

Our position

Cloud Computing: a business reality in Europe

AmCham EU speaks for American companies committed to Europe on trade, investment and competitiveness issues. It aims to ensure a growth-orientated business and investment climate in Europe. AmCham EU facilitates the resolution of transatlantic issues that impact business and plays a role in creating better understanding of EU and US positions on business matters. Aggregate US investment in Europe totalled more than €2 trillion in 2016, directly supports more than 4.5 million jobs in Europe, and generates billions of euros annually in income, trade and research and development.

Executive summary

The cloud ecosystem of the future needs to be open, competitive, and secure, trusted by governments, corporations and consumers. Trust in cloud computing is essential for cloud technology to be adopted and grow. AmCham EU is in favour of creating an ecosystem where data can flow across borders without restrictions, while at the same time promoting strong security.

Standard setting for cloud services should continue to be an industry-led, voluntary and consensus-driven process based on transparency. Cloud computing services should provide an appropriate level of standards-based interoperability and portability, without extending to the feature function level where services add value through differentiation. The European cloud policy should continue to favour an open and competitive market, and cloud research funded by the European Commission should remain open for all organizations with research capabilities in the EU.

Introduction

Cloud Computing is today a business reality in Europe. Consumers, companies, and governments rely on cloud software, services, and infrastructure to keep their operations and lives running. The wider adoption of cloud services across the EU28 could add cumulative total revenue of EUR 449 billion to Europe's GDP with significant impact on employment and business creation, according to European Commission 2017 figures.

Cloud computing can bring benefits across all sectors. It allows businesses to extract value from large amounts of structured and unstructured data, fueling the European data economy. In the educational sector, institutions can use cloud services to give students access to data and materials, to enroll in online classes, and participate in group activities. Schools and universities can bring down operational costs by storing data securely without needing to build a complicated infrastructure. More and more banks use cloud technologies to simplify, standardize, and reduce the cost of IT services, for example by reducing maintenance and hardware upgrade needs. This also allows them to scale and respond faster to customer requests. Cloud computing services can support SMEs, startups and new business models, for example by facilitating remote and collaborative working.

AmCham EU strongly welcomes the European Commission's plans to promote and accelerate the growth of cloud computing in Europe through initiatives set out under its Digital Single Market Strategy. Having the right regulatory framework in place that allows the cloud ecosystem to thrive creates jobs and spurs growth. Cloud computing capabilities make it possible to tap into vast quantities of structured and unstructured data that can be used to extract business value and leverage the data economy. The cloud ecosystem of the future needs to be open, competitive, and secure, trusted by governments, corporations and consumers.

Trust: Security, Privacy, Legal certainty

Trust in cloud computing is essential for cloud technology to be adopted and grow. AmCham EU is in favour of creating an ecosystem where data can flow across borders without restrictions, while at the same time promoting strong security.

Cloud computing is data driven with a significant growth potential that can be fulfilled by making free movement of electronic data within and outside the EU a reality¹. Users of cloud services and infrastructure should be free to choose their preferred provider regardless of location. Data localization requirements make it difficult for companies to take advantage of ways to store and process data in a more efficient, cost-effective and secure way. This can prevent European enterprises, especially smaller ones, from reaping the benefits of new technologies by accessing competitive, state of the art services from jurisdictions other than their own.

Providing legal certainty around data transfers will help cloud services to operate across borders and allow innovative cloud-based content and services to be delivered across the EU market.

The greatest benefits and leverage in the cloud come from using rather than providing cloud services. Regulators in different EU jurisdictions have different approaches towards data transfers, for example, approving transfers prior to transfers occurring. This may be costly and timely, which limits adoption and implementation in the EU and globally.

Security, resilience and confidentiality are essential to maintain trust in cloud solutions. As enterprises and consumers increasingly take advantage of the cloud, this creates incentives to invest in security technologies and services. This trend should be underpinned by raising awareness around keeping equipment and infrastructure secure. In a cloud ecosystem where data is linked to different data centres and jurisdictions, greater certainty on regulatory expectations will support that trend. This includes certainty on how outsourcing to third party suppliers is regulated and supervised.

The cloud can enable superior security outcomes than on-premise solutions, for instance because security patches to software can be deployed quickly and only need to be implemented once by the provider for all users' benefit. Cloud-based provision of cyber incident prevention, detection, response and remediation makes cyber security affordable for small, medium and sometimes even large organisations that might not have the necessary internal resources or expertise.

Export restrictions and licensing requirements should facilitate the provision of cloud services from European locations to third countries. The revision of the EU's Dual Use Export Control Regulation should allow EU-based cloud services to better compete internationally rather than creating unnecessary burden.²

Having strong and coherent data protection provisions will ensure trust and confidence in the cloud. This is why a harmonized approach in implementing the General Data Protection Regulation (GDPR) is needed which the future ePrivacy regulation needs to be aligned to.³

¹ See AmCham EU position on The European Commission Communication 'Building a European Data Economy' [here](#)

² See AmCham EU's position on the revision of EU dual-use export controls [here](#)

³ See AmCham EU Recommendations on GDPR Implementation [here](#)

The Cloud Select Industry Group (C-SIG), is working on soft regulatory approaches for the cloud. This includes committing to robust privacy and security policies via the Data Privacy Code of Conduct, which has been finalized and it available for companies to self-certify (include link perhaps?)

Openness: Standards, Interoperability, Transparency

Standard setting for cloud services should continue to be an industry-led, voluntary and consensus-driven process based on transparency. There is no one-size-fits-all for cloud. AmCham EU believes that standards are most successful when they are open, based on a clear market need, and developed via a bottom-up process: Open interfaces and data formats based on open standards are key and interoperability should be the norm. Standards should be developed in response to the needs of business customers and consumers and in line with existing technology environments, business models and resources available.

Diverging standards and certification schemes are not conducive to building open markets. The NIS Directive allows cloud providers to benefit from a One-Stop-Shop, which should be embedded in harmonised security standards so that providers are bound to a single set of baseline requirements and users can benefit from that same baseline everywhere across the EU. This should hold true for the Cybersecurity Public-Private Partnership.

Cloud computing services should provide an appropriate level of standards -based interoperability and portability, without extending to the feature function level where services add value through differentiation.

Hosted IT services, outsourcing and related business models have evolved into a sophisticated and highly demanded system of cloud services and solutions. This covers Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS), which can be delivered through public, private and hybrid clouds. Combining these offerings allows both private and public bodies to integrate legacy investments with current environments.

The cloud market allows providers to compete on innovation and performance. Interoperable standards and practices ensure that market dynamic is kept, enabling providers to invest into offering a broad variety of technical tools and solutions to make it as easy and straightforward for users as possible to switch vendors and migrate data and processes.

Open data formats and interfaces - the software level where systems, programs, and applications interact - are important. Closed or proprietary interfaces can make it more difficult for users to transfer their data and can give the cloud provider disproportionate discretion over key decisions.

Policy initiatives should focus on enhancing access to cloud services and offering greater regulatory clarity and certainty over requirements through working with financial institutions, SMEs, cloud service providers and others via continuing efforts in developing voluntary standards.

Innovation: Research & Investment, New Technologies

AmCham EU welcomes that the European cloud policy favours an open and competitive market and that cloud research funded by the European Commission and remains open for all organizations with research capabilities in the EU.

The European Cloud Initiative is a step in the right direction in making significant research funding available. Projects like the European Open Science Cloud will help by giving more members of the academic community access to research data. The EU has ambitious goals in High Performance Computing (HPC), which we agree are not just focused on the race to the next performance milestone, but on promoting the growth of a vibrant and highly skilled HPC ecosystem. This will allow European business and society to take advantage of the best available technologies globally. As HPC is powered by the cloud it can dramatically reduce the traditional barriers to accessing HPC systems for industry and academia. We agree with the European Commission that HPC is a strategic resource for the future of European industry as it turns increasingly digital. HPC infrastructure will allow the building of a research community across the EU, giving researchers the opportunity to share and analyse data across borders.

AmCham EU is proud to have many members contributing to research in areas such as protected sharing of personal data online, content management, smart grid security, and the Internet of Things. Many of our members are also active in EU funded framework programmes, such as H2020, which work with partners across multiple countries. These research projects fuel ways to create a trusted secure and innovative cloud eco-system for Europe.