

Approach to Digital Finance in DX Era

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Abstract

Under the dizzying changes in the business environment, what can NEC Corporation do in collaboration with financial institutions? This paper describes the offerings of NEC Corporation based on a common understanding of the environment surrounding financial institutions and the potential of finance in the future world while examining the relationship with the digital government.



FinTech, DX, finance, face recognition, AI, KYC, AML, BPO, digital government, digital ID

1. Changes in the Environment Surrounding Financial Institutions

1.1 A turning point for financial businesses

4.4% - This was the growth rate in 2018 of money-lending businesses, a source of big profits for banks. It is far below the average GDP growth rate in the previous five years, which may mean that existing bank businesses have reached a turning point¹⁾.

1.2 Rise of new players

In recent years, players who have direct contact with prospects and customers and provide financial services (including household accounting, payments, money transfer between individuals, securities/insurance services of small amounts, etc.) have been emerging (these players will hereafter be referred to as FinTech players).

1.3 Trend toward open banking

In January 2018, the EU enforced the Payment Service Directive II (PSD2) to allow open banking and to man-

date that financial institutions get on board.

In Japan, the June 2018 amendment of the Banking Act defined the electronic payment services and institutionalized an obligation for banks to make efforts to prepare open API systems to allow agencies of the electronic payment services to connect to bank accounts.

Later in June 2020, the Act for Partial Amendment of the Acts on Sale, etc. of Financial Instruments, etc. to Improve the Convenience and Protection of Users of Financial Services was issued. As a result, the establishment of financial service brokerage businesses was approved to provide various instruments and services in one-stop operations.

These movements have two potential implications for financial institutions, one being the disruption of existing financial businesses by FinTech players, and the other being the expansion of financial businesses based on collaboration with FinTech players. According to more recent trends, financial institutions are advancing more alignments than ever with other businesses, which may indicate that they have found a way of collaborating with FinTech players.

1.4 COVID-19 pandemic

After economic activities were stopped due to COVID-19, many corporations and individual businesses have been suffering from cash flow difficulties. The Japanese government supports banks by budgeting about 12 trillion yen for funding, and the Financial Services Agency requests banks to support funding of private enterprises. Now is the time that the real value of Japanese banking businesses are put to the test.

2. Offerings from NEC

Under the present dizzying changes in the environment, NEC has three digital finance offerings to support financial institutions.

2.1 Digital Customer Engagement

Presently, financial institutions provide their businesses to potential users directly through tools that are connectable anytime to the Internet such as smartphones. Further advancement of technologies such as VR and AR is expected to gain more reality in our lives. In addition, it would be possible to provide high-security services more conveniently if biometrics-based recognition technology, NEC's strong suit, is adopted. NEC actually provides the Digital KYC (Know Your Customer) service that makes it possible to use face recognition technology, for example, to open a bank account, etc. This service can be used by a variety of businesses such as financial institutions that require strict personal identification. A shop payment service using face recognition technology is also provided. When both hands are occupied or when one has forgotten one's wallet, this technology makes it possible to perform a hands-free or a purse-free payment by showing the face alone. With higher safety and convenience and a high number of positive experiences, users will be able to enjoy services matching their lifestyles.

2.2 Business process transformation

This offering achieves both efficiency improvement and advancement of operations simultaneously. For instance, NEC aggregates money order transfer operations of financial institutions to the Business Process Outsourcing (BPO) center and automates the input, correction and verification jobs using AI to reduce the clerical cost and improve the quality. The corporation also provides a business matching platform service by changing the traditional face-to-face operation to online

operation. The new service is able to quickly develop new order destinations, order sources and business partners and to handle multiple cases.

In addition, NEC is tackling BaaS (Banking as a Service) as a new financial system in the digital transformation (DX) era. By changing the traditional concept of financial systems, this system aims for three major changes: 1) open API for improving linkages with outside services, 2) microservices for dealing with changes in the business environment, and 3) cloud computing for flexible scaling.

As a result, financial institutions can focus on businesses that would create new values.

2.3 Risk-management technology (RiskTech)

It is a fact that the progress of digital technology has caused financial crimes to be more complex and sophisticated than before. Regulations related to finance are also being advanced to cope with it. To prevent the resulting financial risks, NEC makes the best use of our AI technologies and provides the AI-based Fraud and Risk Detection Service. With this service, the AI learns the patterns of trading irregularities and scores the degree of illegality or risk for each of them. Presentation of the reason for the illegality judgment in addition to a score allows financial institutions to achieve accountability with respect to users and regulatory authorities. NEC developed the system jointly with partners representing the financial industry to achieve a service level at the industry standard.

3. Examples of Co-creation with Partners

NEC is pursuing new prospects by co-creating businesses and services jointly with customers and partners.

In 2014, NEC founded Brees Corporation as a joint venture (JV) with Sumitomo Mitsui Banking Corporation. The JV presently provides a new smartphone-based convenience store payment service.

In 2019, NEC founded SBI DigiTrust Co., Ltd. as a joint venture with the SBI Group (SBI Security Solutions) aiming at providing Anti-Money Laundering (AML) and KYC services that make use of the latest technology. These services are presently under development. The JV is also capable of handling services related to RiskTech, described above. This can expand the scope of service provision to customers who have not had transactions with NEC.

Also, we have developed co-creation services as follows, "money order BPO service" developed jointly with

Shinkin Information Service Ltd., which is described in the previous section, a “Business Matching Platform” developed jointly with Sumitomo Mitsui Banking Corporation, and an “AI-based Fraud and Risk Detection Service” developed via demonstrations at the Bank of Yokohama, Ltd. and Securities Consortium.

NEC values highly the experiences of JV foundations and its service co-creation with leading financial institutions, and eventually accumulates precious achievements.

4. Examples of Collaboration with Administrative Systems beyond the Framework of Finance

Finance plays an important role as part of social infrastructure. NEC believes that the linkage of financial systems and administrative systems can contribute to the creation of a better society. The Japanese government is presently making efforts to implement a digital government. The digital government cabinet meeting held at the Prime Minister’s Office started deliberations on the My Number Card and the setting up of the government fund transfer accounts for each My Number. Japanese Ministry of Internal Affairs and Communications revealed that it has entered deliberations to require linking the My Number ID numbering system to one deposit or savings account per person.

When we look around the world, India introduced the national ID system called Aadhaar as early as 2009, and more than 1.23 billion citizens have already been registered so that the system management has made it possible to pay national subsidies to people efficiently. The digital ID systems disseminated in other countries include Easy ID of Denmark, Bank ID of Sweden, and NDI (National Digital Identity) of Singapore. Estonia is well known for its electronic government, which already provides 99% of administrative services online.

To make such projects real, it is required to implement a digital ID for specifying or certifying individuals digitally. NEC hammered out a brand called “NEC I: Delight” and is conducting deliberations with several partners to make real a world in which various services can be enjoyed using common IDs. NEC also provides the Digital KYC service capable of online personal identification, which is the entrance gate to the digital ID, so it surely has the potential to contribute to this field.

When digital ID is disseminated in the field of finance, it would, for example be easy to manage individual assets. When salary payment account, investment account, credit cards and e-money are tied to the digital ID of an individual, it would be possible to browse them using a smartphone app or modify the contracts as well

as to file tax. Tying accounts to digital ID is expected to make financial services more convenient than before.

As discussed above, finance plays an important role in the implementation of digital government and using the digital ID required in it will make financial services more convenient. The digital ID will be the contact point for obtaining synergy between digital government and digital finance.

To promote the digital government and digital ID in Japan, it would be necessary to refer to the experiences of countries that have achieved advanced results as described above and also to consider situations that are specific to Japan such as the national character, concept of privacy and legal systems, which should not be ignored. NEC believes that our long experience in both the administrative and financial systems is sure to contribute to these approaches.

Reference

- 1) McKinsey & Company: The last pit stop? Time for bold late-cycle moves, McKinsey Global Banking Annual Review 2019, October 2019
<https://www.mckinsey.com/~media/mckinsey/industries/financial%20services/our%20insights/global%20banking%20annual%20review%202019%20the%20last%20pit%20stop%20time%20for%20bold%20late%20cycle%20moves/mckinseyglobal-banking-annual-review-2019-vf.pdf>

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