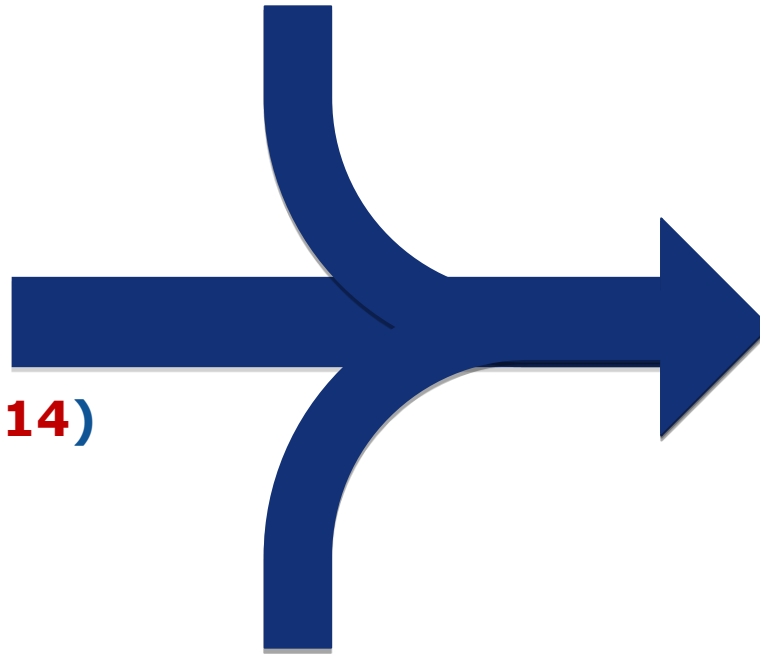# Concertation meeting summary
11 September, 2014

David Wallom, University of Oxford & CloudWATCH

H2020 WP2016-2017 preparation

Internal EC consultation

Public consultation (Sept 2014) Workshop (Nov 2014)

Adoption: Q3 2015?

H2020 WP2016-2017 ICT?, ICT?, ICT? … EUJ? EUB? EUK?

Other sources: reports available at public consultation website, outcome of CloudWatch concertation

Further information

- http://ec.europa.eu/digital-agenda/en/news/public-consultation-cloud-computing-and-software-engineering

- Please disseminate and encourage contributions

Objectives of the Break-outs

- Topics informed by the 45 submitted position papers
- Discuss on research topics about software engineering for future WP 2016-2017
    - What should be funded in next calls?
- Consolidate discussion in set of concrete recommendations
    - Concentrate on few but strong topics to avoid dispersion on the discussion
- Not focused on your own projects
    - But leverage on them as current research

Open Source Research

Recommendation	Why is this a priority	Timescale	Impact	Security / Risks
Foundation (main outcome)	**Need to attract interest and promote sustainability and exploitation; need for curated, stabilized and evaluated projects;**	**Repository; marketplace; dashboard;** **Roadmap for a foundation;**	**Facilitate access to quality curated projects that grow out of EU projects. Build something that endures will benefit all stakeholders;**	
Quality and Risk Assurance	We need quality metrics to start adoption and evaluation (for adoption and procurement) Governance is a requirement for establish tools and processes; responsibility (ownership , maintenance, and support);	Metrics;	Support, long-term relationships,	
Procurement	Help stakeholders find and use quality software			
Software Patents	Implementation of open source projects faces threats from patents (due to implementation restrictions); previous/pre-existing patents.	Long-term view; political plane; Should be an awareness topic;	May prevent or hinder software development.	Not a big issue in EU, but it's not airtight (US).

Software Engineering Research

Recommendation	Why is this a priority (Challenges or gaps)	What technological innovation is needed	Impact on market	Main beneficiary
Software behaviour prediction supporting decisions in development process	Large investments (effort and cost) on SW development that afterwards is not complaint with requirements Lack of decision support for developers in selecting the right path in development choices To foster reusability and other n-bilities Reducing the cost of making the n-bilities decision and trade offs	Models, (Dynamic) metrics and supporting tools for concepts such "technical debt", "requirements testability"	Saving investments costs in SW development Reduce risk in SW dev decisions Reduce time the market for SW transition	SW developers companies Technology companies
Adaptive software design triggered by events (data, infrastructure, apps, etc) and non-functional requirements (policy changes adaptation, i.e.) at run-time	Software is not context-aware for now Build a more efficient software from different aspects (energy, scalability, flexibility, privacy, etc) Supporting decisions at run-time Lack of control of execution environment	New design patterns Software engineering processes (programing and data models) and development processes Simulation tools	Easier and cost-effective software operation and maintenance Broader offering since it is not coupled anymore to infrastructure	End-Users SW developers companies Technology companies

Cloud Computing Research

Recommendation	Why is this a priority (Challenges or gaps)	What technological innovation is needed	Impact on market	Main beneficiary
Trust	Enable increasing cloud adoption	Tradeoffs between security and privacy/perf (client/host). Real-time threat analysis and presentation, accountability, dynamic/usable certification, data IPR	Market growth and jobs.	All stakeholders
Disruptive Applications and usage patterns	Drive the changes beyond resource sharing services, disparate data sources and sinks (IoT, Mobile, Gaming, data science ...) getting people to interact in any ways, e.g. Social networks, social interaction	Customization, self-adaptation, responsiveness (highly), self*, application driven cloud management (sensitivity), interoperability, data gravity/mass	Enhanced enabling power. Engage new cloud consumers	All stakeholders

Cloud Computing Research

Theme	Why is this a priority (Challenges or gaps)	What technological innovation is needed	Impact on market	Main beneficiary
Dynamic real-time Hetergeneous clouds	Hybrid, multi, federated, portability of data and applications	Dedicated design patterns, programming models, Performance, management, benchmarking/metrics, [policies, economics and legal ramifications]	More choice, better competition, clear gain for small players	SMEs, public administrations
Cloud Operations	Providing large scale cloud is still restricted to small no. players	Datacentre relevant customization, self-adaptation, (highly), self*, automation, equipment interoperability, monitoring, energy efficiency, responsibility	Simplifying provision of cloud services, multiple layers from the same provider	Consumers[users of cloud] through more choice, providers{simplification and cost reduction of operation], private cloud more simlar to public cloud enabling easier transition
Business models	Engage new users	Not only technology but models and processes to apply new apps and deliver new services	Engage new cloud consumers (EU + local)	European citizens

Information

◆ Great work is already on going

◆ Getting this to the consumer and possible beneficiary of this is still a challenge

◆ Cloudscout, Cloud Catalyst, others all about getting information from the user/consumer

◆ Need to ensure we can get the information to the user/consumer

CloudWATCH Cloud plugfest

- Have you implemented open standards?
  - E.g. OCCI, CDMI, OVF, TOSCA?
- Are you up to the challenge of testing it against others?
- Take the opportunity to influence standards?
- Test with people locally, and worldwide!

- Participation is free!
- http://www.cloudwatchhub.eu/cloudwatch-cloud-plugfest-and-standards-profile-workshop

25 September 2014, Amsterdam, NL