

ICT: FUELLING THE ECONOMY

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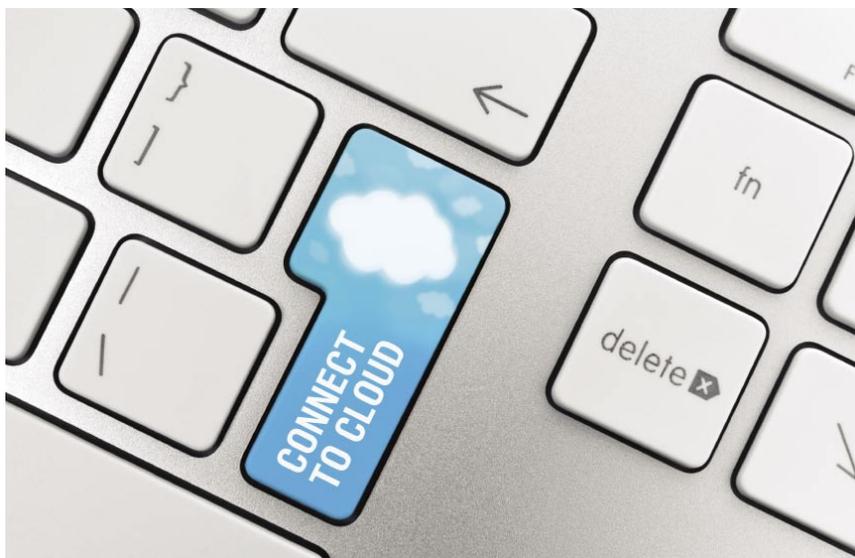
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Kroes: Unleash public-sector buying power on cloud



European institutions and governments should throw their weight behind joint procurement of computing services to encourage the use of cloud computing, says Digital Agenda Commissioner Neelie Kroes.

In an interview with EurActiv, which has also seen other documents spelling out Kroes' strategy for cloud, the Commission vice president signalled she intends to enlist the EU's collective spending power to drive a bargain with cloud computing providers.

Cloud computing enables vast amounts of data to be stored efficiently on off-site servers, enabling corporate computer systems to operate more smoothly.

More procurement strength in common approach

This month, Kroes launched a European Cloud Partnership to promote links between public authorities and industry to overcome problems faced

by government institutions and the private sector in using the new technology.

The partnership aims to tackle obstacles to the use of cloud computing – standards, certification, data protection, interoperability, lock-in and legal certainty all remain troublesome for smaller companies wanting to use cloud.

But Kroes signalled that part of the initiative will involve bargaining hard with cloud providers in order to get the best deal.

Cloud computing is already being used by many in the private sector, despite the challenges, according to Kroes. "And we need to bring the public procurers into play as well in a systematic fashion. The big punch of public procurement should increase competition in cloud supply overall, to everybody's benefit," she said.

In a separate commentary brief, seen by EurActiv, Kroes claimed that EU member states' individual IT

procurement budgets are "too small" to make much of a difference globally.

Teaming up on taxes, welfare

"But together we pull a lot of weight. This should lead to reduced costs for governments who need to deliver efficient and interoperable online services," Kroes argued.

In its first phase, the partnership aims to create common requirements for cloud procurement, she said. The aim was to start "formalise" the common public sector requirements for cloud across member states, regions, and different applications like e-health, tax administration, and welfare payments.

"Building on this the public sector will benefit from simpler procurement of cloud services," Kroes added.

The Commission has launched the partnership with an initial investment of €10 million, and the first results are expected in 2013.

Music industry looks to cloud for new business

Cloud computing is paving the way to access music online legally, boosting new revenues for major and independent labels alike. But in Europe, national licencing systems may pose a hurdle to the development of cloud music, experts say.

Cloud music is quickly becoming a market reality because of the added value that it brings in terms of music portability. Users who subscribe to one of the available services can listen to music stored in remote servers regardless of the devices they use.

Listening to music is gradually shifting from a device-based system (for instance with iPods) to an access-based approach, where what matters is the subscription to so-called digital music lockers, huge libraries stored in the cloud.

The industry welcomes these new developments, as record companies expect a traffic increase on their digital boutiques if customers turn to use the cloud to store or access their music.

"The market is showing that consumers are willing to pay for the portability of music," said Charles Caldas, chief executive of Amsterdam-based Merlin, which represents independent record labels.

Access rather than ownership

Music access is becoming an important alternative to music ownership, as many users now combine listening to high-quality streamed music with actual downloading it.

"The fact that these two models of consumption co-exist speaks volume about the future," said Rob Wells, president of the

global digital business of the Universal record label.

"We have really only scratched the surface of digital music in the last decade. Now we are starting the real mining, and on a global scale," he added.

Many in the industry are thinking that increasing the use of cloud services is a win-win situation for the music industry – major and independent labels alike.

Data support this view. Between 2009 and 2010 sales of music in the cloud services grew by 4.6%. At the same time the digital music industry increased its global sales by 5.3%.

Moreover, cloud music operates through licenced services which make available only copyrighted music, and therefore offers an incentive not to use pirated material.

The main actors

In 2008, a Swedish start-up launched Spotify, which offers access to copyrighted music to its subscribers.

The service is available for free, but for a monthly subscription costing as little as €5 for its cheapest packages Spotify allows unlimited streaming of music and no advertisement. It is a sort of upgraded YouTube where users pay a little fee to have access to higher-quality content, to dispose of content not available elsewhere, and to avoid security problems.

For a €10 fee Spotify also allows its subscribers to directly download music from the cloud to mobile telephones.

Last November Apple's iTunes, the digital music market leader, launched in the United States

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iTunes Match service, which is now slowly making its way in Europe. It offers download of copyrighted content from the cloud to its subscribers.

Other services followed, such as Google Music, which is currently only available in a few countries and not in the EU.

"We have only launched Google Music in the US at the moment and we have nothing to announce about any other countries at the moment - although we are very interested in expanding the service," a Google official told EurActiv.

Legal hurdles for portable music

Despite being praised for giving its users a higher portability of music content, in Europe cloud services face a serious hurdle to turn this pledge into reality.

Spotify, the main actor in Europe, is not present in all EU countries. "I have a subscription in Belgium, but I cannot access my collection when I am in Greece, because Spotify is not operational there," said Kostas Rossoglou, legal officer at BEUC, a consumers' organisation.

But even if a service were available in all 27 countries, subscribers might find themselves unable to access their entire collections. It always depends on licences, which remain a national matter. The same song can be licenced in Germany but not in France, making it impossible for a user to access it once the border is crossed.

A pan-European licencing system would be the solution, but it remains a mirage as collective societies fight for national privileges, raising invisible but very tangible barriers in the theoretically border-less EU internal market.



Cash-strapped regions hesitate to jump on cloud bandwagon



The promise of a leaner, more efficient administration and innovative online services to citizens is making cloud computing an attractive solution for local governments. However, some are still reluctant to jump on the new IT bandwagon, fearing data protection issues and high investment costs.

In times of austerity, European regions are hesitant to invest in new e-government technologies such as cloud computing, even when they're being sold as a cost-cutting tool.

But Microsoft, like others in the online services industry, are keen to point out to studies that show the investment is worthwhile.

Oxford Economics, a leading economic forecasting consultancy, predicts that the EU's GDP could increase by €760 billion by 2020 if the EU matched US levels of investment in ICT. Germany alone expects the creation of 789,400 new jobs in the next five years from cloud computing.

"In times when public authorities are working on tighter budgets than ever before, cloud computing can help regions to increase efficiency and service delivery to citizens while cutting costs," argues John Vassallo, vice president for EU affairs at Microsoft.

Ryan Heath, spokesperson for digital affairs at the European Commission, agrees that cloud computing offers opportunities for regions. "I don't think the cloud on its own can help regions to integrate, but it offers cash-strapped regional governments new and cheaper ways to collaborate and save money and share their best practices and so on," he told EurActiv.

And indeed some regions appear to be ahead of the curve.

For example, the Regional Government of Catalonia in

Spain has re-engineered its IT infrastructure towards cloud computing for 140,000 civil servants. The move helped reduce costs by 75% and is part of a wider effort to deploy private cloud solutions, including a new data centre to support more than 300 government institutions.

Flanders: A success e-story

In Belgium, the Flanders region launched in 2005 a platform called MAGDA - Maximum Data Sharing Between Administrations.

MAGDA handles all data-exchange between the Flemish, federal and local administrations and makes sure that they don't ask citizens to provide information that they have already given to the authorities.

"We started back in 2005, when money wasn't that big a problem. But we made everything very cheap," said Geert Mareels, e-government manager for the Flemish region.

The first project did not cost more than €600,000 and there were only three people in the team. Now they need around €2 million per year to maintain and develop the programme. Plus, all partner agencies have to invest in digitising their own procedures.

"But I do think e-government and ICT prove every day that they're worth the investment," Mareels said.

Moving government services to the cloud allowed Flanders to significantly lower its administrative costs, Mareels said. In one project on distributing child benefits, they replaced over 250,000 paper dossiers with electronic ones, using cloud computing.

Similar results have been achieved for enterprises, regarding the forms needed to participate in government procurement procedures. "The administrations now can collect this data - VAT and social security - themselves, without asking companies to

fetch out a form in another government agency," Mareels said.

While other regional governments are cutting spending, Flanders plans to add new cloud services, such as the launch of a website displaying all enterprises in Flanders on an interactive map.

Mareels expects this to help regions integrate better and promote smaller businesses or inform them about public works projects or traffic disruptions.

The money issue

Despite ambitious projects, the other Belgian region, Wallonia, has not yet got that far. It has a "master ICT plan" to fuel its ambitions, but it doesn't have funds to pay the bill.

Walloons have set themselves targets for 2018, whereby they want 80% of companies to use cloud computing. But when immediate needs such as welfare benefits, housing, healthcare or pensions are calling, the shine of an investment in new concepts such as cloud computing rubs off.

More favourable procurement conditions for cloud computing services could help, said a technical advisor to the Walloon government. "We need a clear direction on what could be done. If not, governments tend to focus on simple money-saving solutions," he said.

The Flemish government agrees that some expenses should be given priority when it comes to investing in cloud. "A medium ICT-project easily costs €200,000 or more. And for that price the government could build a social housing building or buy new equipment for a school," Mareels said. "We have to think what is worthy for the region".

EU help

The EU can help reduce the financial burden by setting the right legislative framework that

will make it safer and reduce risk to encourage investments, said the Walloon official.

But British cloud computing experts in the UK said they moved forward on their own, without waiting for the EU.

It is a matter of trusting the efficiency of the cloud, said the UK government in a statement. "This moves government from attempting to be the architect of bespoke digital solutions to a consumer of widely available and constantly improving mass-market products," the statement reads.

The UK likes to highlight the London's 'Love Clean Streets' online portal that allows Londoners to upload pictures of illegal dumping of graffiti by using a free phone application. The portal allows administrations to know about the graffiti and makes citizens more involved in their communities.

"This is a classic example of a public-sector cloud service that helps make other public services more efficient," according to Microsoft, which has devised the IT tool.

Data sharing reluctance

But cloud computing has still to gain the trust of local governments.

A year ago, the Danish municipality of Odense wanted teachers to use a Google Apps online office suite with calendar and document processing. This was meant to register information about lesson planning and student assessments.

The plans of the municipality were waved off by the Danish Data Protection Agency, which ruled that the use of cloud computing in that context did not respect the consumers' right to data privacy.

Peter Deussen, senior researcher at the Fraunhofer Institute for Open Communication Systems in Berlin, stressed that any challenges such as this one can easily be solved.

Data privacy issues can be resolved by separating personal and non-personal (open) data, he said. Secure documents storage can provide seamless interaction between administrations, enterprises and citizens, optimise governmental processes by delivering documents in a timely manner, and enable inter-administration processes by electronic exchange of documents, he said.

Web giants in silent battle for 'social search' supremacy

Microsoft and Google are developing web platforms combining the roles of social media and search engines – 'social search' – in moves that reveal a raging battle to harness cloud computing and combine the web's most popular functions.

At a seminar on social media in Brussels on 8 February, Microsoft revealed that it is developing a 'social search' tool, called So.cl, currently in use at experimental stage primarily amongst the academic community.

Google Plus, which launched last autumn – and in January allowed users older than 13 years to join – combines the search giant's usual engines with new social services and has been described as an attempt to rival the social network Facebook.

Both platforms involve users sharing information with each

other and have a strong business application, allowing research and business communities to be created on line.

Microsoft is developing So.cl as a research experiment for students focused on combining web browsing,

by enabling users to lock certain friends from information that they make available to others.

Microsoft's model is for users to forgo privacy, enabling all users in the sharing network to see the full trail of information and stories involved in social search chains. The company says that this has proved popular with students who are happier to use a platform where they "know where they stand" on privacy, rather than worrying about several different types of policy.

harness business users. So.cl is targeted at communities of researchers working at a distance, enabling them to pool specialist information. Microsoft is also hoping to capitalise on its relationship with Facebook to drive So.cl forward.

Social search is becoming an area of increasing competition between internet giants. Social platform Twitter complained in January about changes made by Google to integrate Google Plus into its search results.

Google hit back at Twitter, with chief executive Eric Schmidt saying that his company was not favouring its own social network over Facebook and Twitter, and claiming that "all would be treated equally" if the two rivals granted the search giant the right permissions to access their content.



Sharing knowledge is a business matter

In Google's case, pages can be set up for specific groups enabling business users across borders to create knowledge

search and social networking for the purposes of learning.

The two models have sharply different privacy standards. Google Plus uses a model of tight privacy control, aiming to imitate "real life" relationships

Increasing competition in the social search field

Both social search platforms can deal with vast quantities of data through their use of cloud computing, and both are aiming longer term to

EU eyes energy-efficient design of computer servers

Computer servers, the high-performance machines used to run programmes and software services, are facing a design revamp that will make them more energy efficient, following recent assessments by the European Commission.

Servers, together with data storage equipment and four other groups of products, have recently made the Commission's "priority list" for the Ecodesign Directive because of their "significant" energy savings potential.

The Commission said the combined energy saving of these products would amount to 1157 TWh per year by 2030 – twice the total annual energy consumption in Sweden.

"If they know they will be regulated, it puts more pressure on [industry] to go green," said Edouard Toulouse of the European Environmental Citizens Organisation for Standardisation (ECOS), who has been taking part in discussions on the directive.

Big players of cloud computing – like Microsoft, Google, Facebook and Amazon – could lead the industry by opening the discussion on server efficiency.

"It's in their interest to have energy efficient computers and they are constructive and progressive about it," Toulouse told EurActiv.

More efficient servers and data-storage equipment might mean fewer costs for companies and lower bills for consumers,

the European Consumers Organisation BEUC says.

Stakeholders were to meet again this week for a discussion on the next wave of products to be regulated under the Ecodesign Directive.

The Commission needs to assess in the coming months the efforts already made on energy-efficient servers and data storage equipment and decide if there are any issues to address.

"It pushes them to start looking into this matter, and if voluntary approach is deemed satisfactory, there will be no need for regulation," Toulouse said.

If it identifies shortcomings that cannot be resolved through voluntary agreements from the industry, then the EU executive will act to set laws within three years.

Uptake of cloud computing

Cloud computing, which refers to software and data stored remotely by companies or individuals, requires service providers to have vast server and storage capacity.

"There is still a big problem with cloud. People don't use it enough, even if companies like Microsoft are trying to make it seem as simple as possible," a software programmer working for an international computing company told EurActiv.

"But once they realise they can address the need to buy a special research programme and

hire additional staff for a one-off situation, or without their servers crashing, for example, they will want to instead 'rent' this service through cloud computing".

Industry ahead of the wave

As cloud providers prepare for the growth of services, they are also getting ready for the additional expenses they would incur – including the cost of energy to run the servers.

The market is already ahead of this development – which increases its chances to reach a voluntary agreement on energy-efficient servers with the Commission.

For example, Microsoft is leading discussions on energy efficiency and Google has created incentives to save as much energy as possible in the power management and cooling of data centres that store servers.

One of the latter's most recent examples is the data centre set up on the Finnish coast, in Hamina, where water is pumped through an underground tunnel to cool the building.

But cooling data centres is not the top priority of these companies – energy-efficient conversion servers and methods of power conversion have the best energy savings potential.

An investment of €19,000 in energy-saving design generates returns of €50,000 per year, Google reports.

Manufacturers disagree

In the coming weeks, stakeholders will comment on possible obstacles in the inclusion of servers and data storage equipment in the Ecodesign Directive. One of the thorny issues is the initial cost required to make improvements.

Some industry voices say they are already working with the Commission on developing codesign requirements for some server systems.

"The Commission needs to weigh this up, along with the fact that the data centre industry is moving way faster than regulation, in evaluating whether an codesign measure is the best way forward," said Kirsty Macdonald, senior energy policy manager at Intel Corporation.

BEUC's position is that the industry has been delaying the implementation of binding EU measures and is refraining

from new legislation. "The ICT industry has been very outspoken against the inclusion of servers and data storage equipment in the working plan," the consumer group said in a statement.

However, there is reason to expect new EU regulation – or the alternative, industry voluntary agreements – on servers in the near future.

For this to happen, however, resources must move to something that is more commensurate with the resources that are available in the United States and elsewhere, writes an EU-commissioned study on the evaluation of the effectiveness of the directive by the UK-based Centre for Strategy and Evaluation Services (CSES).

"If the extension of the directive is not to be an empty gesture, it should be ensured that implementation and enforcement of legal requirements is feasible, practicable and cost-effective," the study says.



Kroes: Cloud can deliver digital growth

European institutions and governments should throw their weight behind joint procurement of computing services to encourage the use of cloud computing, says Digital Agenda Commissioner Neelie Kroes.



Neelie Kroes is a Commission vice president responsible for the Digital Agenda portfolio. Born in Rotterdam, she was previously (2004-2010) the Competition Commissioner in the Barroso I Commission. She answered questions put by Euractiv's Jeremy Fleming in Brussels.

How much can the digital agenda and European cloud partnership realistically produce growth?

Our digital economy in Europe is much bigger than people realise. It's bigger than the Belgian economy and if it were a country it could claim membership of the G20! It's growing at Chinese-level rates of about 12% a year, and produces about 2.6 jobs for every job lost due to the change it generates. Demand for skilled IT workers is outstripping supply. So it matters. In a tough economic environment digital is now a

backbone for jobs and growth. If we push ahead and the member states implement the digital agenda, we'd see GDP growth one percentage point higher than otherwise. And the cloud is at the heart of this.

The cloud will be a revolution for small business in particular, but also the public sector if we can give it the right momentum. That is why the European Cloud Partnership is so important. It is using the lever of public-sector procurement to push the cloud forward for all businesses and individuals in Europe.

How does Europe currently stand against its rival competitor economies (China, the US, Russia, South America) on ICT?

It's a mixed picture. We are the leaders in many aspects of mobile and broadband. But we are behind on very fast broadband, our high-performance computing is lagging, we aren't investing in the way many Asian economies are. But unlike virtually all our competitors, we have an overarching digital strategy, the Digital Agenda, I am in charge of. We won't see all of the benefits immediately – but I will tell you this, the digital agenda is going to pay big dividends over the long term for Europe. It will be Europe setting the pace on e-commerce, e-health, on copyright, on standards, on data protection, you name it. It's literally the best investment Europe could be making and that's why I am so excited about it.

Why does adoption of the cloud matter to small enterprise?

Having broadband access as a base helps small companies' double growth and exports. The cloud lets them take it to the next level. Instead of having to buy and maintain expensive infrastructure and software, they can effectively rent these as services. It's a massive increase in flexibility, in cost-control. And it really lowers barriers for businesses that struggle to access credit for example. Together this will have a significant impact on productivity across the whole economy, enterprises large and small.

The issues that you want to address with the partnership - such as privacy, interoperability, lock-in and legal certainty - are all issues that the Commission and governments have to be satisfied with before they fully embrace the cloud. Will companies start using the cloud before governments and institutions have fully embraced it?

More than half of European companies are already using it. Anyone with a webmail account or a company Facebook page is using the cloud. But instead of dipping in their toes, companies will be better placed to embrace the cloud if there are more services serving their specific needs, and if they know that can fully trust what will happen with their data, for example, if something goes wrong.

The usage we see today, primarily in the private sector, happens despite the challenges in the fields you mention. We need to make sure to turn them into assets. And we need

to bring the public procurers into play as well in a systematic fashion. The big punch of public procurement should increase competition in cloud supply overall, to everybody's benefit.

Although it is a European cloud partnership, much of the technology behind the cloud is foreign. Is that a problem? Would you like to see more European cloud technology before uptake here?

We treat all businesses the same in the EU. What matters much more than where a company originates is whether it gives European companies and citizens services they need and want and that they have access to an overall environment which lets them support jobs in Europe. That said, I want to see a vibrant digital sector in Europe because it's clear how important this is for jobs and growth – so the more European cloud successes the better. We aren't picking winners; we are just creating an environment where there can be more winners.

Can the Commission or governments regulate the cloud, or is it too big to control?

There is a clear role for public authorities to ensure trust and security. But that doesn't mean we can control the cloud. Or that it should be regulated beyond general rules on data protection, for example. Our goal must be to protect the internet playing field rather than take it over.

Voluntary approaches like codes of conduct can't provide that protection on their own. For example, who will be liable

if something goes wrong in the cloud and data is lost or compromised? Which rules and which jurisdiction will apply? These are not questions that "codes of conduct" on their own can answer in a satisfactory way.

How much of a difference will using the cloud make? What are the new opportunities that are most important?

It's a game-changer for the European economy. Plain and simple. The cloud can be the difference between literally hundreds of thousands of small businesses succeeding or failing. It can make government services so much more effective and affordable. So I think it's small business and government that can benefit most as organisations. Anyone who's ever watched a video website can tell you the benefits for individuals.

In general getting the cloud right will mean the internet can continue to be a generator of innovation, growth and freedom. It's also going to help green our economy by making ICT use more efficient and tied to exact needs.

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