and Q&A forums are aimed at helping SMEs overcome major barriers to cloud service adoption. They are held in collaboration with physical events where it is easy to create a call for action among participants include the online collection of information such as legal questions or security risks. Wherever feasible, workshops will be co-located with SME events. Synergies with trade associations and CSA chapters are key to catering contact to specific information needs identified.

Legal week: Held in collaboration with SME events and promoted through both project and ICT Legal channels, SMEs will be asked to identify which frequently asked legal questions (FAQs) are relevant to them and to also provide their own questions on issues such as cloud contracts and data protection. Data collected feeds into T3.4 Legal recommendations on EU cloud computing services. A dedicated webpage<sup>15</sup> has been set up highlighting the FAQs and providing the opportunity to leave questions.

Security week: Held at Secure Cloud 2016, security questions and concerns will be collected both during the event through participation at sessions, through social media channels, and directly collected on through a webform on the CloudWatchHUB.eu.

#### 3.3.2.1 Branding

CloudWATCH2 creates special branding for each service week and Q&A forum for publication on [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu), the twitter page and in external events.

<sup>15</sup> <http://www.cloudwatchhub.eu/legal-week>

Figure 9: Sample of branding for service weeks



### 3.3.2.2 Info Packs

To facilitate the uptake by cloud services by small businesses, the InfoPacks for the service weeks include:

- ◆ Concise guide to Cloud Services based on a selection of EUCloudScout texts. This will include links to [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu) for more information and examples. Trust-IT
- ◆ Model questions and answers on the topic, e.g. legal tips, security etc.

CloudWATCH2 will leverage the national language versions of EUCloudScout when creating the Info Packs.

### 3.3.2.3 Promotional activities

- ◆ Start promotional activities 3-4 weeks in advance, including social media campaigns, including pinned posts/adverts. The social media campaigns should include handles of business multipliers.
- ◆ Involve one or more National Trade association or similar SME association so that the service can be pushed to their members.
- ◆ Create and publish the event banner for the website and twitter at least two weeks in advance.
- ◆ Use the web form to collection information on SME needs so we can tailor web information and potential events (e.g. webinars/workshops).

### 3.3.3 Channels and community

The table below provides a sample of channels CloudWATCH2 is targeting in its outreach to small businesses.

Table 9: Multipliers and Media for Small Businesses

<b>Start-up Multipliers</b>	@StartUpEU   @StartupUK, @StartUpBritain   @StartupsBe   @Sbootcamp   @iMinds   @BeTech_   @Allied4Startups   @STARTUPLISBOA   @FinTechVBProfiles
<b>SME Multipliers</b>	@EIT_Digital   @UEAPME   @innovateuk, @techUK   @BITMi   @Swedishenterp   @Kommerskoll   @VNO_MKB_Brussel   @isme_ie   @ISBC_global   @EEN_EU   @AlternativaPME   @Irish_Biz   @AgorianI   @AMETIC_es   @EstoniaInvest   @EUBIC
<b>Standards Multipliers for SMEs</b>	@sbs_sme   @Standards4EU   #Standards4SMEs

<b>Media Channels</b>	@BusinessZone   @BizMattersmag   TechCityNews@
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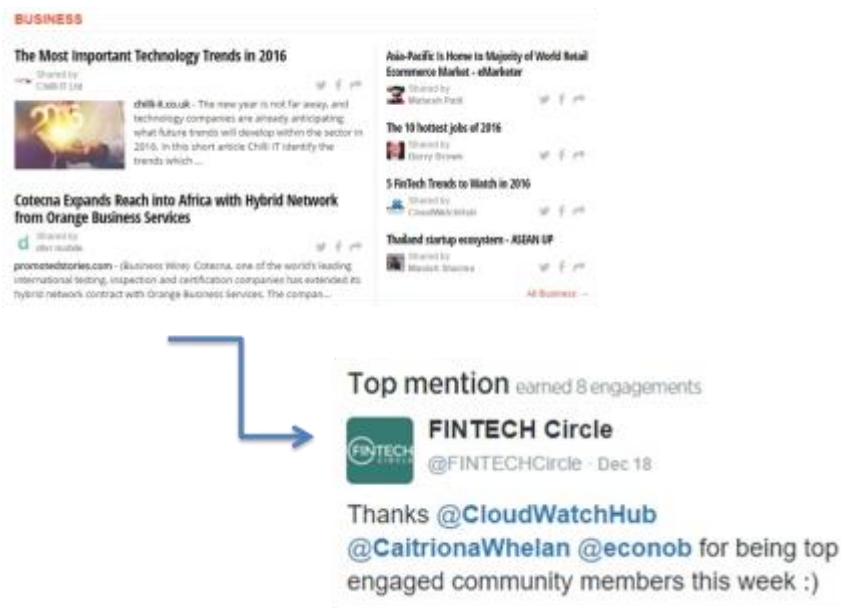
Since the start of CloudWATCH2, we have actively engaged with businesses and business multipliers, thereby increasing the business network, which is key for promoting the SME tools, as well as the software and services for SMEs coming from European projects.

Figure 10: Top Business Follower



An example of the impact this outreach for European start-ups is illustrated in the figure below. In this case, a reference to CloudWATCH2 in a twitter-generated newsletter helped to maximise

Figure 11: Top Mention November 2015



As stated in section 3.3.2, small businesses and large companies make up 44% of the CloudWATCH community. Included in this figure are over 30 multiplier organisations who are key for highlighting and

publicising benefits of CloudWATCH tools and services to their respective communities in the remit of CloudWATCH2. These are listed below:

**Startup and SME multipliers:** UEAPME, PIN-SME, EIT Digital, Enterprise Finland, BiTMI – German IT association for SMEs, Enterprise Sweden, iMinds, Dutch Federation of Industries, Employers and SMEs, SME Association Catalonia, Spanish Federation of SMEs, ISME (IE), Irish Business Network, ERRIN network, Enterprise Flanders, Enterprise Ireland, Innovate UK, EuroCloud (Germany & Slovenia), Startup Belgium, Digital Catapult, ACE\_Accelerator, ICT Hungary, b-ventures, Startup Portugal, Startup UK, Funding Box, IC Tomorrow, Upshapers (AT), Ametic, techUK, Agoria, Tech Industry (FI), IVSZ (HU), ITAS (SK), DSiN (DE)

### Direct email Marketing (DEM) Campaigns

To further our reach to European SMEs, we will implement a series of DEM campaigns. Leveraging tailored content published both for the CloudWatchHUB and other outreach activities, compelling messages will be sent using internationally renowned marketing agencies who specialise in this. Campaigns will reflect project timelines and outputs to ensure strong impact of results targeting an SME audience.

## 3.4 Government

CloudWATCH2 facilitates governments and public administrations in their investigation into cloud services and ensuring they make an informed decision through a suite of tools and practical guides, spanning Cloud security certifications, PICSE Wizard: procurement for public research organisations, Standards for trusted public clouds, Guide to Risk management, User stories, Cloud, software and services for public authorities.

### 3.4.1 Core Messaging and Channels

The box below provides a sample of the messaging for government and public authorities.

#### Box 1: Core Messaging for public organisations

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*Public and private sector organisations are increasingly adopting cloud computing in a shift away from in-house IT approaches towards outsourcing to large cloud service providers. Evidence suggests that in a couple of years, around 80% of organisations will be dependent on cloud computing.*

*Cloud services also enable and simplify citizen interaction with government by reducing information processing time, lowering the cost of government services and enhancing data security. Governmental Clouds offer to public bodies, including ministries, government agencies and public administrations (PAs), the potential to manage security and resilience in traditional ICT environments and strengthen their national cloud strategy<sup>16</sup>.*

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<sup>16</sup> <http://www.cloudwatchhub.eu/taxonomy/term/94>.

The figure below shows the revamped section of user stories for government and public administrations as part of the CloudWATCH communication plan. The current set of user stories also features services and solutions from EU projects such as MobiCloud.

Figure 12: User stories for government and public administrations

**Peterborough City Council Cloud First Strategy**



Peterborough City Council is adopting a cloud first strategy to help tackle one of the biggest challenges facing the public sector today - huge budget cuts.

[Read more](#)

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**MobiCloud and TBAK user-centric agile project delivery**



TBAK is a Swedish rail operator that wanted to take full advantage of mobility to increase efficiency and reduce costs. MobiCloud enabled TKAB to use the cloud and build cross-platform and context capabilities.

[Read more](#)

### 3.4.2 Channels and community

The table below provides a sample of channels targeted around governments and public administrations, including EU projects that are creating services and software for the public sector.

Table 10: Sample of channels for government

<b>Government channels</b>	@EU_gov   @GovComputing   @PublicTech   @gov_procurement   @GOVUKdigimkt   #DigitalServices   @viEUws   @PublicHealth #digitalsinglemarket
<b>Synergies</b>	@CloudforEurope   #CloudForEurope <a href="http://www.cloudforeurope.eu/">http://www.cloudforeurope.eu/</a>
<b>Standards</b>	@usnistgov   @ISOstandards   @IECstandards   @OASISopen

With less emphasis on this target group in both CloudWATCH and the first months of CloudWATCH2, this community makes up 20% of the community database.

## 4 CloudWatchHUB.eu Sustainability

In order to stay fit for at least the next five years, the CloudWatchHUB will need to be maintained as “the” on-line source of objective information in Europe for everything related to cloud services for businesses, governments or other public institutions. To achieve this objective, the hub will need to keep being highly relevant, insightful and up to speed on trends as they evolve over time and as new legislation comes into force. Therefore, all content produced on the CloudWATCHhub.eu platform needs to support the sustainability of the project.

CloudWATCH set out a sustainability plan which is now being put into action in CloudWATCH2 so that the CloudWatchHUB can become self-sustained beyond the lifetime of the project.

The following actions will be carried out in the lifetime of the project. The immediate sustainability of the CloudWatchHUB is secured through the CloudWatch2 project, however, in this time a clear sustainability action plan must be put into place to ensure a smooth and painless transition to self-sustainability at the end of the project.

In year 1 CloudWatch2 will identify potential revenue streams, such as pay-use-services, sponsor packages of services and advertising space or other commercial agreements and define the necessary steps for the business model, which will be based on the 9 elements of the Osterwalder canvas.

The beginning of this phase will be important for carrying out actions related to the business model definition, such as:

- Impact analysis of [www.cloudwatchhub.eu](http://www.cloudwatchhub.eu) from a market perspective and assessment of competitor websites, defining the CloudWATCH hub value proposition.
- Review of the maintenance and operational costs, including staff and hosting costs based on different scenarios (e.g. different revenue streams coming from sponsors, advertisers etc.). The costs of the [cloudwatchhub.eu](http://cloudwatchhub.eu) are estimated to be about 0.5 FTE for content management and 0.25 FTE for ICT support and maintenance. In addition to this, hosting costs are in the order of around four thousand euro per year. These are the costs that will need to be covered for sustainability in the long term.
- Business model building blocks: definition of the final value proposition and analysis of customer segments, customer relationships, channels for reaching the customer, key activities and resources (services and assets required), revenue streams, cost structure and partnerships. Channels should ideally be multipliers that can increase customer reach, e.g. small business associations.
- Database of potential sponsors, advertisers indicating reasons for selection and recruitment processes.
- Identification of Champion users of our services who can promote these to the networks. These should be influential figures to whom SMEs will take note of. For this we will create a set of tailored “champion packs” which in short will explain CloudWatchHUB services and the benefits for stakeholders. Champion users will also be examples of success of tools that can in turn be showcased.
- Provide use of services to external bodies such as SME associations or support bodies such as EIT Digital, and national trade associations such as Ametic and Tech UK.
- Get outside help from external experts in order to validate and evaluate services and business model.

Each partner has in mind how it can already serve its clients through targeted information issued through the website.

**Trust-IT** will keep abreast with the latest market innovations and governance changes to provide state of the art services to our commercial clients in the area of cloud service procurement and development and cloud based applications. Results from the Cloudscape Series events will provide quality insights for the

website including information on SME needs and best practices regarding SLAs and advances in cloud computing and IoT. Promotion of CloudWatchHUB which offers a platform for European excellence and supporting the drive towards a trusted cloud ecosystem by promoting best practices and consumer freedom will help maintain and extend relations with relevant SME organisations.

**UOXF** will host and maintain the Cloud landscape clustering tool which helps projects or organisations to measure technical priorities based on the NIST definition of cloud computer and identify other initiatives with similar priorities which can lead to collaboration and sharing of results. Results also form the basis for the definition, validation and extension of cloud standard profiles which encourage the adoption of open cloud standards thus helping in the provision of more trusted cloud services. By pursuing this asset, and events such as the standards adoption deepdives and cloud interoperability plugfests, UOXF would be able to identify and support private sector interest in working with and exploiting European R&D research results. More generally, we will use CW2 outputs as a baseline and/or early insights for companies (users and infrastructure providers) to help them develop their own adoption roadmap through various, on-going collaborative ventures we are involved in.

Leveraging outputs for **CSA** work in the area of risk profiles will complete the existing research product suite with a missing piece (Risk profiling). Specifically, it will support current findings in the areas of governance, risk and compliance (e.g. projects such as Cloud Control Matrix (CCM), Consensus Assessment Initiative Questionnaire (CAIQ), Cloud Trust Protocol (CTP), Cloud Audit, Open Certification Framework (OCF), Security, Trust & Assurance Registry (STAR) and Privacy Level Agreement (PLA)). CSA will include documentation from ICT Legal in the CSA Legal Information Center (CLIC). The work on standards, especially the analysis of existing gaps, will be used to propose to ISO/IEC SC27 and SC38 period studies on new standards proposals through the CSA International Standardisation Council. Finally, the results of CW2, especially in the area of standard, legal recommendation and risk profiling, will be used to assess the viability and need of new research endeavours for the CSA community.

**Strategic Blue** has been pioneering this maturation of the cloud computing market structure for 4 years now, and has seen its expertise embraced by various consulting clients in Europe and the US. The roadmap, published on the CloudWatchHUB, will help parties better understand the benefits of a more sophisticated and mature market structure, accelerating its development. This will also allow Strategic Blue to grow its business and expand into offering more sophisticated financial products for its clients, which require this greater pricing transparency in the market.

Through legal guidelines and events, **ICT Legal** offer a platform for educating businesses on how and what to consider on the legal side before entering into a cloud service agreement. This will help companies and European SMEs that wish to enter into cloud service agreements and benefit from cloud advantages. European cloud customers, cloud providers and cloud users will benefit from awareness of best practices and from greater transparency. Public and private sector organisations will benefit from important legal knowledge and practical recommendations on contractual and data protection aspects related to cloud services.



## 5 The Roadmap to a cloud market structure encouraging transparent cloud pricing

The preliminary version of the Roadmap asks the question, “What could possibly go wrong?” with respect to the IaaS market. The Roadmap draws on numerous diverse analogies to other markets that have suffered crises, and what strategies have proved effective in mitigating risks of market shocks. This preliminary version tries to identify where similar circumstances may be materialising in the cloud computing market. Following this, preliminary version, the consortium will consult widely with cloud market stakeholders assess whether concerns are ill-founded or being addressed.

WP4 will deliver an overview on how the cloud computing market structure could be encouraged to develop in order to become more efficient, fairer, more resilient to market shocks and generally more open to competition, providing savings for end users, including for R&D projects. The output will be a preliminary and then a final Roadmap to a Cloud Market Structure encouraging Transparent Cloud Pricing.

In preparation for release of the Preliminary version of the Roadmap, CloudWatch2 will present the groundwork for its analysis to a primarily European audience at the Helix Nebula Event in Heidelberg in January 2016 and at CloudScape in Brussels in March 2016. Feedback from the participants, all of whom will be under NDA, will be used to judge the appropriate level of detail to release in the draft Preliminary version of the Roadmap. This draft Preliminary version will be circulated to a small number of major cloud providers, specifically those that are seeking to grow their market share, but are not currently seen as incumbents. We will seek their specific feedback, as our intention is that the recommendations of the roadmap, whilst to the advantage of everyone, will help those players the most, as their growth would help balance the market.

Following publication of the formal CloudWatch2 published preliminary Roadmap, consortium members will be encouraged to write blog posts and other content talking about the issues raised in the Roadmap. There are likely to also be opportunities to speak about the Roadmap results as a result of these efforts. Towards the end of the project, a final version of the Roadmap will be produced. This will report on how the situation has evolved in the cloud market since the launch of the preliminary version, in terms of projects and initiatives that have continued or been initiated, related to the issues raised in the roadmap.

## 6 CloudWATCH2 Experts

CloudWATCH2 Experts contribute on an ad-hoc basis to different activities during the project such as interoperability cloud plugfests (T2.2), security and legal weeks (T3.3 & 3.4), and in particular the cloud market roadmap (T4.3). Experts are contacted to provide consultation and strategic advice when required. They may also be invited to contribute to CloudWATCH2 events such as interoperability cloud plugfests. A number of experts were identified at the beginning of the project to contribute and are listed below. This list may change during the course of the project depending upon the needs of the consortium.

Table 11 CloudWATCH2 Experts

Bob Jones, CERN & coordinator, PICSE Expertise: Cloud for research & procurement of cloud services for research organisations (WP4)	David Bernstein, Cloud Strategy Partners & IEEE Cloud Computing Expertise: Standards & interoperability (WP3)
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Kuan Hon, Centre for Commercial Law Studies, Queen Mary University of London Expertise: Legal recommendations (WP3, T3.4)	Janne Jarvinen, EIT Digital Expertise: Cloud for SMEs and start ups (WP3 & 4)
Alan Sill, University of Texas & OGF Expertise: Standards & cloud interoperability plugfests (WP3, T3.2)	Linda Strick, Fraunhofer FOKUS & Cloud4Europe Expertise: Cloud for government (WP3, T3.3 Risk profiles)
Said Tabet, EMC Expertise: Security standardisation (WP3, T3.1)	Cedric Thomas, OW2 Consortium Expertise: Open Source Software (WP2)

The roadmap (D4.2 & 4.3) is a key output of WP4 and the project. A list of experts who can provide advice on content has been drawn up at the beginning of the project

Given that we feel that its content is potentially of a controversial nature, Experts have been given the option to provide a greater level of feedback anonymously, hence we do not provide their names here. These experts are drawn from the full spectrum of relevant market participants, from policy experts at leading cloud providers, through major cloud buyers, cloud resellers to those starting to look at regulating the cloud market. Our objective is to seek expert advice globally, with input from various EU countries, US and Australia.

## 7 Log Table

DOCUMENT ITERATIONS		
v0.1	Version 1 of document	Stephanie Parker & Nicholas Ferguson Silvana Muscella Trust-IT
v0.2	Internal review	Lucio Scudiero, ICTL
v0.3	Internal review & addition of section 4	James Mitchell & Frank Sullivan, SB
V0.4	Internal review	Silvana Muscella, Trust-IT
V0.5	Version for PMB approval	Nicholas Ferguson, Trust-IT
vFinal	Approved by PMB	Nicholas Ferguson, Trust-IT