

REPLASTIX INNOVATIONS: TRANSFORMING PLASTIC WASTE INTO SUSTAINABLE SOLUTIONS THROUGH SALESFORCE INTEGRATION

DESCRIPTION

Replastix Innovations, a leader in plastic waste management, has adopted the Salesforce platform to automate and streamline key business operations. These include recycling tracking, order management, inventory monitoring, and reporting. The system introduces automation workflows, secure role-based data access, and real-time alerts to improve efficiency and sustainability.

ABSTRACT

This project focuses on integrating Salesforce into the operations of Replastix Innovations, a company involved in plastic waste management. The aim is to automate and streamline business processes such as plastic waste tracking, inventory monitoring, order management, and reporting using Salesforce tools and features.

By implementing role-based access, process automation, and real-time reporting, the system improves data security, reduces manual effort, and ensures efficient communication across departments. The use of tools like Flow Builder, Apex, and dashboards supports smooth operations and helps the organization achieve its sustainability goals effectively.

OBJECTIVES

The objective of this project is to enhance the operations of Replastix Innovations by integrating Salesforce features to automate workflows and manage data efficiently. This includes:

- Automating the tracking of plastic waste from collection to recycling
- Managing recycled product inventory with automatic stock level monitoring

- Creating restock tasks when stock falls below threshold limits
- Streamlining order processing with real-time updates and delivery tracking
- Implementing role-based access control for secure data management
- Sending automated email notifications to relevant departments
- Using Flow Builder and Apex to automate approvals and actions
- Generating detailed reports and dashboards for performance analysis

TECHNOLOGY DESCRIPTION:

1. Salesforce Platform

Salesforce is a cloud-based CRM platform used to build custom applications for managing business operations. It provides tools for creating objects, automating processes, and managing data securely.

2. Custom Objects and Fields

Custom objects were created to store data related to plastic waste, recycling centers, products, orders, and restock requests. Various field types like picklists, numbers, geolocation, and lookups were used for data accuracy and relationships.

3. Flow Builder

Flow Builder was used to automate workflows such as task creation when stock is low, sending email alerts, and updating records. It allows creating visual flows without writing code.

4. Apex

Apex is Salesforce's programming language used to write logic that couldn't be achieved through point-and-click tools. It was used for handling record approvals and complex automation tasks.

5. Roles and Profiles

Roles and profiles were set up to control user access to data. This ensures that users only see and edit the information relevant to their role, improving security and user experience.

6. Reports and Dashboards

Salesforce reports and dashboards were created to visualize data such as inventory levels, orders, and recycling progress. These tools help monitor performance and support better decision-making.

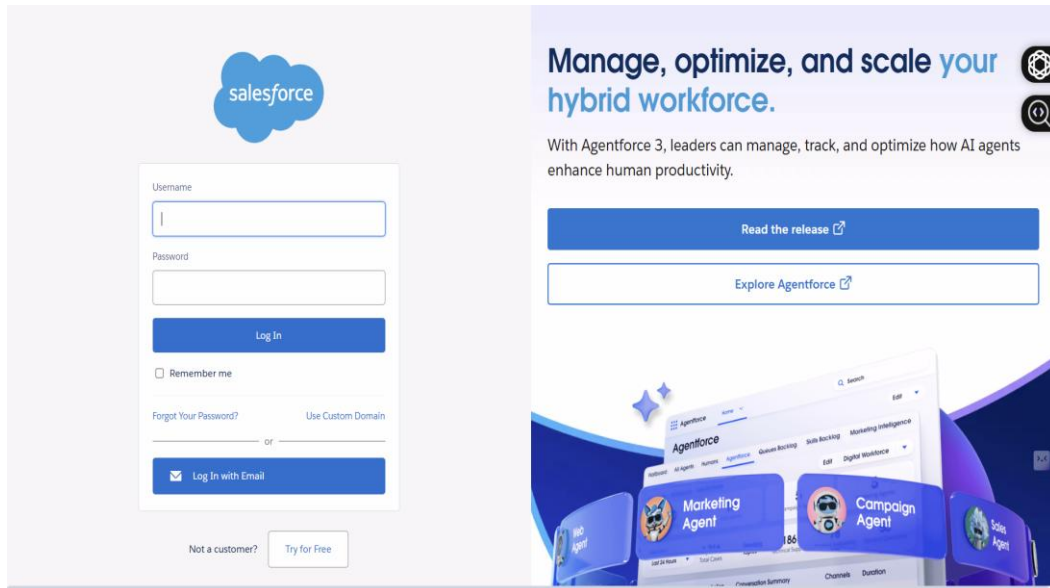
7. Email Alerts

Automated email notifications were configured to inform the relevant teams about low stock, order updates, or restock approvals. This improved communication and reduced delays.

EXECUTION OF PROJECT PHASES


1. Create and login to developer account

First we have to create a salesforce developer account. After that go to login page and start doing the project



2. Design

A data model was designed using custom Salesforce objects like Plastic_Waste, Recycling_Center, Recycled_Product, Order, and Restock_Request. Relationships between objects were planned using lookups. The workflows to automate stock alerts, order updates, and notifications were mapped out clearly.

<div>  Object Manager </div> <div> <input type="text" value="re play"/> Schema Builder Create </div>					
5 Items, Sorted by Label					
LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Re Plastic Innovations Order	Re_Plastic_Innovations_Order__c	Custom Object		7/10/2025	✓
Re Plastic Innovations Plastic Waste	Re_Plastic_Innovations_Plastic_Waste__c	Custom Object	Tracks plastic waste collected and processed	7/10/2025	✓
Re Plastic Innovations Recycled Product	Re_Plastic_Innovations_Recycled_Product__c	Custom Object		7/11/2025	✓
Re Plastic Innovations Recycling Center	Re_Plastic_Innovations_Recycling_Center__c	Custom Object		7/10/2025	✓
Re Plastic Innovations Restock Request	Re_Plastic_Innovations_Restock_Request__c	Custom Object		7/10/2025	✓

3. Object and Field Setup

Custom objects and fields were created in Salesforce Setup. Each object had specific fields to store data, such as Weight, Type, Stock_Level, and Threshold. Lookup fields

were configured to connect related records across different objects.

The screenshot shows the Salesforce Setup interface for the 'Re Plastic Innovations Plastic Waste' object. The 'Fields & Relationships' tab is selected, displaying a list of 10 fields. The left sidebar contains a navigation menu with options like 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, and Scoping Rules. The main content area shows the following fields:

Field Name	Field Label	Field Type	Required	Relationship
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)	✓	
Re Plastic Innovations Plastic Waste	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, 0)		

4. Automation with Flow Builder

Flow Builder was used to automate key actions:

Creating a task when stock drops below a threshold

Updating the order object with current stock status

Sending approval requests for restocking

Triggering emails to notify warehouse managers after approval

These flows reduced manual work and ensured timely responses.

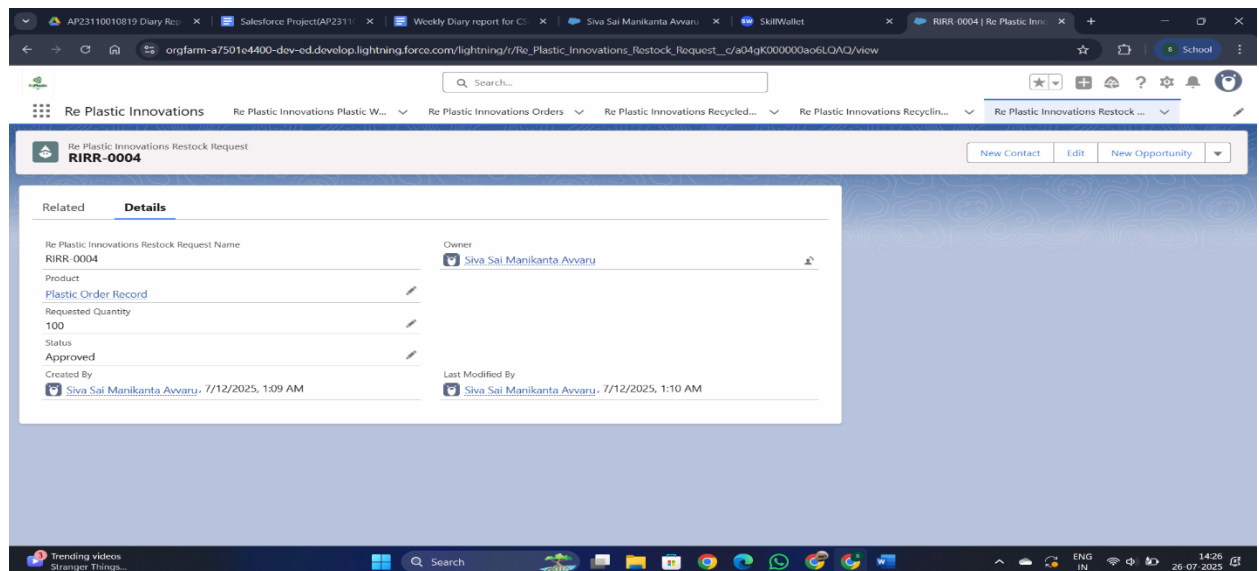
6. Role-Based Security Setup

Profiles and roles were defined to manage access levels for users such as warehouse staff, managers, and admin users. Field-level security and permission sets were configured to protect sensitive data and ensure only authorized users could perform certain actions.

Edit Clone	Custom: Inventory Management	Inventory Management	<input type="checkbox"/>
Edit Clone	Cross Org Data Proxy User	XOrg Proxy User	<input type="checkbox"/>
Edit Del ...	Custom: Marketing Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Del ...	Custom: Sales Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Del ...	Custom: Support Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Clone	Customer Community Login User	Customer Community Login	<input type="checkbox"/>
Edit Clone	Customer Community Plus Login User	Customer Community Plus Login	<input type="checkbox"/>

7. Report and Dashboard Development

Reports were built to show real-time data on plastic waste collected, stock availability, order statuses, and recycling center performance. Dashboards were used to give management a quick overview of key performance indicators and sustainability goals.



Re Plastic Innovations Restock Request
RIRR-0004

Related **Details**

Re Plastic Innovations Restock Request Name
RIRR-0004

Owner
Siva Sai Manikanta Avvaru

Product
Plastic Order Record

Requested Quantity
100

Status
Approved

Created By
Siva Sai Manikanta Avvaru - 7/12/2025, 1:09 AM

Last Modified By
Siva Sai Manikanta Avvaru - 7/12/2025, 1:10 AM

8. Testing and Validation

Each component was tested to ensure it worked as expected. Flow logic was tested with different input values to verify correct task creation and notifications. Apex classes were validated for correct execution and error handling. User profiles were tested to confirm data access control.

Re Plastic Innovations Recycled Product
test 1

Related **Details**

Re Plastic Innovations Recycled Product Name
test 1

Owner
Siva Sai Manikanta Avvaru

Stock Level
50

Threshold
150

Price
1,000,000

Stock Low On Product
Low Stock - Restock Needed

Created By
Siva Sai Manikanta Avvaru - 7/11/2025, 7:29 AM

Last Modified By
Siva Sai Manikanta Avvaru - 7/11/2025, 7:29 AM

Activity

Filters: All time • All activities • All types

Refresh • Expand All • View All

Upcoming & Overdue

> ☐ Please Look in this Stock Is Low ... No due date
You have an upcoming task

> ☐ Please Look in this Stock Is Low ... No due date
You have an upcoming task

[View More](#)

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

9. Deployment

After successful testing , the complete solution was deployed to the production environment. Users were trained on how to use the system for tracking waste, managing orders, and viewing reports.

CONCLUSIONS

The implementation of Salesforce automation at RePlastix Innovations demonstrated how technology can be effectively used to enhance operational efficiency in the plastic recycling sector. The project successfully addressed key challenges such as stock monitoring, delayed task assignment, and inter-department communication gaps.

By automating task creation, approval processes, and email notifications, the organization was able to reduce manual errors and improve response time. The use of dashboards and reports provided better visibility into inventory and workflow performance, supporting data-driven decision-making.

The project also highlighted the importance of secure data access, which was achieved through well-defined roles and profiles within Salesforce. This ensured that users interacted only with relevant information, improving system usability and data protection.

Looking forward, this model can be extended further by integrating IoT sensors for real-time inventory updates or connecting external vendor systems for auto-replenishment. With continued innovation, such solutions can contribute significantly to sustainable business operations and digital transformation in the recycling industry.