Intermediate to Advanced **Complexity Level** 1. Executive Summary 1.1 Project Overview The Help Desk Ticketing System is a comprehensive Appian-based customer service application designed to streamline incident management, service requests, and customer support operations. The system provides both internal staff and external customers with efficient tools for issue reporting, tracking, and resolution while maintaining detailed SLA compliance and performance metrics. 1.2 Business Objectives Centralize all customer support requests and incidents Automate ticket routing and escalation processes • Provide real-time visibility into support operations • Ensure SLA compliance and performance monitoring Improve customer satisfaction through faster resolution • Enable self-service capabilities for common issues Generate comprehensive support analytics and insights 1.3 Success Criteria 80% reduction in average ticket resolution time 95% SLA compliance rate across all ticket categories 60% increase in first-call resolution rate 90% customer satisfaction score 40% reduction in support operational costs Real-time dashboard visibility for all stakeholders 2. Functional Requirements 2.1 User Roles and Permissions 2.1.1 Customer/End User **Permissions:** • Submit tickets through multiple channels (web, email, phone) View and track personal ticket status and history Update ticket information and add comments Access knowledge base and self-service resources Rate service quality and provide feedback Receive automated notifications on ticket progress 2.1.2 Help Desk Agent (Level 1) **Permissions:** All customer permissions for personal tickets View and manage assigned tickets Update ticket status and add resolution notes Escalate tickets to higher support tiers Access knowledge base and solution templates Log time spent on ticket resolution Create internal tickets for system issues 2.1.3 Senior Support Specialist (Level 2) **Permissions:** All Level 1 agent permissions Handle escalated and complex technical issues Reassign tickets between teams and agents Access advanced diagnostic tools and systems Mentor and assist Level 1 agents · Create and update knowledge base articles Generate team performance reports 2.1.4 Support Manager **Permissions:** All specialist permissions across teams Monitor SLA compliance and performance metrics Manage team workload and resource allocation Configure escalation rules and workflows · Generate comprehensive analytics and reports Manage customer communications for major incidents · Approve system changes and policy updates **2.1.5 System Administrator Permissions:** All manager permissions Configure system settings and parameters Manage user access and security permissions Maintain integrations with external systems Backup and restore system data Monitor system performance and health 2.2 Core Functional Requirements 2.2.1 Ticket Management FR-001: Ticket Creation and Intake **Description:** Multi-channel ticket creation with automatic categorization and routing. **Requirements:** Web portal submission with guided forms and validation Email-to-ticket conversion with parsing and classification Phone call logging with agent assistance Mobile app submission capability Automatic ticket numbering and tracking system Priority assignment based on customer tier and issue type · Asset association and configuration item linking **FR-002: Intelligent Ticket Routing Description:** Automated assignment and escalation based on skills, workload, and SLAs. **Requirements:** Skill-based routing to appropriate support teams Load balancing across available agents Customer tier and contract-based prioritization Geographic and time zone considerations Automatic escalation for SLA breach risks Round-robin and weighted distribution algorithms FR-003: SLA Management and Monitoring **Description:** Comprehensive SLA tracking with proactive alerting and reporting. **Requirements:** Configurable SLA definitions by customer and ticket type Real-time SLA countdown timers and alerts Automatic escalation triggers and notifications SLA pause/resume for customer interactions Breach reporting and root cause analysis Historical SLA compliance tracking and trends 2.2.2 Knowledge Management FR-004: Knowledge Base System **Description:** Comprehensive knowledge repository with search and collaboration features. **Requirements:** Hierarchical knowledge article organization Advanced search with filters and tagging Version control and approval workflows Usage analytics and article effectiveness tracking Customer self-service portal integration Collaborative editing and peer review processes 2.2.3 Customer Communication FR-005: Multi-Channel Communication **Description:** Unified communication hub with complete interaction history. **Requirements:** Email integration with ticket thread management Live chat functionality with co-browsing capability SMS notifications for critical updates Voice call logging and recording integration Customer portal for self-service and updates Social media monitoring and response integration 3. Ticket Categories and SLA Matrix **3.1 Ticket Priority Levels** Response Resolution **Priority Description Examples Time Time** P1 -System down, Server outage, security 15 minutes 2 hours Critical business critical breach Major functionality Application errors, data P2 - High 8 hours 1 hour impaired corruption P3 -Minor functionality Feature not working, 4 hours 24 hours Medium performance issues issues General questions, How-to questions, 72 hours P4 - Low 8 hours requests enhancement requests 3.2 Ticket Categories and Routing Category **Subcategory Default Assignment Required Skills Technical Support** Software Issues Level 1 Support Application troubleshooting Hardware diagnostics **Technical Support** Hardware Issues Level 2 Support Billing Team Account Management Billing Inquiries Financial systems Account Management **User Access** Security Team Identity management General Inquiry Product knowledge How-to Questions Level 1 Support 4. Technical Requirements **4.1 Appian Design Objects** 4.1.1 Record Types **Primary Records:** Ticket Record: Main ticket data with full lifecycle tracking Customer Record: Customer information and service history Agent Record: Support agent details and performance metrics • Knowledge Article Record: Knowledge base content and metadata SLA Record: Service level agreements and compliance tracking **Supporting Records:** Asset Record: Customer assets and configuration items Category Record: Ticket categorization and routing rules **Team Record:** Support team organization and skills Communication Record: All customer interactions and history Survey Record: Customer satisfaction and feedback data 4.1.2 Process Models **Core Processes:** Ticket Lifecycle Process: Complete ticket workflow from creation to closure **Escalation Process:** Automatic escalation based on SLA and priority Assignment Process: Intelligent routing and load balancing Customer Communication Process: Automated notifications and updates Knowledge Management Process: Article creation, review, and approval Survey Process: Customer satisfaction measurement and analysis 4.1.3 User Interfaces (SAIL) **Customer-Facing Interfaces:** Public ticket submission portal with file upload Customer service dashboard with ticket tracking Knowledge base search and browsing interface

Help Desk Ticketing System

Comprehensive Requirements Document

Appian Low-Code Platform Application

Help Desk Ticketing System

Appian Low-Code Platform

Functional & Technical Requirements

1.0

August 2025

Project Name

Date

Platform

Document Version

Document Type

Mobile-responsive ticket management app

Live chat interface with agent escalation

Agent workqueue with filtering and sorting

Knowledge base management and search

Ticket detail view with complete history

Customer communication hub

Real-time operations dashboard

Team performance analytics

Customer satisfaction analysis

System

Email System

CRM System

Asset Management

Monitoring Tools

Phone System

Live Chat Platform

SLA monitoring and compliance reporting

System configuration and administration

5. Integration Requirements

Integration Type

IMAP/SMTP

REST API

Webhooks

REST API

6. Reporting and Analytics

6.1 Operational Dashboards

Current ticket volume by priority and status

SLA compliance metrics and breach alerts

Agent workload and availability status

Average response and resolution times

Customer satisfaction scores trending

Team performance comparisons and trends

Cost per ticket and efficiency metrics

Knowledge base effectiveness and gaps

First-call resolution rate analysis

6.2 Standard Reports

Daily Operations Summary

Weekly Performance Report

Monthly Executive Summary

7. Implementation Plan

7.1 Development Phases

SLA Compliance Report

Phase

Phase 1: Foundation

Phase 3: Customer

Phase 4: Advanced

Phase 5: Integration &

7.2 Success Metrics

90% customer satisfaction score

60% increase in first-call resolution rate

• 50% reduction in support operational costs

• 95% SLA compliance rate

Phase 2: Core

Workflow

Portal

Features

Testing

Report Name

Customer segment analysis and satisfaction

Ticket volume forecasting and resource planning

Frequency

Daily

Weekly

Monthly

Monthly

Duration

3 weeks

4 weeks

3 weeks

3 weeks

2 weeks

95% user adoption within 60 days of deployment

80% reduction in average ticket resolution time

Recipients

Support Managers

Department Heads

Executive Team

Service Managers

Key Deliverables

management

monitoring

base

access

Basic ticket creation, user

Routing, escalation, SLA

Self-service portal, knowledge

Analytics, reporting, mobile

External integrations,

performance testing

Document Status: This requirements document provides the comprehensive blueprint for developing the Help Desk Ticketing System on the Appian platform. All requirements should be validated with stakeholders

End of Document

Help Desk Ticketing System - Requirements Document v1.0

and integrated with existing customer service processes before implementation begins.

Knowledge base usage statistics

Management Analytics:

Real-Time Operations Dashboard:

Web Services

CTI Integration

Purpose

Email-to-ticket and notifications

Customer data synchronization

Configuration item data

Automatic incident creation

Call logging and screen pop

Key Metrics

Tickets opened/closed, SLA status

Team metrics, customer satisfaction

Overall performance, trends, costs

SLA metrics, breach analysis

Success Criteria

assigned

operational

deployed

common issues

Tickets can be created and

Complete ticket lifecycle

Customers can self-serve

Full feature set operational

Production-ready system

Chat session integration

Frequency

Real-time

Real-time

Daily sync

Real-time

Real-time

Real-time

5.1 External System Integrations

Management Interfaces:

Time tracking and productivity tools

Agent Interfaces: