



Extending modern bank services to every citizen in Digital India

India is a nation of 1.3 billion people, more than half under the age of 30. Youthful drive is catapulting India into a global economic powerhouse, yet the country grapples with historic issues of poverty and corruption. State Bank of India (SBI) is the nation's biggest and oldest bank. As a government-run entity, it serves a social mission, including support of the "Digital India" initiative to transform India to a modern cashless society. SBI also must compete efficiently as a business, satisfying shareholders and introducing new digital and mobile banking services meeting customer demand. To support these goals, SBI undertook its own digital transformation. Re-architecting its IT stack for growth, efficiency, and next-generation agility, SBI stands ready to help each Indian citizen participate in a thriving economy.

TREND

Moving toward a “cashless” economy

Digital India campaign encourages increased financial access, engagement, and prosperity.

India is a nation of 1.3 billion people, with a median age of 27.6 years old. This massive, youthful population is driving India’s emergence as a regional and global power. Economic growth averaged 7% a year from 1997 to 2016.

Yet poverty remains a problem in India, and until recently many Indians lacked bank accounts, using cash for the vast majority of transactions. That is changing with government initiatives to fight fraud, prevent worker exploitation in an underground economy, and foster digital efficiencies. The goal: to bring all citizens into India’s thriving economy.

Prime Minister Narendra Modi in 2015 launched a Digital India campaign to encourage technology development and to make government services available to citizens online. In 2016, the country transitioned 500 and 1,000 rupee notes to newly designed and minted notes, causing many citizens to open bank accounts for the first time, and learn about electronic payment systems.

In 2017, Modi continued the initiative by urging Indians to transform to a “cashless” or “less-cash” society. He asked young people to teach mobile banking and e-commerce technologies to at least 10 families, and daily wage workers to insist on payment through banks.

“India’s Prime Minister is urging citizens and merchants to enter the digital world—to use mobile banking applications and credit card swipe machines instead of cash—with the goal of creating a cashless society.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India

1.3B

Population of India

58%

Of Indians are under age 30 and tech-savvy

> 90%

Of consumer purchases in India are cash transactions

India's biggest bank

Government-owned SBI is a Top 50 global bank with a mission to serve the people of India.

State Bank of India (SBI) became a Top 50 global bank and a Fortune Global 500 company when it merged with five associate banks in 2017—bringing its balance-sheet size to approximately ₹33 trillion, with 470 million customers, 25,000 branches, 54,000 ATMs, 277,000 employees, and operations worldwide.

Based in Mumbai, Maharashtra, SBI is 51% owned by the Indian government and 49% publicly traded on the Bombay Stock Exchange. It holds 27% of India's bank market share, and controls 40% of bank-based transactions and payments. Actively involved in nation-building, SBI provides non-profit Community Services Banking. Arundhati Bhattacharya, SBI's first woman chairman, in 2016 was listed as the 25th most powerful woman in the world by Forbes.

1806

Year founded

37

Countries of operation

750M

Accounts

“Our business is more than banking because we touch the lives of people in many ways. SBI sponsors and participates in social-welfare activities throughout India, and our commitment to nation-building is complete and comprehensive.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India



Centuries-old institution reinvents itself for digital age

Serving the needs of modern India, SBI embraces rapid growth and digital transformation.

The Indian subcontinent gave rise to one of the world's oldest civilizations—yet roughly half of the nation's population today is less than 30 years old.

SBI itself embodies such complexities. At over two centuries old, the bank must reinvent itself for relevance to digitally savvy young customers who demand fast, reliable, and secure mobile payment services. New business-to-business services require fast time to market. SBI is publicly traded and must operate competitively as a business to satisfy shareholders.

At the same time, the bank is 51% state-owned and committed to national policies of citizen service. When the government launched an initiative to ensure every Indian has a bank account, 55% of that load fell on SBI. The bank's account base also grew when associate banks were merged into SBI, and it must prepare for continued growth both in-country and internationally.

Evolving from its 19th century roots, SBI is at the forefront of the country's digital transformation, and must operate as a modern, agile institution serving national prosperity.



211

Years in business

#2

India's worldwide ranking in
mobile phone use

\$500B

Forecasted size of India's digital payments
industry by 2020

“As the government of India tackles the nation's economic challenges head-on, SBI supports these efforts with consumer bank accounts and new digital banking channels. In addition, our international services must operate flawlessly while satisfying multiple regulators across borders.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India

Becoming a technology company with a banking license

Growth, digital banking call for IT transformation.

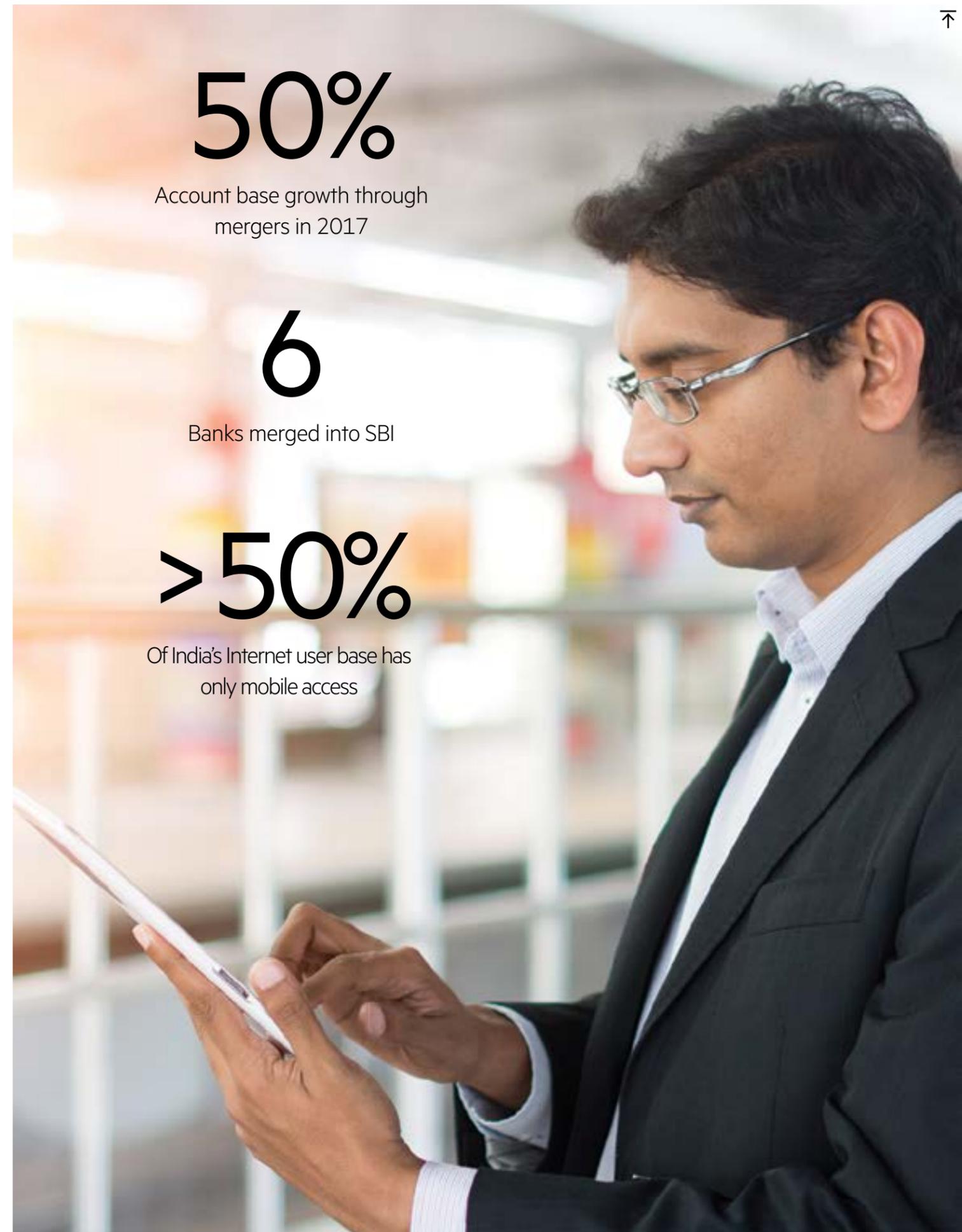
Skyrocketing growth combined with the rise of new digital channels, called for [IT transformation](#) of a magnitude SBI had never before experienced. SBI's account base grew from 500 million to 750 million through government-mandated mergers, and continued growth remains on the horizon. Bank systems must be ready to support up to two billion accounts, along with the resulting data explosion.

SBI aimed to upgrade its core banking infrastructure, modernize its ATM network, and strengthen security. While SBI's brick-and-mortar branch network is essential, younger customers demand digital services. What's more, only approximately 140 million of India's mobile phones today are smartphones; SBI needs a hybrid infrastructure to support a seamless experience for all customers.

Although SBI has steadily upgraded its technology infrastructure over the years, the bank needed its IT data center footprint re-designed and equipped for next-generation capabilities to support growing digital services such as SBI's mobile wallet. To these ends, it endeavored to reinvent its IT technology stack and [data center architecture](#) for lower cost and greater adaptability.

“We’ve always kept our infrastructure up to date, but now we were facing changes in scale so mammoth—combined with new digital delivery models—that we had to re-think our architecture and technology roadmap.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India



50%

Account base growth through mergers in 2017

6

Banks merged into SBI

>50%

Of India's Internet user base has only mobile access

SOLUTION

Future-oriented architecture delivers scale, resilience, security

Benchmark testing confirmed scalability to two billion accounts.

To meet next-generation customer demands, SBI re-designed its data center architecture and upgraded its IT technology stack for growth and agility. Benchmark testing of its domestic core banking application on the new HPE platform proved the system can scale to support masses of customers.

SBI's international banking application was deployed on a new High Availability architecture, including [high-performance computing](#) and [all-flash storage](#) from HPE. The virtualized set-up meets global banking standards and enables database hosting that fulfills each country's requirements including timely reconciliation across zones.

SBI is working with [HPE Pointnext](#) consulting on end-to-end engineering to reinvent its physical data center footprint. It's one of the first banks in India to adopt a three-way setup to deliver full redundancy, with a main data center, a hot-site replica, and a disaster recovery facility for maximum resilience. A new modular, 9 megawatt, 43,000 square foot, Tier III (99.982% availability) data center is under construction in Hyderabad.

For its growing mobile banking services, SBI worked with HPE and its partner, VMware, to create a robust, [scalable private cloud](#). SBI is also deploying [HPE composable infrastructure](#) to upgrade tellers' web access to the core banking system and strengthen branch security with biometric fingerprint scanning of tellers—a use case that approaches [Internet of Things](#) capabilities.

SOLUTION RECIPE

Since 2002, SBI has looked to HPE for technology upgrades with zero unplanned downtime. Recently, HPE Pointnext provided build services for SBI's new data center in Hyderabad. HPE High Availability infrastructure solutions—including HPE Synergy, 3PAR All Flash storage, HPE XP7 storage for three-way disaster recovery, and Superdome servers—deliver scalable performance for SBI's mission-critical applications.

HPE Hardware

HPE Synergy

HPE 3PAR All Flash Storage

HPE XP7 Storage

HPE Integrity Superdome

HPE Integrity NonStop Systems

HPE Software

HPE Enterprise Secure Key Manager

HPE Pointnext

Datacenter Facilities Consulting

Datacenter Care

HPE Partners

Tata Consultancy Services

Infosys

VMware, Inc.

Transformation Solutions

Enterprise Private Cloud

Infrastructure Consolidation and Virtualization

Private Cloud Express

Intelligent Spaces

“Working with HPE, SBI is evolving our IT strategy and capacity to bring this centuries-old institution into the digital age. SBI was your parents' bank—and it will also be your children's.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India

Positioned for prosperity

By extending digital banking services to more people in India, SBI supports citizens' opportunities to prosper in the global economy.

As increasing banking opportunities bring India's 1.3 billion people into the country's thriving economy, SBI's new high-availability infrastructure is helping the bank add new customers and escalate mobile banking adoption by providing massive scalability, business agility, security, and a seamless customer experience through all of the bank's delivery channels around the world. SBI's mobile banking app, SBI Buddy Wallet, brought money transfer, purchasing, and bill paying to more than 10 million new users in just one year.

The highly available infrastructure enables SBI to host e-banking and e-trade services as part of its global expansion while meeting compliance requirements of dozens of regulators worldwide. The new modular data center architecture is flexible to grow as SBI's business does, with energy efficiency and adaptability to market demands that cannot be foreseen today.

Revitalizing staff productivity, for every two new IT employees, SBI now can free 10 bank and office employees from non-value-added operational tasks—and redirect them toward future-oriented marketing initiatives.

Since rising on the banks of the Indus River millennia ago, India's civilization has reinvented itself continuously. Today's journey toward Digital India, supported by SBI's technology-enabled innovations, embraces all citizens as active participants in the global future.

2B

Account capacity verified

3.5M

New accounts added in three weeks

229%

Increase in SBI Buddy Wallet users in the last year



“The digital transformation of SBI supports the digital transformation of India. The future of 1.3 billion people depends on us getting it right. That’s why we rely on HPE for consulting expertise and next-generation technology solutions.”

Mrutyunjay Mahapatra, Deputy Managing Director and CIO, State Bank of India

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