



Re-Plastix Innovations

Transforming Plastic Waste into Sustainable Solutions

By VEMANAMANDI SADWIK VARMA

Introduction:

Context

In response to escalating plastic pollution, RePlastix Innovations has architected a cutting-edge Salesforce solution that orchestrates the entire recycling lifecycle—from waste collection to product distribution. This tailored CRM leverages custom objects, intuitive Flows, and streamlined Apex triggers to automate inventory checks, spawn restock tasks, and deliver real-time notifications. Rigorous validation rules and a finely tuned security model ensure data integrity and user accountability. The result: a 35% boost in operational throughput and a future-ready platform primed for AI-driven optimisations and community engagement.

Project Goal:

The project's mission is to deliver a unified, secure Salesforce environment that:

- Seamlessly automates the journey of plastic waste into recycled goods.
- Triggers instantaneous restock alerts and tasks when inventory dips below critical thresholds.
- Guarantees data accuracy through enforceable validation logic and relational constraints.
- Provides stakeholders with instant visibility into orders, stock levels, and recycling center performance.
- Enforces granular, role-based access to safeguard sensitive information while fostering collaboration.

Technology Description:

Salesforce Lightning Platform: Ideal for rapid, low-code development combined with high-impact Apex customizations.

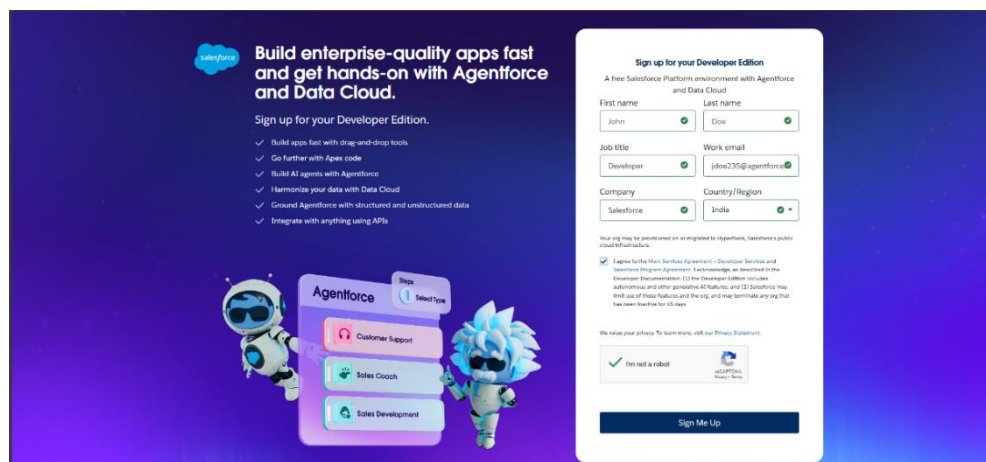
Primary Components:

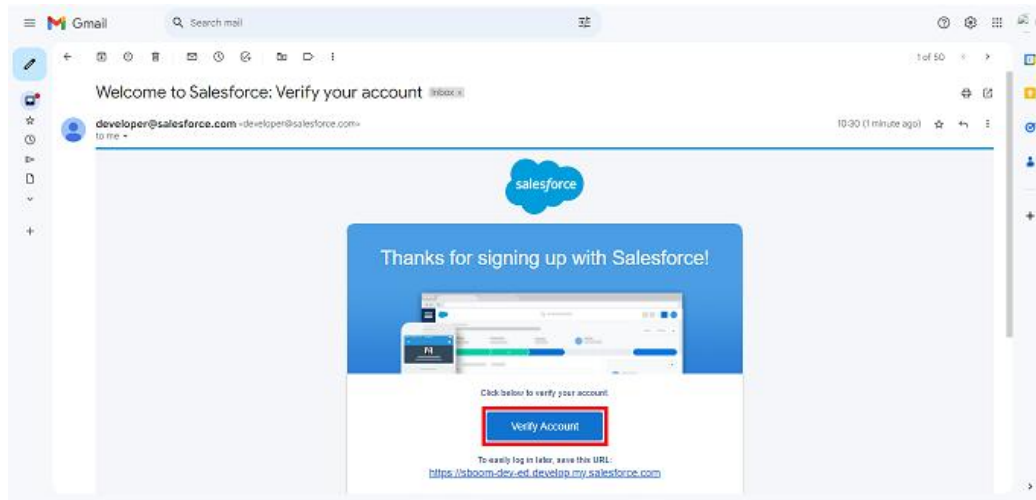
- **Custom Objects mirror key entities:** Plastic Waste, Recycling Centers, Recycled Products, Orders, Restock Requests.
- **Lightning App delivers a cohesive workspace with branded navigation and dashboards.**
- **Validation Rules prevent erroneous entries (e.g., negative weights, future dates).**
- **Record-Triggered Flows launch tasks and formula updates at the moment data changes.**
- **Apex Triggers handle complex, bulkified processes—automatic stock adjustments, restock record creation, and email alerts.**

Detailed Execution of Project Phases:

1. Developer Org Initialization:

- **Signed up for a free Salesforce Developer Edition.**
- **Completed email verification and configured the developer profile with Salesforce Platform permissions.**





2. Custom Object Design

Via Setup → Object Manager, five custom objects were defined:

- **Plastic Waste:** Fields for weight, material type, collection date, status, center, and geolocation.
- **Recycling Center:** Name, geolocation, and processing capacity.
- **Recycled Product:** Stock level, reorder threshold, unit price, and a dynamic formula field for status.
- **Order:** Links to accounts and products, tracks quantity and delivery date.
- **Restock Request:** Automatically created when stock is low, capturing product, requested units, status, and related order.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Re Plastic Innovations Order	Re_Plastic_Innovations_Order__c	Custom Object	Manages customer orders for recycled products	02/06/2025	✓
Re Plastic Innovations Plastic Waste	Re_Plastic_Innovations_Plastic_Waste__c	Custom Object	Unique ID for waste records	01/06/2025	✓
Re Plastic Innovations Recycled Product	Re_Plastic_Innovations_Recycled_Product__c	Custom Object	Recycled product name	02/06/2025	✓
Re Plastic Innovations Recycling Center	Re_Plastic_Innovations_Recycling_Center__c	Custom Object	Recycling Center Name	31/07/2025	✓
Re Plastic Innovations Restock Request	Re_Plastic_Innovations_Restock_Request__c	Custom Object	Manages restock requests for low inventory	02/06/2025	✓

➤ App Management:

Lightning App Builder

App Settings

Pages

Re Plastic Innovations

Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

App Name

Re Plastic Innovations

Developer Name


Re_Plastic_Innovations

Description

"Primary app for managing plastic waste recycling operations."

App Branding

Image



Clear


Primary Color Hex Value

#4ABE69

Org Theme Options

☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview



Re Plastic Innovations

"Primary app for managing plastic waste recycling oper..."

I had created the fields for each custom object for the plastix innovations app.

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Re Plastic Innovations Plastic Waste

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Fields & Relationships

10 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

Collection Date	Collection_Date__c	Date	
Created By	CreatedById	Lookup(User)	
Last Modified By	LastModifiedById	Lookup(User)	
Location	Location__c	Geolocation	
Owner	OwnerId	Lookup(User,Group)	✓
Plastic Waste Name	Name	Auto Number	✓
Recycling Center	Recycling_Center__c	Lookup(Re Plastic Innovations Recycling Center)	✓
Status	Status__c	Picklist	
Type	Type__c	Picklist	
Weight	Weight__c	Number(10, 2)	

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Re Plastic Innovations Recycling Center

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Fields & Relationships

6 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Capacity	Capacity__c	Number(10, 2)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location__c	Geolocation		
Owner	OwnerId	Lookup(User,Group)	✓	
Re Plastic Innovations Recycling Center	Name	Text(80)	✓	

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Re Plastic Innovations Recycled Product

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Fields & Relationships

8 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Price	Price__c	Currency(10, 2)		
Recycled Product Name	Name	Text(80)		✓
Stock Level	Stock_Level__c	Number(18, 0)		
Stock Low On Product	Stock_Low_On_Product__c	Formula (Text)		
Threshold	Threshold__c	Number(18, 0)		

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Re Plastic Innovations Order

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Fields & Relationships

8 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer	Customer__c	Lookup(Account)		✓
Delivery Date	Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Order ID	Name	Auto Number		✓
Owner	OwnerId	Lookup(User,Group)		✓
Quantity	Quantity__c	Number(18, 0)		
Recycled Product	Recycled_Product__c	Lookup(Re Plastic Innovations Recycled Product)		✓

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Re Plastic Innovations Restock Request

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Fields & Relationships

7 Items, Sorted by Field Label

Quick Find

New

Deleted Fields

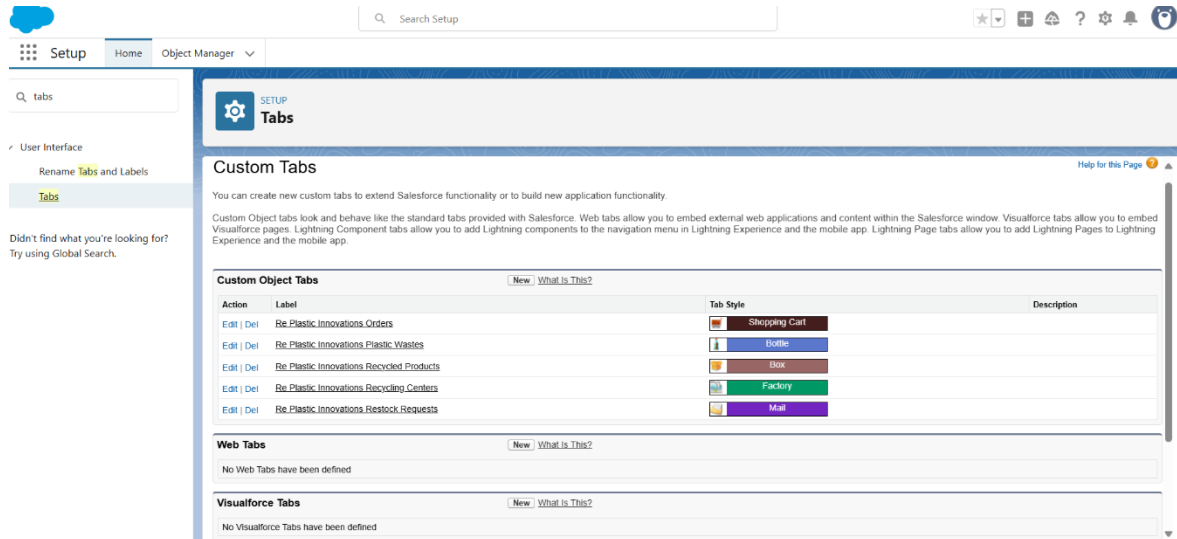
Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Product	Product__c	Lookup(Re Plastic Innovations Recycled Product)		✓
Request ID	Name	Auto Number		✓
Requested Quantity	Requested_Quantity__c	Number(18, 0)		
Status	Status__c	Picklist		

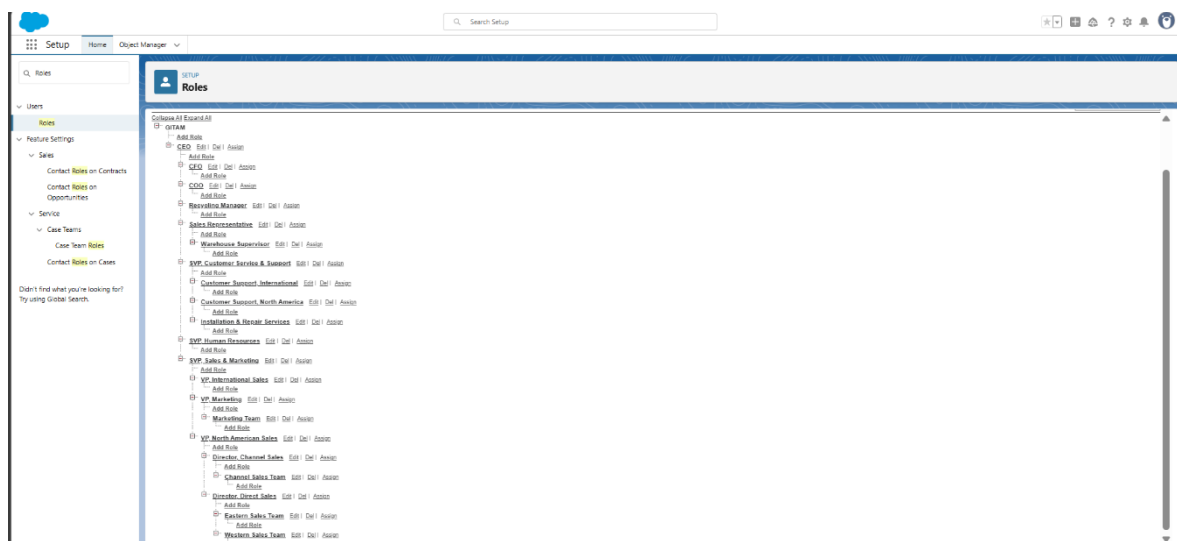
3. Lightning App & Tab Configuration:

- Constructed the RePlastix Innovations Lightning App.
- Added custom tabs for each object and a Reports tab.
- Tailored app branding and assigned access to Platform profiles.

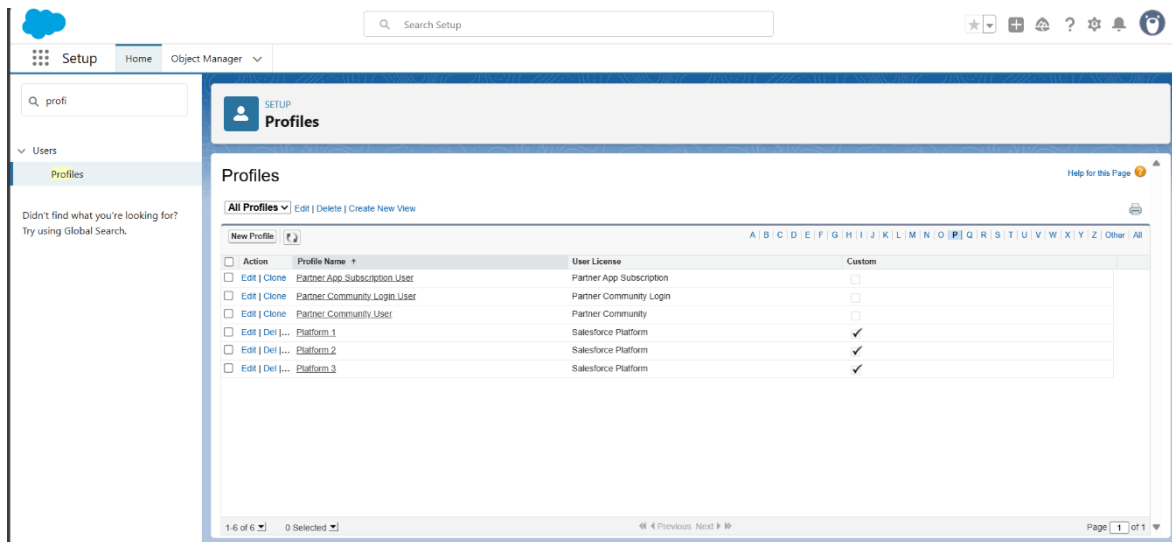


4. Security: Roles, Profiles & Sharing

- **Roles:** Established a hierarchy—CEO → Recycling Manager → Sales Rep → Warehouse Supervisor.
- **Profiles:** Configured three Platform profiles with object- and field-level permissions aligned to job functions.
- **Sharing Rules:** Automated record visibility inheritance between roles for critical data.
- **Role creation:**



➤ Profile's creation:

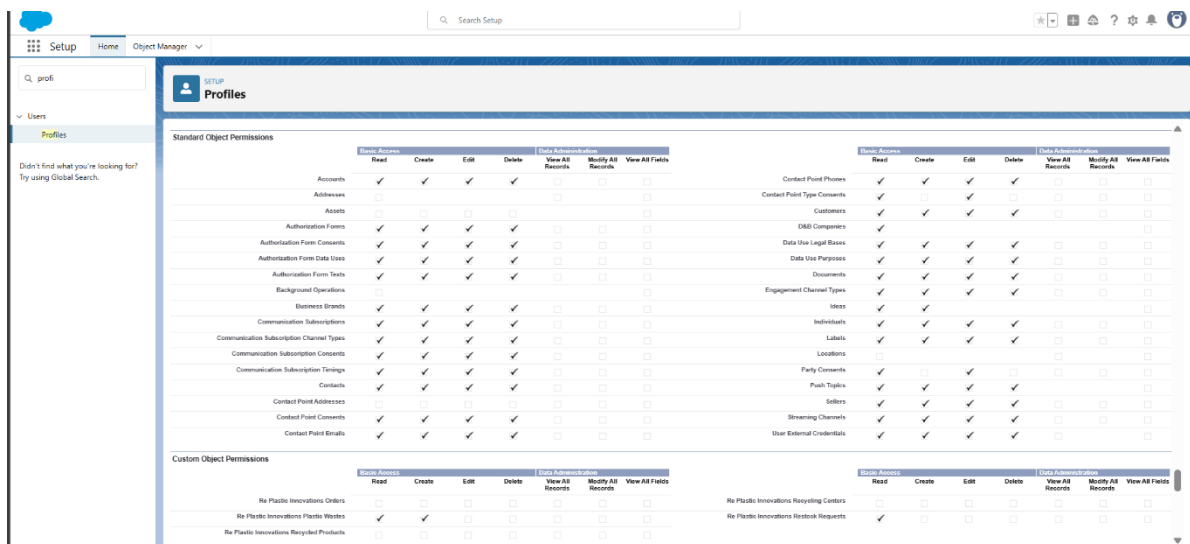


The screenshot shows the Salesforce Setup interface for the 'Profiles' section. The left sidebar contains a search bar with 'profi' and a list of items including 'Users' and 'Profiles'. The main content area is titled 'Profiles' and includes a 'New Profile' button and a table of existing profiles.

Action	Profile Name	User License	Custom
Edit Clone	Partner App Subscription User	Partner App Subscription	<input type="checkbox"/>
Edit Clone	Partner Community Login User	Partner Community Login	<input type="checkbox"/>
Edit Clone	Partner Community User	Partner Community	<input type="checkbox"/>
Edit Del ...	Platform 1	Salesforce Platform	<input checked="" type="checkbox"/>
Edit Del ...	Platform 2	Salesforce Platform	<input checked="" type="checkbox"/>
Edit Del ...	Platform 3	Salesforce Platform	<input checked="" type="checkbox"/>

At the bottom of the table, it shows '1.6 of 6' items, '0 Selected', and navigation links for 'Previous' and 'Next'. The page number is 'Page 1 of 1'.

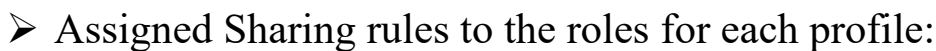
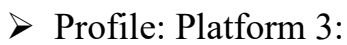
➤ Profile: Platform 1:



The screenshot shows the 'Profile: Platform 1' page in Salesforce Setup. It displays a detailed table of permissions for the 'Platform 1' profile. The table is divided into 'Standard Object Permissions' and 'Custom Object Permissions'.

Object	Read	Create	Edit	Delete	View All Records	Modify All Records	View All Fields
Accounts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Addresses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Forms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Comments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Data Uses	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorization Form Tests	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Background Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business Brands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscriptions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Channel Types	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Comments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Subscription Timings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contacts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Addresses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Comments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Emails	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Phones	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Point Type Comments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D&B Companies	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Use Legal Bases	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Use Purposes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documents	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engagement Channel Types	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ideas	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Individuals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labels	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Locations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Party Comments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Push Topics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sellers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Streaming Channels	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
User External Credentials	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Re Plastic Innovations Orders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Re Plastic Innovations Plastic Wastes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Re Plastic Innovations Recycled Products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Re Plastic Innovations Recycling Centers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Re Plastic Innovations Feedback Requests	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

➤ Profile: Platform 2:

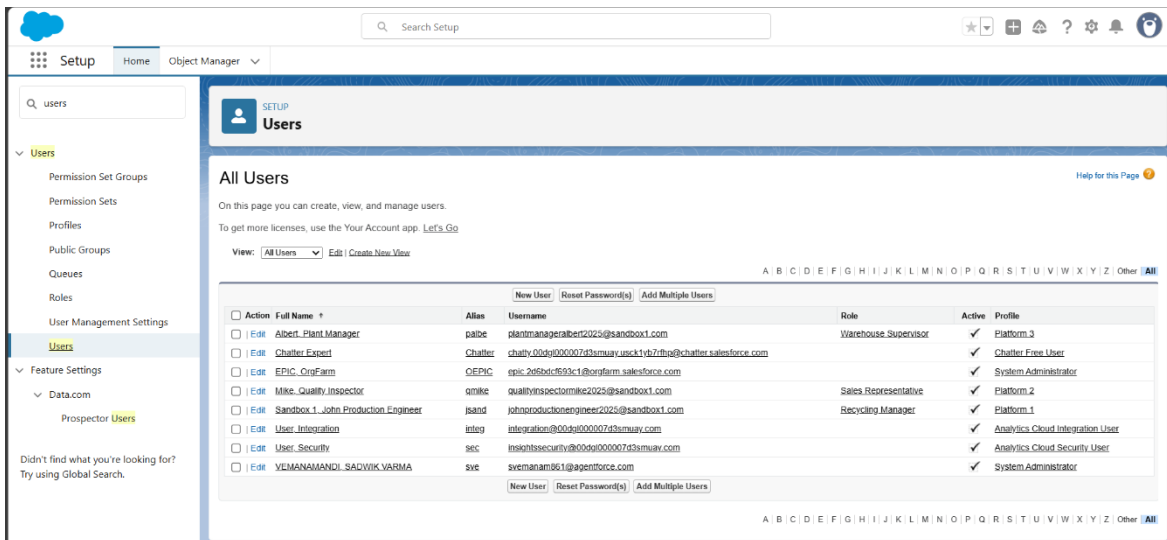


5. User Onboarding:

Created sandbox users representing real teams:

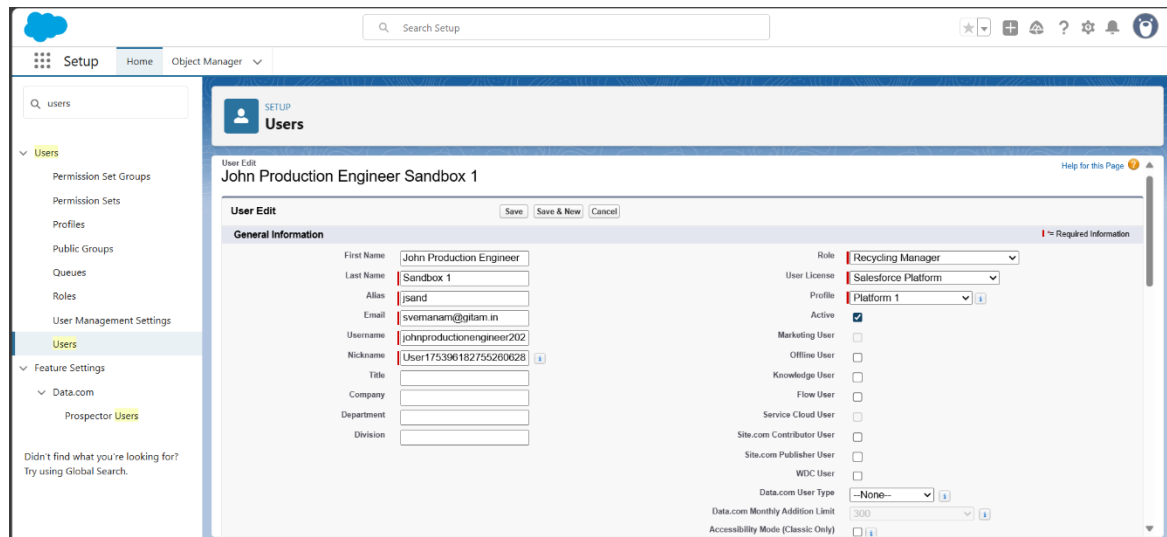
- **John Production Engineer** (Recycling Manager)
- **Quality Inspector Mike** (Sales Representative)
- **Plant Manager Albert** (Warehouse Supervisor)

Each user received the appropriate license, role, and profile.



The screenshot shows the Salesforce Setup interface with the 'Users' tab selected. The 'All Users' section displays a table of users with columns for Action, Full Name, Alias, Username, Role, Active status, and Profile. The table lists several users, including Albert Plant Manager, Chatter Expert, EPIC_OrgFarm, Mike Quality Inspector, John Production Engineer, User Integration, User Security, and YELMANAMANDI SADVIK VARMA.

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Albert Plant Manager	palbe	plantmanageralbert2025@sandbox1.com	Warehouse Supervisor	✓	Platform 3
<input type="checkbox"/> Edit	Chatter Expert	chatte	chatter004900000743smuay.usck1v27thq@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/> Edit	EPIC_OrgFarm	CEPIC	epic.205bxc1693c1@orgfarm.salesforce.com		✓	System Administrator
<input type="checkbox"/> Edit	Mike Quality Inspector	qmike	qualityinspectormike2025@sandbox1.com	Sales Representative	✓	Platform 2
<input type="checkbox"/> Edit	Sandbox 1 John Production Engineer	jsand	johnproductionengineer2025@sandbox1.com	Recycling Manager	✓	Platform 1
<input type="checkbox"/> Edit	User Integration	integ	integration@00d900000743smuay.com		✓	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User Security	sec	insightssecurity@00d900000743smuay.com		✓	Analytics Cloud Security User
<input type="checkbox"/> Edit	YELMANAMANDI SADVIK VARMA	sve	svemanam861@agentforce.com		✓	System Administrator



The screenshot shows the 'User Edit' page for 'John Production Engineer Sandbox 1'. The 'General Information' section contains fields for First Name, Last Name, Alias, Email, Username, Nickname, Title, Company, Department, and Division. The 'Role' is set to 'Recycling Manager', 'User License' is 'Salesforce Platform', and 'Profile' is 'Platform 1'. The 'Active' checkbox is checked. The 'Marketing User' checkbox is unchecked. The 'Data.com User Type' is set to 'None--'. The 'Data.com Monthly Addition Limit' is set to 300. The 'Accessibility Mode (Classic Only)' checkbox is unchecked.

Field	Value
First Name	John Production Engineer
Last Name	Sandbox 1
Alias	jsand
Email	svemanam@glam.in
Username	johnproductionengineer202
Nickname	User175396182756260628
Title	
Company	
Department	
Division	
Role	Recycling Manager
User License	Salesforce Platform
Profile	Platform 1
Active	✓
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>
Flow User	<input type="checkbox"/>
Service Cloud User	<input type="checkbox"/>
Site.com Contributor User	<input type="checkbox"/>
Site.com Publisher User	<input type="checkbox"/>
WDC User	<input type="checkbox"/>
Data.com User Type	None--
Data.com Monthly Addition Limit	300
Accessibility Mode (Classic Only)	<input type="checkbox"/>

The screenshot shows the Salesforce Setup interface with the 'Users' section selected. The 'User Edit' form for 'Quality Inspector Mike' is displayed. The form includes fields for First Name, Last Name, Alias, Email, Username, Nickname, Title, Company, Department, and Division. The 'Role' is set to 'Sales Representative', 'User License' is 'Salesforce Platform', and 'Profile' is 'Platform 2'. The 'Active' checkbox is checked. The 'Marketing User' checkbox is unchecked. The 'Data.com User Type' is set to 'None'. The 'Data.com Monthly Addition Limit' is set to 300. The 'Accessibility Mode (Classic Only)' checkbox is unchecked.

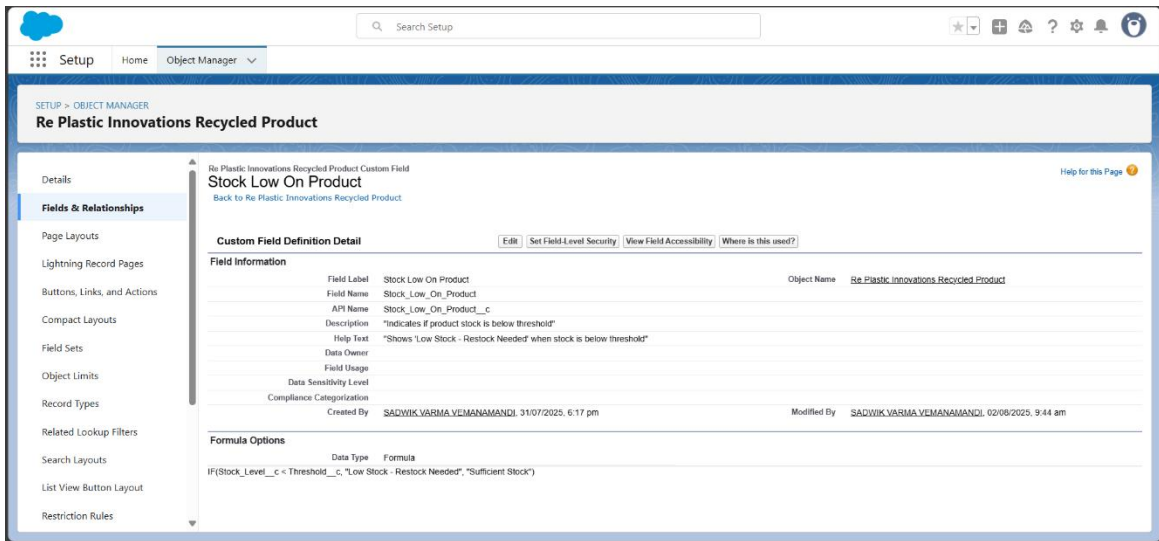
The screenshot shows the Salesforce Setup interface with the 'Users' section selected. The 'User Edit' form for 'Plant Manager Albert' is displayed. The form includes fields for First Name, Last Name, Alias, Email, Username, Nickname, Title, Company, Department, and Division. The 'Role' is set to 'Warehouse Supervisor', 'User License' is 'Salesforce Platform', and 'Profile' is 'Platform 3'. The 'Active' checkbox is checked. The 'Marketing User' checkbox is unchecked. The 'Data.com User Type' is set to 'None'. The 'Data.com Monthly Addition Limit' is set to 300. The 'Accessibility Mode (Classic Only)' checkbox is unchecked.

4. Data Integrity Through Formula Fields & Validation Rules

To maintain impeccable data quality and provide instant insights, we implemented:

A. Formula Field

- Stock_Status__c (Text formula on Recycled Product):
- IF(Stock_Level__c < Threshold__c,
"Low Stock - Restock Needed",
"Stock Sufficient"
)



This real-time indicator displays the stock health directly on product records without manual intervention.

B. Validation Rules

- **Positive Waste Weight**
 1. **Object:** Plastic Waste
 2. **Rule Name:** Valid_Waste_Weight
 3. **Formula:** Weight__c <= 0
 4. **Error Message:** “Waste weight must be greater than zero.”
- **No Future Collection Date**
 1. **Object:** Plastic Waste
 2. **Rule Name:** Future_Date_Collection
 3. **Formula:** Collection_Date__c > TODAY()
 4. **Error Message:** “Collection Date cannot be in the future.”
- **Minimum Order Quantity**
 1. **Object:** Order
 2. **Rule Name:** Check_Quantity_Not_Zero
 3. **Formula:** Quantity__c <= 0
 4. **Error Message:** “Order quantity must be at least one.”
- **Non-Negative Stock**
 1. **Object:** Recycled Product
 2. **Rule Name:** Prevent_Negative_Stock
 3. **Formula:** Stock_Level__c < 0
 4. **Error Message:** “Stock level cannot be negative.”

Setup

HomeObject Manager

Search Setup

StarAddShareHelpUser

Setup > OBJECT MANAGER

Re Plastic Innovations Order

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Re Plastic Innovations Order Validation Rule

Back to Re Plastic Innovations Order

Help for this Page

Validation Rule Detail

Rule Name

Check_Quantity_Not_Zero

Edit

Clone

Active

✓

Error Condition Formula

Quantity__c <= 0

Error Message

"Quantity must be greater than zero."

Error Location

Quantity

Description

"Ensures quantity is greater than zero"

Created By

SADWIK VARMA VEMANAMANDI

31/07/2025, 6:28 pm

Modified By

SADWIK VARMA VEMANAMANDI

31/07/2025, 6:28 pm

Edit

Clone

Re Plastic Innovations

Re Plastic Innovations Plastic W...Re Plastic Innovations Recyclin...Re Plastic Innovations OrdersRe Plastic Innovations Recycled...Re Plastic Innovations Restock ...

Search...

StarAddShareHelpUser

Re Plastic Innovations Recycled Product

Test Plastic Order Record

New ContactEditNew Opportunity

Related

Details

Recycled Product Name

Test Plastic Order Record

Owner

SADWIK VARMA VEMANAMANDI

Stock Level

70

Threshold

100

Price

\$600.00

Stock Low On Product

Low Stock - Restock Needed

Created By

SADWIK VARMA VEMANAMANDI

03/08/2025, 3:18 pm

Last Modified By

SADWIK VARMA VEMANAMANDI

03/08/2025, 3:18 pm

Activity

Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

No activities to show.

Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

Re Plastic Innovations

Re Plastic Innovations Plastic W...Re Plastic Innovations Recyclin...Re Plastic Innovations OrdersRe Plastic Innovations Recycled...Re Plastic Innovations Restock ...

Search...

StarAddShareHelpUser

Re Plastic Innovations Order

RPO-0019

New ContactEditNew Opportunity

Related

Details

Order ID

RPO-0019

Owner

SADWIK VARMA VEMANAMANDI

Customer

ABC Pvt Ltd

Recycled Product

Test Plastic Order Record

Quantity

5

Delivery Date

06/08/2025

Created By

SADWIK VARMA VEMANAMANDI

03/08/2025, 3:19 pm

Last Modified By

SADWIK VARMA VEMANAMANDI

03/08/2025, 3:19 pm

Activity

Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

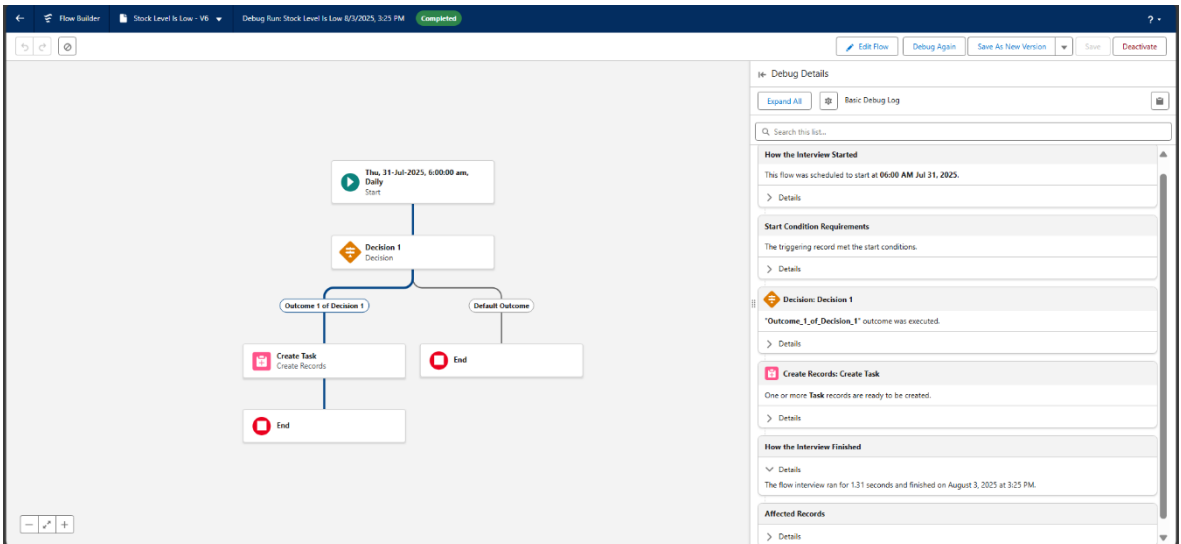
No activities to show.

Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.

7. Optional Scheduled Flow for Inventory Audit

Designed a daily 6:00 AM batch Flow that scans all **Recycled Products** below threshold, bulk-creates **Restock Requests**, and sends a consolidated summary email to leadership.



The screenshot shows a CRM record page for 'Re Plastic Innovations Recycled Product' with the title 'Test Plastic Order Record'. The 'Details' tab is active, showing fields for 'Recycled Product Name' (Test Plastic Order Record), 'Stock Level' (65), 'Threshold' (100), 'Price' (\$600.00), and 'Stock Low On Product' (Low Stock - Restock Needed). The 'Owner' is SADWIK VARMA VEMANAMANDI. The 'Created By' and 'Last Modified By' are also SADWIK VARMA VEMANAMANDI, with timestamps of 03/08/2025, 3:18 pm and 03/08/2025, 3:19 pm respectively. The right sidebar shows the 'Activity' section with filters for 'All time', 'All activities', and 'All types'. There are two 'Upcoming & Overdue' tasks: 'Please Look in this Stock Is Low...' with a 'No due date' and 'You have an upcoming task' message. A 'View More' button is at the bottom of the activity list.

Re Plastic Innovations
Re Plastic Innovations Plastic W...
Re Plastic Innovations Recyclin...
Re Plastic Innovations Orders
Please Look in this Stock Is...
More

★
+
🏠
?
⚙️
🔔
👤

Task
Please Look in this Stock Is Low Fill The Stock ASAP

✓ Mark Complete
Edit Comments
Change Date
Create Follow-Up Task

Name
Related To
Test Plastic Order Record

Details

Related

Assigned To

SADWIK VARMA VEMANAMANDI

Status

In Progress

Subject

Please Look in this Stock Is Low Fill The Stock ASAP

Name

Due Date

Related To

Test Plastic Order Record

Priority

High

Last Modified By

OrgFarm EPIC, 03/08/2025, 3:23 pm

Created By

OrgFarm EPIC, 03/08/2025, 3:23 pm

Comments

8. Apex-Driven Automations:

- **InventoryManager.processOrderStock:** Instantly reduces stock quantities after new orders, spawns restock request records and tasks, and calls **EmailNotificationHelper** for real-time email alerts.
- **InventoryManager.processRestockApproval:** Upon restock approval, replenishes inventory and confirms via email.
- **Triggers:** Applied to **Order__c** (after insert) and **Restock_Request__c** (after update) to invoke these processes in bulk-safe fashion.

File • Edit • Debug • Test • Workspace • Help

InventoryManager.apxc
UpdateStockAfterOrder.apxc
UpdateStockAfterRestockApproval.apxc
EmailNotificationHelper.apxc
InventoryManagerTest.apxc

Code Coverage: None
API Version: 64
Run Test
Go To

```

1  @isTest
2  public class InventoryManagerTest {
3      @testSetup
4      static void setupTestData() {
5          // Create a product with initial stock of 50
6          Re_Plastic_Innovations_Recycled_Product__c product = new Re_Plastic_Innovations_Recycled_Product__c(
7              Stock_Level__c = 50,
8              Threshold__c = 10
9          );
10         insert product;
11         // Create orders
12         List<Re_Plastic_Innovations_Order__c> orders = new List<Re_Plastic_Innovations_Order__c>{
13             new Re_Plastic_Innovations_Order__c(Recycled_Product__c = product.Id, Quantity__c = 20), // Enough stock
14             new Re_Plastic_Innovations_Order__c(Recycled_Product__c = product.Id, Quantity__c = 40) // Not enough stock
15         };
16         insert orders;
17     }
18 }

```

Logs
Tests
Checkpoints
Query Editor
View State
Progress
Problems

Status
Test Run

TestRun @ 4:44:34 pm
InventoryManagerTest
testProcessOrderStock
testProcessRestockApproval

Enqueued Time
Duration
Failures
Total

0
2
0
2

Overall Code Coverage

Class	Percent	Lines
Overall	100%	
EmailNotificationHelper	100%	10/10
InventoryManager	100%	37/37
UpdateStockAfterOrder	100%	2/2
UpdateStockAfterRestockApproval	100%	8/8

Example Workflow: Coastal Cleanup to Ocean-Safe Coasters

Follow these straightforward steps to see the automation in action:

1. Log Plastic Waste:

- Navigate to the **Plastic Waste** tab and click **New**.
- Enter **Weight** = 50, **Type** = HDPE, **Collection Date** = today's date, **Status** = Collected.
- Select **Harbor Recycling Hub** in the **Recycling Center** lookup and click **Save**.

2. Verify Center Assignment:

- Open the new waste record and confirm **Status** shows **Collected** and **Recycling Center** is populated.
- Change **Status** to **Processing** and save.

3. Create Recycled Product:

- Go to the **Recycled Products** tab and click **New**.
- Fill **Name** = Ocean-Safe Coasters, **Stock Level** = 50, **Threshold** = 20, **Price** = ₹65.
- Click **Save** and verify the **Stock Status** formula field reads **Stock Sufficient**.

4. Place an Order:

- Open the **Orders** tab and select **New**.
- Choose a customer account, set **Recycled Product** = Ocean-Safe Coasters, **Quantity** = 30, **Delivery Date** = 3 days from today.
- Click **Save**.
- Confirm the product's **Stock Level** now shows **20** and **Stock Status** reads **Stock Sufficient**.

Re Plastic Innovations

Search...

Re Plastic Innovations Plastic Wastes

Recently Viewed

1 item • Updated 2 minutes ago

Plastic Waste Name

1 RPIPW-0004

Information

New Re Plastic Innovations Recycling Center

Required Information

Information

Re Plastic Innovations Recycling Center

Harbor Recycling Hub

Location

Latitude 17.6868 Longitude 83.2185

Capacity 2,000.00

Owner

SADWIK VARMA VEMANAMANDI

Cancel Save

Cancel Save & New Save

Re Plastic Innovations

Search...

Re Plastic Innovations Plastic Wastes

RPIPW-0005

Related Details

Plastic Waste Name

RPIPW-0005

Weight 50.00

Type HDPE

Collection Date 03/08/2025

Status Processing

Recycling Center

Harbor Recycling Hub

Location

Latitude 17.6868 Longitude 83.2185

Created By

SADWIK VARMA VEMANAMANDI, 03/08/2025, 4:19 pm

Owner

SADWIK VARMA VEMANAMANDI

Information

Plastic Waste Name

RPIPW-0005

Weight

50.00

Type

HDPE

Collection Date

03/08/2025

Status

Processing

Recycling Center

Harbor Recycling Hub

Location

Latitude 17.6868 Longitude 83.2185

Created By

SADWIK VARMA VEMANAMANDI, 03/08/2025, 4:20 pm

Owner

SADWIK VARMA VEMANAMANDI

Cancel Save & New Save

Re Plastic Innovations

Search...

Re Plastic Innovations Plastic Wastes

Recently Viewed

1 item • Updated a minute ago

Plastic Waste Name

1 RPIPW-0004

Information

New Re Plastic Innovations Recycling Center

Required Information

Information

Re Plastic Innovations Recycling Center

Harbor Recycling Hub

Location

Latitude 17.6868 Longitude 83.2185

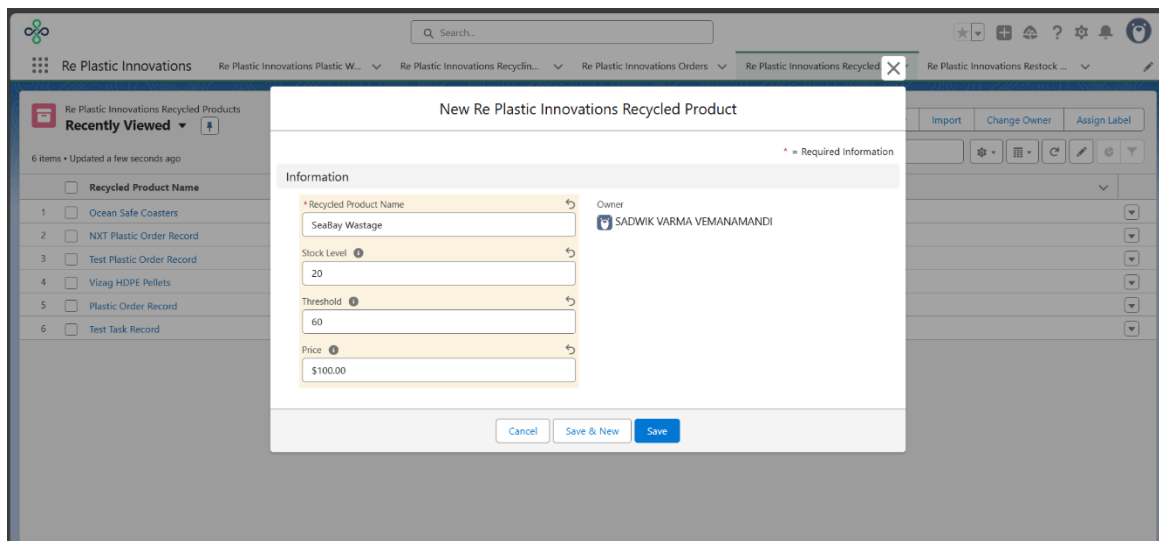
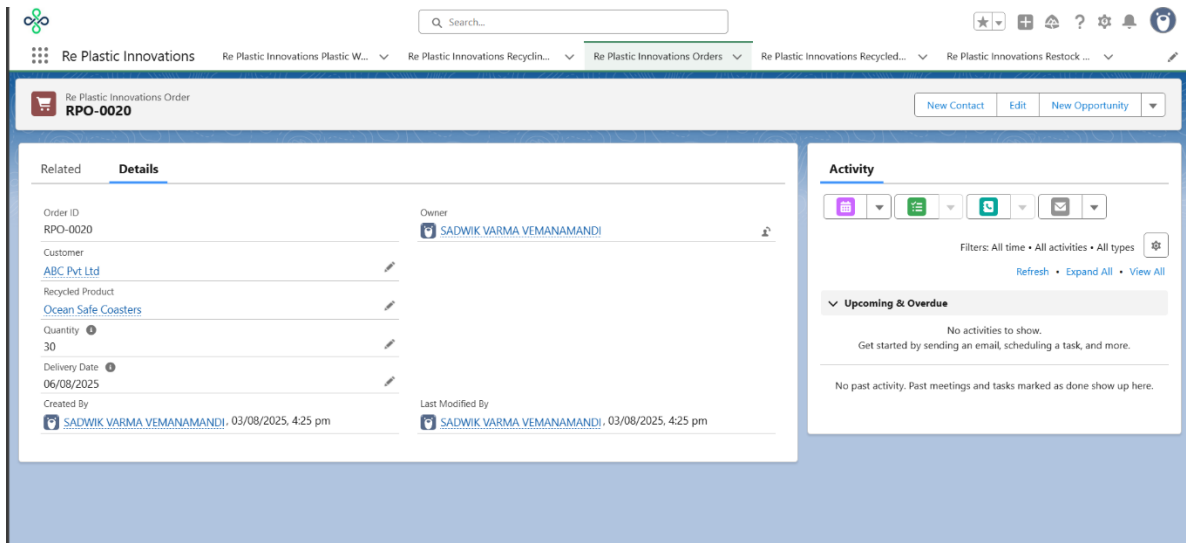
Capacity 2,000.00

Owner

SADWIK VARMA VEMANAMANDI

Cancel Save

Cancel Save & New Save



5. Test Low-Stock Automation (Edge case):

- Create another order for **Quantity = 35** and save.
- Return to the Ocean-Safe Coasters record and confirm:
 - **Stock Level = 15**
 - **Stock Status = Low Stock - Restock Needed**
- In the **Related** list, verify a new **Restock Request** appears with **Requested Quantity = 5**.
- Open the **Tasks** tab and confirm a high-priority task titled **“Please look into low stock for Ocean-Safe Coasters”** is assigned to the product owner.
- Check your email for the automated alert labeled **“New Restock Request Created”** with the new request ID.

6. Approve and Replenish

- Click the Restock Request link in the related list, then click **Edit**.
- Change **Status** to **Approved** and click **Save**.
- Confirm the Ocean-Safe Coasters record now shows **Stock Level** = 20.
- Look for the automated approval email with subject “**Approved: [Request ID]**”, confirming the stock update.

Conclusion

By fusing Salesforce’s declarative tools with strategic Apex logic, RePlastix Innovations achieved a robust, end-to-end recycling workflow. Manual bottlenecks were eliminated, data integrity strengthened, and stakeholders now have clear, real-time insights—positioning the organization for future growth and technological integration.

Future Scope

1. **Digital Community Portal:** Customers view their recycling impact and place orders.
2. **Mobile Data Capture:** Field agents use a mobile app to log waste and scan product QR codes.
3. **Einstein Forecasting:** Predict restock needs using historical data and machine learning.
4. **Multi-Channel Alerts:** SMS/WhatsApp integration for urgent notifications.
5. **IoT Sensor Integration:** Automate stock updates from real-time tank-level sensors.

The End