

CUSTOMER JOURNEY MAP

(Project: ResolveNow – Online Complaint Registration & Management System)

SCENARIO

A customer encounters an issue with a purchased product and uses ResolveNow to register, track, and resolve the complaint through interaction with an assigned agent.

1. ENTICE (Awareness Stage)

Steps:

- User faces an issue with a product/service.
- User searches for complaint resolution platform.
- User visits ResolveNow website.

Interactions:

- Website homepage
- “Register” / “Login” button
- About page

Goals & Motivation:

- Help me resolve my issue quickly.
- Help me find a reliable complaint platform.

Positive Moments:

- Clean and easy-to-understand homepage.
- Clear call-to-action buttons.

Negative Moments:

- User unsure if complaint will be resolved.
- Fear of data misuse.

Areas of Opportunity:

- Add testimonials.
- Show resolution success rate.

- Add security badges for trust.

2. ENTER (Registration & Login)

Steps:

- User registers using email and password.
- Receives verification email.
- Logs into dashboard.

Interactions:

- Registration form
- Email verification
- Login page

Goals:

- Help me create my account easily.
- Help me access my dashboard securely.

Positive Moments:

- Quick registration.
- Email confirmation builds trust.

Negative Moments:

- Password validation errors.
- OTP delay.

Areas of Opportunity:

- Social login option.
- Strong password guidelines.

3. ENGAGE (Complaint Submission & Interaction)

Steps:

- User fills complaint form.
- Uploads documents/images.

- Submits complaint.
- Admin assigns agent.
- User chats with agent.
- Agent updates complaint status.

Interactions:

- Complaint form page
- Chat window (Socket.io)
- Status tracking dashboard

Goals:

- Help me submit complaint without confusion.
- Help me track complaint progress.
- Help me communicate clearly with agent.

Positive Moments:

- Real-time chat.
- Instant complaint confirmation.
- Status updates.

Negative Moments:

- Delay in agent assignment.
- Slow response from agent.

Areas of Opportunity:

- Auto-routing complaints.
- SLA-based escalation system.
- AI-based complaint categorization.

4. EXIT (Resolution Stage)

Steps:

- Complaint marked as resolved.
- User receives notification.

- User gives feedback.

Interactions:

- Email notification
- Feedback form
- Status page

Goals:

- Help me confirm issue is resolved.
- Help me feel satisfied with resolution.

Positive Moments:

- Quick resolution.
- Replacement/refund offered.

Negative Moments:

- Unsatisfactory solution.
- No follow-up.

Areas of Opportunity:

- Auto follow-up system.
- Satisfaction rating system.

5. EXTEND (Post-Resolution)**Steps:**

- Complaint history stored.
- System suggests related help articles.
- User continues using platform.

Goals:

- Help me access previous complaints.
- Help me resolve future issues faster.

Opportunities:

- Loyalty badge for active users.

- Analytics dashboard.

DATA FLOW DIAGRAM & USER STORIES

(Project Name: ResolveNow)

◆ DATA FLOW DIAGRAM CONTENT

◆ DFD Level 0 (Context Diagram)

External Entities:

- User
- Agent
- Admin

System:

- Online Complaint Management System

Data Flows:

- User → Complaint Data → System
- System → Status Updates → User
- Admin → Complaint Assignment → System
- Agent → Status Update → System
- System → Notifications → User/Agent

◆ DFD Level 1

Process 1: User Management

- Input: Registration details
- Output: User Account Created
- Data Store: User Database

Process 2: Complaint Management

- Input: Complaint details
- Output: Complaint ID
- Data Store: Complaint Database

Process 3: Complaint Assignment

- Input: Complaint ID
- Output: Assigned Agent
- Data Store: Agent Database

Process 4: Communication

- Input: Chat messages
- Output: Stored messages
- Data Store: Message Database

Process 5: Resolution

- Input: Status update
- Output: Notification
- Data Store: Complaint Database

USER STORIES

Customer (Web User)

User Story No	User Story	Acceptance Criteria	Priority	Release
US-1	As a user, I can register with email and password	Account created successfully	High	Sprint-1
US-2	As a user, I receive email verification	Email confirmation received	High	Sprint-1
US-3	As a user, I can login securely	Dashboard accessible	High	Sprint-1
US-4	As a user, I can submit complaint	Complaint ID generated	High	Sprint-1
US-5	As a user, I can track complaint status	Real-time updates visible	High	Sprint-2
US-6	As a user, I can chat with agent	Messages sent & received	High	Sprint-2

User Story No	User Story	Acceptance Criteria	Priority	Release
US-7	As a user, I can give feedback	Feedback stored	Medium	Sprint-3

Agent

User Story No	User Story	Acceptance Criteria	Priority	Release
AG-1	As an agent, I can login	Access agent dashboard	High	Sprint-1
AG-2	As an agent, I can view assigned complaints	Complaint list visible	High	Sprint-2
AG-3	As an agent, I can update complaint status	Status updated successfully	High	Sprint-2
AG-4	As an agent, I can chat with users	Real-time communication works	High	Sprint-2

Admin

User Story No	User Story	Acceptance Criteria	Priority	Release
AD-1	As an admin, I can login	Admin dashboard accessible	High	Sprint-1
AD-2	As an admin, I can view all complaints	All complaints visible	High	Sprint-2
AD-3	As an admin, I can assign complaints	Agent assigned successfully	High	Sprint-2
AD-4	As an admin, I can manage users & agents	User/Agent management enabled	Medium	Sprint-3

SOLUTION REQUIREMENTS

◆ Functional Requirements

FR No	Functional Requirement	Sub Requirement
FR-1	User Registration	Register via form
FR-2	User Authentication	Login using email/password
FR-3	Complaint Submission	Submit complaint with attachments
FR-4	Complaint Tracking	View complaint status
FR-5	Complaint Assignment	Admin assigns complaint
FR-6	Real-time Communication	Chat using Socket.io
FR-7	Notification System	Email notifications
FR-8	Role-based Access	User/Agent/Admin dashboards
FR-9	Feedback System	Submit feedback after resolution

◆ Non-Functional Requirements

NFR No	Requirement	Description
NFR-1	Usability	User-friendly interface
NFR-2	Security	JWT authentication, password hashing
NFR-3	Reliability	System available without frequent crashes
NFR-4	Performance	Fast response time (<3 sec API response)
NFR-5	Availability	99% uptime
NFR-6	Scalability	Able to handle increasing complaints

TECHNOLOGY STACK DOCUMENT

Technical Architecture Description

ResolveNow follows a **3-tier architecture**:

1. Presentation Layer – React.js frontend
2. Application Layer – Node.js & Express.js backend
3. Data Layer – MongoDB database

Real-time communication is handled using Socket.io.

◆ **Table-1: Components & Technologies**

S.No	Component	Description	Technology
1	User Interface	Web-based dashboard	React.js, HTML, CSS, Bootstrap
2	Application Logic	Business logic & APIs	Node.js, Express.js
3	Real-Time Communication	User-Agent Chat	Socket.io
4	Database	Store users & complaints	MongoDB
5	Authentication	Secure login	JWT, Bcrypt
6	File Storage	Complaint attachments	Local storage / Cloud
7	External API	Email Notifications	Nodemailer
8	Infrastructure	Hosting	Localhost / AWS / Render

Table-2: Application Characteristics

S.No	Characteristic	Description	Technology
1	Open-Source Frameworks	React, Express	MERN Stack
2	Security	Password hashing, JWT	Bcrypt, JWT
3	Scalable Architecture	3-tier architecture	REST APIs
4	Availability	Deployed on cloud	AWS / Render

S.No	Characteristic	Description	Technology
5	Performance	Optimized queries	MongoDB Indexing