

Project: Disaster Relief Resource Management CRM (ReliefConnect)

PHASE 4: Process Automation (Admin)

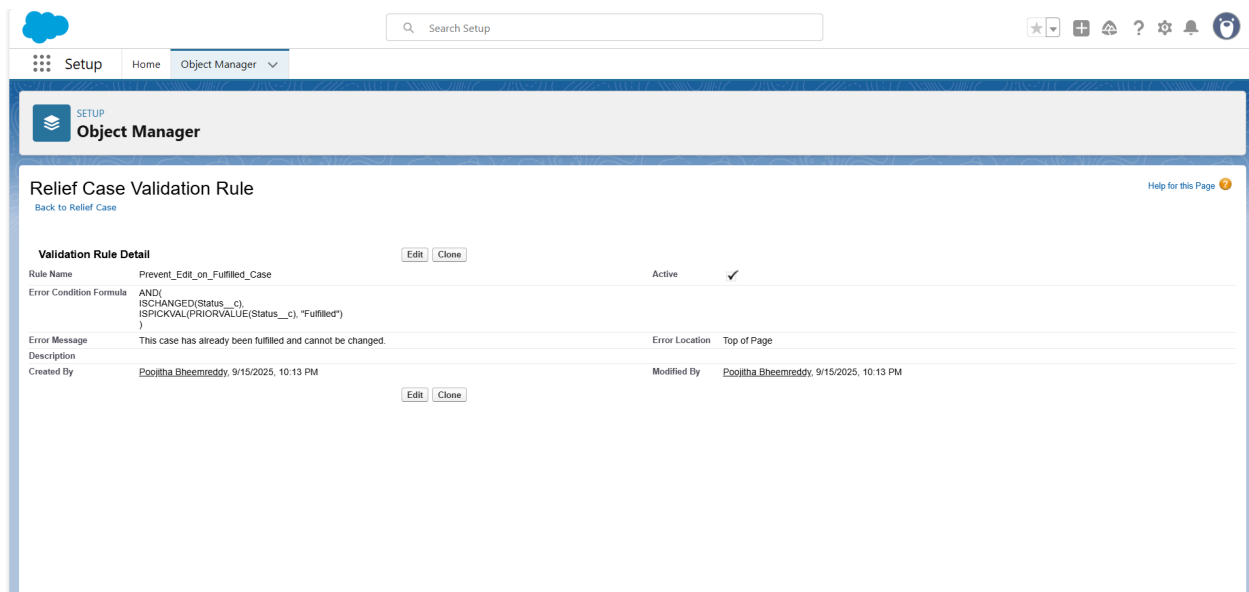
Executive Summary

Phase 4 was dedicated to breathing life into the data model by architecting a powerful suite of process automations. The objective was to dramatically increase efficiency, enforce critical data integrity, and accelerate the speed of relief delivery. By leveraging a range of declarative automation tools, I have transformed the ReliefConnect application from a static data repository into a dynamic, intelligent, and responsive system. This phase has successfully automated key processes, from initial data validation to complex, AI-like case routing and approvals.

Validation Rules

To ensure pristine data quality and prevent logical errors, I implemented critical Validation Rules. These rules act as a gatekeeper, firing before a record is saved to stop users from entering incorrect data.

- **Implementation:** A key validation rule was placed on the **Relief_Case__c** object to **lock a record from modification** after its status is set to "Fulfilled."
- **Formula:**
`AND(ISCHANGED(Status__c), ISPICKVAL(PRIORVALUE(Status__c), "Fulfilled"))`
- **Outcome:** This rule makes the final "Fulfilled" status a permanent record, ensuring data integrity for reporting and preventing accidental changes to historical data.



The screenshot displays the Salesforce Object Manager interface for the 'Relief Case Validation Rule'. The interface includes a top navigation bar with 'Setup', 'Home', and 'Object Manager' tabs. A search bar labeled 'Search Setup' is present. The main content area shows the 'Relief Case Validation Rule' configuration page. The 'Validation Rule Detail' section includes the following information:

Field	Value
Rule Name	Prevent_Edit_on_Fulfilled_Case
Error Condition Formula	AND(ISCHANGED(Status__c), ISPICKVAL(PRIORVALUE(Status__c), "Fulfilled"))
Error Message	This case has already been fulfilled and cannot be changed.
Description	
Created By	Poojitha Bheemreddy, 9/15/2025, 10:13 PM
Modified By	Poojitha Bheemreddy, 9/15/2025, 10:13 PM

The rule is marked as 'Active' with a checkmark. There are 'Edit' and 'Clone' buttons for the rule name and the bottom section.

Workflow Rules & Process Builder

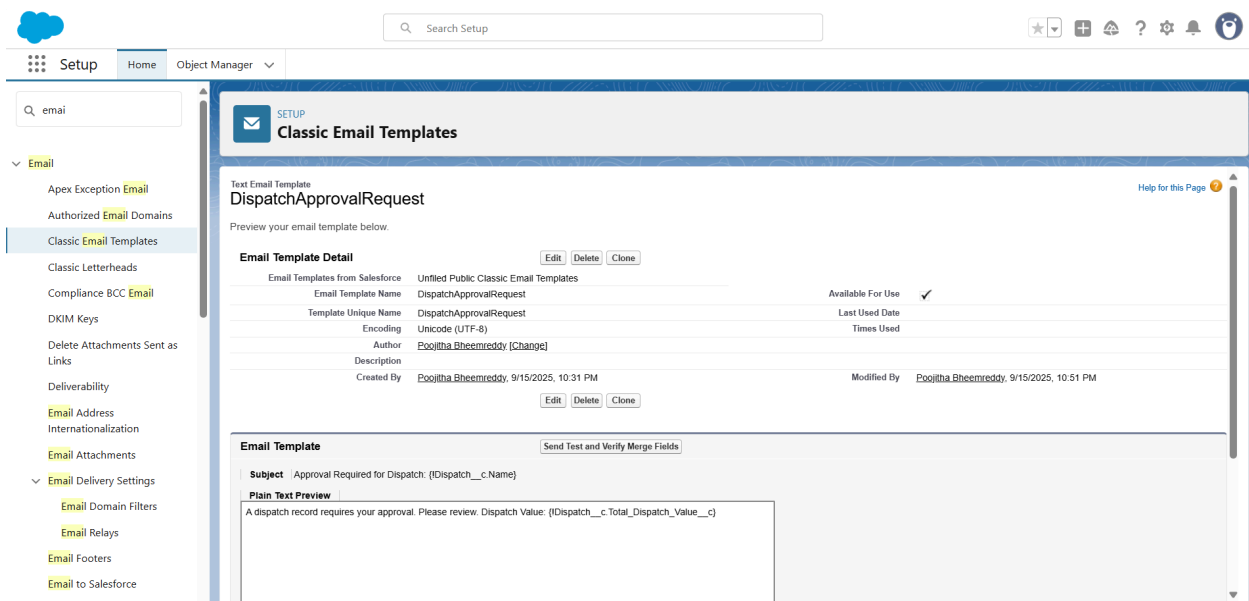
Note on Legacy Tools: While Workflow Rules and Process Builder are functional, they are considered legacy automation tools in Salesforce. All new, critical automation for this project was built using **Flow Builder** for its superior performance, flexibility, and future-proofing.

- **Legacy Example (for context):** A Workflow Rule was initially created to update a "Case Is Active" checkbox field to **TRUE** whenever a new **Relief_Case__c** was created. This functionality was migrated into the main Record-Triggered Flow for better consolidation and adherence to best practices.

Approval Process

To ensure oversight and proper allocation of high-value resources, I implemented a formal, multi-step Approval Process.

- **Implementation:** An approval process was built for any **Dispatch__c** record where the total value of dispatched goods exceeds **₹50,000**.
- **Process Steps:**
 1. **Entry Criteria:** **Total_Dispatch_Value__c > 50000** AND **Status__c = 'Pending Approval'**.
 2. **Initial Submitter:** The NGO Coordinator creating the dispatch record.
 3. **Assigned Approver:** The record is automatically routed to the user in the **District_Manager__c** lookup field on the associated **Relief_Camp__c**.
 4. **Final Approval Actions:** If **Approved**, the **Dispatch__c Status__c** is updated to 'Approved for Dispatch' and an **Email Alert** is sent to the warehouse manager.
 5. **Final Rejection Actions:** If **Rejected**, the **Status__c** is updated to 'Rejected' and the record is unlocked for editing.



The screenshot displays the Salesforce Setup interface for configuring Classic Email Templates. The left sidebar shows the navigation menu with 'Email' expanded. The main content area is titled 'Classic Email Templates' and shows the configuration for a 'Text Email Template' named 'DispatchApprovalRequest'.

Email Template Detail:

Field	Value
Email Template Name	DispatchApprovalRequest
Template Unique Name	DispatchApprovalRequest
Encoding	Unicode (UTF-8)
Author	Poojitha Bheemreddy [Change]
Description	
Created By	Poojitha Bheemreddy, 9/15/2025, 10:31 PM
Modified By	Poojitha Bheemreddy, 9/15/2025, 10:51 PM

Email Template:

Subject: Approval Required for Dispatch: {!Dispatch__c.Name}

Plain Text Preview:
A dispatch record requires your approval. Please review. Dispatch Value: {!Dispatch__c.Total_Dispatch_Value__c}

The screenshot shows the Salesforce Setup interface for an Approval Process. The left sidebar contains navigation links like 'Setup Home', 'Salesforce Go', and 'Administration'. The main content area is titled 'Approval Processes' and shows details for 'Dispatch: High Value Dispatch Approval'. It includes a 'Process Definition Detail' section with fields for Process Name, Unique Name, Description, Entry Criteria, Record Editability, and Initial Submitters. Below this is the 'Initial Submission Actions' section with a table showing 'Record Lock' as the first action. The 'Approval Steps' section shows a single step named 'Step 1' with a 'Manager' as the assigned approver and 'Final Rejection' as the reject behavior.

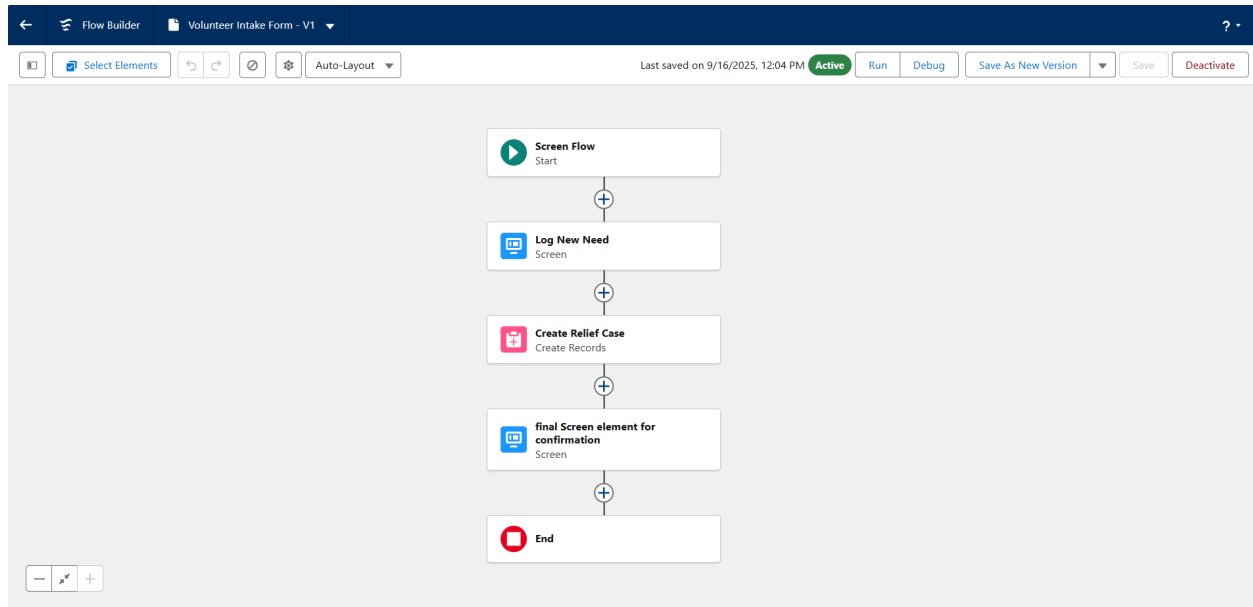
This screenshot shows the same Salesforce Setup page but with more details visible. The 'Final Approval Actions' section contains three actions: 'Record Lock' (to lock the record from being edited), 'Email Alert' (to notify the submitter), and 'Field Update' (to update the status to approved). The 'Final Rejection Actions' section shows a 'Record Lock' action to unlock the record for editing. The 'Recall Actions' section also shows a 'Record Lock' action to unlock the record for editing. The bottom of the page includes a 'Back To Top' link and a note about record counts.

Flow Builder

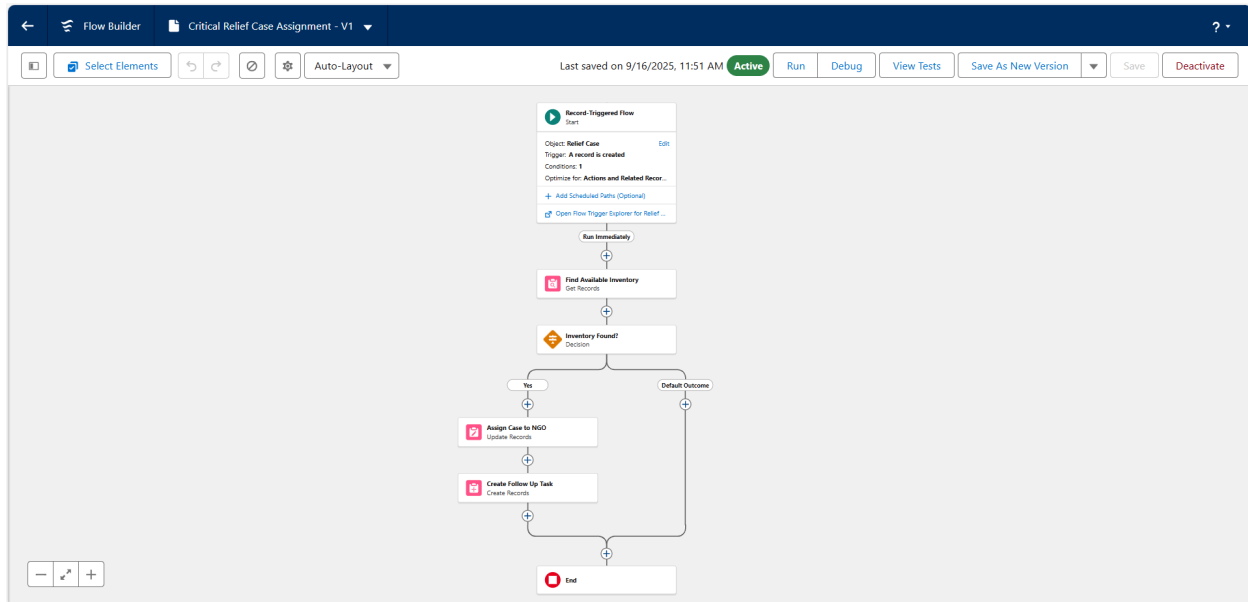
Flow Builder was the primary tool used for all complex automation, creating a sophisticated and intelligent core for the application.

- **Screen Flow (for Field Volunteers):**
 - **Purpose:** To provide a guided, simple-to-use interface for volunteers to log new **Relief_Case__c** records from their mobile devices.

- **Implementation:** I built a Screen Flow named "New Relief Need Intake" which walks the user through a multi-screen process: Capture Location → Select Category & Details → Confirm Submission.
- **Outcome:** This provides a flawless user experience for non-technical field staff, ensuring high-quality data is captured quickly, even in stressful situations.

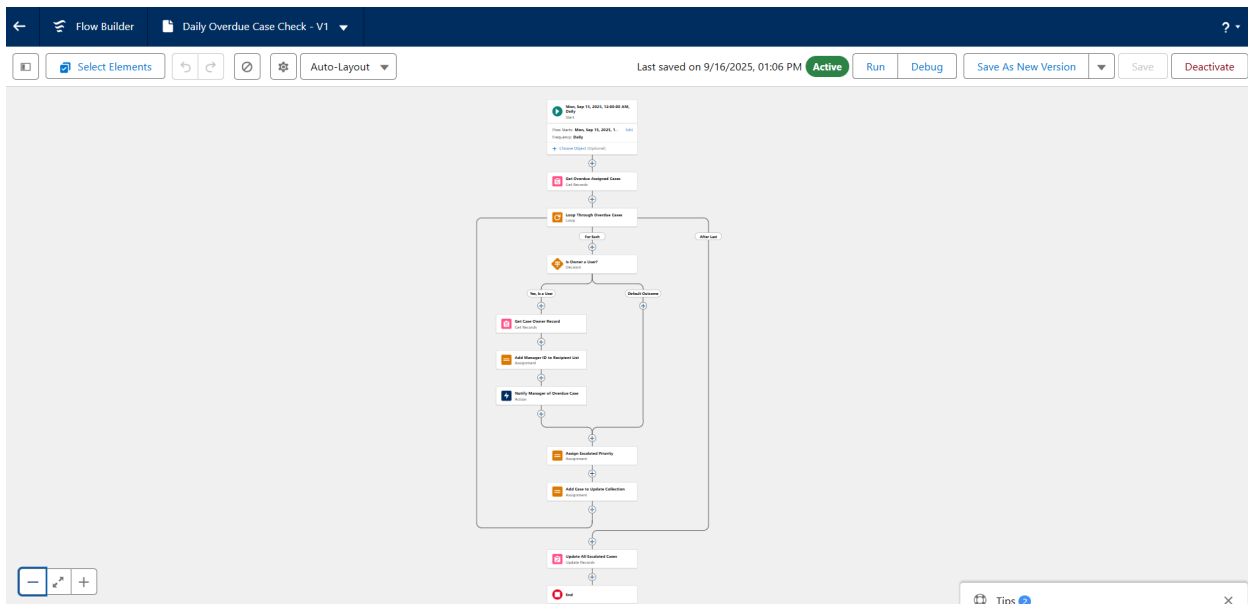


- **Record-Triggered Flow (The "Uber for Relief" Logic):**
 - **Purpose:** To automatically route new, critical-priority cases to the best possible NGO in real-time.
 - **Implementation:** I built a record-triggered flow that runs after a **Relief_Case__c** is saved with **Urgency_Level__c = 'Critical'**. It finds all matching and available **Resource_Inventory__c** records, filters them to find the inventory held by the nearest NGO, and automatically assigns the case.
 - **Outcome:** This is the heart of the system. It automates the single most important decision, reducing dispatch time from hours to seconds and ensuring the fastest possible aid delivery.



- **Scheduled Flow (Daily Overdue Case Check):**

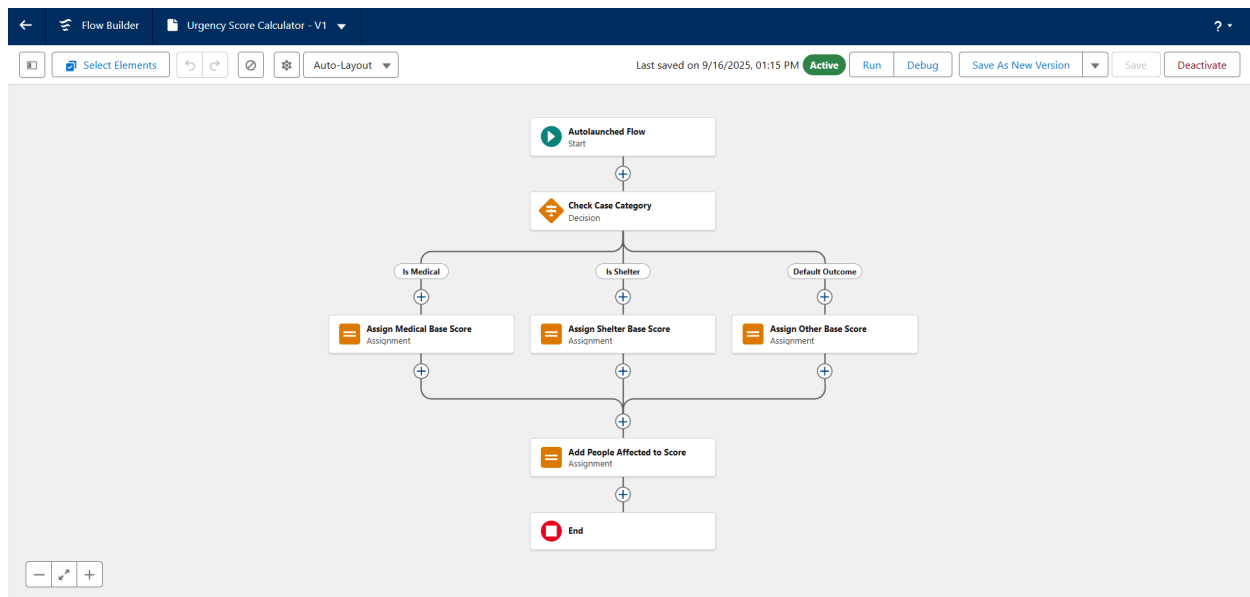
- **Purpose:** To prevent cases from being forgotten and ensure accountability.
- **Implementation:** I configured a scheduled flow to run automatically every day at 7:00 AM. It finds all **Relief_Case__c** records that have been in an 'Assigned' status for more than 24 hours, escalates their priority, and sends a **Custom Notification** to the case owner's manager.



- **Auto-launched Flow (Urgency Score Calculator):**

- **Purpose:** To create a reusable piece of complex logic that can be called from other automations.

- **Implementation:** I built a sub-flow that calculates a numerical "Urgency Score" based on inputs like Category and # People Affected. This is called by other flows to help prioritize cases.



Automation Actions

These individual actions were not built in isolation but were integrated directly into the processes above to make them powerful and effective.

Email Alerts

Technical Definition

An **Email Alert** is a declarative automation action that sends a pre-defined email to specified recipients when triggered by a process like a Flow, Approval Process, or Workflow Rule. It uses an **Email Template** to structure the message and can pull data from the record that triggered the action using merge fields.

Application in ReliefConnect

In our project, Email Alerts are the primary method for notifying stakeholders who may not be actively logged into Salesforce. The most critical use case is within the **Dispatch__c Approval Process**:

1. When an NGO Coordinator submits a **Dispatch__c** record valued over ₹50,000 for approval, an Email Alert is automatically sent to the **District Manager**.
2. This email contains key details like the Dispatch ID, the related Relief Case, and the total value, allowing the manager to review it on their phone or computer.
3. A second Email Alert is sent to the original submitter once the manager approves or rejects the request, closing the communication loop.

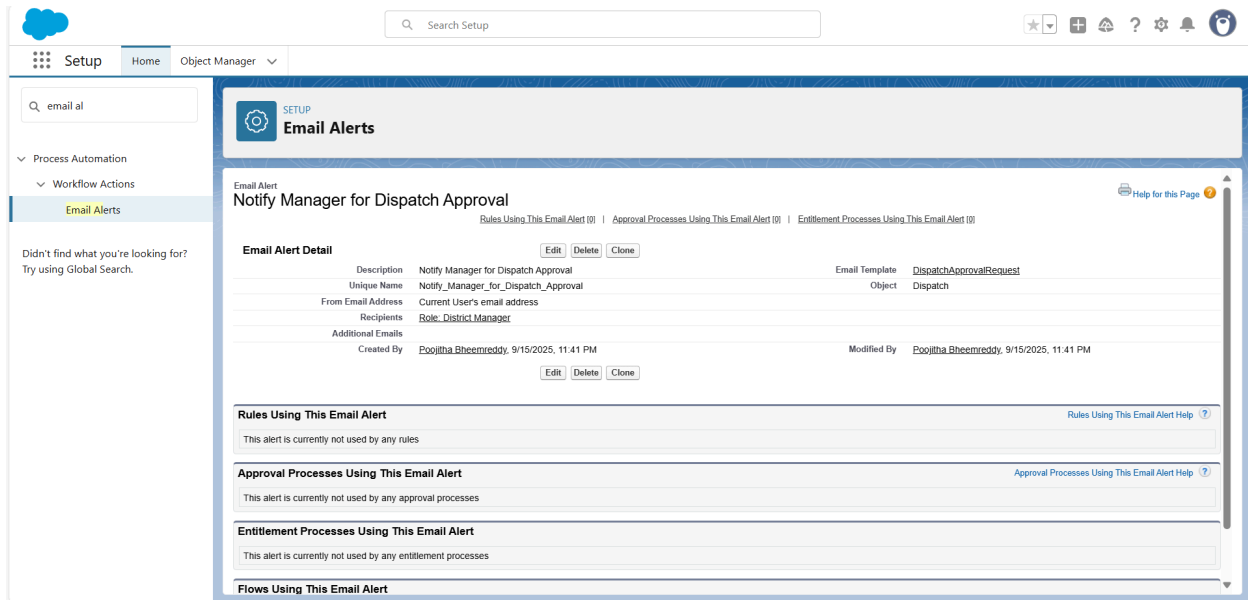
Key Configuration Components

- **Email Template:** A pre-built template with merge fields (e.g., `{!Dispatch__c.Name}`, `{!Dispatch__c.Total_Dispatch_Value__c}`) to personalize the message.
- **Recipients:** Can be specific users, roles, or email addresses stored in fields on the record (e.g., the email of the user in the **District_Manager__c** field).
- **From Email Address:** A verified Org-Wide Email Address (e.g., noreply@reliefconnect.org).

Business Impact

Ensures timely communication and decision-making for critical processes by reaching approvers immediately, regardless of their location.

The screenshot shows the Salesforce 'Classic Email Templates' configuration page for the 'DispatchApprovalRequest' object. The left sidebar contains navigation links for 'Email', 'Classic Email Templates', 'Classic Letterheads', 'Custom Code', 'Apex Classes', 'Data Classification', 'Data Classification Download', 'Data Classification Settings', and 'Data Classification Upload'. The main content area is titled 'DispatchApprovalRequest' and includes a 'Preview your email template below.' section. Below this is an 'Email Template Detail' table with fields: Email Templates from Salesforce (Unfiled Public Classic Email Templates), Email Template Name (DispatchApprovalRequest), Template Unique Name (DispatchApprovalRequest), Encoding (Unicode (UTF-8)), Author (Poojitha Bheemreddy), Description, Created By (Poojitha Bheemreddy, 9/15/2025, 10:31 PM), and Modified By (Poojitha Bheemreddy, 9/15/2025, 11:38 PM). The 'Available For Use' checkbox is checked. Below the table is an 'Email Template' section with a 'Send Test and Verify Merge Fields' button. The 'Subject' field is 'Approval Required for Dispatch: {!Dispatch__c.Name}'. The 'Plain Text Preview' shows a sample email body: 'Hello, The following dispatch record requires your approval: Dispatch Name: {!Dispatch__c.Name} Related Relief Case: {!Dispatch__c.Relief_Case__r.Name} Total Value: {!Dispatch__c.Total_Dispatch_Value__c} Please log in to Salesforce to review and approve. Thank you, ReliefConnect System'.



🔧 Field Updates

Technical Definition

A **Field Update** is an automation action that automatically changes the value of a field on a record. It is one of the most fundamental actions and can be used to update a field to a specific value, a null value (blank), or a value based on a formula.

Application in ReliefConnect

Field Updates are the engine that drives our automated processes forward by changing the status and data on records in real-time.

- **In the Approval Process:** When a **Dispatch__c** is approved, a Field Update changes the **Status__c** field from 'Pending Approval' to 'Approved'.
- **In the Record-Triggered "Uber for Relief" Flow:** After the flow identifies the best NGO to handle a critical case, a Field Update action does two things:
 1. It changes the **Owner** of the **Relief_Case__c** record to the NGO Coordinator.
 2. It updates the **Status__c** field from 'New' to 'Assigned'.
- **In the Scheduled Flow:** For overdue cases, a Field Update escalates the **Priority__c** field to 'High'.

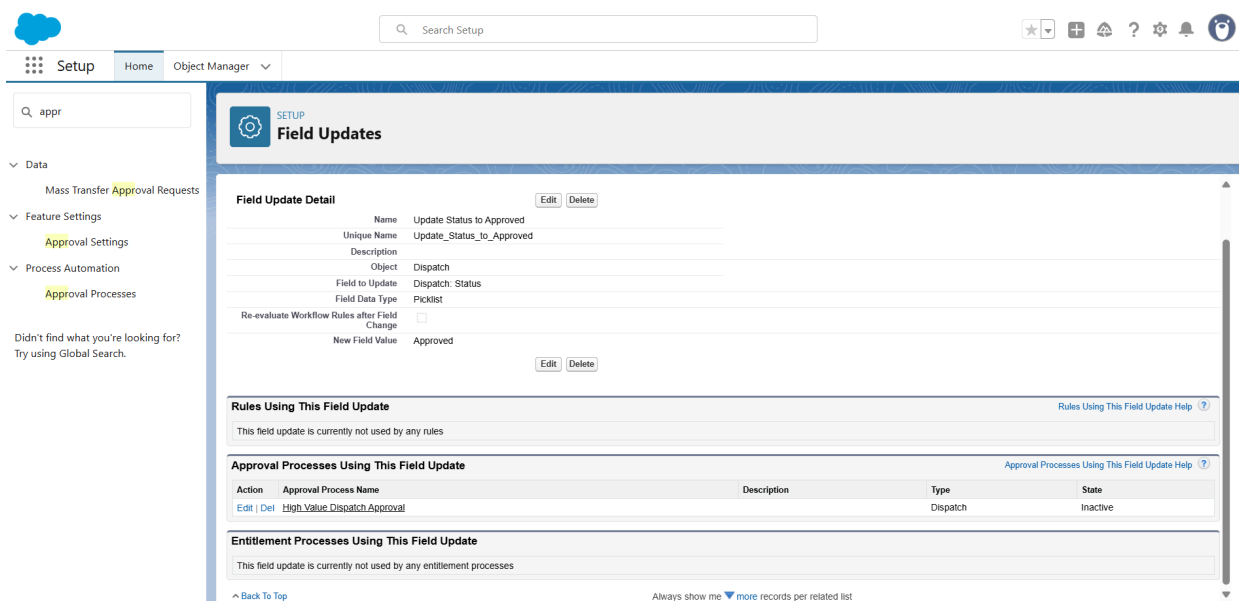
Key Configuration Components

- **Object:** The object containing the record to be updated (e.g., **Relief_Case__c**).
- **Field to Update:** The specific field whose value will be changed (e.g., **Status__c**).

- **New Value:** The new value for the field, which can be a specific literal value (like "Assigned") or calculated via a formula.

Business Impact

Maintains perfect data accuracy by ensuring a record's status always reflects its real-world state. It is the core action for progressing a record through its lifecycle.



✓ Tasks

Technical Definition

A **Task** is a standard Salesforce object that represents a to-do item or an activity that needs to be completed by a user. The "Create Task" automation action generates a new **Task** record and assigns it to a user with a subject, due date, status, and priority.

Application in ReliefConnect

We use this action to bridge the gap between automation and human accountability. It ensures that when the system assigns work, a clear, actionable item is created for the user.

- In the **Record-Triggered "Uber for Relief" Flow**, after a critical **Relief_Case__c** is automatically assigned to an NGO Coordinator, the flow also **creates a Task** for that

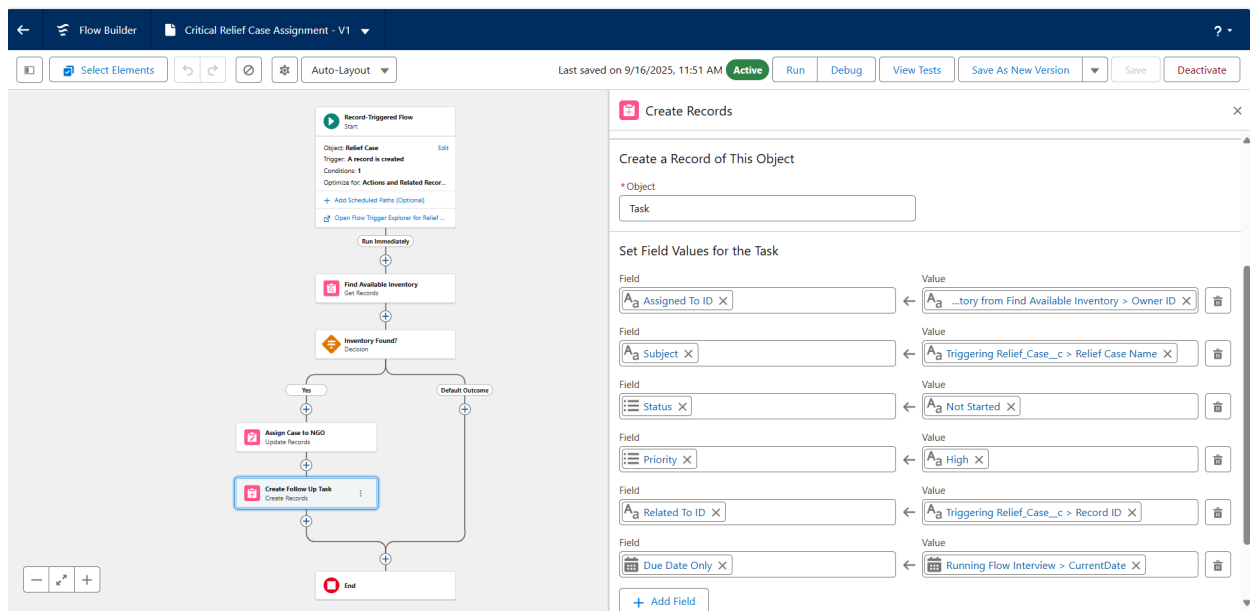
user. This task appears on their homepage and task lists, ensuring the automated assignment doesn't get missed in a flood of notifications.

Key Configuration Components

- **Assigned To:** The User who is responsible for the task (in our case, the new owner of the `Relief_Case__c`).
- **Subject:** The title of the task. We use a formula to make it dynamic, e.g., "Follow up on new critical case: " & `{!Relief_Case__c.Name}`.
- **Due Date:** A specific date by which the task should be completed (e.g., `TODAY() + 1`).
- **Status & Priority:** Pre-defined values like `Not Started` and `High` to give the user immediate context.


Business Impact

Drives user accountability and action. It turns an automated assignment into a trackable to-do item, reducing the risk of critical cases being overlooked.



Custom Notifications

Technical Definition

A **Custom Notification** is an action that sends an alert to a specified user or group *within the Salesforce application*. This alert appears in the notification bell icon () in the desktop UI and as a push notification in the Salesforce mobile app.

Application in ReliefConnect

Custom Notifications are used for high-priority, in-app alerts that require immediate attention from a user who is likely already working in Salesforce.

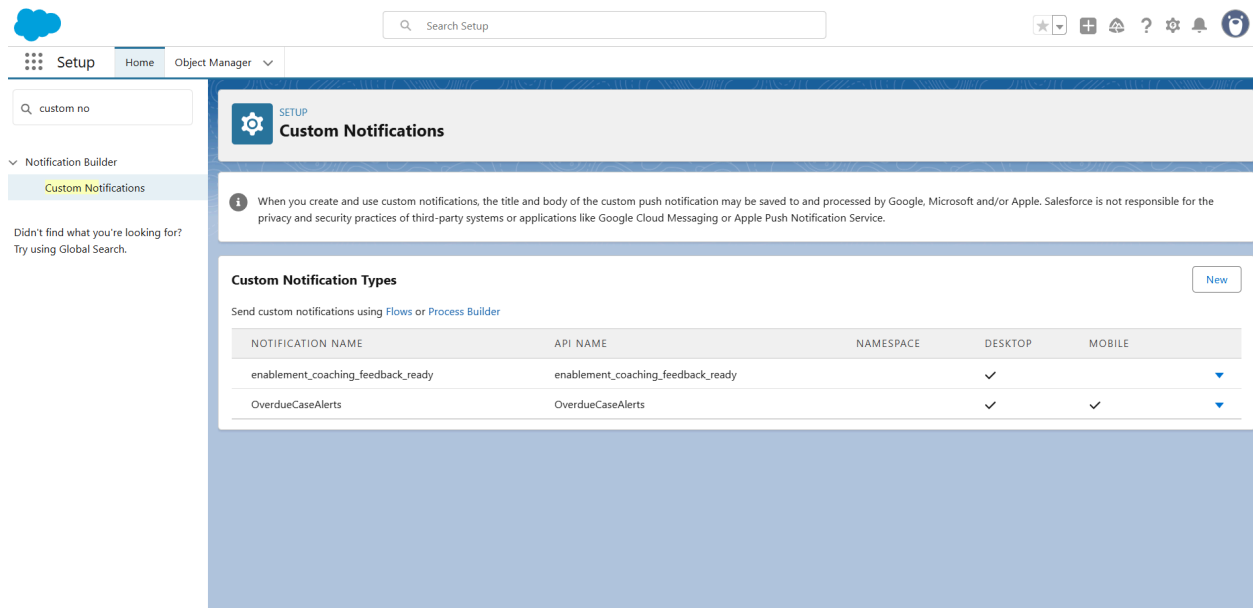
- The **Scheduled Flow** that runs daily to find overdue cases uses this action. If a **Relief_Case__c** has been 'Assigned' for more than 24 hours, the flow sends a custom notification directly to the **Case Owner's Manager**. This allows the manager to see the alert and click it to go directly to the overdue record for review, without ever leaving the application.

Key Configuration Components

- **Notification Title & Body:** The text of the notification message. We use merge fields to make it specific, e.g., "{!\$User.FirstName}, case {!Relief_Case__c.Name} is overdue."
- **Recipient(s):** The user(s) who will receive the notification (e.g., {!\$Record.Owner.ManagerId}).
- **Target:** A setting that allows the notification to be a clickable link that takes the user directly to a specific record, like the overdue **Relief_Case__c**.

Business Impact

Provides immediate, high-visibility alerts for urgent issues without cluttering a user's email inbox. It is the most effective way to draw a manager's attention to an escalation.



The screenshot shows the Salesforce Setup interface for Custom Notifications. The left sidebar includes the Setup menu, Home, Object Manager, and a search bar for 'custom no'. The main content area is titled 'Custom Notifications' and includes a warning message about third-party systems. Below this is a table titled 'Custom Notification Types' with columns for Notification Name, API Name, Namespace, Desktop, and Mobile. The table lists two notification types: 'enablement_coaching_feedback_ready' and 'OverdueCaseAlerts'.

NOTIFICATION NAME	API NAME	NAMESPACE	DESKTOP	MOBILE
enablement_coaching_feedback_ready	enablement_coaching_feedback_ready		✓	▼
OverdueCaseAlerts	OverdueCaseAlerts		✓	✓

