# UrbanCart - Customer Support Process Improvement Case Study

Process Reengineering | Business Analytics | Consulting Approach

Date: 16/11/2025

Shyam
MSc Business Analytics, University of Exeter

# UrbanCart - Customer Support Process Improvement Case Study

## Business Context

UrbanCart is a mid-sized UK-based e-commerce retailer specialising in lifestyle products, electronics, home essentials, and for reasons the management still cannot explain a small but consistently growing category of “mystery boxes” that nobody in the organisation claims responsibility for listing.

The company processes ~50,000 monthly orders, supported by a customer service team that handles queries through email, web forms, and live chat. During high-traffic periods (Black Friday, Christmas, and anytime a celebrity accidentally endorses their product on Instagram), support ticket volumes spike by over 70%, often overwhelming the team.

In a competitive retail environment where customer loyalty is fragile and reviews decide everything, UrbanCart needs a fast, reliable, data-driven customer service process… ideally one that doesn’t collapse every time Dave from Marketing sends out an email blast at 2 AM.

## Process in Scope

This analysis focuses on the Customer Support Ticket Resolution Process:

Start: A customer submits a support ticket (e.g., delivery delays, refunds, “my parcel says delivered but the neighbour ate it”).
End: The ticket is fully resolved, closed in the CRM, and a CSAT survey is triggered - often filled by customers only when they are extremely happy or extremely angry (no middle ground).

The analysis includes the flow of work between support agents, warehouse liaisons, finance teams, and the CRM system that behaves perfectly during demos but crashes during peak hours like clockwork.

## Stakeholders / Actors

- Customer - submits issues and occasionally writes essays instead of selecting a category.
- Customer Support Agent - the frontline hero responsible for categorising, responding, and resolving tickets.
- Support Team Lead - resolves escalations, manages work allocation, and pretends everything is under control.
- Warehouse Team - handles shipping issues, lost items, damaged items, and boxes that mysteriously “fell off the conveyor belt.”
- Finance Team - manages refunds, chargebacks, and unusual customer requests (“I want a refund but I want to keep the product”).
- CRM System - logs tickets, tracks progress, automates workflows, and updates itself at the worst possible times.

- IT Team - maintains CRM configurations and denies all accusations during outages.

## Problem Statement

UrbanCart has seen a sustained increase in customer support volume, leading to longer resolution times, inconsistent ticket handling, and a growing backlog that now has its own personality.

Key challenges include:

- Manual categorisation for 80% of tickets
- Tickets waiting several days for missing customer information
- No automated prioritisation → urgent issues buried with “general queries”
- Escalations managed on a “who’s free right now” basis
- SLA breaches occurring at a rate the leadership refers to as “concerning but character-building”
- Declining CSAT scores, especially around refunds and delayed parcels

These issues directly impact customer satisfaction, repeat purchase rate, operational efficiency, and the support team’s collective will to live.

## Business Objectives

UrbanCart aims to stabilise and optimise its support function with a data-driven, scalable process:

- Reduce Average Resolution Time for all ticket categories
- Improve SLA Compliance with clear prioritisation rules
- Increase First-Time Resolution (FTR) by reducing back-and-forth
- Automate repetitive steps (categorisation, routing, info collection, CSAT)
- Provide real-time visibility through an SLA & ticket performance dashboard
- Streamline escalations with standardised rules
- Improve overall CSAT and reduce negative reviews on public platforms where customers write novels instead of feedback

## AS-IS PROCESS (Current State)

**UrbanCart Customer Support Ticket Resolution Workflow**

1. **Customer Submits Ticket**
   Ticket is submitted via the website, mobile app, or email.
   The customer may or may not use the correct category (and sometimes selects “Other” for everything).

2. **CRM Creates Ticket Automatically**
   Ticket enters the CRM system.
   All tickets go into one large queue called “New” - essentially a digital black hole.
3. **Support Agent Opens Ticket Queue**
   Agents manually scan through the “New” queue and pick tickets based on availability and mood.
4. **Manual Ticket Categorisation**
   Agent reads the entire message and manually assigns:
   - Category (delivery issue, refund, product issue, etc.)
   - Priority level
   - Tags
     This takes time and leads to inconsistencies.
5. **Check for Missing Information**
   Agent evaluates if enough info exists to solve the issue.
   If not → sends email asking for details.
   (Customer usually responds 3 days later with “Hi”.)
6. **Ticket Goes into Waiting Loop**
   Ticket remains in “Pending Customer” status for hours or days.
   Meanwhile, SLA time still runs like a ticking time bomb.
7. **Agent Decides the Resolution Path**
   Options:
   - If agent can solve → resolves directly.
   - If warehouse involvement needed → forwards manually.
   - If refund needed → emails finance team.
   - If complex → manually escalates to team lead.
8. **External Teams Respond**
   Warehouse or finance team replies through internal email threads that no one else can see.
   Agent copies information back into the ticket manually.
9. **Agent Writes Final Response to Customer**
   Agent composes response from scratch (ignoring templates because “templates feel impersonal”).
   They close the ticket after replying.
10. **Ticket Closed, CSAT Triggered**
    CRM sends feedback survey.
    Only angry or delighted customers reply, creating a highly volatile CSAT score.

## Major Inefficiencies in As-Is Process

**1. Tickets dumped into one giant “New” queue**

→ No auto-routing, agents pick randomly.

**2. Manual categorisation**

→ Slows down workflow, inconsistent classification.

**3. Missing information loop**

→ Tickets stuck for days; SLA breached.

**4. Manual forwarding to warehouse / finance**

→ No visibility; email-based coordination → delays.

**5. No priority-based sorting**

→ Critical issues buried under general queries.

**6. No automated escalation**

→ Escalation depends on agent judgment.

**7. Agent-dependent writing style**

→ Some write concise messages, others send novels → inconsistent experience.

**8. No real-time performance dashboard**

→ Team leads operate in full Sherlock Holmes mode to find bottlenecks.

### As-Is Flowchart

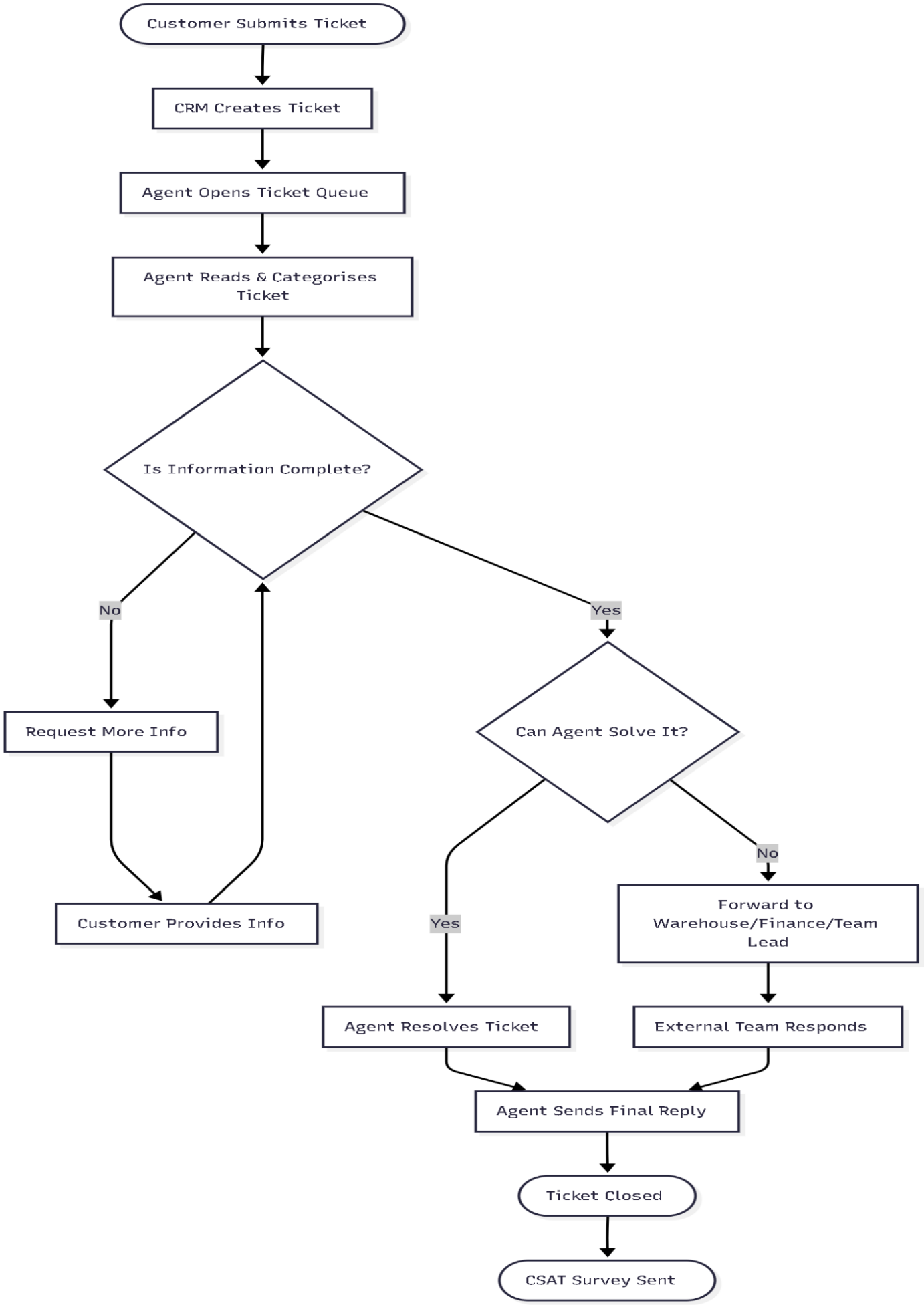


*Figure 1-UrbanCart – As-Is Customer Support Ticket Resolution Process*

## Pain Points & Root Cause Analysis

### Summary of Pain Points (From As-Is Process)

UrbanCart's current customer support process has several operational inefficiencies -some expected in fast-growth e-commerce, others... let's say "character-building."

**Pain Point 1 - Manual Ticket Categorisation**

Agents manually read and classify every ticket, which is fine until volume spikes and suddenly the queue has "more tickets than UrbanCart has products."

**Pain Point 2 - The Endless Missing-Info Loop**

Customers often forget essential details like order ID, issue type, or even their own email.
This leads to repetitive back-and-forth messages that look like:
**Agent:** "Hi, can you share your order ID?"
**Customer:** "Yes."
(And nothing else.)

**Pain Point 3 - No Automated Routing**

All tickets land in one "mega-queue," where urgent refund issues sit next to casual "when is my coupon valid?" queries.

**Pain Point 4 - External Teams Respond on Their Own Timeline**

Warehouse and Finance continue to use internal email threads, where tickets mysteriously disappear and reappear like seasonal products.

**Pain Point 5 - No Priority Framework**

Every ticket is "important," which means **none** actually is - leading to avoidable SLA breaches.

**Pain Point 6 - No Real-Time Monitoring**

Team leads rely on manual checking, intuition, and sometimes spiritual strength to guess which queues are about to explode.

### Root Cause Analysis (5 Whys Method)

| Pain Point | Why #1 | Why #2 | Why #3 | Root Cause |
|---|---|---|---|---|
| **1. Manual categorisation** | Agents read every ticket manually | CRM has no auto-classification | Rules/ML never implemented | **Lack of automation; agents doing the system's job** |

| | | | | |
|---|---|---|---|---|
| **2. Missing-info loop** | Customer submits incomplete info | Form doesn't enforce required fields | No validation/auto-detection | **Weak input design; ticket form trusts customers too much** |
| **3. No automated routing** | All tickets go into one queue | No routing rules configured | No governance around workflows | **Absence of auto-routing; every ticket is a lucky draw** |
| **4. External team delays** | Agents email warehouse/finance | No cross-team workflow inside CRM | No SLAs, reminders, or visibility | **Cross-team collaboration happening outside CRM (email black hole)** |
| **5. No priority model** | All tickets treated equally | No severity levels defined | No SLA tiers or matrix | **No priority or SLA framework; chaos reigns** |
| **6. No dashboards** | Data scattered or unused | Reporting not set up | No KPI ownership | **Lack of real-time monitoring; management flying blind** |

### Consolidated Root Causes

UrbanCart's pain points can be traced back to a few core issues:

- **Automation gaps**
  The CRM is capable of more - it's simply not asked to do it.
- **Weak ticket intake controls**
  Customers can submit tickets with missing details "because the form is too polite to say no."
- **No workflow rules or SLA routing**
  Everything goes into one basket → overwhelmed agents, delayed responses.
- **Cross-team communication outside the CRM**
  Once a ticket moves to email, it enters the Bermuda Triangle of internal communication.
- **No operational visibility**
  Team leads want a dashboard. Right now, they have a prayer.

These causes give **clear justification** for the improvements in the To-Be process.

# To-Be Process (Future State)

## Objectives

- Reduce manual workload via categorisation, routing & templates
- Enforce mandatory customer information upfront
- Introduce SLA-based prioritisation
- Move cross-team communication inside CRM
- Improve first-time resolution (FTR)
- Provide real-time visibility via dashboards
- Standardise escalation workflows
- Make agent's lives at least 40% less stressful

## Future-State Process Overview

### Phase 1 - Smart Ticket Intake

1. Customer submits a structured ticket
    - Mandatory fields enforced (order ID, category, issue type, photos if needed).
    - No more "Hi" as the entire message.
2. System validates inputs
    - Missing info? → System prompts *before* submission.
    - Customers no longer enter the process empty-handed.

### Phase 2 - Automated Processing

3. System auto-classifies the ticket
   → Based on keywords, historical patterns, and rules.
4. System assigns priority (SLA-based)
    - Delivery delay → High
    - Refund → High
    - Product question → Medium
    - Coupon enquiry → Low
      (UrbanCart finally becomes structured.)
5. System auto-routes ticket
   → To the correct team queue or specialist group.

### Phase 3 - Agent Work Simplified

6. Agent sees prioritised queue
    - Highest urgency first
    - No more scrolling through 200 tickets in random order
7. Agent opens ticket with full context
    - Order details
    - Customer history
    - Past complaints
    - Sentiment flag
      (The system is doing the detective work.)
8. Agent uses a suggested response template
    - Reduces typing
    - Ensures consistent tone
    - Still allows personal touch
9. Decision: Can agent resolve?
    - Yes → Resolve → Audit → Close
    - No → Escalate *inside* the CRM
      (No disappearing into Outlook inboxes.)

**Phase 4 - Cross-Team Collaboration Inside CRM**

10. Warehouse or Finance receives assigned tasks
    - With SLA timers
    - With reminders
    - With status visibility
      (Emails are banned for support-related work.)
11. External team completes the task
    → Response logged automatically
12. Agent finalises resolution
    → Sends final customer message from CRM

**Phase 5 - Automated Follow-Up & Monitoring**

13. System triggers CSAT survey
14. System updates dashboard
    - SLA compliance
    - Ticket backlog

- First-Time Resolution Rate
- Category trends

15. Team leads get real-time visibility
    (No more “Are we behind today?” guessing.)

## To-Be Process Flowchart

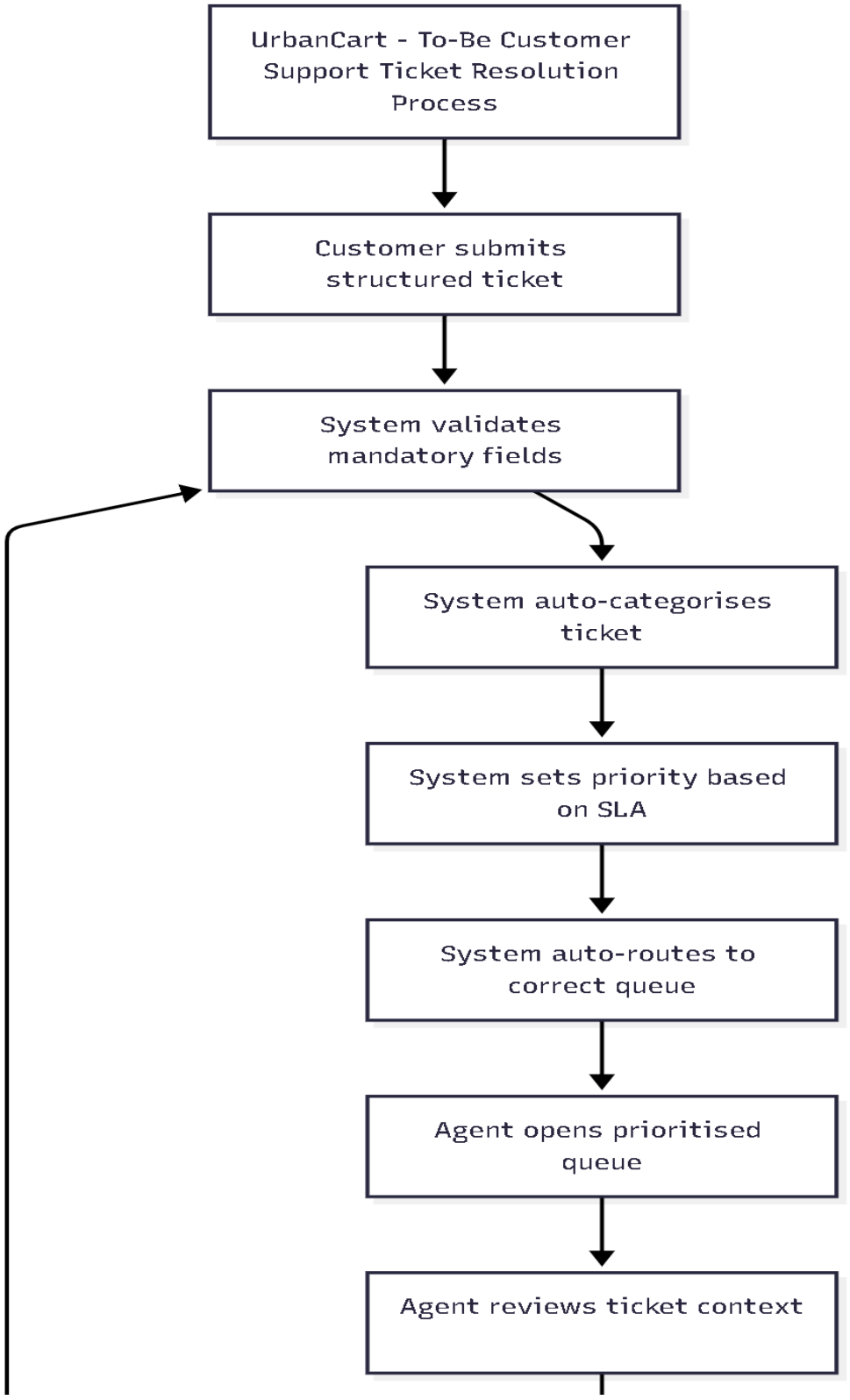


*Figure 2 - To-Be Customer Support Ticket Resolution Process*

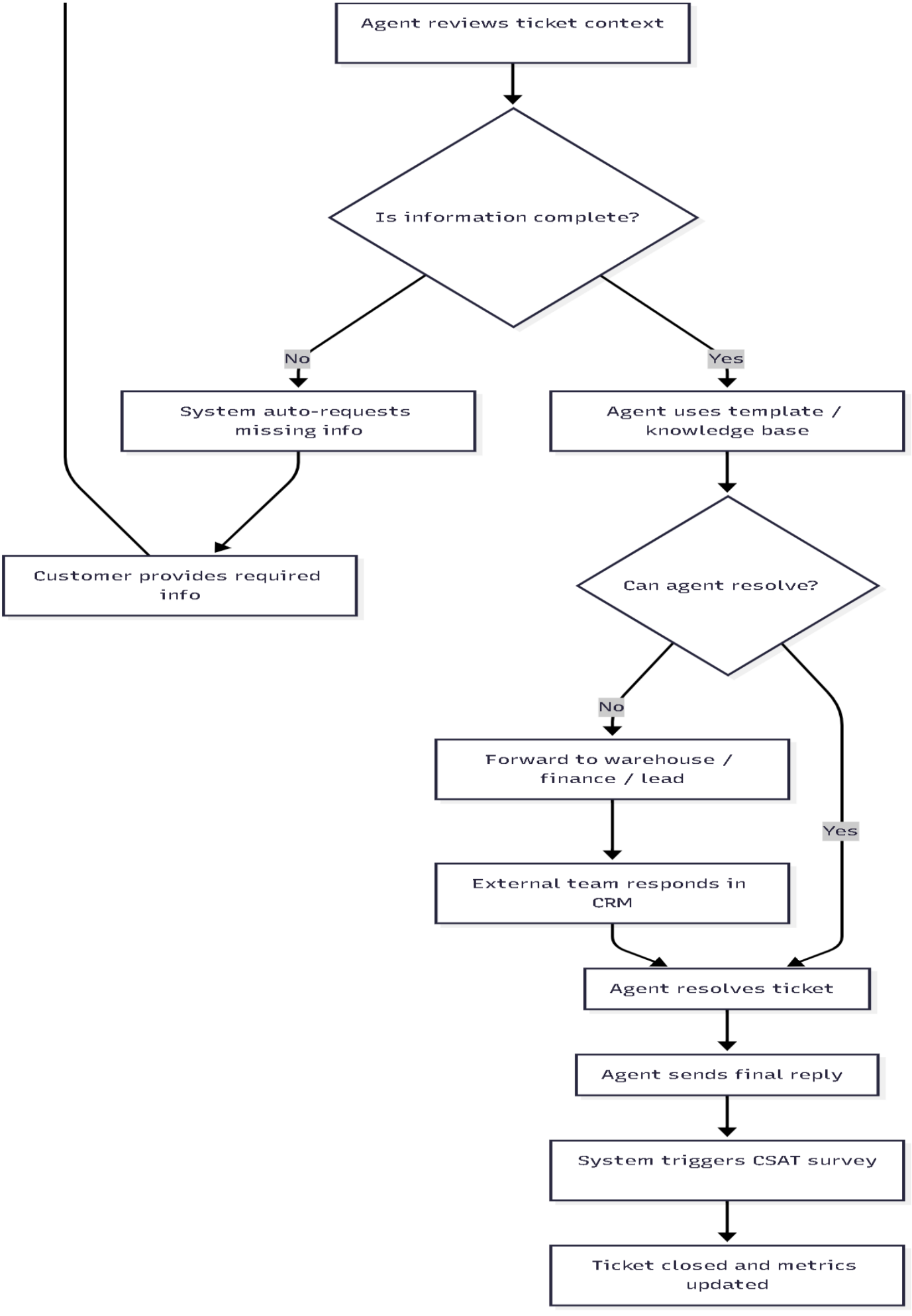


*Figure 3 - To-Be Customer Support Ticket Resolution Process*

### Expected Benefits

- 35-50% reduction in handling time
- Fewer SLA breaches due to automated prioritisation
- Reduced email dependency with warehouse/finance
- Improved CSAT from faster responses
- Reduced agent frustration (scientific estimate: “a lot”)
- Lower backlog during peak periods
- Better transparency for managers

## As-Is vs To-Be Comparison

UrbanCart’s support process evolves from a “manual struggle for survival” to a streamlined, automated, well-behaved workflow.
The table below highlights the major differences and how the To-Be process fixes the chaos baked into the As-Is state.

| Area | As-Is Process (Current Reality) | To-Be Process (Future Reality) |
|---|---|---|
| **Ticket Intake** | Customers send half-complete messages like “Hi, help.” | Mandatory fields ensure customers *actually* provide information before hitting submit. |
| **Categorisation** | Agents manually read every ticket like detectives solving mysteries. | Auto-categorisation (rules/ML) makes the system the detective. |
| **Queue Management** | All tickets dumped into one giant queue, survival of the fittest (agent). | SLA-based prioritised queues - urgent issues actually get treated urgently. |
| **Agent Workload** | Agents chase missing info, switch tabs 40 times, write replies from scratch. | Templates, automation, and context panels reduce the “tab gymnastics.” |
| **External Collaboration** | Warehouse & Finance respond through emails that may be lost forever. | Escalations happen *inside the CRM* with SLAs and reminders. No more email black hole. |
| **Decision Making** | Highly variable. Depends on who picked the ticket and their mood. | Standardised workflows ensure consistent decisions across all agents. |
| **Visibility & Monitoring** | Team leads rely on instinct, luck, and refreshing the email inbox. | Dashboards show real-time SLA breaches, backlog, and team performance. |

| | | |
|---|---|---|
| **Customer Experience** | Slow responses, repeated info requests, inconsistent messaging. | Faster replies, fewer loops, cleaner communication, improved satisfaction. |

### Summary

- The **As-Is** process depends on agents doing everything manually categorising, routing, chasing info, escalating while juggling multiple email threads that vanish like socks in a washing machine.
- The **To-Be** process transfers the heavy lifting to the *system*, making it the responsible adult in the room.
- Agents finally get a predictable workload, customers get faster responses, and managers finally get dashboards instead of suspense.

## KPIs & Performance Metrics

Measuring process performance is crucial to ensure the redesigned To-Be workflow actually improves UrbanCart's customer experience and internal efficiency. The following KPIs help monitor speed, quality, workload, and customer satisfaction.

### Core KPIs (Primary Metrics)

These are the **must-have** KPIs for customer support operations.

| KPI | Definition | Why It Matters |
|---|---|---|
| **Average Resolution Time (ART)** | Time from ticket creation → closure | Measures process efficiency and speed |
| **First-Time Resolution (FTR)** | % of tickets resolved without back-and-forth | Indicates quality and completeness of responses |
| **Average First Response Time (FRT)** | Time to first reply sent to customer | Strong indicator of customer satisfaction |
| **SLA Compliance Rate** | % of tickets resolved within SLA targets | Shows operational maturity and queue health |
| **Ticket Backlog** | Number of open/unresolved tickets at any time | Measures workload capacity vs demand |
| **CSAT Score** | Customer satisfaction survey rating | Direct measure of customer perception |
| **Reopen Rate** | % of tickets reopened after closure | Indicates resolution quality and clarity |
| **Ticket Volume by Category** | Count of tickets per issue type | Shows trends, hotspots, and resource needs |

### Supporting KPIs (Diagnostic Metrics)

These help diagnose deeper issues.

| KPI | Purpose |
|---|---|
| **Tickets Missing Mandatory Info** | Measures how well the intake form is working |
| **Escalation Rate** | Shows how many tickets require external team involvement |
| **External Team SLA Compliance** | Measures Warehouse/Finance performance |
| **Agent Utilisation / Workload** | Shows if agents are overloaded |
| **Template Adoption Rate** | Indicates consistency in communication |

### KPI Formulas

1. Average Resolution Time (ART)

$$ART = \frac{\sum(Ticket\ Close\ Time - Ticket\ Create\ Time)}{Total\ Tickets\ Resolved}$$

2. First-Time Resolution Rate (FTR)

$$FTR = \frac{Tickets\ Resolved\ Without\ Follow-up}{Total\ Tickets} \times 100$$

3. SLA Compliance Rate

$$SLA\ Compliance = \frac{Tickets\ Resolved\ Within\ SLA}{Total\ Tickets} \times 100$$

4. Reopen Rate

$$Reopen\ Rate = \frac{Reopened\ Tickets}{Total\ Tickets} \times 100$$

5. CSAT Score

$$CSAT = \frac{Positive\ Ratings}{Total\ Ratings} \times 100$$

### Recommended KPI Targets

| KPI | Current (Assumed) | Target (To-Be) |
|---|---|---|
| **Average Resolution Time** | 36-48 hours | **< 12 hours** |
| **First Response Time** | 8-12 hours | **< 1 hour** |
| **SLA Compliance** | 60-70% | **> 90%** |

| | | |
|---|---|---|
| **First-Time Resolution** | 55-65% | **> 80%** |
| **CSAT** | 70-75% | **> 85%** |
| **Reopen Rate** | 10-15% | **< 5%** |

## Power BI Dashboard Layout

**SECTION A - KPIs (Top Cards)**

- ART
- FRT
- SLA Compliance
- FTR
- CSAT
- Reopen Rate

**SECTION B - Trends Over Time**

- Line chart: Ticket Volume (Daily/Weekly)
- Line chart: Average Resolution Time trend
- Line chart: SLA trend

**SECTION C - Breakdown by Category**

- Bar chart: Top 10 Ticket Categories
- Bar chart: Resolution Time by Category

**SECTION D - Workload View**

- Column chart: Tickets per Agent
- KPI: Agent Utilisation

**SECTION E - External Team SLA**

- Table: Warehouse/Finance SLA performance
- Conditional formatting: Red/Amber/Green

**SECTION F - Customer Feedback**

- Donut/Bar chart: CSAT distribution
- Text box: Common positive/negative keywords

This dashboard directly shows how the To-Be process performs.

## Summary

- The **As-Is** process didn't have good KPIs - it was mostly "Are we drowning today? Check the inbox."
- The **To-Be** process produces KPIs automatically, giving team leads superpowers (or at least visibility).
- Agents get peace of mind, customers get fast replies, and managers finally stop guessing.

## Recommendations

### 1: Enforce Mandatory Fields in Ticket Submission

UrbanCart should redesign the customer support form to include required fields (order ID, category, issue type, attachments).

**Benefits:**

- First-time resolution increases
- Agents stop sending "Can you share your order ID…?" 500 times a week
- No tickets enter the queue without basic info

### 2: Introduce Automated Categorisation and Routing

Use rules or ML models to classify tickets and route them to the appropriate queue automatically.

**Benefits:**

- Eliminates manual reading of every ticket
- Reduces handling time
- Agents spend time solving, not sorting
- Greatly reduces SLA breaches

### 3: Implement SLA-Based Prioritisation

Define severity levels (High, Medium, Low) and route tickets accordingly.

**Example:**

- Refund/failed payment → High
- Delivery delay → High
- Coupon/FAQ → Low

**Benefits:**

- High-impact issues handled first
- Fairer and predictable workload distribution

### 4: Enable Cross-Team Escalations Inside the CRM

Warehouse, Finance, and Lead approvals must be managed within the system - no more emails.

**Benefits:**

- Faster and trackable collaboration
- Eliminates lost or forgotten requests
- SLA-driven follow-ups automatically triggered
- Reduced frustration for agents (and customers)

### 5: Introduce Templates & Knowledge Base for Agents

Provide pre-built reply templates and solution steps for common issues.

**Benefits:**

- Consistent tone and messaging
- Reduces manual typing
- Ensures correct information is always shared
- Speeds up resolution without sacrificing quality

### 6: Deploy Real-Time Dashboards for Managers

Monitor:

- SLA compliance
- Ticket backlog
- FTR rate
- Agent workload
- Peak hours
- Category trends
- External team SLA

**Benefits:**

- Leaders stop relying on “gut feeling”
- Staffing decisions become data-driven
- Early identification of bottlenecks

### 7: Automate CSAT Surveys & Feedback Loops

Send a CSAT request after closing a ticket and track satisfaction continuously.

**Benefits:**

- Direct measurement of customer happiness
- Identifies top-performing agents
- Provides insights for training & coaching
- Completes the customer support feedback cycle

## Wrap-Up

UrbanCart's future process reduces:

- Agent stress
- Customer frustration
- Email scavenger hunts
- "Why is this ticket still open after 3 days?" moments

And improves:

- Speed
- Accuracy
- Accountability
- Customer delight
- Manager sanity

A ***win-win-win***.