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Final Copy of Case Study

Year:

2013

Status:

Laureate

Organization Name:

Nepal Clearing House Ltd.

Organization URL:

www.nchl.com.np

Project Name:

Electronic Cheque Clearing Implementation

Category:

Economic Development

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

An implementation of the Electronic Cheque Clearing (ECC) system in Nepal is an initiative of the Central Bank of Nepal along with other banks and an ATM switch provider company. This was convened by establishing a new company, Nepal Clearing House Ltd. (NCHL), which was given the responsibility to implement, operate and support the ECC system. Nepal's economy is more of a cash-oriented economy. Transactions through banking and financial systems are limited to first- and second-tier cities, with few remote villages. The banked population is hardly 20% despite having more than 200 banks and financial institutions in the country. One of the major reasons for difficulty in expanding banking services is its high dependency on physical banking services. Prior to ECC, the cheque clearing process was completely manual whereby physical

cheques were moved from the presenting bank/branch to the central bank and then to the paying bank. It used to take 2 to 3 days for cheque clearing within the proximity of main cities, whereas it used to take 15-30 days in other locations. The inherent risk of cheque loss, fraud and manual errors associated with manual clearing were the reality. NCHL's ECC service provides T+0 settlement for cheques presented within the cut-off time and on the next business day for the ones presented thereafter. This is applicable for all the member banks/financial institutions located anywhere in Nepal. NCHL is established in a shared model whereby the central bank and other banks and financial institutions are the equity holders and at the same time the members using the services from NCHL. The entire infrastructure required for operating such a national payment system is installed and hosted at the NCHL site in a business service provider (BSP) model, thereby reducing the infrastructure cost burden for the members.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

Nepal Clearing House Ltd. was incorporated on 23rd December 2008. The NCHL-ECC implementation project was initiated on 22nd December 2010 and it went into live operation on 3rd February 2012. It was initially started with clearing of USD, EUR and GBP denominated cheques, whereas on 9th April 2012, clearing of NPR (Nepali Rupees) denominated cheques was also introduced. Being one of the laggards in adopting such national payment systems compared to other countries in South Asia, Nepal has not yet been able to use the latest technologies which are available and proven internationally. Also the vendors providing such technology in the country are limited. In that sense, the NCHL-ECC system implementation has been a testimony not just by starting the first national payment system in the country, but also to use advanced technology in the country for the very first time in various areas, namely database, network and connectivity, disaster recovery, etc. Since its successful implementation, the application software has also been upgraded from its initial version 18 to version 19 in November 2012.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

With the successful establishment of Nepal Clearing House Ltd. and the implementation of the electronic cheque clearing system in Nepal, the project is now completed. And it is fully operational. NCHL is currently servicing close to 100 banks and financial institutions, covering their 1,400 plus branches and more than 1,300 business users. The project has been completed and we are in the operation/maintenance phase. NCHL is still enrolling other interested banks and

financial institutions as its members so that they can use and offer to their customers electronic cheque clearing services, which can reduce the operational risk and cost for the banks yet increase the efficiency.

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

The Electronic Cheque Clearing system is the first national payment system implemented in Nepal, which has opened up a whole new avenue and opportunity for rolling out other national payments systems. The successful implementation of the electronic cheque clearing system in Nepal has benefited the member banks and financial institutions, their customers and the economy as a whole. 1. Member banks and financial institutions have achieved better turnaround time for cheque clearing, thereby improving their settlement cycle. It has also reduced their operational cost and risk, as it is not required to physically move the cheques, and at the same time increased operational efficiency. 2. Customers of the banks and financial institutions have been better served as they can realize their cheques on the same day. Additional interest that the customer can earn on the realized cash is a bonus. 3. The main beneficiary of having implemented the ECC system is the overall economy, as people have started accepting cheques as an alternative to cash, thereby reducing a high dependency on cash for financial transactions and promoting formal banking transactions. This has also helped reduce the cost associated with printing cash notes in the country.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

Establishment of Nepal Clearing House Ltd. as a business service provider (BSP), thereby hosting the entire infrastructure required for all members and providing services to its members, is a notable approach followed by NCHL. Further, investing in a company from the government agency (the Central Bank), the public sector (banks and financial institutions) and the private sector (ATM switch provider company) and later the service being subscribed by all the member banks and financial institutions is also an exemplary practice, at least in Nepal. One of the key success factors of NCHL, we believe, is the Public Private Partnership (PPP) in establishing NCHL. NCHL has also tried to follow the COBIT standard for the operation of electronic cheque clearing systems so that sufficient assurance can be provided for the security of the financial information being processed. It has followed a proven project management practice during



the implementation of the electronic cheque clearing system, which has also helped for the successful implementation of the project. Technically, NCHL has tried to implement redundancies at all possible steps, with a fully operational disaster recovery site so that there is minimum business impact in case of any failover.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less)

The Electronic Cheque Clearing system uses Java-based application software using Oracle 11g as the database with ASM technology and data stored on SAN storage. It is installed on IBM AIX Unix servers. For network and connectivity, we have used Cisco and Fortigate switches/routers and other devices. As best practices followed in such a financial system, necessary redundancies are maintained at various levels/equipment, along with a fully operational disaster recovery (DR) site. The DR site is operational at high availability (HA) mode. ECC system implementation, including the establishment of NCHL, is a showcase project for Nepal, not just because it will help the member banks and financial institutions and their customers, but it has also helped Nepal to place amongst the rest of the other South Asian countries to have a national cheque truncation system in place.