
Hitachi's Efforts Contributing to the Development of Payments Ecosystem in India

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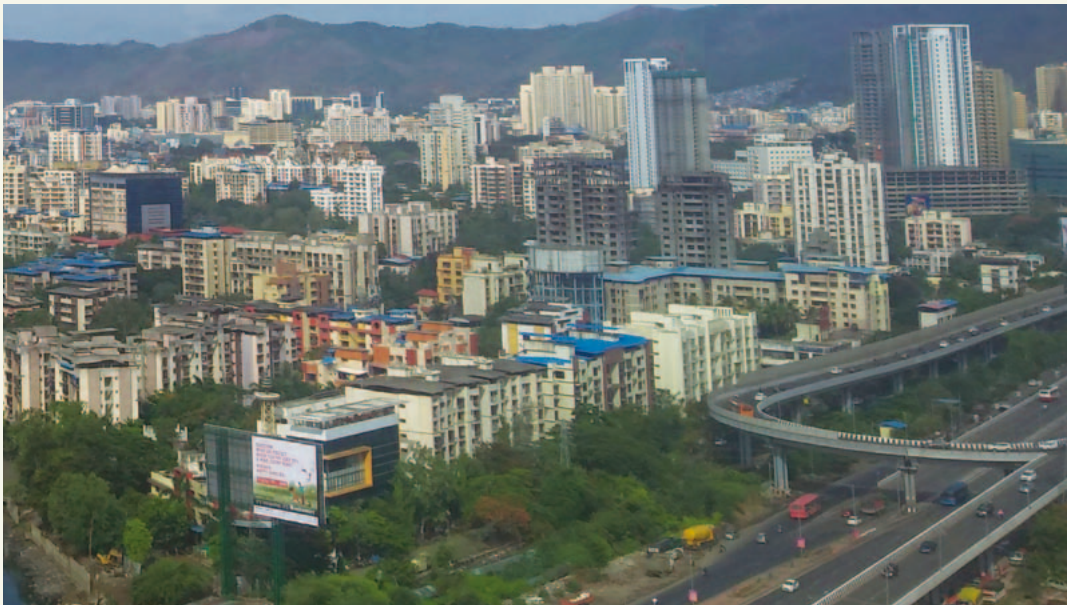
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1. Introduction

India is the one of the fastest growing economies in the world. A growing economy means an increased need for and access to banking and payment services. India has witnessed a paradigm shift in the banking sector in the last decade. Digital payment technologies such as online payments, QR code^{*1}, and the Unified Payments Interface (UPI) have enhanced convenience, communication speed, and safety, transforming the payments experience for consumers.

Hitachi Payment Services Pvt. Ltd. (HPY), through its secured and efficient cash and digital payment solutions, is constantly seeking to enhance citizens' quality of life (QoL) while consistently contributing to customers' social and economic values. Through its innovative payment solutions in India, HPY is pursuing Hitachi's vision of "Powering Good," helping meet the changing needs of society by helping to achieve financial inclusivity^{*2} and the sustainable growth of the nation.

^{*1} QR code is a registered trademark of DENSO WAVE Inc.

^{*2} A general term for ensuring that everyone has access to the financial services needed to participate in the economy.



2. Government Vision of Making India a USD5-trillion Economy and Associated Initiatives

The nation’s tech-savvy demography – 1.2 billion mobile phone connections, 560 million Internet subscriptions, and over 350 million smartphones⁽¹⁾ – serves as the fulcrum of an inclusive digital transformation. A report released by the Government of India’s Ministry for Electronics and Information Technology notes that India’s digital consumer base is the world’s second-largest as well as the second-fastest growing among 17 major economies. From multinationals to government entities to entrepreneurs of all sizes, digitalization is making Indian enterprises future-ready, preparing them to take advantage of opportunities and overcome challenges. This is in line with the government’s ambitious vision of making India a USD5-trillion economy by 2025 (see [Figure 1](#)).

The government’s push to improve digital literacy through initiatives spanning infrastructure, literacy, and ease of access to digital services has had a significant impact. According to a recent report by KPMG International Cooperative, digital payments in India are growing at a compound annual growth rate (CAGR) of 61% in terms of volume and 19% in terms

of value⁽²⁾. The digital payments space is set to grow to USD1 trillion by 2023 according to the National Institution for Transforming India (NITI Aayog)⁽³⁾.

The “Jan Dhan-Aadhaar-Mobile (JAM) trinity” has provided a digital identity to more than one billion Indian citizens through the Aadhaar national identification number system together with greater access to the banking system through the Pradhan Mantri Jan Dhan Yojana (PMJDY) financial inclusion initiative. PMJDY ensures access to a range of financial services, including basic savings bank accounts, need-based credit, and pensions. The technology-leveraged Aadhaar programme, meanwhile, is the biggest disruptor in financial inclusion delivery as it enables targeted transfers of government benefits. The Aadhaar identity platform is one of the key pillars of Digital India, wherein every resident of the country is provided with a unique identity. The government has so far opened 381.8 million Jan Dhan bank accounts⁽⁴⁾, while over 1.2 billion citizens⁽⁵⁾ have been issued Aadhaar cards by the Unique Identification Authority of India.

While the digital interface in Fintech has grown by leaps and bounds, cash remains an equal catalyst in bridging the gap between conventional and digital payments. There is now a need to drive the use of formalized financial channels among India’s next half billion. Pointers to the amount of work still to be done include a 2017 report from the Household Finance Committee that shows insurance penetration to be very low, noting also that Indian households have less than 5% of their wealth in financial assets.

Figure 1 | POS Terminal in Use in India, where Digitalization is Ongoing



3. Hitachi Money Spot ATMs Driving ATM Penetration

For India’s population of over 1.3 billion, cash still remains the favored and for many the only means of payment, particularly in semi-urban and rural areas. While debit card issuance has increased rapidly in

the last few years, there has been no commensurate increase in the number of automated teller machines (ATMs). India trails behind other markets when it comes to ATM penetration. India has 18 ATMs per lakh (100 thousand) of population, compared to 63 in China, 81 in Brazil, 107 in Japan, and 132 in Australia. The problem is further aggravated in India by the very low ATM availability in Tier 3 and 4*³ locations of approximately five ATMs for every lakh citizens.

With a view to improving financial inclusion and boosting ATM penetration, the Reserve Bank of India (RBI), India’s central bank and banking regulator, has endorsed the launch of White Label ATMs (WLAs) that allow private non-bank companies to install and operate their own brand of ATMs. Operating largely in remote areas, WLAs have contributed to greater financial inclusion by providing access to banking services. Under the brand “Hitachi Money Spot,” HPY has been licensed by the RBI to deploy and operate WLAs across the country with a strong focus on Tier 3 to Tier 6 towns (see [Figure 2](#)).

To date, it has deployed over 3,100 WLAs in the

*3 The Reserve Bank of India classifies municipalities by population into six tiers, with cities being classified as Tier 1 or 2 and smaller centers or villages as Tier 3 to 6.

country, providing the semi-urban and rural populace access to much-needed banking services. By deploying WLAs, HPY’s Social Innovation Business is contributing to the wider adoption of financial services in India. HPY leverages its IT x operational technology (OT) expertise, using solutions created in-house and known for their technical excellence. These include the use of data analytics in site selection and the Work Bench Management System, a web-based application used for ATM site sourcing and life cycle management.

4. Hitachi’s Make-in-India Initiative – ATM Manufacturing Unit in Bengaluru, India

Cash recycling represents a natural progression in the evolution of ATM technology. Cash recycling enables automation of key banking services and also offers efficient interoperability. For example, people can deposit cash into a cash recycling machine (CRM) operated by another bank. CRMs enable the consistent and reliable counting of cash and the detection of counterfeit notes, enforcing RBI’s clean note policy. More banks are opting for CRMs, both as replacements for their old ATMs and when deploying new

Figure 2 | Hitachi Money Spot Branding on White Label ATM



**Figure 3 | Hitachi Cash Recycling Machine**

ATMs, attracted by the benefits of convenience, cost, and operational efficiency.

As part of the Make-in-India initiative, Hitachi-Omron Terminal Solutions Corporation, a Hitachi Group company, has established Hitachi Terminal Solutions India Pvt. Ltd. in Bengaluru, India as an ATM manufacturing company. This is intended to support the growing demand for CRMs in India (see [Figure 3](#)).

5. Hitachi Payment Services Joint Venture with SBI to Drive Digital Payments

The digital payments space has also witnessed a significant push from the innovative use of technology. Major capabilities such as UPI, near-field communication (NFC), and Bharat QR have increased digital adoption and impacted the way consumers transact. Bharat QR is an interoperable QR code acceptance solution that enables quick and secure payments to merchants. With over 1.3 billion⁽⁶⁾ transactions as of February 2020, UPI has grown exponentially since its introduction. UPI is an instant payment system developed by the National Payments Corporation of India (NPCI). Owing to such initiatives, per capita digital transactions rose from 2.4 in 2014 to 22.42 in 2019 and have the potential to grow almost ten-fold by 2021⁽²⁾.

With a vision to improve people's lives, HPY and State Bank of India (SBI) entered into a joint venture (JV) for the establishment of a state-of-the-art card acceptance and future-ready digital payment platform

for India. The JV, SBI Payment Services Pvt. Ltd. (SBI-PSPL), aims to bring in financial empowerment and improve QoL by providing digital payment solutions. It combines an unparalleled distribution network and customer trust in SBI with the cutting-edge technology and services of the Hitachi Group in areas such as big data, analytics, and artificial intelligence (AI). SBI-PSPL will enable Hitachi to expand and accelerate its digital payment business while gaining a strong foothold in the Indian market. It will be able to leverage SBI's huge customer base for further driving digital payments in the country while developing new solutions and providing value-added services.

SBI-PSPL is already contributing to India's payment landscape with digital offerings like point of sale (POS) terminals, Bharat QR, UPI (person to merchant), Bhim Aadhaar^{*4}, electronic toll collection, transit, and online payment aggregation (see [Figure 4](#)). To support the Indian government's recently launched National Common Mobility Card (NCMC), also known as the "One Nation, One Card" initiative, it developed an open-loop card-based ticketing system based on qSPARC 2.0 standards^{*5}. The open-loop system is designed to help people use the same card for both transit and retail payments, thereby providing additional convenience.

^{*4} A payment interface for retailers that enables them to accept over-the-counter digital payments on the basis of Aadhaar authentication.

^{*5} A standard specification developed by the National Payments Corporation of India for the chips used in cards. qSPARC 2.0 is the latest version.

Figure 4 | SBI-PSPL Digital Solutions for Payments in India

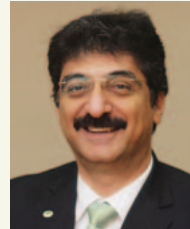


6. Conclusions

Through its Social Innovation Business, HPY is helping to bring financial inclusivity to millions of Indians by building a robust payments infrastructure in the country. Whether it be through ATM services, CRMs, WLAs, POS solutions, Internet payment gateway solutions, or toll & transit solutions, its offerings drive channel efficiencies by optimizing cost and enhancing the banking experience for customers. HPY has been a significant partner in building an ecosystem of end-to-end advanced payment solutions and is contributing to the government's Digital India initiative.

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