Digital Banking 2.0

September 2021



NSE: AXISBANK

BSE: 532215

LSE (GDR): AXB

1

India's Best Digital Bank





1. In terms of volumes for Q1FY22

Digital Banking – Axis Bank's "silent revolution"

AXIS BANK Ann naver HEALTH HEELTRACHCO PURCE OEPORIT ENLINES ENCLIPT BURSTNEEDSTR. 0 CALL CAUDS BALDOVERNT AND MORE FUELD TRANSPER

84% 67% ~74% **69%** Fli= ③ 57% 60% 4.6 Mobile App **Digitally active** Credit cards New SA **Fixed deposits** PL disbursed⁴ New MF SIP acquisition¹ opened⁴ ratings issued (Q1FY22) CUSTOMERS(Q1FY22) sales (Q1FY22) **D2C products** 250 +14% 90% 15% ~975 300+ 65,000+ Market share in Services on Market share in Digital Automated **Employee tool** Staff on BYOD~ digital channels **UPI** (Q1FY22)² mobile (Q1FY22)² transactions³ processes (IA) Journeys Transformation ~850 ~150 ~75% PB 120% Agile ~50 People In-house New hires from Scale big data Lift of bank Apps on Cloud Enabled teams dedicated to with CI/CD, Hadoop credit model development non-banking Capabilities micro-services digital agenda **GINI** scores backgrounds clusters team architecture over bureau 18% **4 Mn** 140 Mn **Contribution of KTB channels to** Non Axis Bank customers using **KTB⁵ Customer base** overall sourcing of Cards (in Q1FY22) Axis Mobile & Axis Pay apps Digital tablet based account opening process for Q1FY22 2. by volume 3. Based on all financial transactions by individual customers in Q1FY22 4. Digitally in Q1 FY22 5. Known to Bank

Digital leadership and technology driven transformation are key pillars of our GPS strategy





Our digital strategy is aligned with our GPS strategy





OPEN: The operating system that drives every digital initiative AXIS BANK in Axis Bank



The OPEN philosophy underpins everything we do





 Impact targeted across different stages of the customer lifecycle (acquisition, cross-sell and up-sell, lifecycle management and risk management)

We are working on 30+ initiatives to execute our digital strategy

	Acquisition	Cross sell / Up sell			Lifecycle management			Risk man	agement	i.
Retail liabilities	LEAP : Digital journey for CASA opening Partnerships for SA acquisition NTB acquisition for FDs	rships for SA acquisition digital journeys for Bank		marketplace	Archetype based personalized automated journeys for priority segment			fast track testing		
Retail assets	Maximus : OD FD, Auto loans, Personal loans Buy now Pay later, Home loan Acquisition partnerships: GPay, Airtel, Freecharge and many more expected	PFM, credit cards, PL Outward remittance on mobile app Buy now, Pay Later	, credit cards, PL	Deals: e-c marketpla Insurance	Lifecycle management of all products on mobile app	Future	et Banking	l functions, automated	d credit and	calibrated for ID normal
Payments & Cards	Partnerships with Flipkart, Vistara Maximus: Axis led acquisition End to End Digital Issuance of Cards	Olive: Convert to EMI,	Thanos:	Olive: Convert to EMI, CLI, card upgrade, instant Ioan Card partnerships: Flipkart Card console	Branch of the I	Mobile and Internet Banking	nent with ctr	a for customized fraud models	nitiatives: Re	
BG	Digital CA acquisition Digital Business Loan Lending on informational collateral: GST, POS Sankalp: Technology led sales effectiveness	Sankalp: Technology led sales effectiveness and credit process transformation				Ш	Mob	Ops risk : Early alignment with ctr es; and Tech risk: C ontrolled and	: Alternate data for customized credit and fraud models Dioital Collections initiatives: Recalibrated f	Digital Collections initiatives: Recalibrated for the Test and learn nost COVID normal
Corporate	Project Neo: Journey re-imagination, nudges on the platform for product recommendations, enhanced API proposition and partnerships with Neobanks, aggregators etc. and SCF platform revamp Credit process automation to reduce TAT GCG initiatives: e-NAM, e-freight, e-tendering & e- Credit process automation to reduce TAT							_		
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Our digital strategy is aligned with our GPS strategy





Digital is an important customer acquisition engine for the Bank, which continues to achieve scale

	Product	Where we were (Dec '20)	Latest upda (Jun' 21)	te
Deposits ОГРОП	Video KYC enabled Savings Accounts (non salaried)*	10%	~20%	
4	Video KYC enabled Savings Accounts (salaried)		9%	
	Fixed Deposits (for existing and new customers)	71% ¹	69% ²	
Assets	Personal Loans	54% ¹	60% ²	
	Credit card	78% ¹	74% ²	
	Credit Card – EMI conversion	29%	72%	

AXIS BANK

Digital is an important customer acquisition engine for the Bank, which continues to achieve scale



AXIS BANK

Our digital strategy is aligned with our GPS strategy



A Reimagine Customer	B Transform the Core	C Build Future-ready Capabilities
Digital-first products embedding design thinking	Ops excellence & institutionalization of data & tech enabled operating rhythm	Data architecture 3.0; moving beyond analytical models to data engineering
 End-to-end simplification of customer journeys 	Twin-engine approach to build digital stack and modernize the core	Integrating alternate, unconventional data for risk-moderated growth
Banking services integrated across partner ecosystems	☐:= Modular, resilient technology with cloud first architecture	Digital workforce for digital consumers
Omnichannel experience to differentiate customer experience & hyper personalization	 Proprietary in-house capabilities for accelerated design and go-to-market Next gen cyber security capabilities 	Creating a cutting edge, future ready workspace 2.0

We continue to introduce and scale new products driven by our *zero-based redesign philosophy*



Detailed further

Our product portfolio **New launches Investments & Insurance** Loans & Cards Deposits Gene fees a Get The Full Prover Digital demosine in A Street LINE YOU PERSON 14-14-17-16-1 2 64 () 54-19-14 Children hand state state of the local state of the -----■ + E + E + P. tot 1 (1 mm 154030 Statistic for the state of the second 0 Define . GrabDeals **Cards lifecycle** Auto Ioan Saving Accounts Current Accounts Mutual Funds General Insurance Personal loan Credit cards **Buy Now Paylater** . () =) () =) 27.20.000 0 the state of the s INVALUE DATA de ā C 🗰 😵 24 SELECT TRAVEL DESTINATION 47978 1 Country 3 Carryny 3 Details 25 O/W Remittance **Digital Gold** Insurance 2.0 ODFD GST based PPF **Fixed Deposit** Forex card Life Insurance Auto loans business loans

0-operations based redesigned journey with customer at the centre, minimum to no data entry and all checks done by machines with automated underwriting

1: Buy Now Pay Later on Freecharge





1: Buy Now Pay Later on Freecharge | Developed on 'Jarvis': our in-house developed, cloud native, API oriented lending platform



New-age Loan Management System

AXIS BANK

- Supports small ticket, small tenor, limit/loan, multiple interest rate/fee structures
- 100% digital journeys No manual intervention

Custom built, Cloud native, API oriented

- Built, managed, run inhouse
- Built for partners
- Modular, loosely coupled
- 100% on AWS

Scalable and Customizable

- CI/CD in place with best practice AWS tools (externally recognized)
- Custom built BRE Runs multiple policies
- All forms of KYC supported

Integrated with downstream systems

- Collection & recovery
- Statutory & regulatory reporting
- Financial reporting

2: Leap | Digital Savings Account onboarding





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2: Leap Digital Savings Account | Impact







3: Outward Remittance journey on mobile





One view of recent payees for easy txn initiation

1 working day TAT for txn processing



Capture all mandatory information



One of the first banks to launch outward remittance through Mobile



Agile, proprietary hybrid solution for quick turnaround for **issue resolution**

Android web view leveraged for in-house development

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Offered to partners through APIs for

specific use cases such as Integration with brokers to allow overseas investments



New channel for outward remittance transactions leading to an increase in throughput - 133% increase in 3 months and share of digital increased from 20% to 40%

3: Outward remittance journey on mobile | Impact





4: Mutual Funds | Online Investment



Key steps in the journey





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Scheme listing



Plan your goals with SIP

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Scheme details





#### Portfolio view



Only Bank to have an **Online & Instant investing journey**, including for new-to-MF customers

0 paperwork



**Online & Instant** KRA KYC process leveraging customers' CKYC

## E

**Ecosystems capable** across all Axis channels to facilitate easy and quick onboarding of AMC partners



Focus on increasing fresh SIPs & SIP book - ~100% YoY growth in Q1FY22

#### 4: Mutual Funds | Online Investment | Impact





NSTP



5: Grabdeals e-commerce marketplace | Grabdeals Fest to help 🗼 AXIS BANK achieve blitz scale and gain significant customer traction





Simple 3-step process to avail cash back on Grab Deals: Browse → Authenticate → Shop

Integrated with WhatsApp channel



Seamless CX due to close integration with Axis mobile and internet banking

Planned integration with Axis's UPI platform



Expandable, Dynamic Cloud based solution to enable rapid partnerships

40+ brands available on the platform



5x growth* in Gross Merchandise Value over last year exit numbers

* Monthly GMV in Jun'21 over Mar'21

#### 5: Grabdeals e-commerce marketplace | Impact

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#### **Customer impact**

Offers all year round; Benefits over and above the cards and merchant offers

Simple process to avail cash back

Over 40+ major brands to choose from (among the highest in industry)

#### **Operational / Sales impact**

**Better Proposition** to pitch products such as Savings accounts / Credit cards

Sales Aid / Pitching tool - Conversation starter for all cold calls



Customers who shop on Grab Deals maintain **100% higher balances** than Saving accounts holders who don't shop **Increased spends** on Debit (140%) & Credit cards (30%) during Grab Deals Fest

## Our digital strategy is aligned with our GPS strategy



	В	С
Reimagine Customer	Transform (R) the Core	Build Future-ready Capabilities
Digital-first products embedding design thinking	<b>Ops excellence</b> & institutionalization of data & tech enabled operating rhythm	Data architecture 3.0; moving beyond analytical models to data engineering
End-to-end simplification of customer journeys	Twin-engine approach to build digital stack and modernize the core	Integrating alternate, unconventional data for risk-moderated growth
Banking services integrated across partner ecosystems	☐ Modular, resilient technology with cloud first architecture	Digital workforce for digital consumers
<ul> <li>Omni-channel experience to differentiate customer experience &amp; hyper personalization</li> </ul>	<ul> <li>Proprietary in-house capabilities for accelerated design and go-to-market</li> <li>Next gen cyber security capabilities</li> </ul>	Creating a cutting edge, future ready workspace 2.0

## 1: Maximus | 24x7 Personal Loan







Multiple Login Options Instant e-Sanction and e-Disbursal

Instant set-up of repayment from Axis Bank Account

#### Bank's proprietary underwriting model

Advance Curation of personalised offers

Use of **advance analytics** to arrive at eligible customer base

Online fraud assessment and detection

**Ecosystems capable** and available on all Axis Digital Properties

Built as micro-services; extendable to internal channels as well as external partners

Spearheading change - **60% of the disbursement** was Digital in Q1FY22;

Significant reduction of e2e TAT from 7 days to 15 mins

### 1: Maximus | 24x7 Personal Loan | Impact





#### 2: Maximus | 24x7 Business Loan









Customer confirms available information



Customer centric design with minimal data collection to deliver a seamless customer experience Built for Self Employed customers Instant e-Sanction and e-Disbursal Instant set-up of repayment from Axis Bank Account

#### Bank's proprietary underwriting model



Use of **advance analytics** to arrive at eligible customer base

Online fraud assessment and detection



Ecosystems capable and built in for customer self initiated as well as assisted journeys

Online identification and classification of PSL eligible customers



Spearheading change - 42% of the disbursement in Q1FY22 facilitated through digital



**Signs Digitally** and receives Digital **Disbursement** 



#### 2: Maximus | 24x7 Business Loan | Impact





#### 3: Maximus | 24x7 Auto Loans





#### 3: Maximus | 24x7 Auto Loans | Impact





## 4: 24x7 ODFD | Fully digital, instant account opening





All integrated **three step** customer journey **Instant limit** set against customer FDs Multiple FDs can be selected Available across **NRI** and **Agri Customers** 

Built on Bank's proprietary Digital Lending Platform

**Templated underwriting** significantly reduces time on journey

Available on all Axis digital properties **Fully secure** 

- Facilitates Customer retention
- Online identification and classification of PSL for eligible customers



**Spearheading Change - 72% of the limit** set-up was digital in Q1 Significant reduction in e2e TAT from 2

days to 5 mins

#### 4: 24x7 ODFD | Impact





*Sales sourcing cost

32

## 5: Digital Home Loan | Instant digital sanction for Axis Bank approved projects



33



E-VERIEV INCOM

**ETB customers** can login using customer ID and password or mobile and PAN/DOB. NTB using their mobile and PAN/DOB

CHARMS DEVELOPERS CHARMS HERITAG CHARMS HERITAGE CHARMS HERITAGE-C2

**Application is** specific to an Axis Bank approved project. **Customers select** the builder and project details

After applicant

complete their

journey customer

selects the loan

amount and

and one co-

applicant



#### Digital, Instant and paperless sanction.

Customers can avail a sanction from the project site or comfort of their homes

**Only Bank among peers** to have a paperless journey for salaried customers; and only 1 document required for self-employed



Launched on the Bank's proprietary Lending platform

**Proprietary Axis Bank underwriting model** 



Can be integrated with other platforms such as online property aggregators



**Reducing the TAT** from 3 -7 days to instant/same day sanction for STP cases

Number of projects, applications and disbursal value being tracked closely

Income assessment is done using either Perfios or Netfetch (depending upon customer's choice)

LAN YOUR LOA

18 CONGRATULATIONS: Your Home Loan application is sanctioned and valid for 90 days Customer receives an instant sanction on mail, can also be downloaded on the platform

tenure





## 6: Thanos | Insurance marketplace to aid distribution growth



Key steps in the journey



**STP paperless journey** with prefilled application & instant policy issuance capability

A single platform for customers to choose from multiple Insurance Products across Partners

Marketplace Model: Hosted on the Bank's server and APIs of partners are invoked to generate the Quote and Demog Services are invoked to pre fill customer details

**Redirection Model:** A single standardized payload API created to share customer details with multiple

Ecosystems capable across all Axis channels to facilitate easy and guick onboarding of insurance



Recently launched, regular tracking of numbers to ensure scale

# 7: Merchant Acquisition Business (MAB) | Focus on growth acceleration with state-of-the art digitization





- Neo Bank: Powerful features like integrated invoicing, GST compliance to address key pain points of target merchants
  - VAS: Ordering, Invoicing, Credit management, etc. built in the POS

#### Merchant lending based on anchors, merchant cash products in advanced stages of development

Aggregator partnerships

(40% sourcing)

Instant swipe machine–India's first proposition to enhance the onboarding experience, completed within 30 minutes

Extension of digital payments ecosystem fintech aggregators

#### 7: Merchant Development Program to aid MAB growth





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# Our digital strategy is aligned with our GPS strategy





# We are adopting a combination of approaches for the digital ecosystem

Build our own capabilities, partner with FinTechs where there is complementarity and invest in areas that have adjacencies





# 1: We are the 4th largest issuer of Credit Cards in the country 🙏 AXIS BANK

#### **Featured Cards**



#### **Co-branded Cards**



#### **Premium Cards**



#### **Credit Cards in force (mn)**



#### **Credit Card market share and spends**



## 1: Flipkart Axis Bank Credit card | Acquisition journey





Customer clicks on Flipkart Axis Bank Credit card banner and can view details



Customer fills up the form and submits the application

Digital acquisition, fulfilment & servicing via partner platforms



**Video KYC and Digitization** of Income Documents to digitize application journey – *unique to Axis Bank* 

**10+ DIY card management features** live on Flipkart



API based digital journeys using Bank's onboarding and customer management platforms to deliver seamless experience



Built in **partnership with Flipkart** and is being expanded across other partnerships



**1.2Mn CIFs** of the Flipkart Axis Bank Card



Approved customers complete KYC and income verification via digital or physical channels

	Fighter 2	Anna Anna
	₹2,1 earned as cas	
	ing Summary 12, 2019 to Dec 12, 20	19
₹3	0,000	Pay Bill
		Can't pay full amount?
Due	Date	Apr 15, 2020
Pay	hy 🛛	Apr 13, 2020
Mini	mum Due 💿	₹1,680.00
View	v Bill payment history	
View	v Unbilled amount	3
Mor	re Card options	
	Get statement by em	ail
-	Manage your Card	

Card is generated and the customer can view and manage card features via Flipkart console

## 1: Flipkart Axis Bank Credit card | Card console





### 10+ DIY features on the Card Console on Flipkart App

## 1: Flipkart Axis Bank Credit card | Impact





# 2: UPI | Growth Through Partnerships & Reliability





## Acquiring Partnerships

- Axis Bank provides UPI acquiring services to leading online players Amazon, CRED, Razorpay, PayU, Zerodha, Swiggy, BigBasket, Ola, Uber, BookMyShow, etc.
- In the offline space, we power acceptance via QR codes issued by Google, PhonePe and Freecharge among SMB merchants.

## Focus on Reliability

 Pro-active investments in capacity building by setting up dedicated UPI infrastructure and network bandwidth – enabling peak volumes of up to 1400 TPS and reducing instances of technical declines



Instant on-boarding and creation of UPI handles allows customers to transact digitally within minutes.

P

Extensive suite of **UPI solutions** (APIs and SDKs) cater to all the digital payment needs of our partners



Leading player in the UPI ecosystem; among the first to partner with NPCI on new initiatives such as AutoPay, e-RUPI.



**75%* growth in UPI transactions** powered by Axis Bank YoY

# 2: UPI | Impact





## **3: API Developer Portal**





#### https://apiportal.axisbank.com/portal/

## 3: API Developer Portal | Impact



## Self registration

All developers can view and sandbox test Axis bank's APIs, simply by creating user ID and password

#### **Notifications**

Registered developers receive notifications for any new API uploads, structure updates, or journeys

### Suggest your use case

Registered customers can suggest more APIs or use cases that they would like the Bank to offer

#### Customer impact

# of APIs (Indexed)

100

Mar-21

105%

200

150

100

50

0



205

Jun-21



# of products



# Our digital strategy is aligned with our GPS strategy





## **Our Mobile Banking volumes continue to grow**





Axis Mobile is amongst the highest ranked Banking app on Apple Store (rating of 4.6) & Google Play Store (4.5) and offers 250+ DIY services



## WhatsApp Banking emerging as a significant channel





- Get your Account Balance
- Generate Account/Mini Statement
- Order Cheque Book

#### **Credit Card Related**

- Get your Outstanding Amount, Available Credit Limit
  - Summary of Credit Card, Bill Payment details
  - Block your Credit Card and many more to come.







- Ask us Anything
- Get Pre-Approved Personal Loans in WhatsApp
- Apply for our Banking Products
- Locate Axis Bank Branches/ ATM and many more to come.

Rich cards to show

better & simplified

view



#### Insta Opt-In, real-time fulfilment of request on WhatsApp with 24x7 availability Al enabled Axis Aha integration to answer all FAQs

Hosted and managed on Axis Bank private cloud

Seamlessly integrated with WhatsApp for an almost native experience in customer's chat window



1mn customers onboarded

6mn+ customer interactions over last 6 months

## WhatsApp Banking | Impact





6 months of successfully delivering banking services through WhatsApp



				80	
	Account Level Enquiry	Credit Card Enquiry	FAQs Answered (via Aha!)	Pre Approved Offers	Axis Locations
Requests	1.6 Mn+	0.8 Mn+	2.2 Mn+	0.3 Mn+	76k+
Customers	0.6 Mn+	0.4 Mn+	0.8 Mn+	0.2 Mn+	43k+

Setting up best-in-class personalization engine to deliver distinctive customer experience...



Creating Digital DNA elements for more than **25 Mn** customers

CUSTOMER	
What is the current life stage of a customer?	– Married with kids
What does a customer do?	– Self Employed - Doctor
How much does the customer earn?	– 143K per month
Where does the customer live?	– Tier 2 city

## Leverage DNA variables to understand the customer better & engage with them accordingly



# ...by looking at 4 key dimensions when engaging with a customer



4

Creative

Imagery



Personal

Message

Connector

Click Parameters

A Contextual

# 100+ nudges developed & deployed via custom cloud native serving layer

Leveraging situational triggers to craft a multistep curricula for ETB ...



Payments	Spends	EASY ACCESS Savings Acc
Freesbarge	Recency	<ul> <li>Flat 3% cashback on Amazon &amp; Flipl and 5-45% on 30+ other major bran via GRAB DEALS.</li> </ul>
Freecharge	Frequency	<ul> <li>1% cashback on all online spends</li> <li>Air, Accident and Baggage Insurance</li> </ul>
FasTag	Monetary	Recomme
FD		

**AXIS BANK** 

## Our digital strategy is aligned with our GPS strategy





## Our digital strategy is aligned with our GPS strategy





# 1: Branch of the Future | Transform the way Axis Bank engages with and serves its customers



Re-engineer key service requests to release frontline capacity from servicing and enable focus on relationship building & sales



targeted

**50+** Initiatives identified and underway

## 1: Branch of the Future | Impact



Services accounting for ~65% of request volumes in branches are now digitally available	Aggregated metrics	90%+ STP rate	<1% NFTR rate	<b>58%*</b> Digital adoption
-----------------------------------------------------------------------------------------------------	-----------------------	------------------	------------------	---------------------------------

### **Updation of PAN service request illustration**



*Digital adoption is basis requests processed through digital and branch channels in Jun'21 for services that take up max vol in branches STP and NFTR is for requests processed through digital channels in Jun'21 for 13 services built under BOF

# 2: Operations transformation | Back-office productivity enhancement





Results for FY21: 30+ large-scale operations transformation projects, multiple medium-scale initiatives (Gati) and continuous improvement initiatives (Pragati) were delivered across customer life cycles and internal controls.

**3x** increase in **STP** of service requests

90% improvement in NFTR

75% improvement in TAT of NSTP processes

Implemented system to track and close service requests for wholesale banking

# Establishment of an Intelligent Automation Center

**4X** increase in Number of interventions over cumulative baseline

**3X** increase in automation index of operation teams

Institutionalized digital transactional (Risk & Fraud) monitoring

Leveraging analytics to enhance customer satisfaction and improve efficiency Lean Six Sigma training for project members

#### Skills development

initiated in analytics, customer experience, portal development, and dissemination tools

Automation of manual reports and MIS

The Bank has achieved its customer experience targets for FY 21 3: Sankalp | Technology led transformation benefitting CBG business on sales effectiveness and credit process



**AXIS BANK** 

# 4: Siddhi | Tool for sales and managerial effectiveness



Intelligent, comprehensive, proactive and hyper-personalized employee tool that enables meaningful customer conversations via analytics and empower managers to have control and meaningful coaching conversations

### **Problem statement**

Varied customer experience during sales and service due to poor frontline knowledge, skills

Relatively **low and uneven frontline productivity** due to lack of structured sales process and limited central enablement

**Poor employee experience** due to fragmentation of applications, clunky communication, information asymmetry

**Tough external environment** requiring maximization of value from current assets





**Comprehensive:** Customer 360, single access

Proactive: Nudges for improved customer connects

**Personalized:** Self-optimizes

Implementation and impact

**MVP 1 across 5 journeys** (Customer Interaction, Day Planning, Performance Management, Team Management, Training)

Addressing **premium portfolio** (Priority, Burgundy and NRI) covering **3,000** RMs

**Further drops** across branch roles, Retail Assets and Mid-corporate RMs in design phase

300+

Staff journeys across Bank and subsidiaries

Reduced

Opex and capex for the Bank while delivering better frontline productivity 5: We have also transformed our internal processes to empower our employees and enhance effectiveness



**BYOD** Bring Your Own Device (BYOD) program, enabling staff to use bank apps on their devices thereby enhancing staff mobility, productivity and improvement in TAT [Ω] = = = = 7% 60,000+ ~350K 400+ Staff onboarded Leads delivered Compatible models/ NFTR rate with AI, OCR, **OS** flavours facial recognition, and per month geo co-ordinates tracking

## Our digital strategy is aligned with our GPS strategy





# A twin-engine approach to upgrade legacy IT stack to make it digital ready and build a best-in-class end-to-end digital stack





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## Our digital strategy is aligned with our GPS strategy





## Enabling the team through right technology and processes



### Last time, we spoke about...



Architecture API Consumers

API Server

with Payload noryption an Checksoni

Detabese

Environmen

(Private/Public

Networkd

Axis Bank Enviro

(Private Network)

External Environm (Public Network)

### ... Now, Axis is:





70% of Applications and Infra planned on Cloud – including100% of new customer facing applications

Leader among peers to take the **Cloud First approach** 



500 deployments in CI/CD mode



Integration of Dev-Sec-Ops led to **70% reduction** in deployment time



One of the largest Work-From-Home setup on Cloud with 65k+ registered users

## 1: We are the leader in cloud adoption in the banking sector



## Why cloud was vital in Axis Bank's transformation agenda

By Rajiv Bhuva | June 29, 2021



Amitabh Chaudhry, Managing Director and CEO of Axis Bank, on the bank's core transformation strategy—and the future of banking.

## mint

Axis Bank chooses AWS to transform digital experience



Axis Bank will use AWS to build new digital services. mint (Photo: Mint)

## **Business Standard**

### Axis Bank strikes cloud computing deal with AWS for digital transformation

India's third-largest private sector bank to migrate 70% of its on-premises data centre infra in next 24 months to further reduce cost, improve agility, improve customer experience

## Axis Bank to send 70% of its apps and infrastructure to the cloud

The Indian bank turns to AWS for digital banking transformation.



## moneycontrol

## Axis Bank inks multi-year deal with AWS for powering digital banking services

As part of the agreement, Axis Bank will draw on the breadth and depth of AWS services to build a portfolio of new digital financial services to bring advanced banking experiences to customers, including online accounts that can be opened in under six minutes and instant digital payments.





As India went into lockdown to contain the Covid-19 crisis in March, the country's third-largest private sector lender Axis Bank moved swiftly to ensure that employees have access to critical applications to maintain business continuity.

## 2: 500 deployments in CI/CD mode through the 'Jenkins' pipeline



**AXIS BANK** 

The DevSecOps Build Farm for Axis is capable of handling multi cloud **CI CD** 



All security tools have embedded security

Platform supports the entire spectrum from monolithic deployment in traditional application servers to cutting edge deployment in managed services **Kubernetes** 



Features like ChatOps, automated functional and non functional testing are in the pipeline to evolve it to a truly touchless CI CD platform

# 3: Resiliency at Axis being built through multiple initiatives

# 



#### **Data Centre**

Data Centers Expansion

DRM solution implemented

DR drill calendar for Apps



#### New Age Tech.

Adoption of SDN, Latest Enterprise Class Storage, HCI, Cloud, Engineered Systems, Tapeless Backup



#### Data

**Built for Resiliency** 

Maximum availability arch.

Always on methodology



#### Network

N+N Arch. for critical n/w components and dynamic routing protocols



#### Cloud

Cloud Platform & Technologies adoption with ~50 Apps live from Cloud



#### Standardization

Infra Standardization covering Hardware & Software tech



#### Monitoring

24x7 Resiliency Operation and Network Operating Centre monitoring using NMS Tools



#### Assessments

Business impact analysis, data center and app resiliency audits

### Continuous Technology Refresh - Year-on-year >25% Refresh towards Latest Technology Adoption

### **Continuous Re-skilling** -Technology adoption of techniques like SRE, Technology Labs etc.

**Governance** - IT Strategy of the Board, Management Reviews

Key focus areas

## 3: Strengthening to become Best-in-Class data infrastructure



	<b>Near DR</b> ¹ for Critical Apps	4 Physical data centres	<b>100%</b> Infra ~3 Year ageing	RTO ² reduced by <b>50%</b> for critical applications	Improved Infra availability from	
Data Centres	Software defined single-pane management with orchestration	<b>Near Zero</b> Data Loss architecture	Standardized Hardware, OS & DB to Latest Tech/Platform	Software defined single-pane management with orchestration for network	99.99% to 99.999%	
A D Applications	<b>Near Zero</b> RPO ³ for Critical Apps	Monitoring Customer- level application performance	Proactive approach to improve App Resiliency to <b>99.999%</b>	<b>70%</b> Apps on Cloud targeted in 3 Years period	Skillset readiness for Cloud tech (Kubernetes, Containers, In- memory, Functions & Sharding)	
Service Delivery	Improved assurance of repeatable tasks	Improved <b>reliability</b> in Biz Services delivery	Reduce human intervention & errors	ITIL Framework implementation	Site reliability engineering (SRE) framework	

1. DR – Disaster Recovery 2. Recovery Time Objective 3. Recovery Point Objective

## Our digital strategy is aligned with our GPS strategy





## Developing in-house tech, design and AI capabilities





Enterprise Architecture Practice that focuses on building a sustainable governance structure to rationalize and optimize the application architecture



Agile Centre of Excellence (CoE) to build capabilities to deliver faster

Key roles such as **Agile Coach, Scrum Master** are being introduced across IT projects to drive adoption and leverage benefits

66% increase in the IT team strength in the last 2 years



The Bank is focusing on developing its in-house capabilities

Customer Experience will be a focal point of all technology developments and enhancements and therefore, Bank has invested on experienced talent in this area Subzero design - a collection of guidelines and components to create a unified experience for all Axis Bank customers



IA center of excellence (CoE) to create overall automation strategy and adoption of industry practices enabling scaling automation and maximize benefits within the bank and its subsidiaries

## 1: Sub-zero design platform for a unified user experience





Subzero is a collection of guidelines and components shared among designers and developers in order to create a streamlined and enjoyable user experience for all Axis Bank customers.



At its centre is the pattern library which contains reusable components and foundations, from the individual atoms to the full templates and pages..



Rather than focusing on pixels, developers can focus on application logic, while designers can focus on user experience, interactions, and flows.

Subzero will help reduce design and development time by ~20%, and provide consistency across customer journeys


## 2: IA center of excellence (CoE) to create overall automation strategy and adoption of industry practices (1/2)



IA journey so far

Key streams	Implemented interventions	Success stories
RPA	650+	<b>Digital Insta Services –</b> Using AI & OCR for KYC document validation & Aadhaa redaction leading
		40% NFTR Reduction due to the pre-upload check
AI/Cognitive automation	50+	<b>Email BOT</b> – helps in automating understanding of content, issue prioritisation, routing and revert generation for incoming emails
		70% intent identification
		40% reduction in average handling time

Intelligent customer engagement $Q$	Paperless journey	Digital assurance		
Conversational AI	Customer experience improvement	Automating controls to reduce risks		
<ul> <li>Use of Voice BOT to automate call handling for outbound calls for sales/reminders/notifications</li> </ul>	<ul> <li>Attended Bot (personal RPA BOTs who help with daily repetitive tasks)</li> <li>Computer vision</li> </ul>	Creation of <b>automated control reports</b> for risk mitigation along with assurance functions		
<ul> <li>Speech analytics to assist agents real time</li> <li>&amp; automate call quality assessments</li> <li>Chat BOT</li> </ul>	<ul> <li>Use of IOCR technology to extract information for processing and machine learning</li> </ul>			

## 2: IA center of excellence (CoE) to create overall automation strategy and adoption of industry practices (2/2)

#### Four levers for CoE institutionalization

- 1 Structure &<br/>governanceOperating model, roles and responsibilitiesDelivery practices and governance framework
- 2 Partners & Tool and cloud strategy tools
  License optimization and Partner engagements
  Platform consolidation
- 3 Capability & Setup of IA specialist roles & capabilities competence Learning and development plan for IA roles
- **4 Delivery and maintenance** Agile transformation for delivery
   Automate process performance review and reporting
   Setup of Business Continuity practices



**AXIS BANK** 





# Committed to Highest Standards of Data Security and Customer Privacy (1/2)





Defence in depth though best in class security technology and process controls Vulnerability and threat management across the entire tech. landscape

Security by Design

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24 x 7 events monitoring by SOC through Next Gen SIEM, threat intelligence tools



Continuous RED Team exercises to proactively and timely vulnerability identification



Security Analytics for enhanced security threat visibility

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Continuous transaction monitoring supplemented by real-time decline rules



Strengthening Cyber resilience program with focus on detect and respond/recover activities

1. BitSight Rating = Key Risk Indicator of Over all Cyber Security. Cybersecurity ratings company based in Boston, US (2011). Approach similar to credit ratings for financial risk.BitSight Security Ratings are calculated on a scale of 250-900 with a higher rating indicating better security performance.

## Committed to Highest Standards of Data Security and Customer Privacy (2/2)



		- Key Capabilitio	es ———			
In-House Cyber Breach Assessment For safely simulating multiphase world attacks, and identify gaps vulnerabilities in Bank's environ	a. Frauc e, real- b. Artific / Risk Mo	<ul> <li>24x7 Dark Web Monitoring</li> <li>a. Fraudulent / Phishing sites</li> <li>b. Artificial Intelligence based Digital Risk Monitoring for Bank's sensitive data on Internet / Dark web</li> </ul>		Cyber Security Threat Intelligence from best-in-class commercial sources		
Cloud Cyber Security Suite	Container security monitoring & vulnerability Scanning			Cloud security compliance monitoring		
Cyber Security controls for DevSecOps Pipeline	Static analysis	Dynamic analysis	Real-time vulnerability monitoring an analysis		Cloud secret keys and credential management	









1: Best in class analytics solution leveraging alternate data to AXIS BANK implement large scale models



- We have begun our cloud data infrastructure journey
- We are building **alternate data platforms** to enable score-based underwriting for next 100 million+ customers

  - We are also implementing large number of credit and marketing models leveraging advanced techniques with new age data to drive better predictive and to drive sourcing
- Agile team with expertise in alternate data and risk set up, and a robust test and learn approach to risk framework and program building and scale-up set up to drive the initiative

### 1: We are moving to Data Architecture 3.0





Structured, Semi Structured and Unstructured Data

### On the fly elasticity Separation of compute from storage



Big data clusters developed on Hadoop with PetaByte scale data



150+ use cases deployed across credit, fraud, marketing analytics on cloud decisioning platform



Multiple machine learning based credit models developed; 2000 attributes considered; up to 120% lift on GINI over generic bureau models

## 2: Integrating alternate unconventional data in Axis ecosystem 🗼 AXIS BANK for risk-moderated business expansion

We are starting to use **Information collateral** or data like **telecom score** and **farmland health metrics** for enabling underwriting capability for all Indians who walk through Axis doors, especially for new products or info-poor segments



Validated on multiple products: Telecom score gives risk discrimination over and above underwriting scorecards

#### **Farmland Health metrics**



#### Crop Health Metrics generated from satellite images



## 2: Leveraging geo-location based income estimation models to enhance customer onboarding experience







## Neural network algorithm leveraged for obtaining the final estimates

Estimate Income using Bureau + Internal bank information + Output from 1



### We are leveraging state-of-the-art cloud-infra for deploying the model in real-time



- Python container box to help on-board non-linear algorithms to run in real-time on Blaze environment.
- 2 Real-time geo-location based K-Nearest neighbors to be leveraged for model-run.

## 3: KTB cards sourcing has started contributing significantly with good risk outcomes and activation rates



KTB (Known to Bank) base of **140 mn customers** 

Built market tested credit models based on KTB data

**Credit risk outcomes** for KTB performing significantly better than expectations

Bank is currently launching **KTB based programs –** Focus is on scaling them going forward



#### % of Business contribution

## 3: Large number of marketing models leveraging advanced techniques with new age data









### Building the right team with the right talent





...people dedicated to digital agenda



.. member strong inhouse tech team



#### ...new hires from non-banking background

Fintech's

• Consulting

- E-commerce
- IT

- Campus
- Others

#### .. across roles forming full service teams

- Design
- Product managers
- Developers: Front-end, backend, full stack
- Dev-ops
- QA
- Scrum masters

- Digital marketers
- Partnerships
- Governance
- Channels





### The organization is moving to more flexible ways of working... 🗼 AXIS BANK

Future of v	vork 2.0
~15,000	Staff coverage under Hybrid Model
~2,250	Employees across 22 central departments moved to a 100% virtual format in two phases
130	Candidates hired in alternate formats under GIG-A Opportunities
Benefits	Structural reduction in costs Better employee satisfaction Ability to attract new talent pools

### One Axis App

App with enhanced Self-Service and access to required information through ~30 modules

**Onboarding** Virtual ID, visiting card & mandatory declarations for new joinees

ActiveOne screen view of benefits, employee profile, payroll and reimbursements, leaveTransactionmanagement, staff loans, ESOPs etc.

OthersCOVID support – Online expert consultation, vaccination badge & reimbursementWebcast, Axis Champions, My GPS, Contributions to social causes, Online<br/>Approval System, Tap P2P





axis bank





