Vodafone and Google Cloud to Develop Industry-First Global Data Platform

•The two companies sign six-year strategic partnership to build powerful new integrated data platform and distributed system for Vodafone, supporting the creation of new digital products and services for customers

•Vodafone to host its SAP environment and all big data and business intelligence workloads on Google Cloud

Sunnyvale, Calif, May 3, 2021 - Vodafone and Google Cloud today announced a new, six-year strategic partnership to drive the use of reliable and secure data analytics, insights, and learnings to support the introduction of new digital products and services for Vodafone customers simultaneously worldwide.

In a significant expansion of their existing agreement, Vodafone and Google Cloud will jointly build a powerful new integrated data platform with the added capability of processing and moving huge volumes of data globally from multiple systems into the cloud.

The platform, called 'Nucleus', will house a new system - 'Dynamo' - which will drive data throughout Vodafone to enable it to more quickly offer its customers new, personalised products and services across multiple markets. Dynamo will allow Vodafone to tailor new connectivity services for homes and businesses through the release of smart network features, such as providing a sudden broadband speed boost.

Capable of processing around 50 terabytes of data per day, equivalent to 25,000 hours of HD film (and growing), both Nucleus and Dynamo, which are industry firsts, are being built in-house by Vodafone and Google Cloud specialist teams. Up to 1,000 employees of both companies located in Spain, the UK, and the United States are collaborating on the project.

Vodafone has already identified more than 700 use-cases to deliver new products and services quickly across Vodafone's markets, support fact-based decision-making, reduce costs, remove duplication of data sources, and simplify and centralise operations. The speed and ease with which Vodafone's operating companies in multiple countries can access its data analytics, intelligence, and machine-learning capabilities will also be vastly improved.

By generating more detailed insight and data-driven analysis across the organisation and with its partners, Vodafone customers around the world can have a better and more enriched experience. Some of the key benefits include:

- Enhancing Vodafone's mobile, fixed, and TV content and connectivity services through the instantaneous availability of highly personalised rewards, content, and applications. For example, a consumer might receive a sudden broadband speed boost based on personalised individual needs.
- Increasing the number of smart network services in its Google Cloud footprint from eight markets to the entire Vodafone footprint. This allows Vodafone to precisely match network roll-out to consumer demand, increase capacity at critical times, and use machine learning to predict, detect, and fix issues before customers are aware of them.
- Empowering data scientists to collaborate on key environmental and health issues in 11 countries using automated machine learning tools. Vodafone is already assisting governments and aid organisations, upon their request, with secure, anonymised, and aggregated movement data to tackle COVID-19. This partnership will further improve Vodafone's ability to provide deeper insights, in accordance with local laws and regulations, into the spread of disease through intelligent analytics across a wider geographical area.
- Providing a complete digital replica of many of Vodafone's internal support functions using artificial intelligence and advanced analytics. Called a digital twin, it enables analytic models on Google Cloud to improve response times to enquiries and predict future demand. The system will also support a digital twin of Vodafone's vast digital infrastructure worldwide.
- In addition, Vodafone will re-platform its entire SAP environment to Google Cloud, including the migration of its core SAP workloads and key corporate SAP modules such as SAP Central Finance.

Johan Wibergh, Chief Technology Officer for Vodafone, said: "Vodafone is building a powerful foundation for a digital future. We have vast amounts of data which, when securely processed and made available across our footprint using the collective power of Vodafone and Google Cloud's engineering expertise, will transform our services, to our customers and governments, and the societies where they live and serve."

Thomas Kurian, CEO at Google Cloud, commented: “Telecommunications firms are increasingly differentiating their customer experiences through the use of data and analytics, and this has never been more important than during the current pandemic. We are thrilled to be selected as Vodafone’s global strategic cloud partner for analytics and SAP, and to co-innovate on new products that will accelerate the industry’s digital transformation.”

Technical Note to Editors

All data generated by Vodafone in the markets in which it operates is stored and processed in the required Google Cloud facilities as per local jurisdiction requirements and in accordance with local laws and regulations. Customer permissions and Vodafone’s own rigorous security and privacy by design processes also apply.

On the back of their collaborative work, Vodafone and Google Cloud will also explore opportunities to provide consultancy services, offered either jointly or independently, to other multi-national organisations and businesses.

The platform is being built using the latest hybrid cloud technologies from Google Cloud to facilitate the rapid standardisation and movement of data in both Vodafone’s physical data centres and onto Google Cloud. Dynamo will direct all of Vodafone’s worldwide data, extracting, encrypting, and anonymizing the data from source to cloud and back again, enabling intelligent data analysis and generating efficiencies and insight.

NUCLEUS

Vodafone maintains vast troves of valuable business data, and it needs to be able to extract and blend data from one system with data from another, and to move data between multiple business systems.

Nucleus is Vodafone’s global integrated data platform with a standard data model and common processes, data sourcing and data products.

Google Cloud and Vodafone are co-developing this entirely new platform to help Vodafone reinvent its approach to data, analytics and business intelligence. It will make business insights available more quickly and empower informed decision making. Nucleus will use data that can be trusted, thanks to clear lineage and robust data governance capabilities from Google Cloud.

DYNAMO

Dynamo is the part of Nucleus that extracts and manages data from source systems and distributes the data to where it is used. This market-first hybrid data integration system will help Vodafone reduce costs, re-use data artefacts, and simplify and centralise operations across its global footprint.

It uses the latest hybrid cloud technologies to facilitate the movement of data in a standard format using a single technology that runs as one system in Vodafone and Google data centres.

Key benefits include:

- Encouraging re-use of data and compliance with standards across multiple markets by basing all the user interfaces on common API’s and strong security and compliance protocols.
- Supporting the movement of 5,000 data feeds per day to the cloud – the equivalent of 50 terabytes per day or more than 10 petabytes each year and growing.

- Avoiding duplication of data extraction efforts by building reusable connectors to systems like SAP etc and reusable data pipelines, halving the time taken to extract data and reducing the time taken to generate insights.
- Increasing the speed at which new data pipelines are built by 25%. These pipelines move the data from the source where it is generated to a warehouse or data hub for storage and analysis.
- Automatically controlling the capacity of a data pipeline depending on time of day and demand.
- Improving zero-touch automation with smart alerts and self-healing capabilities.

NEURON

Leveraging Google Cloud's data and analytics technologies like BigQuery and Dataproc, the platform, called Neuron, enables Nucleus. Announced in November 2019, Neuron is now operational in multiple Vodafone markets.

SAP

Google Cloud's scalable, reliable, and secure infrastructure will underpin Vodafone's SAP environments, enabling Vodafone to augment its SAP systems with Google Cloud's analytics and AI capabilities, and helping to derive more value out of its SAP data. Accenture will act as Vodafone's SAP migration partner, helping Vodafone seamlessly transition business critical SAP environments onto Google Cloud.

About Google Cloud

Google Cloud provides organizations with leading infrastructure, platform capabilities and industry solutions. We deliver enterprise-grade cloud solutions that leverage Google's cutting-edge technology to help companies operate more efficiently and adapt to changing needs, giving customers a foundation for the future. Customers in more than 150 countries turn to Google Cloud as their trusted partner to solve their most critical business problems.

About Vodafone

Vodafone is a leading telecommunications company in Europe and Africa. We are the largest mobile and fixed network operator in Europe and a leading global IoT connectivity provider. Our M-Pesa technology platform in Africa enables over 45m people to benefit from access to mobile payments and financial services. We operate mobile and fixed networks in 21 countries and partner with mobile networks in 48 more. As of 31 December 2020, we had over 300m mobile customers, more than 27m fixed broadband customers, over 22m TV customers and we connected more than 118m IoT devices.

For more information, please visit www.vodafone.com, follow us on Twitter at @VodafoneGroup or connect with us on LinkedIn at www.linkedin.com/company/vodafone.

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