

Edge computing – Providing a cutting-edge customer experience in banking

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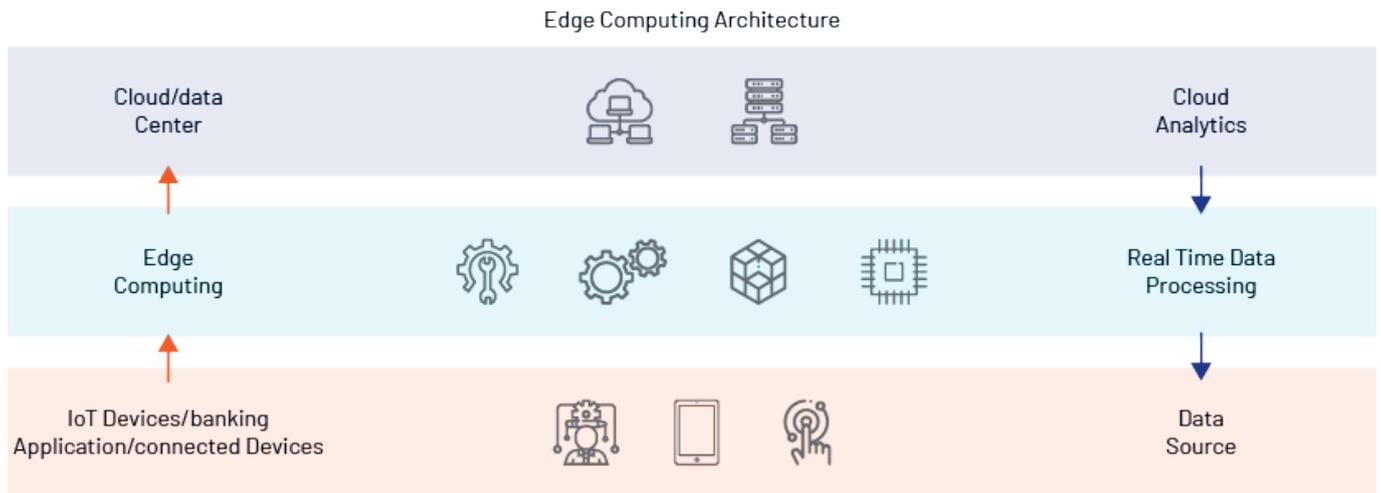
In the world of internet of things (IoT) devices, banks are striving to provide a superior, engaging and hyper-relevant customer experience. They see wider adoption of digital and mobile banking technologies, including the latest ones such as blockchain and [artificial intelligence](#). Customers are also shifting to accessing banking services through wearable devices and smartphones. Banks are looking to use these new technologies to serve their customers more effectively by providing additional value-added services and personalised offerings.

In this age of data-driven banking that puts significant pressure on banks' IT infrastructure to provide real-time analytics after meticulously examining large volumes of data created every hour, edge computing has emerged a lifesaver, enabling banks to realise their goal of enhancing the customer experience.

Edge computing - An introduction

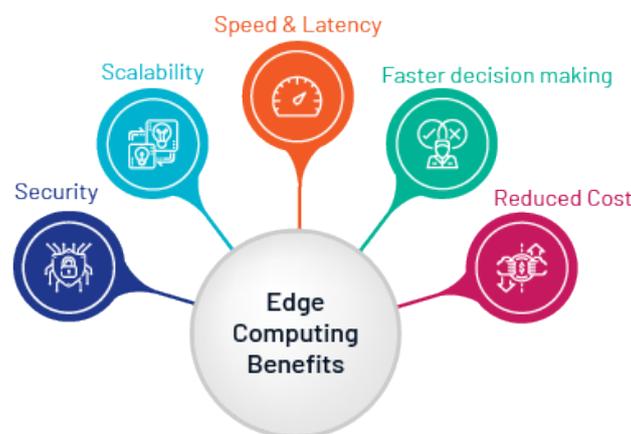
Edge computing helps banks bring analytics closer to data rather than shifting data to a centralised data centre to conduct analytics. In traditional models, all data collected by banks and financial institutions is routed back to a centralised data centre for processing. This leads to latency and potential delays in customer servicing/providing contextual and real-time offerings. 'Around 10% of enterprise-generated data is created and processed outside a traditional centralised data centre or cloud', according to global research and advisory firm Gartner. It forecasts that this figure will reach 75% by 2025 ¹. International Data Corporation² estimates that by 2022, over 40% of organisations' cloud deployments will include edge computing.

Edge computing enables faster data processing locally, either on a device or on a local server, as opposed to transmitting to a centralised data centre. This allows smart devices or banking applications to process data instantaneously, as and when they are created, eliminating any lag and enabling faster decision-making.



A classic example of the application of edge computing is in autonomous cars, where terabytes of data are generated every day and decisions need to be made in milliseconds for a smooth user experience.

Edge computing also helps reduce the load on a network by processing data locally and transmitting only relevant information to a data centre once a day for record-keeping. It is a cost-effective method and adds a layer of security, as the locally processed data does not need to be transmitted over a network for processing.



Use cases in banking and financial services

Banks have started experimenting with edge computing, coupled with 5G technology. Edge computing is helping banks bring analytics closer to customers. We list some use cases in banks and financial institutions below:

- Personalised customer offerings:** As part of their cross-selling strategy, banks offer customers generic products as soon as they walk into a branch. The products may not be relevant, and chances of conversion may be few. However, using near-field communication (NFC) technology and data based on interactions with a customer and applying real-time analytics through edge computing, bank can provide personalised offerings. For example, when a recently married millennial walks into a branch, they could be offered a suitable home loan, car loan or saving plan for a holiday the couple is planning for.
- Insights for insurance providers:** Insurance companies are monitoring car condition and driving statistics to arrive at insurance premium. With a device fitted in the car, insurance

provider can monitor real time data on regular basis to arrive at suitable insurance premium or any road side assistance

- **Fraud detection:** Online banking accounts for most banking frauds. These frauds may occur at the transaction level or be deemed to be suspicious activity, based on payment frequency or profile changes. Real-time fraud detection is critical in terms of online transactions, for the purpose of taking timely action. Applications supporting this requires low latency and scalability. Using edge computing, banks can put in place a real-time fraud detection mechanism through real-time advanced analytics for each transaction.
- **Real-time information for trading firms and hedge funds:** In the case of trading firms and hedge funds, a lag of even a millisecond in providing an update on a particular stock or hedge fund information may have a substantial impact on business. Banks can use edge computing to set up infrastructure near stock exchanges in order to process data in real time and run complex algorithms.

Banks' adoption of edge computing

Banks have already started working on use cases with a focus on adopting edge computing because of its benefits such as enabling faster decision-making, reducing costs, and providing speed, low latency, security and scalability. The Commonwealth Bank of Australia is exploring the adoption of edge computing to improve its customer experience. It believes it can improve the [digital experience](#) of its customers by using edge computing and 5G technology to optimise its network infrastructure. It will be interesting to see the wider adoption of edge computing by banks and financial institutions.

(1) Gartner:

<https://www.gartner.com/smarterwithgartner/what-edge-computing-means-for-infrastructure-and-operations-leaders/>

(2) IDC: <https://www.idc.com/getdoc.jsp?containerId=prUS44417618>

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