Action Plan for Bangla AI Customer Care Platform

This document is not describing a simple FAQ chatbot. Instead, it outlines a full-scale Bangla AI customer care platform that: Understands any natural Bangla query (not only predefined FAQs). Connects with real backend systems (CRM/ERP/Databases) to fetch live answers. Works across voice (phone IVR) and text (chat channels). Can handover to humans when needed. Learns continuously from interactions. So yes ■ this is a custom NLU-powered, intent-based, data-integrated system — not just an FAQ bot.

Phase 1: Foundation Setup

- Define Knowledge Sources: Select backend systems (ERP, CRM, inventory, appointment DB). Gather real-world queries and map to intents + DB queries.

- Infrastructure Setup: Deployment environment (AWS/GCP/Azure or local) and APIs for CRM/ERP integration.

Phase 2: Core AI Engine (NLU + ASR + TTS)

- Bangla ASR: Use Whisper, Vosk, or custom-trained model for Bangla + accents, optimized for telephone-quality audio (8kHz).

- Bangla NLU: Train from scratch with domain-specific intents, using transformers (mBERT, IndicBERT, BanglaBERT). Extract entities (product names, account numbers, dates, amounts).

- Dialogue Manager: Decide whether to fetch DB info, trigger workflows, or escalate to human.

- Bangla TTS: Natural-sounding Bangla synthesis (Google, Coqui TTS, or Microsoft).

Phase 3: Backend & Data Integration

- APIs for Real-Time Data: Example — product availability, order status.

- Middleware Layer: Convert NLU intent → DB query → structured response.

- Dynamic Response Generator: Templates + data injection (e.g., 'Apnar order #123 ekhon courier er kase ache').

Phase 4: Multi-Channel Interfaces

- Voice Calls (IVR + AI Agent): SIP/VoIP integration (Asterisk/FreeSWITCH/Twilio). AI answers in Bangla, real-time conversation.

- Chat Interfaces: Messenger, WhatsApp, Website widget, Mobile App. Unified backend for all.

- Admin Dashboard: Monitor conversations, edit intents/entities, analytics (accuracy, fallback rate, satisfaction).

Phase 5: Human Handoff & Learning

- Fallback to Human Agents: Smooth transfer if AI fails or user requests. Show conversation history to the agent.

- Continuous Learning Pipeline: Collect failed/ambiguous queries, retrain NLU weekly/monthly, expand intent coverage.

Phase 6: Security & Compliance

- End-to-end encryption (TLS for calls/chats).
- Role-based access for admins.
- Logging with privacy compliance (local laws, GDPR if required).

Phase 7: Pilot → Scale

- Start with one domain (e.g., e-commerce order tracking).
- Expand to banking, healthcare, govt. services gradually.
- Keep scaling intents, languages, and accents.