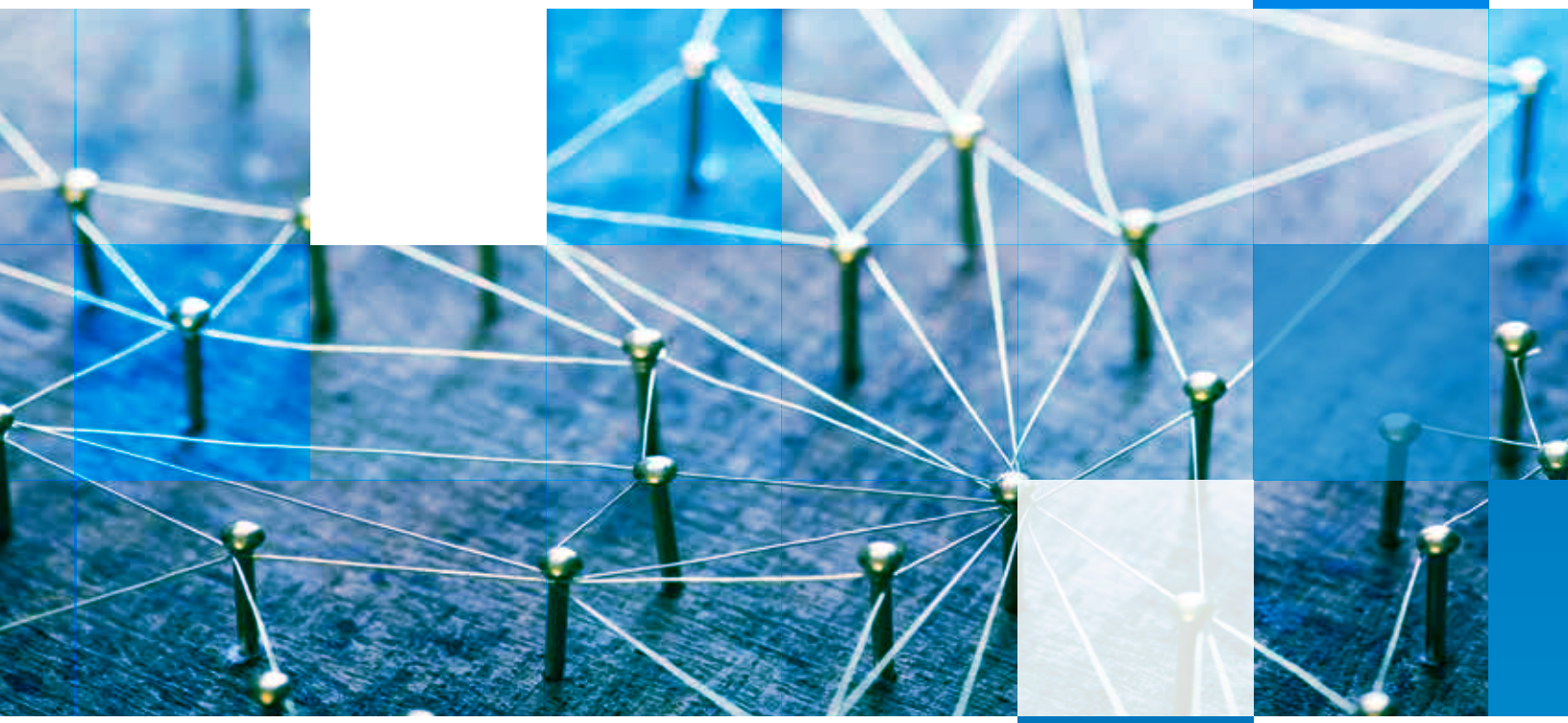
WHITE PAPER

IoT-enabled Banking Services



Abstract

The Internet of Things (IoT) is the next big and imminent thing in financial services. It is a network of connected devices through the Internet, which receive and send data. In this whitepaper, we discuss how IoT will help financial and banking services bring more value to customers.

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Introduction

I would rather refer to it as the 'Internet of Everything', where the real, physical, and the virtual world interact with each other. It is the independent communication between objects that helps optimize operations, reduce costs, boost productivity, and improve lives. All of those connected dots and devices change the customer experience in banking.

Over the last few decades, the Internet has evolved from a set of documents (interlinked hypertext) to a network of people, applications, and devices.

Within a few years, the usage of devices increased from millions to billions, not to mention that the time spent on these devices has been steadily rising. By the end of 2016, it is estimated that 75 percent of the world's population will have Internet access, connecting more than six billion devices.

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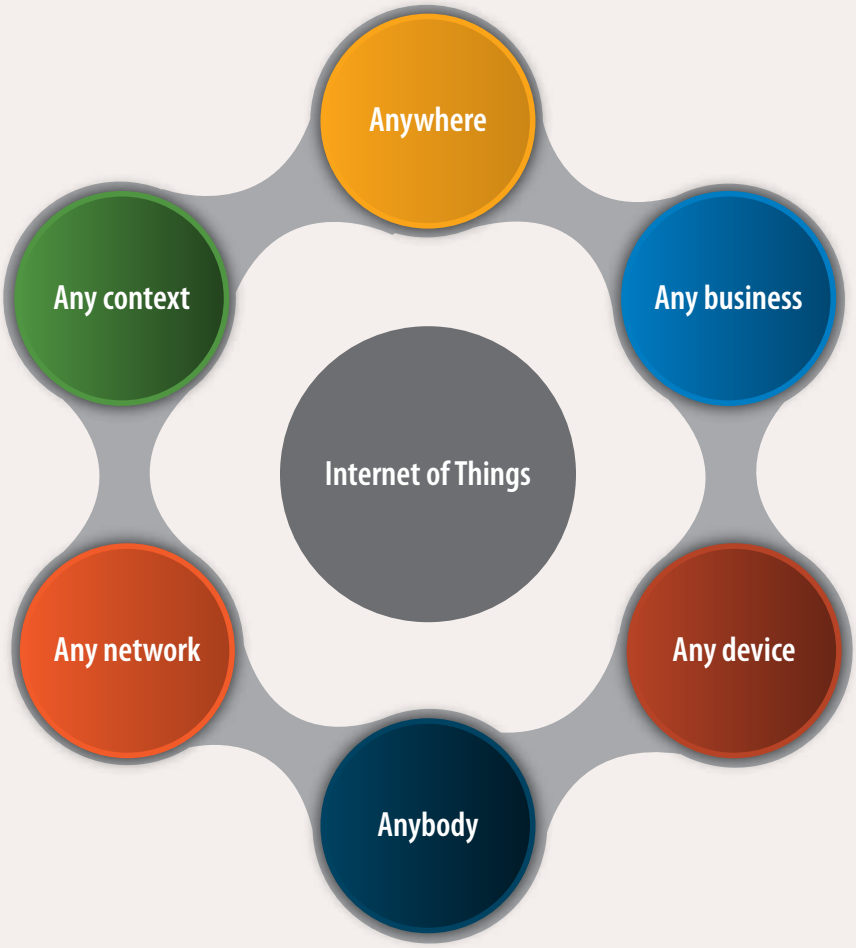

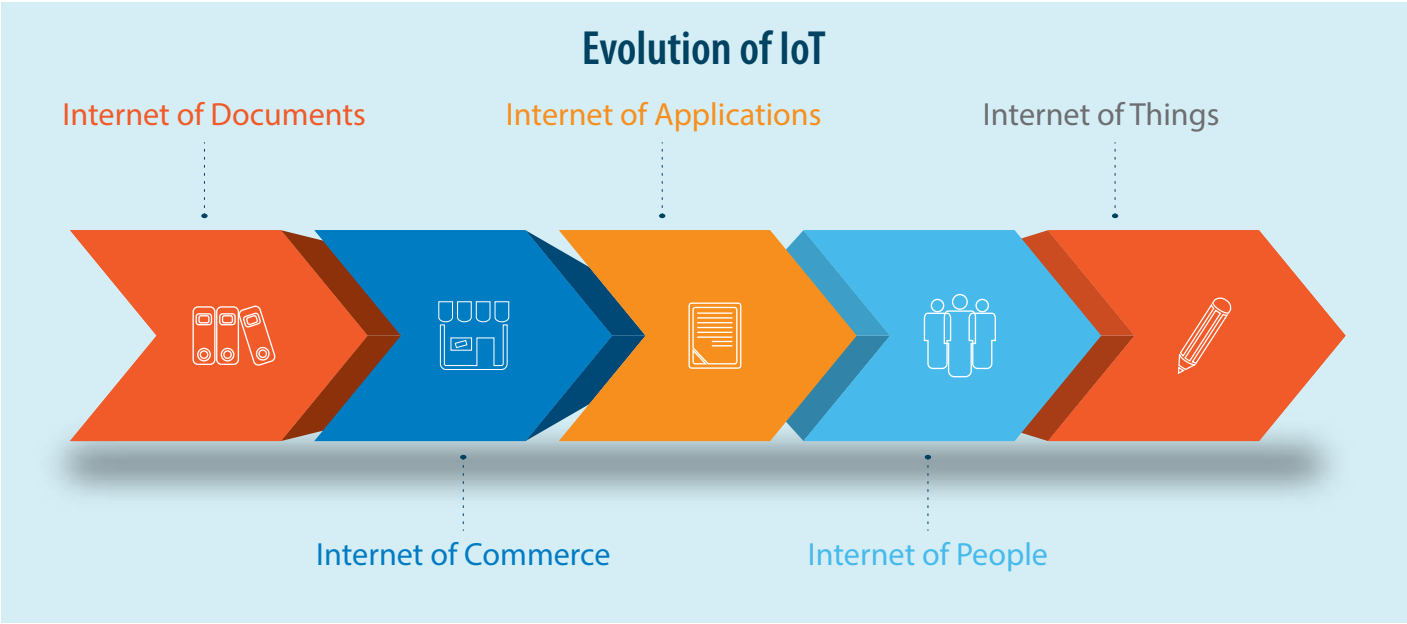

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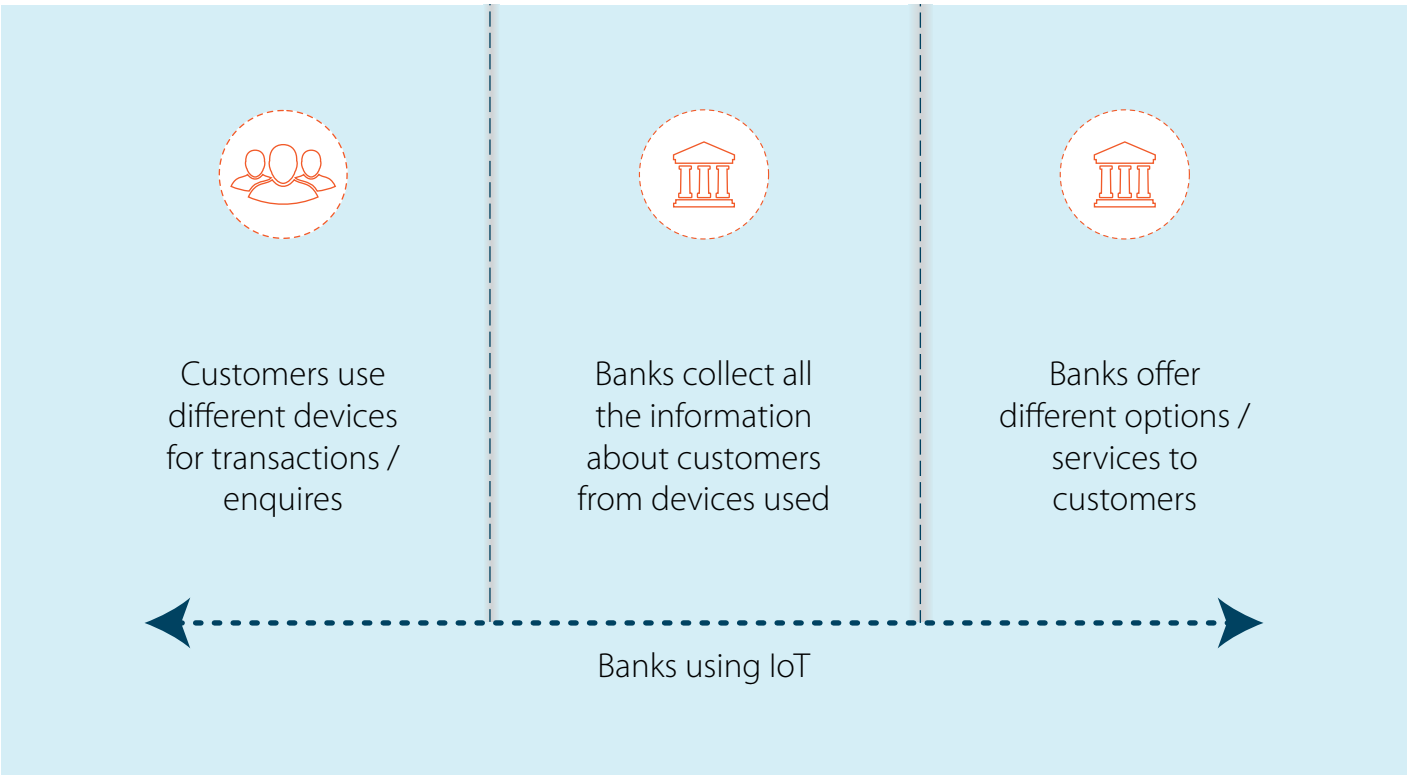
IoT enabling banking

Billions of devices are connected to each other, and in doing so, become an intelligent system of systems. When these intelligent devices and systems share data on the cloud and begin to analyze, they can transform our business, our lives, and our world – in countless ways.

Customers use smart devices for accessing data, which allows banks to provide a complete view of customer finances in real time. Banks can anticipate the needs of customers through the data collected and offer solutions and advice that can help customers take sound and smart financial decisions. In this way, the 'bank of things' can become a very powerful facilitator to increase customer loyalty, and in turn, bring in more business to banks.

In the world of interrelated 'things', banks are communicating with customers, offering them advice via their cell phones. A similar approach can be taken with regard to the spending habits of customers. There are multiple ways for banks to connect with their customers – by offering advice and rewards in other areas of life, not necessarily financial. This, in turn, will increase customer loyalty.



Benefits of IoT in banking services

One of the most important benefits of IoT in the banking sector is providing rewarding, easy-to-access services to both credit and debit card customers. Banks can analyze the usage of ATM kiosks in specific areas and increase / decrease the installation of ATMs depending on usage volumes. Along with ATMs, banks can also use IoT data in bringing on-demand services closer to customers by providing kiosks, and increase the accessibility of services to customers.

The customer data available through IoT will help banks identify their customers' business needs, their value chain – like suppliers, retailers, distributers – and also gain customer insights. Customer information will also help banks provide value-added services, financial assistance, and customized products to ensure a win-win situation for both parties.

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IoT also helps customers belonging to the agriculture and farming sector. Banks can analyze the output and other conditions of farm crops and accordingly estimate the value of the output. Based on the estimated crop yield, banks can provide flexibility in financial terms, depending upon the expected yield, frequency, and output of the crop. This can make the relationship between the farmer and banker stronger.

Another important feature that banks can leverage by using IoT is predicting fraud in debit / credit card transactions. When a customer swipes his / her card, by verifying account holders mobile / device location and the transaction location, the bank can confidently approve or decline the transaction accordingly.

By using IoT from sensor devices installed at the borrower's warehouse, banks can track raw materials and inventory stocks. By using this tracked data, banks can deduce the account balance and ensure that a loan is paid when inventory is sold. This helps banks reduce overhead costs of tracking and also stops borrowers indulging in fraudulent practices.

Financial institutions such as auto loan and insurance companies can leverage IoT via installed sensors in vehicles for which they have disbursed loans. These sensors will notify financial institutions whenever someone tries to remove these sensor devices. This helps financial institutions minimize theft and enables fast recovery of vehicles, which is a win-win situation for both consumers and financial institutions.

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Concerns to be addressed

While IoT use has innumerable benefits, there are also some associated risks. The data collected can be very challenging to make proper decisions by banks / financial institutions. Banks need to dig deep into data management, security, and need to safeguard customer information along with maintaining privacy standards.

Privacy

As a part of IoT, all transaction data, including the information sent through smart devices and smart watches, will be available to banks and financial institutions. Along with data, banks also have access to customer location, which may lead to a breach of privacy. Adhering to privacy standards while making good use of information is one such area of concern.

Data security risk

Banks and financial institutions collect a lot of information from customers through various channels. Any data breach could lead to severe repercussions for banks. Data infringement and data hacking may cause massive damage to customers and fracture their relationship with their banks.

Banks should incorporate the best and latest data security technologies and must take preventive and corrective measures to make sure that the information / data is secure.

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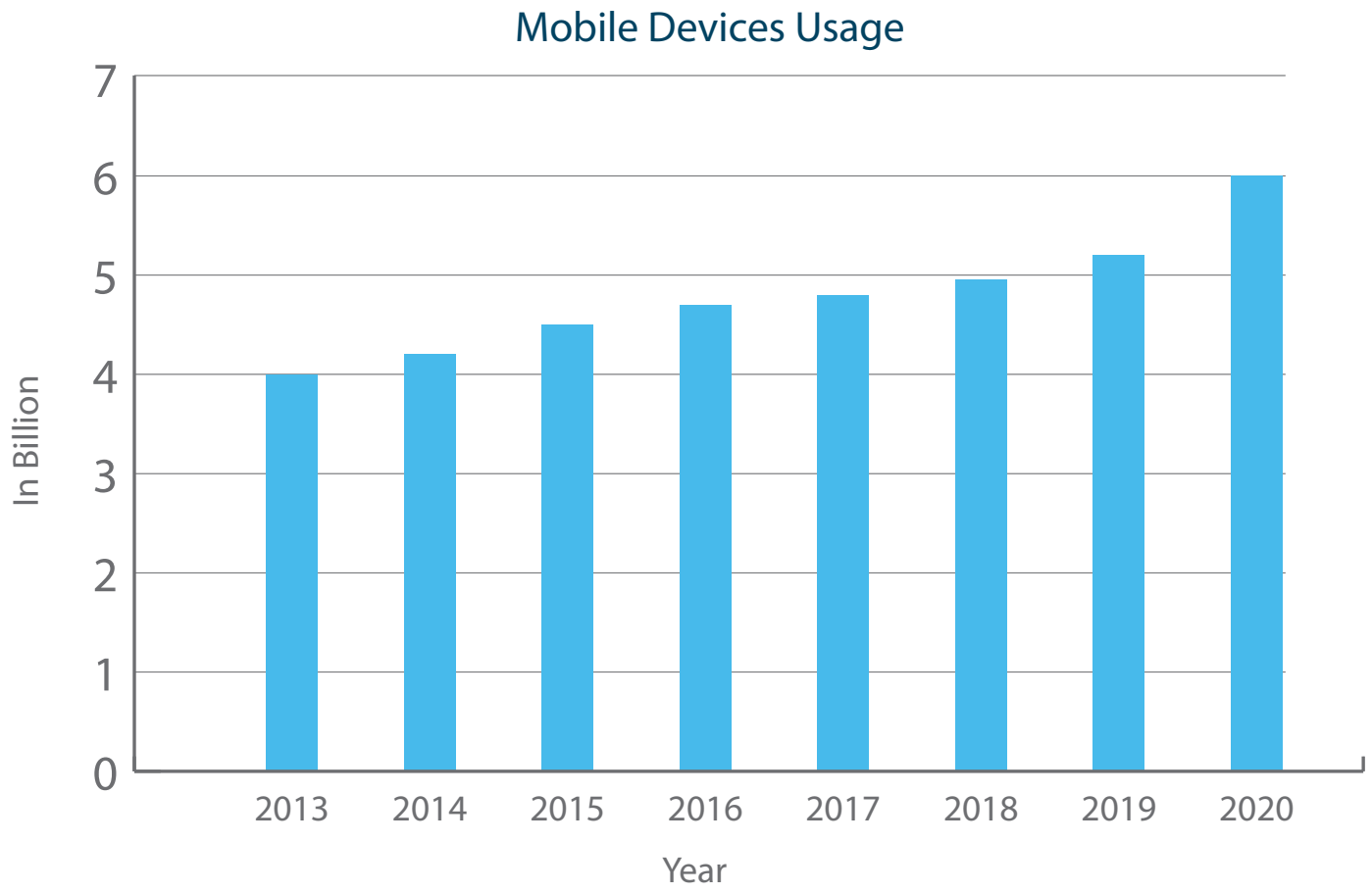
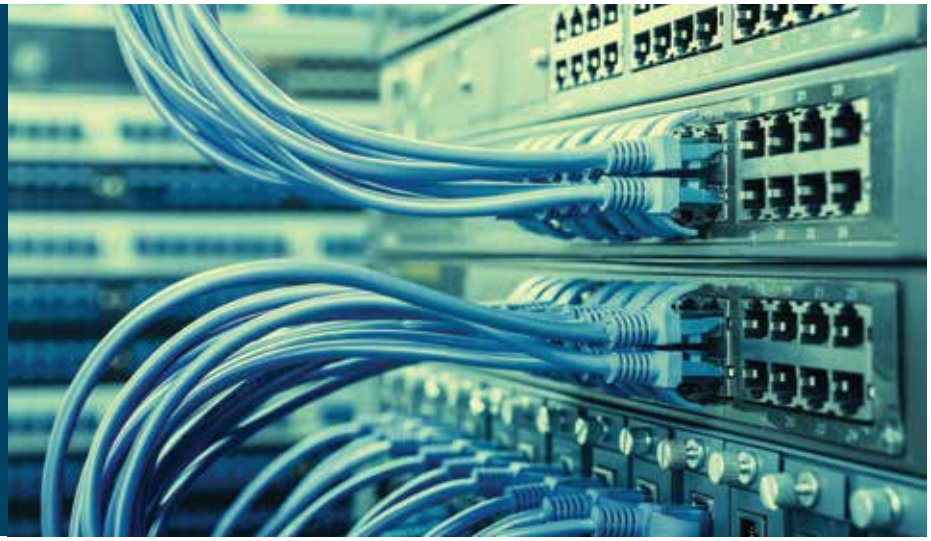
Conclusion

The mobile usage graph below depicts the increased use of devices by customers.



The increased use of devices by customers has led to an increase in IoT data. IoT will transform lives and change the way business is undertaken. Today, everything is connected, wireless, or being wired up. Banks have to convert IoT data into valuable information, and thus, increase their market share and provide better services to their customers.



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Balaji has 13 years of experience overall and more than six years of experience in core banking, with considerable experience in payment modules and core banking processes. He has also had prior experience in Finacle products and he has worked with various banks like MPCB and Bancolombia in product development and enhancements.

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