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DRAFT REPORT

on unleashing the potential of cloud computing in Europe
(2013/2063(INI))

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on unleashing the potential of cloud computing in Europe

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The European Parliament,

- having regard to the Commission communication of 27 September 2012 entitled ‘Unleashing the potential of cloud computing in Europe’ (COM(2012)0529) and the accompanying working document,
 - having regard to the Commission communication of 3 March 2010 entitled ‘Europe 2020: a strategy for smart, sustainable and inclusive growth’ (COM(2010)2020),
 - having regard to the Commission communication of 19 May 2010 entitled ‘A digital agenda for Europe’ (COM(2010)0245),
 - having regard to its resolution on a new digital agenda for Europe: 2015.eu,¹
 - having regard to Decision No 243/2012/EU of the European Parliament and of the Council of 14 March 2012 establishing a multiannual radio spectrum policy programme,
 - having regard to the Commission’s proposal of 25 January 2012 for a Regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) (COM(2012)0011),
 - having regard to the Commission’s proposal of 19 October 2011 for a Regulation of the European Parliament and of the Council establishing the Connecting Europe Facility (COM(2011)0665),
 - having regard to the Commission’s communication of 3 March 2010 entitled ‘Europe 2020: a strategy for smart, sustainable and inclusive growth’ (COM(2010)2020),
 - having regard to Rule 48 of its Rules of Procedure,
 - having regard to the report of the Committee on Industry, Research and Energy and the opinions of the Committee on Legal Affairs and the Committee on Civil Liberties, Justice and Home Affairs, the Committee on Economic and Monetary Affairs and the Committee on the Internal Market and Consumer Protection, (A7-0000/2013),
- A. whereas remote computing services in various forms, now commonly known as ‘cloud computing’, are not new;
- B. whereas cloud computing has nonetheless attracted attention in recent years owing to the development of new and innovative large-scale business models, a strong push by cloud

¹ Texts adopted, P7_TA(2010)0133.

vendors, increased computing capabilities, lower prices and high-speed communications, as well as to the potential economic and efficiency benefits that cloud services offer all kinds of users;

- C. whereas the vendor benefits of cloud services consist of e.g. service fees, monetisation of excess computing resources and the possibility of a captive customer base and of secondary uses of user information, such as for advertising;
- D. whereas the user benefits of cloud services consist of potentially lower costs, convenience, reliability and security;
- E. whereas the cloud also brings risks to users;
- F. whereas cloud services oblige users to hand over information to third party providers, raising issues relating to the continued control over and access to the information of individual users and its protection against the provider itself, other users of the same service and other parties;
- G. whereas the increased use of cloud services provided by a limited number of large providers means that increasing amounts of information is aggregated in the hands of those providers, thus magnifying their efficiencies, but also increasing the risks of catastrophic losses of information and of access to the information by third parties;
- H. whereas the market for cloud services appears bifurcated along consumer and business lines;
- I. whereas for business users, standardised cloud services can, if they meet the particular needs of the user, be an attractive means of converting capital cost to operating expense and of enabling fast availability of additional storage and processing capacity;
- J. whereas for consumers, the fact that providers of operating systems for various types of consumer devices, in particular, are increasingly steering consumers – through the use of default settings, etc. – towards using proprietary cloud services means that these providers are creating a captive consumer-base and aggregating the information of their users;
- K. whereas the use of external cloud services in the public sector has to be weighted carefully against any increased risks with regard to information on citizens and against the ensured performance of public service functions;
- L. whereas, from a security perspective, the introduction of cloud services means that the responsibility for maintaining the security of information belonging to each individual user is shifted from the individual to the provider;
- M. whereas the achievement of Europe’s Digital Agenda targets, in particular broadband uptake and access, cross-border public services and research and innovation goals, is a necessary step if the EU is fully to reap the benefits that cloud computing has to offer;
- 1. Welcomes the Commission’s communication on unleashing the potential of cloud computing in Europe;

2. Underlines that policies enabling high-capacity and secure communications infrastructure are a crucial element for all services relying on communications, including cloud services, and regrets the Council's proposed cuts to the budget for Union broadband funding;
3. Underlines that cloud services must offer security and reliability commensurate to the increased risks flowing from the concentration of information in the hands of a limited number of providers;
4. Underlines that Union law should be neutral and, absent compelling reasons of public interest, not be adapted to either facilitate or hinder any legal business model or service;

The cloud as an instrument for growth and employment

5. Emphasises that, given the economic potential of the cloud for increasing Europe's global competitiveness, it can become a powerful instrument for growth and employment;
6. Highlights that the Union faces multiple, simultaneous pressures on GDP growth at a time when the scope to stimulate growth from public funds is limited by high debt and deficit levels, and calls on the European institutions and the Member States to mobilise every possible growth lever; notes that cloud computing can become a transformative development in all sectors of the economy, with special relevance in areas such as health care, energy, public services and education;
7. Stresses that unemployment, including youth and long-term unemployment, has reached unacceptably high levels in Europe and is likely to remain high in the near future, and that determined and urgent action is needed at all political levels; notes that e-skills and digital education actions in cloud computing development can, consequently, be of extraordinary importance in order to tackle the rising unemployment, especially among young people;
8. Highlights that SMEs are the heart of the EU's economy and that more actions are needed to promote the global competitiveness of EU SMEs and to set the best possible environment for the uptake of new promising technological developments, such as cloud computing, that can have a high impact on the competitiveness of EU businesses;

The EU market and the cloud

9. Stresses that the internal market should remain open to all providers complying with Union law, as the global free flow of services and information increases the competitiveness of and opportunities for Union industry and benefits Union citizens;
10. Regrets the indications of massive, pervasive and indiscriminate governmental access to information related to Union users stored in third country clouds;
11. Insists that, in order to counter the risk that information is accessed directly or indirectly by foreign governments where such access is not allowed under Union law, the Commission shall:
 - (i) ensure that users are aware of this risk, including by supporting the European Network and Information Security Agency (ENISA) in activating the public interest information

platform in the Universal Service Directive, and

- (ii) sponsor research in technologies, including encryption, enabling users to secure their information in an easy way;
- 12. Approves the Commission's ambition to develop a coherent approach to cloud services;
- 13. Calls on the Commission, in cooperation with Union industry and other stakeholders, to identify areas where a specific Union approach could prove particularly attractive globally;
- 14. Emphasises the importance of ensuring a competitive and transparent Union market in order to provide all Union users with secure, sustainable, affordable and reliable services;
- 15. Underlines that all cloud providers operating in the Union must compete on an even playing field, with the same rules applicable to all;

Public procurement and the cloud

- 16. Stresses that the take-up of cloud services by the public sector has the potential to reduce costs for public administrations and provide more efficient services to citizens, whilst the digital leverage effect to all sectors of the economy would be extremely beneficial;
- 17. Encourages public administrations to consider safe, reliable and secure cloud services in IT procurement, while underlining their particular responsibilities with respect to protection of information relating to citizens, accessibility and continuity of service;
- 18. Calls, in particular, on the Commission to consider making use of cloud services, where appropriate, in order to provide an example to others;
- 19. Calls on the Commission and the Member States to speed up the work of the European Cloud Partnership;

Standards and the cloud

- 20. Calls on the Commission to take the lead in developing and promulgating standards and specifications supporting a safe, reliable and secure cloud;
- 21. Insists that standards should enable easy and complete portability and a high degree of interoperability between cloud services;
- 22. Welcomes the mapping of standards that has been entrusted to the European Telecommunications Standards Institute (ETSI), and highlights the importance of continuing to follow an open and transparent process;

Consumers and the cloud

- 23. Calls on the Commission to ensure that consumer devices should not make use of cloud services by default;

24. Reminds the Commission of the unused possibility, under Directive 1999/5 (the RTTE Directive), for it to require that equipment incorporates safeguards protecting users' information;
25. Calls on the Commission to ensure that the consumer, when prompted to accept or is otherwise offered a cloud service, is first given the information necessary for an educated decision;
26. Stresses that the information thus provided should identify, among other things, who the ultimate provider of the service is and how the service is financed; stresses, furthermore, that if the service is financed by using users' information to target advertising or enable others to do so, this should be disclosed to the user;
27. Stresses that the information should be in a standardised, easily comprehensible and comparable format;
28. Instructs its President to forward this resolution to the Council and the Commission.

EXPLANATORY STATEMENT

All over the world companies are increasingly realising the gain of productivity they can achieve by easily accessing the best performing business applications and/or drastically boosting their infrastructure resources at affordable costs. In this regard, estimates from the European Commission calculate that by 2014 cloud revenue can reach 148.8 billion and that 60% of all server workloads will be virtualized.

The economic and commercial prospects of the cloud are indeed promising and there is consequently a business case for its development, which in practical terms means that with or without Europe's intervention cloud computing will continue to develop in one way or another.

In the past the Union institutions have taken some welcome but small steps, such as when the European Commission published the 2010 Communication 'Towards interoperability for European public services' and the ENISA report on the main security issues related to the cloud.

Consequently the presentation of the Commission's Strategy for cloud computing is welcomed. However, we must not forget that when developing any strategic framework of action, and in particular this future cloud computing strategy, we have to try and be as horizontal as possible without taking for granted any circumstances that might not seem to directly affect its development.

Accordingly, infrastructure policies are crucial: strong fixed and mobile communication networks are prerequisite in order to grasp the full potential of the cloud and consequently the rapporteur regrets that the Connecting Europe Facilities communication and more specifically the proposed regulation on Guidelines for Trans European Telecommunications Networks, which are welcome steps that have the capacity of boosting much needed investment into broadband networks in Europe, will not be able to perform adequately if they are not provided with proper financial resources.

On the other hand, due to the strong commercial nature of cloud systems, the future strategy must address a wide number of aspects that range from technological issues related to cloud systems development, management and elastic scalability, without forgetting the flexibility that any ICT development needs in order not to hamper innovation when addressing standardisation matters, to non-technical issues such as legal aspects related to data privacy and security that pose a major obstacle towards wide uptake of cloud infrastructures.

With regards to these last aspects: the proposed data protection regulatory framework now being debated in Parliament is welcomed due to the urgent need -as demanded in Parliament's own initiative report on a Digital Agenda for Europe- to adapt the 1995 regime to the digital society. It is however crucial that the final outcome does not impide the development of new and state of the art cloud services, and promote its uptake. In this respect it is important that the data protection framework establishes a clear delimitation of the roles and responsibilities of the controller and processor-. Furthermore, the recently proposed directive on network and information security is also welcomed.

These are crucial aspects; we must not forget that the Cloud, due to its outsourced nature, adds an extra feature of insecurity to our perception of security and data protection. In this respect, the World Economic Forum has noted that 90 percent of suppliers and users of cloud services think that risks to privacy are a ‘very serious’ impediment to wide adoption of cloud computing.

In addition, Europe should stimulate research and technological development in the area of cloud computing. Europe’s excellent background in key research and development aspects, such as GRIDs and Service Oriented Architectures, can give the EU a competitive advantage. Consequently, Horizon 2020 should play a major role.

With regards to the concrete action lines of the Commission’s communication, the following can be underlined:

1. Cutting through the jungle of standards:

This is a fundamental aspect. At the end of the day users must be able to change their cloud provider in a fast and secure manner. In other words: complete portability, a high degree of interoperability and open specifications are essential. Efforts must be invested in eliminating the lock-in of customers. Consequently the mapping of existing standards entrusted to ETSI is, at this stage, a good start. But it must be guaranteed that the process is as open and transparent as possible. Also the Rapporteur believes that cloud standards are by definition of a global nature, and no region of the World can go about globally-applicable standards in isolation. Europe must focus on maximizing the opportunities for its SMEs and consumers in the global market. We need standards that have the capacity of becoming worldwide standards.

In addition ENISA can also play an important role and the Rapporteur agrees that it should assist the development of EU-wide voluntary certification schemes for cloud computing, meeting the deadline set in the Communication of establishing a list of such schemes by 2014.

2. Safe and Fair Contract Terms and Conditions.

In spite that the Common European Sales Law deals with ‘digital content’ contracts for consumers and small firms, an instrument might be needed to deal with other aspects, specially data location and transfer -utmost account should be taken of the Article 29 Working Party opinions-, and common contractual terminology.

The underlying principle in this key action should nevertheless be that the cloud offers different services and business models ‘*One size does not fit all*’. Consequently, when establishing ‘safe and fair contract terms’, it is clear that contracts between business and consumers are of a substantially different nature than those between businesses. Likewise, challenges public administrations face when embracing cloud services differ greatly from those of regular consumers. In other words, different clouds respond to different needs and challenges. Contract law should however be able to accommodate all aspects,

3. Promoting Common Public Sector Leadership through a European Cloud Partnership.

The Rapporteur believes that the public sector, including the Commission itself, must take the lead. Not just because of the gain of productivity that can be achieved by easily accessing the best performing applications and technologies at affordable costs, but because in addition citizens would be able to benefit from more efficient and innovative public services. By way of an example, the prospects with regards e-health, education and transport services are enormous.

The cloud partnership is a welcome tool, however we must move up a gear. There is an urgent need for a high degree of coordination and to avoid the serious risk that in a near future the public sector market will be even more fragmented, as with the eID, where no real coordination took place when Member States started to develop their different national systems.

The Rapporteur believes that in order to fully reap the benefits of cloud technology and maximise use of resources, the public sector should be the motor due to its size and presence in almost every sector across Europe. We must insist that public administrations undergo their ‘digital switchover’, and start, in a proactive manner, coordinating their initiatives immediately.

Likewise European institutions must also without further delay start evaluating the possibilities and challenges that cloud technology has to offer them. Due to the many complex questions that must be answered (budgetary structural constraints, possible lack of market development, clarification of internal security aspects etc), the Institutions must elaborate a strategy for the European institutions.

Cloud computing and the Digital Single Market

The full development of cloud computing has a strategic importance in the completion of the digital single market. In that sense the cloud strategy touches upon many aspects that affect the need for higher convergence, and eventually, harmonisation, in order to eliminate all the existing barriers in for example: broadband deployment, spectrum allocation, consumer protection, IPR, data protection, specific product regulations, and payment transactions.

Consequently, the development of the Cloud in Europe has an extraordinary potential of becoming a powerful accelerator to the completion of the digital single market.