

Waste King Telephone System Automation Guide

AI Voice & SMS Automation Implementation Manual

For Technical Implementation Partners

Executive Summary

Waste King is implementing a comprehensive AI-first telephone automation system to handle customer enquiries, bookings, and follow-ups 24/7. This guide provides the technical requirements, business logic, and implementation roadmap for automating their voice and SMS communications through VVR (Virtual Voice Role) and MVR (Message Virtual Role) systems.

Project Objective: Create an AI-powered telephone system that handles 100% of inbound calls, eliminates missed calls, automates quote generation, and integrates seamlessly with Microsoft Dynamics 365 CRM.

About Waste King

Company Overview

Waste King is an established UK waste management company (incorporated 2007) providing comprehensive waste solutions nationwide. The company operates through two main entities:

- **Waste King Ltd** (Company No. 06147518)
- **Waste King Recycling Ltd** (Company No. 09620781)

Core Services Portfolio

Primary Services:

1. **Man & Van Rubbish Clearance** - Household and small commercial clearances
2. **Man & Van Waste Collection** - Flexible collection with loading assistance
3. **Skip Hire** - 4-yard to 12-yard skips with permits handled
4. **Grab Hire** - Large volume soil, hardcore, construction waste
5. **Roll On Roll Off (RORO) Haulage** - Industrial scale containers
6. **Tonnage Skip Hire** - Heavy material specialized skips

Additional Services: 7. Trade Waste Wheelie Bins 8. Waste Bags 9. Portable Toilet & Welfare Unit Hire 10. Hazardous Waste Removal 11. Asbestos Collection & Disposal 12. Waste Recycling Pods 13. Aggregates Supply 14. Road Sweeper Hire

Business Metrics

- **Coverage:** Nationwide UK service
 - **Environmental Performance:** 97% landfill diversion rate
 - **Customer Base:** Domestic, commercial, and trade clients
 - **Operating Hours:** Monday-Thursday 8:00am-5:00pm, Friday 8:00am-4:30pm, Saturday 9:00am-12:00pm
-

Automation Requirements

System Objectives

Primary Goals:

- **Zero Missed Calls:** 24/7 AI-powered call handling
- **Instant Response:** Immediate quote generation and booking
- **CRM Integration:** Real-time updates to Microsoft Dynamics 365
- **Follow-up Automation:** Automated quote chasing and retention campaigns
- **Operational Efficiency:** Smart scheduling and route optimization

Technical Architecture

Core Components Required:

1. Voice AI System (VVR)

- Natural language processing for call handling
- Integration with ElevenLabs or similar TTS
- Gemini 2.0 Flash API for conversation logic
- Twilio for telephony infrastructure

2. SMS Automation (MVR)

- Automated quote delivery
- Payment links and confirmations
- Follow-up campaigns
- Status updates

3. CRM Integration

- Microsoft Dynamics 365 API connection
- Real-time data synchronization
- Automated job status updates

4. Quote Generation Engine

- Dynamic pricing based on service type

- Instant quote calculation and delivery
 - PDF generation and email/SMS distribution
-

Call Handling Workflows

Primary Call Types & Routing

1. New Customer Enquiries

- Skip Hire requests
- Man & Van bookings
- Grab Hire enquiries
- General waste collection

2. Existing Customer Support

- Booking amendments
- Collection queries
- Payment issues
- Complaint handling

3. Business/Trade Enquiries

- Account setup requests
- Regular service contracts
- Bulk waste solutions

Service-Specific Scripts

Skip Hire Workflow

Initial Greeting:

"Good [morning/afternoon], thanks for calling Waste King Recycling, you're speaking with [AI Name]. How can I help you today?"

Key Questions Sequence:

1. Name and delivery postcode
2. Waste type identification
3. Hazardous waste screening
4. Skip size estimation

5. Placement location (road/private property)
6. Duration requirement
7. Delivery date preference

Value Proposition:

"Based on what you've told me, I'd recommend a [skip size], which is ideal for your type of waste and space. The price would be £[price], including delivery, collection, up to [x] days hire, and all waste processing."

Man & Van Workflow

Fact-Finding Questions:

1. Customer details and location
2. Waste type and volume assessment
3. Access restrictions identification
4. Heavy material screening
5. Urgency determination
6. Additional items discovery

Red Flags Screening:

- Multi-story access without lift
- Heavy materials (rubble, soil) requiring special handling
- Narrow access or parking restrictions
- Bulky items requiring multiple people
- Garden waste condition assessment

Grab Hire Workflow

Critical Assessment Points:

- Waste accessibility from roadside
 - Vehicle access requirements (3.5m width minimum)
 - Site contact availability
 - Load estimation (quarter/half/full)
 - Hazardous material exclusions
-

Call Transfer Triggers

Automatic Transfer Conditions

Immediate Transfer Required:

1. Management Requests

- "Can I speak to the director/Glenn Currie?"
- Complex commercial negotiations
- Complaint escalations

2. Technical Issues

- System cannot process the request
- Unusual service requirements outside standard offerings
- Pricing disputes requiring manual intervention

3. Compliance Matters

- Hazardous waste requiring specialist consultation
- Asbestos disposal requests
- Legal or regulatory queries

Transfer Protocol

Information to Capture Before Transfer:

- Caller name and company
- Contact number and email
- Reason for call
- Urgency level
- Preferred callback time

Transfer Script:

"I'll connect you with [specialist/manager] who can help you with that.
Let me just take your details so they have everything they need..."

Quote Generation & Pricing Logic

Dynamic Pricing Variables

Service-Based Pricing:

- Skip size and duration

- Man & Van load estimation (cubic yards)
- Grab hire volume assessment
- Distance and location factors
- Waste type classifications

Supplement Charges:

- Mattresses: £[amount] per item
- Upholstered furniture: £[amount] per item
- Fridges/freezers: £[amount] per item
- Hazardous waste surcharges

Quote Delivery Process

1. **Instant Verbal Quote** during call
 2. **SMS Quote** sent immediately with payment link
 3. **Email Confirmation** with full terms
 4. **Follow-up Sequence** if not booked within 1 hour
-

Red Flags & Risk Assessment

Access Challenges

Man & Van Red Flags:

- Non-ground floor access without lifts
- Stair navigation requirements
- Narrow alleyways or restricted parking
- Apartment buildings with loading restrictions
- Distance from vehicle to waste location

Skip Hire Red Flags:

- Insufficient width for lorry access (minimum 3.5m required)
- No turning circle for vehicle reversal
- Height restrictions preventing delivery
- Road placement near junctions
- Size limitations for access routes

Material Restrictions

Heavy Material Limitations:

- Loose soil or rubble in small containers
- Large stones/paving slabs requiring special handling
- Mixed waste with unidentified heavy materials

Prohibited Items:

- Asbestos (requires specialist service)
 - Gas canisters and hazardous chemicals
 - Medical waste
 - Radioactive materials
 - Large electrical items (WEEE collection required)
-

Integration Requirements

Microsoft Dynamics 365 Integration

Required Data Sync:

- Customer contact information
- Service bookings and job details
- Quote generation and conversion tracking
- Payment status and invoice generation
- Job completion confirmations

Real-time Updates:

- New lead creation
- Quote status changes
- Booking confirmations
- Collection completions
- Customer feedback entries

Supplier Management Integration

Automated Supplier Communications:

- Job allocation notifications
- Collection confirmations required
- Failed acceptance escalations

- Alternative supplier routing
-

Follow-up & Retention Automation

Quote Follow-up Sequence

Timeline:

- **1 Hour:** VVR call with objection handling
- **24 Hours:** SMS reminder with discount offer
- **3 Days:** Final follow-up call
- **7 Days:** Transfer to sales team for personal contact

Customer Retention Program

Trigger Points:

- **30 Days:** Since last order - frequency check email
- **60 Days:** Discount offer SMS/email
- **90 Days:** VVR call to identify objections and re-engage

Objection Handling Framework (ERICA)

E - Empathy: Acknowledge customer concerns **R - Refine:** Clarify the real objection **I - Isolate:** Confirm this is the only barrier **C - Commit:** Get agreement on resolution **A - Answer:** Provide solution and close

Performance Metrics & KPIs

Call Handling Metrics

- **Answer Rate:** Target 100% (24/7 availability)
- **First Call Resolution:** Target 80%
- **Average Call Duration:** Target 5-7 minutes
- **Customer Satisfaction:** Target 4.5+ stars

Conversion Metrics

- **Quote Conversion Rate:** Target 30-35%
- **Same-day Booking Rate:** Target 25%
- **Follow-up Success Rate:** Target 15%
- **Customer Retention Rate:** Target 70%

Operational Metrics

- **CRM Data Accuracy:** Target 98%
 - **Quote Generation Speed:** Target <2 minutes
 - **Payment Processing:** Target 95% automation
 - **Supplier Confirmation:** Target 90% automated
-

Implementation Phases

Phase 1: Core Voice System (Months 1-2)

- Basic call handling and routing
- Service identification and fact-finding
- Quote generation integration
- Microsoft Dynamics connection

Phase 2: Advanced Automation (Months 3-4)

- SMS automation implementation
- Follow-up sequence deployment
- Supplier integration
- Payment processing automation

Phase 3: Optimization & Analytics (Months 5-6)

- Performance monitoring dashboard
- Advanced analytics implementation
- Customer behavior tracking
- Conversion optimization

Phase 4: Full Integration (Months 7-8)

- Complete system testing
 - Staff training and transition
 - Performance tuning
 - Go-live support
-

Technical Specifications

Minimum System Requirements

API Integrations Required:

- Microsoft Dynamics 365 API

- Twilio Voice and SMS API
- Payment processing gateway
- Email delivery service
- PDF generation capability

Performance Requirements:

- 99.9% uptime availability
- <3 second response time
- Concurrent call handling (minimum 10 simultaneous)
- Scalable to 100+ calls per day

Security & Compliance

Data Protection:

- GDPR compliance for customer data
- PCI DSS compliance for payment processing
- Secure API connections with encryption
- Regular security audits and updates

Regulatory Compliance:

- Waste carrier license integration
- Transfer note generation
- Environmental compliance tracking
- Health and safety documentation

Success Criteria

Business Outcomes Expected

Revenue Impact:

- 25-30% increase in quote conversion rates
- Elimination of missed call revenue loss
- Improved customer retention rates
- Faster quote-to-booking cycles

Operational Efficiency:

- 80% reduction in manual call handling

- Automated administrative tasks
- Real-time reporting and analytics
- Streamlined supplier communications

Customer Experience:

- 24/7 availability and instant response
 - Consistent service quality
 - Reduced wait times
 - Proactive communication
-

Support & Maintenance

Ongoing Requirements

System Monitoring:

- 24/7 system availability monitoring
- Performance metrics tracking
- Error logging and resolution
- Regular system updates

Content Management:

- Script updates and refinements
- Pricing changes implementation
- Service additions or modifications
- Seasonal campaign management

Training & Documentation

Staff Training Required:

- System overview and capabilities
- Manual override procedures
- Escalation protocols
- Performance monitoring

Documentation Deliverables:

- Complete system documentation
- User manuals and guides

- Troubleshooting procedures
 - API documentation
-

Investment Summary

Total Project Investment: £13,200 (excluding VAT)

What's Included:

- Complete AI voice and SMS automation system
- Microsoft Dynamics 365 integration
- Custom quote generation engine
- Supplier management automation
- Customer retention system
- Staff training and documentation
- 30 days post-launch support
- Source code ownership transfer

Payment Schedule:

- 25% deposit upon contract signing (£3,300)
- 25% at 50% completion (£3,300)
- 25% at 90% completion (£3,300)
- 25% upon project acceptance (£3,300)

Project Timeline: 6-8 months from initiation to full deployment

Next Steps

1. **Technical Assessment:** Review current infrastructure and integration points
2. **Requirements Validation:** Confirm business logic and workflow requirements
3. **Development Planning:** Create detailed technical specifications
4. **Integration Testing:** Establish testing protocols with existing systems
5. **Pilot Deployment:** Limited rollout for validation before full implementation

This comprehensive automation system will position Waste King as the most technologically advanced waste management company in the UK, capable of serving customers faster, more efficiently, and more profitably than competitors while maintaining the highest levels of service quality and customer satisfaction.