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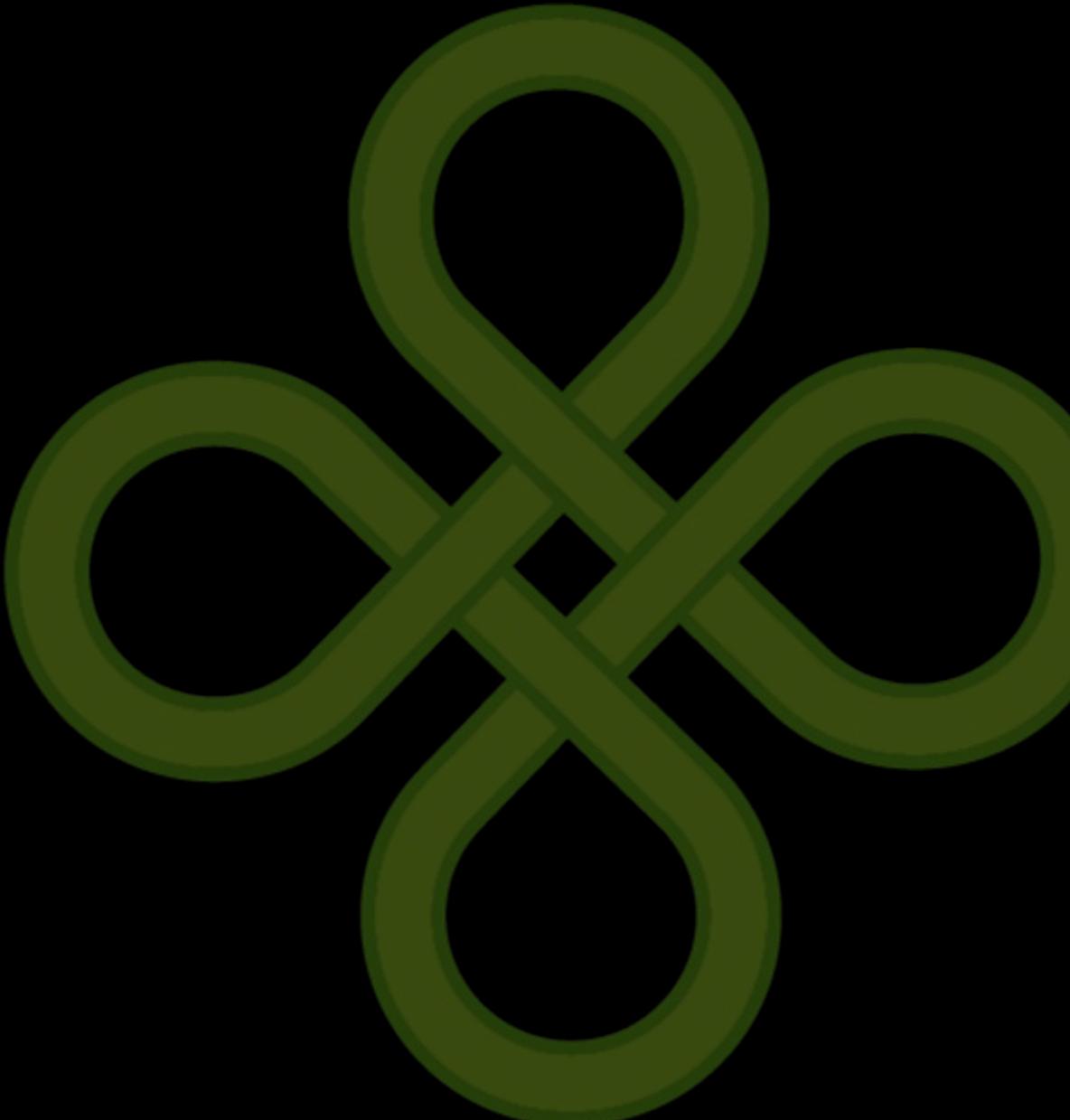
Revolutionizing natural fiber farming and supply chain in India using IoT and AI, to impact millions of farmers

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Solutions Architect
AWS India

Shiv Prasad Khillar
VP Engineering
ReshaMandi

Agenda

- About ReshaMandi
- Business challenges & opportunities
- Impact on ground
- Business and technological use cases
- Future goals and journey



About ReshaMandi

One platform for country-wide farm output, yarn, saree and fabric sourcing

Impacting the lives of **145,000+** stakeholders of Indian Natural Fibers Industry across **2,700+ pincodes**

100,000+ Farmers

997+ CRCs

10,000+ Reelers

17,500+ Weavers

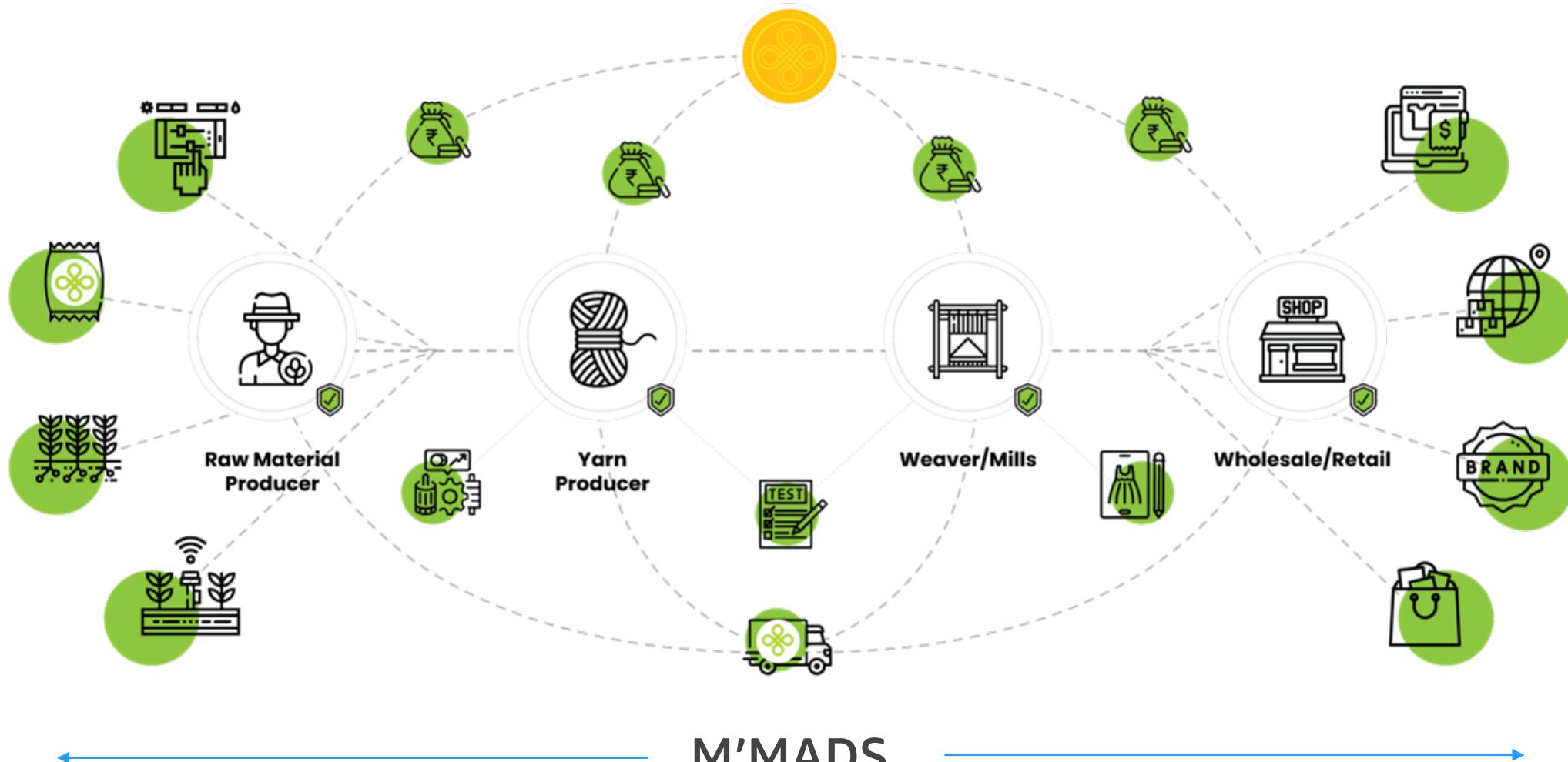
18,500+ Retailers



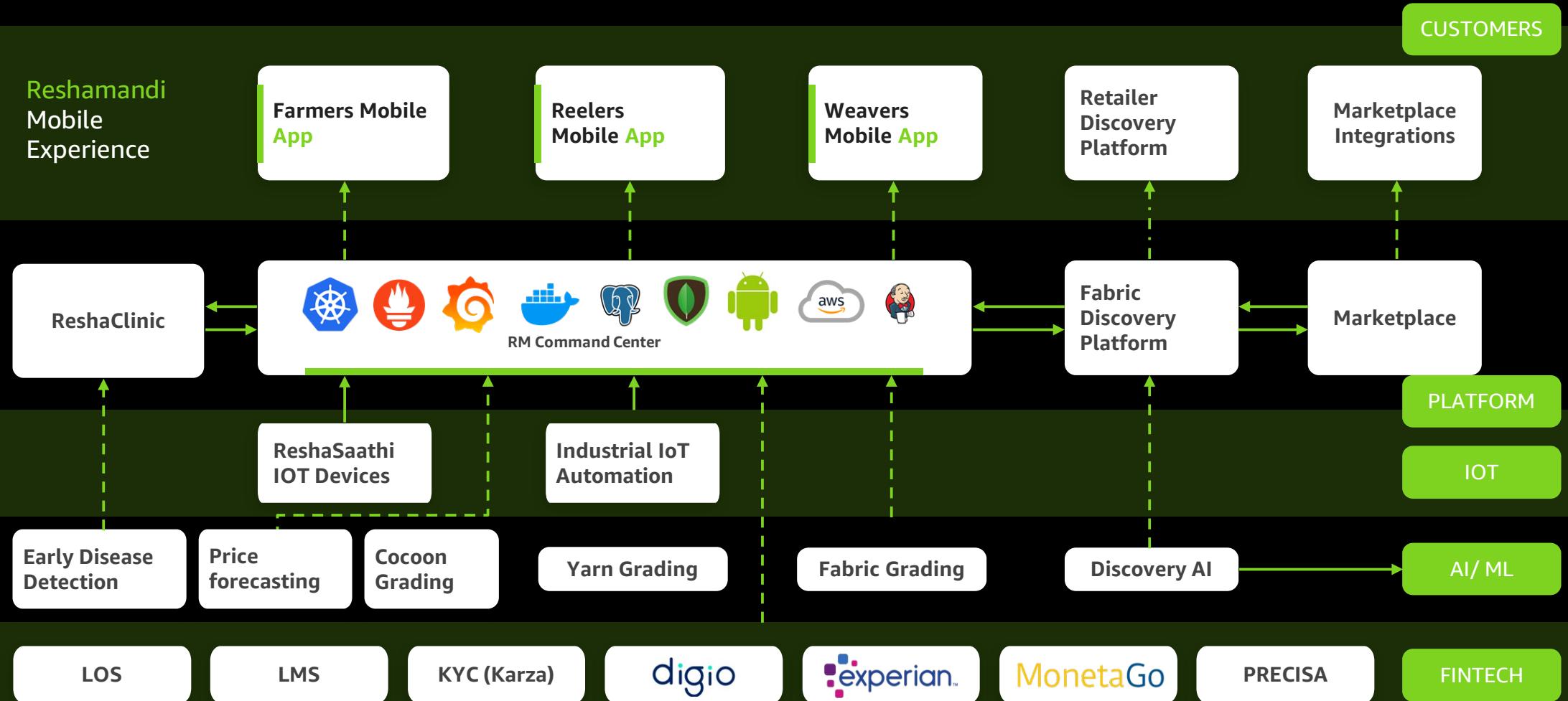
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ReshaMandi's natural fiber ecosystem



ReshaMandi's tech ecosystem



Partner Integrations - Pay Later, Loans, Insurance



Challenges & Opportunities

MULBERRY SATELLITE IMAGING

IOT DEVICES

COCOON PRICE FORECASTING

COCOON GRADING

TREND ANALYTICS & FORECASTING

RESHALENS - SAREE CLASSIFICATION

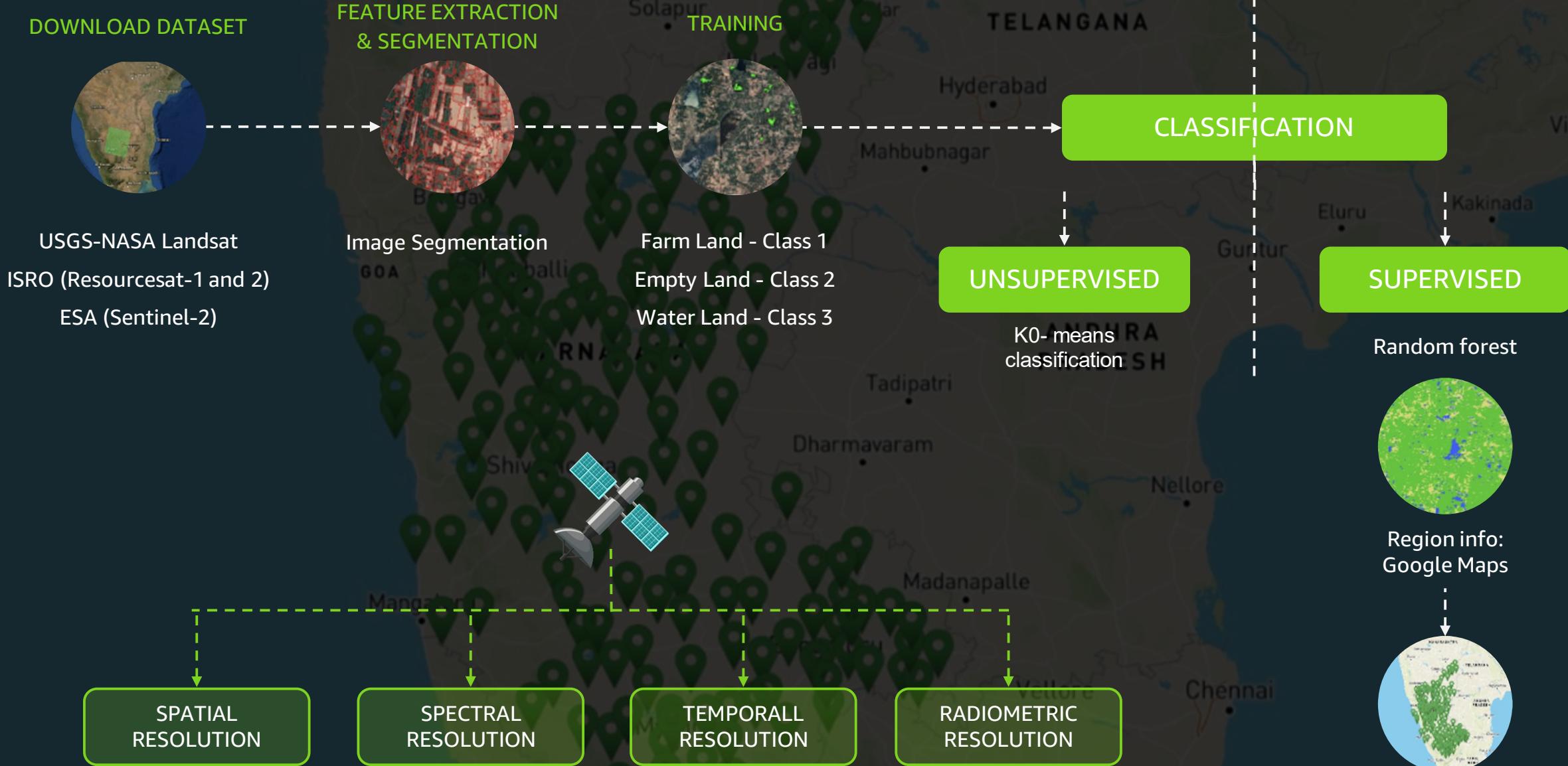


x



RESHAMANDI™
RELATIONSHIPS MATTER

Mulberry satellite imaging



IoT devices



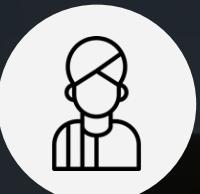
Rearing IOT 2.0 device



Temperature change not in safe range



Humidity change not in safe range



Farmer



Indicates how to control
temperature/ humidity

if NO action is taken



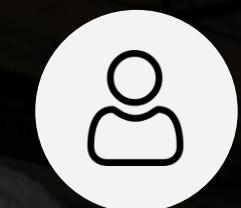
Customer success team
directly calls farmer



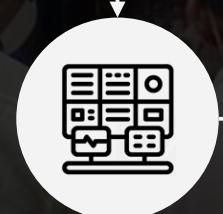
Executive team approaches
farmer

*Enabled from **4-6 cycles** in a year (30 days per cycle, 15 days to clean the shed) to **8 cycles**. with optimum **5-7 cycles**

Cocoon price forecasting



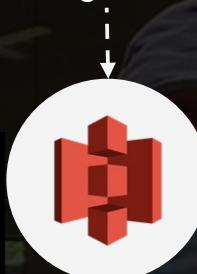
Users



OCC dashboard ->
Cocoon pricing

cocoon-forecasting-
staging/artifacts/cocoon_price_recommend
ation.csv

Training/ Dataset



reshamandi-mi-data



cocoon-forecasting-deepAr

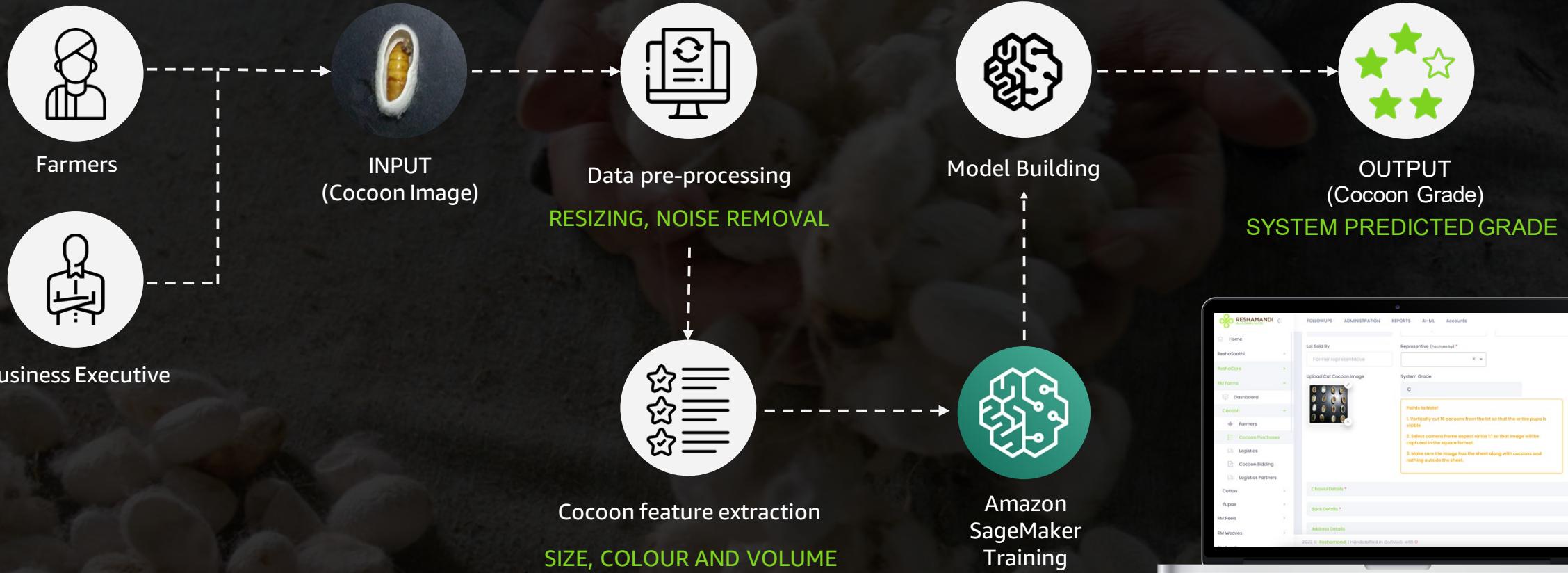
Array of forecast prices
for 30 days



PRICE FORECASTING GRAPH

*4000 cocoon lots are purchased every month and 10+ tons every day

Cocoon grading AI/ML



- Grades for cocoons are A+, A, B+, B, C+ and C
- 200+ grading done every day
- Grading process time has reduced to <1 min
- Accuracy of model is at 50% - 60%

Trend analysis & forecasting



ecosystem.reshamandi.com



Retailer mobile app



Trend Analytics



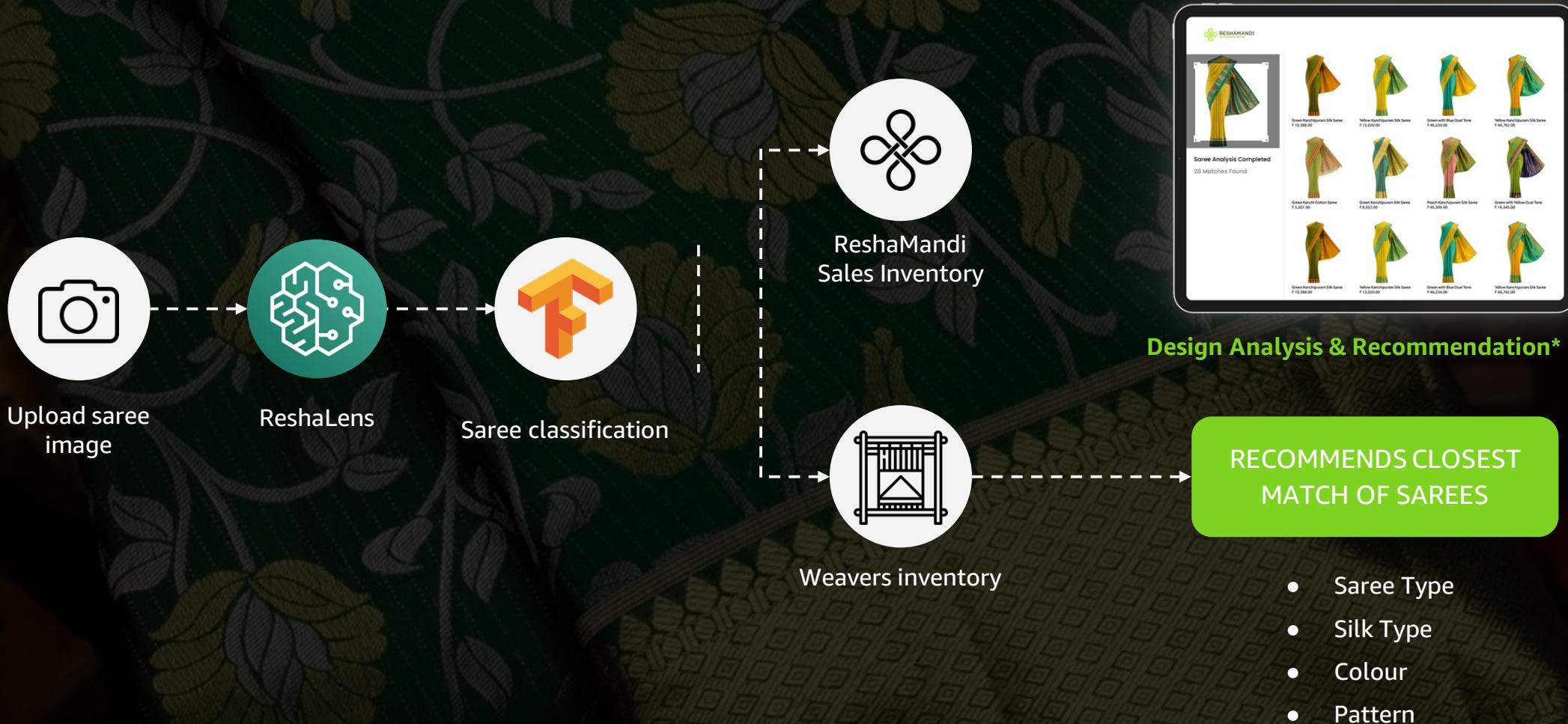
.psd file for prints

TRENDS



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Saree classification and attribute extraction





for supply chain

How to build a dynamic supply chain platform

Complex network with several integrated systems and thousands of data points

Collecting data in real time from various points in the supply chain

Timely & accurate info of supply chain - uncover hidden trends, provide recommendations

Event-driven Architectures

- Amazon EventBridge
- Amazon Simple Notification Service
- Amazon Simple Queue Service
- AWS Lambda
- AWS Fargate
- Amazon Elastic Compute Cloud
- Amazon Elastic Container Service
- Amazon Elastic Kubernetes Service
- Amazon DynamoDB
- Amazon API Gateway

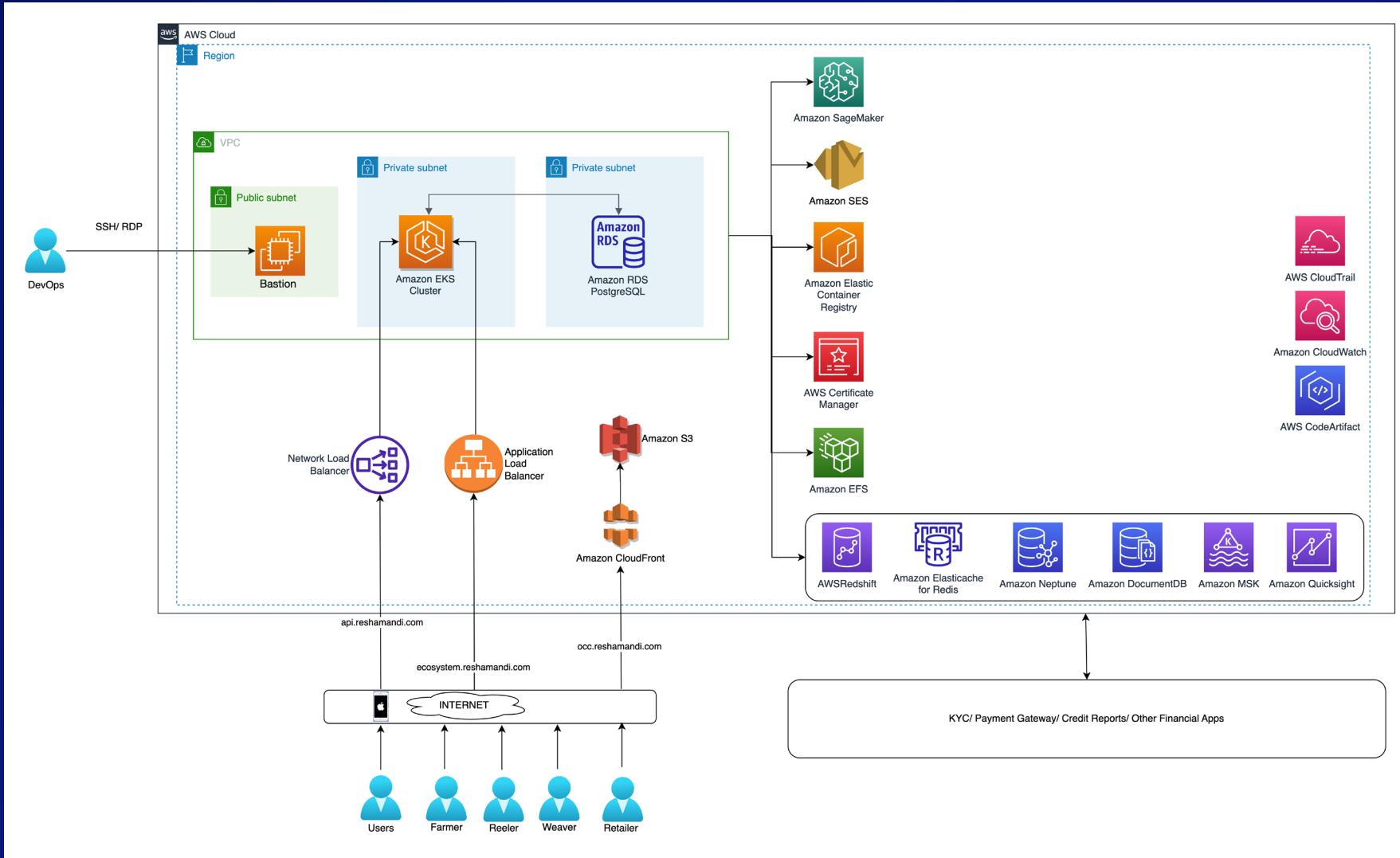
Real-time Data Collection

- AWS IoT Core
- AWS IoT Greengrass
- AWS IoT Core for LoRaWAN
- AWS Data Exchange

Real-time Data Collection

- Amazon Redshift
- Amazon Quicksight
- Amazon SageMaker
- Amazon Forecast

Technology × Infrastructure = SCALE



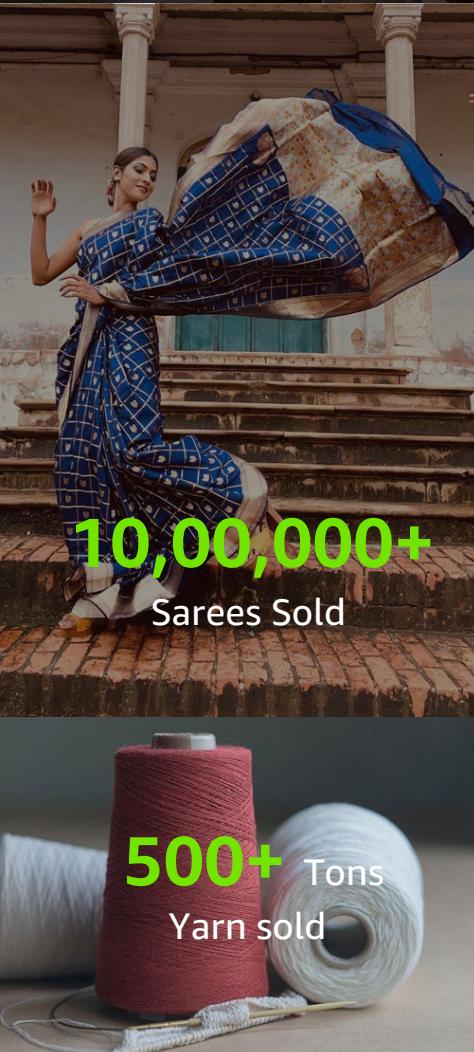
Building Bharat of tomorrow



2700+
Pincode
Served

1 Lakh +
Stakeholder
Network

50+
Cities
Present



500+ Tons
Yarn sold

21,00,000

Meters of fabric



20,000 Tons

Cocoon sold

1,00,000

Farmers



56%

Repeat Transactions

6.87 CM 1%*

In FY - 22

10,000+
Reelers

17,000+
Weavers

18,000+
Retailers



RESHA
FARMS™
BY RESHAMANDI

"I've been selling cocoons to ReshaMandi for about 6 to 8 months. ReshaMandi gives ₹10-₹20 more than the average rate in other Markets "....Vasanth Reddy (Farmer)



₹15/kg +11%

Additional Revenue

Increase in Production



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RESHA
yarn™
BY RESHAMANDI

" since the inception of ReshaMandi, most of my Cocoon Purchasing happens from ReshaMandi only ... "
- Mohammad Avais (Reeler)



5% +13%

Savings on Operational Costs

Increase in Production



RESHA
weaves™
BY RESHAMANDI

" ... I've been in this business for 27 years....with ReshaMandi, they have great Relationship with us and have helped us with good growth in our business ... "
- Satyanarayana (Weaver)

30%

Reduced Sourcing TAT

+2.5%

Lower Procurement Cost

" ... Once I started working with ReshaMandi, everything fell in place. They are the one-stop solution for all my needs ... "
- Shri. Shyam Kumar (Varalaxmi Silks)

2x

Increase in Revenue

+40%

Increase in Profit Margins



Let's talk - Roadmap and future plans

- Conversational AI using Amazon Lex
- Traceability - Blockchain
- Amazon QuickSight for Analytics
- Amazon SageMaker and Hugging Face for advance AI/ML
- Amazon RDS to Amazon Aurora
- AWS Device Farm
- AWS IoT Core
- Amazon Lookout for Vision

skillbuilder.aws 

Your time is now

Build in-demand cloud skills your way



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Thank you!

Shiv Prasad Khillar
Vice President of Engineering
ReshaMandi

Shreya Pathak
Solutions Architect
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session survey