

# FH 'TECH SPOTLIGHT' N.6

## ICTs' New Frontier

### — Cloud Computing



Cloud computing is one of the most exciting developments in the IT world. Broadly defined as internet-based on-demand computing, the benefits of cloud computing to businesses and governments are unprecedented. The market value of cloud computing in terms of cost savings, efficiency increase for customers and market gains for cloud service are already worth billions of euro and will only continue to grow. It is therefore no surprise that the world's largest ICT and technology companies are allocating significant resources in their cloud capabilities, investing in new and massive data centres, developing new forms of cloud services and establishing new business models. However, despite the rapid growth of cloud computing, the market remains nascent and there are still numerous technical and regulatory challenges that need to be addressed in Europe before cloud computing can develop into a fully mature market.

This paper from Fleishman–Hillard offers a snapshot of the regulatory challenges that face both providers and users of cloud services in Europe and that business need to be aware of as they expand into this new frontier.

#### CLOUD COMPUTING—THE BUSINESS CASE

Cloud computing is not based on a new technology; rather it is the natural development of pooling and harnessing processing power to offer flexible and cost effective IT infrastructure and services. It essentially allows individual users to access their data and applications from any connected device. The economic impact for business, especially SMEs and small start-ups, is unprecedented as it allows businesses and organisations reduce their capital costs by purchasing their software and hardware (data servers) as a utility service. This gives business the flexibility to pay per use and avoid under-utilisation of its computing resources. Moreover, cloud computing eliminates IT infrastructure as a market differentiator and reduces market entry barriers, thereby promoting creativity and growth in a sustainable way. Clouds are more or less

infinitely scalable, which gives business better control over their expenditure by shifting costs from CAPEX to OPEX and avoids costly asset acquisitions and expensive maintenance costs. Cloud computing can also have a positive effect in reducing companies carbon footprint as they no longer need to maintain their own energy intensive servers and hardware.

Generally speaking, cloud computing service providers fall into three main categories: software-as-a-service providers; infrastructure-as-a-service providers (vendors that offer web-based access to storage and computing power) and platform-as-a-service providers whereby vendors give developers the tools to build and host web applications.

#### THE WAY FORWARD FOR CLOUD COMPUTING IN EUROPE—SETTING THE REGULATORY AGENDA

A mature and well functioning cloud computing market will not only benefit business, but can play a vital role in Europe's broader economic recovery and achieve the goals and objectives of EU2020 Agenda. Cloud computing can be a key enabler of growth, innovation and entrepreneurship in Europe. However the right legal framework is needed to ensure legal certainty and accommodate the borderless nature of today's business.

There still remain a number of different challenges that need to be overcome to achieve this. Looking at Europe's political agenda, there is currently no single "cloud computing" policy debate or

legislative framework in place. In fact, the European Commission makes hardly any specific references to cloud computing in its recently published ICT Framework Programme (European Digital Agenda). However this Framework outlines an ambitious roadmap to achieve ultra-fast internet access, security, privacy, interoperability, IT skills, and above all, a digital single market; all of which are fundamental requirements for a successful European market for cloud computing, for both users and providers. Industry will have an important role to play and there are many opportunities in the coming months for industry to engage and contribute.

[www.fleishman-hillard.eu](http://www.fleishman-hillard.eu)



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# KEY REGULATORY CHALLENGES FOR CLOUD COMPUTING IN EUROPE

## Legal certainty and obligations

Cloud, by its nature, does not fall under single jurisdiction and is therefore subject to multiple privacy regimes and legal obligations. Diverse implementation and interpretation of European law in areas of data protection, retention periods and security (cyber-crime laws) create significant problems and legal uncertainty for both providers and users.

This issue will become increasingly problematic as laws governing the control and processing of data require new stricter obligations and sanctions for non-compliance. In particular the different data retention periods will need to be addressed either through the introduction of mutual recognition system, or greater harmonization of the retention requirements. Furthermore, clearer definitions are needed in order for cloud computing providers to fully understand their various obligations.

## For your business

*The EU is currently in the process of reviewing Europe's data protection legal framework. The outcome should result in more legal certainty through clearer definitions and greater harmonization. The European Commission has and continues to organise public consultations and hearings and a formal proposal is expected in 2011.*

*Business has an import role to play in the review process and should actively contribute to these consultations. Business should also continuously reach out to the administrative and elected officials in the European Parliament as the review goes forward.*



## Security

Users must be sure that cloud providers have sufficient safeguards and processes in place that ensure their business and personal data

will be secure otherwise they will not use the service. This includes robust identity, authentication and access control mechanisms that reflect the level of sensitivity of the data. Security standards are of particular relevance for companies that store their own sensitive and third party data (i.e. customers data), but also for those whose critical and operational IT infrastructure are run through cloud services. Cloud computing will therefore require new security governance models and processes.

## For your business

*There is currently very little hard law in this area and, as is often the case with disruptive technologies, the law lags behind the technological developments. However, security is one of the focus areas of Europe's Digital Agenda and there are a number of initiatives that will seek to equip and strengthen the security of Europe's critical infrastructure, resilience and vulnerabilities. These include renewing the mandate of the European Network Information Security Agencies (ENISA), a Directive on attacks against information systems and launching a Public Private Partnership on Resilience (EP3R) in 2011. Business has the opportunity to become actively engaged in the formulation of these measures.*

*"Cloud Computing (...) could pose a challenge to data protection as it may involve the loss of individuals' control over their potentially sensitive information"*

European Commission Communication "A comprehensive approach on personal data protection in the European Union", November 2010

*"We need to build trust into the cloud. If we don't build trust into this environment, the business model will not run"*

Udo Helmbrecht, Executive Director of the European Network and Information Security Agency (ENISA), March, 2010

*"This [cloud computing] next generation of computing holds enormous potential to stimulate economic growth and enable business and governments to reduce costs, increase transparency and expand services to citizens"*

Vicky Ford, UK Conservative Member of the European Parliament, February 2010

## Standardisation/Interoperability

Like any IT service, the question of interoperability is paramount. Users want to avoid being "locked-in" by a vendor and there remains a need for the data to be portable. There is currently limited interoperability and standardization between the services offered by the various providers of cloud computing. This is because most commercial tools were developed independently from one another and originally for a company's own internal needs. However, as the market evolves, it will be necessary for the industry to define standards that will enable interoperability across the various cloud service offerings.



## For your business

*Interoperability is one of the key priority areas for European Commissioner for Information Society, Neelie Kroes. She repeatedly reiterated the fact that this will be the key for the ICT sector to truly deliver its added value for Europe. Standardisation and the standard setting process are crucial in achieving this. Industry has an important role to play through the various international and standard setting foras. The debate will centre around how these standards are set: will a US market driven or rather the European upfront approach prevail?*

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