



# Transforming Bill Payments in India

## The Need for Anytime, Anywhere Bill Payments

Bill payment constitutes one of the basic financial needs of any family. In a populous country like India, bill payments comprise a large percentage of all payments. The size of the billing market in India was more than USD 90 billion in 2016, and about 70% of these bill payments were made using cash or check. Several bill payment aggregators are operating in silos in this heavily fragmented market, and in the absence of a countrywide integrated billing system, attempts to integrate with these players involve extensive paperwork, delays, transaction failures and poor customer support.

To address this problem, the National Payments Corporation of India (NPCI) has commissioned the Bharat Bill Payment System (BBPS), a nationwide integrated bill payment system that offers interoperable and accessible bill payment services to customers through a network of agents, allowing multiple payment modes, and providing instant confirmation of payment. BBPS also serves as an efficient, cost effective alternative to existing systems, setting standards for bill payments in the country and enhancing consumer confidence.

The overall ecosystem is perceived to have one central unit who will govern, manage disputes and route transactions through the unified rails, and multiple operating units/members who will connect to the central unit and facilitate processing of bills across multiple customers (both individual and corporate) and billers. Hence the system was visualized to comprise the Bharat Bill Payment Central Unit that sets operational, technical and business standards for the entire platform, and the numerous Bharat Bill Payment Operating Units that connect to the Central Unit and adhere to its directives.

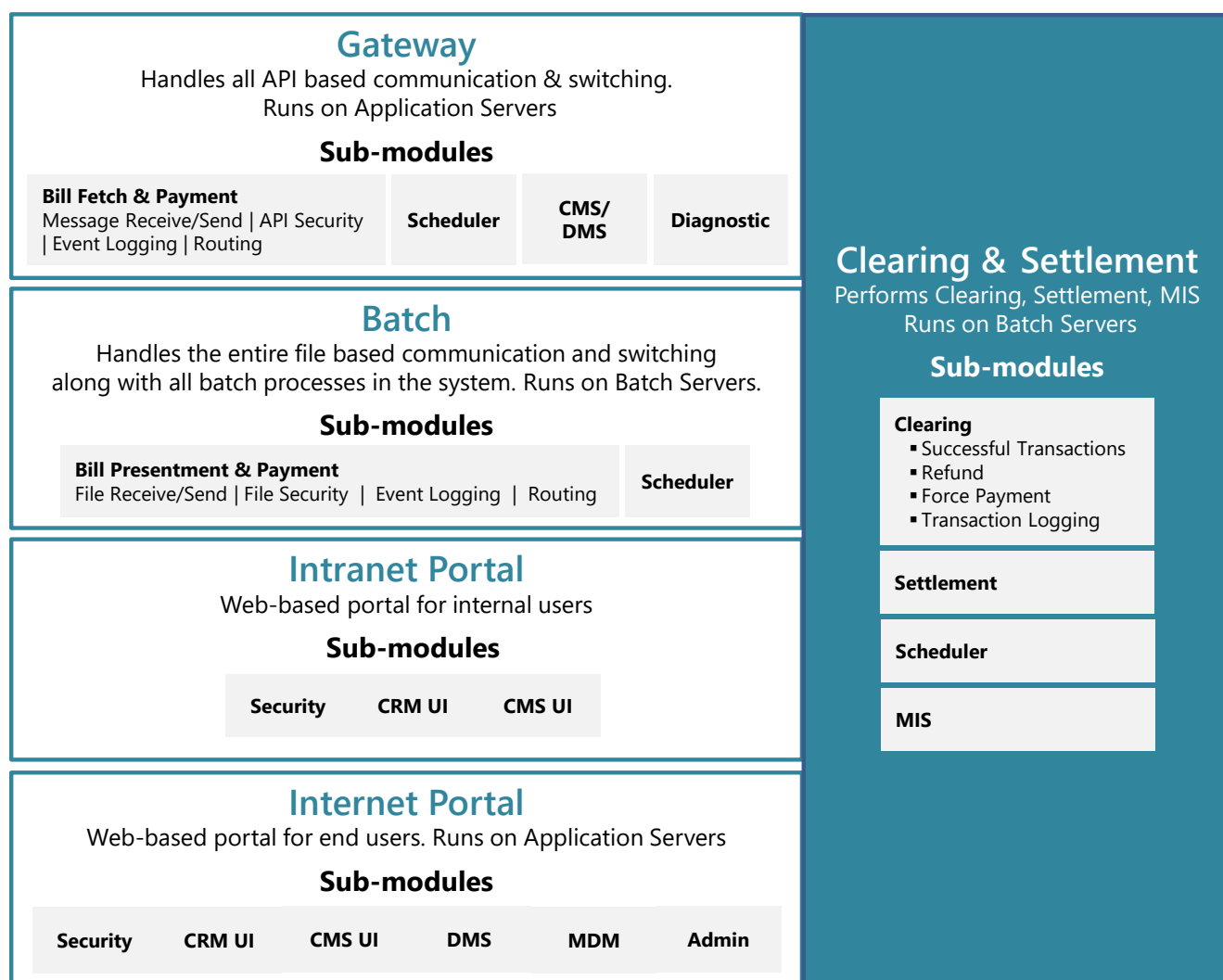
To support the diversity, reach and fragmentation of the Indian market, this system on-boards multiple intermediaries as agents, aggregators and participating financial institutions.

## Interoperable User-friendly Platform

RS Software was awarded the project through a global RFP. As architect for the hugely successful Unified Payments Interface, RS was the obvious choice for building the BBPS platform that would attract all stakeholders of the billing ecosystem to utilize a common vestibule for bill payments through multiple channels (internet, mobile, PoS, mPOS, kiosk, ATM, bank, and agent) and diverse payment modes (cash, credit card, debit card, internet banking, prepaid card, UPI, wallets and other electronic methods).

### BBPS Central Unit

The key components of the Central Unit and their functions are outlined below.



The key features of the platform included:

- End to end implementation of core transaction processing integrated with the existing nationwide digital platform of NPCI
- Channels for bill payment through web, mobile, in-person
- On-boarding portal for customer, agent, and agent institutions along with self-registration features
- Management of complaints and disputes
- Customer dashboard
- Bill fetch and processing lifecycle
- Alerts and notifications
- MIS Reports

## BBPS Operating Unit

Having developed the Central Unit system that has already on-boarded more than sixty banking and non-banking entities, RS Software has successfully delivered the Operating Unit application for several well-known Indian banks (including the largest bank of India):

- State Bank of India (SBI)
- Industrial Development Bank of India (IDBI)
- Punjab National Bank (PNB)
- Ratnakar Bank Ltd (RBL)
- South Indian Bank (SIB)
- Canara Bank
- Pragati Krishna Gramin Bank
- Kerala Gramin Bank

We have also efficiently implemented the operating unit application for one of the India's renowned biller aggregator i.e. ItzCash.

Key features include:

- Dashboards providing transaction history, complaint history, registered biller list, searching pending bills etc.
- Multiple bill fetch and payment for different service providers
- Scheduler to collect entire billing information for subscribed billers on a given date for a customer
- Automatic payment schedules for Utilities

As RS Software builds applications for other Operating Units, we continue to provide features and functionalities through rich UI/UX designs and API integration that serve to differentiate these organizations from their competitors.

## Value Delivered

RS Software used its subject matter expertise on billing systems to deliver the core engine of the BBPS platform for easy and efficient bill payments, supporting a throughput of 5,000 transactions per second. We have extensively used reusable components of the API based architecture to achieve flexibility and faster time-to-market, enabling an increasing number of features on API instead of in batches. We have proactively enabled the Multilateral Net Settlement Batch mechanism as mandated by the Reserve Bank of India, and new features have been introduced for dispute management and complaint management. We have conceptualized and set up not only the platforms but the detailed infrastructure of the data centers with specifications required for rolling out the solution, testing, staging, deployment, high availability and DR environments which includes hardware, operating system, database, middleware, replication technologies/tools, version management tools, software licenses, support subscription etc.

We believe that these value-adds will be the critical success factors for BBPS Central Unit and Operating Unit applications in the long run.

## About RS Software

RS Software is a leader in providing vertically integrated solutions for highly complex, mission-critical payments environments. Today the company serves a client list that includes leading global payment brands within the electronic payments ecosystem including acquirers, issuers, payment networks, billing solution providers and other financial institutions. Presently we are leveraging our billing knowledge gained from BBPS and other prestigious assignments, to build distinctive value propositions for our clients in a rapidly changing payments world.