

Materials Management App

PowerApp Documentation

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Introduction

This document has the purpose to explain the different parts of the Material Management App, its code and functionalities, for understanding and replication purposes. The different parts of the architecture solution are show below.

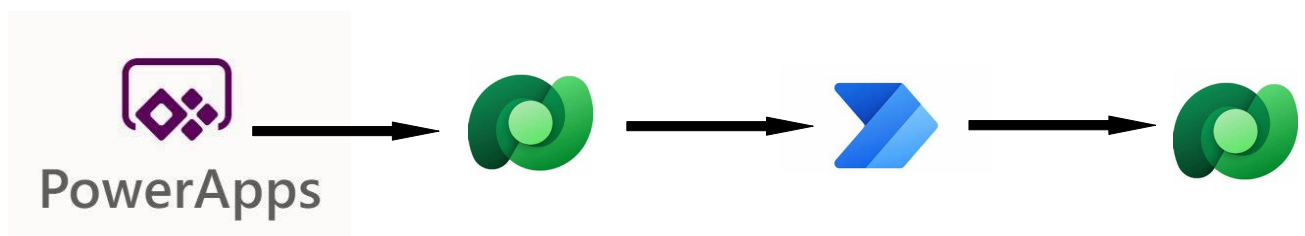


Picture 1: Materials Management Main Layout

Architecture

The composition of the architecture starts in the PowerApp, The travel requests are added to different Dataverse tables and are represented in the differnt screens. After any adding or modification of the Orders Table, a flow is activated and a new location updates the material pointed in the order's row.

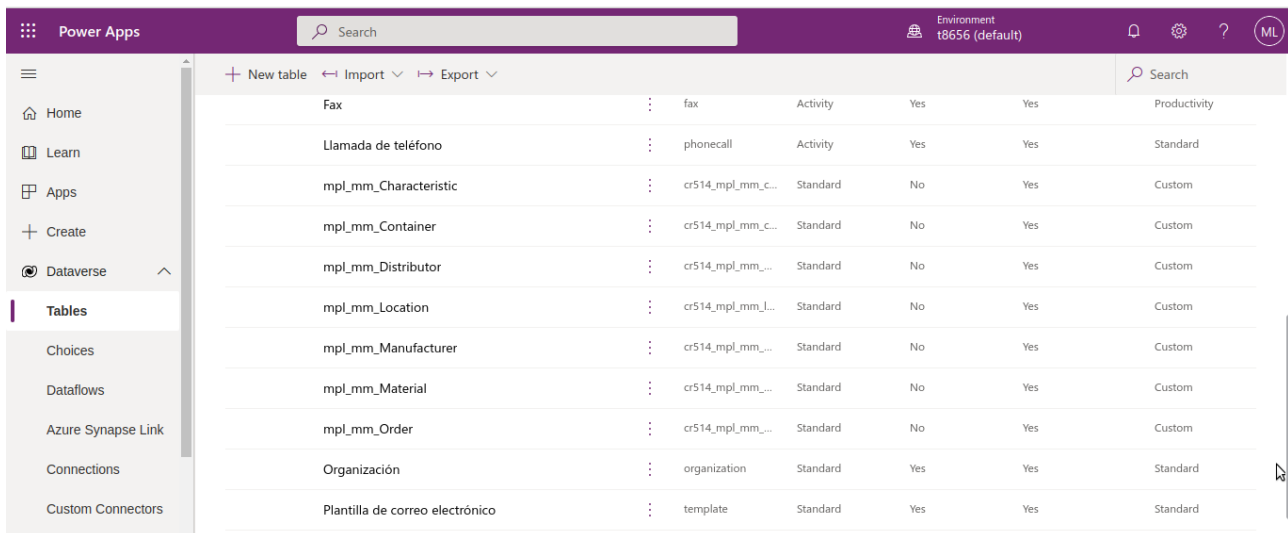
A full diagram of the solution is shown below.



Picture 2: Materials Manager App solution Architecture

Dataverse Database

The Materials Management App solution will have a Dataverse database as a Data storage and manipulation, a sample of the database is shown below.



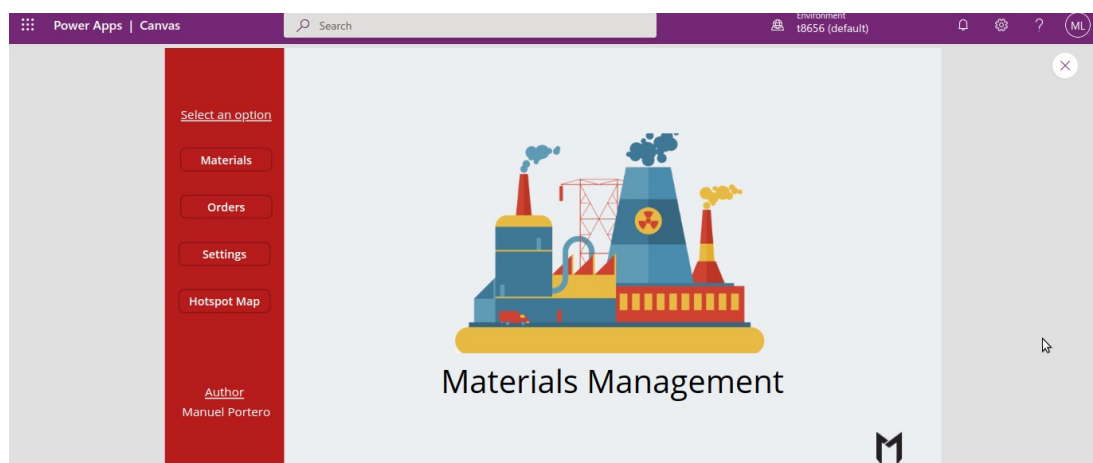
The screenshot shows the Power Apps interface with the Dataverse section selected in the left-hand navigation pane. The 'Tables' tab is active, displaying a list of tables in the Dataverse database. The table list includes columns for the table name, a description, the table type, and other attributes. The tables listed are: Fax, Llamada de teléfono, mpl_mm_Characteristic, mpl_mm_Container, mpl_mm_Distributor, mpl_mm_Location, mpl_mm_Manufacturer, mpl_mm_Material, mpl_mm_Order, Organización, and Plantilla de correo electrónico.

Table Name	Description	Type	Other Attributes
Fax	fax	Activity	Yes, Yes, Productivity
Llamada de teléfono	phonecall	Activity	Yes, Yes, Standard
mpl_mm_Characteristic	cr514_mpl_mm_c...	Standard	No, Yes, Custom
mpl_mm_Container	cr514_mpl_mm_c...	Standard	No, Yes, Custom
mpl_mm_Distributor	cr514_mpl_mm_...	Standard	No, Yes, Custom
mpl_mm_Location	cr514_mpl_mm_l...	Standard	No, Yes, Custom
mpl_mm_Manufacturer	cr514_mpl_mm_...	Standard	No, Yes, Custom
mpl_mm_Material	cr514_mpl_mm_...	Standard	No, Yes, Custom
mpl_mm_Order	cr514_mpl_mm_...	Standard	No, Yes, Custom
Organización	organization	Standard	Yes, Yes, Standard
Plantilla de correo electrónico	template	Standard	Yes, Yes, Standard

Picture 3: Dataverse database sample

Main Screen

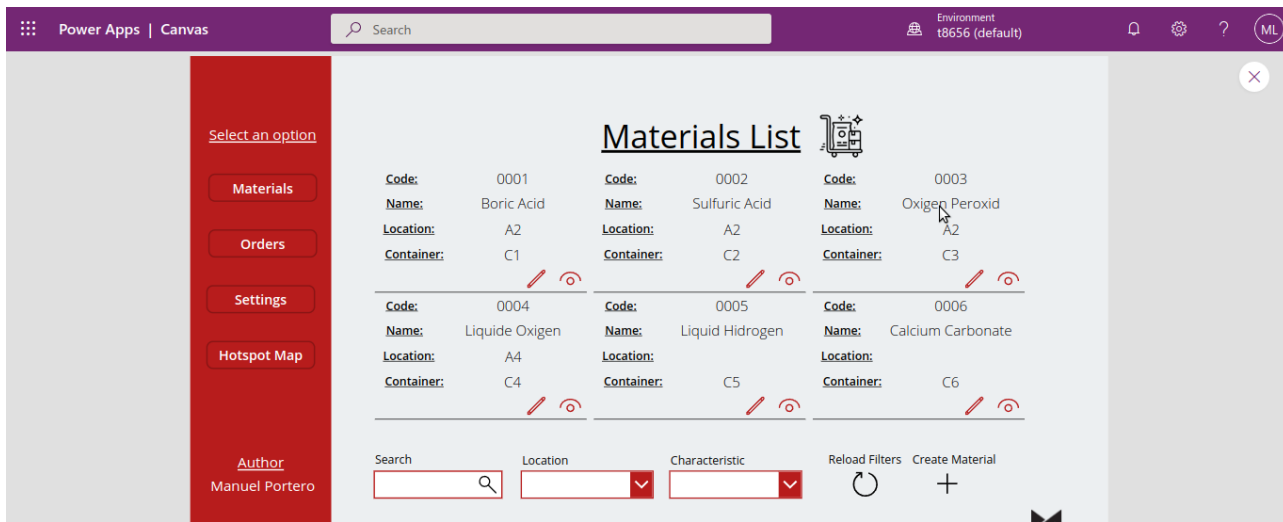
The main screen is composed by the main landscape picture and the navigation buttons to the others screens.



Picture 4: Materials Management App main Screen

Materials Screen

The Materials Screen has a Gallery displaying the Materials of the factory, a name search text input field, two dropdown filters and a reload button and a create button.



Picture 5: Materials Screen

The code of the materials gallery is the following one :

```
Filter(
    Search(
        mpl_mm_Materials;
        SearchTextInput8.Text;
        "cr514_code";
        "cr514_name"
    );
    If(
        LocationDropdown.Selected.Name = Blank();
        true;
        Location.Name = LocationDropdown.Selected.Name
    );
    If(
        CharacteristicDropdown.Selected.Name = Blank();
```

```

true;
Characteristic.Name = CharacteristicDropdown.Selected.Name
)
)

```

The code of the reload filters button is the following one :

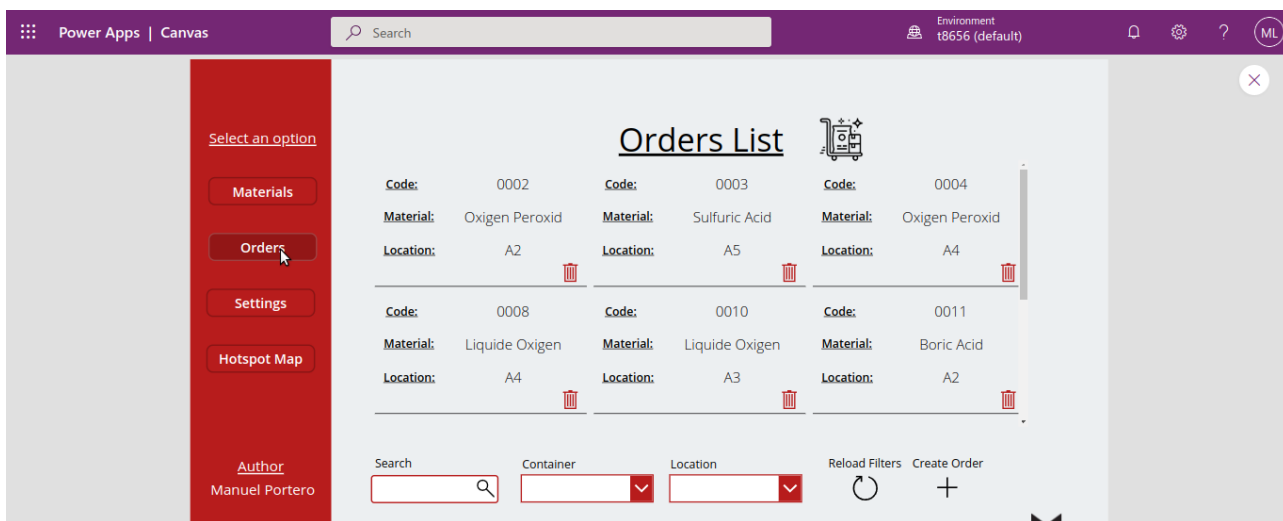
```

Reset(SearchTextInput8);;
Reset(LocationDropdown);;
Reset(CharacteristicDropdown);;
Notify(
    "Filters reseted successfully";
    Success
)

```

Orders Screen

The Orders Screen has a Gallery displaying the Orders of the factory, a name search text input field, two dropdown filters and a reload button and a create button.



Picture 5: Orders Screen

The Code of the Orders Gallery is the following one :

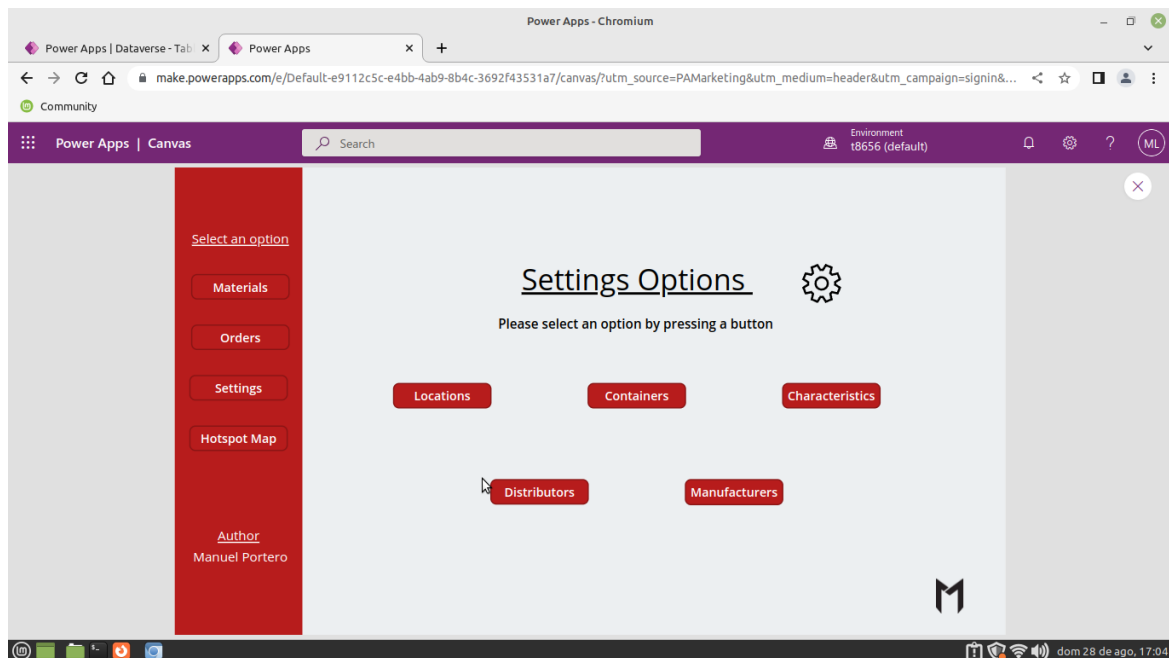
```
Filter(  
    Search(  
        mpl_mm_Orders;  
        OrdersTextInput.Text;  
        "cr514_code"  
    );  
    If(  
        ContainerDropdown2.Selected.Code = Blank();  
        true;  
        Code = ContainerDropdown2.Selected.Code  
    );  
    If(  
        LocationDropdown2.Selected.Name = Blank();  
        true;  
        Location = LocationDropdown2.Selected.Name  
    )  
)
```

The reload filters button is the following one :

```
Reset(OrdersTextInput);;  
Reset(ContainerDropdown2);;  
Reset(LocationDropdown2);;  
Notify(  
    "Filters reseted successfully";  
    Success  
)
```

Settings Screens

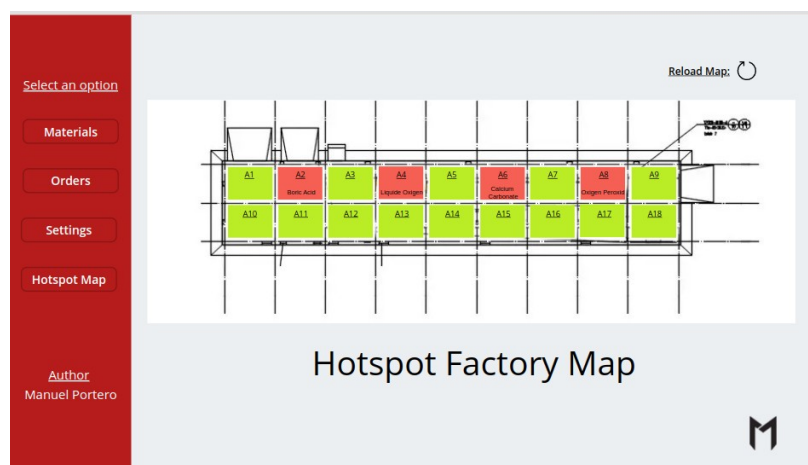
The settings screens are composed by a gallery, a text search input and a create button (not text search for location and containers).



Picture 6: Setting Screen

Hotspot Map Screen

The hotspot map screen, consist in a factory image map with 18 divisions on it. For each division a rectangle with the title of the Location area and a label with the material of the area (if apply) is setted. Each rectangle with change of color depending if the area is occupied for a material (red) or not (green). The reload Map button will refresh the mpl_mm_Materials table reloading the map too.



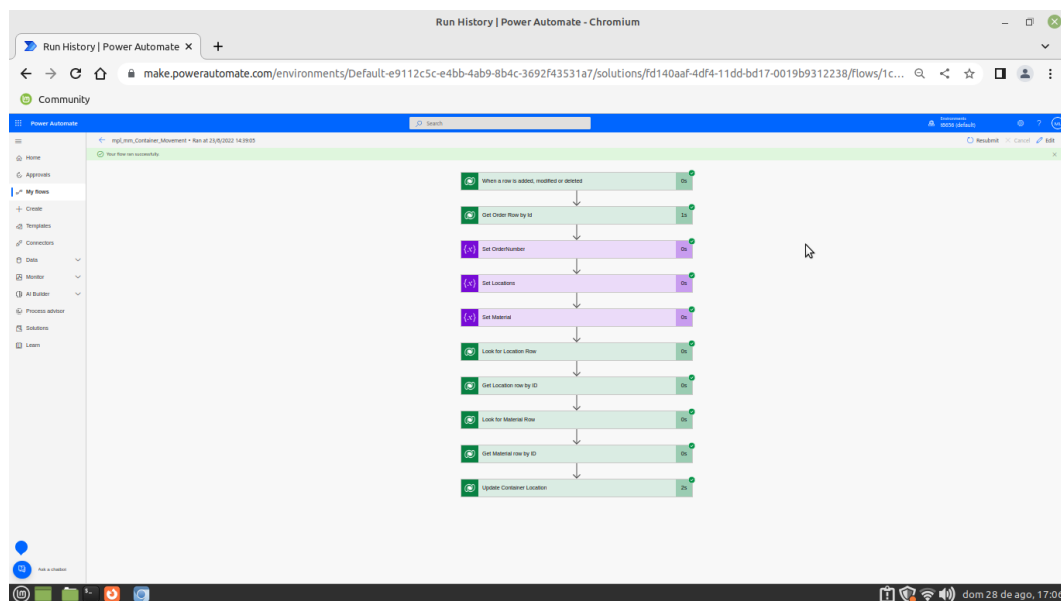
Picture 7: Setting Screen

The code of the Fill attribute for each rectangle is shown below:

```
If(LookUp(mpl_mm_Materials;Location.Name  
=<"<LocationNameString>";true);RGBA(244; 67; 54; 1);RGBA(174; 234; 0; 1))
```

Dataverse Flow

Every time a row is created in dataverse the materials table will be updated with the new order's location.



Picture 6: Dataverse flow

The flow will take the order list and search in Get Orders row by id taking all the row elements, after that the ordernumber, location and material will be setted with the Get Orders row by id outputs. The Look for Location row will list all the elements that match with the locations variable. The Get location row by id will take the first value output of the Look for Location row action.

Search

Undo

Look for Location Row

Table name:

Select columns:

Filter rows:

Sort By:

Expand Query:

Fetch Xml Query:

Row count:

Skip token:

Partition ID:

Hide advanced options

Get Location row by ID

Table name:

Row ID:

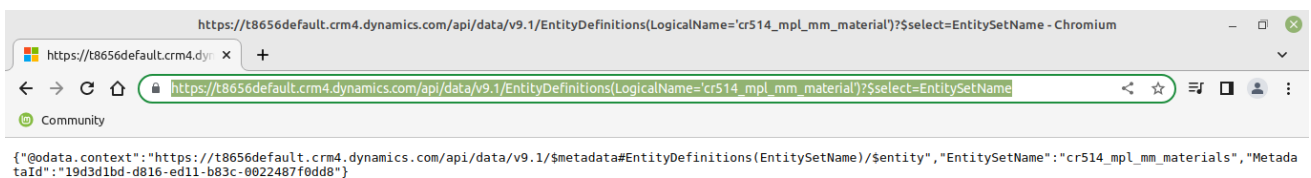
Show advanced options

Picture 7: Look for Location action

The Look Material row and the get material row by id will perform the same actions than Look for Location row and get location row by id.

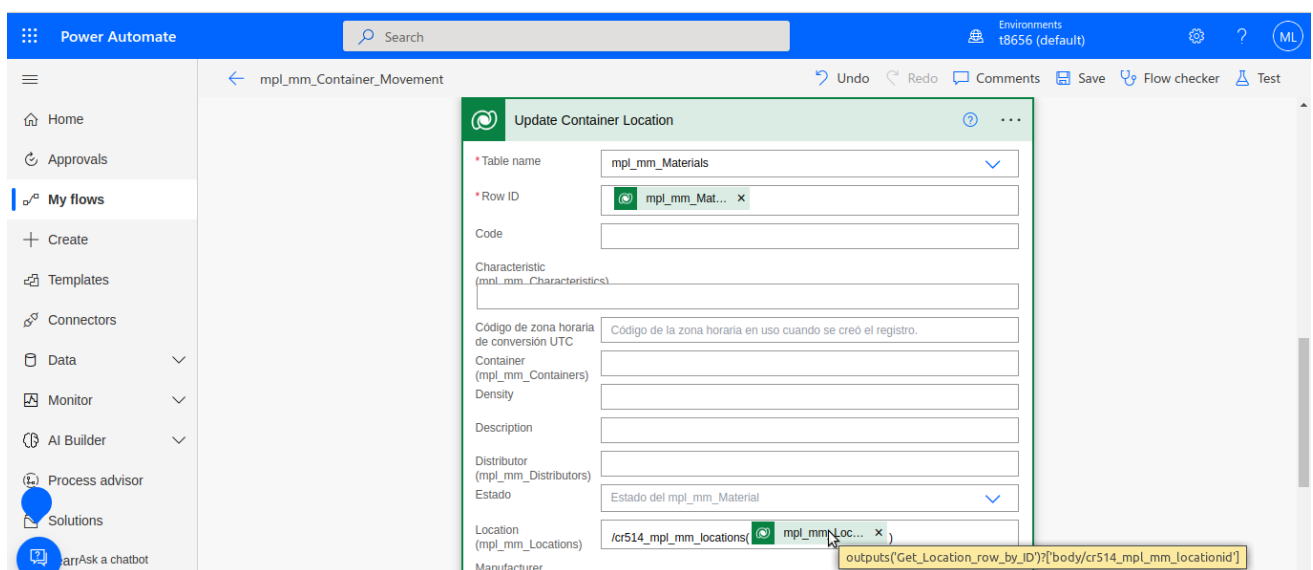
We get the EntityName of the mpl_mm_Materials table calling the dynamics API putting this string in the browser (may be the developer would be to sign in in the powerapp tenant).

[https://t8656default.crm4.dynamics.com/api/data/v9.1/EntityDefinitions\(LogicalName='cr514_mpl_mm_material'\)?\\$select=EntitySetName](https://t8656default.crm4.dynamics.com/api/data/v9.1/EntityDefinitions(LogicalName='cr514_mpl_mm_material')?$select=EntitySetName)



Picture 8: Dynamics API query call

Finally the update actions will update the location setting in the place /EntitySetName(uniqueidentifierOfTheTable)



Picture 9: Update MaterialsAction

