

PROBLEM – SOLUTION FIT DOCUMENT

1. CUSTOMER SEGMENT(S)

- Online shoppers facing defective product/service issues
- Customers of e-commerce platforms
- Students & working professionals
- Small businesses needing complaint tracking
- Organizations wanting structured grievance management

2. JOBS-TO-BE-DONE / PROBLEMS

- Register complaints easily without visiting physical offices
- Track complaint status in real-time
- Communicate directly with support agents
- Get timely resolution (refund/replacement/service)
- Maintain digital record of complaints

3. TRIGGERS

- Receiving a defective product
- Poor service experience
- Delay in refund
- No response from customer care
- Frustration with traditional complaint systems

4. EMOTIONS (BEFORE / AFTER)

Before using ResolveNow:

- Frustrated
- Confused
- Angry
- Helpless

After using ResolveNow:

- Confident
- In control
- Satisfied
- Assured about resolution

5. AVAILABLE SOLUTIONS

Current alternatives customers use:

- Calling customer care helpline
- Email complaints
- Social media complaints
- Physical office visits
- Manual tracking through phone calls

Problems with Existing Solutions:

- No real-time tracking
- Long waiting times
- No structured complaint ID
- Poor communication transparency

6. CUSTOMER CONSTRAINTS

- Limited technical knowledge
- Limited internet connectivity
- Fear of data misuse
- Lack of trust in complaint resolution systems

7. CUSTOMER BEHAVIOR

- Searching for complaint forms online
- Posting complaints on Twitter/Instagram

- Calling customer support multiple times
- Following up repeatedly
- Saving screenshots as proof

8. CHANNELS OF BEHAVIOR

8.1 ONLINE

- Website login
- Email communication
- Social media
- Chat support

8.2 OFFLINE

- Visiting service centers
- Calling helpline numbers
- Talking to store representatives

9. PROBLEM ROOT CAUSE

- Lack of centralized complaint system
- Poor communication between departments
- Manual tracking systems
- No transparency in resolution status
- No real-time customer interaction

10. YOUR SOLUTION

ResolveNow provides:

- Centralized digital complaint management
- Real-time status tracking
- Role-based dashboards (User, Agent, Admin)
- Direct chat communication via Socket.io

- Secure authentication using JWT
- Admin-controlled complaint assignment
- Automated notifications

It solves transparency, tracking, and communication gaps in traditional complaint systems.

PROPOSED SOLUTION TEMPLATE

1. Problem Statement (Problem to be solved)

Customers face difficulty in registering, tracking, and resolving complaints efficiently due to lack of transparency, delayed responses, and unstructured communication in traditional complaint systems.

2. Idea / Solution Description

ResolveNow is a web-based full-stack application that enables users to:

- Register complaints online
- Track complaint status in real-time
- Communicate with assigned agents
- Receive notifications for updates
- Provide feedback after resolution

It includes separate dashboards for:

- User
- Agent
- Admin

3. Novelty / Uniqueness

- Real-time chat between customer and agent
- Role-based access system
- Complaint routing by admin
- Digital complaint history management

- Secure authentication & encrypted passwords

4. Social Impact / Customer Satisfaction

- Saves time and effort
- Reduces frustration
- Increases trust in complaint systems
- Encourages transparency
- Improves service quality

5. Business Model (Revenue Model)

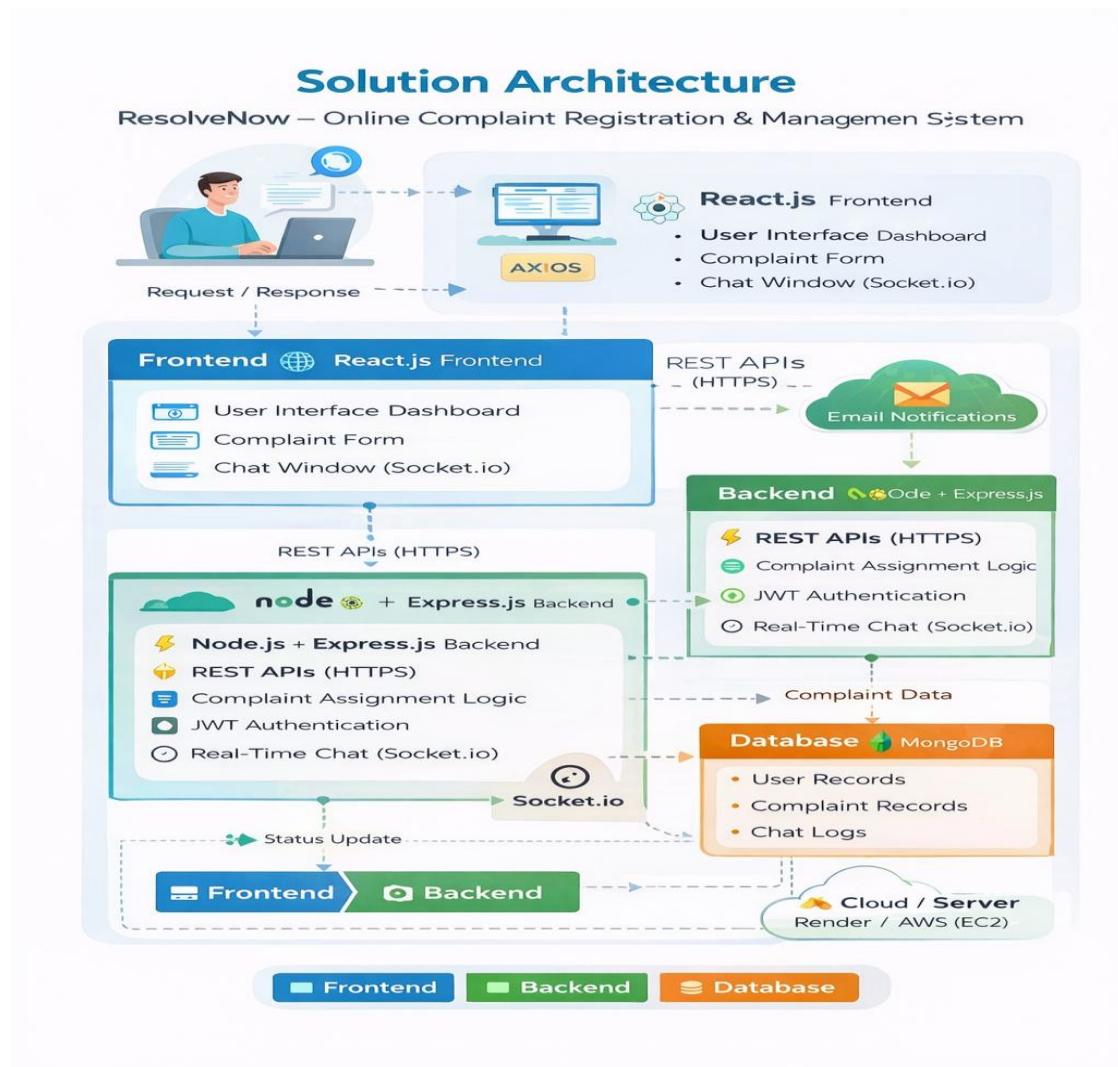
Possible revenue streams:

- SaaS subscription model for companies
- Enterprise licensing
- Custom complaint system development
- Premium analytics dashboard
- Integration services

6. Scalability of the Solution

- Built using scalable MERN stack
- MongoDB supports large data growth
- Can be deployed on cloud infrastructure
- Supports multi-organization model
- Can integrate AI-based complaint classification

SOLUTION ARCHITECTURE DOCUMENT:



Solution Architecture Description

ResolveNow follows a **3-Tier Client-Server Architecture**:

Presentation Layer (Frontend)

Technology: React.js

Responsibilities:

- User interface
 - Complaint submission forms
 - Dashboard views
 - Chat window
 - Status tracking

- API calls using Axios

Application Layer (Backend)

Technology: Node.js + Express.js

Responsibilities:

- REST API handling
- Business logic
- Authentication (JWT)
- Role-based authorization
- Complaint assignment logic
- Real-time communication (Socket.io)

Data Layer

Technology: MongoDB

Collections:

- Users
- Agents
- Complaints
- Messages

Responsibilities:

- Store complaint details
- Store chat messages
- Maintain complaint status history

Data Flow in Architecture

1. User sends request → React Frontend
2. Frontend → REST API (Express Server)
3. Server processes request

4. Data stored/retrieved from MongoDB
5. Server sends response to frontend
6. Real-time chat handled via Socket.io
7. Email notifications triggered

Infrastructure

Deployment Options:

- Frontend → Vercel / Netlify
- Backend → Render / AWS EC2
- Database → MongoDB Atlas
- Secure communication via HTTPS

Security Architecture

- Password hashing using Bcrypt
- JWT-based authentication
- Role-based authorization
- API validation
- Data encryption

Architecture Justification

- 3-tier architecture ensures separation of concerns
- Scalable backend using REST APIs
- NoSQL database allows flexible schema
- Real-time communication improves user experience
- Cloud-ready deployment