

## **Prepared by: New Zealand Embassy Berlin, with input from Embassies in Brussels and Paris**

### **Summary**

- Germany and France have launched GAIA-X, a European cloud infrastructure and data ecosystem, with a view to improving Europe's strategic and commercial autonomy.
- The aim of GAIA-X is to provide a secure digital environment for the cross-business sharing of data within Europe, but it is also open to participation from other countries.

### **Report**

Germany and France have now officially launched the European cloud infrastructure project GAIA-X, portrayed as “nothing less than a European moon-shot in digital policy”. The project aims to address Europe's current reliance in digital infrastructure on a few major non-European corporations.

#### *What is GAIA-X?*

GAIA-X will not be a European cloud provider or cloud service to store and share data online per se. Equally it does not seek to connect a network of servers and computers around the world with big data computing capacity and data storage. Instead, GAIA-X can best be understood as a meta-level project that seeks to link existing (and newly created) clouds together in a network, so that data silos from different economic sectors and different companies in Europe are connected and made accessible to other users. By setting standards and facilitating interoperability, GAIA-X aims to connect all these different data infrastructures and bring many solutions into a homogeneous, user-friendly system.

The result is a “federated form of data infrastructure” that ensures users can both access and share data securely and confidently and combine individual components into a complete solution as needed. Based around this, GAIA-X wants to promote the development of a digital (European) “ecosystem” as the network of developers, providers, and users of digital products and services, connected by transparency, broad-based access and a “vibrant process of interchange”. The free, secure and voluntary sharing of data within and across sectors in the European data ecosystem should allow companies and researchers to access big data and develop their own algorithms. Particularly start-ups and SMEs, which may otherwise lack the resources to access big data, will be enabled to “scale up competitively worldwide”, a potentially important stepping stone as Europe looks to play ‘tech’ catch-up.

GAIA-X has been set up as a public-private partnership, initiated with some seed capital from the German Government and subsequent buy-in from France. It brings together representatives from more than 300 organisations from a range of countries – including multinational enterprises, business associations, SMEs, research institutes, and civil society organisations – working on 20 different work-streams to develop user-driven

cloud and data solutions and create “data ecosystems” with concrete use cases for industry, sustainability, mobility, health, finance, agriculture or public administration.

The project is open to European countries and companies as well as third-country companies, including the big US cloud providers. The initial push and funding from Germany and France notwithstanding, private sector engagement and investment will be critical for success. A non-profit foundation has been established in Brussels, made up of a group of 22 German and French industry heavyweights (such as Deutsche Telekom, Siemens, SAP, Bosch, BMW, Atos, Orange) which will steer and facilitate cooperation within the GAIA-X community. The foundation will develop the technical framework, a common set of rules and standards, and the connecting elements of the ecosystem, such as data transfer interfaces, a joint identity management and billing system, and user interface. The plan is to release GAIA-X by the end of the year, and to implement “prototypical” services from 2021.

### *The GAIA-X principles and standards*

All GAIA-X participants are required to sign up to the principles of European data protection, openness and transparency, authenticity and trust, digital sovereignty and self-determination, free market access and European value creation, modularity and interoperability, and user-friendliness. Based on these, the GAIA-X foundation is specifying a set of rules and technical requirements as a central element of the certification and “on-boarding process” for services and participation in GAIA-X. Apart from compliance with European data protection legislation, one of the central guiding principles is data sovereignty, understood not only in a macro-level geopolitical sense, but also as the individual user’s complete control over stored and processed data and also the independent decision on who is permitted to have access to it. Reversibility, portability and interoperability shall provide a choice of services and full support for multi-cloud strategies, and reduce the risk of vendor lock-in. GAIA-X supports decentralised processing and has clear and user-friendly data management rules. A system of automated certification and authentication and multi-stakeholder-governance for trustworthy services aims to ensure that providers and users can rely on the promised standards being upheld.

Ultimately, GAIA-X envisages more than just technical facilitation and economic benefits through the creation of a data ecosystem – it is seeking to develop a novel “European approach” to governing data storage, user-provider relationships and the processing of individual data, thereby setting an example for innovative international internet governance.

### *Stakeholder feedback*

Overall, GAIA-X has been positively received by stakeholders across the board, from research organisations to the private sector. German IT business and user/consumer associations have clearly welcomed the project, although some are concerned it could focus too much on larger companies. The German and French umbrella industry groups (BDI and MEDEF) have stressed the importance of involving “as many providers and users of cloud services as possible” in the next couple of months. And the German National Academy of Science and Engineering together with leading IT CEOs have praised the ambition and technical approach of GAIA-X.

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