

'The European cloud takes shape'

'While Europe is losing its institutions and businesses to non-European cloud providers, it will certainly (finally) answer the wake-up call in 2020 and do its utmost to secure its independent digital future,' says former Atos CEO Thierry Breton as the European Commissioner responsible for a broad portfolio. For all we know, these initiatives might all be adopted by the European Gaia-X cloud as early as 2020.'

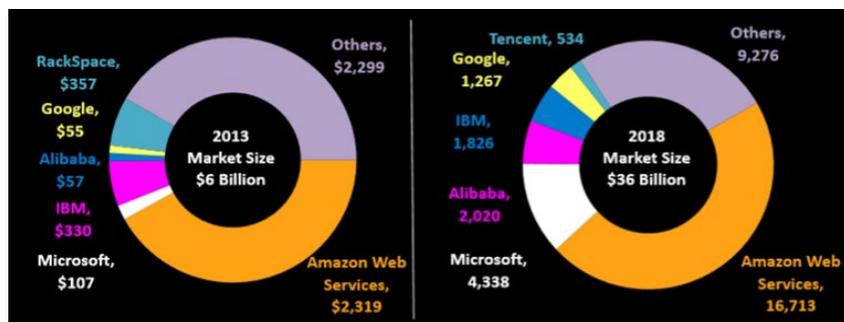
What has long been regarded as a far-fetched IT prediction now appears to hold some truth. In a rapidly digitalising economy/society ('Software is eating the world'), hyperscale cloud platforms are monopolising the basic infrastructure for this new world. Amazon (AWS), Microsoft (Azure), Alibaba (Alibaba Cloud), Google (GCP) and Tencent (Tencent Cloud) are all building their own global network of server parks for the centralisation of data storage and computing power in order to offer it flexibly based on consumer, business and government demand. With data for machine-learning algorithms as the key commodity in a digital world, dependence on these private companies may become too high. Europe will respond in 2020.



'Big Three' Crush Middlemen in the US

In 2020, the main question is whether the ambitions of these players are limited to offering IT infrastructure. They will present the first examples of integrated comprehensive solutions (IT hardware + software application + physical assets) being sold to end customers without the intervention of traditional intermediaries. Examples include 'Fulfillment by Amazon' for traders, mobility solution and Google spin-off Waymo, and Microsoft's game-streaming service xCloud.

Development of Cloud Infrastructure-as-a-Service market share



China and its Great Firewall

Because China's Internet is carefully shielded behind the 'Great Firewall', local giants can recycle their generous cash flows from e-commerce (Alibaba) and gaming (Tencent) into the development of their cloud infrastructure. As a result, China is currently the only country to have successfully developed an alternative for the US big three.

Europe Invokes Greek Goddess

The EU has been conspicuously absent in this respect, while witnessing a mass migration at its own institutions and European businesses. Data protection authority EDPS recently even questioned the European Commission about their contracts with Microsoft!



However, given the strategic importance of this infrastructure, the Franco-German axis in the EU does not want to leave it at that. US legislation, such as the 'U.S. CLOUD Act', which obliges American businesses to transfer customer data (on domestic and international servers) to the judicial authorities, is seen as a violation of European 'data sovereignty'.

Under the project name 'Gaia-X', which refers to the Greek goddess of nature and earth, the two countries are working together to develop a European cloud infrastructure that is expected to be launched in 2020. The project's initial focus seems to be on determining open standards for data storage and exchange, which should enable small (European) hosting companies to remain competitive with the American and Chinese competition.

European businesses and institutions retain control of their own data and can, in theory, quickly switch between the various server and storage capacity providers. This should enable traditional anchors of the European economy, such as industrial production and healthcare, to independently concentrate on the development of the smart factory and personalised preventive healthcare, respectively.

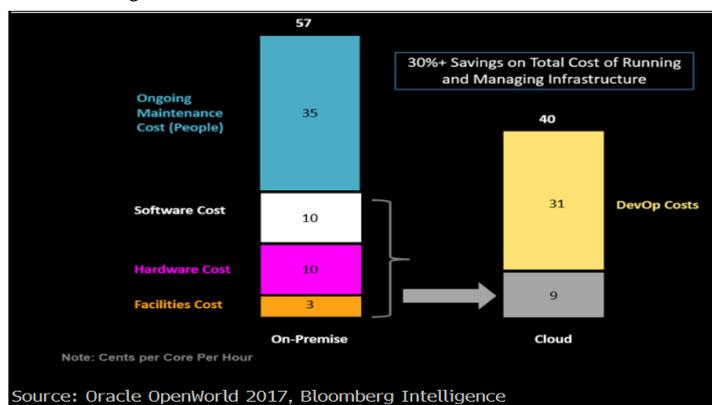
Is the US Faltering?

However, it remains to be seen whether this initiative will be enough to copy the traditional advantages of the cloud. Amazon, Microsoft and Google have used their unprecedented cash generation from e-commerce, business software and online advertising to develop systems that are not necessarily always cheaper, but which:

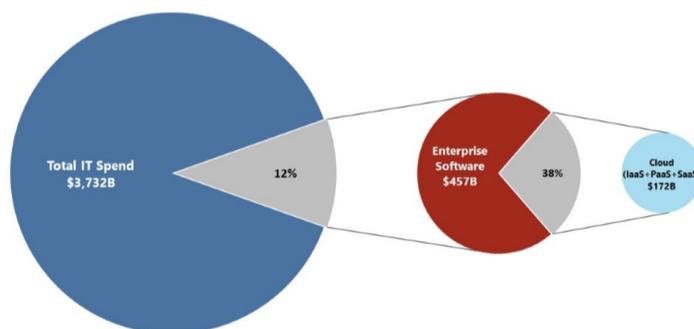
- **are paid based on consumption:** customers replace 'capex' (their own infrastructure that has to be maintained) with 'opex' (pay-per-use);
- at least for the time being have proved to be **highly reliable and secure;**
- are immediately **available, flexible, scalable** and easy to configure and reconfigure by the customer;
- are compatible with latest-generation business applications that typically run in the cloud ('**Software-as-a-Service**').

In addition, a European cloud design does not necessarily mean non-European players are excluded.

Business logic of the cloud model



Cloud expenses compared to total IT expenditure



Europe to Wake Up in 2020

If anything is certain, it is that Europe has (finally) answered the wake-up call and will do its utmost to secure its independent digital future in 2020. The new Von der Leyen Commission also makes no secret of its digital priorities, which include High Performance Computing, Artificial Intelligence, Cybersecurity & Trust, Advanced Digital Skills, and Interoperability & Digital Transformation. It underlines these ambitions with the appointment of former Atos CEO Thierry Breton as the European Commissioner responsible for a broad portfolio. For all we know, these initiatives might all be adopted by the European Gaia-X cloud as early as 2020.

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