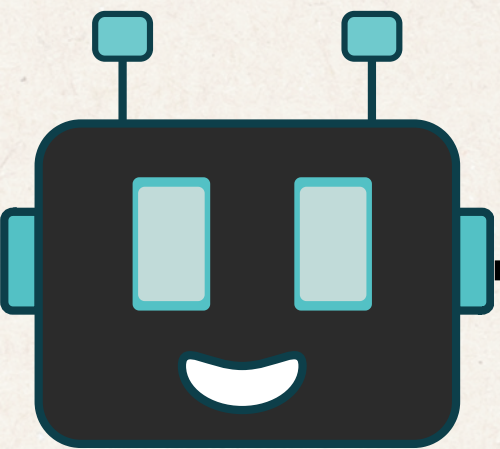


CASE STUDY

AI IN CUSTOMER SUPPORT AUTOMATION



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INTRODUCTION

- Artificial Intelligence is transforming how India learns, works and engages across industries, becoming a core driver of innovation and productivity.
- With **70%** of enterprises adopting AI, it’s enabling **30%** cost savings, **40% faster** responses, and adding nearly **\$500 billion** to India’s GDP by 2025.
- The vision for India’s AI ecosystem, driven by government and industry collaboration, is to embed intelligence into every process for smarter, data-driven and human centered growth.
- Chosen Segment: AI in Customer Support Automation — valued at **USD 445 million** in India (2025), forming **~3.7%** of the **USD 12 billion global market**, driven by the demand for multilingual, real-time, and cost-efficient support solutions.

Segment	India 2025 (USD)	Global 2025 (USD)	India % of Global
AI in Education	215M	6.9B	~3.1%
AI in K-12	16M	1.1B	~1.5%
Upskilling/Test Prep/EdTech	2.5B	5.3B	~47%
GenAI/Content Creation	7.3B	70B	~10.4%
Customer Support Automation	445M	12B	~3.7%
AI Personal Finance	16M	13.5B	~12%
Recruitment Workflows	43.2M	660M	~6.5%
Overall AI Market	15B	390.91B	3.80%

Source

Market Overview: AI in customer support automation

Industry Scale

- India’s customer support industry is valued at over USD 33 billion, forming the backbone of global contact center and CX operations.

AI Penetration

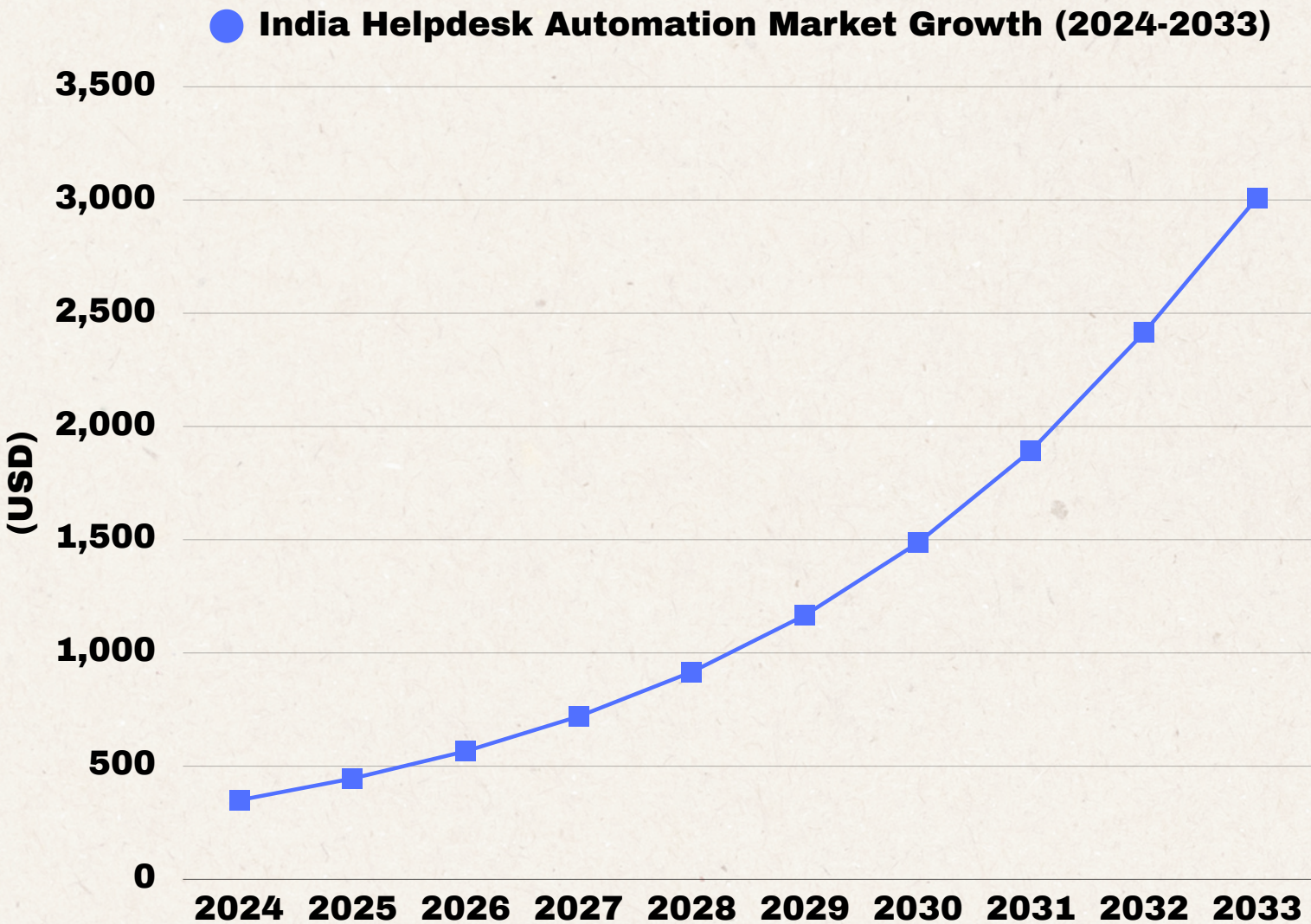
- AI-driven automation currently captures about USD 350 million, projected to reach USD 3.01 billion by 2033 at a strong 27 % CAGR, signaling deep transformation across enterprises.

Ecosystem Integration

- A unified stack of telephony, voice AI, chat automation, workflow orchestration and analytics is redefining support from reactive service to proactive experience.

Human + AI Collaboration

- AI now assists human agents through agent-assist tools, internal helpdesk bots, and workflow intelligence, boosting resolution speed and accuracy while reducing cost.



Source

Employment Impact

- This evolution is also creating new job roles AI support specialists, automation trainers and data analysts building a skilled workforce to manage and optimise intelligent systems.

Market Segmentation

1

Chatbots & Virtual Assistants

- Automate FAQs, order tracking, lead generation, onboarding; provide 24x7 instant issue resolution via chat (web, app, WhatsApp).
- Market Share: **62–65%**

2

Voice AI (Conversational: IVR, Voicebots)

- Automate inbound/outbound calls, KYC verification, surveys and multilingual customer service through voice/IVR bots.
- Market Share: **15–18%**

3

Social & Messaging Automation

- WhatsApp, Instagram, Facebook Messenger chatbots for omni-channel customer service and campaigns.
- Market Share: **8–10%**

4

Ticketing, Case Management & Workflow Automation

- Automated ticketing, escalation, agent assist, workflow optimization via AI-powered helpdesk platforms.
- Market Share: **8–10%**

5

Sentiment Analysis, NLP & Document/Image Processing

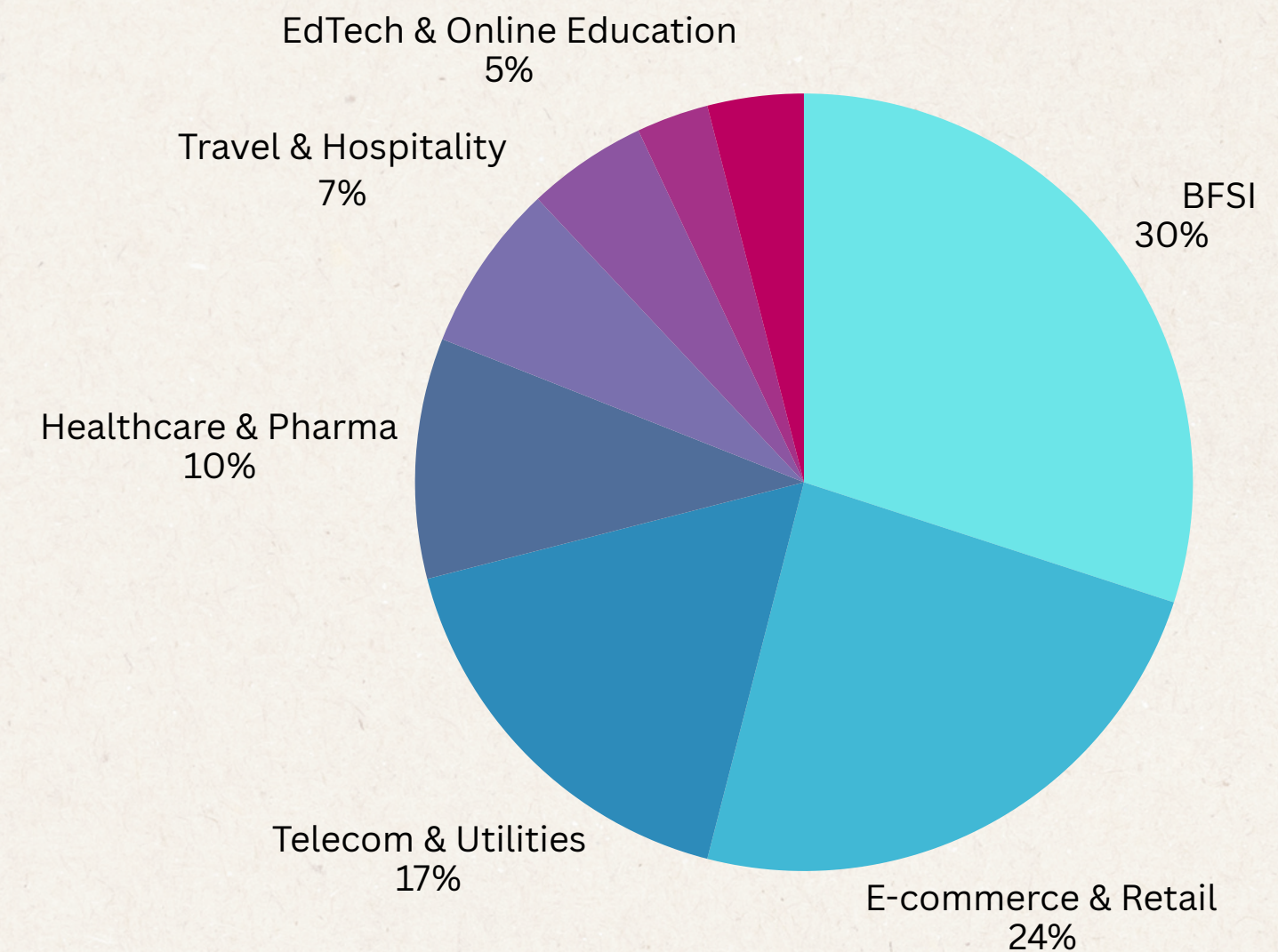
- Analyse customer emotion/intent, smart routing, real-time extraction/verification of IDs, claims, documents.
- Market Share: **5–8%**

6

AI-Powered Payment Handling & Analytics

- Automate payments, refunds, order verifications; provide real-time analytics, KPI dashboards, feedback capture.
- Market Share: **4–6%**

Industry vertical percentage distribution for AI in customer support automation in India (2025)



BFSI Segment Highlight:

The Indian BFSI chatbot and voice AI market is projected to grow from ~USD 110 million in 2022 to ~USD 550 million by 2030, at a CAGR of around 24%.

Chosen Sub-Segment: Voice AI (Conversational IVR, Voicebots)

Voice-based AI Solutions

Voice AI refers to automated systems that use speech recognition, natural-language understanding, and TTS to interact with customers by voice. These include AI voicebots (intelligent IVR systems), conversational voice assistants, and real-time speech analytics.

Growth: The Indian voice AI market (voicebots and assistants) was about \$153 M in 2024 and is forecast to **grow ~35–36%** annually (reaching ~\$958 M by 2030) driven by smartphone adoption and demand for vernacular support.

Use cases: missed-call follow-ups, lead qualification, cart abandonment recovery, reminders.

24×7 service demand: Consumers expect instant, round the clock support. AI voicebots can provide uninterrupted service and reduce waiting times

Cost and efficiency: Enterprises see strong ROI in automating simple tasks. Surveyed firms expect voice AI to cut support costs and improve CX.

Market Drivers:

- Rising smartphone and UPI penetration in Tier-2/3 cities
- Push for multilingual customer service.
- Integration with CRM & cloud telephony.
- Advancements in Generative AI and voice-based LLMs.
- Growing acceptance of AI-driven voice assistants among consumers
- Demand for omni channel integration (chat, WhatsApp and calls)

Ecosystem of Vendors and Platforms



Bhashini- Digital India Initiative: Government-backed initiative enabling real-time language translation and NLP APIs for enterprises.

Chosen Sub-Segment For BFSI

BFSI led the **first wave** of customer support automation through chatbots. Now, with the rise of Voice AI, the industry stands at the edge of the second automation revolution one that connects digital and voice users seamlessly, expanding accessibility, reducing costs and strengthening trust through secure, conversational experiences.

BFSI Industry Size (India, 2025):

- The Indian BFSI sector’s market capitalisation has surged to **₹91 trillion** in 2025.
- BFSI is foundational with banks, NBFCs, insurers, mutual funds, pension funds, and a booming fintech sector projected at **~USD 150 billion** in 2025.
- BFSI is expected to capture **USD 240–550 million** of the India voice AI market by 2030 (depending on continued digital inclusion and automation trends)

Common use cases include:

- | | |
|--------------------------------------|---|
| • Balance and transaction inquiries. | • Loan application and status checks. |
| • Credit card or PIN related issues. | • Account opening assistance. |
| • Bill payments and fund transfers. | • Fraud alerts and security verification. |

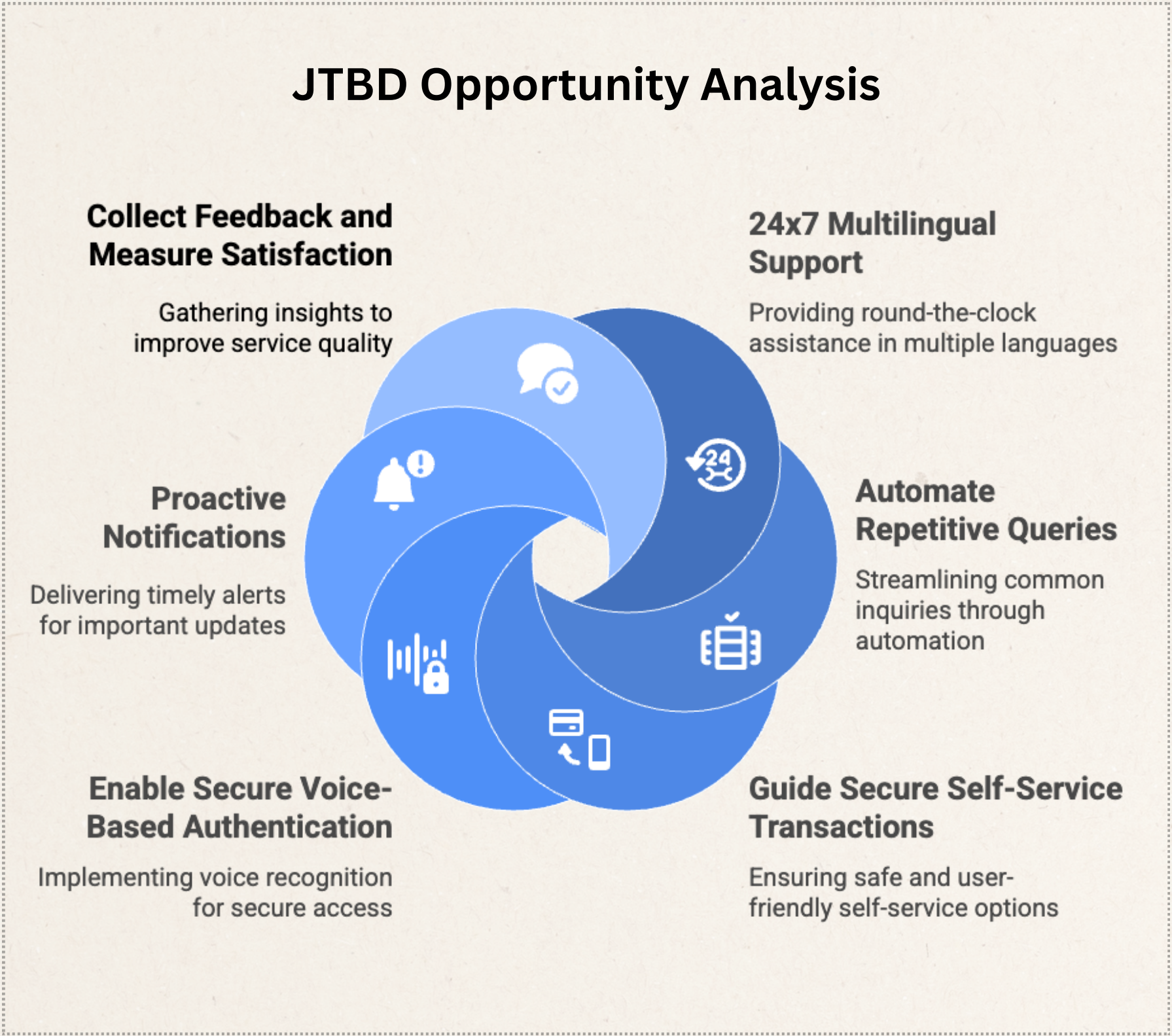
Impact & ROI:

Kotak Mahindra Bank’s “Keya” (launched 2018) is a bilingual (Hindi/English) voicebot that handles helpline calls.

Result: Customer response time cut by over half compared to legacy IVR.

Bank of Baroda deployed voice biometrics for secure authentication.

Result: Reduced authentication time by 50 seconds per call and cut per call costs by **15%**.



Key Value Proposition Parameters

1

NLP/AI Quality: Accuracy of intent recognition, language understanding and generation. Higher NLP sophistication means more natural, helpful interactions.

2

Language & Localisation: Support for Indian languages and dialects. Systems must handle Hindi, regional languages (Tamil, Bengali, Marathi, etc.) and code switching to be effective in India

3

Channel Coverage: Omnichannel support (web chat, mobile app chat, social media, WhatsApp, IVR/phone). Seamless integration into the customer's preferred channel is critical.

4

Integration Ease: Out of the box connectors to CRM/ERP systems, ticketing platforms and backend databases. Solutions that integrate easily (APIs, plugins) with existing workflows are preferred.

5

Customisation & Domain Knowledge: Ability to tailor the AI's knowledge base for specific industry workflows. Sectors like BFSI or healthcare need domain-trained bots with relevant context.

6

Analytics & Reporting: Real-time dashboards on ticket volumes, response times, customer sentiment and bot performance. Actionable AI insights (e.g. sentiment trends) help continuously improve support.

7

Regulatory Compliance: Data security, customer privacy (especially for financial data) and compliance with Indian laws (e.g. RBI regulations for banking).

7

Cost & ROI: Total cost of ownership balanced against projected operational savings. Especially for SME buyers, usage based pricing or no-code tools that minimise setup cost are attractive.

Recent Trends and Innovations

1

Generative AI & LLMs

- LLMs like GPT-4 and Gemini are reshaping support with human like replies and smart summaries.
- India’s GenAI in support market valued at **~\$1.3B** (Ken Research).

2

Multimodal & Rich Media AI

- AI bots now process text, image and voice inputs.
- 45%** of Indian support chats use rich media for visual or audio issue resolution.

3

Emotional Intelligence in AI

- AI gauges tone and sentiment, escalating when frustration is detected.
- Used by EmotionLogic and IBM Watson for real-time CX improvement.

4

Multilingual Voice Assistants

- Voicebots support 10+ Indian languages (Sarvam AI).
- Bilingual and vernacular-first bots drive inclusivity across 22 official languages.

5

Funding & M&A Momentum

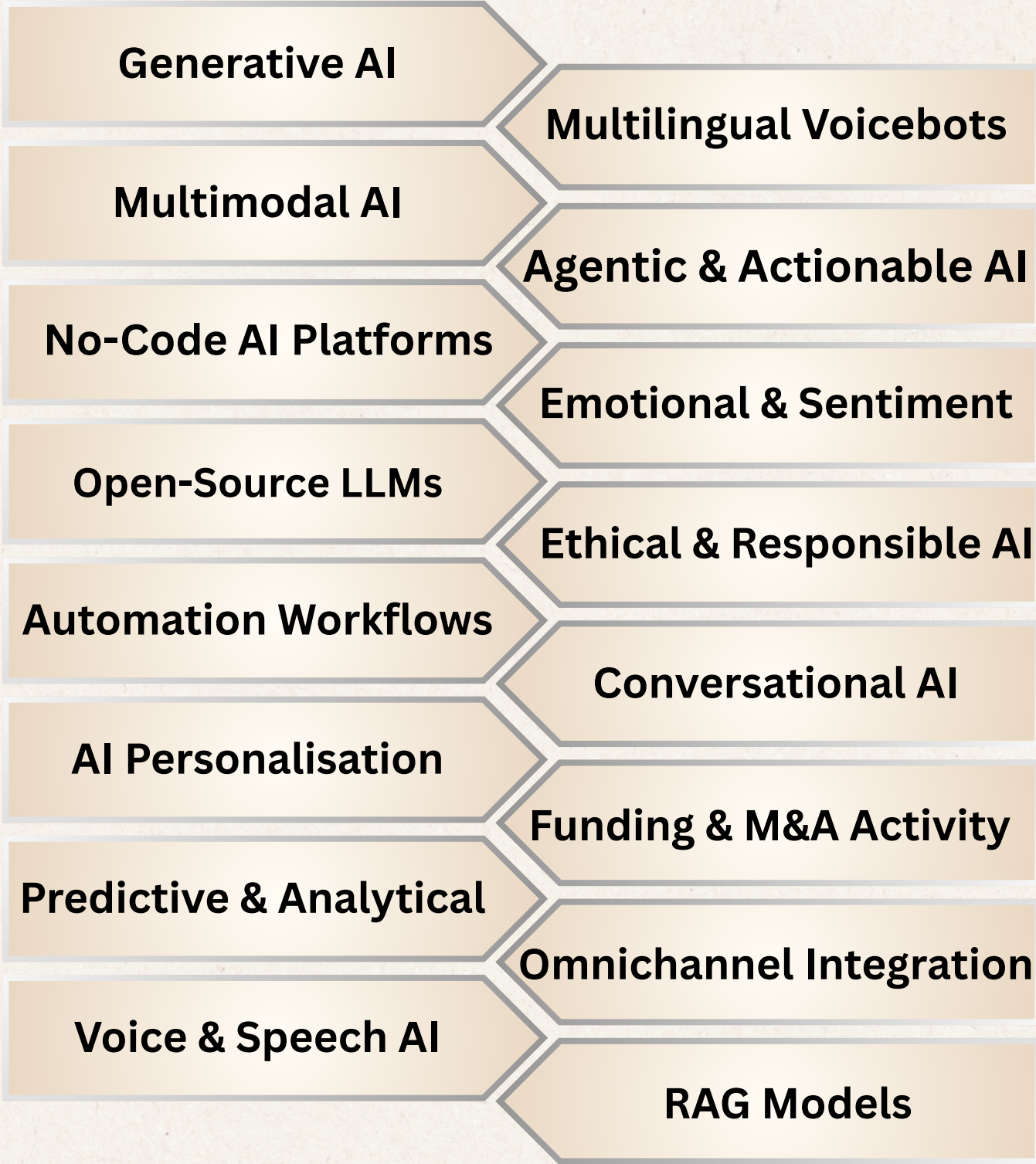
- 18+** Indian AI startups raised **\$600M+** in 4 years.
- Key deals: Gupshup (\$340M), Yellow.ai (\$200M).

6

Agentic AI & Automation

- Bots act autonomously booking, payments, and upselling.
- Example: Razorpay’s AI agent processes UPI payments within chat.

Emerging Innovation Areas in AI Support Automation



Future Outlook & Opportunities (2025–2030)

Voice AI Outlook

Mainstream Adoption

Voice AI to become a core CX channel, projected at ~US\$1.8B by 2030

Workflow Integration

AI agents to handle end-to-end tasks — from loan approvals to fund transfers.

Tech Evolution

5G & edge AI to reduce latency and improve voice quality & response time.

Compliance Ready

Data privacy (PDP Bill) and telecom norms to shape secure voice architectures.

Smarter AI Models

Next-gen multilingual & domain-specific models to boost accuracy and context.

New Use Cases

Expansion into healthcare, education, and rural services via voice led interfaces.

Opportunities for New Entrants

Mainstream Adoption

Voice AI to become a core CX channel, projected at ~US\$1.8B by 2030

Local Language Edge

Focus on low-resource Indian languages & dialects (Marathi, Assamese, Bhojpuri, etc.)

Vertical Focus

Build domain specific voice bots for BFSI, healthcare and agriculture.

Rural Inclusion

Voice-first solutions for low-literacy, feature-phone users in Tier-2/3 regions.

Human like UX

Create natural, friendly TTS voices and empathetic conversational flows.

Performance & Scale

Invest in ASR/NLU efficiency to cut cost and latency.

Govt. Collaboration

Partner with IndiaAI, Bhashini and Digital India initiatives for reach & credibility.

Product Recommendation

AI is transforming customer support through intelligent automation handling repetitive queries, providing multilingual voice support, and enabling 24×7 engagement. Modern enterprises are adopting voice-based AI to deliver faster, human like customer interactions while reducing operational costs.

Proposed AI Product: Invorto AI

Invorto AI is an Indian built, voice automation platform that helps businesses manage outbound and inbound customer conversations through AI bots.

Technology Stack

Built on speech recognition (ASR), NLP/NLU, and LLM-based dialogue management, using frameworks like GPT and custom multilingual models. Backend powered by Python, Node.js and cloud telephony APIs with real time analytics.

Go To Market Strategy

Target SMBs and enterprises in PropTech, BFSI, and BPO sectors via demo-led onboarding.

Focus Areas

Self-Serve Automation Platform

I would emphasise no code self serve bot creation, where businesses can build and deploy bots easily without technical help. Users should be able to:

- Define bot roles, tasks, tone and context
- Upload knowledge bases
- Configure workflows visually

Why: It reduces dependence on developers and allows sales or CX teams to experiment freely.

Industry Specific AI Templates

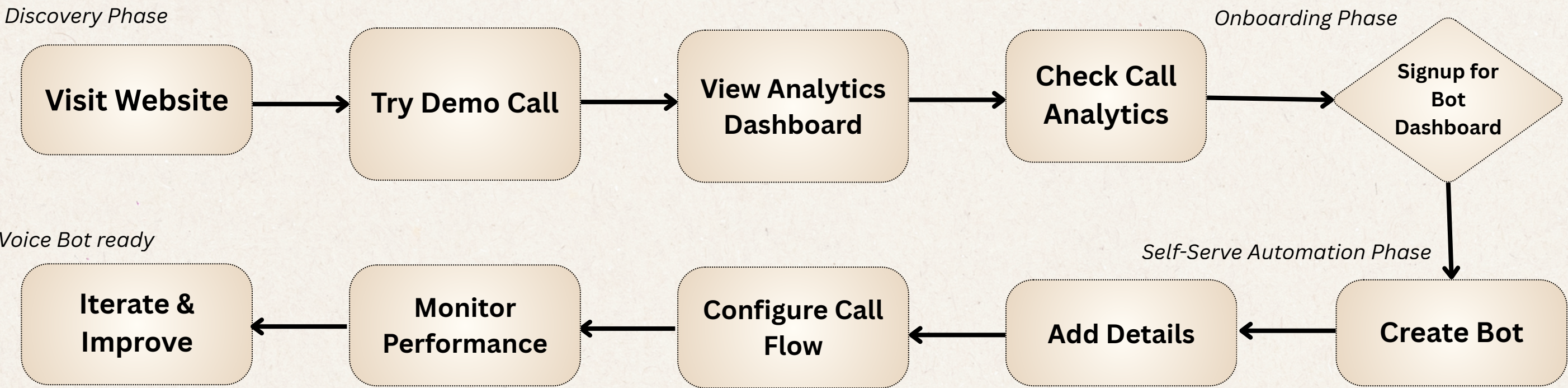
Create vertical-tailored bot templates (for BFSI, PropTech, healthcare, logistics).

For example:

- BFSI → Loan eligibility bot
- PropTech → Site visit scheduler
- Healthcare → Appointment reminder bot

Why: Pre-trained industry templates reduce go-live time and improve ROI.

User Workflow



[Demo Link](#)