

India

The interoperable digital payment system that transforms personal finance

Challenge

The Indian government wanted to address financial exclusion – particularly among its rural population – and widen access to digital payments and banking services in an economy where people relied on cash. The vision was for digital services that would enable faster and cheaper transactions than was possible under the existing paper-based system. This in turn could help to remove bottlenecks that restricted economic growth.

Solution

The government addressed this challenge through [India Stack](#). Crucially, India Stack would not have been feasible without an existing government initiative, [Aadhaar](#) (foundation, in Hindi), which is the world’s largest digital identity system, introduced in 2009. Aadhaar allows every citizen to create a 12-digit unique digital identifier, based on their personal information plus their biometric data (fingerprints, iris scans and photograph). They can then use this to verify their identity when accessing government and private sector services.

Indian banks and fintechs were able to use the Aadhaar ID database to confirm instantly the identity of people who applied for bank accounts or digital wallets. This opened access to digital payments for anyone with an Aadhaar ID. According to the Aadhaar dashboard, almost 80 billion ID authentications have been performed so far and almost 13 billion electronic know-your-customer checks.

With this as a base, the National Payments Corporation of India (NPCI) developed the [Unified Payments Interface \(UPI\)](#), a real-time payment system. This system powers multiple bank accounts into a single mobile application, which is open to all retail payment providers, both banks and non-bank fintechs. The UPI made sure that payment services were interoperable.

Identity authentication has enabled more than 1 billion citizens to access bank accounts and mobile phone contracts, and carry out financial transactions

Result

The Indian government used the Aadhaar system as the basis of its policy, launched in 2014, to spread access to bank accounts to every Indian household. Within a year, 166 million people had opened an account using the Aadhaar ID verification system. By 2019, the total had risen to more than 380 million.

By September 2022, almost 1.35 billion Indians, more than 90 per cent of the population, had obtained a digital ID and around half of them had linked a bank account to their Aadhaar identity. Tens of millions of transactions a month are processed through the India Stack, most of which originate from rural areas that in the past have experienced the greatest levels of financial exclusion.

During the COVID-19 pandemic, the volume of payments using digital wallets soared as people grew wary of handling physical cash due to the risk of infection. The UPI handled most of the extra payment volumes and now accounts for the majority of small retail payments that Indians make.