



MUMBAI | MAY 18, 2023

Puneet Chandok

President, Amazon Web Services,
India & South Asia

Welcome

12

TRACKS

96

BREAKOUT
SESSIONS AND
WORKSHOPS

7

EXPERIENTIAL
ZONES

80

AWS
CUSTOMERS
FEATURED

53

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Crafted at Zoho Corp.



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BRAIN STATION 23

Cloud.in

DATAMOTIVE
Eliminating Cloud Boundaries

GENESE

ManageEngine

NIMESA

ORCA
security

PSSPL
PENTAGON SYSTEM &
SERVICES PVT. LTD.

Shellkode

sumo logic

SUSE

VERTICA
by opentext

Workmates Core2Cloud
Solution Pvt. Ltd.

Exhibitors

Alchemy



TRAINOCATE
Advocate | Educate | Innovate



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AWS Training Partners

2019



1,464

**DAYS SINCE THE LAST PHYSICAL
AWS INDIA SUMMIT**

2023



There are years when nothing happens, and years in which centuries happen

"Tackles the biggest questions of history and of the modern world"
JARED DIAMOND

Yuval Noah
Harari


Sapiens
A Brief
History of
Humankind



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What I would like to share today

1

AWS India
**How are we moving
the country forward?**

2

Cloud and Technology
**What is top of mind for
our customers?**

3

AWS for you
**How can you start
building today?**

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**How can you start
building today?**

The world's largest and most broadly adopted public cloud

Millions

100k+

200+

99

31

Of active
customers

Partners in
150+ countries

Fully featured
services

Availability
Zones

Geographic
regions

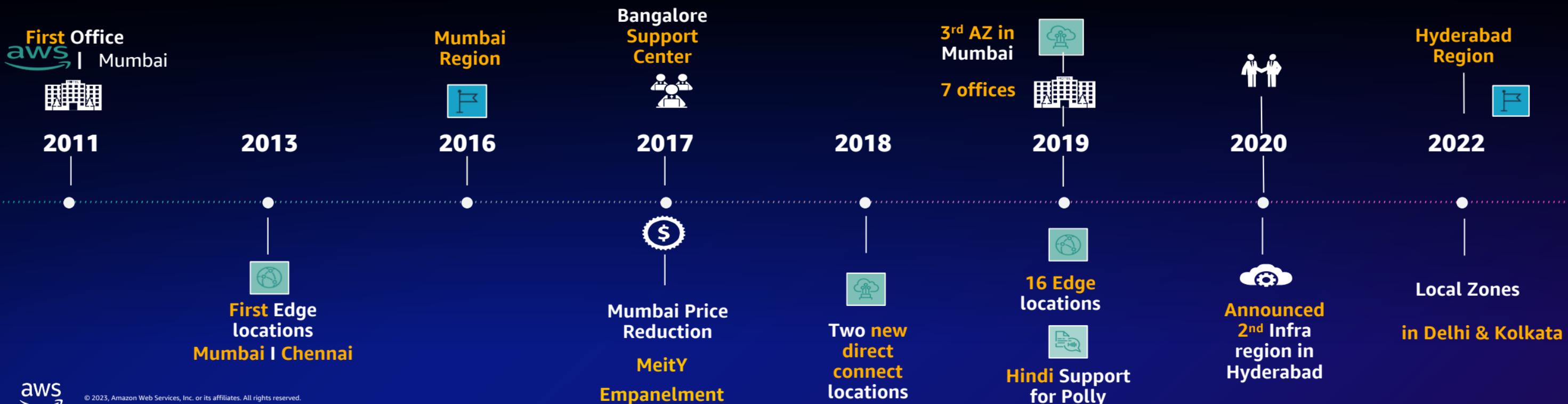
Our AWS India Mission

**Empowering builders and businesses to
build a better India**



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We're investing in India for the next few decades



Our multi-billion dollar investments are a long term commitment to India

\$12.7B

To be invested
in the country
by 2030

131,700

Jobs supported at
external businesses
annually by 2030

\$23.3B

Contributed to
India's GDP by
2030



Using the power of the cloud to **democratize knowledge**

29M

People to be trained
on the cloud by **2025**

4M

Trained in India
since **2017**

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AWS for you
**How can you start
building today?**

AWS for Data

AWS for Generative AI

AWS for Modernization

AWS for Sustainability

AWS for Skills



**AWS for
Data**

**AWS for
Generative AI**

**AWS for
Modernization**

**AWS for
Sustainability**

**AWS for
Skills**



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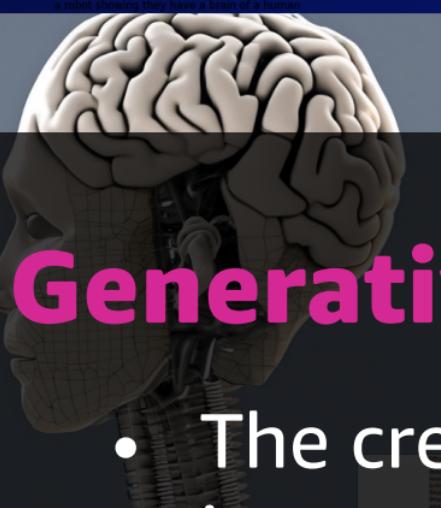
AWS for Generative AI

AWS for Modernization

AWS for Sustainability

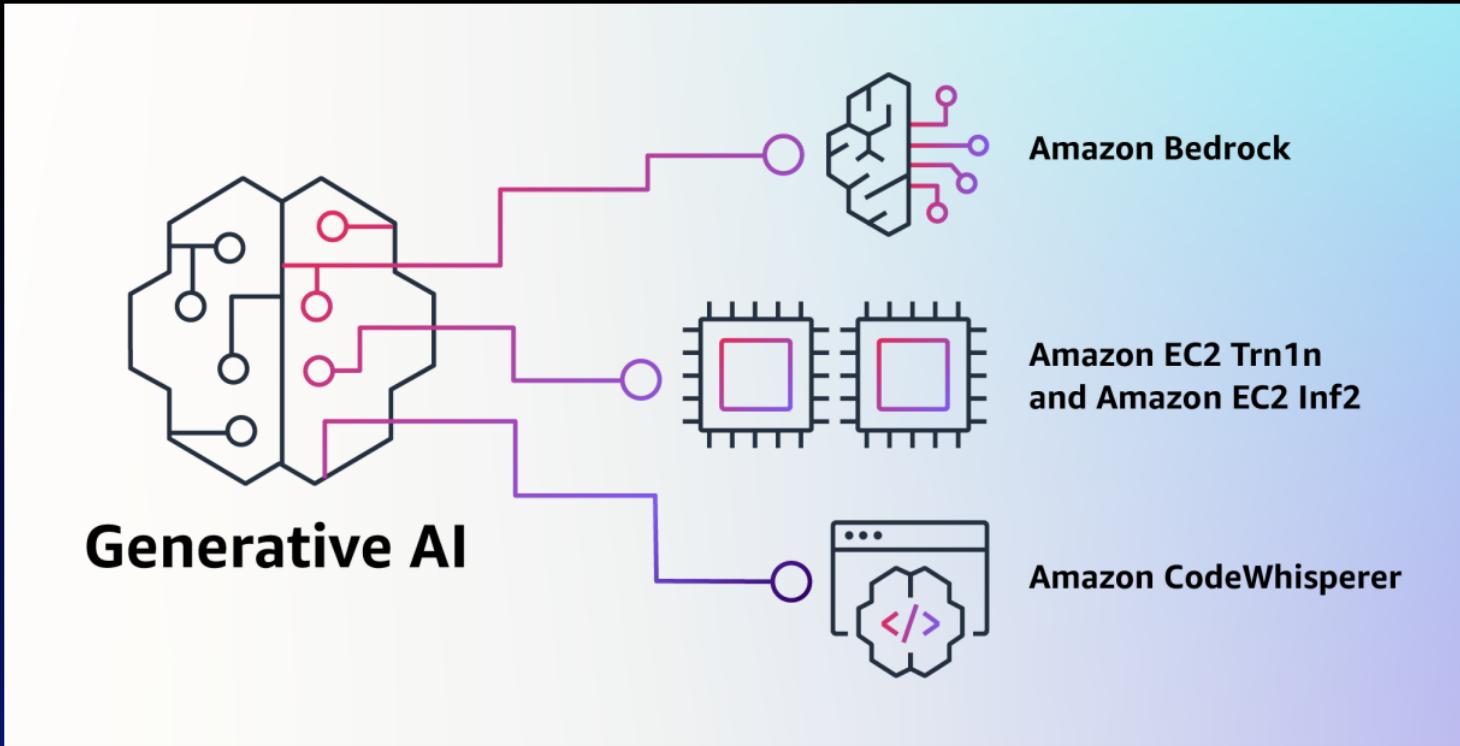


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Generative AI for the uninitiated

- The creation of new content and ideas, including conversations, stories, images, videos, and music
- Powered by large models that are pretrained on vast corpuses of data and commonly referred to as foundation models (FMs)



Amazon Bedrock

The easiest way to build and scale generative AI applications with foundation models (FMs).

Amazon Titan

Bedrock will also offer Amazon Titan FMs, a family of industry-leading FMs developed by AWS.

Amazon SageMaker JumpStart

Provides pretrained, open-source models for a wide range of problem types to help you get started with machine learning.

**AWS for
Generative AI**

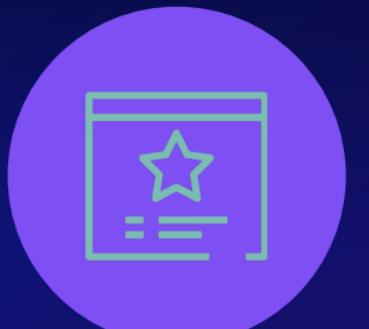
**AWS for
Modernization**

**AWS for
Sustainability**

NEW SERVICES AND FEATURES

3332

released in 2022



AWS Modernization Pathways

**Move to Cloud
Native
Architecture**

**Move to
Managed Cloud
Services**

**Move to
Managed
Databases**

**Move to
Open
Source**

AWS for Generative AI

AWS for Modernization

AWS for Sustainability



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Amazon and Global Optimism announced The Climate Pledge, a commitment to meet the goals of the Paris Agreement **10 years early**—and achieve **net-zero carbon by 2040**.

Amazon is a co-founder and **first signatory of The Climate Pledge**

AWS's infrastructure is
5 times more energy efficient

than the average of surveyed enterprise
data centers in the Asia Pacific region

*SOURCE: 451 RESEARCH



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**How can you start
building today?**

Customers adopting AWS have seen a 3.5x return on their investment

\$10B

turnover
generated

\$710M

in cost
savings

>50%

Of customers
experienced shorter
time to market



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Source: RTI International report 2022



DELHIVERY

DREAM11

CRED

Gameskraft

lenskart

make mytrip

meesho

MPL

PayU⁺

paytm

shaadi

GAMES 24

Razorpay

big basket

SWIGGY

ZERODHA

zomato

TATA M&T

accenture

airtel

AngelOne

APOLLO
TYRES LTD

ASHOK LEYLAND

AU
AU SMALL
FINANCE BANK
A SCHEDULED COMMERCIAL BANK

AXIS BANK

bajaj
ENERGY

BajajCapital

BAJAJ
FINSERV

BARC
BROADCAST
ADVERTISING
RESEARCH
COUNCIL INDIA
What India Watches™

WYNK
MUSIC

CEAT

cloudnine

दैनिक भास्कर

Dialog

Dr.Reddy's

Edelweiss
GENERAL INSURANCE

GE

genpact

HOUSING FINANCE

HCLTech

HDFC BANK

HDFC
Life
See what's in your life

ICICI
Lombard
Nisshay Vyaap

JUBILANT
FOODWORKS

LARSEN & TOUBRO

mahindra

SONY
liv

Disney | Star

salesforce

TATA MOTORS

TATA
PLAY

TATA
CLIQ

TIMES
NETWORK
Now On Nothing

ZEE

amagi

ArisGlobal

Chargebee

CleverTap

druva⁺

freshworks

gupshup

highradius

ibssoftware

innovaccer

LAMBDATEST

mindtickle

moengage

punchh.

Imagicaa

Balmer Lawrie - Van Leer Limited

befree

Business Standard

DINDIGUL
THALAPPAKATTI
BRYAN'S RESTAURANT

Durian

GK-E
Hi-TECH
LENSES
Precision Optics

Hocco
entry

INDIRA
IVF
FERTILITY & IVF CENTRE

The Indian EXPRESS

Kalamandir
SCHOOL OF SCIENCE

KENSTAR

lightstorm

MAHAJAN
IMAGING & LABS

mathrubhumi.com

BharatPe

Chingari

CREDITVIDYA

MediBuddy
Your Health Buddy

esper

gamation
TECHNOLOGIES PVT.LTD

HASURA

INDmoney
Super Money App

INDUSFACE

Kiranakart

LENDINGKART

LOCO

MYTEAM11

Niyo

OBserve-AI

Perfios
TECHNICAL ANALYSIS & EXECUTIVE SOLUTIONS

solt

WINZO

WorkApps

aws

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Up to 30%
*reduction in
costs*

25%
*reduction in
query run time*

20%
*reduction in
number of
instances*

10%
*reduction in CPU
utilization*

*Saves big by using AWS Graviton2 to power data
driven business insights*

Shaadi.com reduced the time needed to verify new user profiles by 50% and shortened the development cycle from 2 months to 2 weeks



shaadi[®].com

“Working with AWS allows us to perform data processing and deliver client reports at a much faster pace, with greater velocity than ever before.”

- Mahendra Upadhyay, CIO/CTO

**2x data
processed in
~20% of the time**

**Data from
55,000 IOT
devices**



3 key messages I would like to leave you with



AWS is the world's most broadly adopted cloud and is **deeply committed to India**



AWS is innovating to **democratize technology**, make it easy, practical and cost effective for you



AWS is the **home for India businesses to build** and innovate. And you can too, get started today



MUMBAI | MAY 18, 2023

Thank you!



Dr Anish Shah

Managing Director & CEO,
Mahindra Group



Subrat Mohanty

Group Executive, Banking
Operations & Transformation,
Axis Bank



Dilip Kumar

Vice President, AWS Applications



Kapil Bharati

Executive Director & CTO,
Delhivery



Murali Brahmadesam

CTO & Head of Engineering,
Razorpay



Tanuj Vohra

CTO, HighRadius



Kaivalya Vohra

Co-Founder & CTO, Zepto



Dheeraj Pandey

Co-Founder & CEO, DevRev



Gopal Vittal

Managing Director & CEO, Bharti
Airtel Limited



FUTURE OF MOBILITY

GLOBAL MEGA TRENDS SHAPING AUTO INDUSTRY

MOBILITY AND TRAFFIC



154 hours of time is lost to traffic jams each year in 20 of the world's most congested cities

CLIMATE CHANGE AND POLLUTION



90% of the world's urban population lives in an environment that fails to meet WHO's air-quality standards¹

ROAD SAFETY



~40,000 people die in car accidents in the US every year

URBANIZATION



66% of world's population will be living in cities by 2050, and 41 megacities will exist by 2030²

Sources: UN, IMF, INRIX Global Traffic Scorecard 2019 congestion rank, World Bank—WDI; IEA; EVI; NSC; BCG analysis. ¹World Health Organization's annual air quality (PM2.5) guidelines. ²10M inhabitants or more.



Electrified vehicles (EVs)

Self-driving cars and Robotaxis

Cars will operate more like smartphones

Mobility as a service

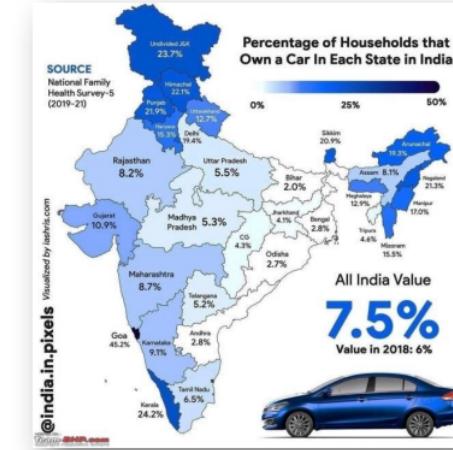
FURTHER AMPLIFIED WITH INDIA-SPECIFIC MARKET FORCES

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Rapidly Changing Infrastructure

10,993 Km in 2022-23 - 30 km/day
Vs
4,410 Km in 2014-15 - 12.08 km/day



Huge Potential for Personal Vehicles

22 Veh. / 1000 Indians
Vs
700-800 Veh. / 1000 in Developed Countries



The Great Demographic Dividend for India

Middle Class :
14% in F05 Vs 31% in F22
2X (60%+) by F47

LEADING TO TRANSFORMATION IN INDIAN AUTO INDUSTRY

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MASS MOBILITY

Objects of Mobility



Electric 2 & 3 wheeler blazing the trail



Mobility as a Service

PERSONAL MOBILITY

Objects of Desire



Indian BEV market is kicking off



SUV dominance, & need for Safety



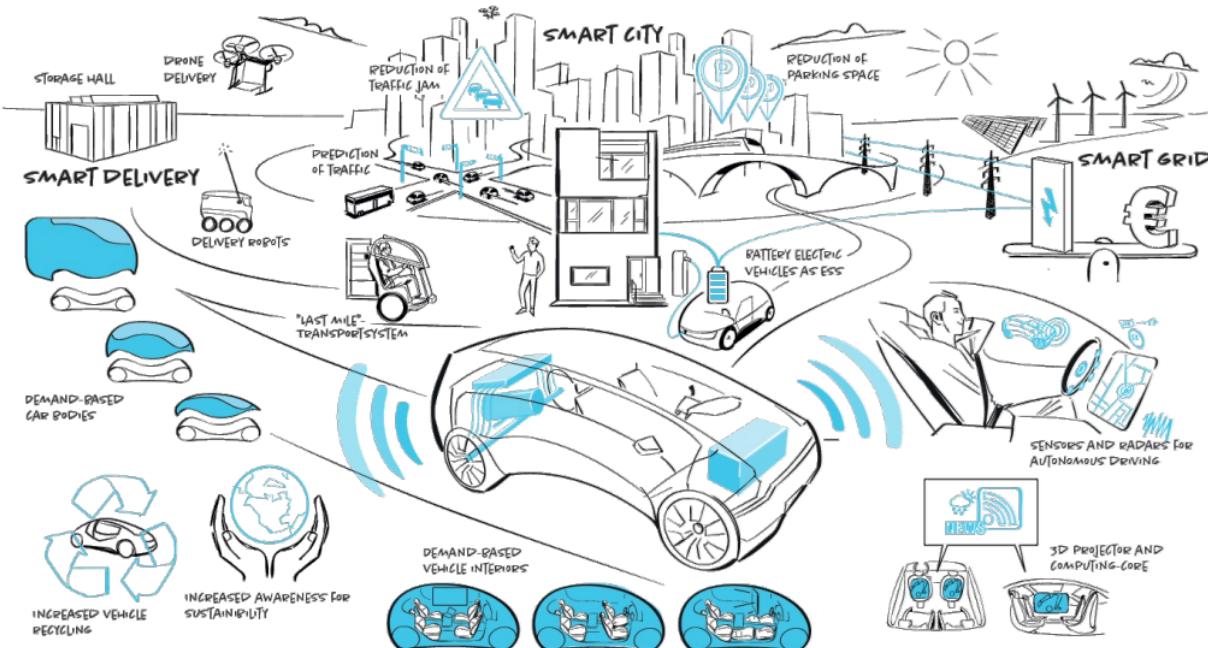
Focus on customer experience

2030 end-state of mobility ecosystem : "system of systems"

with multiple inputs and multiple decisions points being managed in near-real-time

Characteristics of the "Mobility ecosystem in 2030 and beyond"

- High share of **electrified vehicles**
(30%..>50% w/o ICE)
- **AI-based optimization** of "super-systems"
(e.g. traffic flow plus grid load)
- Lower than today's share of individual car **ownership**
- **MaaS** using Purpose-built mobility vehicles (**PMV's**):
 - Modular
 - Electric (mix of BEV, FCEV)
 - Connected
 - Autonomous (L4/L5)





ELECTRIC LAST MILE MOBILITY LEADERSHIP

70%+ MARKET SHARE IN E3W

MAHINDRA'S TECH BASED SHARED MAAS PLAY

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ENTERPRISE MOBILITY SOLUTIONS

enabled by

Alyte Core System

Intelligent forward-thinking system that ties together all our technology platforms.



Application based interaction for bookings, tracking of vehicles and reporting



Driver and Employee Apps to accept and manage trips



Routing engine for optimal routing and planning of trips



Control Tower Operations (CTO)



EV telematics for a connected car



Business partner and driver management



Meru

City Rides | Airport Transfers | Hourly Car Rentals | Outstation

Meru Biz

End-to-end tech-based travel management system for corporates

FUTURE OF PERSONAL MOBILITY

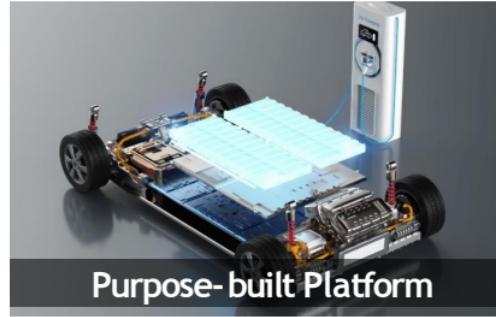


OBJECTS OF DESIRE

OUR FUTURE-READY STRATEGY



Software Defined Architecture



Purpose-built Platform



ADAS & Autonomous Driving



Ecosystem Partnership Approach



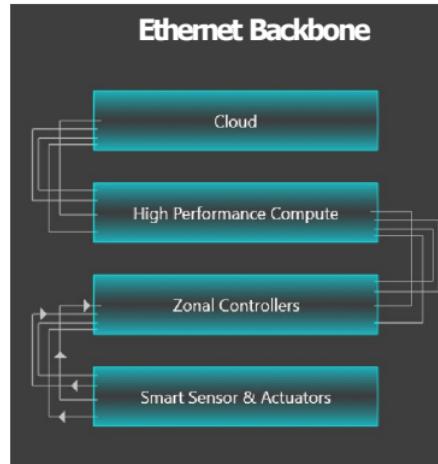
Innovative Business Models



Customer-obsessed Brands

Our Tech Leadership

SOFTWARE DEFINED ARCHITECTURE

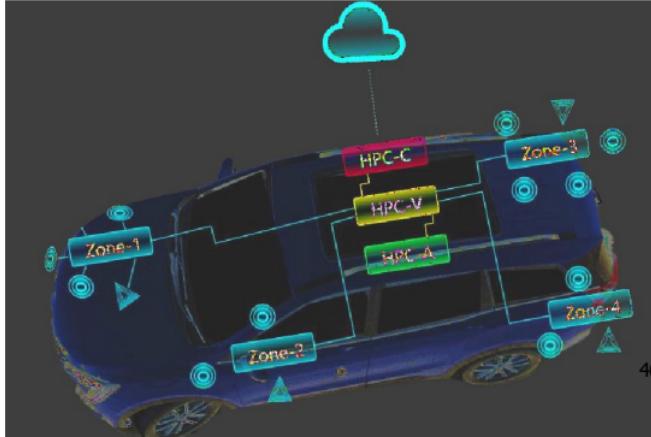


High Performance Computers

- Cockpit Domain
- Autonomous
- Vehicle Dynamics

Capable of delivering

- ADAS Level 2+
- FOTA, SOTA
- DMS, OMS
- Alexa
- Connected Car - 5G, V2X



AUTOMOTIVE TECHNOLOGY

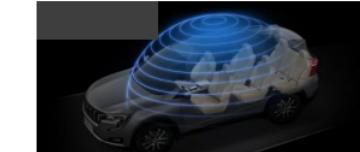
High Performance Cockpit



Sky Roof



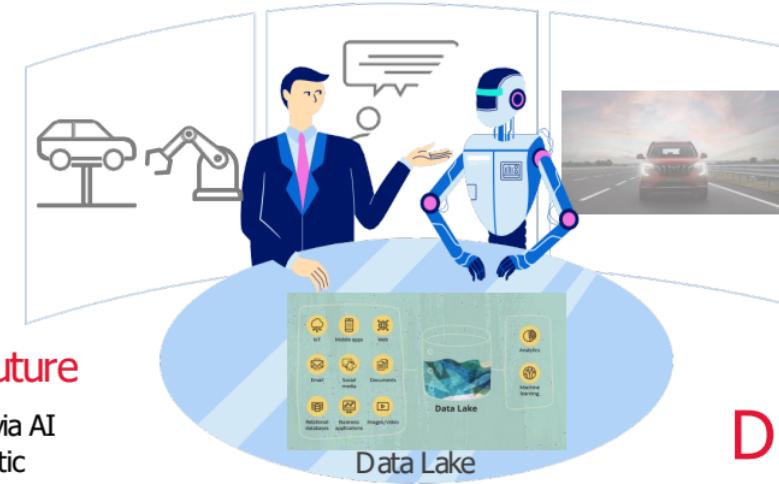
Immersive Sound System



Semi-Active Damping



EMBRACING AI AT SCALE IN AUTO



A

- Factory of the Future**
- No Fault Forward via AI
 - Autonomous Robotic manufacturing
 - Connected Supply chain

B

- AI driven Enterprise**
- Data driven decision making
 - AI/ML based forecasting
 - Overall operations optimization

C

- Customer Experience**
- Omnichannel experience
 - AI/ML based Customer acquisition
 - Hyper Personalized usage experience

D

- Generative-AI**
- Customer Care Co-pilots
 - Technician Co-pilots
 - Driving & Navigation Co-pilots
 - Marketing collateral creation using GPT

PURCHASE AND OWNERSHIP EXPERIENCE OF THE FUTURE

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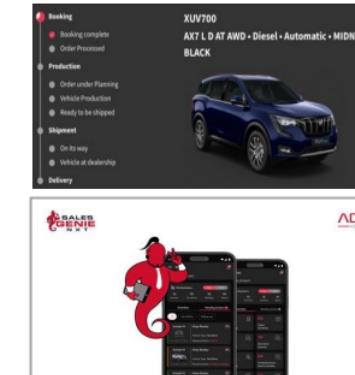
AI Enabled Omni Channel Product Discovery



Metaverse enabling - All digital Experience



Exciting Phygital Purchase Experience



Prognosis with Supply Chain Automation



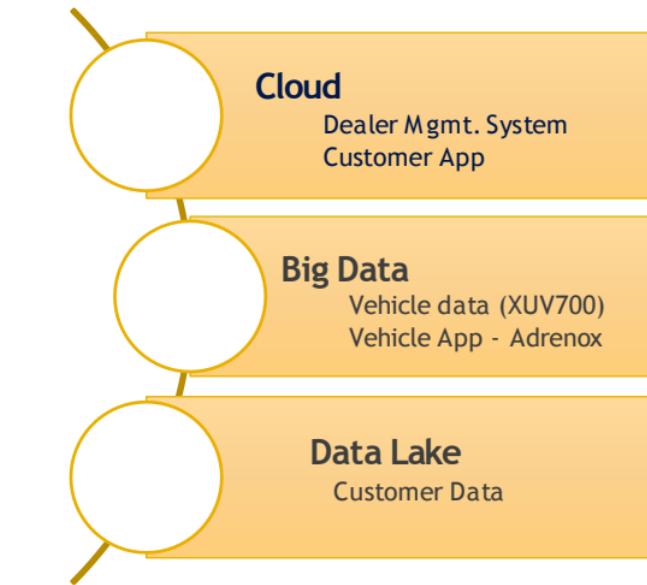
Technology Partners

SAAS - BACKBONE OF DIGITAL TRANSFORMATION

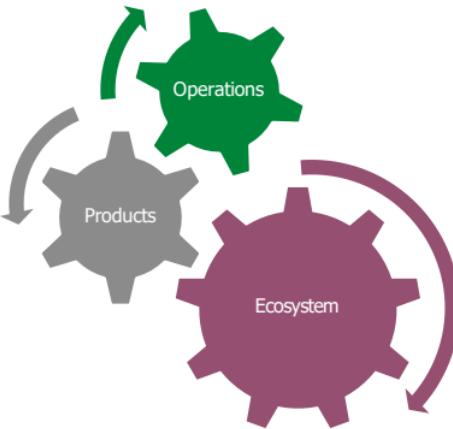
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Planet +ve Future of Mobility



Greening Ourselves

1



Scope 1+2

2



Material
Circularity

3



Water Positivity

4



ZWL

Decarbonizing Our Industry

5



Scope 3 - Supply Chain

6



EVs

7



Alternate Fuels

8



Auto Recycling

50

MAXIMIZING THE IMPACT - HOW TO GET RESULTS

1

Rethink value add and value chains



2

Become a SW-centered tech company



3

Establish a culture of financial prudence



4

Be customer obsessive



5

Embrace partnerships



51

Prerequisite

Drive Cultural Change: Collaboration, Agile, Bold

PLAY PRODUCT AV



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DESIGN

Thank You!





M U M B A I | M A Y 1 8 , 2 0 2 3

Reimagining Banking For Digital India

Subrat

Axis Bank



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Indian Banking Digital Landscape



Broad-based Customer Segmentation



Data for Reporting



Digitizing steps & Journeys



Banking in Isolation



Personalization at Scale



Data driven Decisioning



Digitizing Interactions



Banking As A service with Ecosystem & Partners

Change Drivers and Themes



Rising customer expectations –
Personalized offerings beyond
traditional financial services



Growth from tier-2 markets is driving
the shift from product centric approach to
focus on effective distribution



Evolving business models in
collaborations with fintechs &
banks



Disruptive trends across
domains e.g. Neo Banks, UPI
Payments, BNPL etc

These themes are driving conversations around:

A. Leveraging platforms & data to meet
customer expectation – What they need, when
and the way they want to receive it

B. Enterprise Agility - Focus on execution
- Shift from “what” to “how”, while being
nimble & fast

C. Emerging Tech & Security - Use of emerging
tech - Analytics & AI to customized offerings &
improving fraud detection

Enablers to Unlock Value



A. Leveraging Platforms & Data

- 1 Enhancing CX via re-imagined journeys & hyper-personalization
- 2 Modernizing data stack



B. Enterprise Agility

- 3 Building resilience in core system by adopting cloud
- 4 Back-Office efficiency & process automation, reusability



C. Emerging Tech & Security

- 5 Embracing Emerging Tech – Generative AI, Metaverse
- 6 Cross-platform and ecosystem solutions

10%¹ Revenue uplift through personalization at scale

20%² Avg savings from running data workload on cloud

\$447b³ Estimated cost savings through AI based applications in Indian banks



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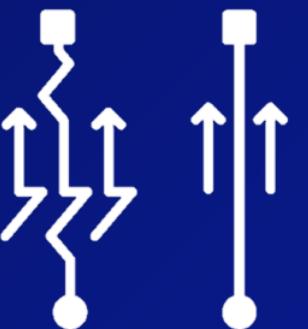
Source 1.BCG Global survey on "What personalisation can mean in Banking" 2 Accenture: 3 ways banks can get great ROI from the cloud. 3. Analytics India Magazine: Optimizing the Indian Banking industry using Artificial Intelligence

1

Reimagined Journeys & Hyper-personalization



Embed **digital-first** in
design thinking
across products



Reimagine customer
proposition for e2e
simplification



Provide omnichannel,
differentiated
customer experience

Journey so far @ Axis Bank

4.8 MB Playstore Rating

94% Digital Transactions

11M MB Monthly Active Users

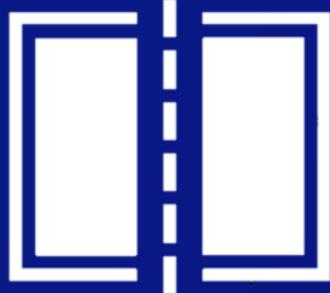
2 Modernized Data Stack



Leverage **alternate data** to scale up customer base



Build Data Stack for enhanced **analytics and decisioning**



Separate **compute from storage** elastically, on-the-fly

Journey so far @ Axis Bank

10k Nudge variants

100+ Alternate Data features

1000 Data Stack 3.0 use cases

3 Cloud Adoption



**Build Cloud-first,
Cloud-native apps for
digital architecture**



**Improve resilience of
core apps through
Cloud micro-services**



**Optimize operating
costs and reduce
capex expenditures**

Journey so far @ Axis Bank

1st Bank w/ 3 Landing Zones

76 Applications on Cloud

98% CIS Governance Score

Back-Office Efficiency & Process Automation



Automate processes
for **back-office**
operations



Improve **operational efficiency** through via automated processes



Cognitive services for data analysis and decision-making

Journey so far @ Axis Bank

2991 IA RPA Bots

1488 Automated Processes

40k Automated monthly Vendor Invoicing

5 Emerging Technologies



Explore **usecases** in
ChatGPT, GPT4 for
digital penetration



Simplify front-end,
keeping complexities
at back-end



Adopt **tech-for-good**
to foster growth and
financial inclusion

Journey so far @ Axis Bank

10 Min vKYC SA Opening
Blockchain cross-
border trade platform
2000 Attributes for
machine learning credit model

6 Cross-platform and Ecosystem



Integrate banking services across partners ecosystem



Marquee partnerships with fintech aggregators



Empower merchants through Integrated Ecosystem solutions

Journey so far @ Axis Bank

380+ Integration APIs

85+ Partnerships

80Cr Monthly Transactions

Way Forward

Revamp product offerings using
People, Process & Technology



Reimagine e2e journey for
hyper-personalized CX



Transform core by infra
modernizing and
continuous monitoring

Digital Transformation Flywheel

Utilize Big Data and Data Stack 3.0 for
understanding CX feedback



Build critical partnerships and
expand the ecosystem

Thank you!



Please complete the session survey in the mobile app



Dilip Kumar

INDIA | 18 MAY 2023



Today's times require
new ideas





250 B.C.

Archimedes
discovers buoyancy



1945 A.D.

Spencer invents
the microwave







Data is the
genesis of modern invention



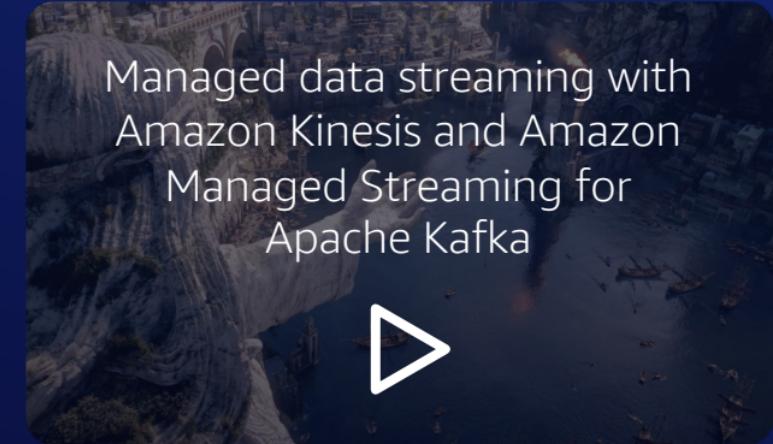
17+ years of
data innovation



First scalable object
storage in the cloud
with Amazon Simple
Storage Service
(Amazon S3)



The first
fully-managed
warehouse in the
cloud with
Amazon Redshift



First machine learning IDE
in the cloud with
Amazon SageMaker

Core elements of a **strong data strategy**



Comprehensive

set of tools for any use case



Integrated

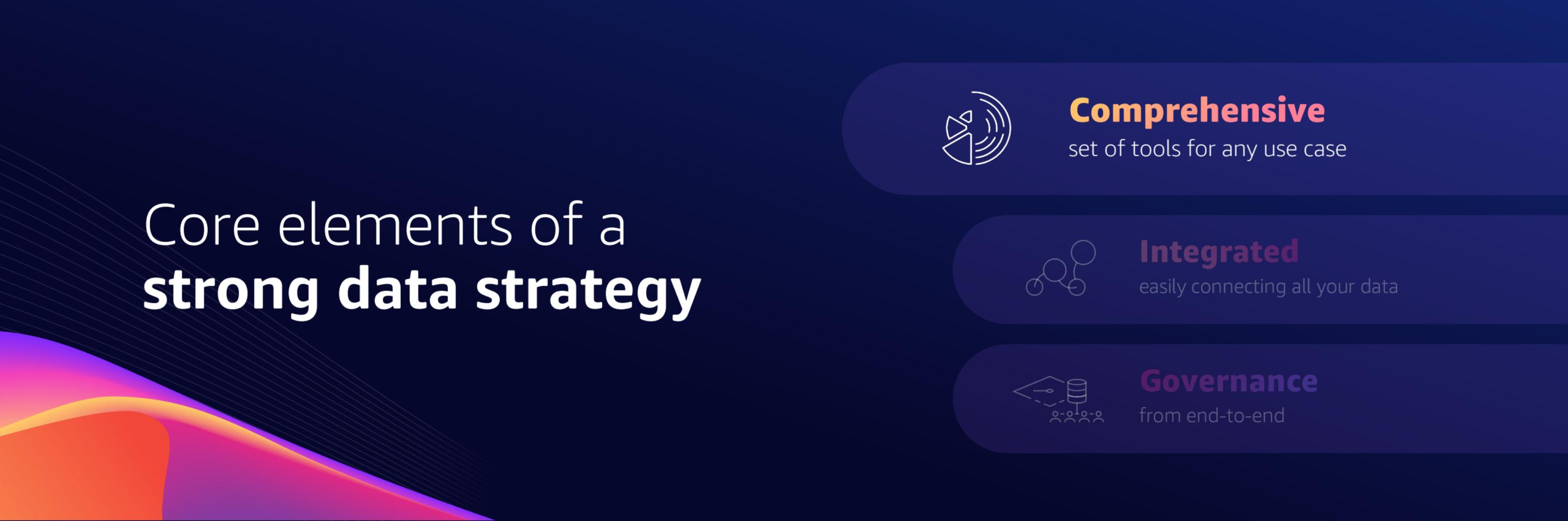
easily connecting all your data



Governance

from end-to-end

Core elements of a **strong data strategy**



Comprehensive

set of tools for any use case



Integrated

easily connecting all your data



Governance

from end-to-end

Amazon S3 is the best place to build **data lakes**

Unmatched security, compliance, and audit capabilities

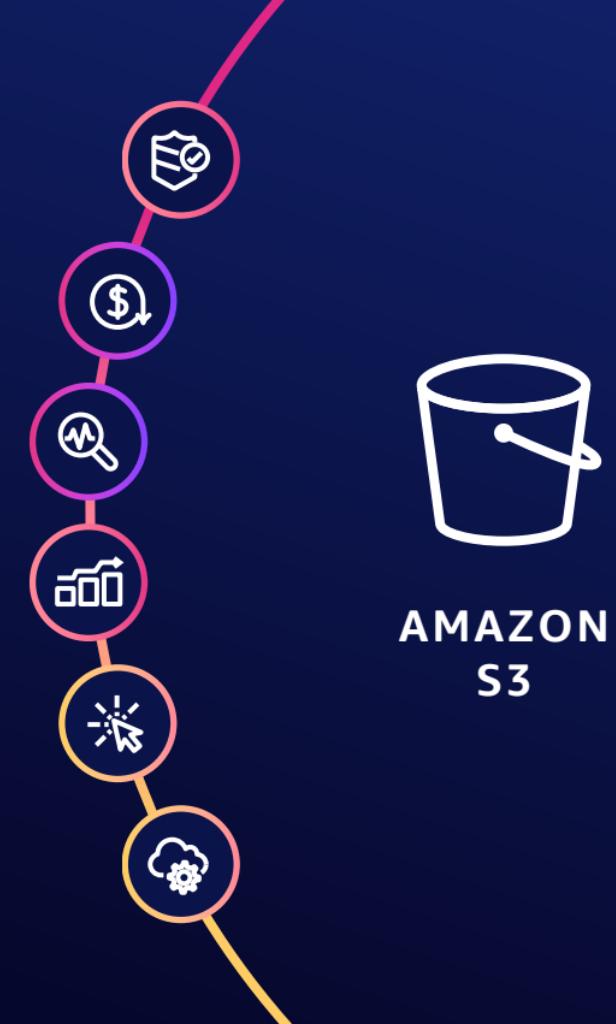
As low as a tenth of a cent per GB-month

Integrated with broadest set of analytics and ML capabilities

Hundreds of thousands of data lakes

More than \$1 billion saved with S3 Intelligent-Tiering

More than 280 trillion objects



Most complete set of relational and purpose-built databases



Amazon
RDS

LAUNCHED 2009



Amazon
Aurora

KEY-VALUE



Amazon
DynamoDB

DOCUMENT



Amazon
DocumentDB

CACHING



Amazon
ElastiCache

GRAPH



Amazon
Neptune

TIME-SERIES



Amazon
Timestream

LEDGER



Amazon
Quantum
Ledger Database

WIDE COLUMN



Amazon
Keyspaces

MEMORY



Amazon
MemoryDB

Most comprehensive set of analytics services

BIG DATA
PROCESSING



Amazon
EMR

SERVERLESS

INTERACTIVE
QUERY



Amazon
Athena

SERVERLESS

REAL-TIME
ANALYTICS



Amazon Kinesis
Amazon MSK

SERVERLESS

DATA
WAREHOUSING



Amazon
RedShift

SERVERLESS

DATA
INTEGRATION



AWS
Glue

SERVERLESS

BUSINESS
INTELLIGENCE



Amazon
QuickSight

SERVERLESS

OPERATIONAL
ANALYTICS



Amazon
OpenSearch Service

SERVERLESS

LAUNCHED 2009

NEW

Broadest set of machine learning capabilities

AI SERVICES

Core

TEXT VISION SPEECH

Specialized

BUSINESS PROCESSES CONVERSATION HEALTH

SEARCH

INDUSTRIAL

CODE & DEVOPS

ML SERVICES



Amazon
SageMaker

GROUND TRUTH

STUDIO

CANVAS

EDGE MANAGER

ML INFRASTRUCTURE

ML frameworks

PyTorch

TensorFlow

Hugging Face

ML silicon

AMAZON EC2
AWS TRAINIUM

AWS INFERENTIA
HABANA GAUDI

Broadest set of machine learning capabilities

AI SERVICES

Core

TEXT VISION SPEECH

Specialized

BUSINESS PROCESSES CONVERSATION HEALTH

SEARCH

INDUSTRIAL

CODE & DEVOPS

ML SERVICES



Amazon
SageMaker

GROUND TRUTH

STUDIO

CANVAS

EDGE MANAGER

ML INFRASTRUCTURE

ML frameworks

PyTorch

TensorFlow

Hugging Face

ML silicon

AMAZON EC2
AWS TRAINIUM

AWS INFERENTIA
HABANA GAUDI

Paytm has over 34 million
daily active users

6%

CONVERSION RATE

Paytm

245.5

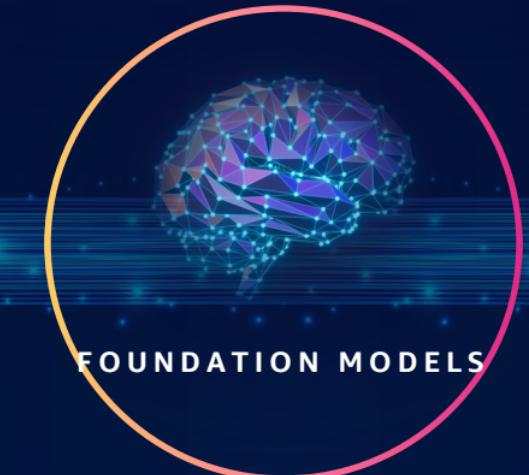
183.102

154.178



Machine Learning models are becoming
increasingly large and complex

AWS is democratizing
generative AI



LIMITED PREVIEW

Amazon Bedrock

The easiest way to build and scale generative AI applications with foundation models (FMs)



Accelerate development of generative AI applications using foundation models through an API, without managing infrastructure



Choose foundation models from AI21 Labs, Anthropic, Stability AI, or use one of our Amazon Titan foundation models.



Privately customize foundation models using your organization's data

Core elements of a **strong data strategy**



Comprehensive
set of tools for any use case



Integrated
easily connecting all your data



Governance
from end-to-end

EXTRACT. TRANSFORM. LOAD.

Combining data from different
sources is deeply complex

DEEPER INTEGRATIONS

Between AWS services



AMAZON
S3



AMAZO
N
AUROR
A



AMAZON
REDSHIFT



AMAZON
SAGEMAKE
R



AMAZO
N EMR



AMAZON
ATHENA



AMAZON
KINESIS



INVESTING IN A
Zero ETL Future

LIMITED PREVIEW

Amazon Aurora zero-ETL integration with Amazon Redshift



AMAZON
S3



AMAZON
AURORA



AMAZON
REDSHIFT



AMAZON
SAGEMAKER



AMAZON
EMR



AMAZON
ATHENA

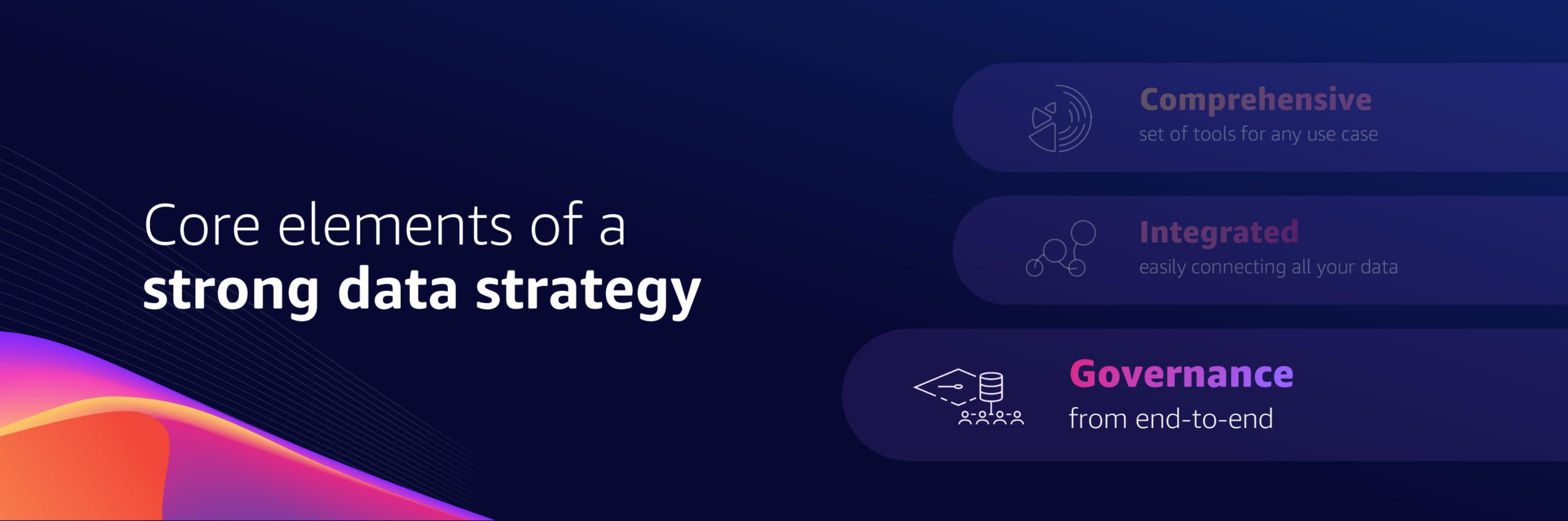


AMAZON
KINESIS

TRANSACTIONAL

ANALYTICAL

Core elements of a **strong data strategy**



Comprehensive
set of tools for any use case



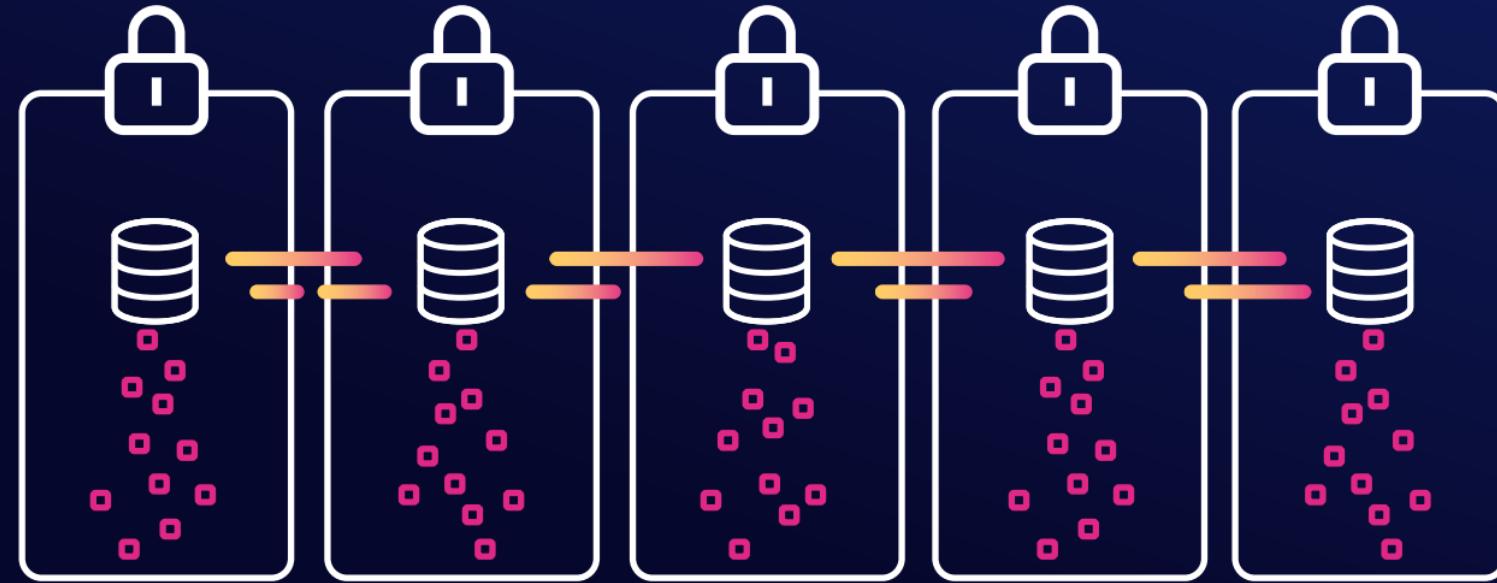
Integrated
easily connecting all your data



Governance
from end-to-end

Core elements
of a **strong**
data strategy

Governance **helps you move faster**



Built-in governance tools



AWS **Lake Formation**

Govern data
within your data
lake on S3



Amazon SageMaker **ML Governance**

Governance and
auditability for end-to-
end ML development



Amazon **DataZone**

Catalog, discover,
share, and govern data
across the organization

PREVIEW

Amazon DataZone

Catalog, discover, share, and govern
data across the organization



AWS LAKE FORMATION



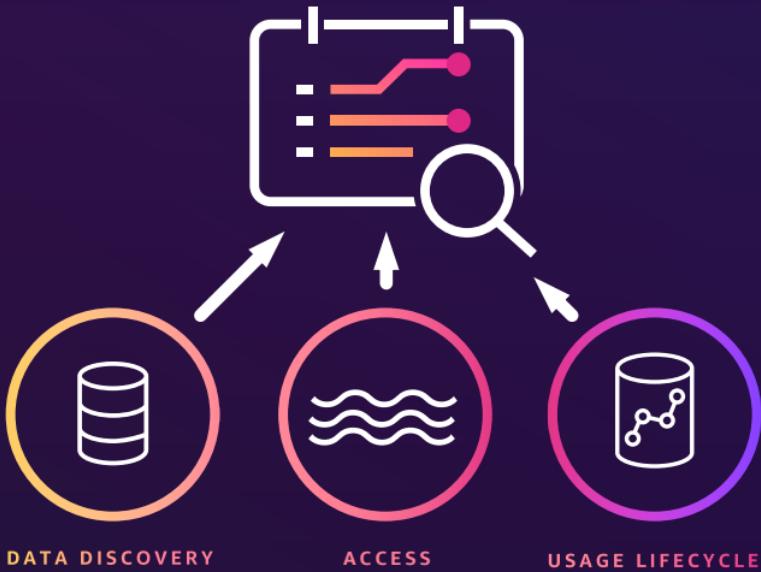
AMAZON REDSHIFT DATA
SHARING



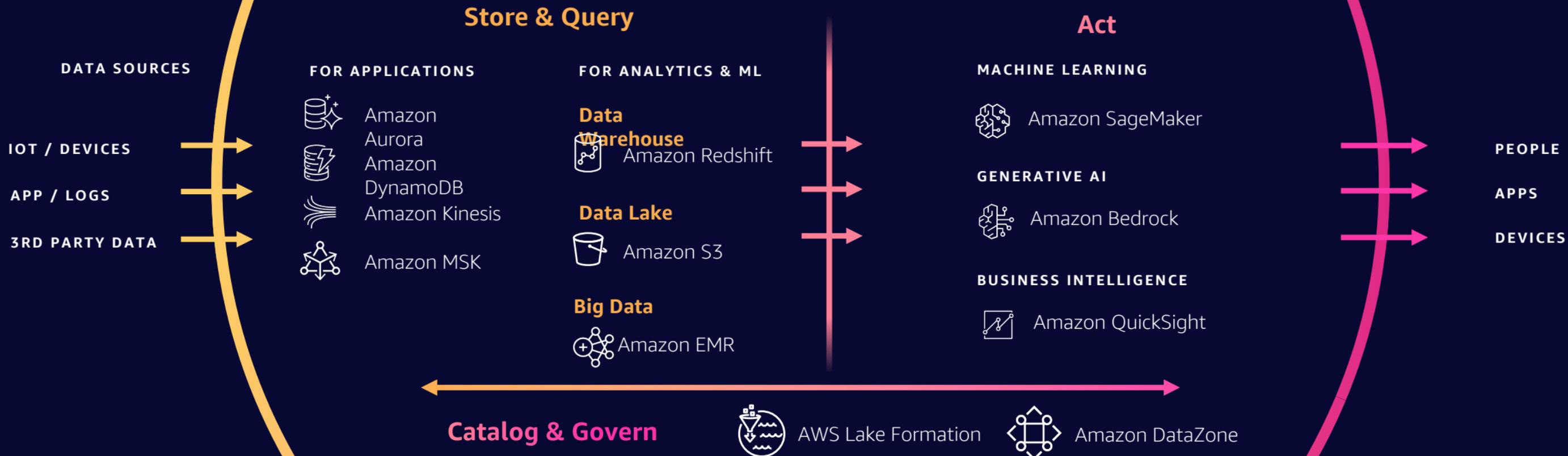
AMAZON
ATHENA



APIS TO THIRD-
PARTY SOURCES



Building an end-to-end data strategy





Our innovative cloud powers
innovative customers



DELHIVERY

India's largest integrated logistics platform



**We aim to build the
Operating System for
commerce in India**



We address a massive TAM

Express Parcel ⁽¹⁾	Part Truckload Freight ⁽¹⁾	Truckload Freight ⁽¹⁾	Supply Chain Services ⁽¹⁾	Cross-Border Air ⁽¹⁾
\$10-12 Bn	\$26 Bn	\$163 Bn	\$109 Bn	\$8 Bn

Total TAM⁽¹⁾: \$316-318 Bn

Source: RedSeer report

1. FY2026E TAM figures approximated to the nearest \$Bn value

Delhivery at a Glance

1.9B₍₁₎
Express Parcel Delivered

3M+ Tons₍₂₎
PTL Freight Shipped

18,500+
Pin codes Covered

26,000+
Active Clients

17.9M₍₃₎
Sq. ft. logistics
Infrastructure

2.2M
Orders Sorted
Automatically everyday

11,700+
Fleet size
Operating Daily

80+₍₄₎
Technology
Applications

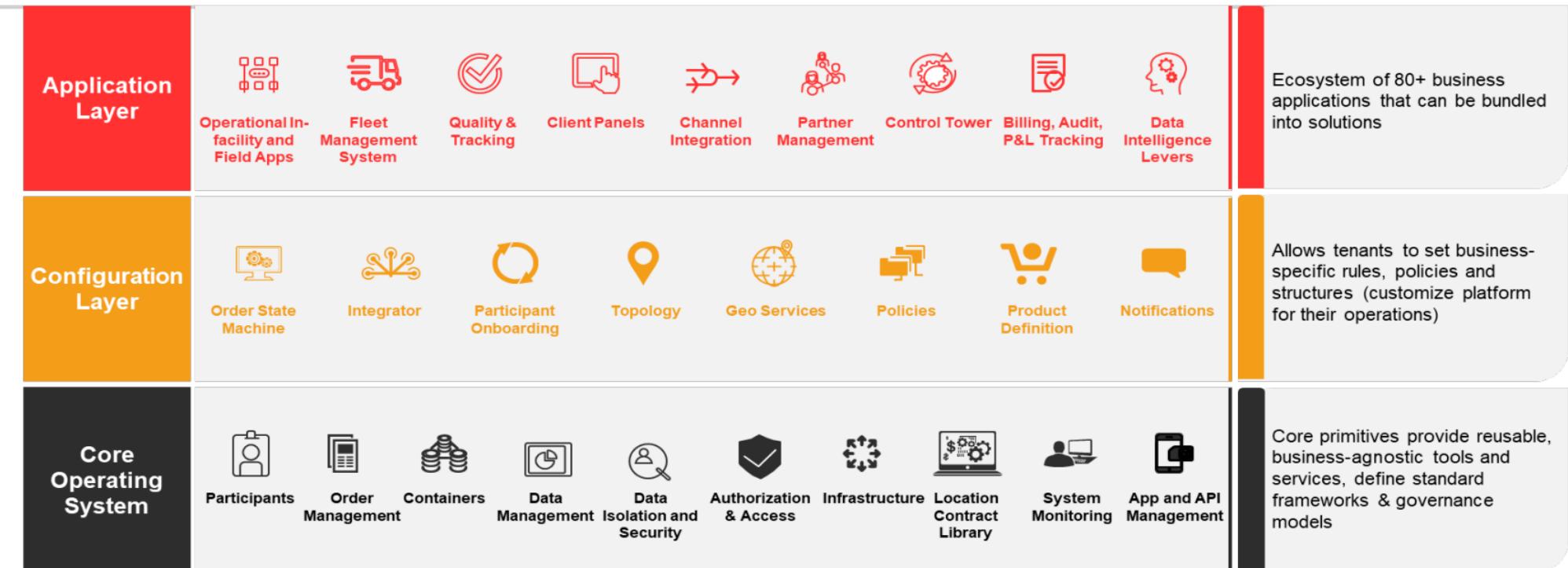
(1) Express Parcel Delivered since inception

(2) PTL Freight shipped since FY 2019

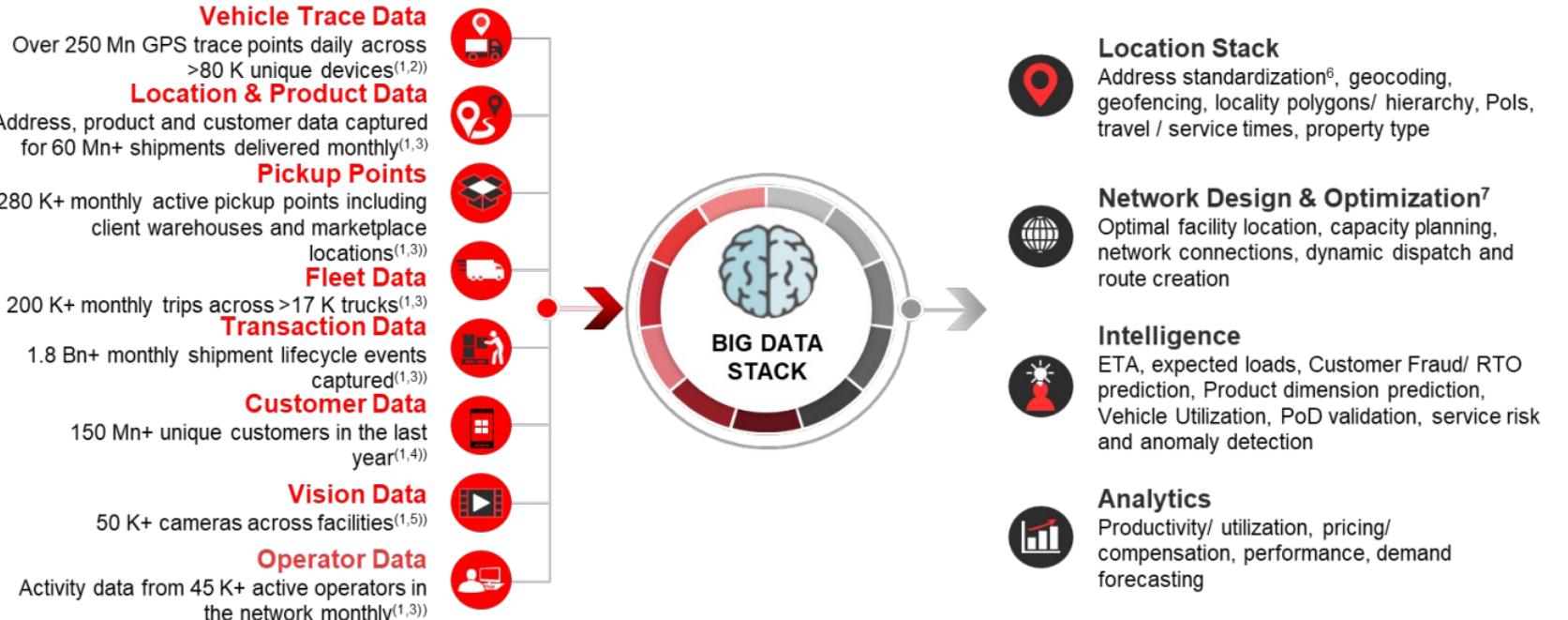
(3) As of 31st December 2022

(4) As of 31st December 2021

Proprietary technology platform



Vast data intelligence capabilities



(1) All figures excluding Spoton

(2) Daily average for March 2022

(3) For March 2022

(4) For April 2021 to March 2022

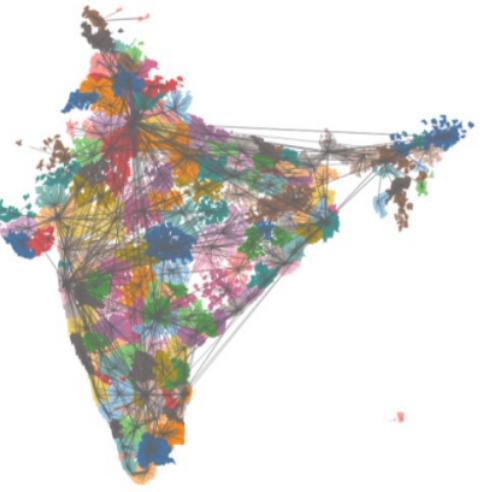
(5) As of March 2022

(6) Awarded US Patent for proprietary Addfix technology; 2 patents pending for unique address identification

(7) 2 patents pending for intelligent system direction in the network

Use operational & telemetry data to continuously optimise utilisation and routing of our trucks in real time

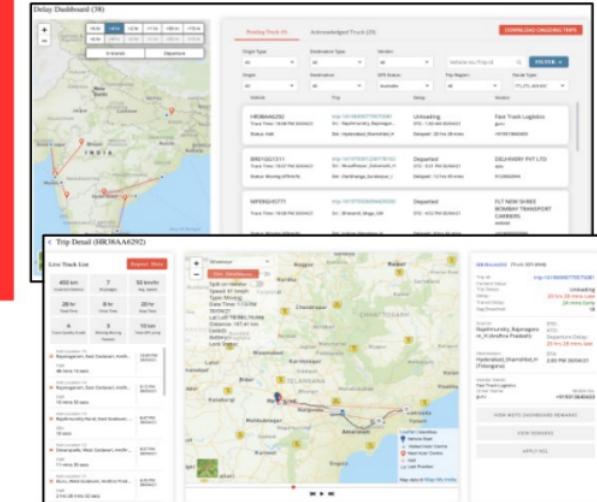
2297
connections
connecting
8659 OD
pairs daily



Mid-mile
Route
Planner

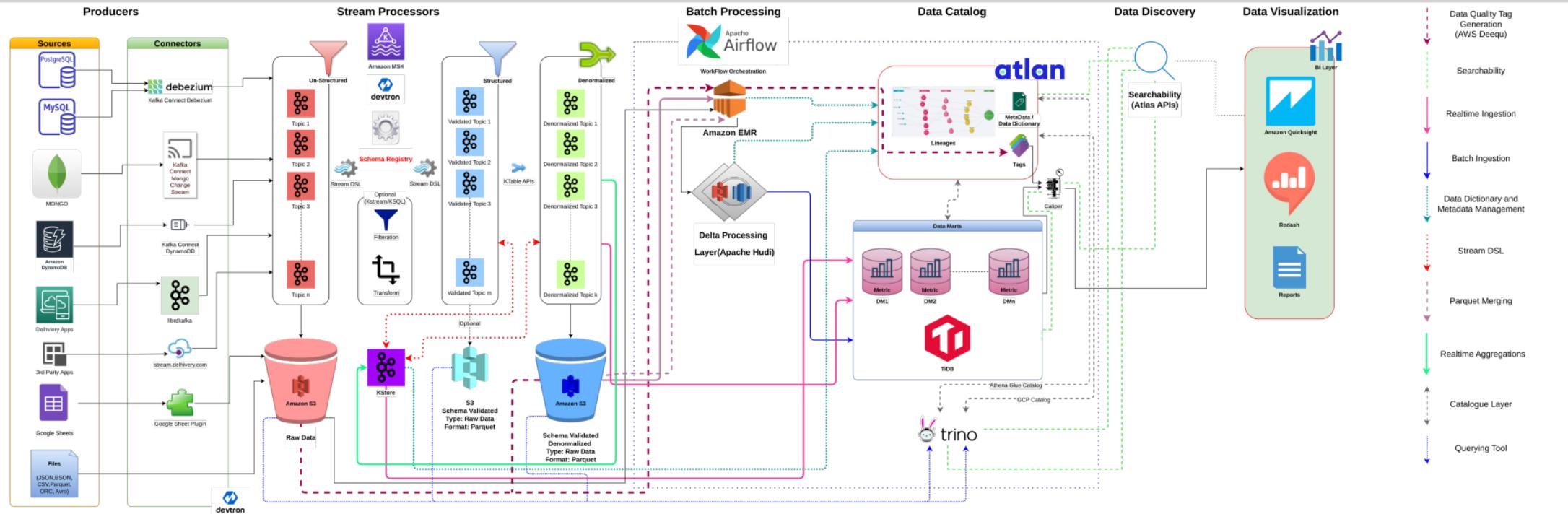


Real Time
Visibility



The dashboard displays truck tracking information for various routes. One trip log is for a route from Mumbai to Bangalore, showing a map with stops at Panvel, Navi Mumbai, Alibaug, Ratnagiri, Waranapet, and Bangalore. Another trip log is for a route from Bangalore to Hyderabad, showing a map with stops at Bangalore, Mysore, Hassan, Shimoga, Bellary, Chitradurga, Davangere, Belgaum, Dharwad, Bagalkot, Haveri, Tumkur, Hassan, Bangalore, and Hyderabad.

Data Architecture Blueprint



In Summary



Exploring new possibilities

DELHIVERY



aws

DELHIVERY

EXPRESS PARCEL



FREIGHT



SUPPLY CHAIN



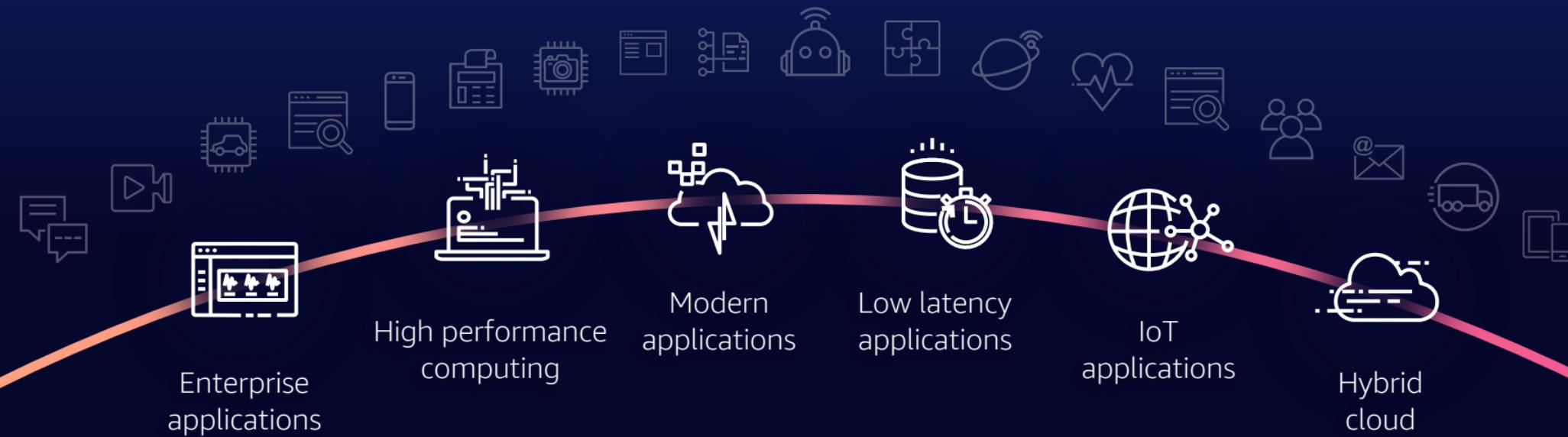
CROSS-BORDER

A spark can't create a fire
without the right conditions



Focus on innovation
not infrastructure

Supporting virtually **every application**



600
SERVERS

100
APPLICATIONS

1,000
TB OF DATA



Everything you need to build **your spark**



Most capabilities
for virtually every application



Performance
and cost optimization



Consistent experience
wherever you need it



Everything you need to build **your spark**



Most capabilities
for virtually every application



Performance
and cost optimization



Consistent experience
wherever you need it



Broadest and deepest
services and capabilities

600+
instance types
for virtually every workload

Broadest and deepest compute choice

CATEGORIES

General purpose
Burstable
Compute optimized
Memory optimized
Storage optimized
Hardware accelerated
HPC optimized

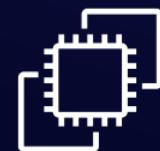
CAPABILITIES

Choice of processor
(AWS, Intel, AMD)
Fast processors
(up to 4.5 GHz)
High memory footprint
(up to 24TiB)
Instance storage
(HDD and SSD)
Accelerated computing
(GPU, FPGA, and ASIC)
Networking
(up to 1600 Gbps)
Bare metal

OPTIONS

Linux, Unix, Windows, macOS
Amazon EBS
Elastic Fabric Adapter

Compute for virtually every application



Amazon EC2

Infrastructure
-as-a-service



Amazon ECS/EKS

Container-management
-as-a-service



AWS Fargate

Serverless
containers



AWS Lambda

Serverless
functions

105+

Features since launch
in 2014



AWS Lambda SnapStart

SnapStart for Java delivers
up to 10x faster function
startup performance

Typically no changes
to your code

Storage for virtually every application

OBJECT



Amazon S3 & S3
Glacier

BLOCK



Amazon Elastic
Block Store
**Driving trillions
of IOs and
exabytes of
throughput daily**

FILE



Amazon Elastic
File System



Amazon
File Cache

FSx_{Z=}

Amazon FSx
Family

Everything you need to
build **your spark**



Most capabilities
for virtually every application



Performance
and cost optimization



Consistent experience
wherever you need it

The AWS Nitro System architecture

**OFFERING THE BEST SECURITY,
PERFORMANCE, AND
INNOVATION IN THE CLOUD**



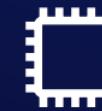
The AWS Nitro System architecture

OFFERING THE BEST SECURITY,
PERFORMANCE, AND
INNOVATION IN THE CLOUD



15% Higher
throughput
performance





AWS Graviton

40% better price performance



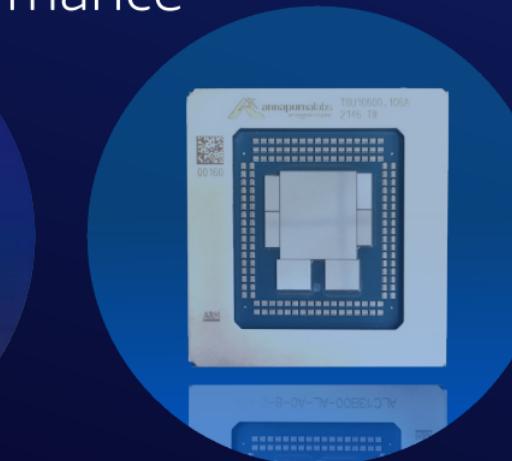
2018

AWS Graviton



2019

AWS Graviton 2



2021

AWS Graviton 3

25% faster than Graviton 2
60% less energy



Reduced compute requirements
by up to 75 percent

20%

SAVED ON INFRASTRUCTURE

CleverTap



Scalable Reliable Datagram (SRD)

**Lower Latency
Higher Throughput**

Multi-pathing

Retries in microseconds

Runs on the AWS Nitro System



Elastic Network Adapter (ENA) Express for Amazon EC2

**BRINGING SCALABLE RELIABLE DATAGRAM (SRD)
TO THE MAINSTREAM**

Enable by checking a checkbox

Lower latency, higher throughput

More consistent networking

Cost optimization with AWS



BETTER PRICE PERFORMANCE

with AWS-designed silicon



RESOURCE UTILIZATION EFFICIENCY

by rightsizing your workload



ELASTIC RESOURCE PROVISIONING

for variable demand

Amazon S3 Intelligent-Tiering storage has saved customers over \$1B



FLEXIBLE PURCHASE OPTIONS

for every workload

Save you up to 72% in Amazon EC2 instance cost with Savings Plans

Everything you need to build **your spark**



Most capabilities
for virtually every application



Performance
and cost optimization



Consistent experience
wherever you need it

AWS Global Infrastructure

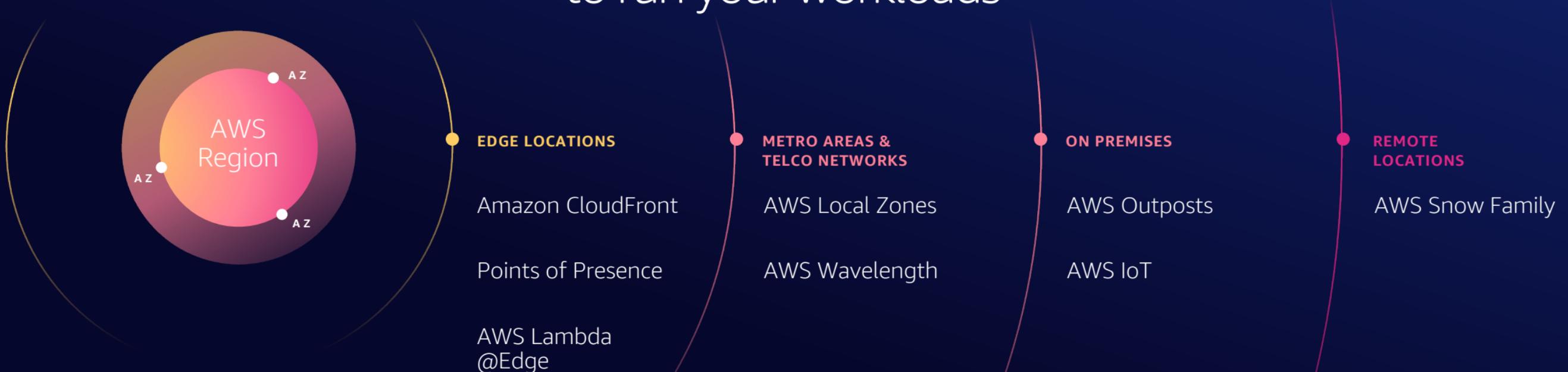
AWS NETWORK BACKBONE

- Redundant 400 Gbps links
- 245+ Countries and territories
- Between all Regions, Local Zones, and Edge Locations

31 Regions, 99 Availability Zones, 450+ points of presence



Flexibility of choosing how and where you want to run your workloads







The most secure
cloud computing
environment

300+ security services
and features

Future-proof your organization with training

SKILLBUILDER.AWS

600+ digital courses

The screenshot displays the AWS Skill Builder platform interface. At the top, a navigation bar includes links for 'COURSES AND LEARNING PLANS', 'SUBSCRIPTIONS', 'CLASSROOM TRAINING', 'AWS CERTIFICATION', and 'AWS PARTNER TRAINING'. The main header reads 'AWS Skill Builder' with the subtitle 'Your learning center to build in-demand cloud skills'. Below this, there's a search bar and filter options. A 'Featured content' section highlights five popular courses: 'Cloud for CEOs', 'Build with Amazon MemoryDB for Redis', 'AWS Best Practices for Hybrid Cloud Adoption', 'AWS for Games Learning Plan: Cloud Game Development', and 'AWS Certified Developer - Associate Official Practice Question Set (DVA-C02 ...)'.

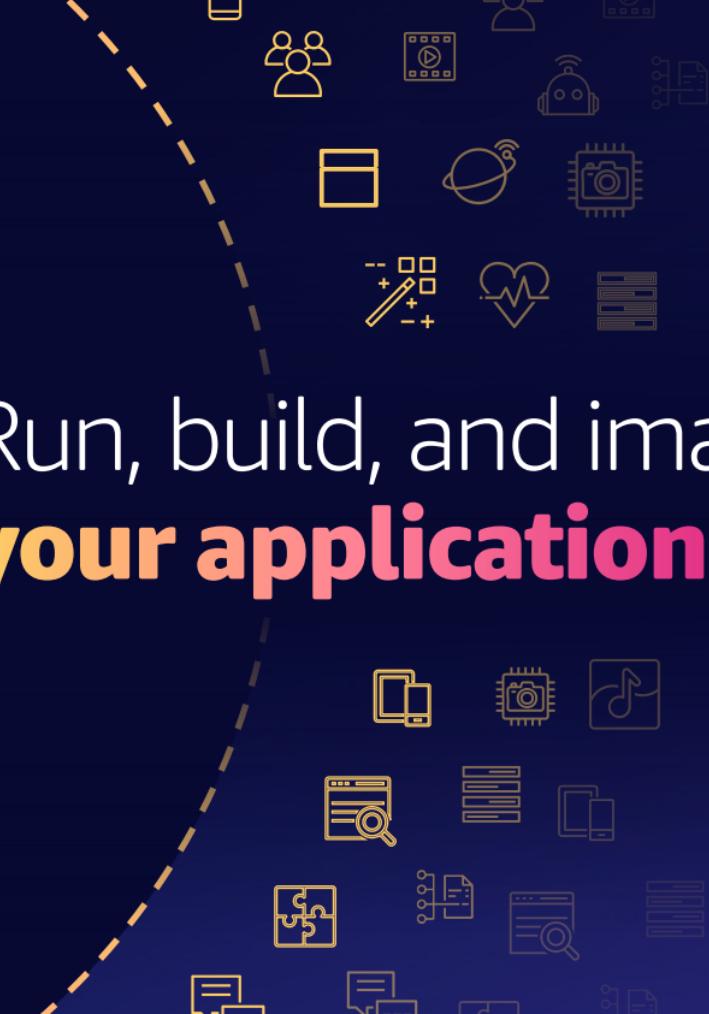
Course Title	Type	Language	Duration	Rating
Cloud for CEOs	Digital training	EN	10m 00s	★ 5.0
Build with Amazon MemoryDB for Redis	Digital training	EN	1h 00m	★ 5.0
AWS Best Practices for Hybrid Cloud Adoption	Digital training	EN	1h 00m	★ 5.0
AWS for Games Learning Plan: Cloud Game Development	Learning Plan	12 courses	11h 40m	FREE
AWS Certified Developer - Associate Official Practice Question Set (DVA-C02 ...)	Digital training	EN	45m 00s	★ 5.0

Below the featured content, a 'Featured subscription content' section is shown, which is partially cut off at the bottom of the screenshot.

Unlock the value of
all your data



Run, build, and imagine
your applications

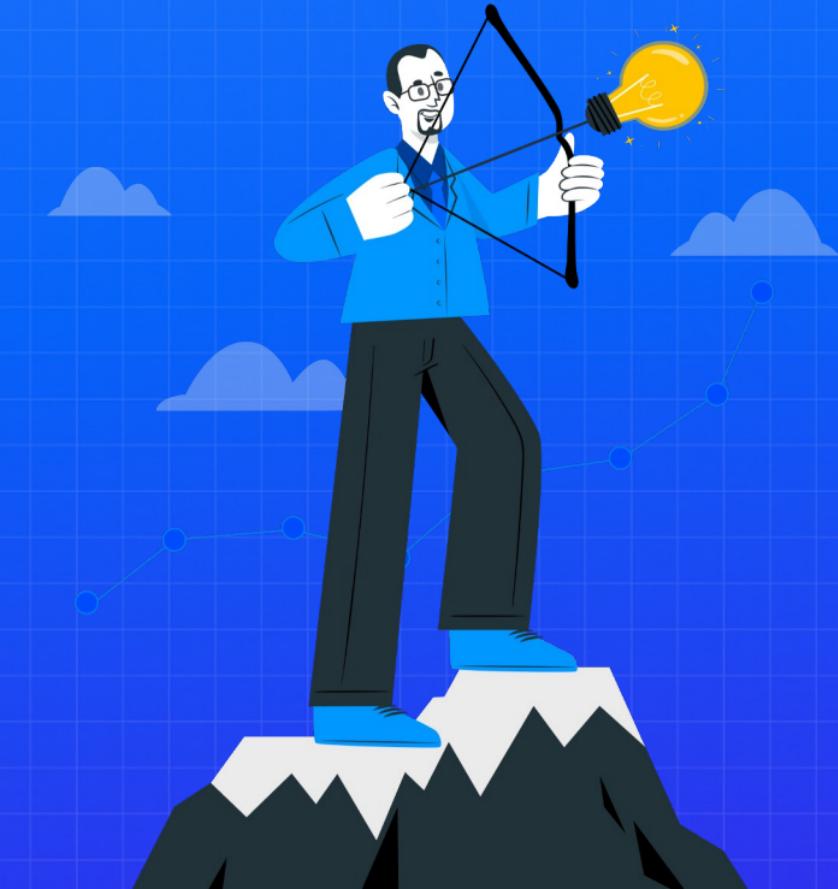




Murali Brahmadesam

CTO, Razorpay

May 2023



My journey so far



2002 - 2013

- Distributed file systems
- Blob storage
- Online backup
- Big data / ML platforms



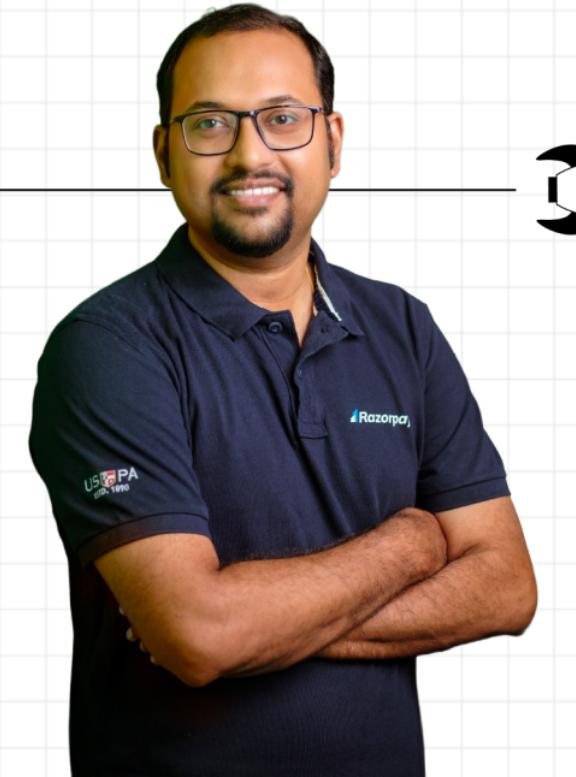
2013 - 2022

- Customer forecasting platform for Amazon.com
- Amazon Aurora – RDBMS (MySQL / PostgreSQL) for AWS



2022 - current

- Payment Gateway
- Capital
- RazorpayX

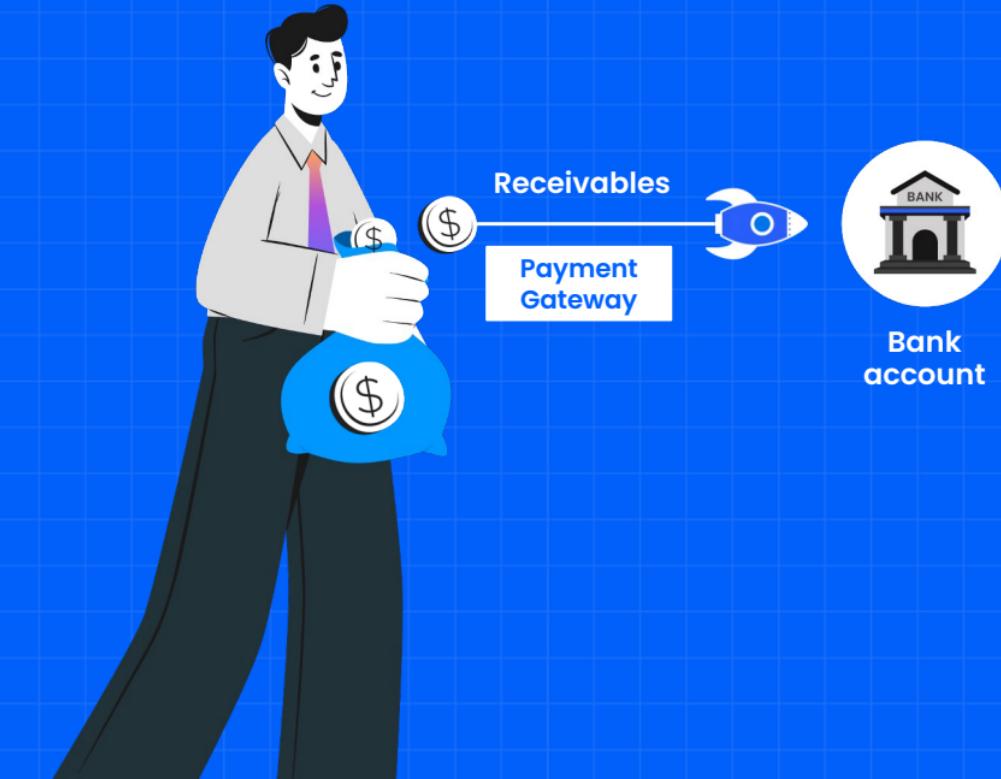


RAZORPAY'S MISSION

To become the
**one-stop money
movement** platform
for all businesses.

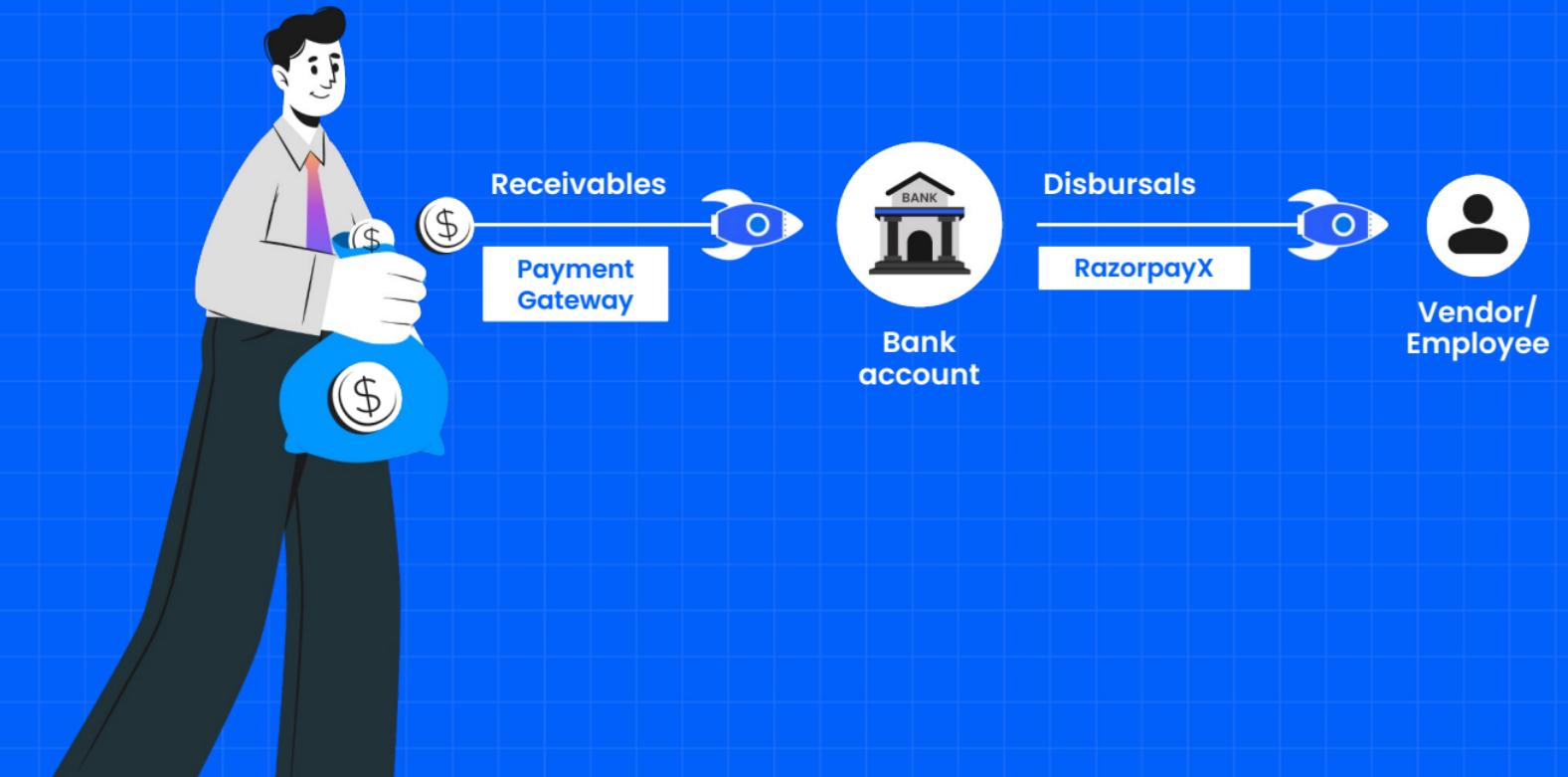
RAZORPAY'S MISSION

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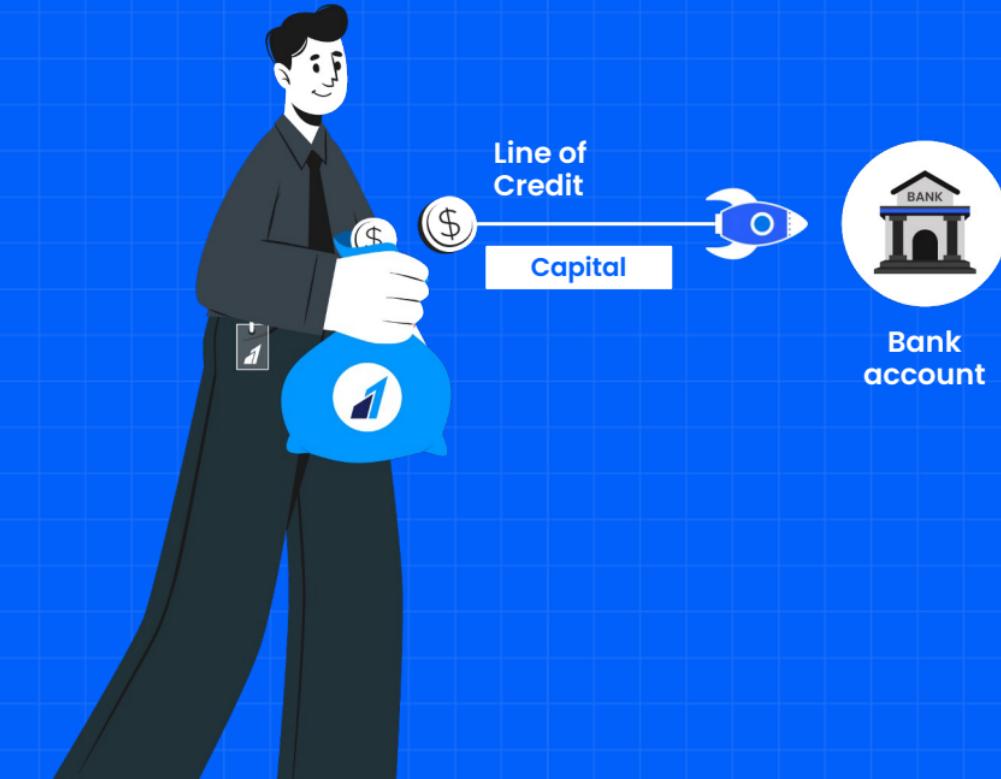
RAZORPAY'S MISSION

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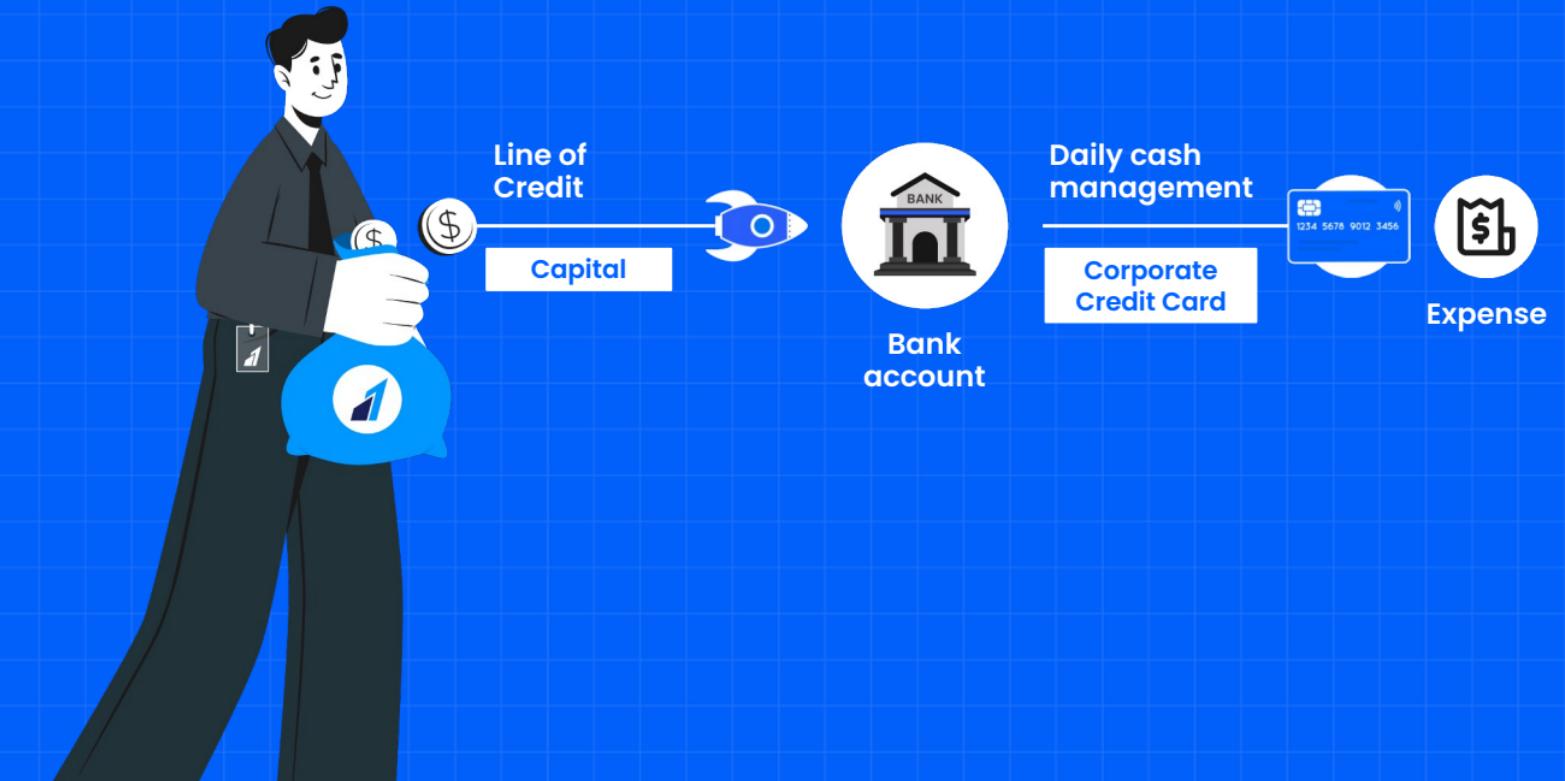
RAZORPAY'S MISSION

To become the
**one-stop money
movement** platform
for all businesses.



RAZORPAY'S MISSION

To become the
**one-stop money
movement** platform
for all businesses.



Razorpay's Growth Story

 TPV
annualised

 Businesses
Onboarded



2014

 Launched Payment Gateway

2014

Businesses onboarded

 zomato

 upstox

 slice

 NYKAAN

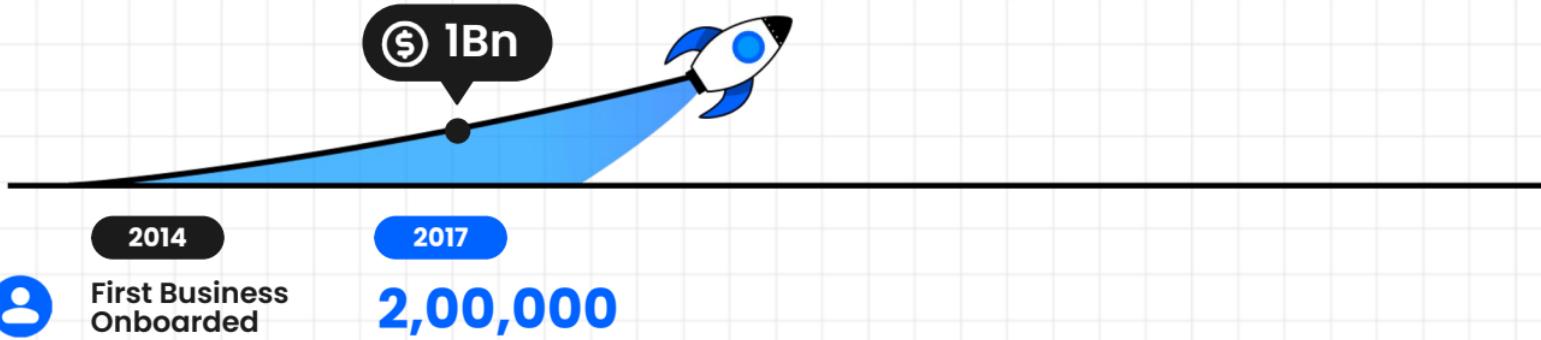
 Licious
BORN TO MEAT

 cleartrip

Razorpay's Growth Story

 TPV
annualised

 Businesses
Onboarded



2017
Businesses onboarded



yatra



DELHIVERY

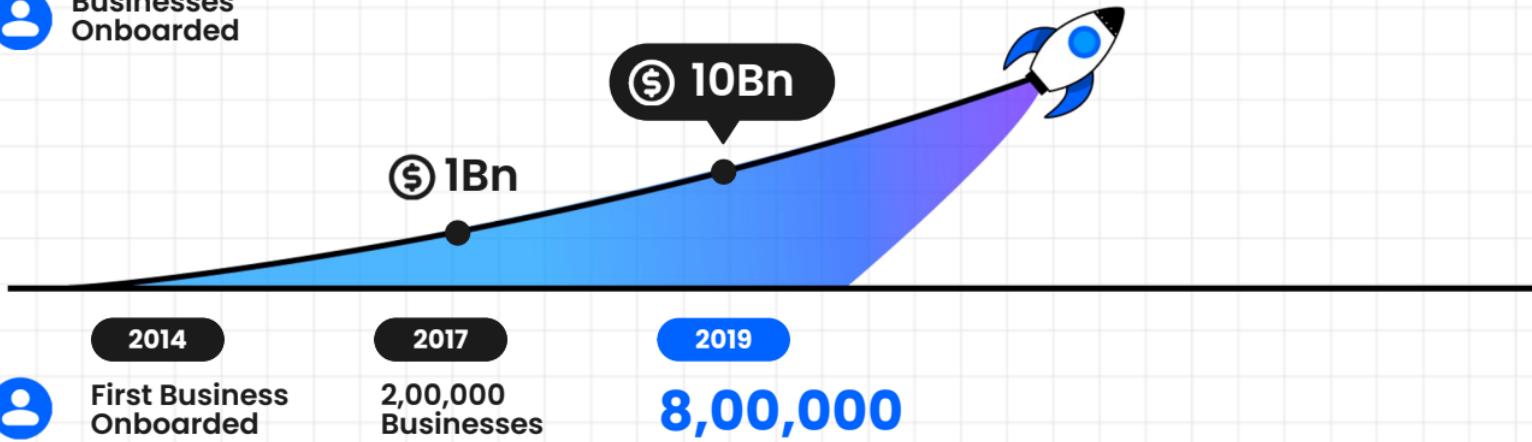
SWIGGY

policybazaar^{com}

Razorpay's Growth Story

TPV
annualised

Businesses
Onboarded



2019 Businesses onboarded



Groww



MOTILAL OSWAL
Investment Services



Flipkart



make my trip

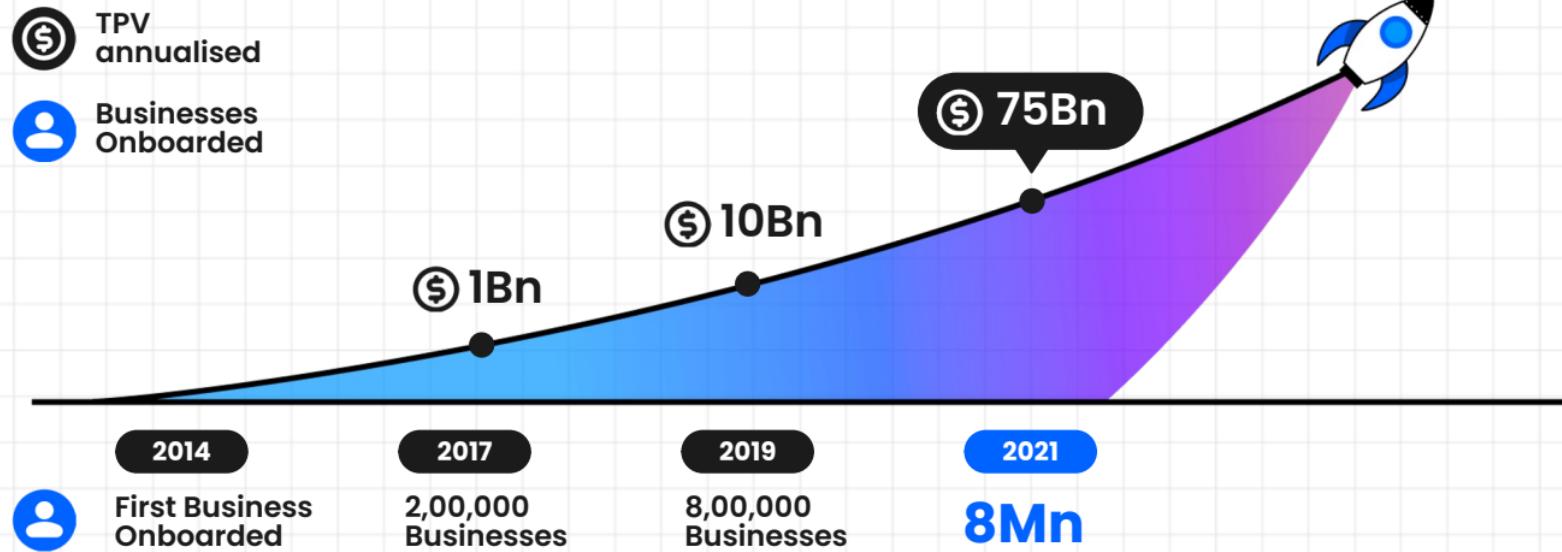


ICICI PRUDENTIAL
LIFE INSURANCE



ET Money

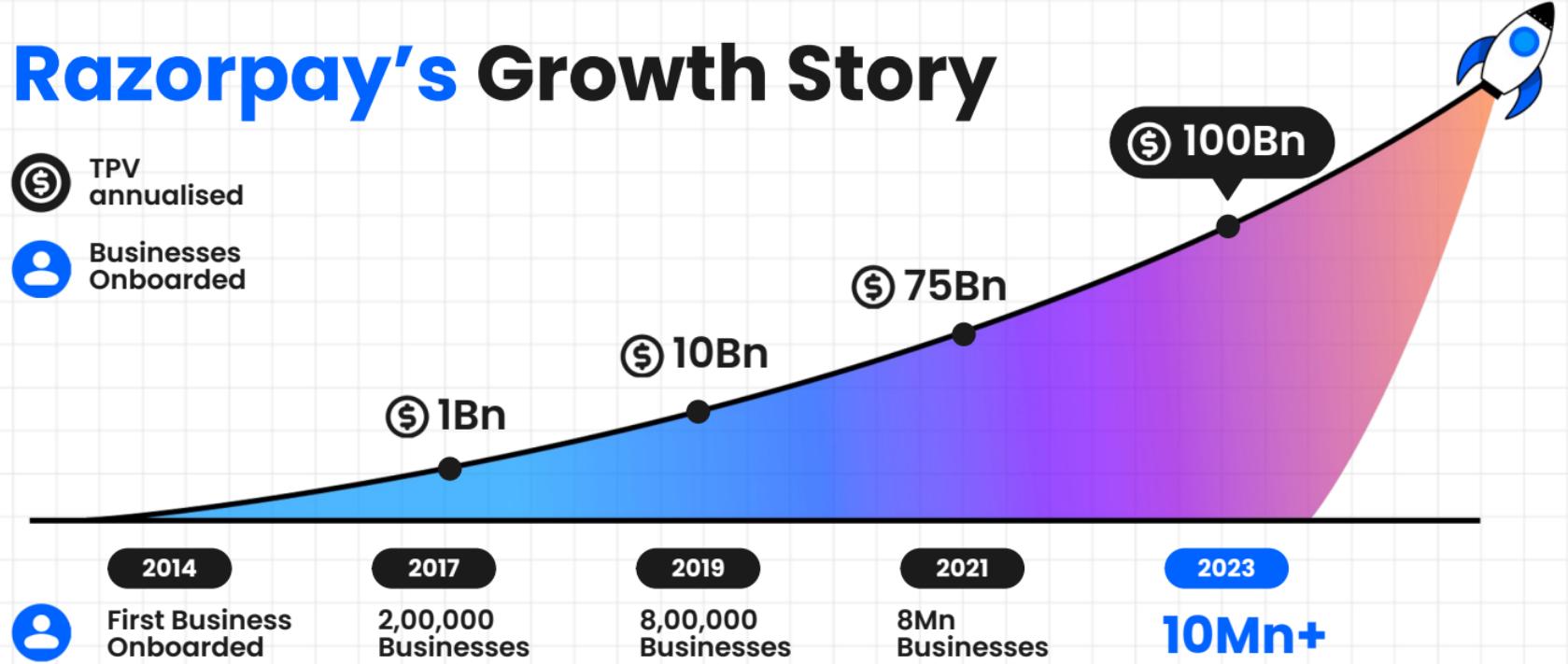
Razorpay's Growth Story



2021
Businesses onboarded



Razorpay's Growth Story



2022-23

Businesses onboarded



CRED



Joyalukkas
World's favourite jeweller



ZERODHA



ICICI Securities



rapido
BIKE TAXI

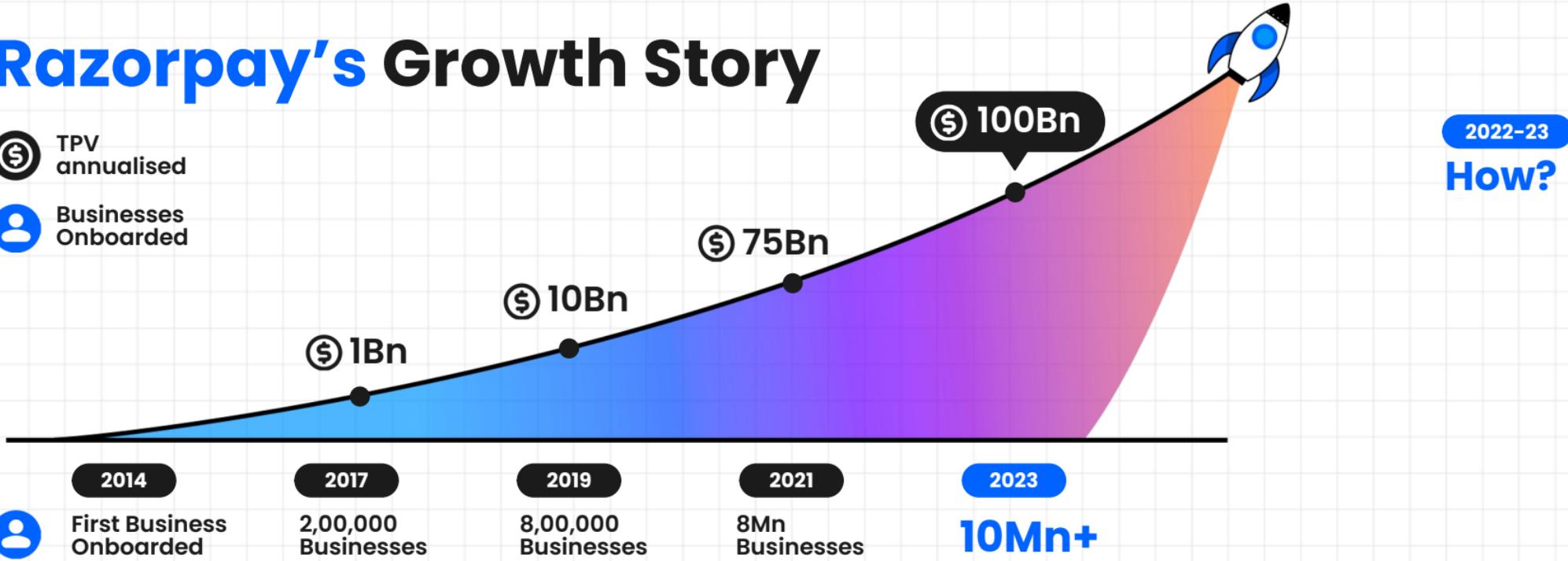


blinkit

Razorpay's Growth Story

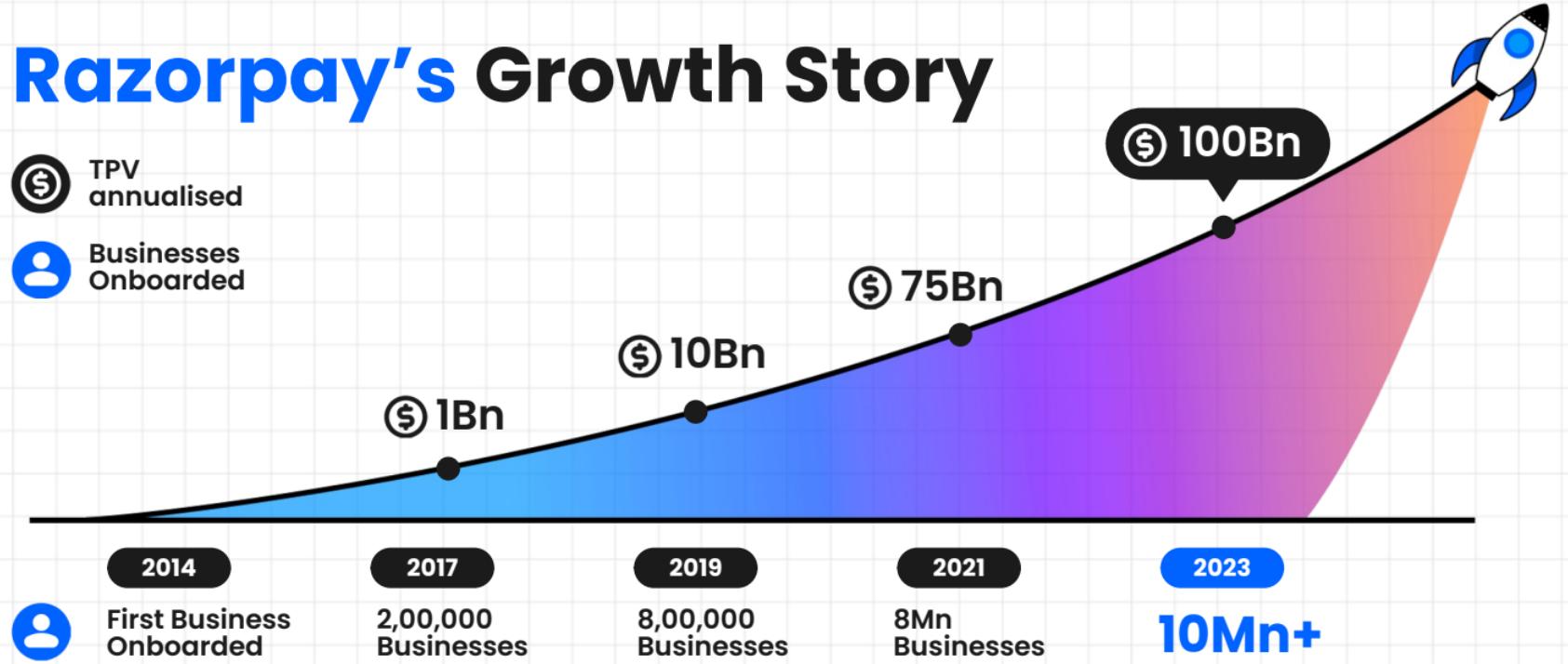
TPV
annualised

Businesses
Onboarded



2022-23
How?

Razorpay's Growth Story



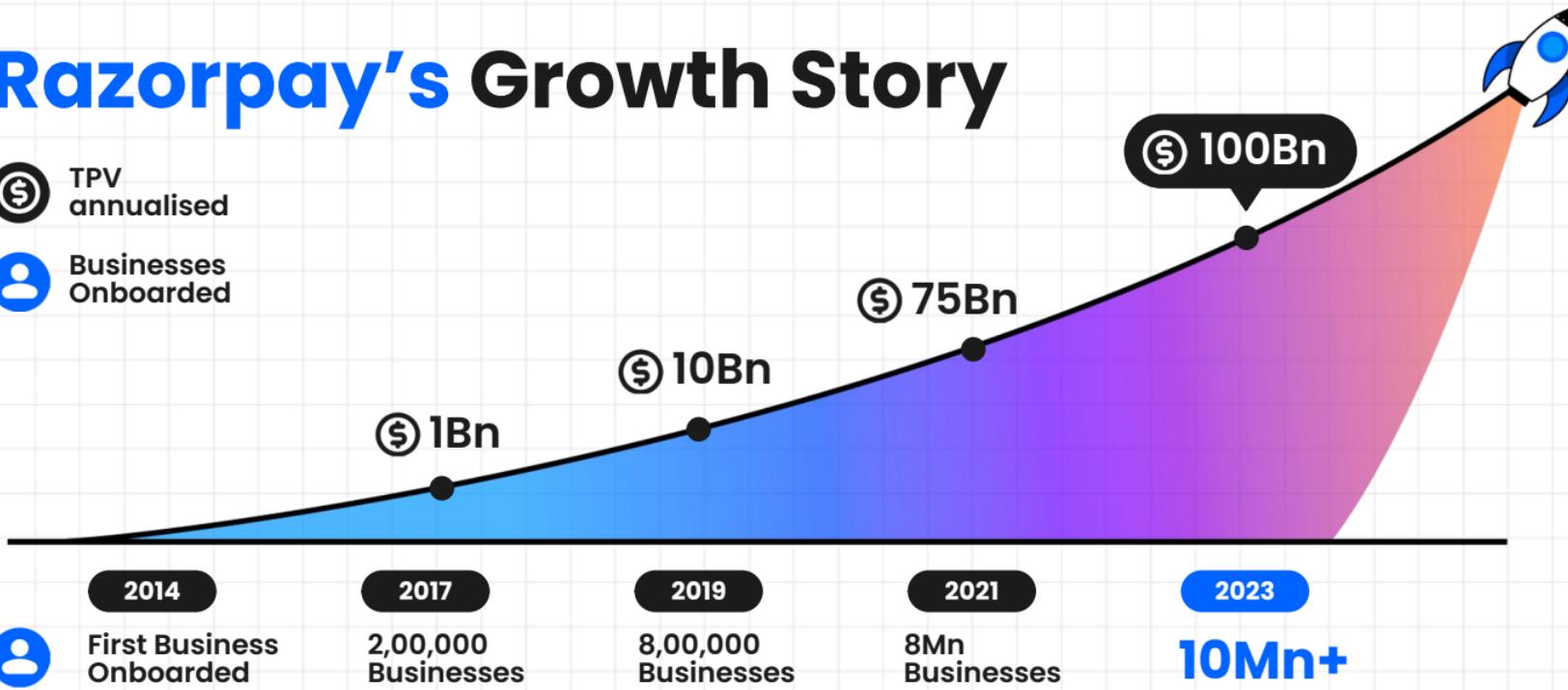
2022-23
How?

-  Easy to onboard
-  Easy to develop
-  Easy to scale

Razorpay's Growth Story

TPV
annualised

Businesses
Onboarded



2022-23
How?

Easy to onboard

Easy to develop

Easy to scale



**The right infrastructure
allows exponential growth**



**Our operating principles
and values are aligned**

Our Operating Principles

Principle 1

Security

-  Bug bounty
-  Automated patching



Our Operating Principles

Principle 1

Security

-  Bug bounty
-  Automated patching



Principle 2

Compliance

-  Awareness
-  Regular Internal audits

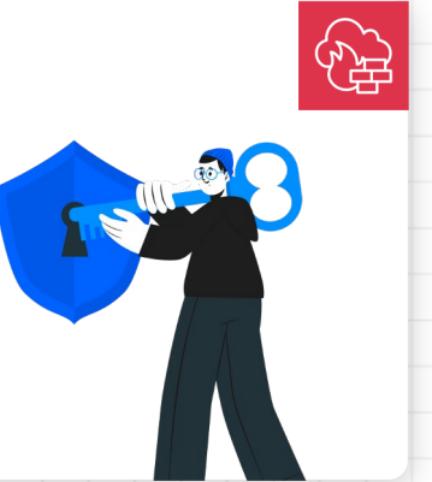


Our Operating Principles

Principle 1

Security

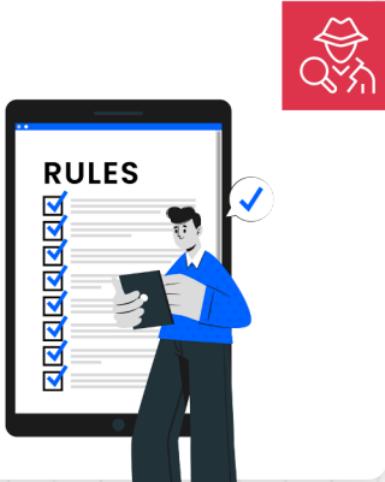
-  Bug bounty
-  Automated patching



Principle 2

Compliance

-  Awareness
-  Strong regulatory framework



Principle 3

Reliability

-  Correctness
-  Faster reconciliation



Our Operating Principles

Principle 4

Availability



Blast radius



Swift detection & resolution



Our Operating Principles

Principle 4

Availability



Zero downtime



Swift detection & resolution



Principle 5

Scalability



Cost-Performance



Modularity



Our Operating Principles

Principle 4

Availability



- Zero downtime
- Swift detection & resolution



Principle 5

Scalability



- Cost-Performance
- Modularity



Principle 6

Innovation



- Incremental
- Strategic



What's next for **Razorpay**?

Global Expansion

Acquired Curlec, set foot in Malaysia



Empowering Banks

Partnered with 45 banks in India



Scaling Offline Ecosystem

Acquired Ezetap, to innovate in omnichannel space



RAZORPAY'S MISSION

To become the
**one-stop money
movement** platform
for all businesses.

Thank You





Building a Hyper-Growth Tech Company

AWS Summit India



Tanuj Vohra

Chief Technology Officer





HighRadius is a **Centaur**

HighRadius is one of the
“only 8 SaaS Businesses” from India
to get the Centaur Status

-Bessemer Venture Partners

Centaur
A Rare Breed

~7x

More rare
than unicorns

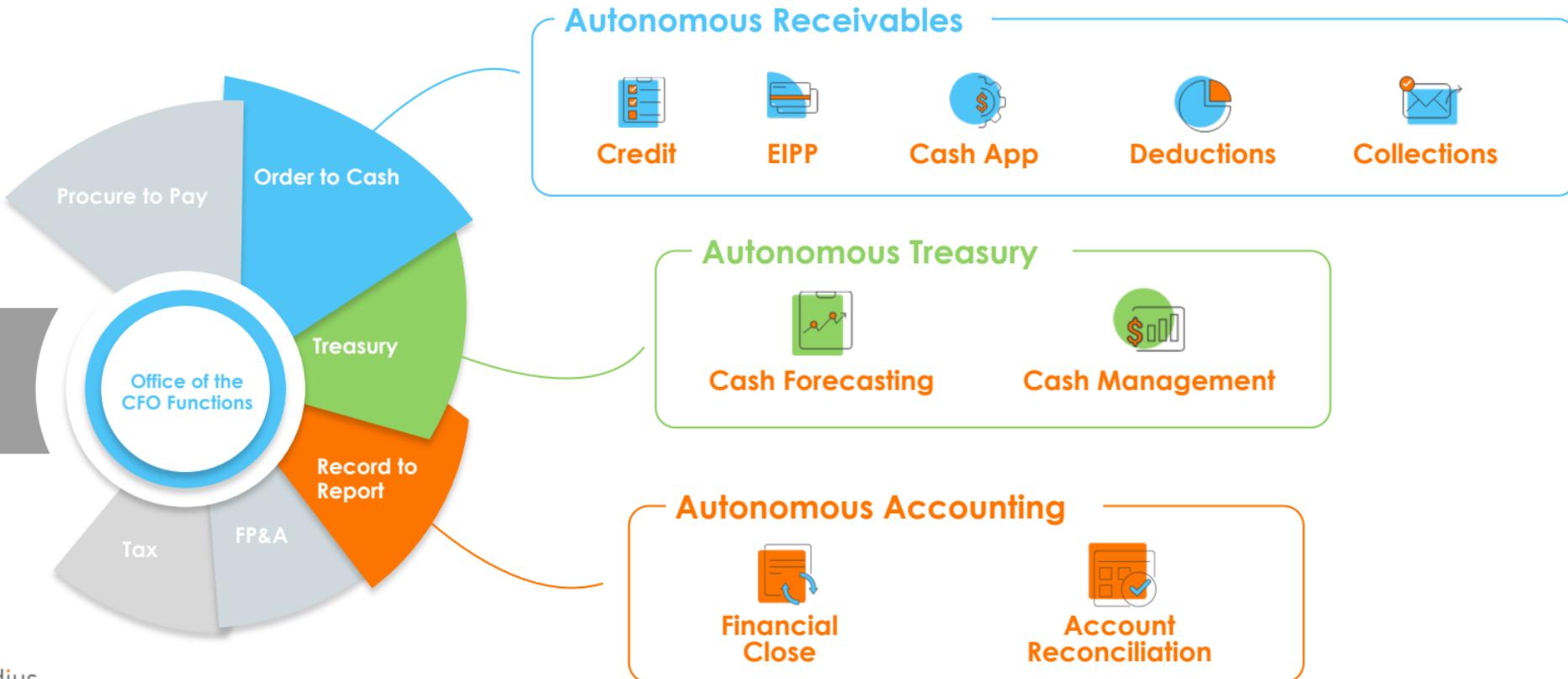
~150

Private Centaurs
in the world

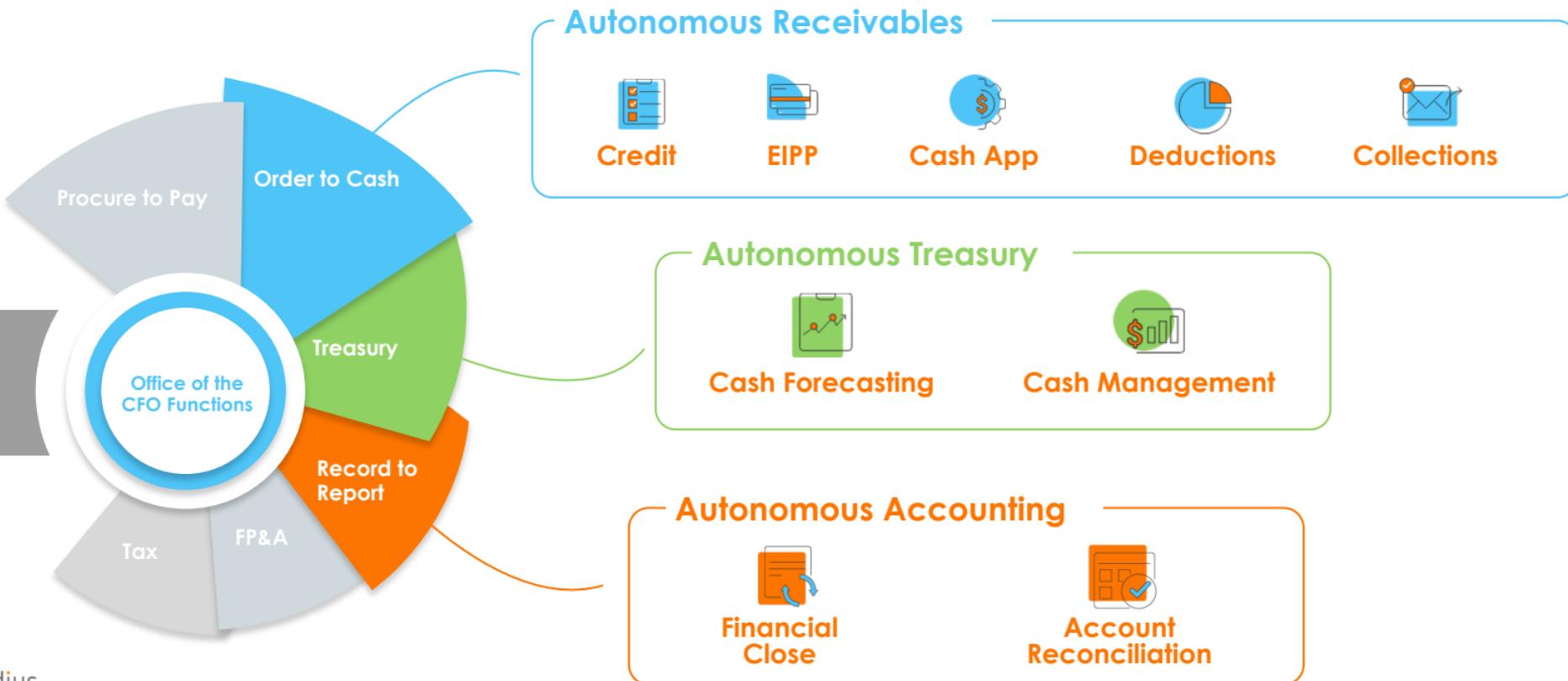
Office of the CFO Tech



Autonomous Finance Platform for the Office of the CFO



Autonomous Finance Platform for the Office of the CFO



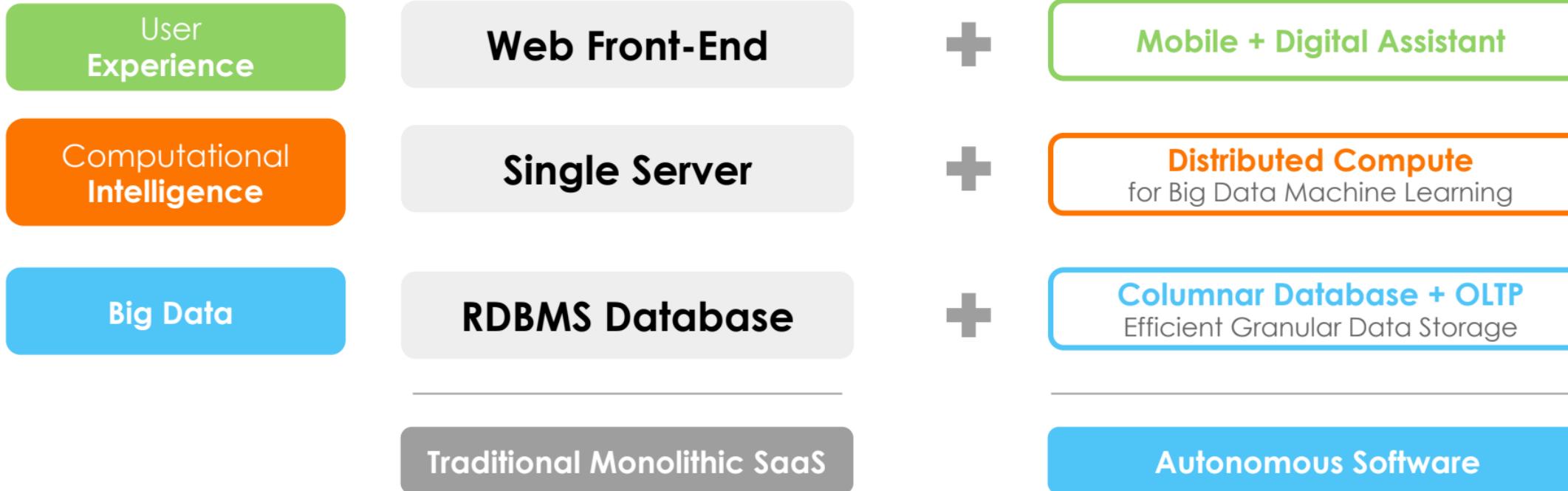
Building Blocks of
autonomous FINANCE

Humans + Machines Interaction
Experience

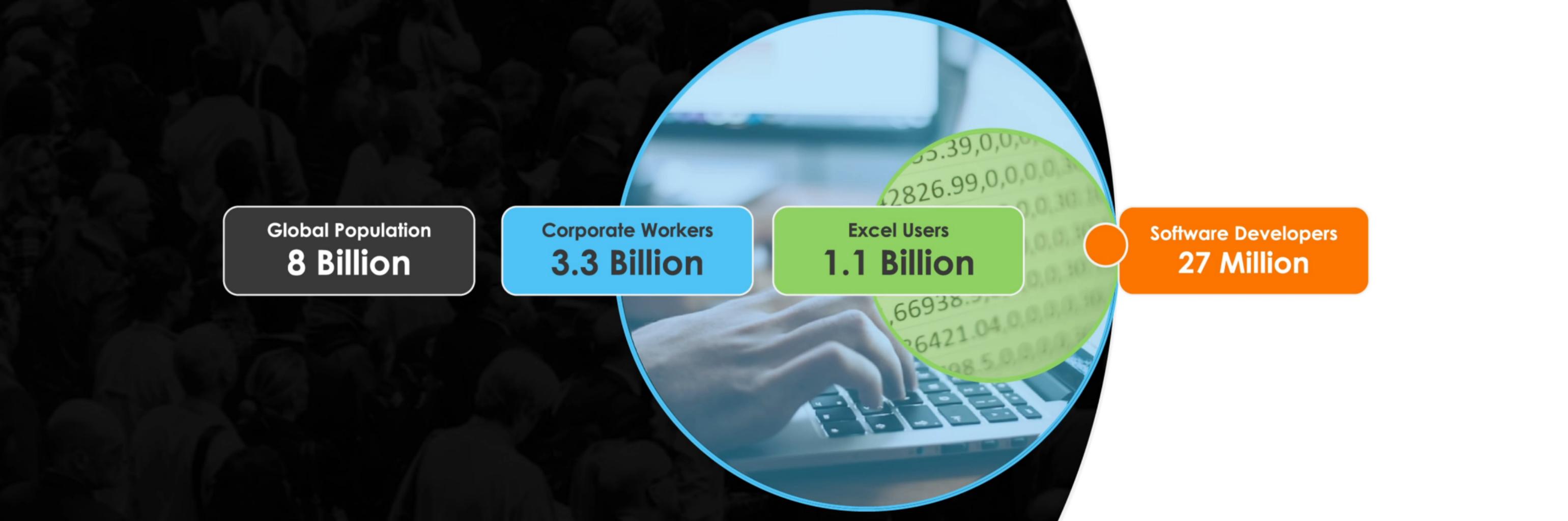
AI & Machine Learning Algorithms
Intelligence

Domain-Specific
Big Data

Traditional Monolithic SaaS vs Autonomous Software



Autonomous Software supports **multiple clients, petabytes of data** and **high-performance machine learning processing**



Global Population
8 Billion

Corporate Workers
3.3 Billion

Excel Users
1.1 Billion

Software Developers
27 Million



NO-CODE PLATFORM

The Freedom to Extend Enterprise Applications

highradius.com/livecube

Cloud Scalability with AWS

Application Capability

Globally Scalable Cloud

1000s of clients

\$7.7 trillion
in annual transactions

Infinite scalability
Cloud-provider agnostic

Cloud Scalability with AWS

Application Capability

Globally Scalable Cloud

1000s of clients

\$7.7 trillion
in annual transactions

Infinite scalability
Cloud-provider agnostic

Under the Hood

C1

Multi-Tenant, Cloud-Agnostic

Managed Services Independence

C2

Microservices Architecture

40+ Microservices across all environments

C3

Kubernetes, Docker Containers

Continuous deployment, Auto-Scaling & Monitoring

Lessons we learned in creating a Centaur based out of India



Original
Ideas

Build New or Disrupt Existing Categories.

Lessons we learned in creating a Centaur based out of India



Original
Ideas

Build New or Disrupt Existing Categories.

Fail Fast. Fix Fast. Learn Fast.



Failure
Tolerance

Lessons we learned in creating a Centaur based out of India



Original
Ideas

Build New or Disrupt Existing Categories.

Fail Fast. Fix Fast. Learn Fast.



Failure
Tolerance



Challenge
Status Quo

Take Pride of Innovating from India.



We are always on the lookout for great
talent

Let's Connect on LinkedIn!
[linkedin.com/in/tvohra/](https://www.linkedin.com/in/tvohra/)

Birthdays

MAY

Andrea Miller May 1
Joshua Mason May 3
Bob Van May 4
Jayan Patel May 5
Yovana Velasquez May 5
Pratibha Duttarai May 9
Shankar Bellam May 12
Ken Siegel May 21
Harris Libman May 25
Jenny Cerrahan May 27

JUNE

Abhishek Trivedi May 2
Juliet Rose May 3
Kiran Austin May 4
Tina Loposer May 5
Eddie Jeng May 10
Vikram Gill May 12
Sasha Tepala May 19
Anish Chahal May 21
Mike Turner May 29
John Elbaum May 29
Heesuk Sohmi May 30

UPCOMING EVENTS

ASUG sapphire
ORLANDO, FL
June 6
Shard Media + EBSCO WEBINAR
June 11-14
NACM credit

ALDO
ELOCLEAN

CHUBB

GVSynthetis

SUMMIT

Summit

L'ORÉAL
FORUM
TCL

JET
Information Inc.

CHUBB

ALDO

ELOCLEAN

aws SUMMIT
zepto



Agenda

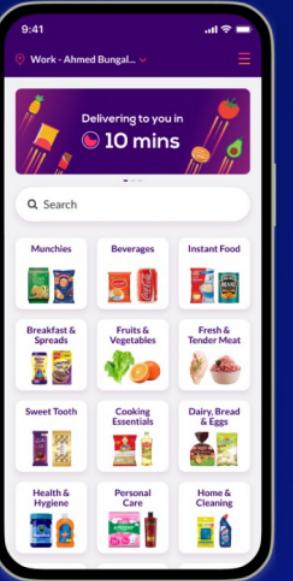
1. About Zepto's Journey
2. Technology Strategy & Approach
3. Zepto's Future

About Zepto's Journey



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Zepto has revolutionized grocery delivery in India.



Order your groceries

Over 6,600 products, from
fresh fruits to a Firestick



Packed in our dark stores

Products packed in under 75
seconds by our trained workforce



Delivered in 10 mins

Median Arrival Time is
between 9 and 12 minutes

We're one of the fastest growing companies in Indian history.

We crossed **\$100M** in
annualized sales within
7 months of launch!

Zepto is now 20 months
old and growing rapidly.

Today, we are doing
**LAKHS OF ORDERS EVERY
DAY**



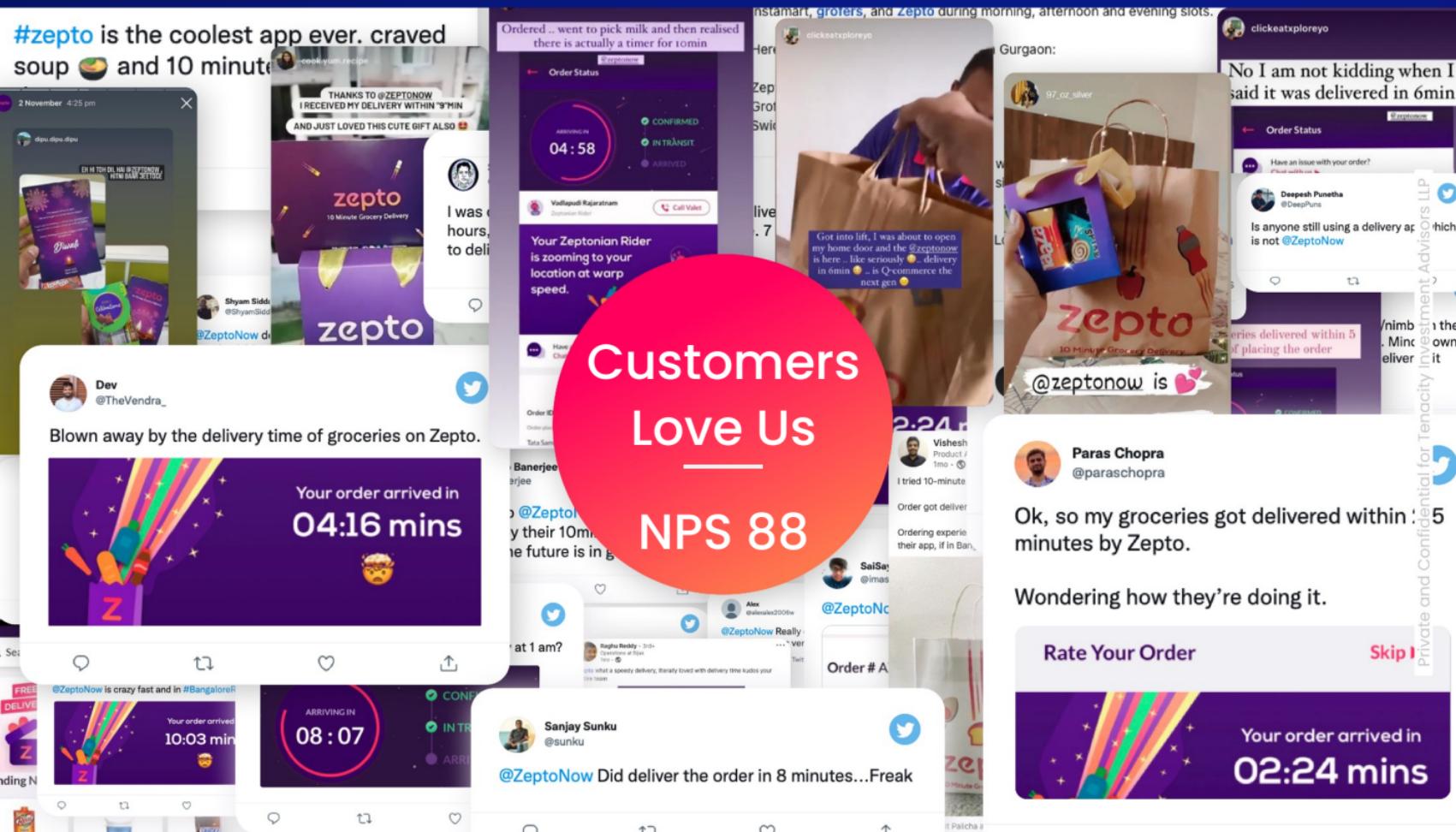
Jul 1, 2021

Apr 1, 2023

Within 20 months, we've launched hundreds of dark stores across India.



And, we are expanding into new cities soon!



Customers Love Us

NPS 88

Rate Your Order

Skip It

Your order arrived in
02:24 mins

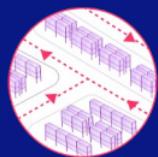
We've built Zepto with solid unit economics.

Our mature dark stores are trending towards full profitability **faster than offline supermarkets**.



4% Higher Margins Than Supermarkets

High sales volume in fresh fruits & vegetables means higher margin



Lower Rent Costs

Dark stores are placed in back alleys, unlike offline supermarkets



Efficient Last Mile Operations

Zepto's delivery cost is 15% lower than food apps

Technology Strategy and Approach



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There's a crazy amount of technology that goes into making a Zepto delivery happen.

We leveraged AWS programs, like Activate for Startups, to get off the ground with a very small team.

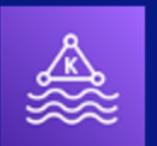


AWS Managed Services

We use a ton of AWS managed services to allow us to build at speed.



Amazon Aurora



Amazon Managed Streaming
for Apache Kafka



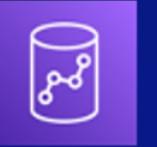
Amazon EC2
Auto Scaling



Amazon ElastiCache



Amazon Simple Storage
Service (Amazon S3)



Amazon Redshift



Amazon Simple Queue
Service (Amazon SQS)



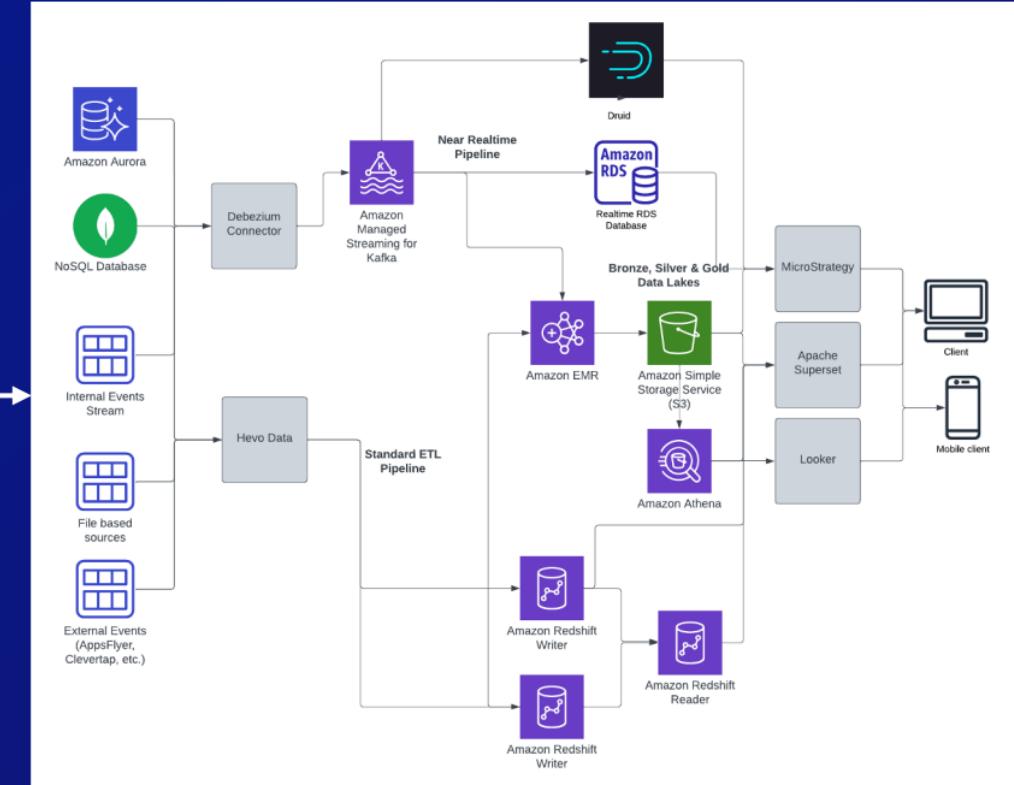
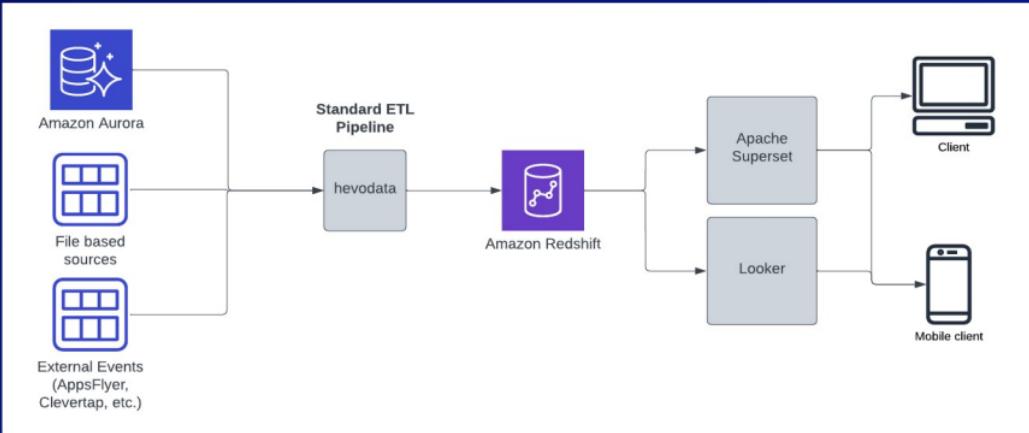
Amazon Elastic Kubernetes
Service (Amazon EKS)



Amazon EMR

Zepto's Data Stack

Data has been a key component of our success.



Zepto's Future



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Zepto's Future

- New Geographies + Categories



- Building even more depth in our supply chain

Home / Companies / Start-ups / Zepto launches farmer-focussed app

Zepto launches farmer-focussed app

1 min read . Updated: 11 Feb 2023, 12:46 PM IST

Live Mint

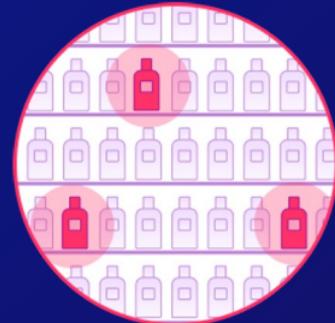
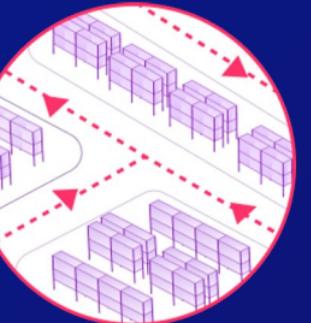
Home / Companies / Start-ups / News / Quick commerce firm Zepto launches engagement programme, app for farmers

Quick commerce firm Zepto launches engagement programme, app for farmers

Service will help Zepto digitise processes helping farmers to streamline their supplies and yields

Aryaman Gupta | New Delhi

- Leveraging AI/ML to continue making step-change improvements on customer experience and PnL



- Evolving our tech stack for 100x scale

Thank You!



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Staying Relevant in the Post-GPT Era.

Let's Read Together

Dheeraj Pandey
CEO, DevRev



Like Internet,
Like GPT

Big Bang Event(s)...



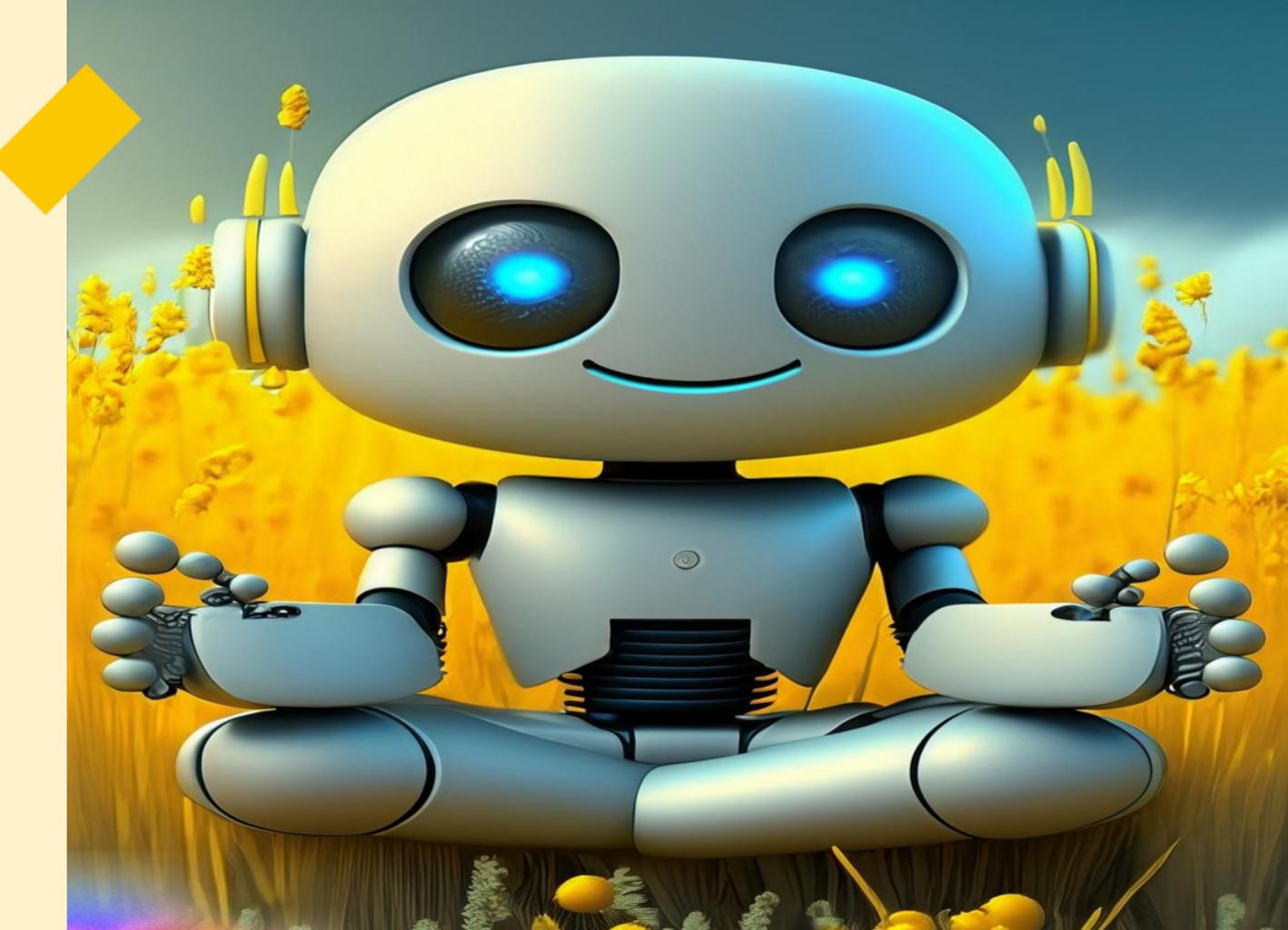
Humans needed departments to organize.

Departments *fragment*.
GPT *integrates*.



Machines don't
care about
~~departments~~.

AI will catalyze
cross-departmental collaboration



“\$100 vs. \$10,000,000”

Open-source models are faster, more customizable,
more private, and pound-for-pound more capable.

**They are doing things with \$100 and 13B params that
large models struggle with at \$10M and 540B.**

And they are doing so in weeks, not months.

“Giant Models”

Giant models are large monoliths, which are difficult to maneuver and finetune. In the long run, the best models are the ones which can be iterated upon quickly.

“LLMs on a Phone”

LLMs on a Phone: People are running foundation models on a smartphone!

Scalable Personal AI: One can finetune a personalized AI on their **laptop** in an evening!

Velocity in Decentralization

Large models aren't more capable in the long run if one
can iterate faster and successfully finetune smaller
models

Velocity in Decentralization

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models

Pragmatism of Decentralization

Why Compete with Open Source?

Velocity in Decentralization

Large models aren't more capable in the long run if one can iterate faster and successfully finetune smaller models

Pragmatism of Decentralization

Why Compete with Open Source?

Economics of Decentralization

Directly Querying Servers Is a Losing Proposition



Dheeraj Pandey @dheeraj · Apr 22

Our @[OpenAI](#) servers' runaway query on #DALL-E 2 left us with a bill of \$200K in 3 hours. Rogue query FTW.

And we haven't seen the full movie yet. Wait till the world starts tuning large language models in the cloud. This #GenAI thing better be worth it.



4



6



20



3,768



Decentralize.
Decentralize.
Decentralize.



Generate.

Text

Meeting notes, Transcriptions, Summaries

Images

Voice

Video ?



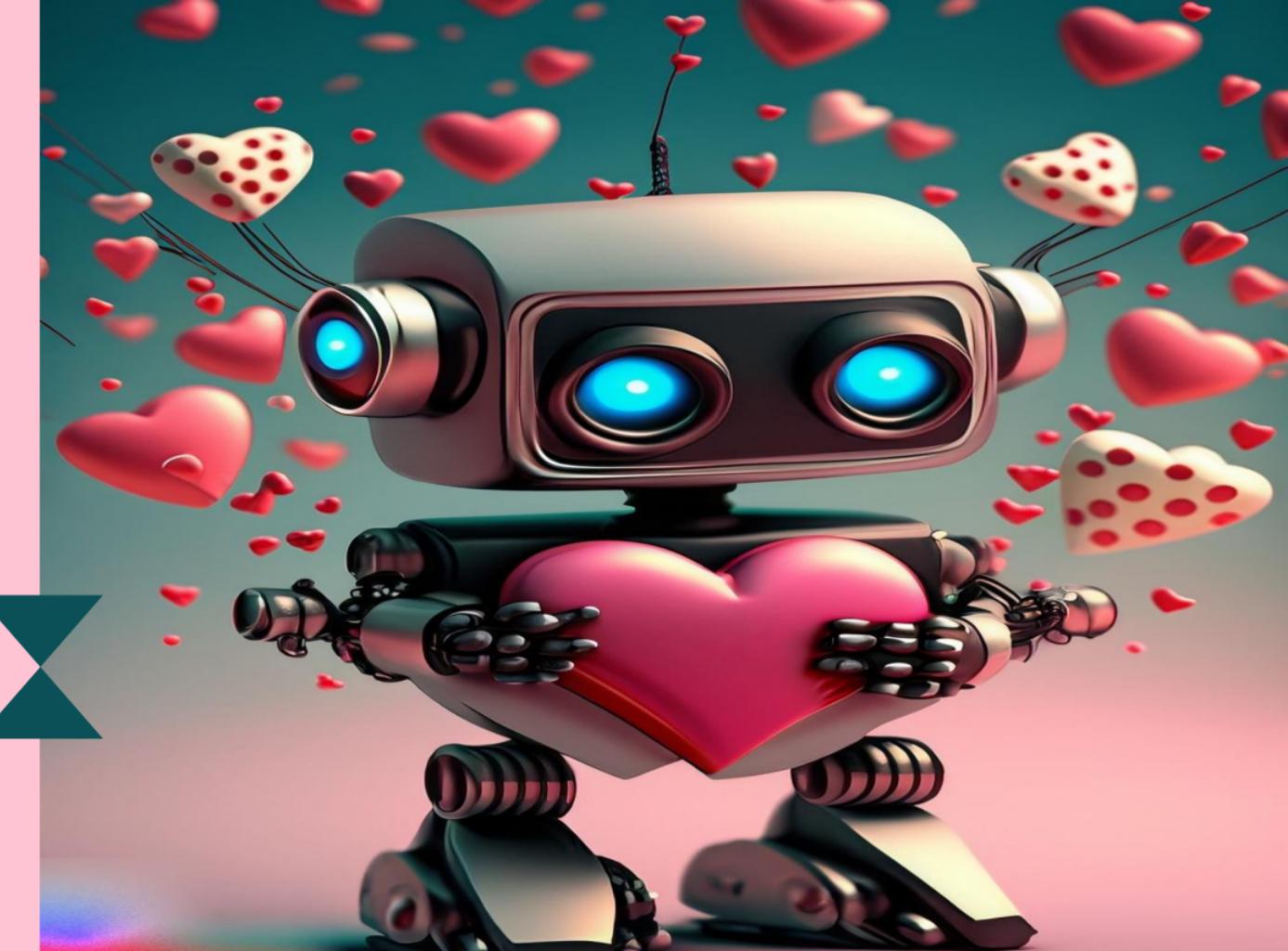
Build Copilot

Generative,
for Developers



Support Copilot

Generative,
for SREs and Agents



Grow Copilot

Generative,
for PMs, SEs, and AEs



Standardize.

LangChain
Vector Indexes
Plugin-based agents

Contextualized
Semantic Search and Prompts



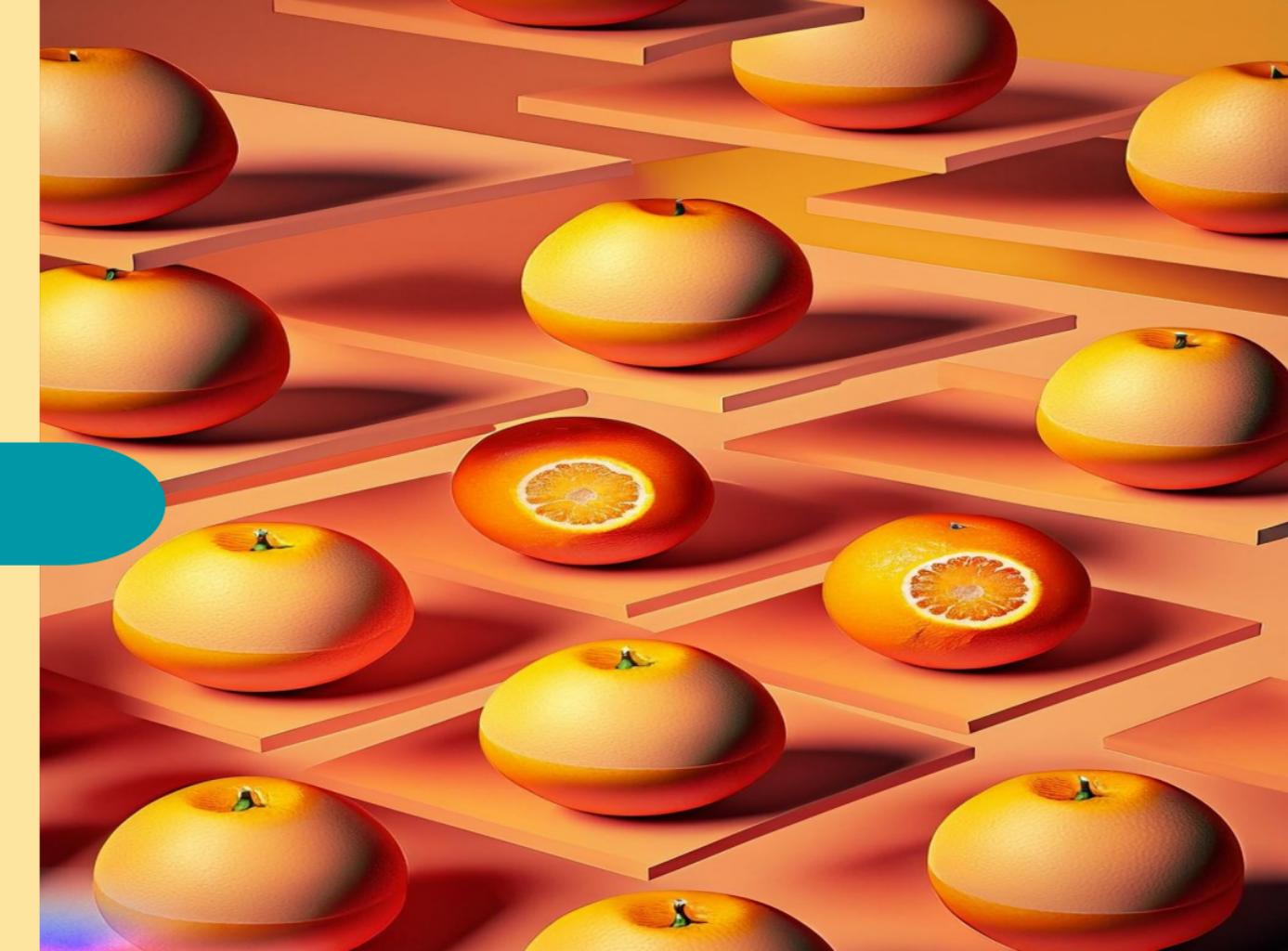
3 Pillars of our DevRev-AWS Stack

Decentralized. Generative. Standardized.



Standardize with AWS

Kubernetes
Message Bus
Document Database
Key Value Store
Syntactic Search
Relational Database
Lambdas
Object Storage
ServiceMesh and LBs



Decentralize with AWS

Open Source AI Models
Analytics at the edge
AWS Collab and smaller models
Serverless



Generative with DevRev

Build, Support, and Grow with our
OneCRM platform





One Org.

for Customer's Sake...

linkedin.com/in/dpandey

Thank you.
twitter.com/dheeraj

aws
SUMMIT
MUMBAI



Gopal Vittal

Managing Director & CEO, Bharti Airtel Limited

