



BPO – AI ERP TicketingOS

Business Process Outsourcing · Data Entry · Call Center · Finance & Accounting · HR · IT Helpdesk · Omnichannel Ticket Management

✦ Zero software license · Pay per document/service · SLA-driven · AI-native workflow

1. Master BPO Execution Flow (Omnichannel Ticket-Driven)

ID	Department	Process	Activity	Action	Progress %
BPO001	Client / Customer	REQUEST	Omnichannel intake	Email / WhatsApp / SMS / API / Voice / Chat → auto ticket creation[reference:0]	5
BPO002	AI Triage	CLASSIFY	Intelligent routing	AI categorises by service line (Data Entry / Call Center / F&A / HR / IT)	10
BPO003	Service Desk	VALIDATE	SLA & contract check	Verify client contract type (Transaction-based / FTE / Outcome-based)	15
BPO004	Resource Mgmt	ASSIGN	Agent / SME allocation	AI matches skill + availability + load → auto assign[reference:1]	20
BPO005	Delivery	PROCESS	Execute outsourced task	Data entry / Call handling / Invoice processing / Recruitment screening[reference:2]	40
BPO006	QA	QUALITY CHECK	2-level validation	Random sampling (10-20%), accuracy measurement, calibration sessions	55

ID	Department	Process	Activity	Action	Progress %
BPO007	QA	DEFECT LOGGING	Error correction loop	Defect ticket created → rework → resubmit	60
BPO008	Client Review	APPROVAL	Client sign-off	Dashboard / report delivery + client acceptance	75
BPO009	Finance	INVOICE & BILLING	Auto invoicing	Transaction count / FTE hours / Outcome metric → generate invoice[reference:3]	90
BPO010	Client Success	CLOSURE & FEEDBACK	Satisfaction survey	CSAT / NPS capture, renewal recommendation	100

2. Service Line Specific Workflows (Ticket Types)

Data Entry Services

Document upload (Invoice/PO/GRN/Inventory) → OCR extraction → Manual validation (99.8% accuracy)[reference:4] → GL coding → ERP update → Daily reconciliation report.

Call Center / Customer Support

Ticket from call/chat → IVR → Agent assignment → Issue resolution → First Contact Resolution (FCR) measurement → CSAT survey. [reference:5]

Finance & Accounting (F&A)

AP/AR ticket → Invoice processing → 3-way matching → Payment run → Month-end book closure → Financial reporting. [reference:6]

HR Outsourcing (RPO)

Recruitment ticket → Sourcing → Automated screening → Interview

IT Helpdesk

Password reset / Software install ticket → Remote access → RCA →

scheduling → Onboarding → Payroll processing.[reference:7]
[reference:8]

Resolution → Knowledge base update.

Reporting & Analytics

Data pull request → AI analysis → Report generation
(Email/WhatsApp/SMS/Dashboard/API) → Client delivery.[reference:9]

Critical Control Points (SLA & Quality Gates)

- **Response time SLAs:** 4h for critical tickets, 24h for standard.[reference:10]
- **Accuracy threshold:** 99.8% for Data Entry, 99.5% for F&A.[reference:11]
- **First Contact Resolution (FCR):** Target >75% for voice processes.[reference:12]
- **Service Level Compliance:** >95% calls answered within 30 seconds.
[reference:13]
- **Turnaround Time (TAT):** 24h for standard documents, 4h for priority.
[reference:14]
- **Quality Assurance:** 2-level validation + weekly calibration sessions.


3. BPO Pricing & Payment Models


Model	Basis	Pricing Example	Best For
Per Transaction (Document)	Number of units processed	Data Entry: ₹3.00-4.00 per document[reference:15]	Data entry, Invoice processing, Claim processing
Full-Time Equivalent (FTE)	Per dedicated agent/month	Call center agent: ₹25,000-45,000/month	24/7 customer support, Dedicated accounting team
Hourly Rate	Per billable hour	₹500-1,500/hour (specialised skills)	IT helpdesk, Legal process, Ad-hoc tasks
Fixed Fee / Retainer	Monthly fixed amount for defined scope	₹50,000-2,00,000/month	Multi-channel reporting, Monthly reconciliation


Model	Basis	Pricing Example	Best For
Outcome-Based	% of savings / revenue / metric achieved	15% of recovered revenue, ₹500 per resolved ticket[reference:16]	Collections, Sales support, Lead generation
Hybrid / Tiered	Base retainer + per-unit overage	₹30k base + ₹2/document beyond 2,000 docs[reference:17]	Fluctuating volume, Peak season overflow


💰 Platform fee model (UrbanClap-style): 20% of transaction value retained by BPO platform, 80% paid to agent.


4. ERP & TicketingOS Module Mapping (BPO Stack)


 **Omnichannel Ticketing Engine** – Auto ticket creation from Email, WhatsApp, SMS, Voice, Chat, API. [reference:18]

 **AI Triage & Routing** – Natural language classification, skill-based assignment, load balancing. [reference:19]

 **SLA & Workflow Automation** – Triggers, escalations, auto-reminders, timer-based actions. [reference:20]

 **Workforce Management (WFM)** – Agent scheduling, occupancy tracking, real-time adherence.

 **Quality Management (QMS)** – Random sampling scorecard, calibration, root cause analysis. [reference:21]

 **Billing & Invoicing** – Usage metering (per doc / per hour), auto invoice, collections, client portal.

 **Client Dashboard & Reports** – Real-time KPI view, SLA


 **AI CoPilot / Agentic AI** – RPA for data entry, AI chat for tier-1

compliance, daily/weekly/monthly report delivery.[reference:22]

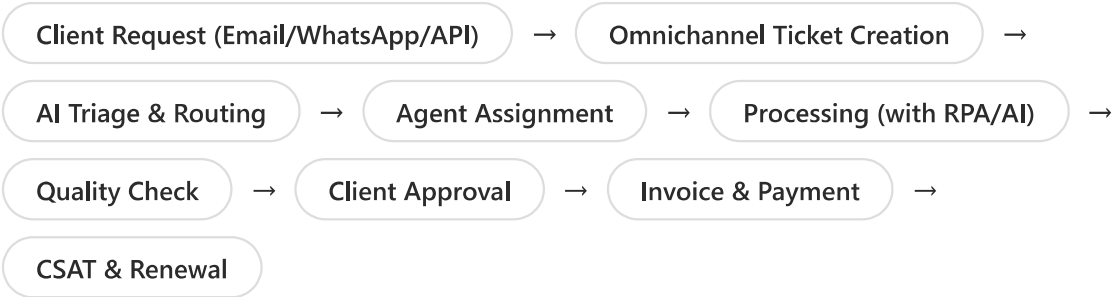
support, predictive analytics. [reference:23]

5. AI & Automation in BPO (TicketingOS)

Function	AI Automation
Intelligent Ticket Triage	AI reads inbound message → classifies (Billing / Support / HR) → auto assigns to correct queue. 70-80% automation achievable.[reference:24] [reference:25]
Data Entry OCR + RPA	Invoice/PO scanned → OCR extraction → GL mapping → auto entry into ERP. 99.8% accuracy. AI learns from corrections.[reference:26]
Sentiment & Emotion AI	Analyzes call transcripts / emails → detects customer frustration → escalates to senior agent. Predicts churn risk.
Predictive Workforce Mgmt	Forecasts ticket volume by hour → suggests shift adjustments to maintain SLA at lowest cost.
Automated Quality Scoring	Analyzes 100% of interactions → assigns quality score → flags outliers for manual review.
RPA for Back-Office	Invoice matching, bank reconciliation, payroll calculation → reduces manual effort by 80%.[reference:27]
AI Chatbot (Tier 1 Support)	Handles 50-60% common queries (password reset, order status) → only escalates complex issues.
Anomaly Detection (F&A)	Flags duplicate invoices, unusual GL postings, missing approvals → creates review ticket.

 Agentic AI: Up to 70% of repetitive BPO tasks can be autonomously executed by AI agents, reducing human intervention to exception handling only.[reference:28]

6. Final BPO + TicketingOS Architecture



Internal BPO Stack: Omnichannel Intake → TicketingOS → AI Triage → Workforce Mgmt → Delivery → QA → Billing → Client Portal

AI TicketingOS Side: AI Ticket Creation | AI Classification | AI Assignment | RPA Data Entry | AI Sentiment | AI Quality Scoring | AI Forecasting | Anomaly Detection

Every client transaction is a ticket. End-to-end traceability. Zero manual follow-up.

Traceability (Client Request → Closure)

<p>Request ticket – Source (Email/WhatsApp/API), timestamp, client ID, SLA clock start</p>	<p>Processing ticket – Assigned agent ID, RPA logs, timestamps for each workflow step</p>	<p>QC ticket – QA score, defect count, rework history, final approval timestamp</p>
<p>Billing ticket – Transaction count, FTE hours, invoice number, payment status</p>	<p>Audit trail – Immutable log of every action. SOC-2 compliant. 99.9% uptime.[reference:29]</p>	

BPO Performance Dashboards

- **Service Level (SLA):** % tickets answered within threshold (e.g., 90% in 30 seconds).[reference:30]
- **First Contact Resolution (FCR):** % resolved without escalation (target >75%). [reference:31]

- **Average Handling Time (AHT):** per ticket type – voice, data entry, email.
- **Quality Score (QS):** Weighted score from QC sampling (target >95%).
- **Customer Satisfaction (CSAT) / Net Promoter Score (NPS).**
- **Agent Utilisation: Billable hours vs available hours (target 75-85%).**
- **Defect Density: Errors per 1,000 transactions – track by process type.**
- **Turnover & Attrition: Monthly agent retention rate – BPO-specific KPI.**
- **AI Automation Rate: % tickets fully handled by AI without human touch.**
- **Outcome metrics (for outcome-based contracts): Claim denial reduction %, Cost saved per FTE.[reference:32]**

Compliance & Security (BPO Mandate)

ISO 27001 & SOC-2 Type II – Enterprise-grade security, data residency control, 99.9% uptime SLA.
[reference:33]

ISO/IEC 30105 ITES-BPO – Process reference model (PRM) and organisational maturity.
[reference:34]

Data Privacy (GDPR / DPDP Act) – Client data isolation, retention policies, right to be forgotten.

Disaster Recovery – Auto-failover, RTO 4h, RPO 15 min, multi-region backup.

BPO HR Lifecycle (Agent Management)

Phase	Process	Output / Automation
1. Recruitment & Sourcing	Automated screening, skills assessment, background check[reference:35]	Shortlisted candidate ticket, offer letter generation
2. Onboarding & Integration	Digital onboarding, document collection, system access provisioning	ERP / CRM / Ticketing system access auto-granted
3. Training & Alignment	Process-specific training (Data Entry / Call Center / F&A), certification[reference:36]	Training completion certificate, skill tag in system

Phase	Process	Output / Automation
4. Performance & Support	Daily KPI tracking, weekly coaching, escalation path	Auto-scorecard, low performer alert, improvement plan ticket
5. Engagement & Mobility	Retention programs, career pathing, cross-training	Promotion recommendation AI, internal job posting ticket
6. Exit & Continuity	Knowledge transfer, asset return, exit interview	Exit ticket, system access revoked, backup agent auto-assigned



Industry Specialization (Pre-built Workflows)

FMCG & Distribution – Inventory mgmt, SKU tracking, retail reconciliation[reference:37]

EPC & Construction – Project accounting, BOM mgmt, contractor payments[reference:38]

Real Estate – Property master data, lease accounting, CIP tracking[reference:39]

Gas & Petroleum – Duty calculation, excise compliance, hazmat documentation[reference:40]

Retail & Wholesale – Multi-location inventory, POS integration, dealer accounting[reference:41]

eCommerce & Online – Multi-marketplace sync, fulfillment tracking, return processing[reference:42]



ROI Calculator – Outsourcing vs In-House

Scenario	Monthly Cost (INR)	Annual Cost (INR)
In-house team (2 FTEs + infrastructure)	₹36,000	₹4,32,000
BPO Ticket-OS (3,300 docs/month + reports)	₹10,400	₹1,24,800
Annual Savings	—	₹3,07,200 (71% lower)

✓ Zero setup cost · Zero software licence · Scale on demand · 99.8% accuracy guarantee · Start in 48 hours[reference:43]

AI ERP TicketingOS – BPO (Business Process Outsourcing).

Full lifecycle from omnichannel ticket creation to SLA-driven delivery, billing, and client reporting. AI-native, ISO/SOC compliant.

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