



MAPLYTICS™ – User Manual



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### Introduction

Maplytics™ is a leading Certified for Microsoft Dynamics 365 (CfMD) geo-analytical mapping app. Maplytics empowers users across verticals with the power of Geographical Data Visualization, Optimized Routing, Automated Appointment Planning, Proximity Search, Heat Maps, Shape Overlay, Census data visualization and Territory Management to drive better sales, improve business processes and engage right customers at the right time.

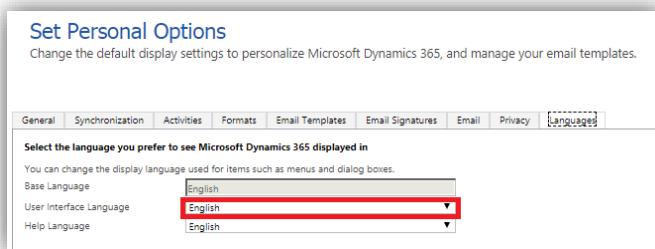
Maplytics is available for Microsoft Dynamics versions CRM 2013 and above and supports all deployment models of CRM On-Premise (IFD as well), CRM Online and Partner-hosted. It uses the API services provided by Bing maps. The following are the highlights of Maplytics:

- ✓ Ease of access
- ✓ Compatible with Dynamics 365 App for Phones and Tablets
- ✓ Multiple language support
- ✓ Plot multiple OOB & custom entities on map
- ✓ Area of Service
- ✓ Search nearby records with Proximity Search
- ✓ Auto Scheduling for multiple users
- ✓ Track field reps' activities with Check-In
- ✓ Custom icons for pushpins
- ✓ Multiple category on plot card
- ✓ PowerApps Component Framework
- ✓ Multiple categorization for single entity
- ✓ Multiple territories for a record
- ✓ Spider Cluster
- ✓ Building Marketing list
- ✓ Pie Charts and Column Charts in Heat Map
- ✓ Overlay
- ✓ Merged Plot and Route view
- ✓ Maplytics Security Template
- ✓ Point of Interest search
- ✓ Layer Menu
- ✓ Concentric Proximity search
- ✓ CRM / Dynamics 365 Customer Engagement
- ✓ Bulk geographies upload
- ✓ Shape operations
- ✓ Territory Management
- ✓ Auto-Territory Creation
- ✓ Draft Territories
- ✓ Census data visualization
- ✓ Support for CDS
- ✓ Data grid resizable
- ✓ Plot Saved Templates on individual records
- ✓ Configurable categorized color-coded pushpins
- ✓ Routing with multiple waypoints
- ✓ Along the Route search
- ✓ Ability to Save & Share Driving directions
- ✓ Sales analysis with Heat Maps
- ✓ Summary Card on Detail and Heat Map
- ✓ Configurable color for Heat Map measure
- ✓ Maplytics Dashboards with configurable queries
- ✓ Geocoding Confidence Rating
- ✓ Route Redirect for turn by turn navigation on mobiles and tablets
- ✓ Seamlessly integrated within Dynamics
- ✓ View travel distance on proximity search

### Language Support

Maplytics is a multi-language solution currently available in six different languages namely:

- English
- Spanish (Español)
- German (Deutsche)
- French (Français)
- Portuguese (Português)
- Turkish (Türk)
- Arabic (عربي)



Maplytics auto-detects the user language set in Dynamics CRM and sets its language accordingly.

To check user language set in Dynamics CRM, please go to **Settings > Options > Languages**

## Maplytics Configuration (Personalization)

Each user of Maplytics can customize Maplytics configuration according to their preference. The user can configure Zoom level, Current Location, default origin and destination and a couple of other settings like Map more, default summary grouping, etc. Please go to **Settings > Maplytics Configuration Details > Select Maplytics Configuration record for the required user (users added in Team Maplytics)> Set according to the preference**

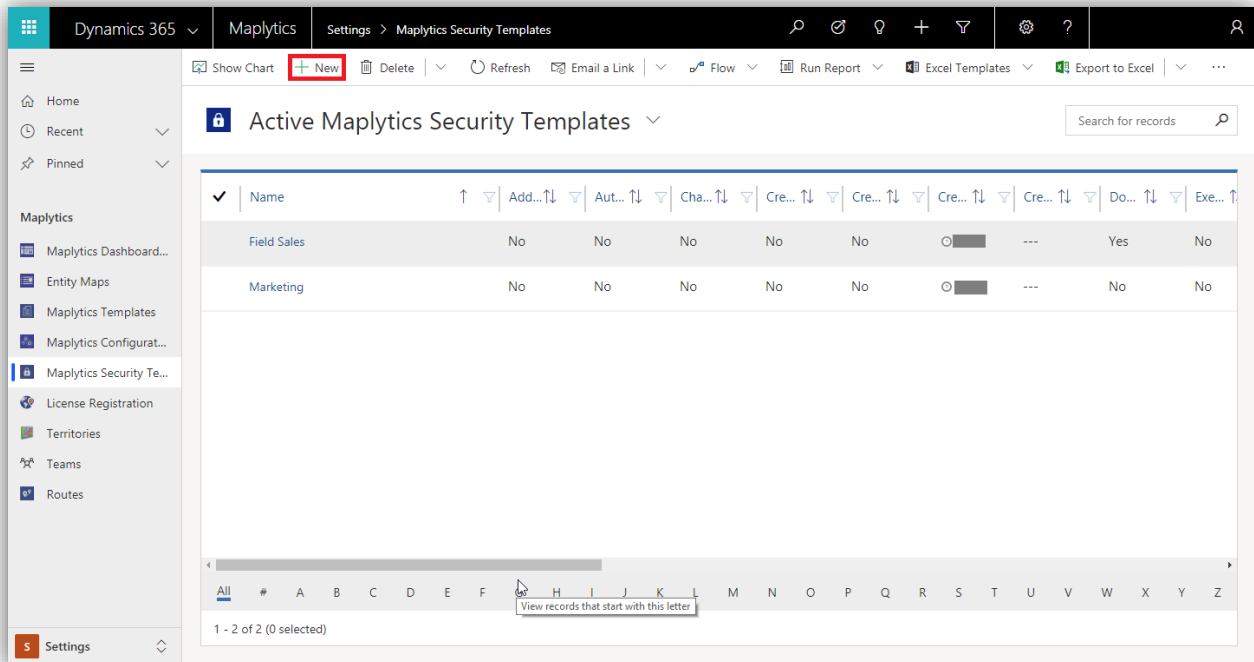
Refer to **‘Maplytics Configuration Details (Personalization)’** section of **Installation Manual** for a detailed description of personalization settings.

## Maplytics Security Template

System admin and Maplytics admin can provide selective access of Maplytics actions to the Maplytics users. They can select the required Mass actions & other actions in the list and save it as a Security template. They can further assign this template to the required users so as to provide the access of the selected actions in the template to the respective Maplytics users.

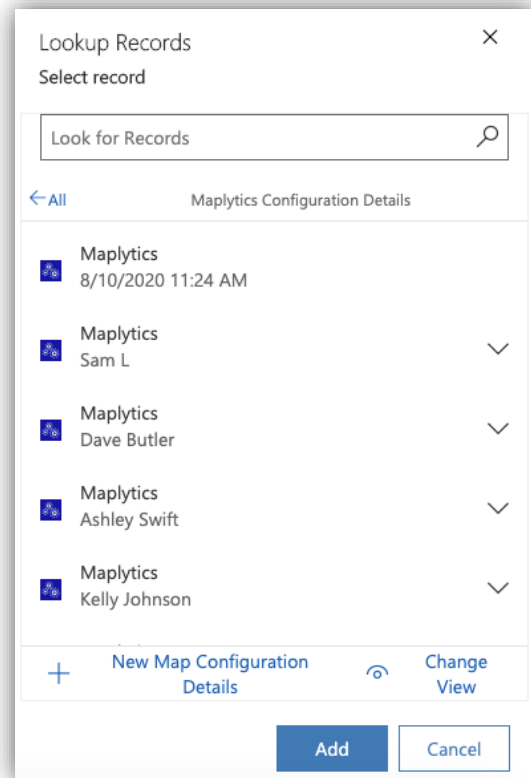
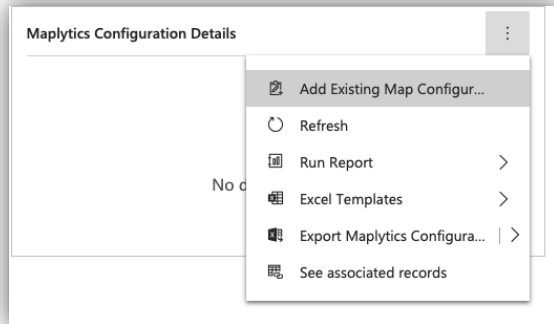
To create a Security Template,

**Go to the Maplytics App > Settings > Maplytics Security Templates > New > ‘General’ tab > Give a name and ‘save’ the template.**

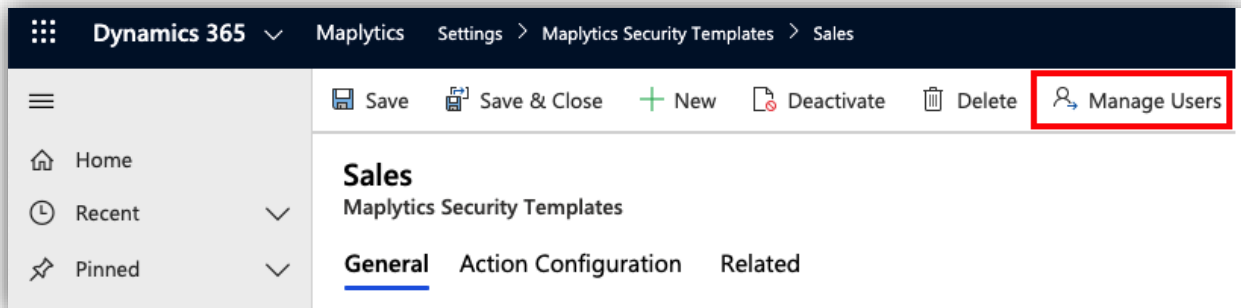


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To assign a template to the Maplytics users, Admins can add the Maplytics Configuration Detail records of the Maplytics users under the section of 'Maplytics Configuration Details', to whom the template has to be assigned.



In order to assign the Security Template to multiple users at once. Admins can also add teams/users using the button 'Manage users' from the Ribbon bar. They can also remove the required users/teams from the list. Thus, using 'Manage users' admins can easily manage the users assigned with any Security Template.



## Maplytics™ – User Manual

Admins can choose whether they want to assign the template to Users or Teams by adding them. They can also choose to remove the users/teams from the list. They can also see the list of teams and respective users added from those teams.

Maplytics - Manage Users

☒ Add
 ☐ Remove

Type
 

✓ Select Type  
Users  
Teams

Add

Maplytics - Manage Users

☒ Add
 ☐ Remove

Type
 

Users

✕ Dave Butler

✕ Gerard Smith

✕ William Anderson

Dave Butler  
 Kelly Johnson  
 Gerard Smith  
 William Anderson  
 Ashley Swift  
 John Pinto  
 Sam L

Add

Maplytics - Manage Users

☒ Add
 ☐ Remove

Type
 

Teams

✕ HR

✕ Maplytics

✕ Marketing

HR  
 IT  
 Maplytics  
 Marketing  
 orga5210b38  
 Sales

☒ User  
☒ Ashley Swift  
☒ Dave Butler  
☒ Gerard Smith  
☒ John Pinto  
☒ Kelly Johnson  
☒ Sam L  
☒ William Anderson

Maplytics  
 HR,Maplytics  
 Maplytics,Marketing  
 Maplytics

Page 1 / 1
 

20

 1 to 7 of 7

Add

Maplytics - Manage Users

☐ Add
 ☒ Remove

Type
 

Users

✕ Dave Butler

✕ Gerard Smith

Dave Butler  
 Kelly Johnson  
 Gerard Smith  
 William Anderson  
 Ashley Swift  
 John Pinto  
 Sam L

Remove

**Note: A Maplytics Security template can be assigned to the users belonging to any team, however, they should also exist into the Maplytics team.**



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Go to Action Configuration > Select the required actions to be made available to the users assigned with this template and save.

**Sales**  
Maplytics Security Templates

General
**Action Configuration**
Related

Mass Actions	
Select All Mass Actions	<input type="checkbox"/>
Change Owner	<input type="checkbox"/>
Manage Territory	<input type="checkbox"/>
Execute Workflow	<input type="checkbox"/>
Send Email	<input checked="" type="checkbox"/>
Auto Scheduling	<input checked="" type="checkbox"/>
Associate Records	<input checked="" type="checkbox"/>
Export To Excel	<input checked="" type="checkbox"/>
Add To Route	<input checked="" type="checkbox"/>
Save Data - Marketing List	<input type="checkbox"/>
Save Data - Personal View	<input type="checkbox"/>
Create Activities	<input checked="" type="checkbox"/>

Actions	
Select All Actions	<input type="checkbox"/>
Save Template - Public	<input type="checkbox"/>
Create Route	<input type="checkbox"/>
Print Map	<input type="checkbox"/>
Create New Record	<input checked="" type="checkbox"/>
Related Records	<input checked="" type="checkbox"/>
Territory Management	<input type="checkbox"/>
Shape Files Configuration	<input type="checkbox"/>
Save Template - Personal	<input checked="" type="checkbox"/>
Update Route	<input type="checkbox"/>
Download Map	<input checked="" type="checkbox"/>
Send Route Email	<input checked="" type="checkbox"/>
Overlay Layer	<input type="checkbox"/>

Along with using the 'Remove' button, to unassign any template to a user, admins can also **Go to Maplytics App > Settings > Maplytics Configuration Details > Select the record of the required user> Remove the lookup value for the field of 'Maplytics Security Templates'**

## Maplytics™ – User Manual





Maplytics

Map Configuration Details

General

Auto Scheduling

Related

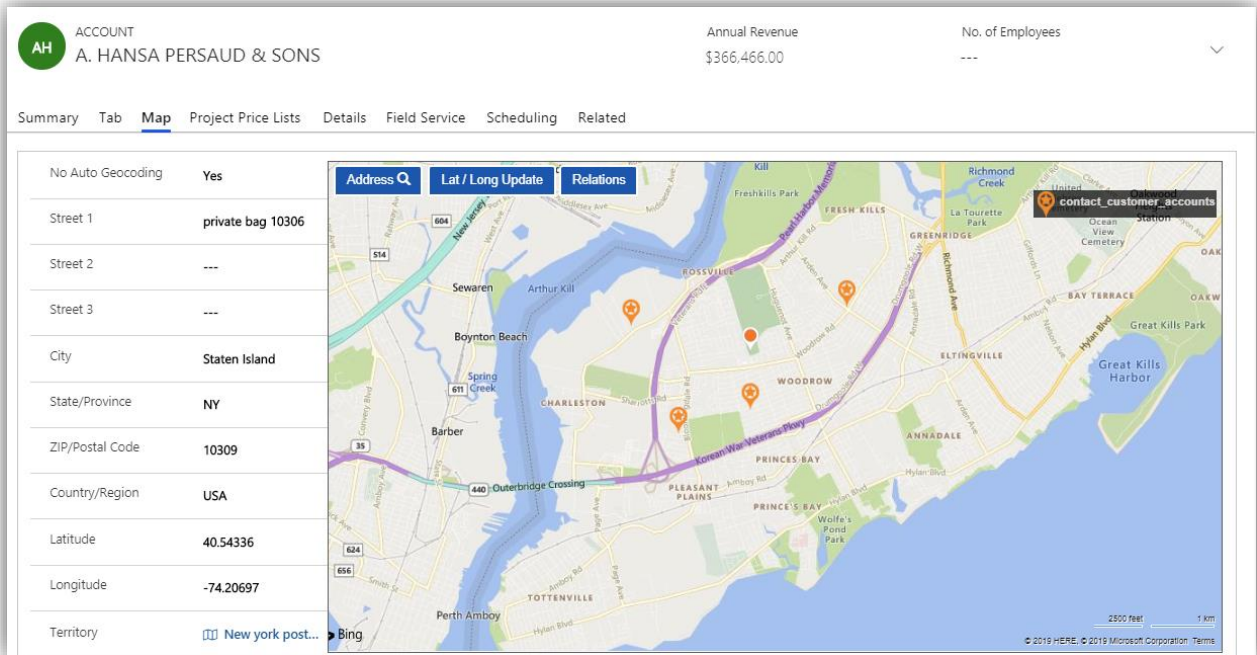
Route Option	Shortest Time	Navigate In	Google
 Map Center	---	Records Per Page In Grid	50
Heat Map Type	Boundary	Zoom Level	---
Summary Grouping	City	User	 
Default Template	---	Maplytics Security Template	 Sales
Set As Origin	Other	Set As Destination	Other
Other - Set As Origin	819 Catalpa Dr, Montgomery, AL 36112	Other - Set As Destination	819 Catalpa Dr, Montgomery, AL 36112

### Note:

- All the actions will be visible to a user, if no template is assigned to the user
- Only System Admin and Maplytics Admin will be able to access the Maplytics Security Template Entity

## Individual Record Map

A tab to display an Individual Map section has been added by default on the Account, Contact and Lead records as a part of the Maplytics solution.



Here, two types of pushpins are plotted on the map:

- Orange color pushpin:

This always indicates the record location on the map. This pushpin is movable on the map. If the user is not satisfied with the automatic geocoding information stored for the record, they can manually move the pushpin to the exact location of their choice. As the user moves the pushpin, the geocoding information (*Latitude* and *Longitude*) is updated in the bar at the top. Use the Update button to save the updated geocoding information.

If the application is not able to geocode the address provided, the user can edit the address in the *Address text* box and click on Search button. This will help the user to geocode the address.

Set the '*No Auto Geocoding*' option to 'Yes' available on the left-hand side, if the user has manually set the geocoding information and do not want the automation to override the geocoding information.

- Related Record Pushpin:

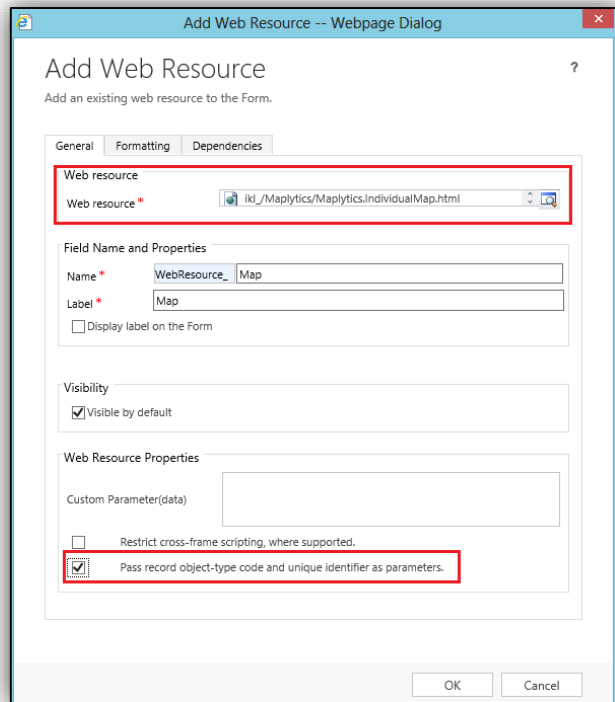
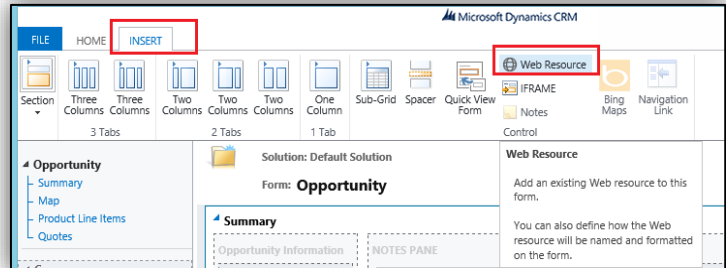
The related records are indicated by star pushpins. Related records correspond to all 1:N relationship between the plotted Entity and the user can set a default relationship which should always be plotted whenever this map is loaded. The user can further see related record information by clicking on it. The user can plot maximum two relationships here. The user can use 'Relations' drop-down to select the available relationships for this Entity. Check the Entity Map

settings (refer to Installation Manual) to set Default relationship and adding more relationships to 'Relations' dropdown.

### Steps to add the Map to other entity forms

Open the Entity form and go to the 'Insert' tab.

Click on 'Web Resource' button, as shown in the screenshot.



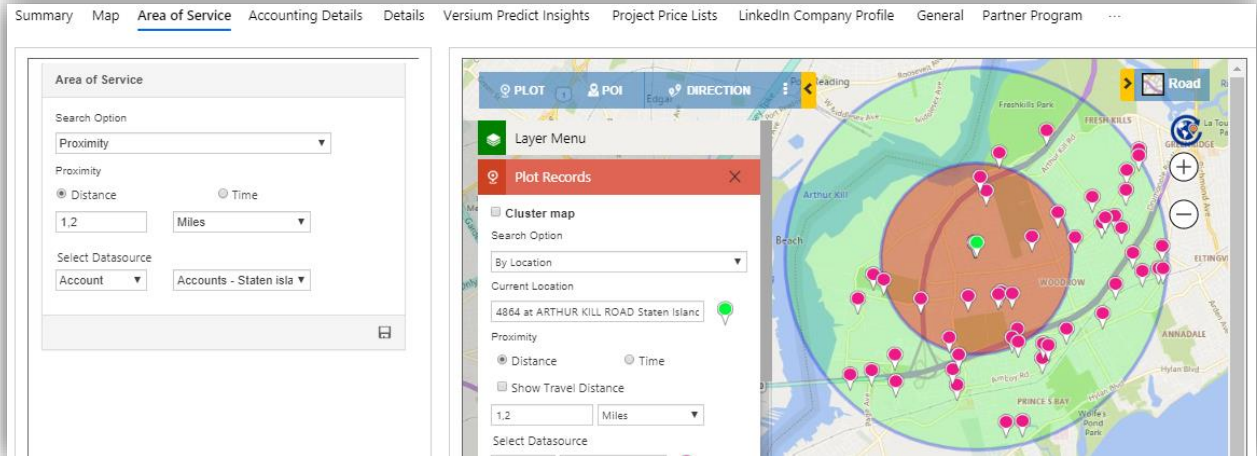
In the Add Web Resource dialog, select "**ikl\_/Maplytics/Maplytics.IndividualMap.html**" web resource and check the Pass record object-type checkbox as shown in the screenshot.

Click **OK**, then **Save and publish** the form to see the Map on the entity form.

**Note:** To plot a particular address on the Map, it should be geocoded and the Latitude & Longitude should be set for that address. For geocoding you need to execute Maplytics Geocoding workflow for the records.

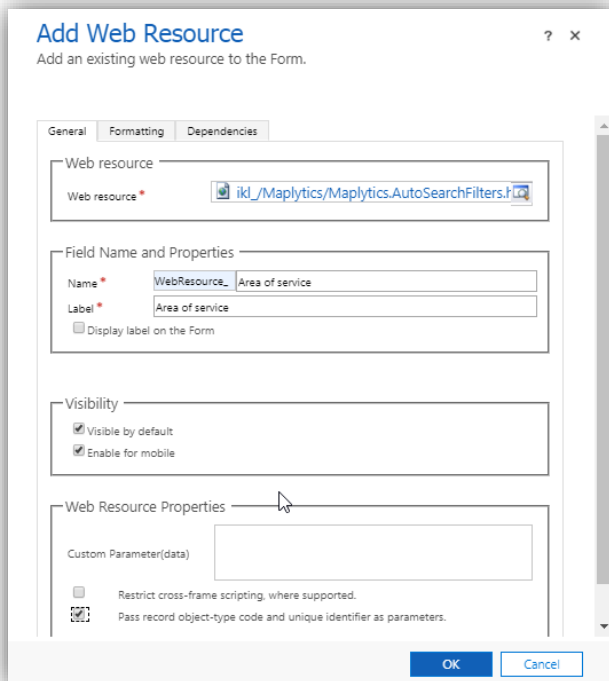
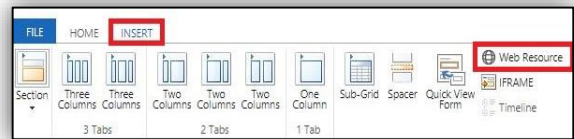
## Area of Service

The user can view the data in a proximity or a region around an individual record as defined by the user in the Area of service.



### Add Area of Service tab

To add Area of Service tab, Open the Entity form and go to the 'Insert' tab. Click on Web Resource button, as shown in the screenshot.



In the Add Web Resource dialog, select **"ikl\_/Maplytics/Maplytics.AutoSearchFilters.ht ml"** web resource and check the 'Pass record object-type' checkbox.

*The preferred number of rows in formatting is 15.*

Click **OK**, then **Save and publish** the form to see the Map on the entity form.

## Create an Area of Service field

To save the values entered in the Area of Service, the user needs to create a field for the Entity for which Area of Service has been added. **Go to Entity form > New field.** Enter the following values:

*Name - Area of Service*

*Data type – Multiple Line of Text*

*Maximum Length – 10000*

Select the field in the respective Entity map for the Area of Service field.

The screenshot shows the 'ENTITY MAP account' interface. The 'Attribute Mappings' tab is selected. The 'Title' field is set to 'Account Name'. The 'Area of Service' field is highlighted with a red box, and its value is 'Area of Service'. The 'Template' field is empty.

The values when entered and saved into the Area of Service, the corresponding data will be plotted on the map.

## View Area of Service data on a map

To view the Area of Service data on the map, there are two ways:

- Using Map button – the results are shown in a map opened in a different tab
- Adding Detail map on form – the results are shown in a map added on the same record

## Using Map button

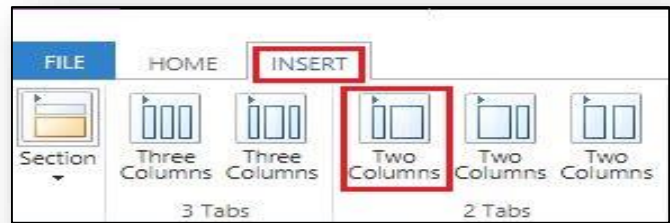
The user can open the Detail map to view the corresponding Area of Service data plotted on the map.

The screenshot shows the Maplytics interface with a table of account data. The 'Map' button is highlighted with a red box.

ACCOUNT	Annual Revenue	No. of Employees
AH A. HANSA PERSAUD & SONS	\$366,466.00	---

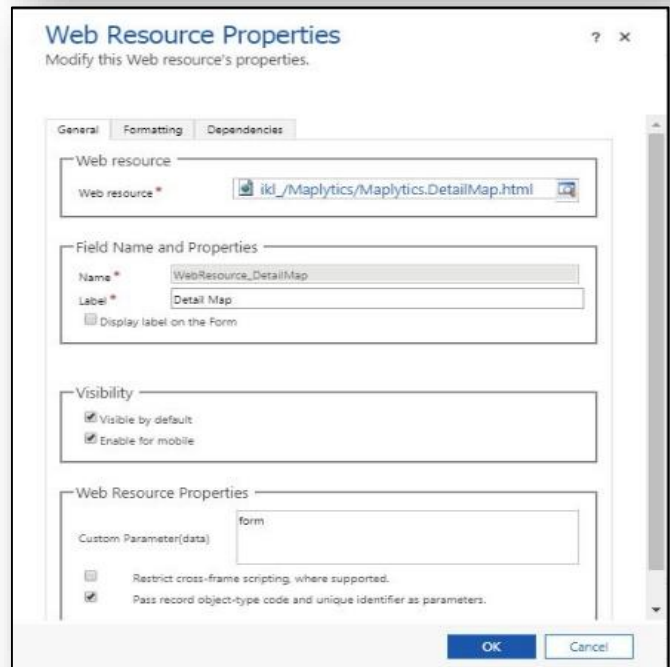
## Adding Detail map on form

To add a Detail map to show the data of Area of Service, follow the steps mentioned below:  
Open the Entity form and go to the 'Insert' tab.  
Add two columns.



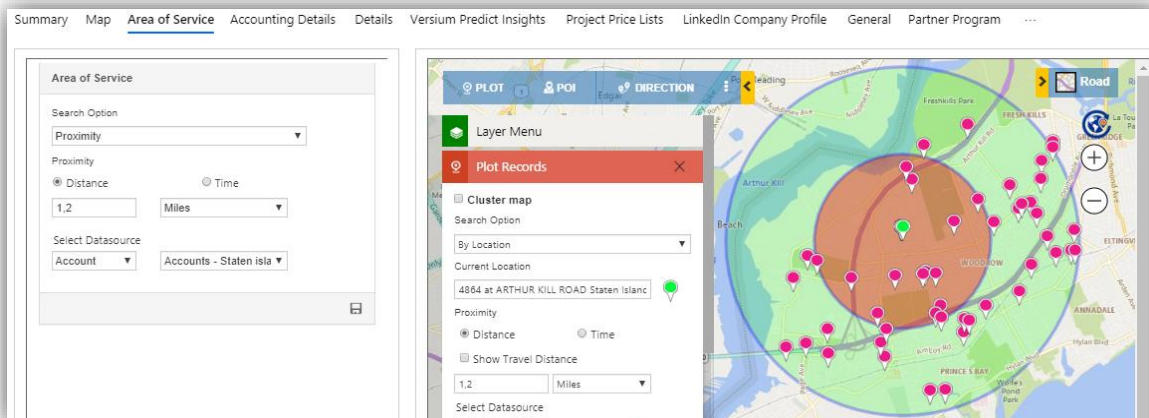
After adding Area of Service tab in the entity form as mentioned above, follow the steps mentioned below to add the Detail map on the entity form.

To add a detail map, Click on 'Web Resource' button. In the Add Web Resource dialog, select **"ikl\_/Maplytics/Maplytics.DetailMap.html"** web resource, add "form" as custom parameter (data) and check the 'Pass record object-type' checkbox as shown in the screenshot. The preferred number of rows in formatting is 15.



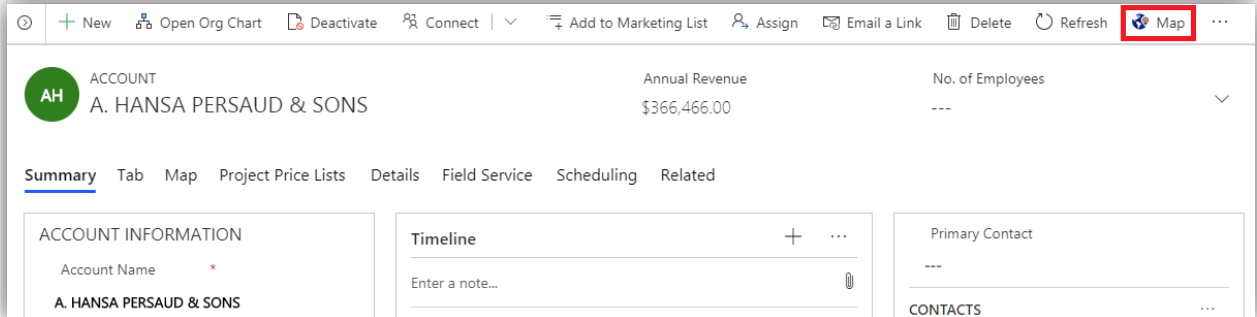
Click **OK**, then **Save and publish** the form to see the Map on the Entity form.

Enter the required values into Area of Service, save it and click on the refresh button on the Detail map to view the data plotted.

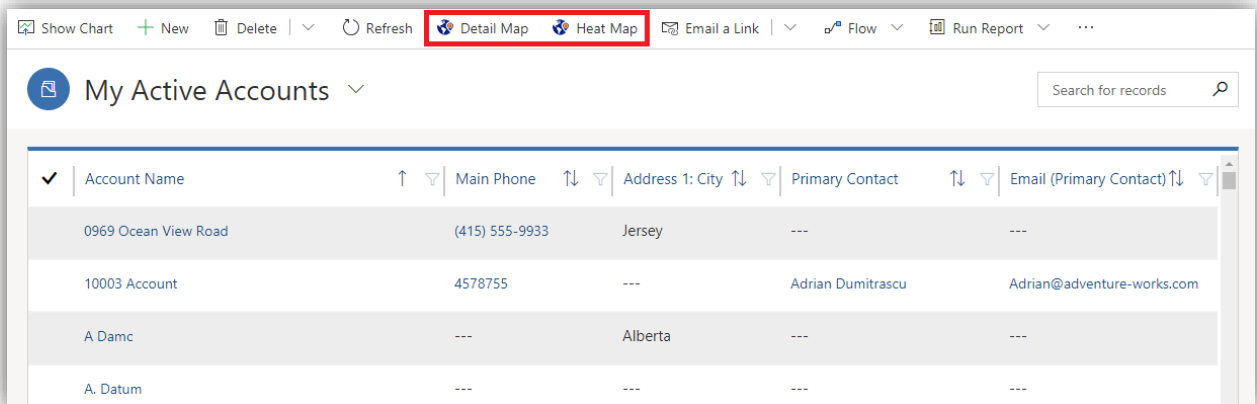


## Detail Map

Maplytics buttons are added to the Entity forms as well as the Entity Homepages so that it can be easily accessed from anywhere.



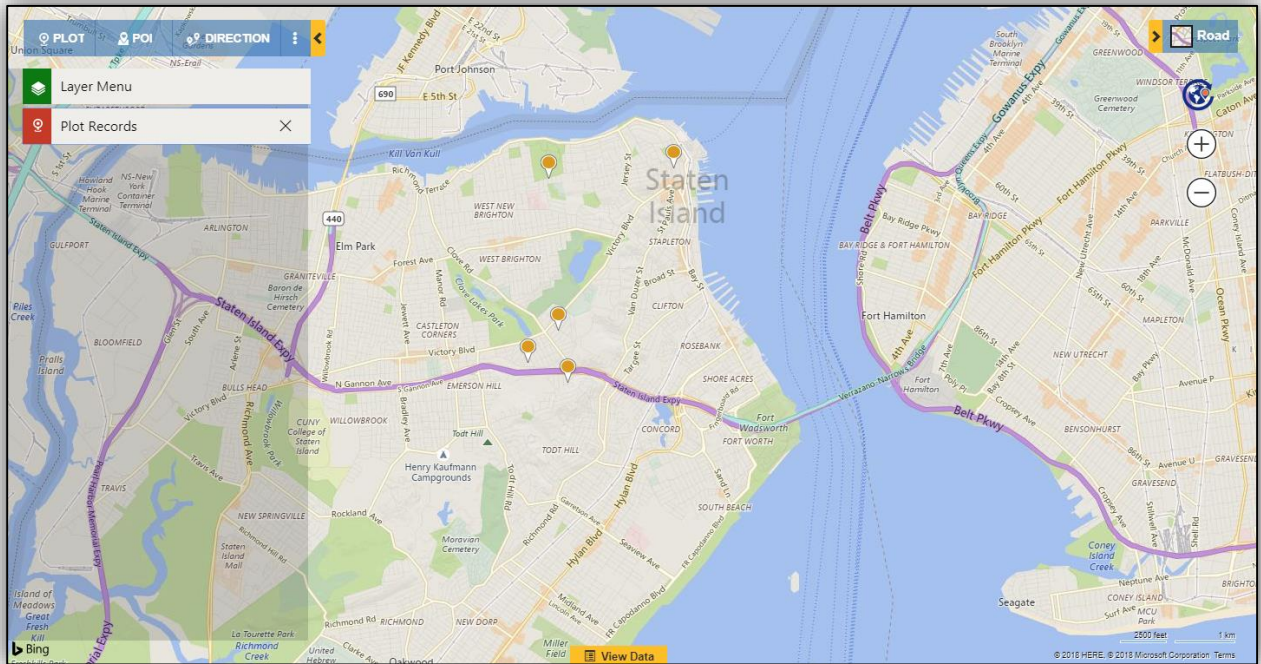
Using this button, the user can invoke the Maplytics application for detailed geographical analysis. Maplytics provides both 'Heat Maps' view as well as 'Detail Map' view of the Dynamics CRM data. These views can be easily accessed from the buttons added to the command bar in entity home pages and other views.





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Selecting a few records and clicking on the 'Detail Map' button on a particular Entity Grid view will open the following window;



It will automatically plot the selected records from the view on the map. **Records that do not have their latitude/ longitude will be ignored and will not be plotted on the Map.**

## Plot

There are five different search options to plot the data on Map:

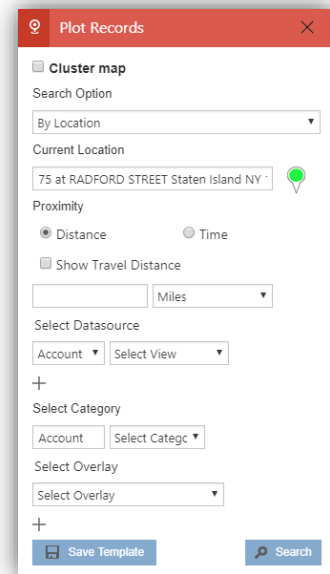
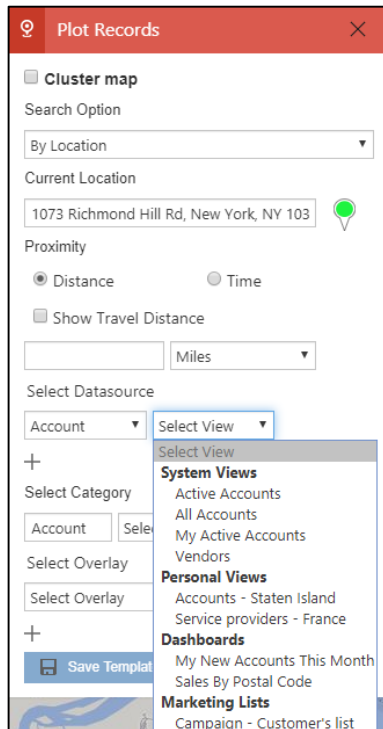
- By Location
- By Region
- By Drawing
- By Territory
- By Template

**Note: The user can also configure the 'Search Options' to be visible on the map. Refer 'Setup Entity Map' section of Installation Manual for further instruction.**

### By Location

This helps the user to plot the data using the geocoding of each record. By Location search option also allows the user to perform Proximity/Radius Search based on Distance or Time.

The Current Location is fetched from the user's personalization record. The user can also set a new current location using the contextual menu. Refer to the section of the Contextual menu.



**Select Datasource** dropdown will list out all the Entities (OOB and Custom) configured for Maplytics and the active views (System views, Personal views, Maplytics Dashboards and Marketing Lists) that are available for the selected Entity type. The user can choose one of the views to plot all the records available in that view.

**Note: The user can also configure the 'Views List'. Refer 'Setup Entity Map' section of Installation Manual for further instruction.**

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The user can select additional entities using the '+' button. The user is allowed to specify a maximum of 3 Datasources for plotting the data at a time. This allows for viewing Dynamics CRM data across Entities in a single view on the map.

After selecting multiple entities, the user can click on the 'Search' button to plot the records for the selected entities. This helps the user to visualize three entities on a single map.

**Note:** User can define the colors as well as pushpin shapes of the Entity – view combination. Refer to 'Setup Entity Map' section of Installation Manual for further instructions.

**Plot Records**

☐ Cluster map

Search Option  
By Location

Current Location  
75 at RADFORD STREET Staten Island NY 103

Proximity  
☒ Distance ☐ Time

☐ Show Travel Distance  
Miles

Select Datasource

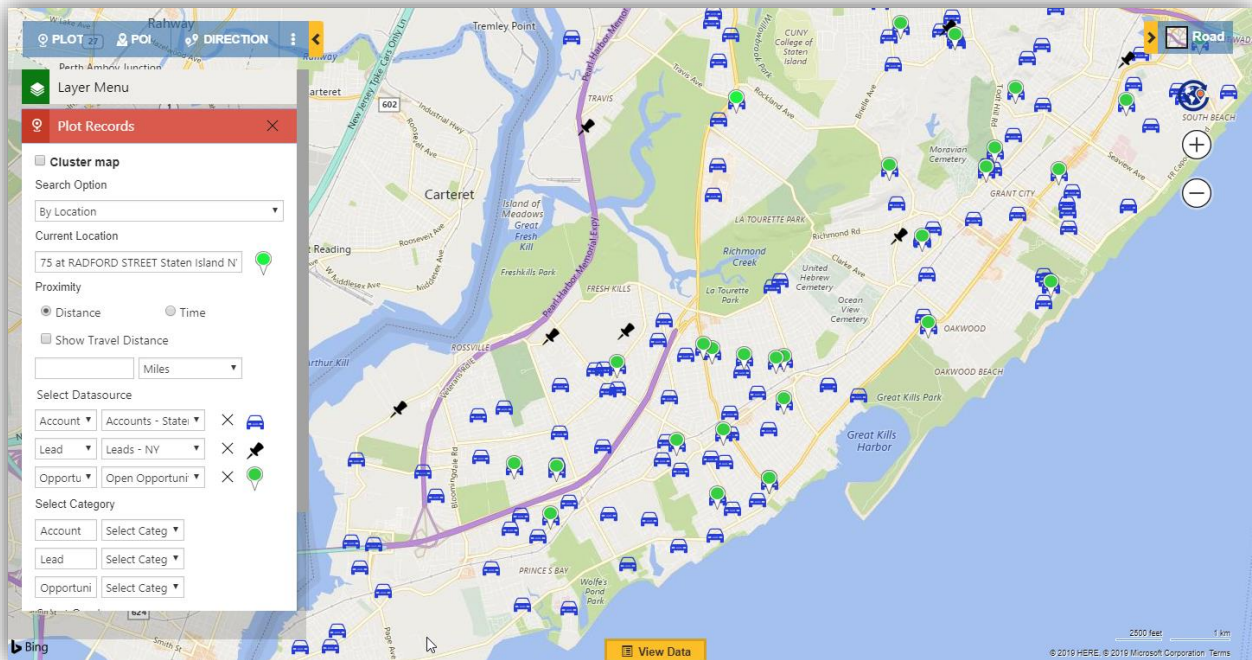
Account	Active Accounts	X	Car
Lead	Leads - NY	X	Car
Opportun	All Opportunities	X	Car

Select Category

Account	Select Category
Opportunity	Select Category
Lead	Select Category

Select Overlay  
Select Overlay

+ Save Template Search

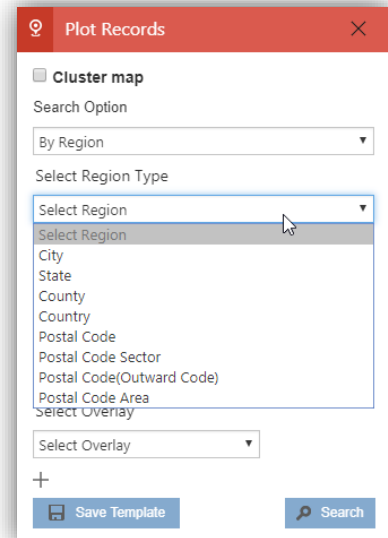


## Maplytics™ – User Manual

### By Region

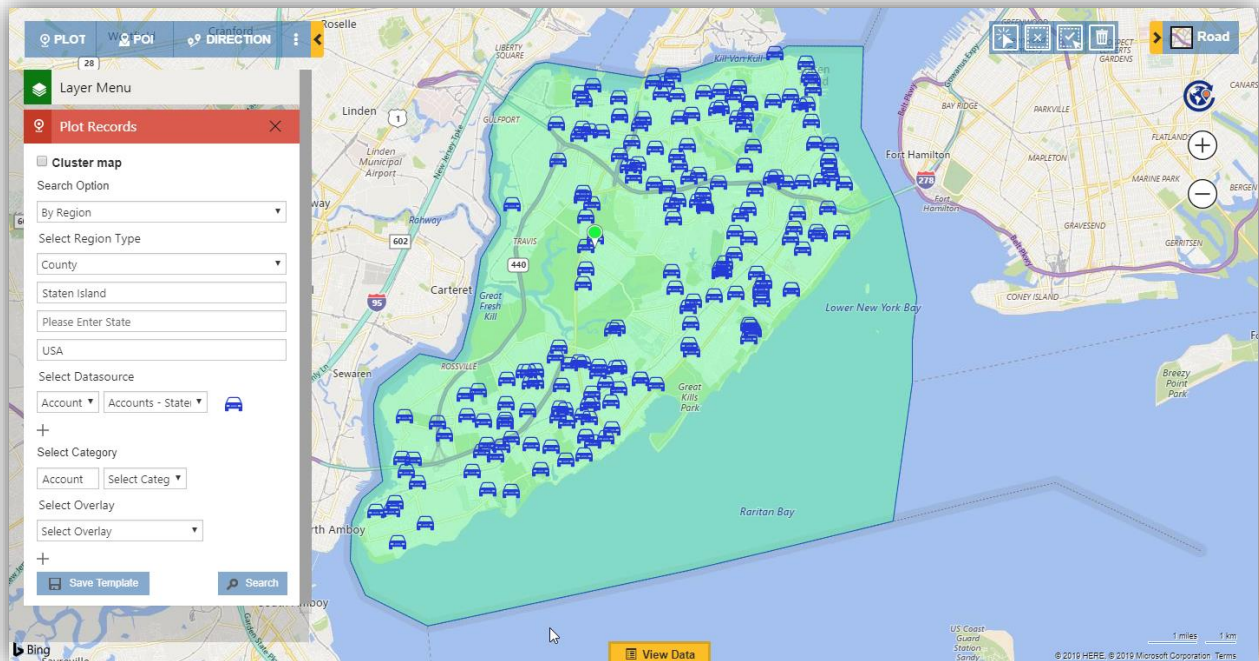
This helps the user to plot the data by the region of records, i.e., City, State, County, Country, PostalCode, PostalCode Sector, Postal Code(Outward Code), Postal Code Areas. The user can plot multiple regions under a particular region type.

- **Postal Code:** The smallest postcode category, such as a zip code.
- **Postal Code Sector:** The second '1' is called "Postcode Sector". Example: CA1 1
- **Postal Code(Outward Code):** This is called Outward Code, the part of the postcode before the single space in the middle. Example: CA1
- **Postal Code Areas:** The next largest postcode category after Postcode1 that is created by aggregating Postcode1 areas.



#### Note:

- *The regions that were plotted using the option of Post code Areas before will now be plotted by using the option of Post code sector.*
- *The regions will be plotted as per the Bing maps.*





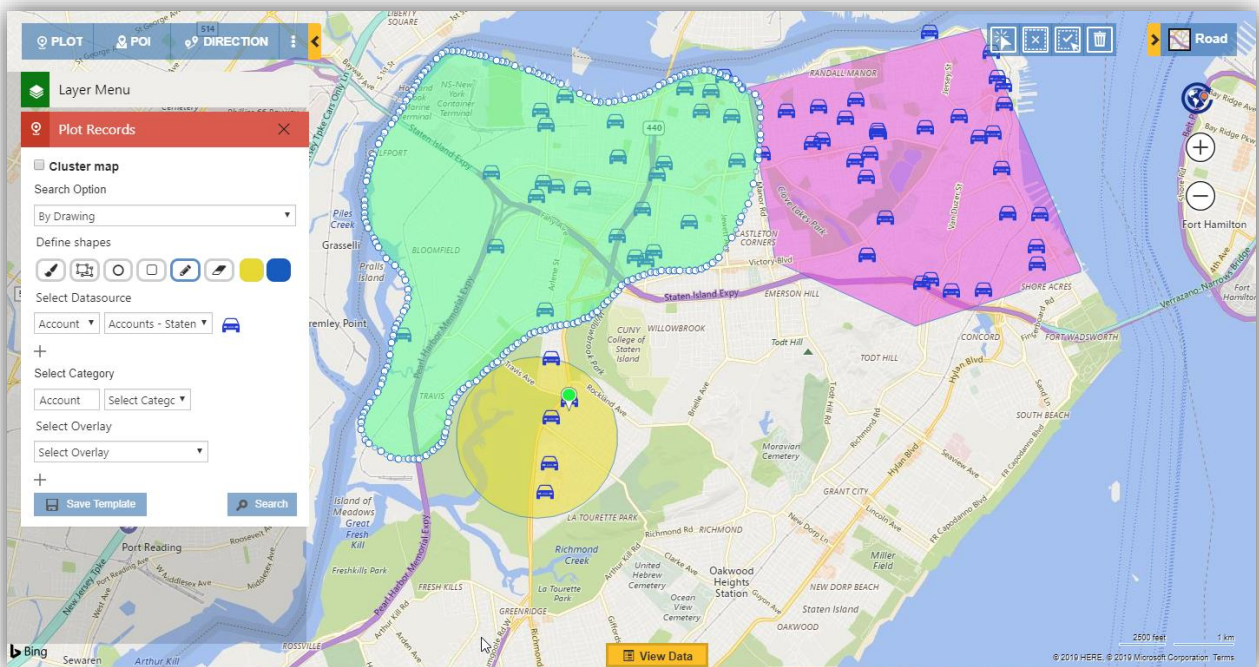
### By Drawing

This helps the user to plot data by defining their own shapes. The user can use the 'Drawing tool bar' to draw the following shapes:

- Freehand drawing
- n-sided polygon
- Circle
- Rectangle

The user can further edit the drawn shapes by using the following options in the Drawing tool bar:

- Edit
- Erase
- Fill color
- Stroke color



**Note:** While creating an n-sided polygon, use the 'Esc' key from keyboard to close the shape.

## Maplytics™ – User Manual

### By Territory

This helps the user to plot the data defined in a particular sales territory. The user can select multiple territories in 'Select Territory' option and respective Datasource & view to plot the territories along with the records assigned with them.

Plot Records

☐ Cluster map

Search Option

By Territory

Select Territory

AL - USA, AR - USA

Select Datasource

Account

Accounts - U

+

Select Category

Account

Select Cat...

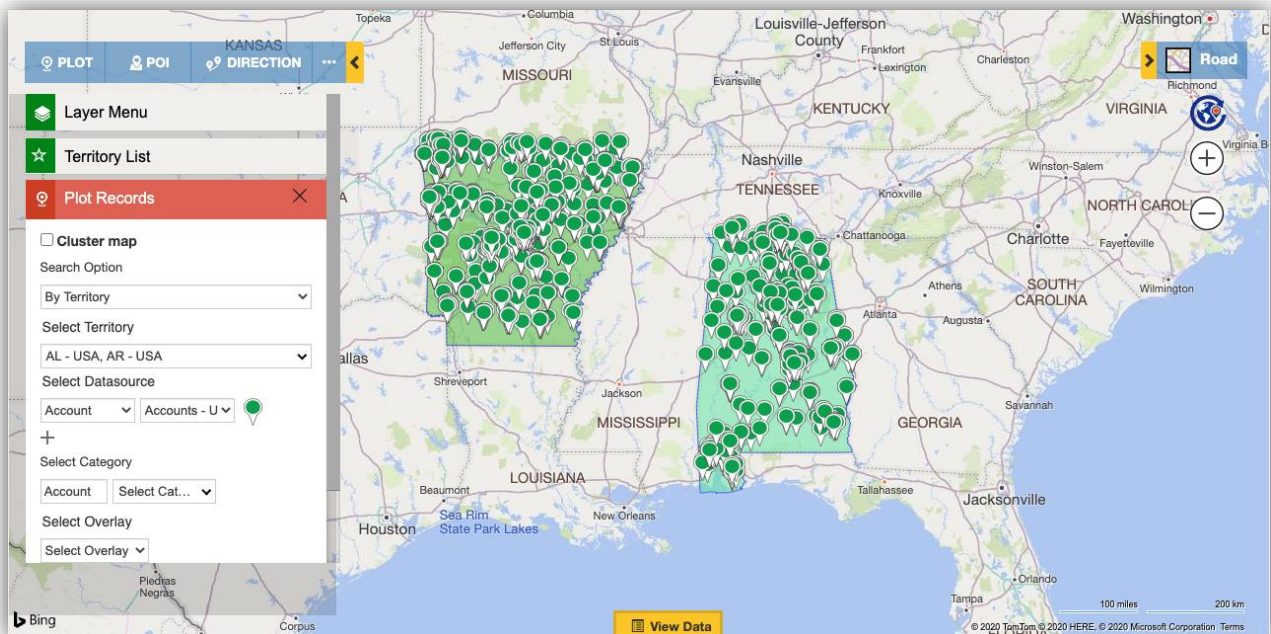
Select Overlay

Select Overlay

+

Save Template

Search



## By Template

This helps the user to plot the predefined search criteria in Detail Map. The user can save the search criteria as a template and use the 'By Template' search option to quickly plot the data with that search criteria. This helps the user to save a considerable amount of time.

For example, if any user is assigned with a task where the requirement is to regularly plot 'My Active Accounts' records in 2 miles of a particular location and filter a particular Industry, then the By Template option can be beneficial.

The User can use the button 'Save template' to save the search criteria as a template and define the access level of the Template while saving the template as described below:

- **Personal** – The users can limit the usage of this template to themselves
- **Public** – Anyone in the organization can use this template

*Apart from saving information of Plot Records, Category card, and filters from Grid, it also saves the Zoom level & Center of the map.*

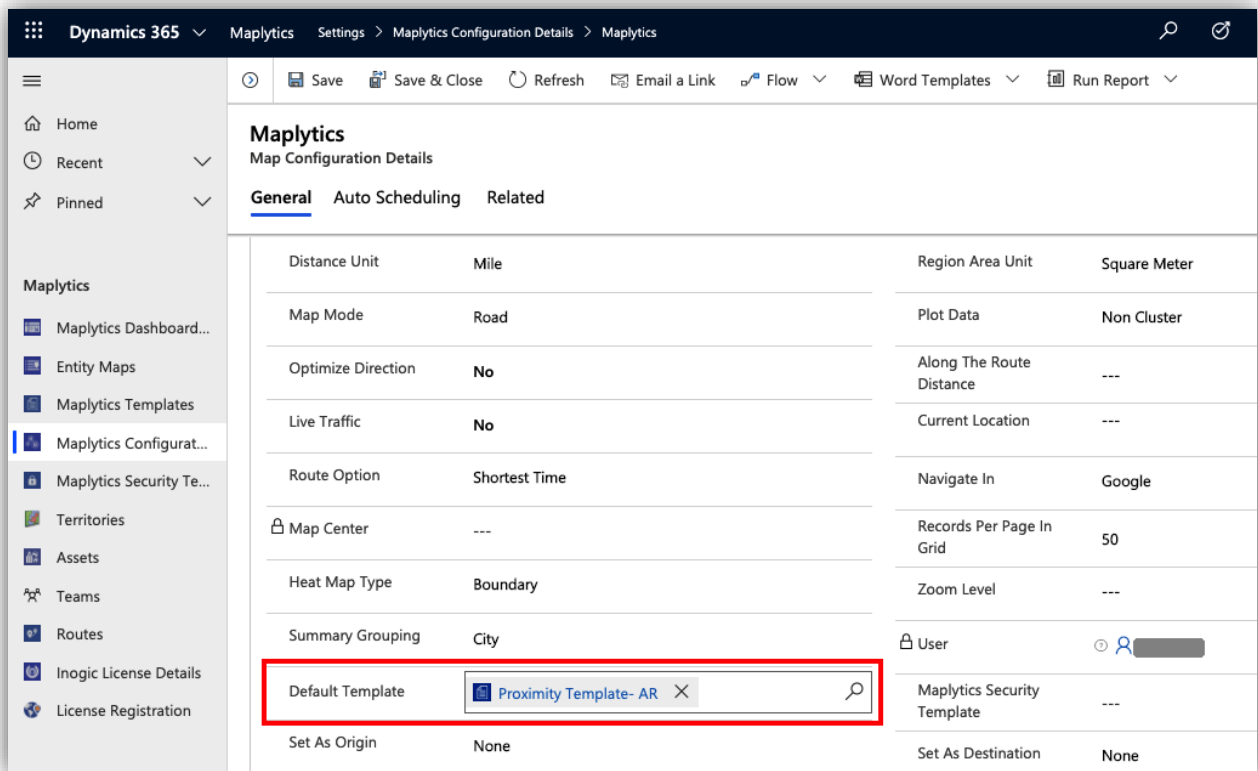
**Note: Please assign 'Maplytics User' security role to Team Maplytics before exploring this**

## Default Template

User can set the Default Template within their respective Configuration Detail record and view the predefined search criteria saved in the template plotted by default on the Detail Map.

To set a template as Default, user need to **Go to the Maplytics App > Settings > Maplytics Configuration Details > Respective User Configuration Detail record > General > Default Template > Select required template.**

## Maplytics™ – User Manual

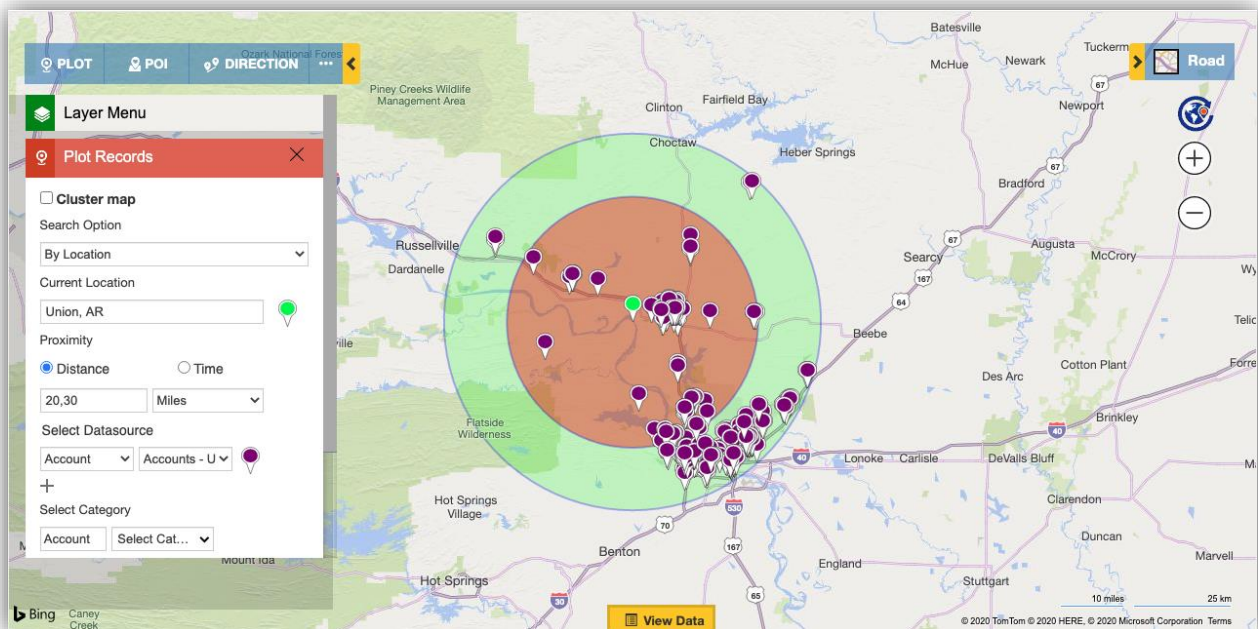


**Maplytics**  
Map Configuration Details

**General** Auto Scheduling Related

Distance Unit	Mile	Region Area Unit	Square Meter
Map Mode	Road	Plot Data	Non Cluster
Optimize Direction	No	Along The Route Distance	---
Live Traffic	No	Current Location	---
Route Option	Shortest Time	Navigate In	Google
Map Center	---	Records Per Page In Grid	50
Heat Map Type	Boundary	Zoom Level	---
Summary Grouping	City	User	[User Icon]
Default Template	Proximity Template- AR		
Set As Origin	None	Maplytics Security Template	---
		Set As Destination	None

When clicked on the 'Detail Map' button, it will plot the default template selected in the respective user's Maplytics configuration detail record by default on the map.





**Note:** *Default Template will not open if,*

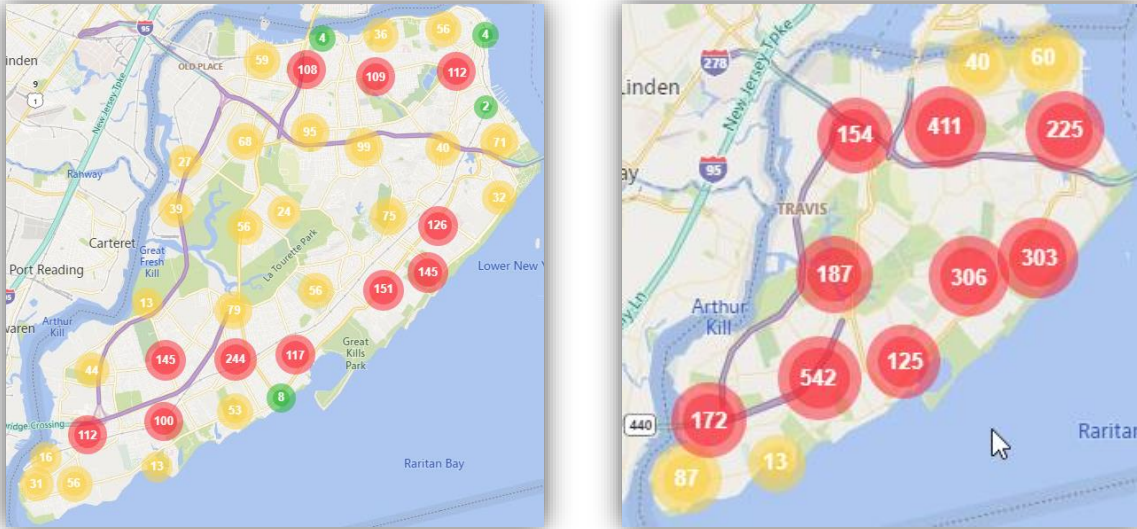
- *User selects a few records in Entity home grid and then clicks on Detail map button.*
- *User expands a dashboard to open on Detail map.*
- *User has saved Default template with search criteria other than By location/ Proximity Search and uses the 'Map' button on a specific record to open the map. In this case, the respective record will be plotted on map.*
- *User has set Area of Service on a record and is using the 'Map button' on the record to open the map.*

**Note:** *Below are some exceptional cases for Default template where the plotted data might vary.*

- *If Default template has been saved with search criteria By Location and the user uses the 'Map' button on a record to open the Map, in this case, the respective record will be plotted as the current location along with other records selected within the Default template.*
- *If Default template has been saved with search criteria Proximity Search and the user uses the 'Map' button on a record to open the Map, in this case, the respective record will be plotted as the current location replacing the initial current location set in the template. Thus, the records will be plotted within the specified radius from the respective record's location which is now the current location on the map.*

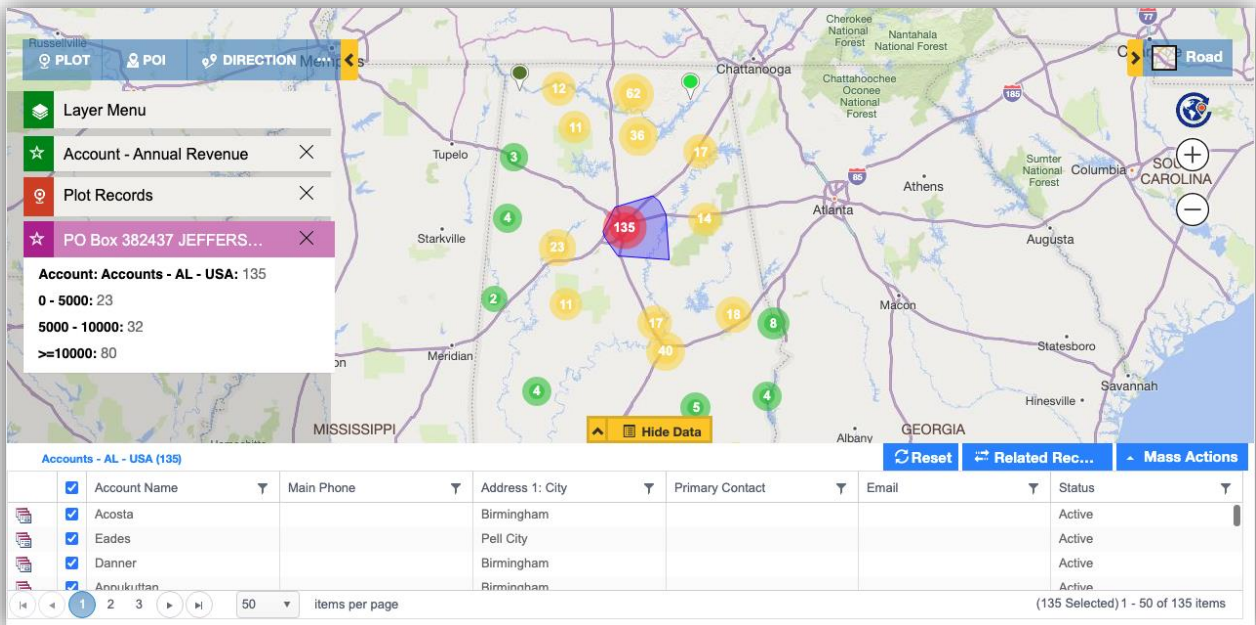
## Cluster map

The user can select this option to group the closely positioned pushpins into a cluster. A cluster shows the number of pushpins in the cluster. The user can zoom in further to break down the cluster into smaller clusters or zoom out to group closely positioned clusters into one.



## Cluster Area

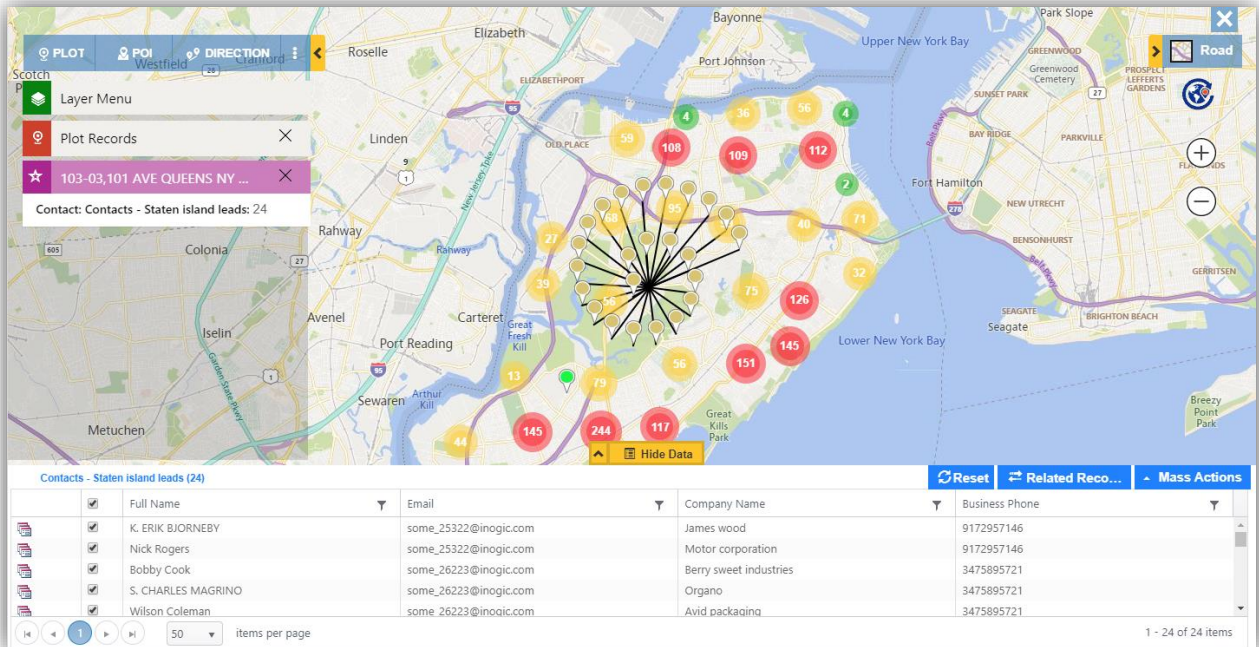
The user can hover on any cluster to see the 'Cluster area' which shows the data spread. The data spread is based on the area covered by the pushpins existing in the cluster.



## Maplytics™ – User Manual

### Spider cluster

The user can click on any cluster to view the pushpins existing in the same in the form of a ‘Spider cluster’.



**Note: Spider clusters can be visualized only for records less than or equal to 50.**



## Category

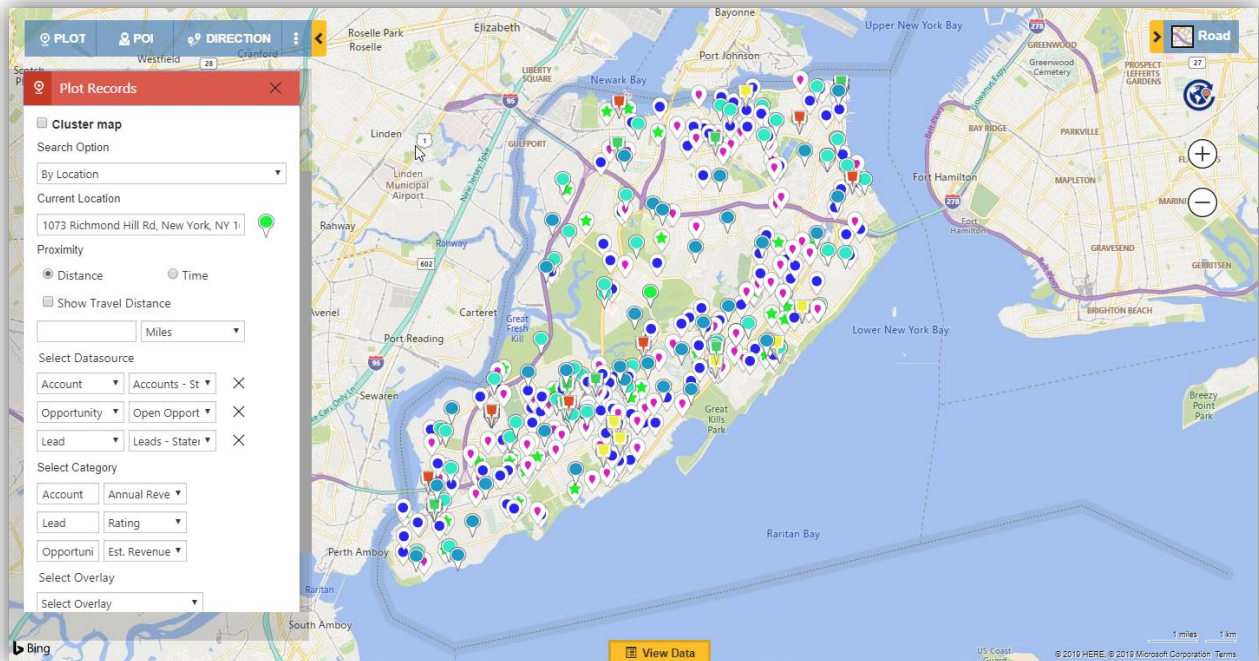
Users can choose any attribute for the selected entity to categorize the data on the map and visualize the pushpins color-coded based on the selected attribute.

### Multiple categorization for multiple entities

User can plot a maximum of three entities on the map and can also select one attribute for each of the three datasources selected to categorize them. The screenshot below shows the categorization of the records of Account, Lead and Opportunity based on the attributes Annual revenue, Rating and Estimated Revenue respectively.

#### Note:

- **User can choose respective categories for at a maximum of three different entities.**
- **The user can define the color as well as shape of pushpins for each parameters of category. Refer to [Pre-Define Colors for Category](#) section for further details.**
- **User can also choose the field attributes to be visible in Category list. Refer to 'Setup Entity Map' section of Installation Manual for further instruction.**

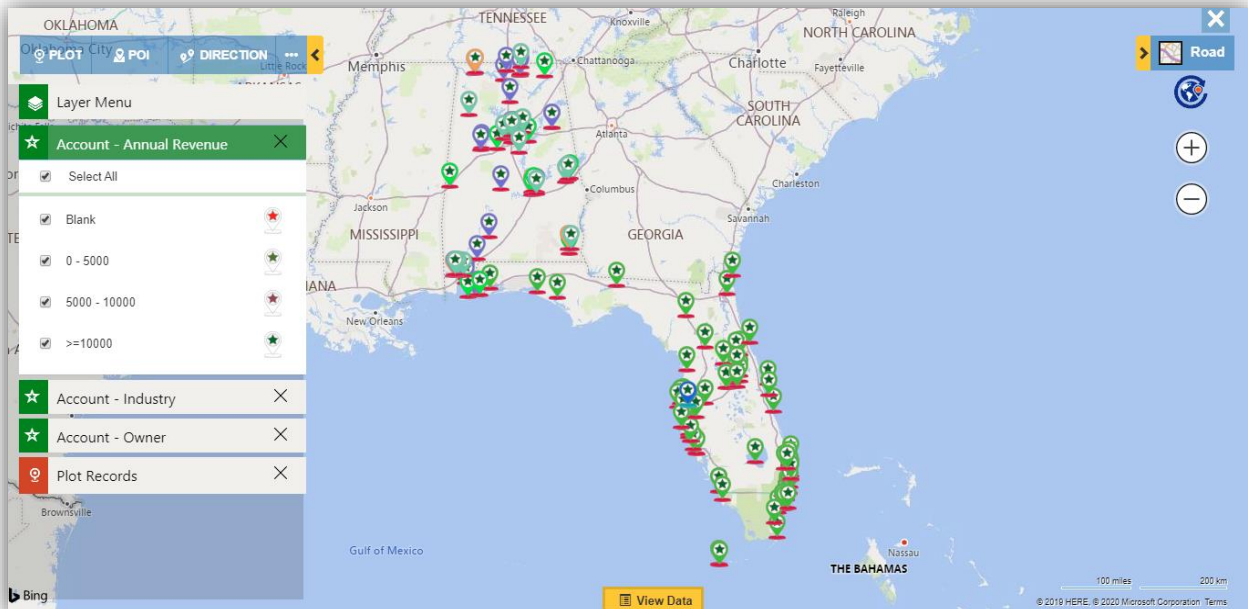
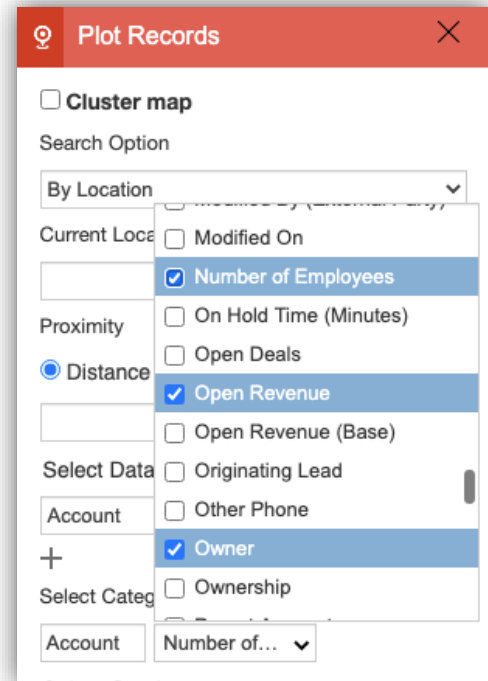


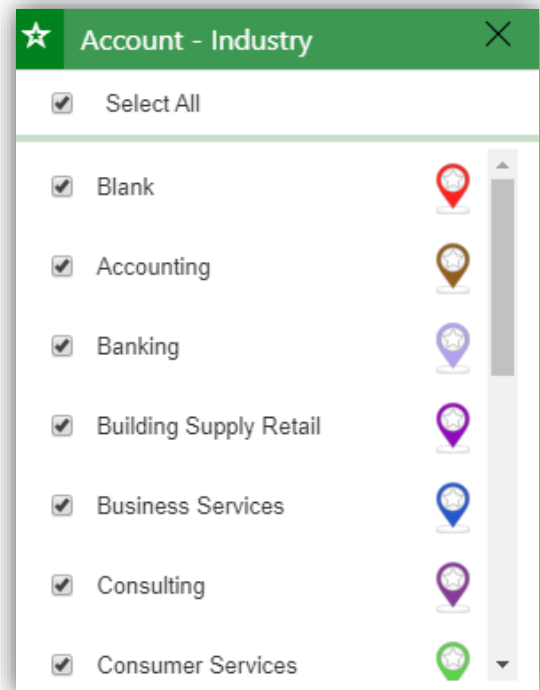
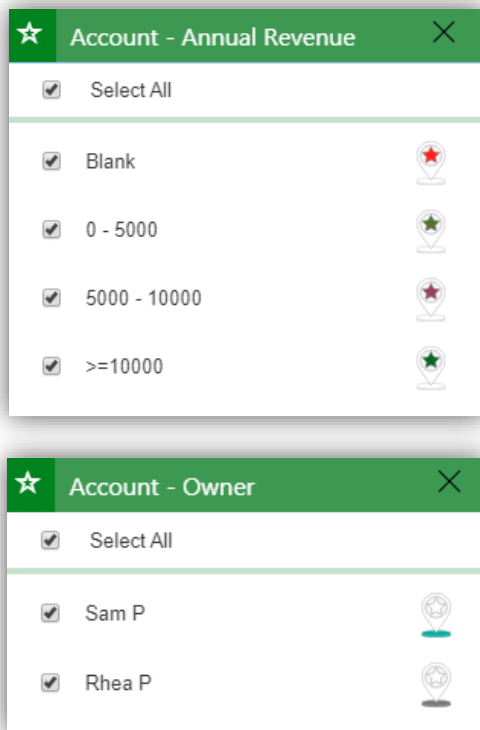
## Multiple categories for single entity

Users can also plot a single entity records categorized by multiple attributes e.g. Account records categorized by Open revenue, Originating lead, Owner. Users can also choose an entity twice or thrice with two or three different views respectively and choose at a maximum of three attributes to categorize the entity records.

**Note: User can select a maximum of three attributes to categorize a single entity.**





While plotting a single entity categorized by three attributes, three category cards will open up for the three attributes. For example, the screenshot below shows Accounts plotted on the map which is categorized by three different attributes viz. Annual Revenue, Industry and Owner and three different cards have opened up for each of them.






The category cards shown above states which category is represented by which pushpin. The categories are represented with the following three different parts of every single pushpin.

- 
- 
- 

All the above three icons combine to form a pushpin  which will represent the plotted records. Each of the three parts represent three different categories with different colors shown within the category card. For example, the category card 'Account – Annual revenue' shows that the  icon represents the Account records that belong to different ranges of Annual revenue with different colors. The category card 'Account-industry' shows that the icon  represents the Account records that belong to different industries with different colors and the category card 'Account-Owner' shows that the icon  represents the Account records that belong to different owners with different colors.

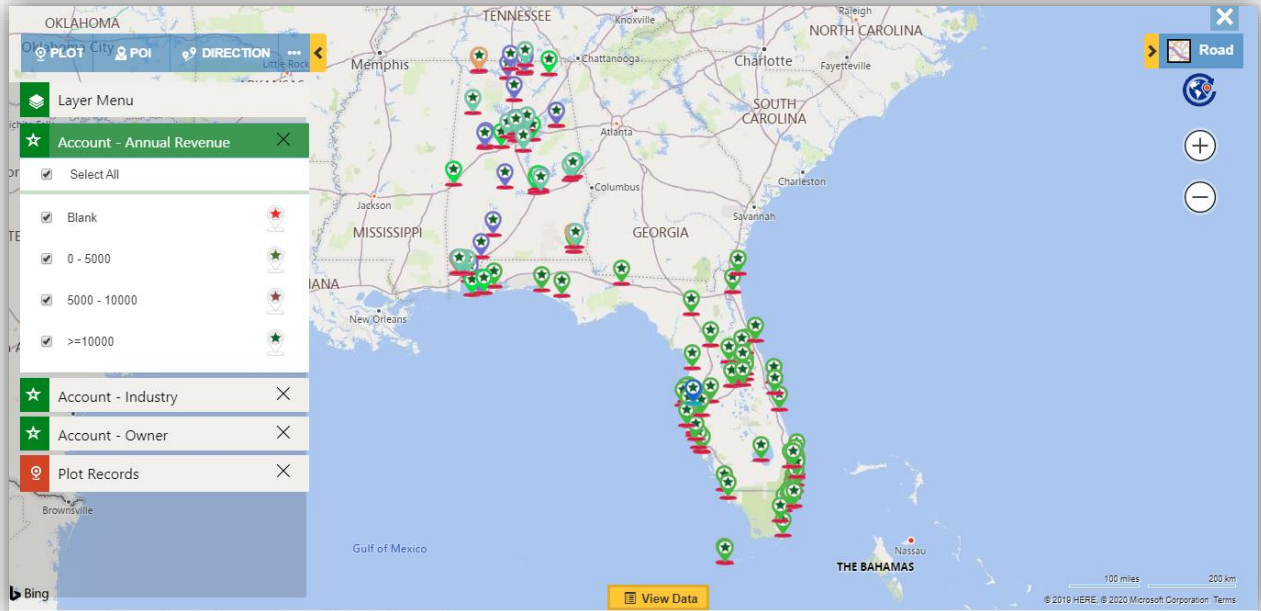
In case, the user has selected only two attributes in order to categorize the entity records, the pushpin that will be used to represent two categories will be .

The plotting of categories follows **AND** condition. This means that if the user deselects a category in one category card, then all the pushpins for records that belonging to that category will be hidden from the map even if any of the records belong to any other categories as well. For instance, if the user deselects

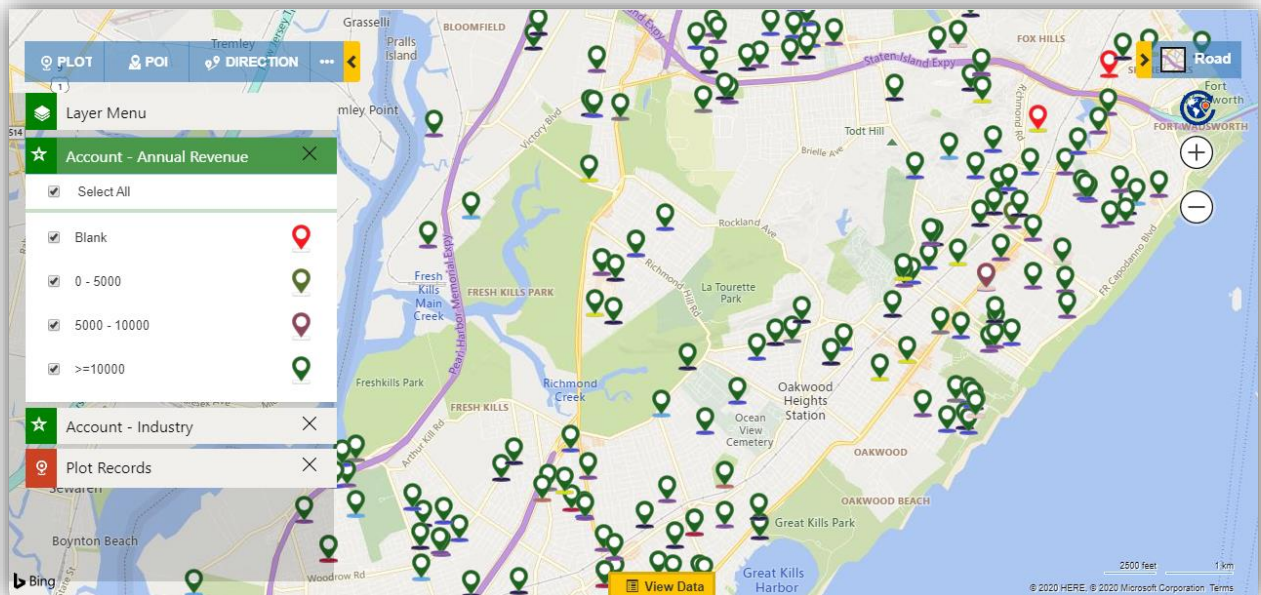
## Maplytics™ – User Manual

the category of Annual revenue between 5000-10000, then all the pushpins for the records that belong to this category will be hidden from the map even if any of these records belong to other category like owner or industry.

*In the screenshot below, three categories have been selected viz. Annual Revenue, Industry and Owner.*



*In the screenshot below, only two categories have been selected viz. Annual Revenue and Industry.*





## Data Grid in Detail Map

The Data Grid is available at the bottom of the Detail map which can be opened using the yellow button 'View Data'. All plotted pushpins represent a unique record in Dynamics CRM and data grid helps the users to access these records from the map screen, filter the data further and perform some mass actions. Order of columns in the grid depends upon the Dynamics CRM View selected to plot the data and in the case of Marketing Lists & Maplytics Dashboard records, it is same as that of the Entity-View selected in Entity Map. The users can also customize the data columns to be visible in the grid by adding/removing columns from the Entity view.

The screenshot shows the Maplytics interface with a map of London. A 'Layer Menu' is open, showing 'Annual Revenue' with filters: Select All, Blank, 0 - 10000, 10000 - 50000, 50000 - 100000, and >=100000. Below the map, a 'Plot Records' button is visible. At the bottom, a data grid shows 'Active Accounts (1136)' with columns: Account Name, Main Phone, Address 1: City, Primary Contact, and Email. The grid lists several accounts, including J. WU (WOODY) CHEN & SONS, 16 GOLDHURST TERRACE FREEHOLD U..., 163-165 BATTERSEA RISE (FREEHOLD) U..., and 30 50 MEDIA LIMITED.

### Filter & Sort Data:

The user can use the filter present on the top of every column to filter the data further selecting any of the conditions and entering the respecting value.

The screenshot shows the Maplytics interface with a map of London. A filter dialog box is open, showing a filter for 'Address 1: City' with the value 'London'. The dialog box has a 'Filter' button and a 'Clear' button. Below the map, a data grid shows 'Active Accounts (1136)' with columns: Account Name, Main Phone, Address 1: City, Primary Contact, and Email. The grid lists several accounts, including A. NIKOLA MARTINOVIC & SONS, A. ROBERTA CURTIS & SONS, A. ROBERTA LEVINE & SONS, and A. ROBERTA WOELFLING & SONS.



## Maplytics™ – User Manual

User can see the filter icon at the column header to understand based on which column the data has been filtered. Further, user can also click on any of the column header to sort the data and can see the arrow icon at the column header to understand based on which column the data has been sorted. User can deselect some of the records and see at the bottom the number of records selected from the list

Accounts - Staten Island (21)										Reset	Related Reco...	Mass Acti...
<input type="checkbox"/>	Account Name	Main Phone	Address 1: City	Annual Revenue	No. of Employees	Website	Email					
<input type="checkbox"/>	Abbas & Sons	7188520069	Staten Island	64801	200	www.inogic12952.com	meir9489@inogic.com					
<input type="checkbox"/>	Abdelkader & Sons	2125548182	Staten Island	63244	200	www.inogic14376.com	james10835@inogic.com					
<input type="checkbox"/>	Abdelmessih & Sons	2122501122	Staten Island	259962	200	www.inogic14580.com	michael11030@inogic.c...					
<input checked="" type="checkbox"/>	Abraham & Sons	2127510545	Staten Island	861945	200	www.inogic14015.com	ely10491@inogic.com					
<input type="checkbox"/>	Adams & Sons	2122068501	Staten Island	763923	200	www.inogic13828.com	bruce10306@inogic.com					
<input type="checkbox"/>	Addeo & Sons	2126618995	Staten Island	161278	200	www.inogic14272.com	robert10733@inogic.com					
<input checked="" type="checkbox"/>	Aguiyza & Sons	2123082665	Staten Island	378729	500	www.inogic13856.com	david10334@inogic.com					
<input checked="" type="checkbox"/>	Ahmad & Sons	2129205723	Staten Island	132192	500	www.inogic14483.com	william10937@inogic.com					
<input checked="" type="checkbox"/>	Ellison & Sons	2126867933	Staten Island	325947	500	www.inogic14043.com	nader10519@inogic.com					
<input type="checkbox"/>	Falconite & Sons	7182217672	Staten Island	793294	500	www.inogic13987.com	yosi10464@inogic.com					

50 items per page (5 Selected) 1 - 21 of 21 items



### Reset:

This will reset the grid to the initial search.

### Parent Record / Related Record:

This is useful when the user is dealing with plot related records functionality. The user can switch between child data and parent data using this button.

### Resizable Data grid:

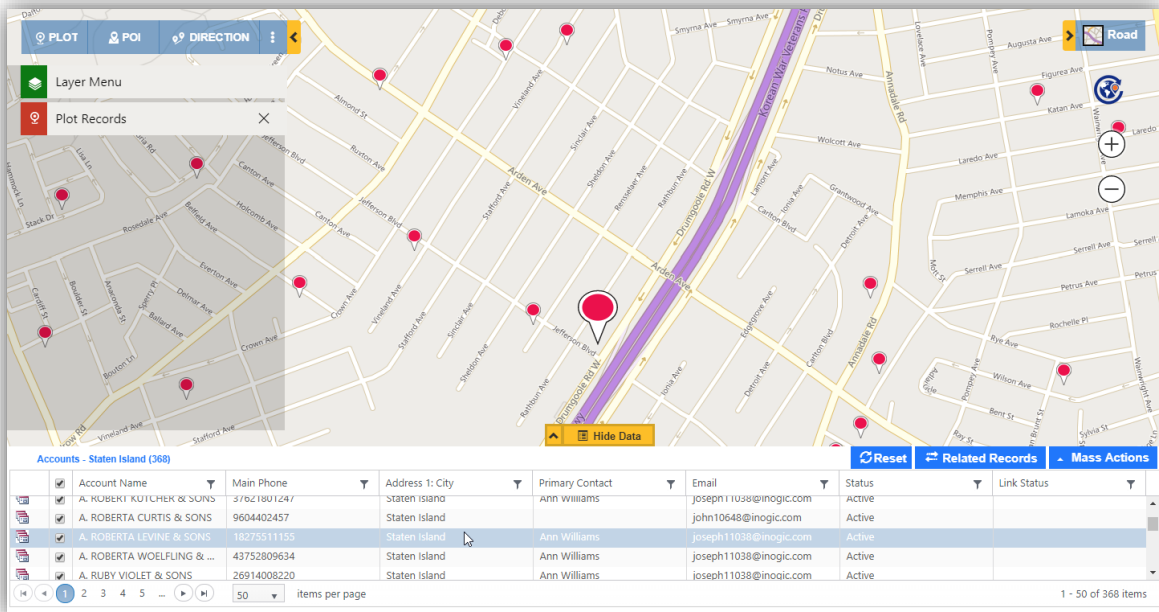
Double click on  Expand button to view the data grid in full screen. Double click on  Collapse button to view the default size of the data grid. Use can also click once and drag to resize the data grid to the desired size.

Accounts - New York (350)										Reset	Related Records	Mass Actions
<input checked="" type="checkbox"/>	Account Name	Main Phone	Address 1...	Email	Expected ...	Industry	Owner	Sales	Territory	Website		
<input type="checkbox"/>	R. PETER KANAKOS & SONS	8464352048	10306	pamela10616@inogic.com	14976089	Engineering	Joe Smith	400000	10306	www.inogic14148.com		
<input type="checkbox"/>	L. PAUL CASTRUCCI & SONS	36577023498	10310	beth10516@inogic.com	14843411	Transportation	Sam S	800000	10310	http://www.inogic14040.com		
<input type="checkbox"/>	R. WERNER MORATH & SONS	5208663787	10308	robert10942@inogic.com	14779901	Engineering	Joe Smith	700000	10308	www.inogic14488.com		
<input type="checkbox"/>	Y. ANTHONY TAKOS & SONS	33982746370	10306	john11009@inogic.com	14719345	Social Service	William Smith	400000	10306	www.inogic14558.com		
<input type="checkbox"/>	K. FRANK CAMINITI & SONS	41133044516	10314	james10792@inogic.com	14698054	Transportation	Sam S	290000	10314	www.inogic14333.com		
<input type="checkbox"/>	Z. DARIUSZ MAKARA & SONS	14959555031	10314	judith10814@inogic.com	14685001	Transportation	Sam S	290000	10314	www.inogic14355.com		
<input type="checkbox"/>	J. N J KATZ & ASSOC. INC. & SO...	14141242839	10314	silkaly10483@inogic.com	14496539	Engineering	Sam S	290000	10314	www.inogic14007.com		
<input type="checkbox"/>	S. JAMES FEUERBORN, JR. & SO...	7124852777	10307	lawris10932@inogic.com	14418039	Social Service	William Smith	1000000	10307	www.inogic14478.com		
<input type="checkbox"/>	S. STILES SHAWN & SONS	39591012928	10314	mark10408@inogic.com	14394467	Engineering	Sam S	290000	10314	www.inogic13931.com		
<input type="checkbox"/>	S. JESUS COOMBS & SONS	33719694353	10306	larry10333@inogic.com	14372710	Engineering	Joe Smith	400000	10306	www.inogic13855.com		
<input type="checkbox"/>	H. ELIZABETH DI SALVO & SONS	39192804098	10304	chris10629@inogic.com	14337160	Banking	Sam S	200000	10304	www.inogic14161.com		
<input type="checkbox"/>	R. OMAR ELSHERIF & SONS	18792802791	10306	melanie1972@inogic.com	14332454	Engineering	Joe Smith	400000	10306	www.inogic14517.com		
<input type="checkbox"/>	R. NASIR KHANZADA & SONS	2422958921	10309	stanley10653@inogic.com	14173893	Engineering	Sam S	200000	10309	www.inogic14186.com		
<input type="checkbox"/>	S. JANIS VACCA & SONS	23584616947	10306	christopher10957@inogic.c...	14111729	Transportation	Joe Smith	400000	10306	www.inogic14503.com		

200 items per page 1 - 200 of 350 items

## Highlight pushpins

User can click on any record within the Data Grid to highlight the respective pushpin on the map. User can also click on any pushpin on the map to highlight the respective record in the Data grid.



## Mass Action Buttons

The user has the option to take actions on the plotted records like adding to route or executing the workflow on selected records in the grid. Defined mass actions are as follows:

- **Add To Route:** This option will add selected data points to the route. The user can add at max 25 data points to the route
- **Save Data:** The selected records can be saved as static Marketing List or Personal View in Dynamics CRM
- **Change Owner:** The user can assign the owner of the plotted records by selecting a user or a Team
- **Manage Territory:** The User can assign or change the territory of selected records
- **Send Email:** The user can send a mass email to the selected records. User can select any one the available email templates or a new email to write their own content. User can also choose to keep the recipient as To/Cc/Bcc in the email.

Send Email

Select Email Template.

New Email

Select Email recipient

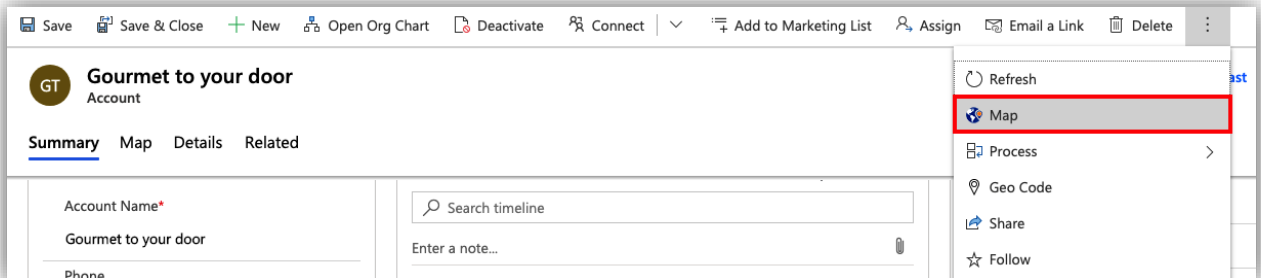
To

Proceed

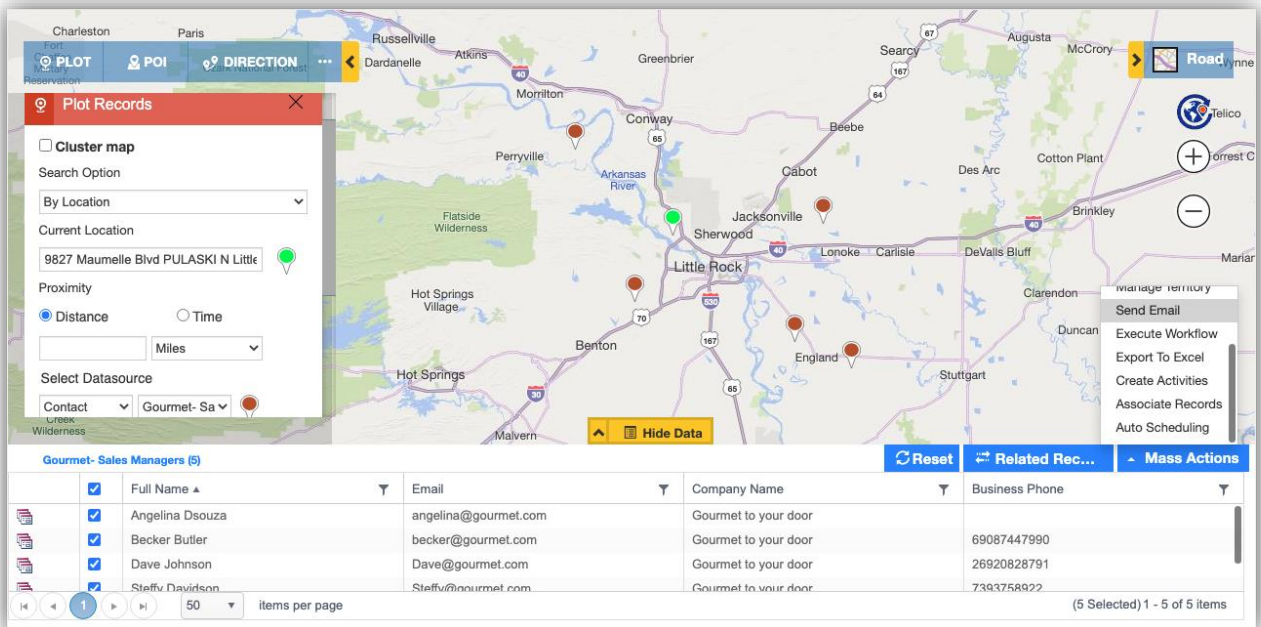
## Maplytics™ – User Manual

**Select regarding:** If user needs to send bulk emails and also wants to keep a specific record in the Regarding field into the email. They can select the option of 'Select Regarding'. To view this option, they can follow the steps mentioned below.

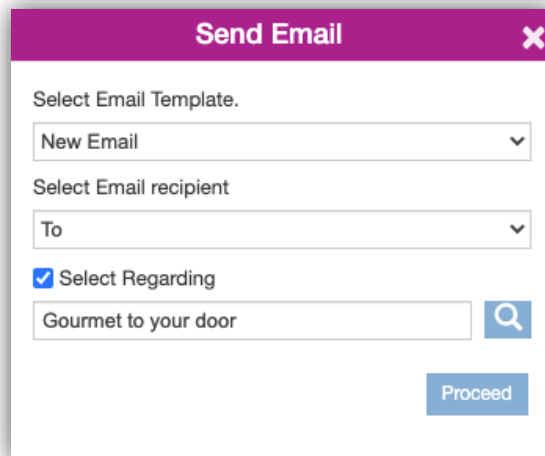
- Open the respective record to be set in Regarding field from the 'Map' button on the record. In the screenshot below, we have taken an Account 'Gourmet to your door' as an instance.



- Now plot the required records to whom the mail has to be sent and Go to Mass actions to choose the option of 'Send email'. Here, we have plotted Contacts.



- Once clicked on 'Send Email' from 'Mass Actions', user can select the option of 'Select Regarding' and the Account that we plotted earlier 'Gourmet to your door' will be set by Default within the Regarding field.



**Send Email** [X]

Select Email Template.

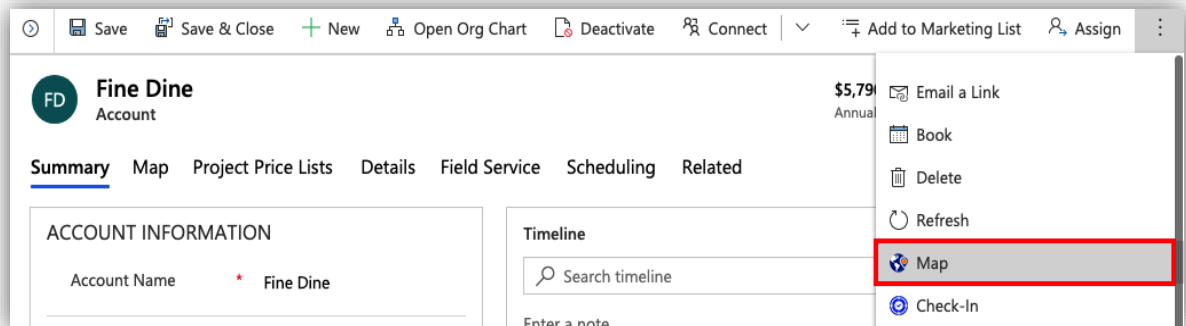
Select Email recipient

☒ Select Regarding  
 [Search Icon]

**Note:** This option will be visible only if the map has been opened using map button on a record.

- **Execute Workflow:** The user can execute any on-demand workflow with this functionality
- **Export To Excel:** The user can use this feature to export data from the map to excel. This functionality adhere to CRM security roles, if the user does not have the permission to 'Export Data to Excel' in CRM then that user will not be able to export data from Maplytics
- **Create Activities:** User can create activities for non-activity Entity records currently selected in "View Data grid." The user can define the Activity, Subject, Duration, Owner(User/Team) and Priority. The user can also select the number of activities they want to create from Mass actions. The activity selected in respective Entity maps can be seen in the Mass actions list under the label of "Create activities", by clicking this label below window will open which will list the activity selected in respective entity map.
- **Associate Records:** This helps the user to associate a record with the plotted record(s) on map. To do this, user needs to open the map using 'Map' button on the record they want to associate.

*In the below screenshot we have opened map from an Account.*

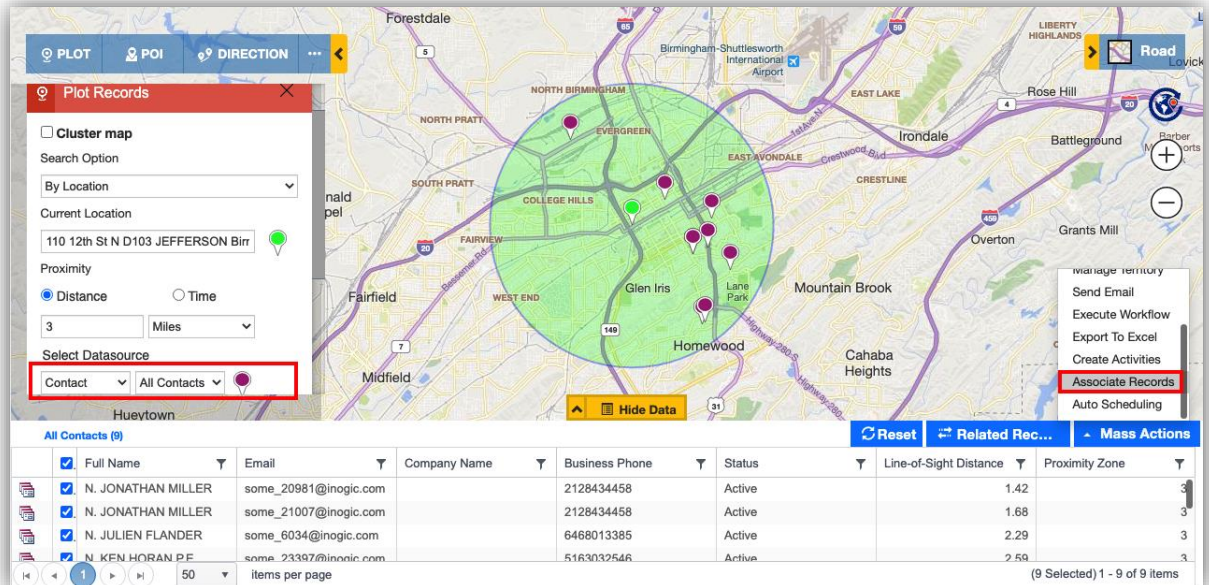


Once the map is opened, plot the required Entity & View to associate the Account. Now, click on 'Mass actions'.

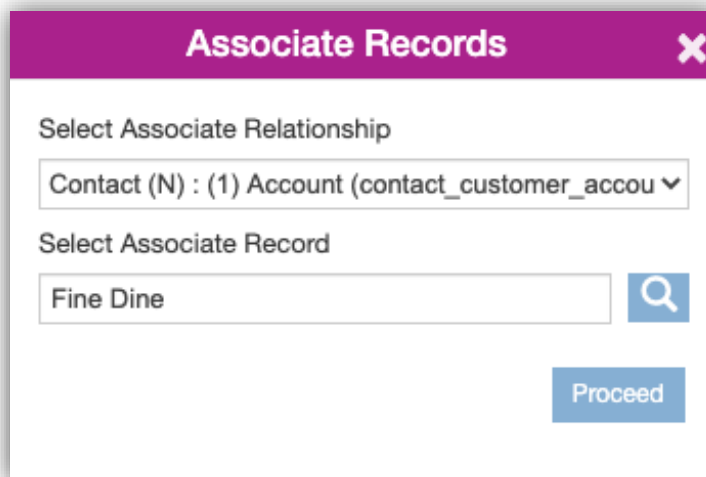


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In the below screenshot, we have plotted Contacts on the map using Proximity Search.



Within Mass Actions, click on 'Associate Records' to open the window. Here, the relationships between both of the entities, the records plotted and the record from which the map has been opened will be listed. User can select the relationship through which they want to associate the records. Here, the record from which the map was opened has been selected by default. User can also select another record as per their requirement to associate with the plotted records.

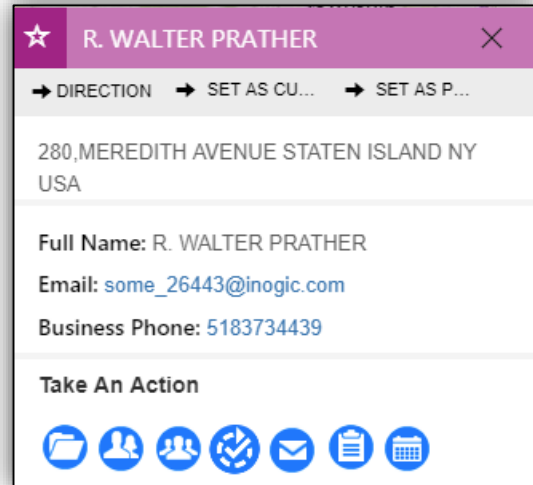
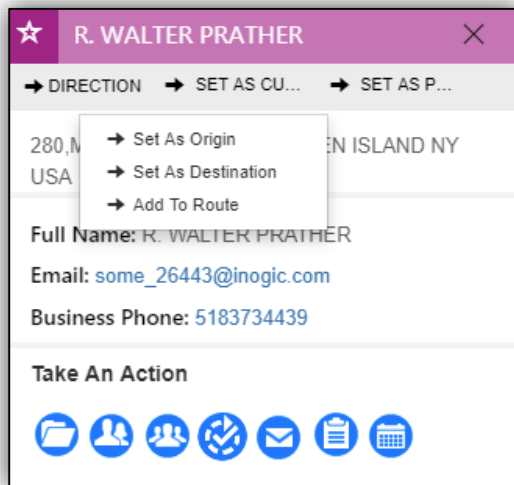


**Note:** This option will be visible in Mass Actions only if the map has been opened using map button on a record.

- **Auto Scheduling:** This can be used to create a schedule for one or more users automatically. Refer to the section of Auto scheduling to know how Auto Scheduling works.

## Tooltip Card




User can click on any pushpin to open a tooltip card. This card will display the data like Address, Account name etc. which is defined in the Tooltip Mapping section of the Entity Map.



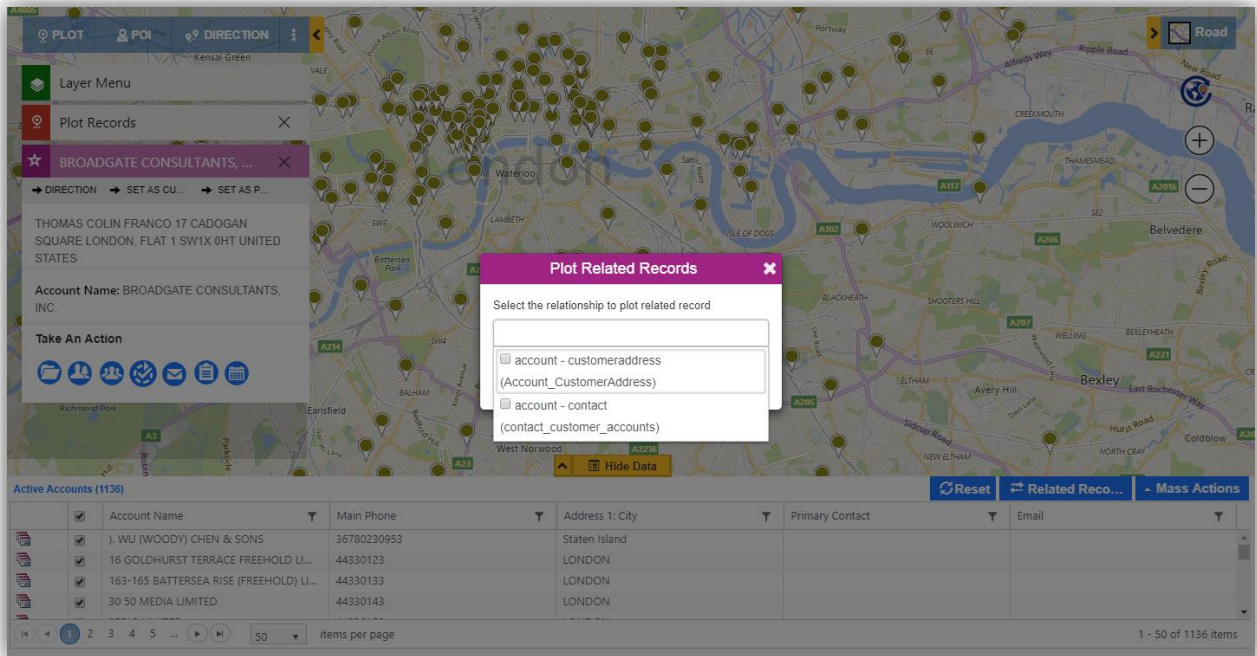
User can also set a particular record as 'Origin', 'Destination', 'Add to Route' under Direction, 'Set as Current Location' and 'POI location' from the Tooltip card.

## Quick Call to Action Buttons

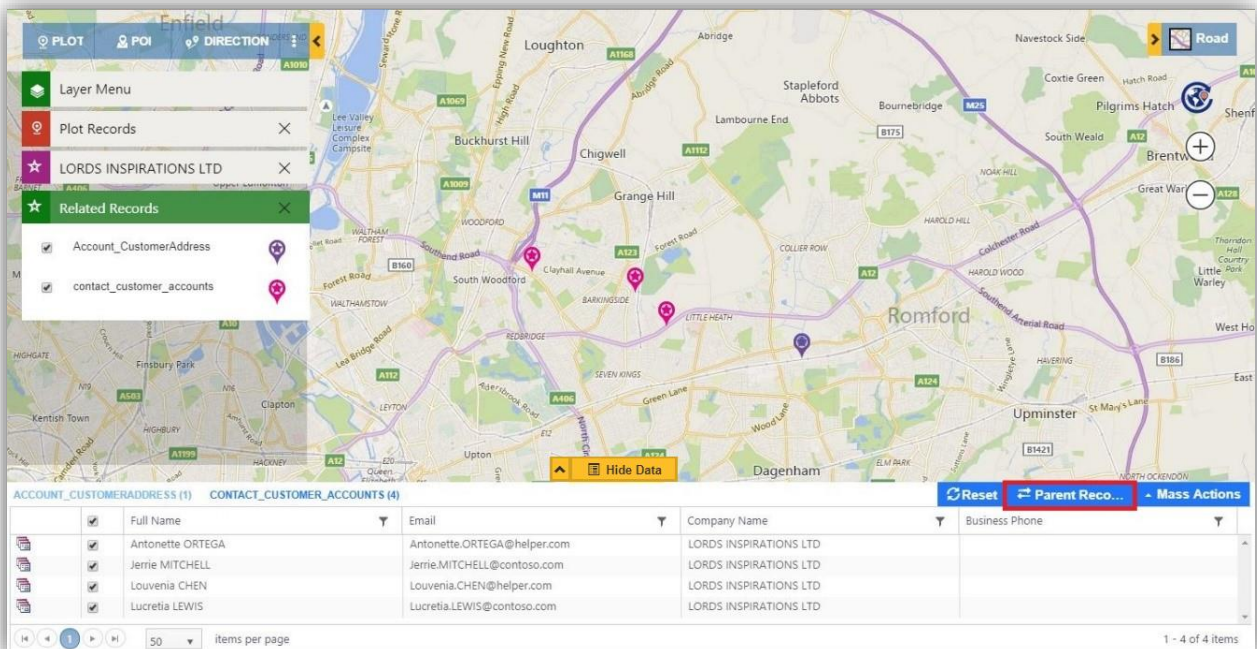
User can associate quick action buttons. This helps in saving time while switching between screens to take actions. First four actions are the default actions and cannot be changed by the user. User can further add actions for creating records for activities and related entities. The default records are as follows:

- **Change Owner** : Assign an owner to the respective record by selecting a user or a team
- **Open Record** : Open record directly from this screen to edit any field
- **Plot Related Record** : Plot One-to-Many Relationships/Related records of a particular record as shown below:

## Maplytics™ – User Manual




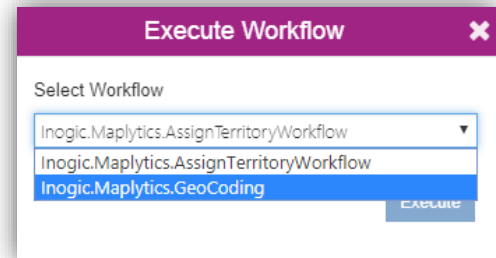
Select the required relationships from the list and click on 'Plot Records' button. Related records will be plotted as shown below. Use 'Parent Records' button to switch between Parent and Related records data points.









## Maplytics™ – User Manual

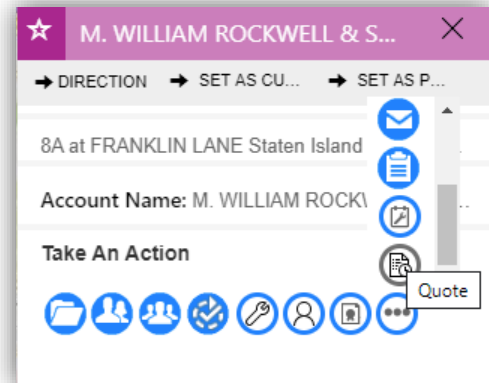
- **Run workflow** : The user can execute on-demand workflows on an individual record. When clicked on this button, it will open a window which will list down all the on-demand workflows available for respective Entity as shown below:



The user can customize the rest of the actions according to their requirement. For example, user can add Email, Add Task, Appointment and Quote and many more.

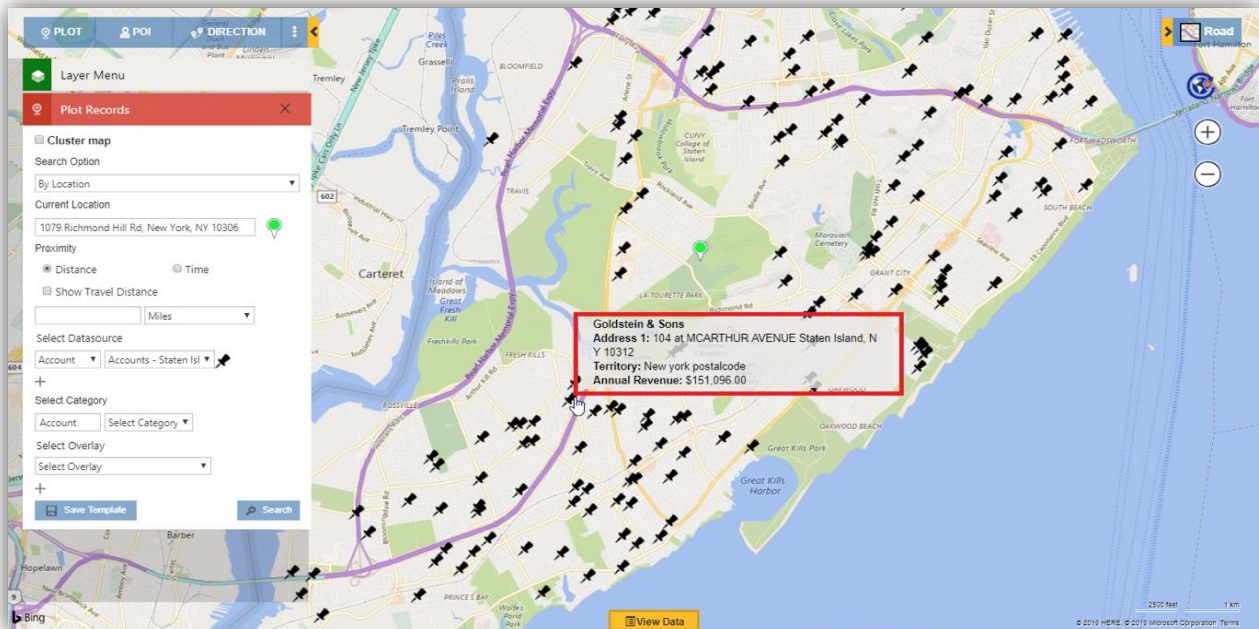
- **Email** : Send email to this record
- **Add Task** : Add task to this particular record
- **Appointment** : Schedule appointment with this record
- **Quote** : Create Quote related to the plotted entity record

The user can define these actions under 'Advance Settings' in Entity Maps. **Go to Setting > Entity Map > Select Required Record > Advance Settings > Tooltip Card Actions** or refer to 'Setup Entity Map' section of Installation Manual for further instructions.



## Hover

User can hover on Dynamics CRM Records plotted on the map to have a quick glance at its details.



The user can have a maximum 6 different attributes here apart from the title attribute. Refer to the 'Setup Entity Map' section of Installation Manual for further instruction.



### Reset Map

User can use the button of 'Reset Map' to reload the map with the initial Detail map settings.

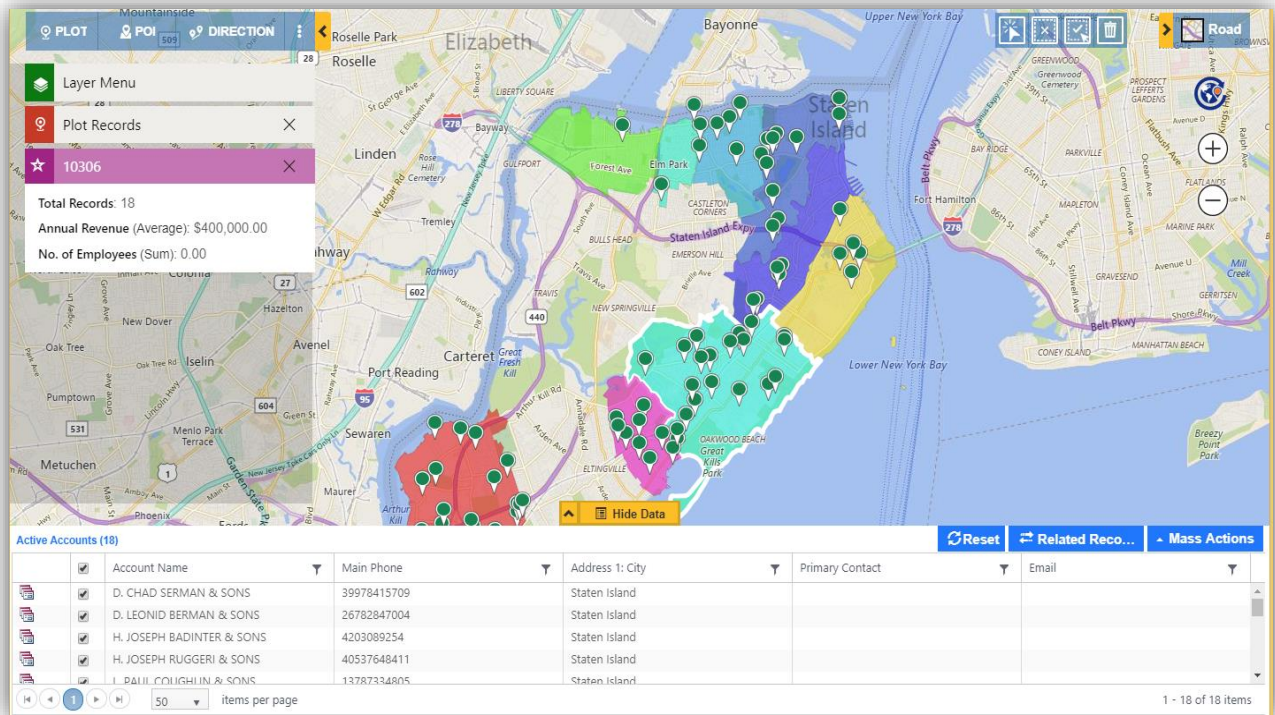


**Note:**

- *This action will clear all the data plotted on map*
- *The refresh map button will show the same data on the map in the following conditions:*
  - *Expanding the map or plotting a route from a dashboard*
  - *Using the map button from an individual Entity record page*
  - *Plotting a route or a template*
  - *Plotting records by selecting the records from the Entity records page*
  - *User had set a default template for the Detail map*

## Summary Card

The user can click on any enclosed area to get the summarized information of the plotted records in that area in a summary card. The area clicked will get highlighted and the respective data will be visible in the data grid. The user can customize the settings for this under the Summary card section in the respective 'Entity Maps'. Refer to 'Setup Entity Map' section of Installation Manual for further details.



With territories plotted on the map, Summary card also provides a button to 'Open Record' that can be used to open the respective territory from the map itself.

☆
AL - USA

**Area:** 135639420459.18 Square Meter

**Take An Action**

**Total Records:** 531

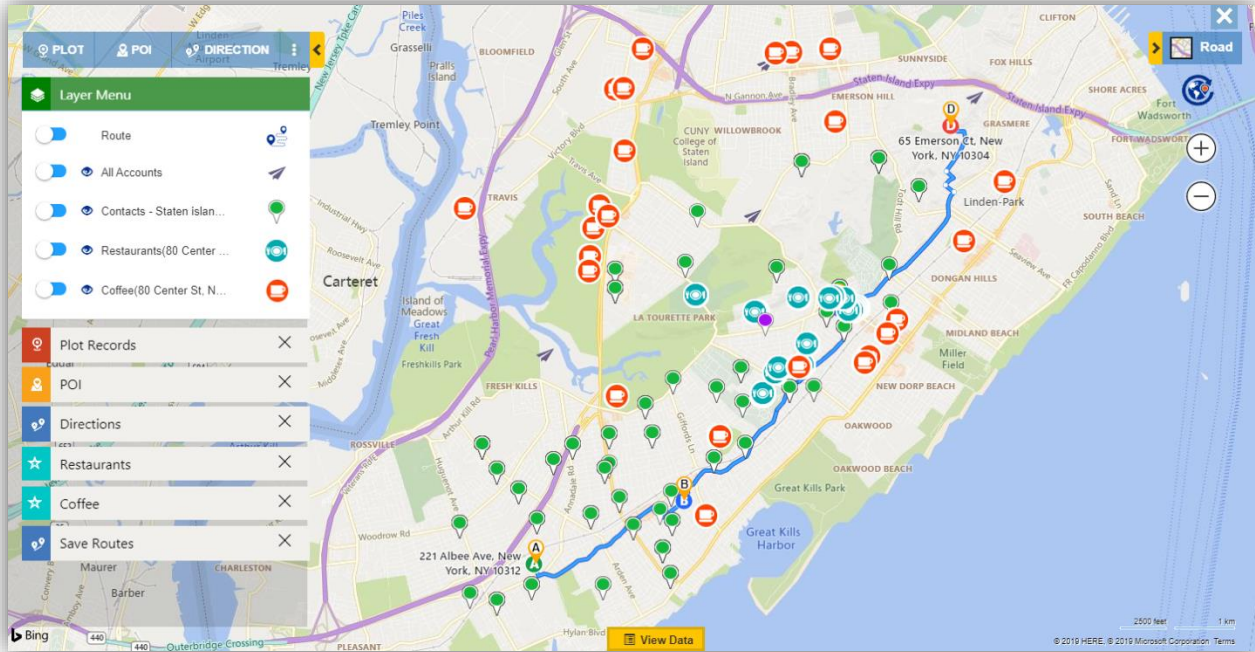
**Account - (Accounts - USA):** 531

**Annual Revenue (Average):** \$1,413,395.59

**No. of Employees (Sum):** 0.00

## Layer Menu

This helps the user to select the required data among the multiple data plotted on the map. The user can use the toggle buttons on the Layer menu card to show or hide the required layers of the data to be shown on the map without removing the same from map.



**Note:** Layer menu card is collapsible but a user can not close this card exclusively.

The layer menu card will show the following icons for the respective layers mentioned:



Layer type	Icon	Layer type	Icon
Data source		Territory	
Route		POI	
Proximity		Cluster Pushpin	
Drawing Shape		Shape Operation	
Region Shape		Overlay- Shape file	
Plot-child		Territory Management – Shape file	

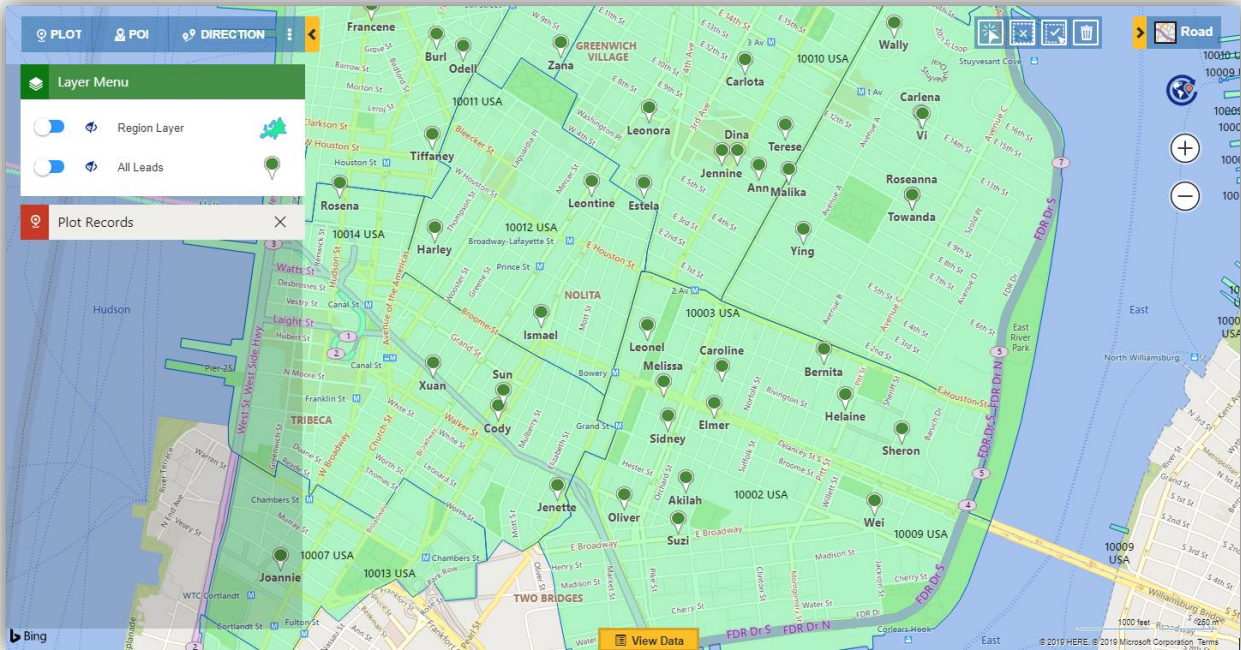
**Note:**

- Layer icon for Data source layer, POI layer and Plot-child layer will change depending upon pushpins visible on map
- If category is selected in the plot card, the layer menu card will show only the default pushpin for the Data source layer




## Show/Hide Labels

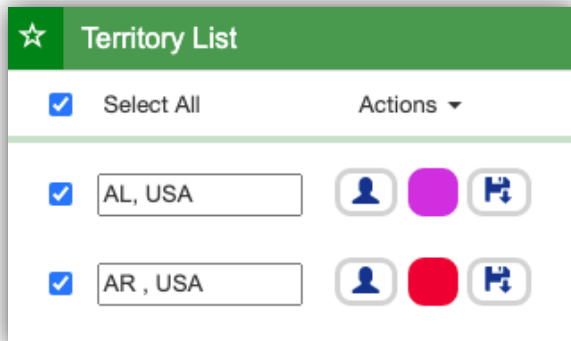
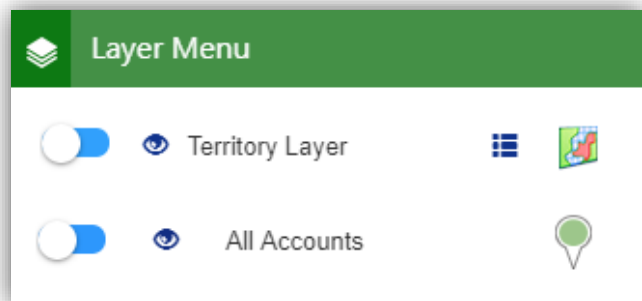
User can click on the 'Show label'  button to view the labels for the pushpins, regions as well as territories plotted on the map. User can again click on 'Hide Label'  to hide the labels showing on the map. The option for showing/hiding labels is available for every individual layer of data plotted on the map.



**Note: Show Labels is available for less than 5k records.**

## Show/Hide Territory List

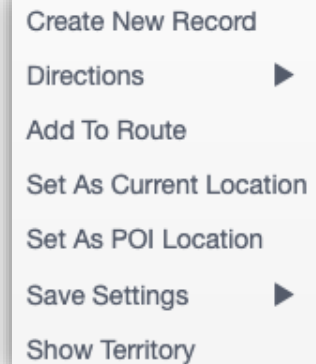
With territories plotted on the map, layer menu will also show an option of Show/Hide List for the layer of territories. User can click on the show/hide list button  option to open the list of territories plotted on the map.



User can select or deselect the territories which are required to be plotted on map. User can further change the name, select a color and select the manager for the respective territories and also save the same with the 'Save' button within the 'Territory List' card.

## Contextual Menu

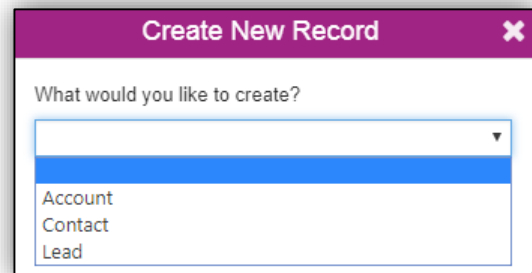
User can right click on the map to open Contextual menu. It provides commonly used features in Dynamics CRM like creating a new record, set origin/destination or selecting map zoom level on the map, etc. The contextual menu provides the following options:



### Create New Record:

User can right-click anywhere on the map or POI result icons and create a record for that particular location. This will save the record with the details of the address and the geo-coordinates (Latitude & Longitude).

**Note: Create new record option will not available for existing record pushpin**



### Directions:

- Set As Origin: This option will set the address of the pushpin/map location as the start location of the route.
- Set As Destination: This option will set the address of the pushpin/map location as the end location of the route.

**Add to Route:** This option will set the address of the pushpin/map location as a middle waypoint(s) of the selected route. For example, the user has selected Point A & B as origin & destination respectively for a route and now clicks on the 'Add To Route' option, the Point B will remain as the destination and will become the Point C. The address of the selected pushpin will become the Point B of the route.

**Set as Current location:** User can click on any pushpin or anywhere on the map to set the address of the pushpin or the location as the current location respectively, which can be used for Proximity search.

### Set as POI Location:

This option helps the user to set the location for the Point of Interest (POI) searches like ATMs, restaurants, Airports, etc. Setting the POI location, user can search for various Geo-tagged & Bing mapped locations around it.

### Save Settings:

User can save the default settings for the following options. These settings will be saved in the Configuration details record of the user:

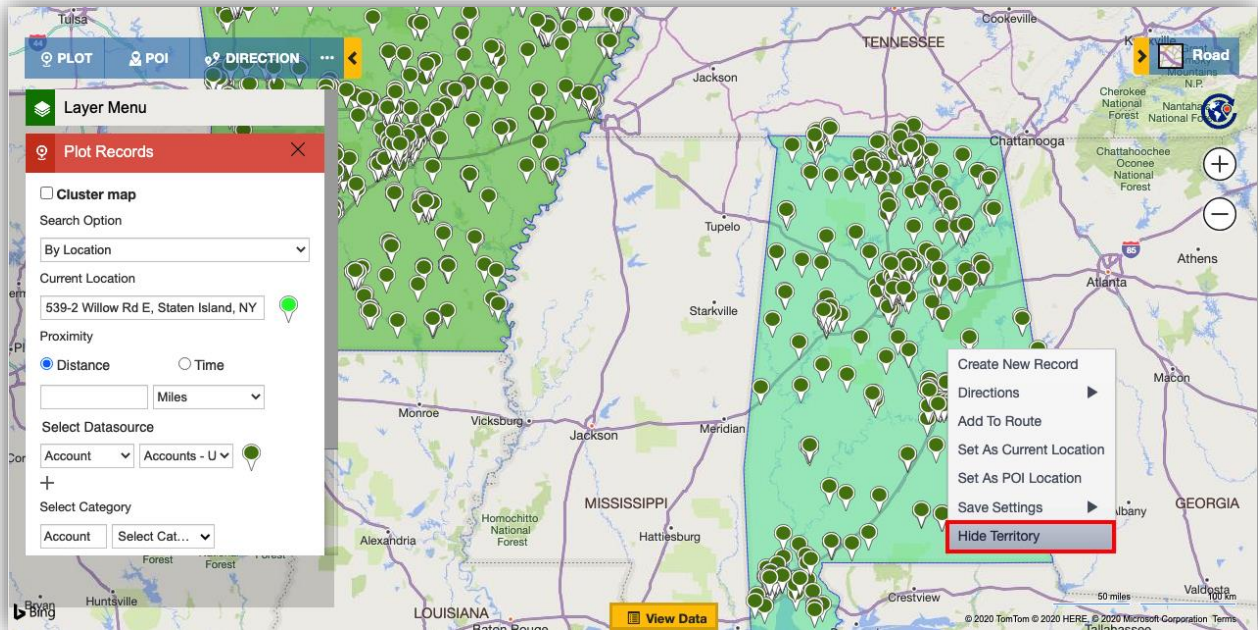
- Current location: This will save the location as the default current location.

## Maplytics™ – User Manual

- Map zoom level: This sets the zoom level and map center for the Map. After this setting is done, whenever the user will open the Detail Map, it will be zoomed down to the location set here.
- Origin: This sets the location as the default origin.
- Destination: This sets the location as the default destination

### Show Territory:

User can right click anywhere on the map or at any record to select the option 'Show Territory' from the Contextual menu. This will plot the respective territory to which the selected location or the record belongs to. Further, user can click on 'Hide territory' from Contextual Menu to hide the plotted territory.

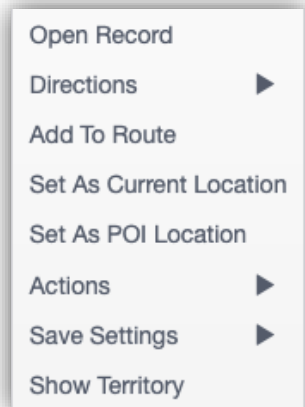


User can also click on any pushpin to get a contextual menu. Along with the options mentioned above, this will provide the following options:

Open record: User can open the record form right from the map and can further edit the details for the record.

Actions: User can perform the following actions on the pushpin selected:

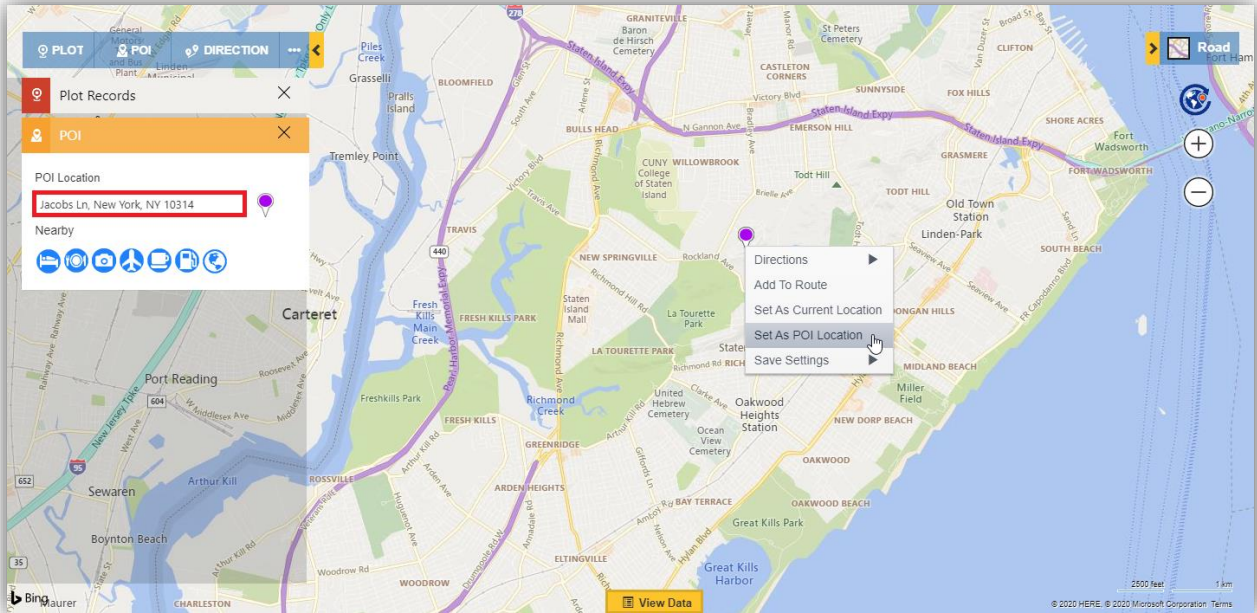
- Add Task: This option helps the user to create a new task in Dynamics CRM regarding the selected record.
- Schedule Appointment: The user can use this option to create a new appointment for the selected record.
- Manage Territory: The user can assign/re-assign a territory to the selected record from the map and hence can manage the territory.



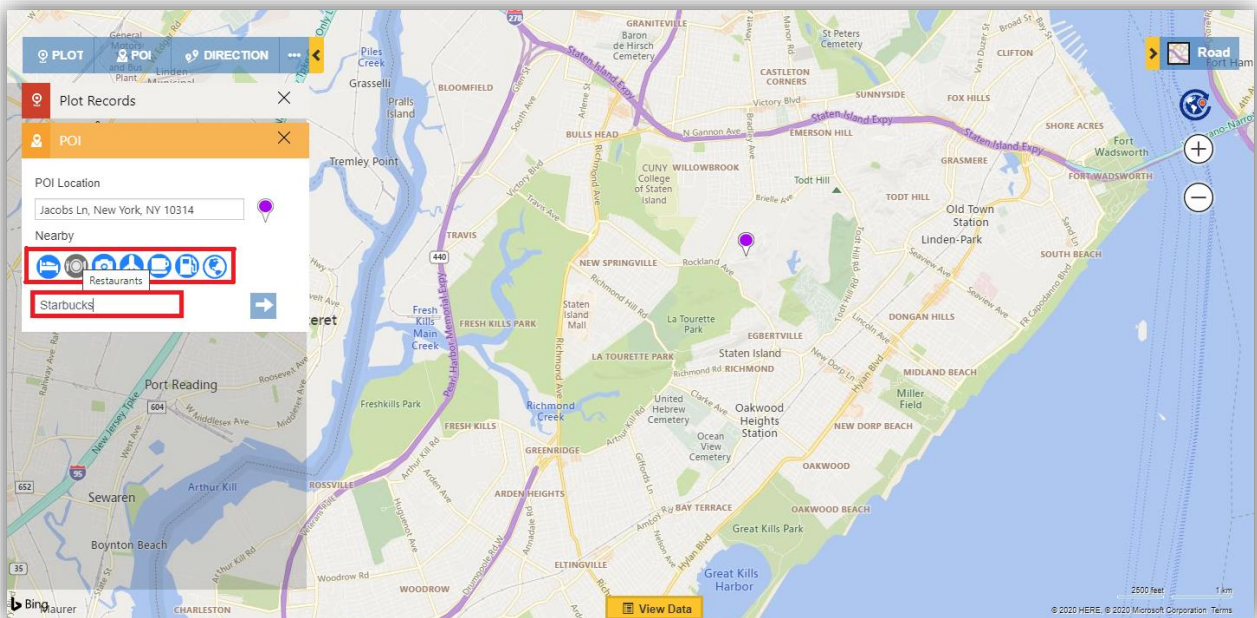


## Point of Interest (POI) Locations

User can search for any geo-tagged Bing-mapped locations called points of interest (POI) like ATMs, restaurants, hotels, coffee shops, etc. near a specified location. This can also be plotted alongside the CRM data. User either can right-click on map to set the location as the POI location or can directly enter the required location in the POI card.



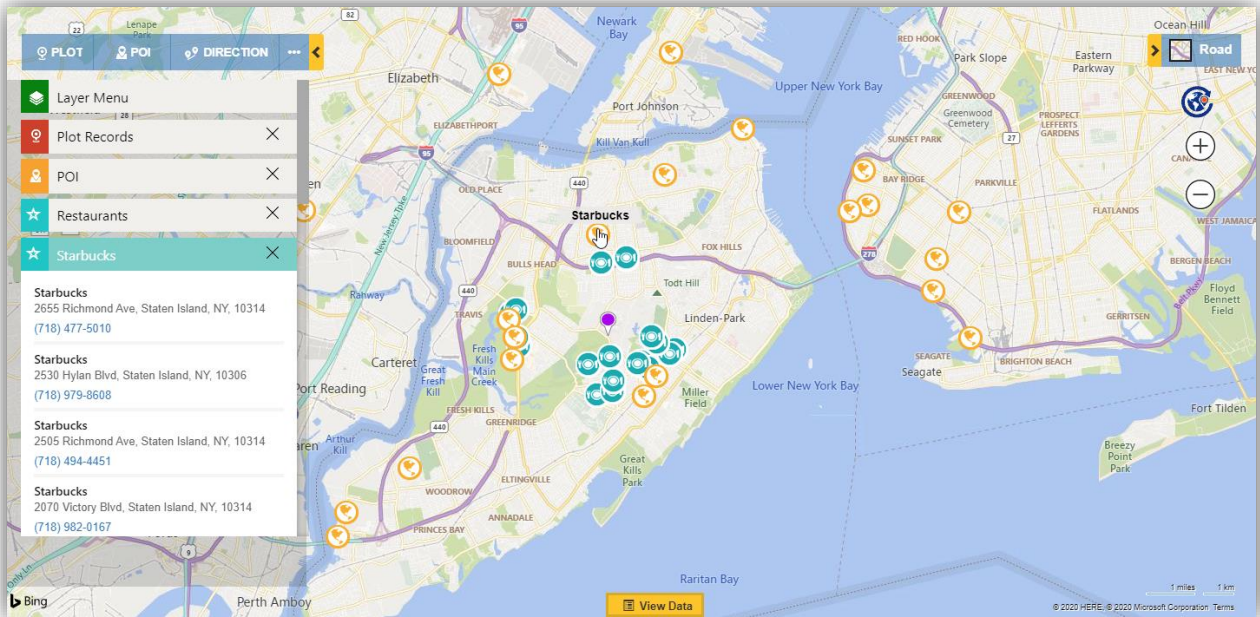
User can either click on any of the POI icons or manually search for required POI location by entering the respective keyword in the search bar.



Based on the selected POI location icon or the entered keyword, the results will be loaded.



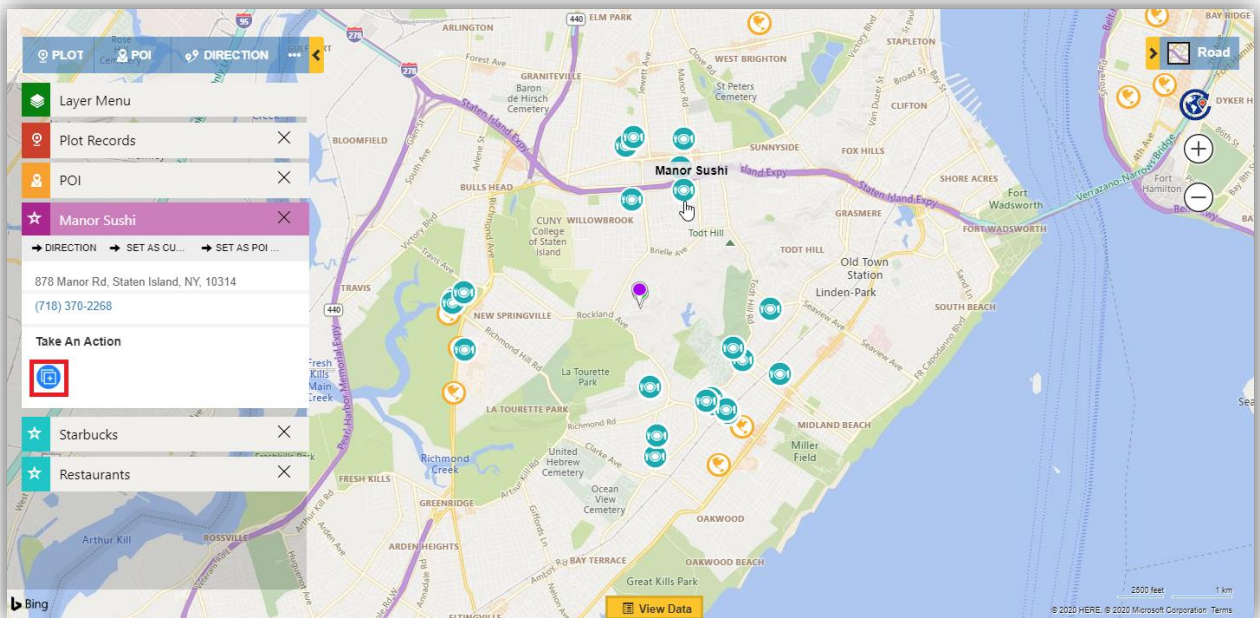
## Maplytics™ – User Manual



### Note:

- **The option to enter a keyword to search POI locations is only available while searching in USA.**
- **For each POI location search, only 25 locations will be plotted on the map.**

Apart from plotting POI data, user can also add the plotted businesses in Dynamics CRM record as leads, accounts, contacts, or any custom entity by using the Create New Record option in the POI card or Contextual menu. (Refer to Contextual menu section)



## Proximity Search

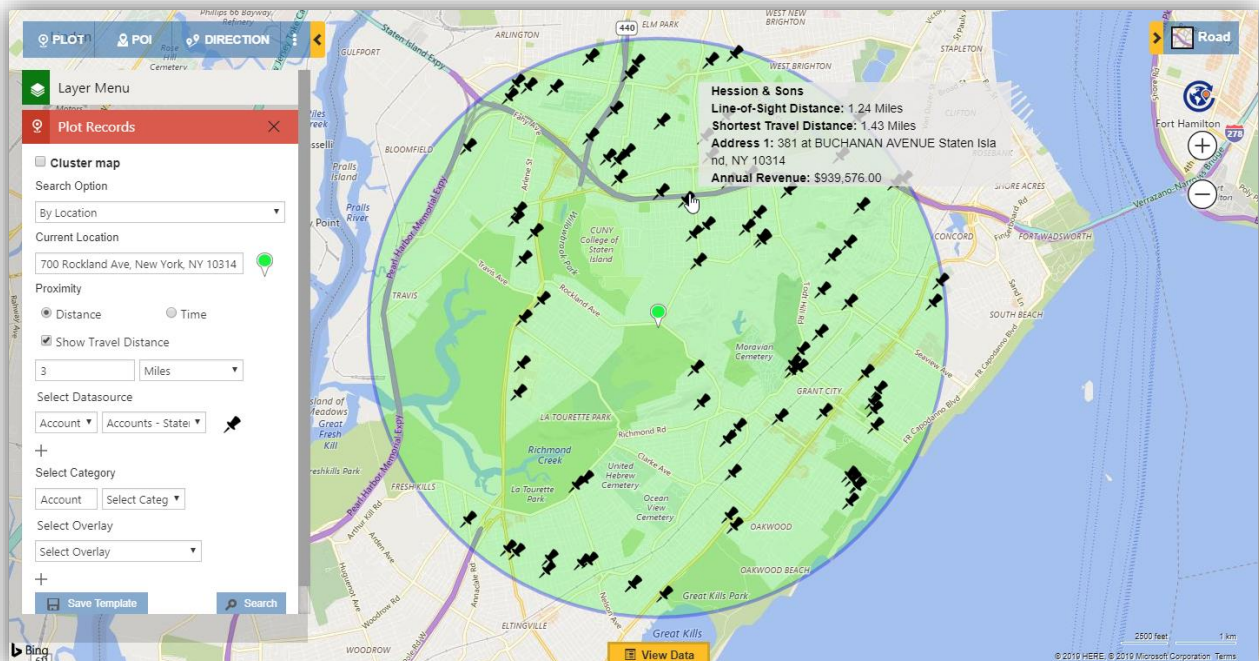
User can search for the nearby records around a required location using Proximity Search. This will help the users to understand the proximity of the nearby records in regards to the selected location. There are two different options to perform a Proximity Search:

1. Proximity by Distance
2. Proximity by Time.

**Current Location:** User can select any location or a record as the current location. This is used to specify the center point for the Proximity search. By default, this field displays the address stored in the Maplytics personalized record of the logged in user. This is always represented by a green color pushpin on the map and also indicated right next to the current location message box.

### Proximity by Distance

This option will calculate the straight line distance between the current location and all the points which fall in the proximity parameter as shown below:

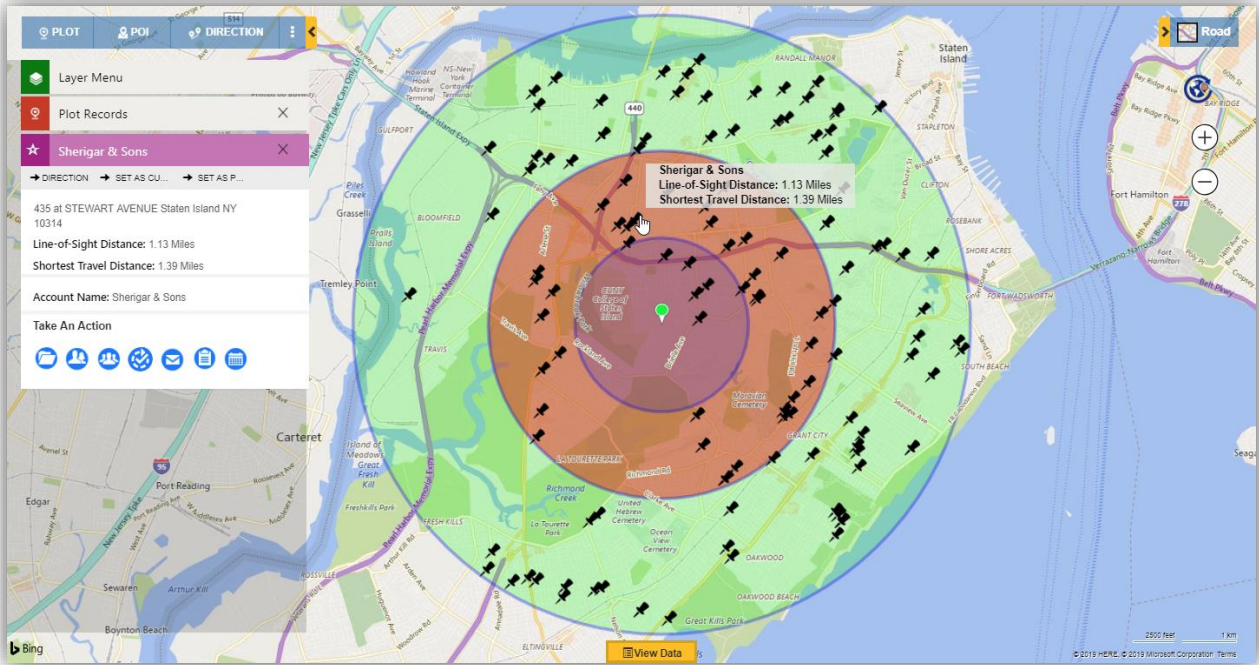


Enter the radius for the Proximity search. The user can also add decimal values with a scale of 2 for the radii. The Proximity can be provided either in Miles or Kilometers. The User can also hover over a pushpin and see the distance from current location.



## Concentric Proximity Search

This new addition to Proximity based on Distance allows users to perform up to 3 proximity search simultaneously. The user needs to enter the distance values separated by a comma (,) and all the points that fall in the defined proximity parameter will be plotted.



The Concentric proximity zones are represented by different colors for easy visual analysis. The user can also click on individual proximity point zones to highlight the circle and open the Summary Cards for that proximity parameter.

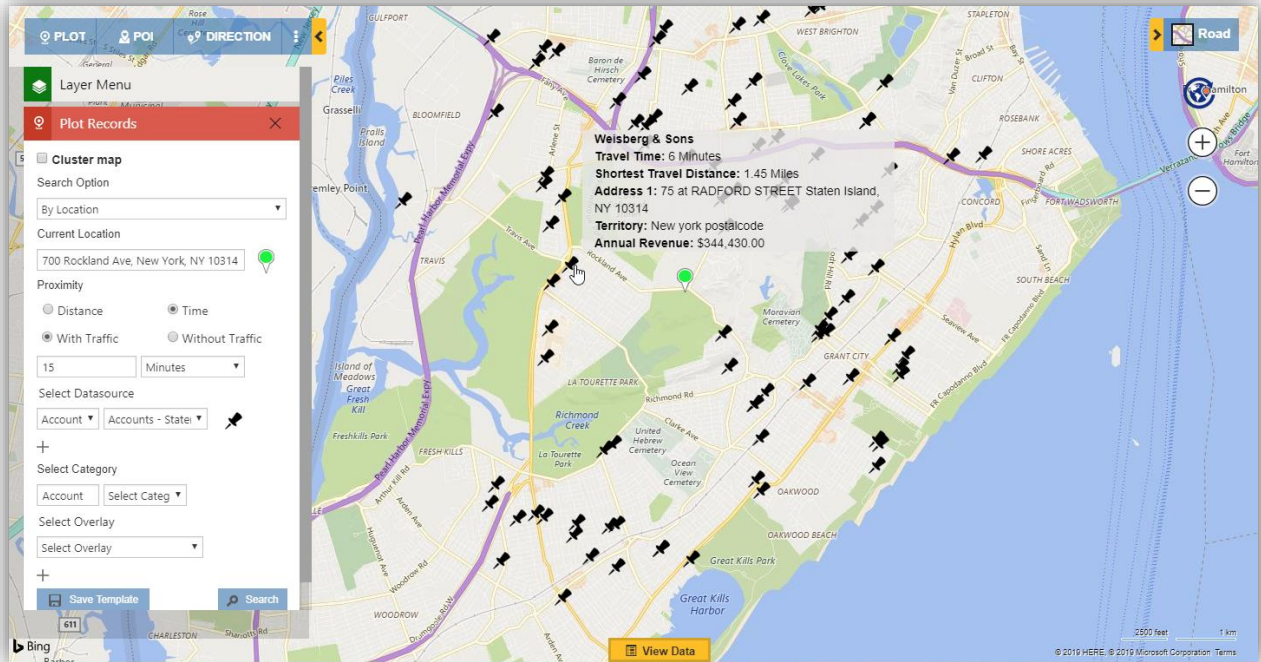
The user can also filter the data points based on the proximity zone and their proximity distance from the current location in the 'View Data' grid.

Accounts - Staten Island (130)					Reset	Related Records	Mass Actions
	Account Name	Primary Contact	Main Phone	Shortest Travel Distance	Line-of-Sight Distance	Proximity Zone	
<input checked="" type="checkbox"/>	Abbas & Sons		7188520069	2.5	1.84	2	
<input checked="" type="checkbox"/>	Abdelmessih & Sons	Abraham McCormick	2122501122	2.04	1.32	2	
<input checked="" type="checkbox"/>	Adamita & Sons	Adrienne McMillan	2124180645	0.43	0.39	1	
<input checked="" type="checkbox"/>	Adams & Sons	Benno Kurmann	2122068501	1.55	1.1	2	
<input checked="" type="checkbox"/>	Aguayza & Sons		2123082665	3.21	2.96	3.56	
<input checked="" type="checkbox"/>	Aiello & Sons		2128165282	3.88	2.85	3.56	

**Note:** User can enter integer value from 0.1 to 2000 for distance proximity search.

## Proximity by Time

This option will calculate how many points fall in 'x' minutes or hours of driving distance from current location. The Proximity can be provided in either Minutes or Hours. The User can also hover over a pushpin and see the distance from current location.



## Show Travel Distance

While performing Proximity Search by Distance or Time, if the user wants to see the actual travelling distance from the current location till each of the individual pushpins, they can select the checkbox of 'Show Travel Distance' to view the Shortest Travel Distance on the hover and view data grid.

Accounts - Staten Island (103)							Reset	Related Records	Mass Actions
	Account Name	Primary Contact	Main Phone	Shortest Travel Distance	Line-of-Sight Distance	Proximity Zone			
	<input checked="" type="checkbox"/> Abbas & Sons		7188520069	2.5	1.84	3			
	<input checked="" type="checkbox"/> Abdelmessih & Sons	Abraham McCormick	2122501122	2.04	1.32	3			
	<input checked="" type="checkbox"/> Adamita & Sons	Adrienne McMillan	2124180645	0.43	0.39	3			
	<input checked="" type="checkbox"/> Adams & Sons	Benno Kurmann	2122068501	1.55	1.1	3			

## Show Travel Distance for Truck

Plot Records

☐ Cluster map

Search Option  
By Location

Current Location  
3057 124th Ave NE, Bellevue, WA 98005

Proximity  
☒ Distance ☐ Time  
1,2,3.56 Miles

☒ Show Travel Distance  
Select Asset  
Select Asset Select Hazard

Select Datasource  
Account All Accounts

+  
Select Category  
Account Select Categor

Once the user selects the option of 'Show Travel Distance', user will get an option to an Asset and Hazardous material. This will provide the list of the assets created in the Asset entity within the CRM. If the user wants to search for the shortest travel distance for truck, they can choose to select the respective Asset and if any Hazardous material is being carried out or select none from the following list:

- Combustible
- Corrosive
- Explosive
- Flammable
- Flammable Solid
- Gas
- Goods Harmful To Water
- Organic
- Poison
- Poisonous Inhalation
- Radioactive
- Other
- None

### Note:

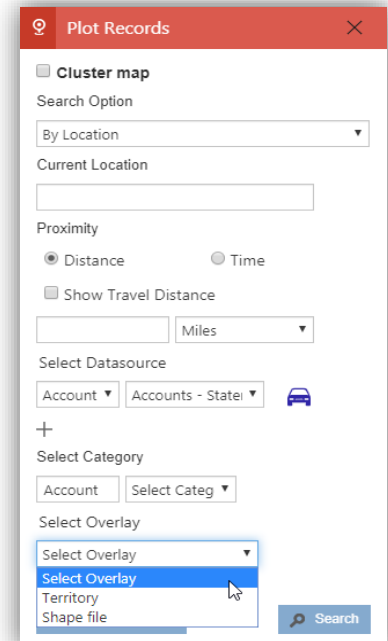
- If user has not selected any asset here, by default, the travel distance will be calculated as per driving by car.
- The feature of 'Show Travel Distance' based on driving by truck uses a separate key. Every time the travel distance is searched based on driving by truck, 3 transaction limits of the key are consumed for each pushpin that appears within the proximity.

## Overlay

This helps user to view the Dynamics CRM records along with shape/excel files and existing territories plotted on the map. User can also view the 'layer menu' to select or deselect the layers so as to show or hide the same respectively. Using Overlay user will easily be able to understand and analyze the data spread in required shape file regions and territories.

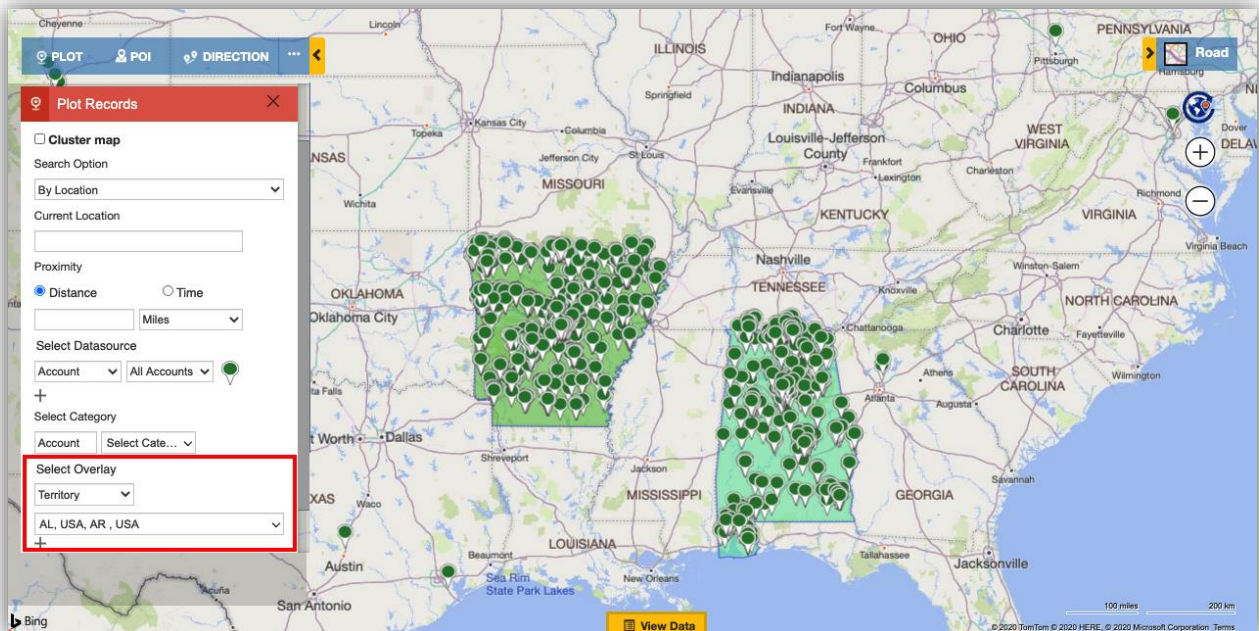
User can select the following two options:

- Territory – This option helps the user to select among the list of existing territories
- File – This option helps the user to select among the list of shape/excel files. The file should be in a territory in order to be visible in the list.



### Overlay by Territory

User can select the option of Territory and select the territories they want to plot. Along with this, they can also select any datasource & view. This will help them view the datasource records along with the Overlay of territories selected.





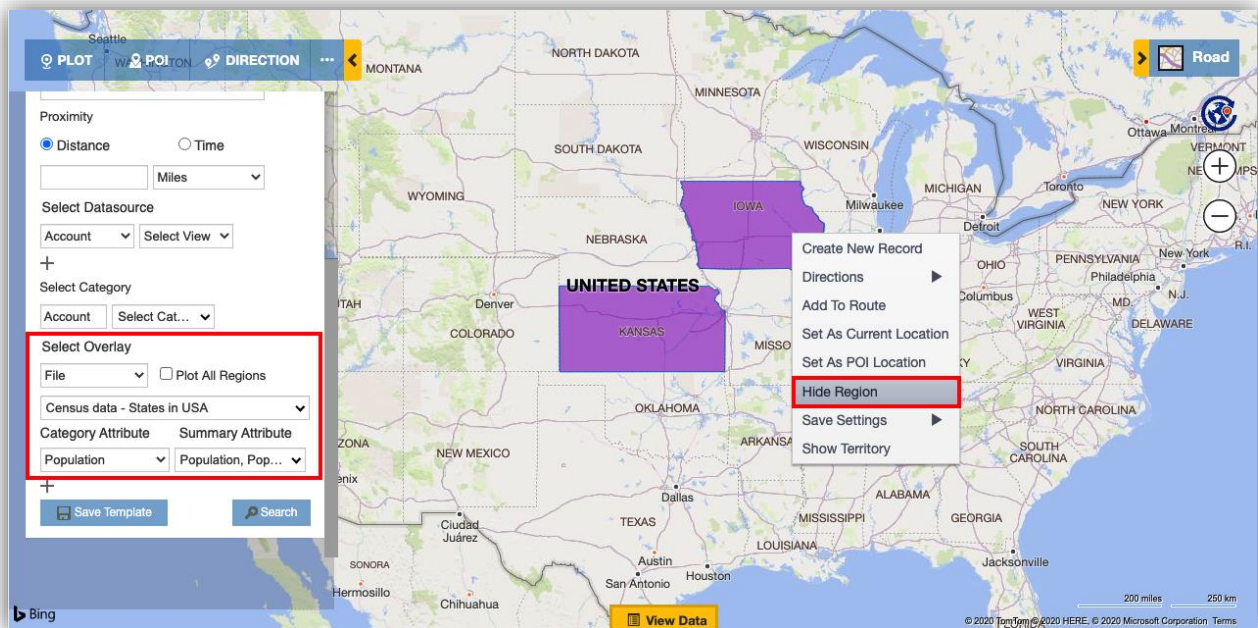
## Overlay by File

User can select a excel/shape file saved in CRM to plot the same on the map. Further users can select the following options as well.

**Category Attributes:** An attribute can be selected to categorize the regions plotted by file.

**Summary Attributes:** One or more attributes can be selected to show the same in the Summary card. The attributes selected within the 'Configuration' of the saved file in the Territory Entity will be selected by default. User can deselect them and can select other attributes.

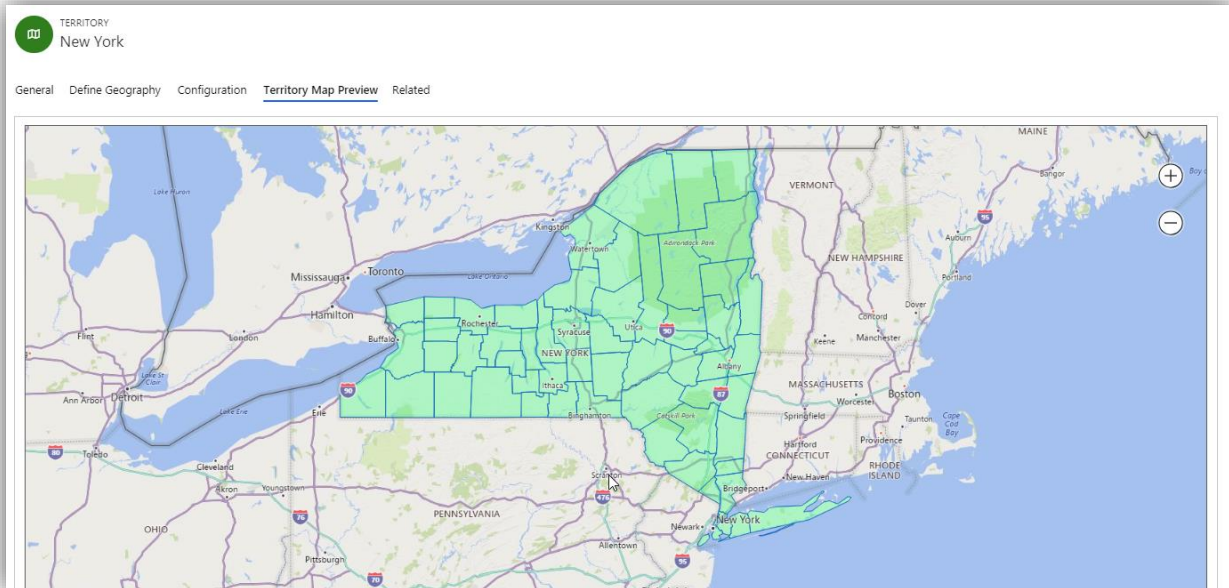
Users can also uncheck the option of 'Plot All Regions' if they do not want to plot all regions from the file. In this case, they can right click at any location on the map to select the option of 'Show region' from the Contextual Menu. This will help them to view the region for the respective selected location. User can again click on 'Hide Region' from the Contextual Menu to hide the region for the respective selected location. Further, user can also open the respective territory within which the file is saved using the 'Open record' button on the Summary card.



### Save Shape/Excel file in territory

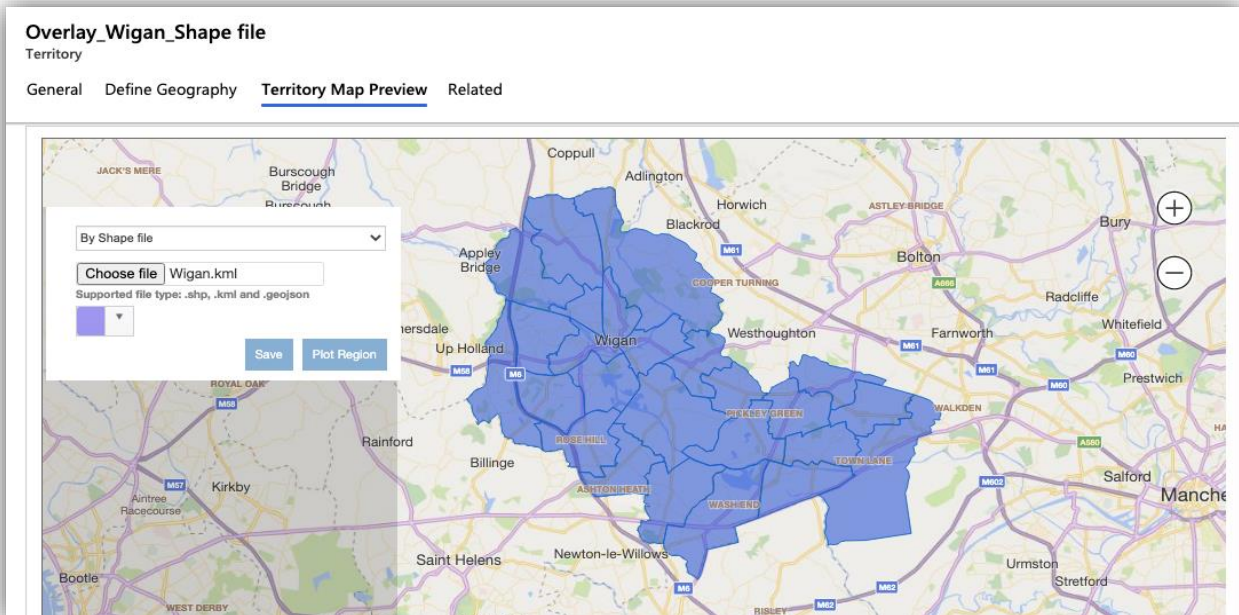
A file should be saved in a territory in order to be visible in the list of the files to be plotted as an Overlay. Follow the steps mentioned below to save the shape/excel file in a territory:

- **Go to Settings > Business Management > Sales Territories > Create a sales territory > Save**
- **Go to Territory Map Preview > Select Option > Shape file/Excel file > Save**



### Save Shape file

Within the Territory Map preview, user can select the option of 'Shape file' and select the color to view the regions in the same.



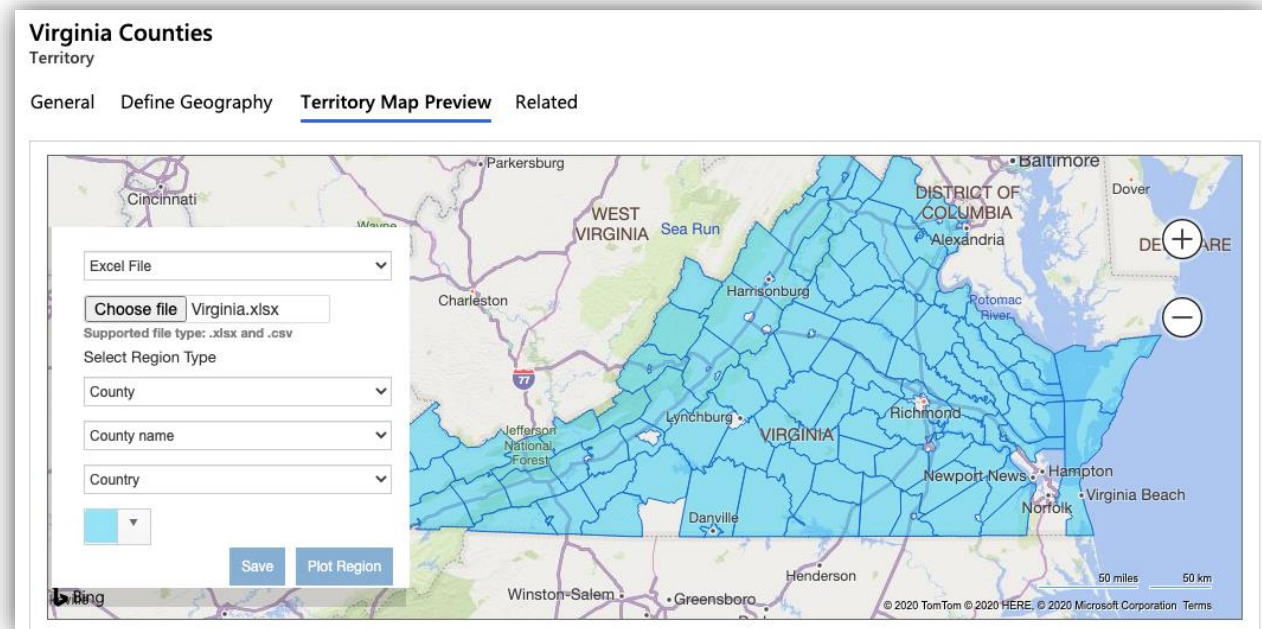
### Save Excel File

Within the Territory Map preview, user can select the option of 'Excel File' to select an excel file to the territory. User can also select the color to view the regions in the same. They further need to select the following options in order to save the excel file as per their requirement:

Select Region Type: User should select the region type based on which the boundaries of the regions from the excel file is to be plotted.

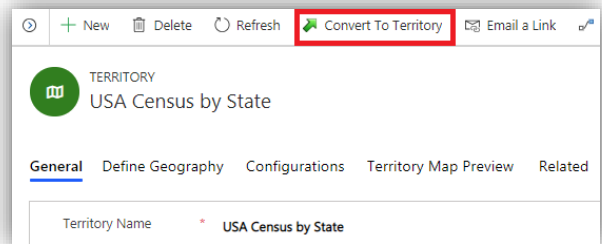
Select Region Value: User needs to select the column from the excel file that contains the values for the selected Region Type.

Select Main Region: User needs to select the column from the excel file that contains the value for the biggest region for the selected Region type in order to plot the regions accurately. For example: If the Region type selected is Postal code, so the Main Region should be preferably Country. If the column of country is not available then the column with the values for respective States or Cities can be selected.



### Convert Overlay to territory

User can use this button to convert an overlay record to a territory. After the overlay record is converted, it becomes a territory which can be searched in the option of 'Territory' in Overlay.



#### **Note:**

- ***Supported file types for shape files are .shp, .kml and .geojson and excel files are .xlsx, .csv***
- ***In a territory, either a shape/excel file can be saved or geographies can be created***
- ***Only one shape/excel file can be saved in one Territory***



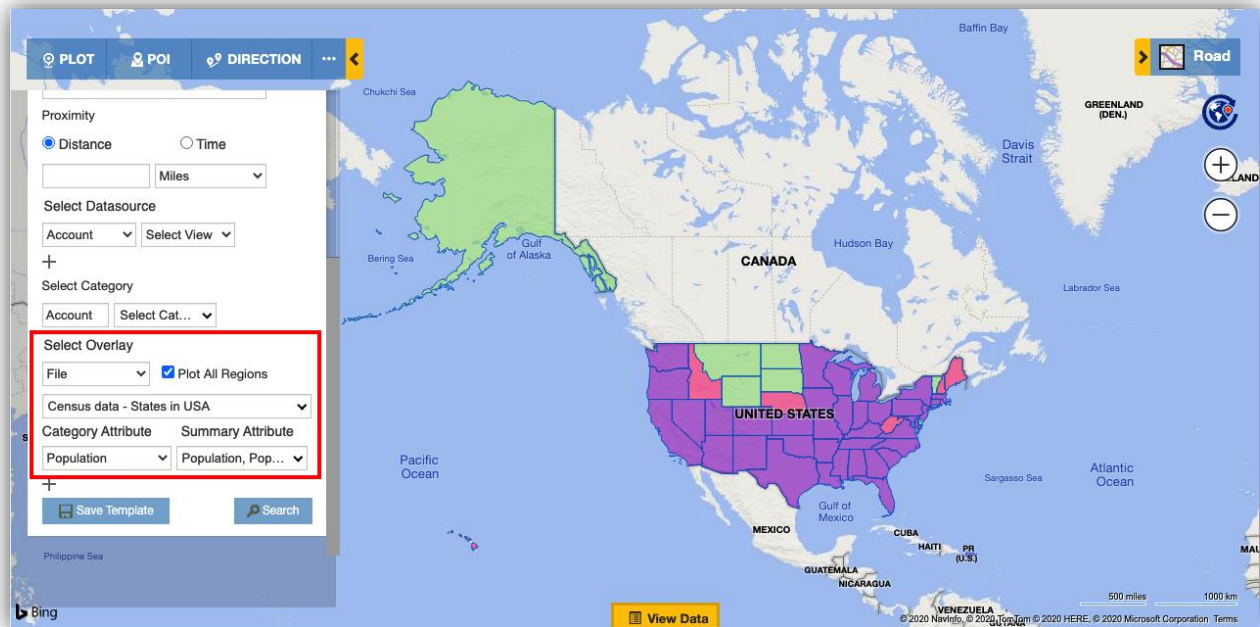
## Census data Visualization

This feature helps the user to visualize census data on the map. Census data provides the information about the population for a whole country or parts of country. Visualization of this data on Maplytics will help the user to analyze various information of the required area in a country like Housing units, Area land, Area water, population demographics, etc. and take strategic decisions. A few census data are available by default within Maplytics. These default census data are provided by Bing maps for USA. User can also plot their own census files on the map which contains census data. User can configure categories to see colored regions as per the configuration and also configure attributes to see on Summary card and hover on region.

To plot the census data, user can choose the option of 'Files' in the feature of Overlay. Please refer to the section of 'Overlay'. Further users can select the following options as well.

Category Attributes: An attribute can be selected to categorize the regions plotted by file.

Summary Attributes: One or more attributes can be selected to show the same in the Summary card. The attributes selected within the 'Configuration' of the saved file in the Territory Entity will be selected by default. User can deselect them and can select other attributes.



## Configuration for Census data

User can configure the Census files provided by Maplytics in the Dynamics CRM. Please refer to the section of 'Configure' in Installation manual for the steps to configure. This will save some census files in CRM provide by Maplytics.

While configuring the census data into Dynamics CRM, territories will get created within which the respective census data will be saved in the form of geographies. To view the saved census data, **Go to**

**Settings > Business Management > Sales Territories.** Following are the territories for census data saved on configuration:

- England-Cities
- Germany-Postalcodes
- NewYork-Postalcodes
- USA 111th Congressional Districts
- USA Counties
- USA States
- USA-Postalcodes

### Configuration for attributes

User can configure the attributes available in the census data/shape files to show on the map, create categories for attributes and select the colors to visualize the categorized data on the map. This allows the user to frame the data how they want to view on the map.













**Go to Settings > Business Management > Sales Territories > Territories with census data/shape files saved > Configuration**

- Attribute Configuration:
  - **Summary Attributes:**  
User can select the attributes to show on the Summary card shown on the click on the regions in the census data/shape file plotted on the map.
  - **Hover Attributes:**  
User can select at a maximum of 6 attributes that will be shown on the hover on the regions in the census data/shape file plotted on the map.
  - **Data grid Attributes:**  
User can select the attributes from the census data/shape file to be shown as columns in the data grid in Detail map.

Attribute Configuration			
Summary Attributes		Actions	
Select Summary Attribute(s)		+	
Name			
Population			
Area_Land			
Hover Attributes		Actions	
Select Hover Attribute(s)		+	
Name			
Population			
StateCode			
Data Grid Attributes		Actions	
Select Grid Attribute(s)		+	
Name			
Population			
Area_Land			


- Category Configuration  
User can create categories for the attributes in the census data/shape file. Creating categories will help the user to view the categorized census data for the required attributes in the desired colors. Some categories are provided by default for configured census data. User can click on **+ New** button to create a new category for any attribute. User can also click on **Edit** and **Remove** to make changes or delete the existing categories respectively.






Create Categories <span>+ New</span>	
Name	Actions
Population	 
Area_Land	 
Area_Water	 
Pop_Over16	 
Pop_Male_Over16	 
Pop_Female_Over16	 

#### ■ Create filters and define colors

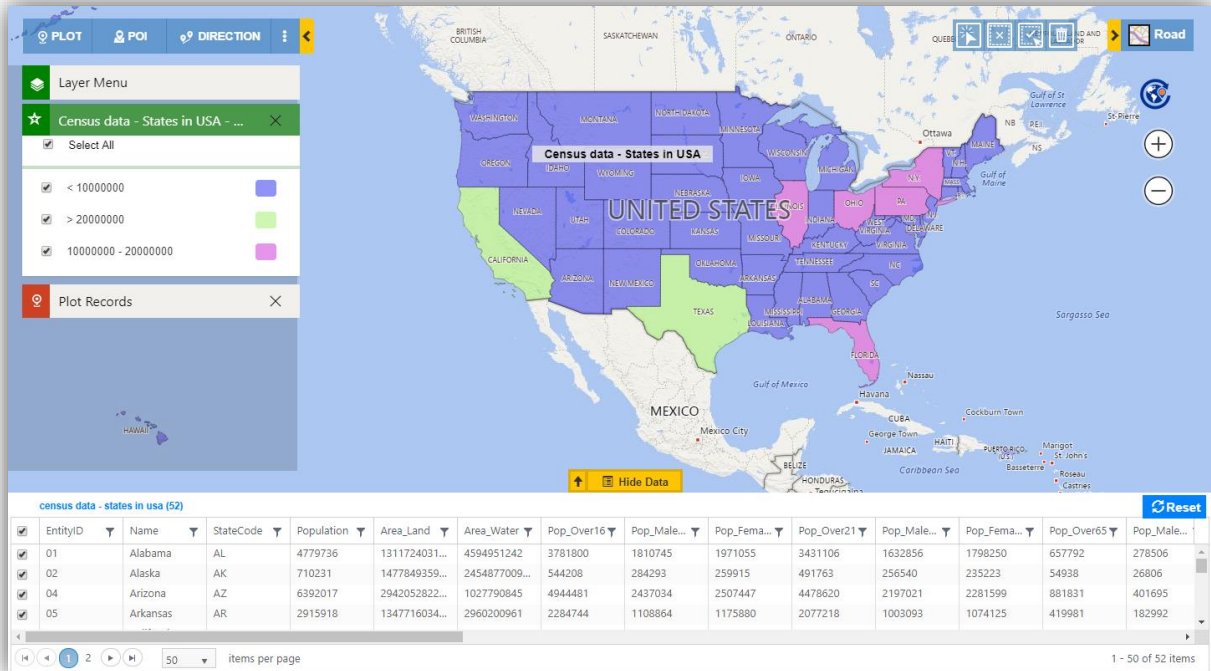
After clicking on Edit/New button, user can filter the attributes and define colors for the ranges of the filtered attributes.

- **Attribute:** This shows the name of the Attribute for which the category has been created/will be created.
- **Display Name:** User can type a name for the category which should be displayed in the list of the categories.
- **Save:** User can click on save button to save the changes made.
- **Discard:** User can click on Discard button to discard the changes made.
- **Filter:** User can set various filter conditions for the category.
- **Value:** User can set values for respective filters set.
- **Color:** This can be used to set colors for individual filters set. The user can click on the  Auto Set button to set random colors for all the values.
- **Add/Remove:** Click on Add or Remove to add a new filter or delete the filter respectively.

<b>Attribute</b>	Population	<b>Display Name</b>	Population			
Attribute	Filter	Value	Color	Add	Remove	
Population	Is Less Than Equal To ▼	1000000	#88d888	+	×	
Population	Is Between ▼	1000000 - 2000000	#fc0c66	+	×	
Population	Is Greater Than Equal ▼	2000000	#8001ff	+	×	

## Maplytics™ – User Manual

After the user has created categories, user can plot the census data along with an attribute selected to visualise the categorised Census data on the map as shown below:



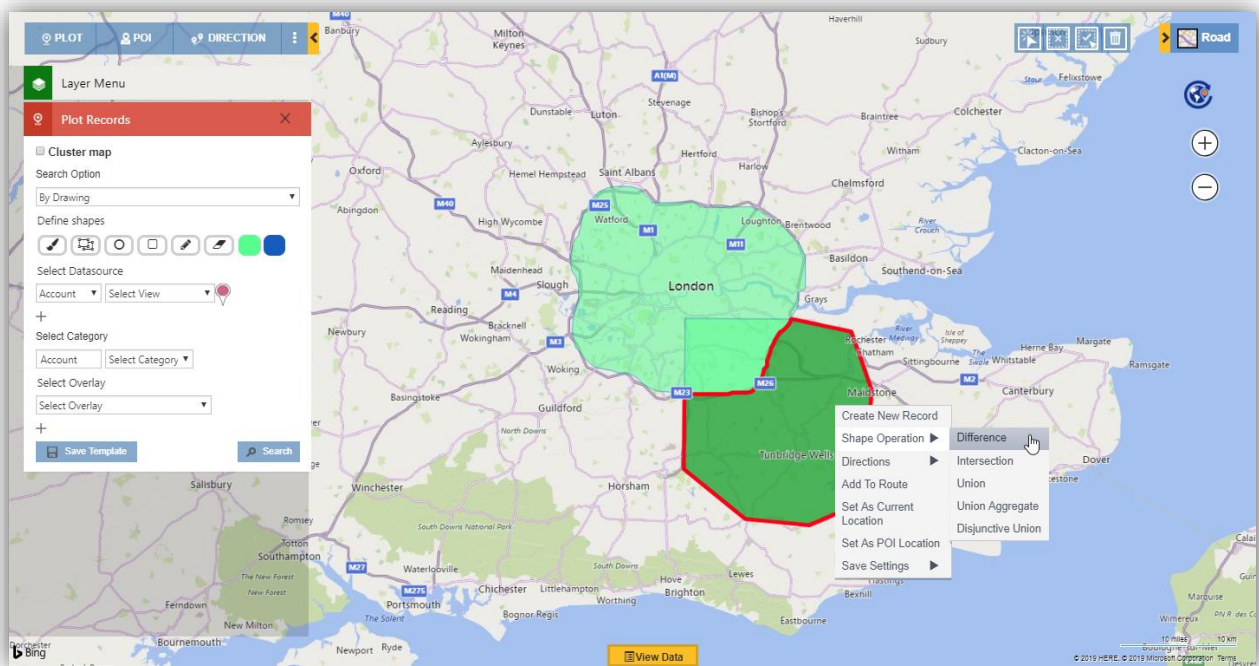
## Shape Operations

With the help of Shape operations, users can perform Binary operations on the shapes drawn on the map. These operations can only be performed under the Search option of 'By Drawing' in the Plot card and Territory management section. Please refer to the section of Territory management for the shape operations in Territory management.

User can open the 'by drawing' search option and right click on the shapes and can choose the option of 'Shape operations'. The following five operations can be performed on the shapes:

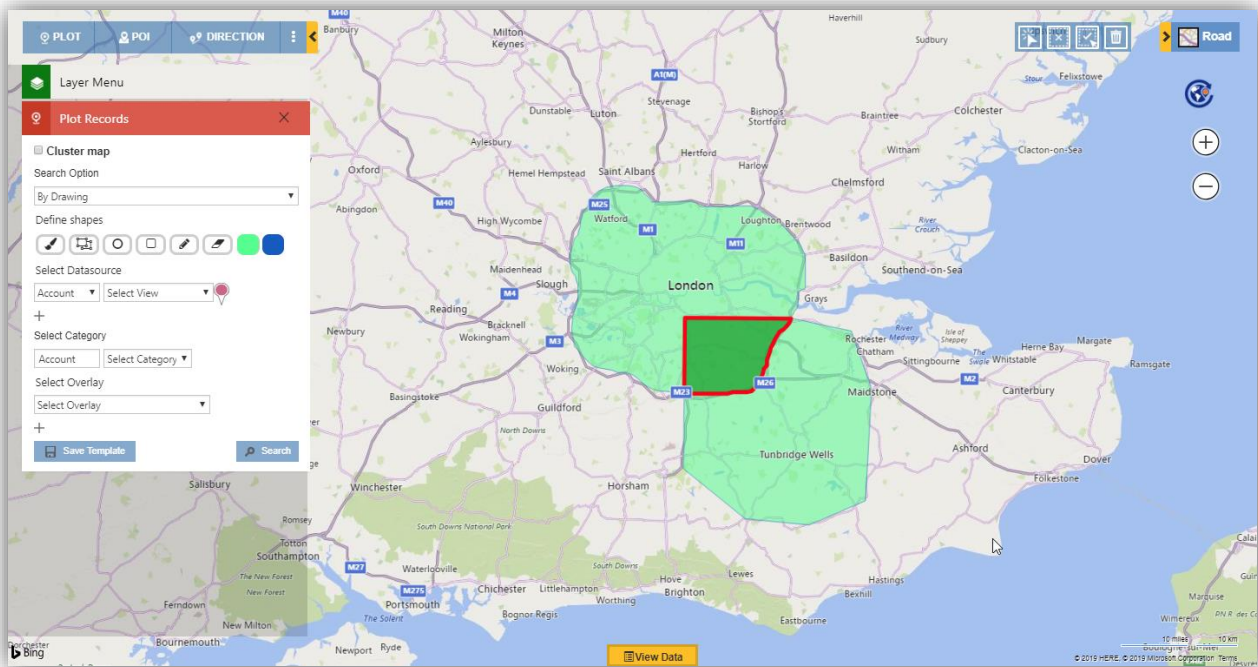
### Difference

This highlights the shape(s) obtained by subtracting the overlapped ones from the selected shape



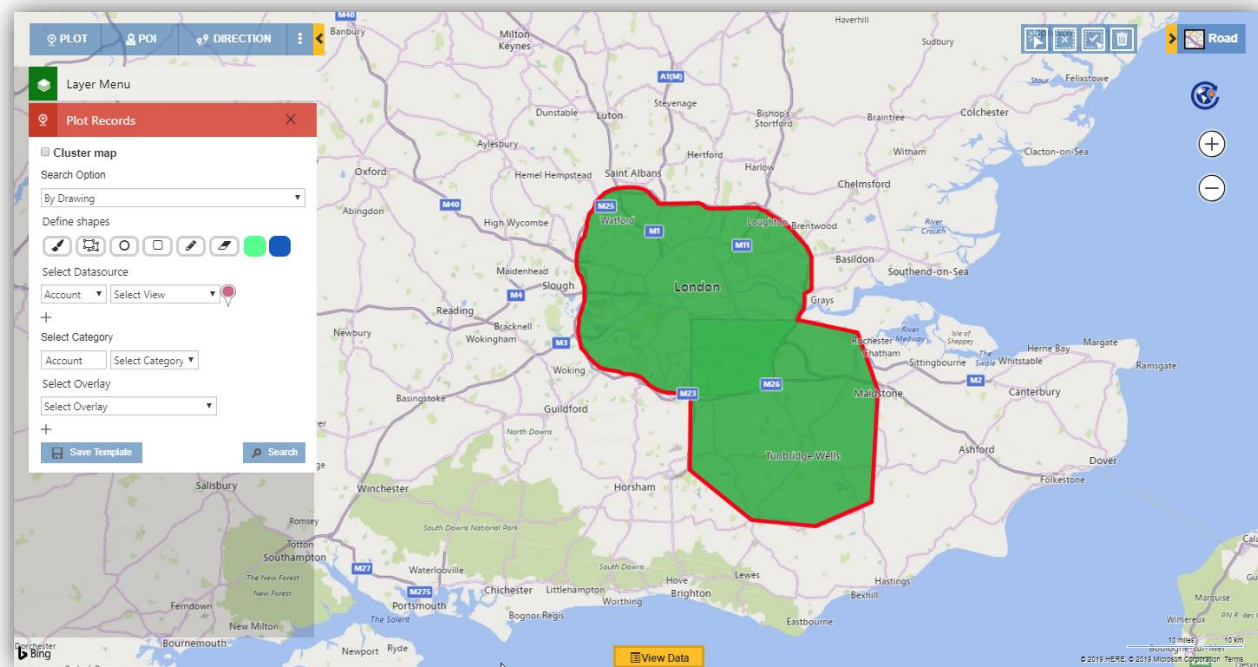
## Intersection

This highlights the shape(s) where the selected shape and other shapes overlap.



## Union

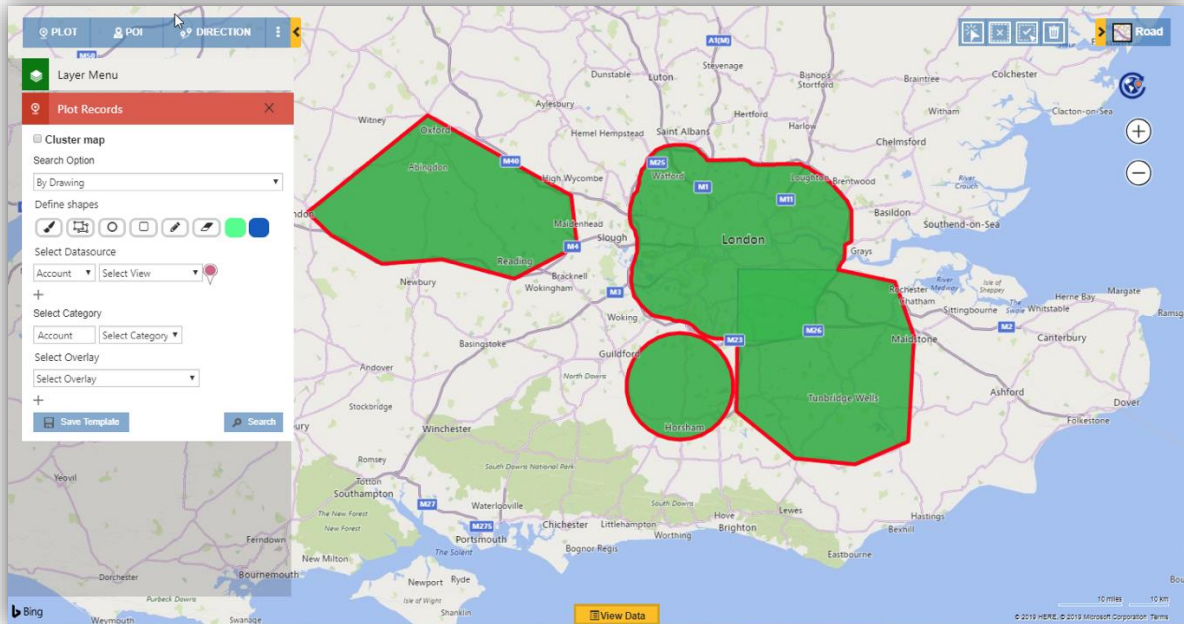
This adds all the shapes overlapped on the selected shape





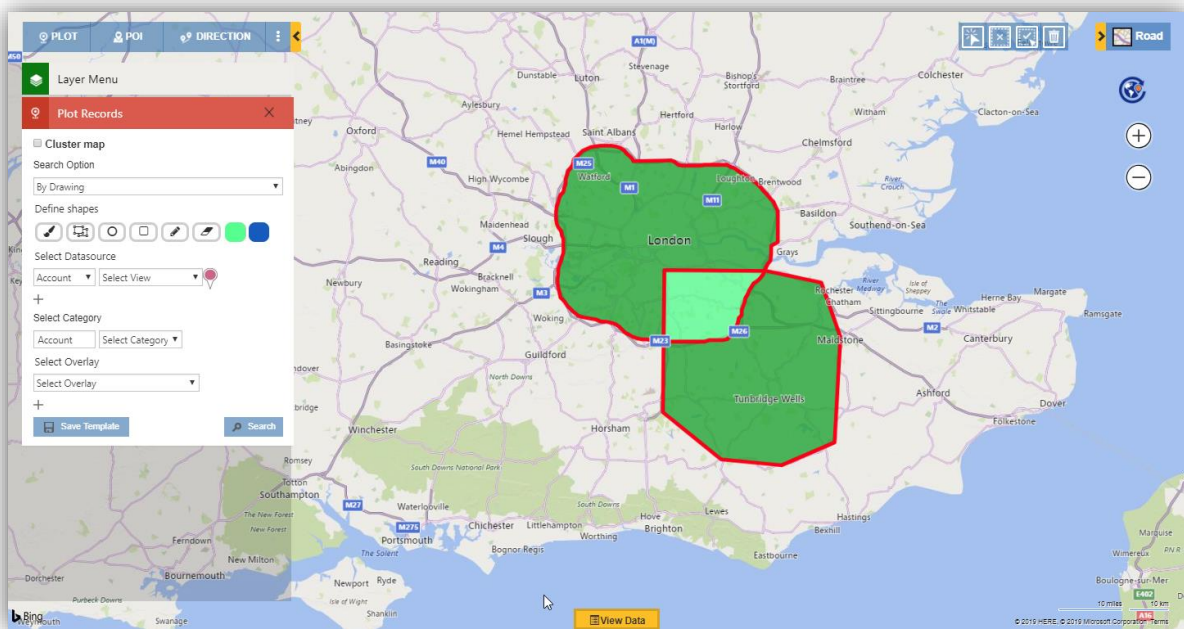
## Union Aggregate

This performs union operation on all the shapes that are drawn on the map. If a shape does not overlap with any other shapes, it highlights such shapes and the union of the rest of the overlapping shapes.



## Disjunctive union

This highlights the shapes that are not overlapped and lie in the selected shape & the shapes that are linked with the selected shape.



Undo – While performing operations, user can use the option of ‘Undo’ to go only one step back into the binary operations performed

Reset – Using the option of reset, user can remove all the operations that are performed on the shapes drawn on the map

**Note:**

- *To perform any operation, two or more shapes should overlap.*
- *For Union Aggregate, there should be more than one shapes with or without overlap.*
- *The highlighted shapes are new shapes as resultants of the operations performed. User can click on the highlighted shapes to view the summary card and the data in the view data grid.*

## Territory Management

Territory management helps the user to create new territories manually as well as automatically and align the existing territories as well to get proper distribution of territories. User can plot required regions, draw shapes or directly upload shape files/excel files to get the required regions plotted on the map to create territories for the same. User can create territories multiple automatically based on count of records or use the territory Alignment tool to select the required regions and create new territories for the same. While creating multiple territories automatically, user can also save the territories as a draft and rework on the draft to get the territories created as per the requirement. Further, user can plot the existing territories and edit them to get proper distribution of territories.

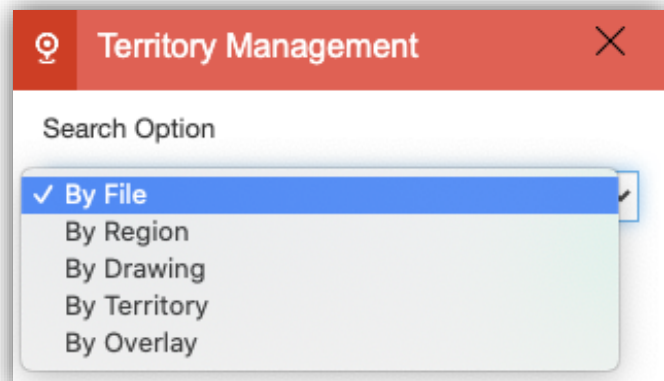
**To access Territory Management, Go to Detail map > More Options > Territory Management**



**Note: Users other than System Admin, can use Territory management only if they are given the role of Maplytics Territory Manager**

User can use the search options to plot shape files, excel files, search by region, draw a shape or plot existing territories on the map. There are five search options:

- By File
- By Region
- By Drawing
- By Territory
- By Overlay



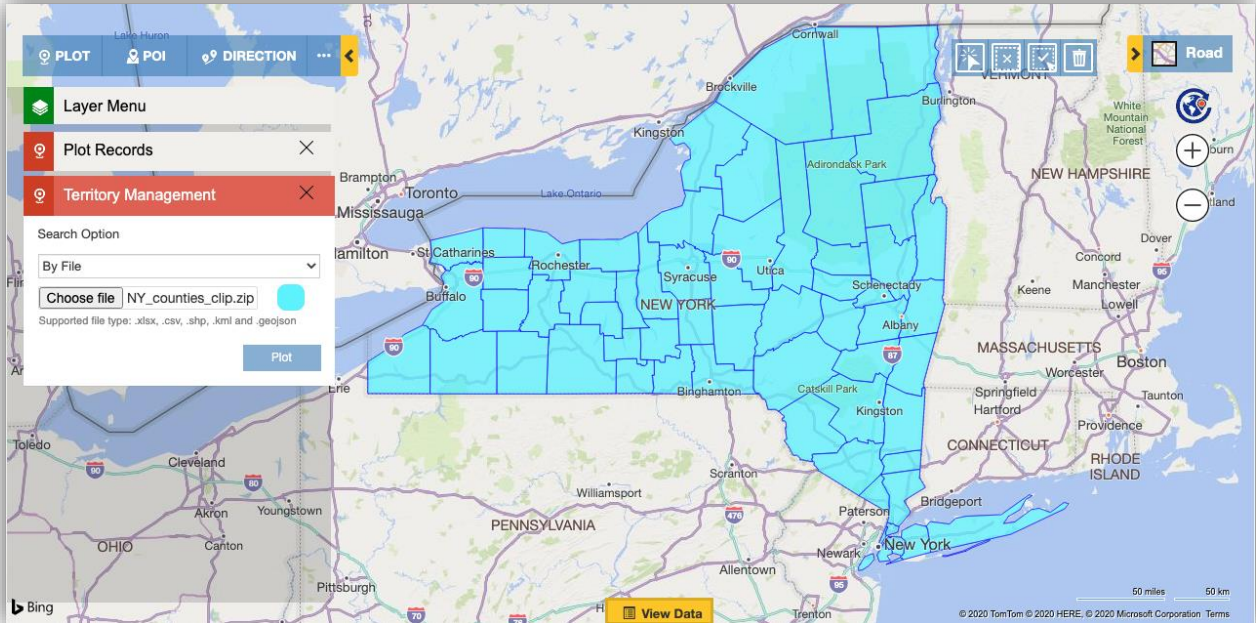


## Maplytics™ – User Manual

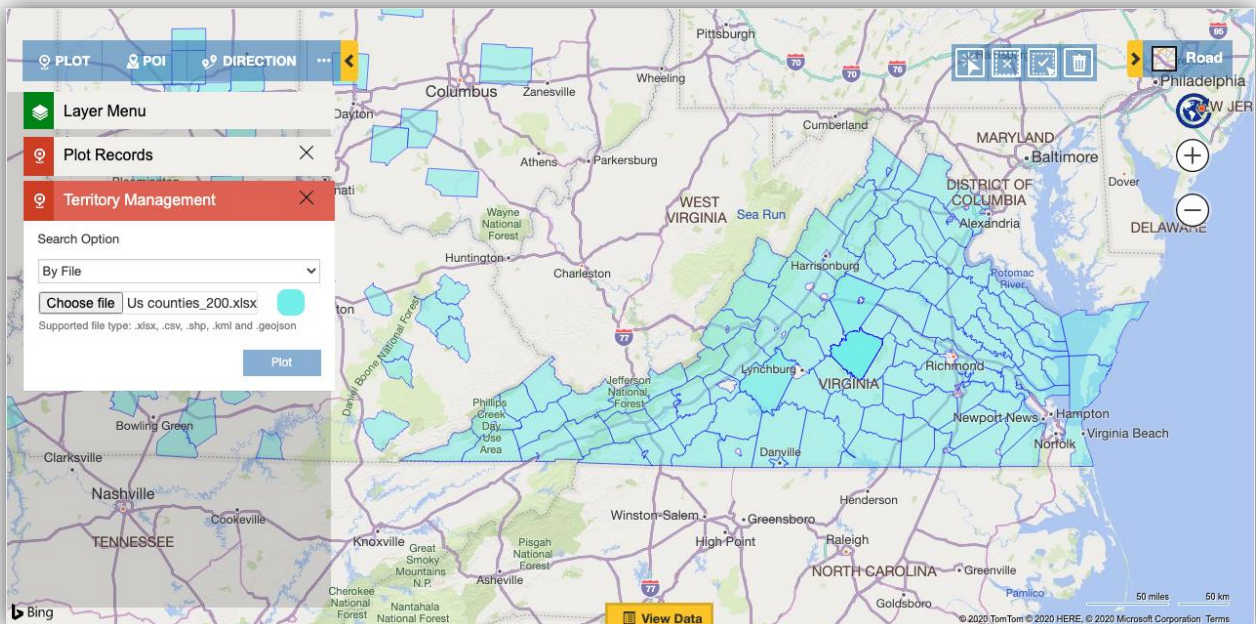
### By File

This helps user to plot the shape files and excel files on the map that store geographical information and attributes of the geographic features. User can plot the following two types of files:

- Shape files: The supported file formats are .shp, .kml and .geojson



- Excel files – The supported file formats are .xlsx, .csv





## By Region

This options helps the users to search for regions on the map by City, State, County, Country, PostalCode, PostCode Sector, PostCode(Outward Code), PostalCode Area.

Territory Management

Search Option

By Region

Select Region Type

City

Select Region

City

State

County

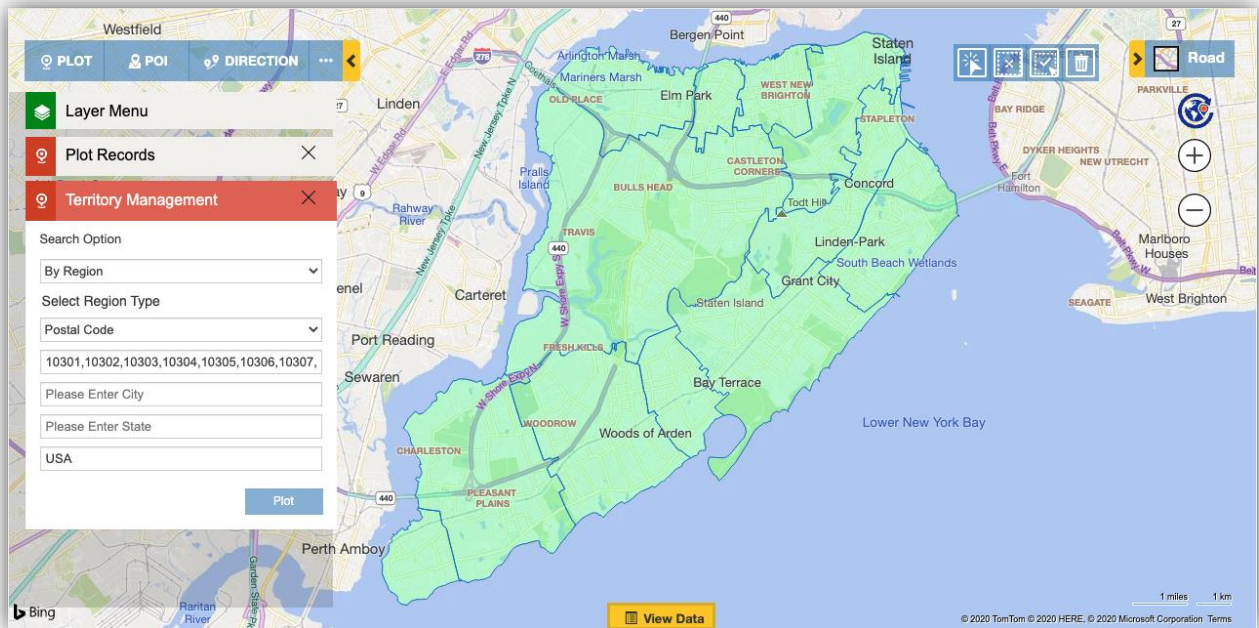
Country

PostalCode

PostalCode Sector

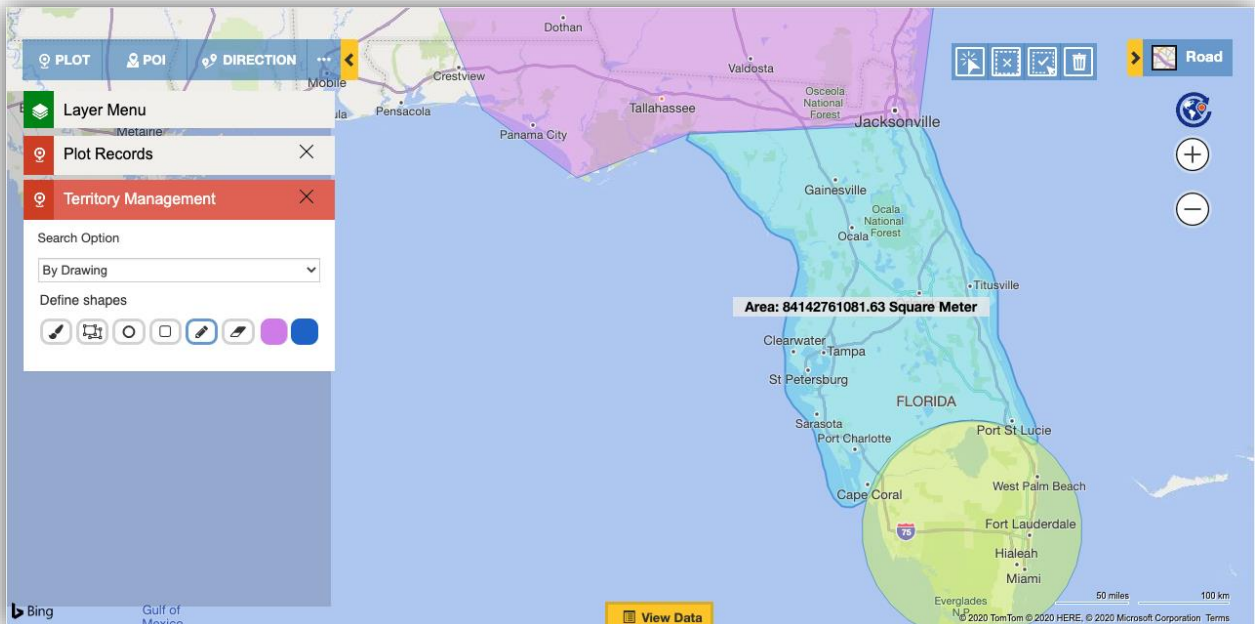
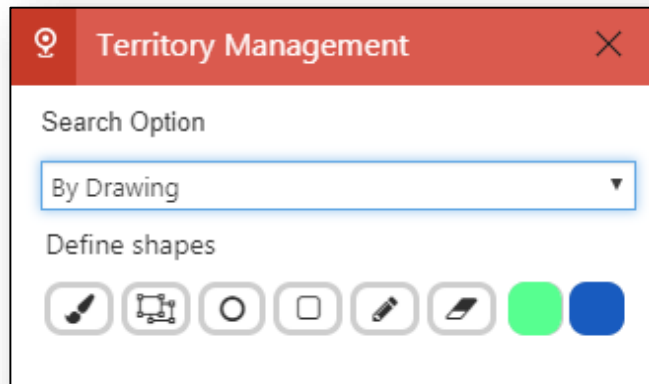
PostalCode(Outward Code)

PostalCode Area



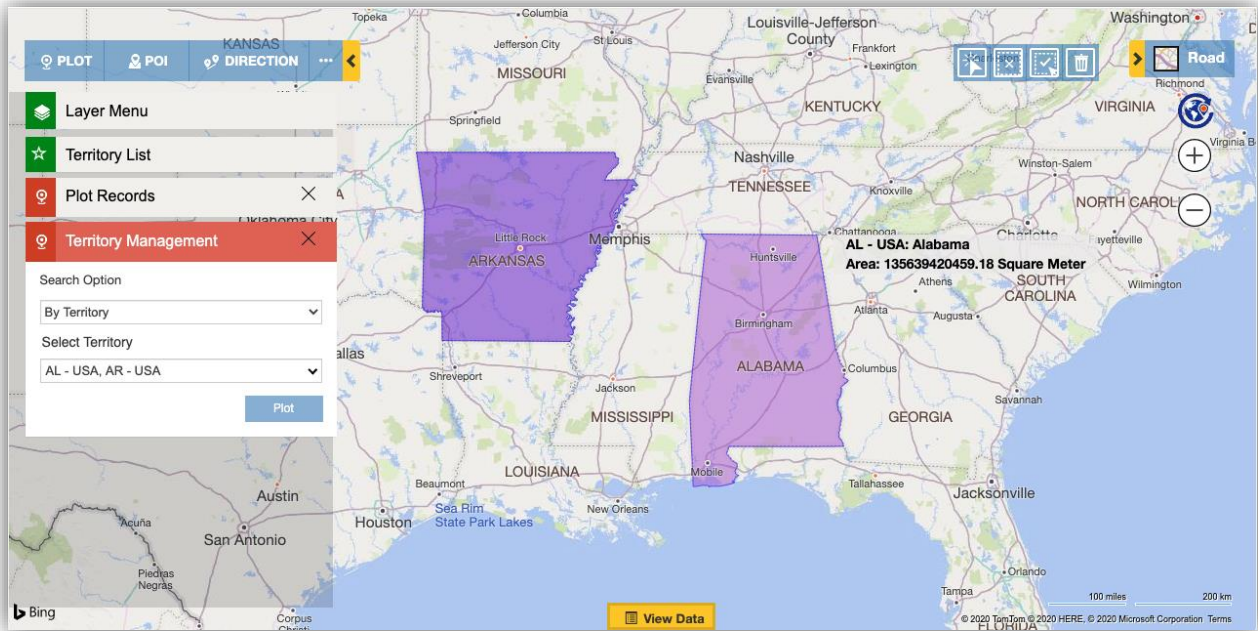
## By Drawing

This helps the user to draw a shape on the map using the Drawing Tool Bar.




## By Territory

This helps user to plot the existing territories on the map.



## By Overlay

Users can select this option of 'By Overlay' to select any shape/excel file saved in CRM to plot the same on the map. Users can also select an attribute within 'Category Attribute' to categorize the regions plotted on map. Also, they can select one or more attributes within 'Summary Attribute' to show on Summary card when clicked on any region plotted on the map.


**Territory Management**
✕

**Search Option**  

By Overlay

**Select Overlay**  

Census data - States in USA

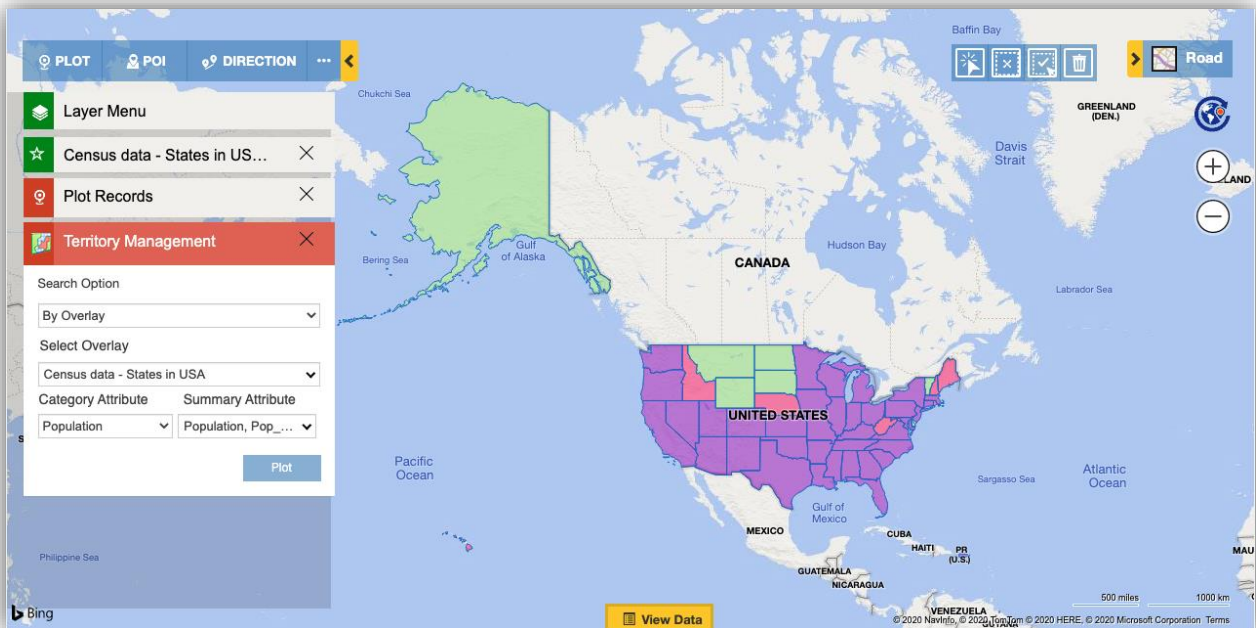
**Category Attribute**  

Population

**Summary Attribute**  

Population, Pop\_...

Plot

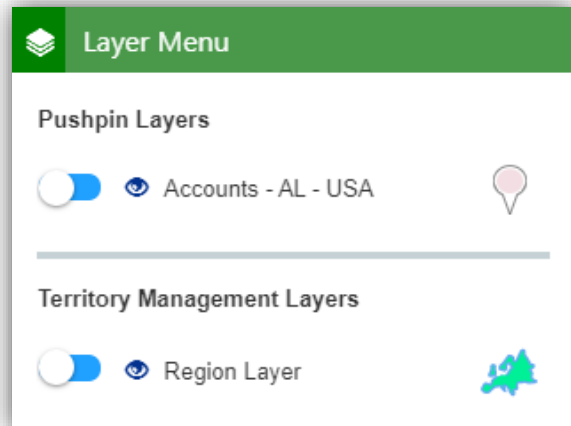


**Note:** If user has plotted any territory or shape/excel file using the feature of 'Overlay' within the 'Plot records' card and moves to 'Territory Management' card so the option of 'By Overlay' will retain the selection of the same while working with Territory Management.



## Layer Menu

This helps the user to select the required data among the multiple data plotted on the map. The user can use the toggle buttons on the Layer menu card to show or hide the required layers of the data to be shown on the map without removing the same from map. If user is using the 'Plot Records/POI/Directions card' and has plotted Datasource Records, POI locations or Route and has proceeded for Territory Management, the plotted layers of data will be retained and will be listed in the section of 'Pushpin Layers' of the Layer menu. The data plotted using the Territory Management card will be listed in the 'Territory Management Layers' section of the Layer menu.



## Territory Alignment Tool

This tool has four options respectively as mentioned below:

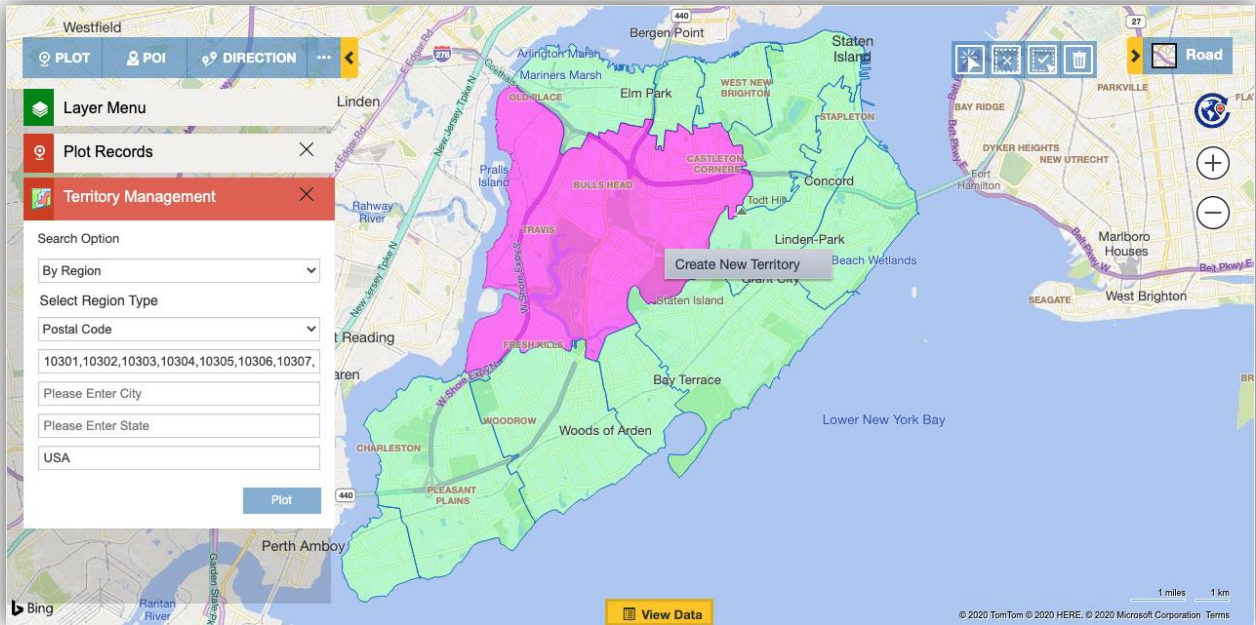
- Select/Deselect: User can select regions/shapes/territories one by one on the map
- Deselect All: User can deselect all the selected regions/shapes/territories on the map
- Select Multiple: This is a freehand selection which helps the user to select multiple regions/shapes/territories on the map
- Delete: User can delete the shapes/regions/geographies plotted on the map



**Note:** *If the delete option is used on the existing territories, it will delete the selected geographies from the existing territories.*

## Create new territory

User can select some of the regions/shapes using the 'Alignment Tool' and right click to create a new territory. User can also select the required manager who will be responsible for the respective territory.



Create Territory

☐ Add To Existing Territory
   
☒ Create Single Territory
   

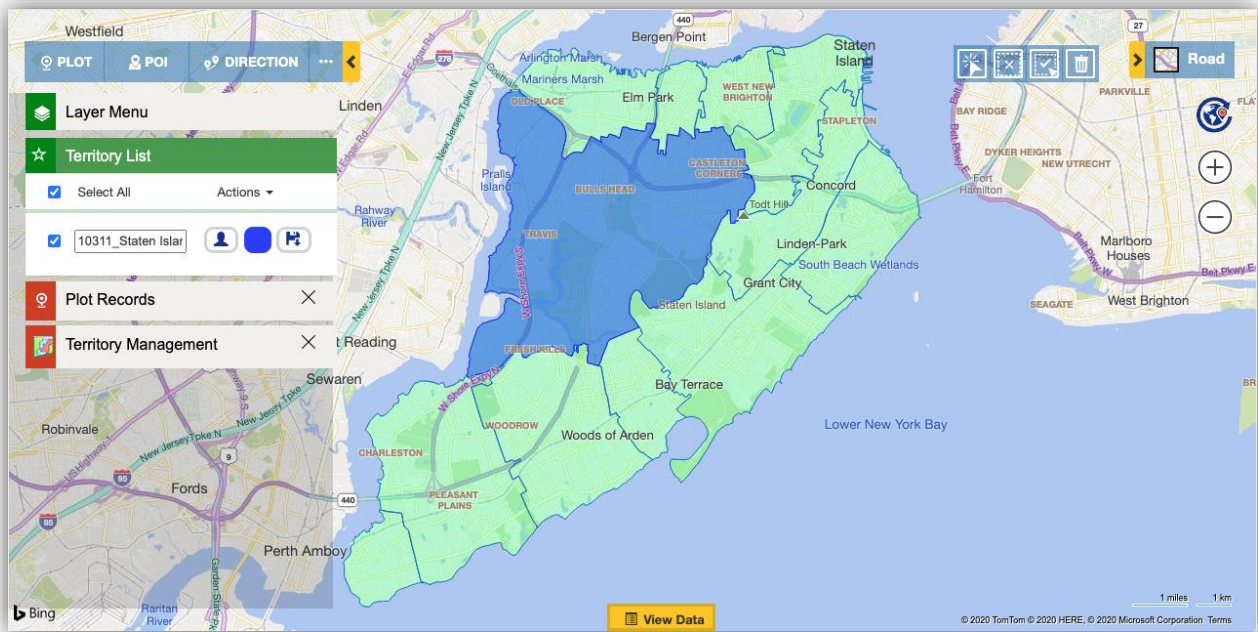
  
 Select Manager
   

  
☐ Create Multiple Territories
   

Proceed

**Note:** Users who have already been assigned as a manager for another territory will not be visible in the list of users to be selected as a manager of the territory.

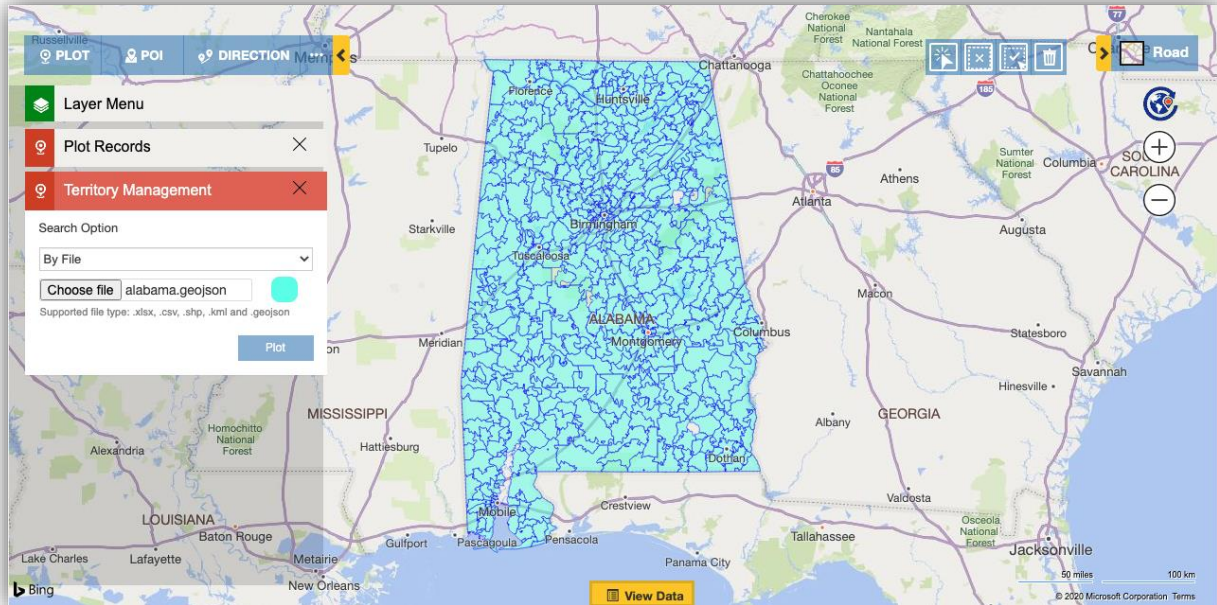
## Maplytics™ – User Manual



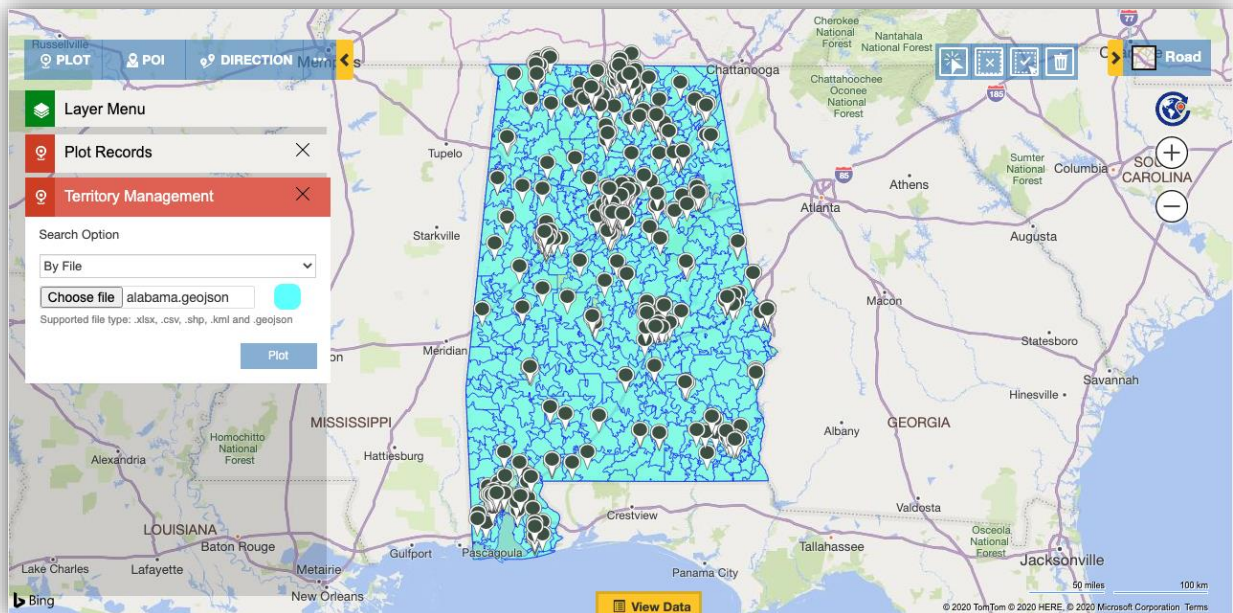


### Auto Territory creation

User can create territories automatically based on a shape/excel file and count of records plotted on the map to get the desired number of balanced territories. To do this, user can go to Territory Management and use the option of 'By File' to upload a Shape file or an Excel file to get it plotted on the map. User can also choose the option of 'By Overlay' to plot a saved shape/excel file on the map.



Now, user can go to the 'Plot Records Card' and select the required 'DataSource' and the respective 'View' to plot the same on the map. These records will be distributed among the territories that are to be created.





**Note: Only those records which lie within the regions selected will be considered while creating multiple balanced territories.**

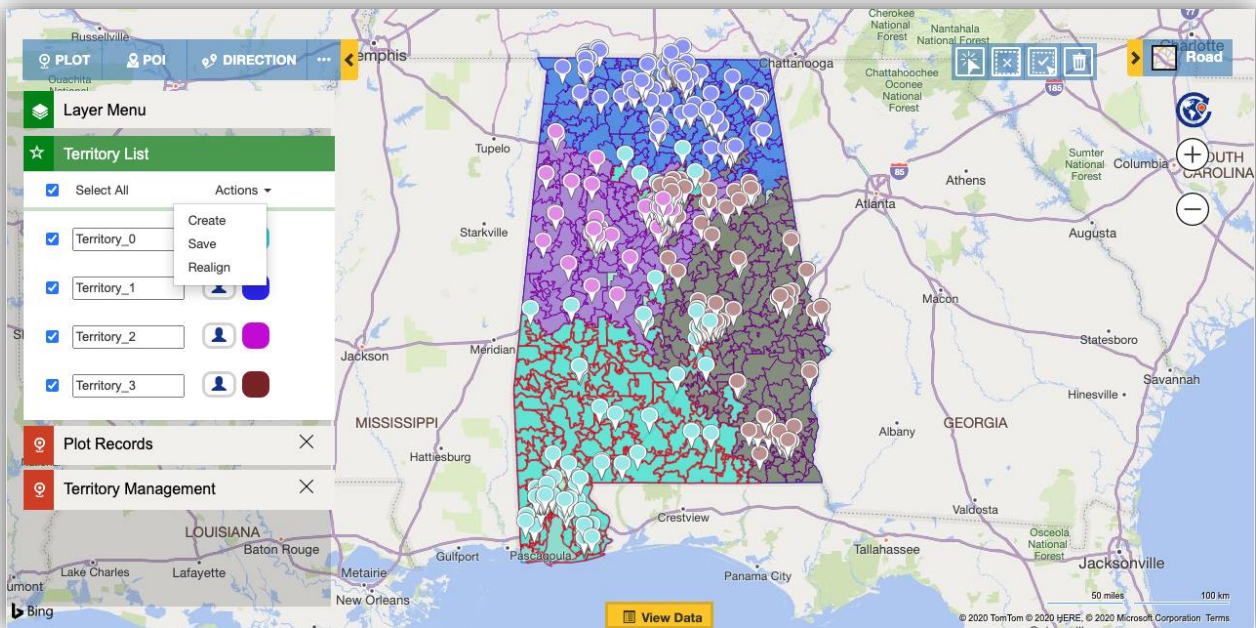
Using the options of 'Select' or 'Multi-select' from the 'Alignment Tool' user can choose the required regions and right click to select the option of 'Create Territory' to open the window. Here, user can select the option to 'Create Multiple Territories' and enter the number of territories they want to create out of the selected regions on the map. In the screenshot below, we have entered 4 for an instance.

The image displays two screenshots of the 'Create Territory' dialog box. The left screenshot shows the 'Create Single Territory' option selected, with fields for 'Please enter the name of territory', 'Select Geography Name', and 'Select Manager'. The right screenshot shows the 'Create Multiple Territories' option selected, with a text box containing the number '4' and a 'Proceed' button.

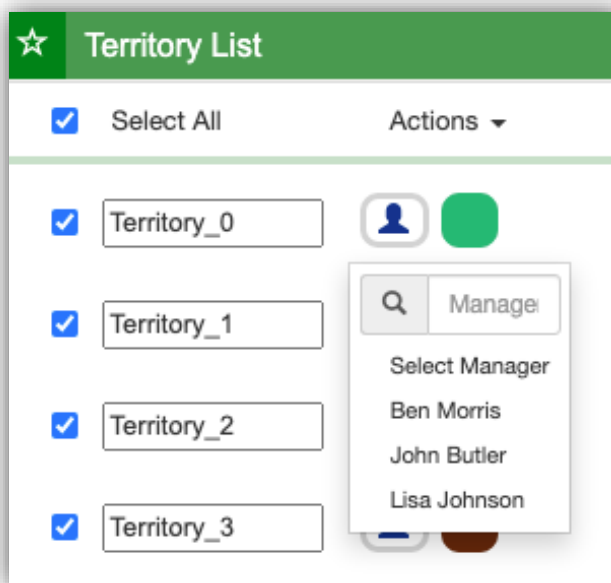
This will calculate the number of records and divide the selected regions automatically to get 4 balanced territories. By default, territories will be named as Territory\_0, Territory\_1, Territory\_2 and so on. User can change the names as per their requirement.

**Note: The count of records in the territories created automatically might vary slightly.**

## Maplytics™ – User Manual

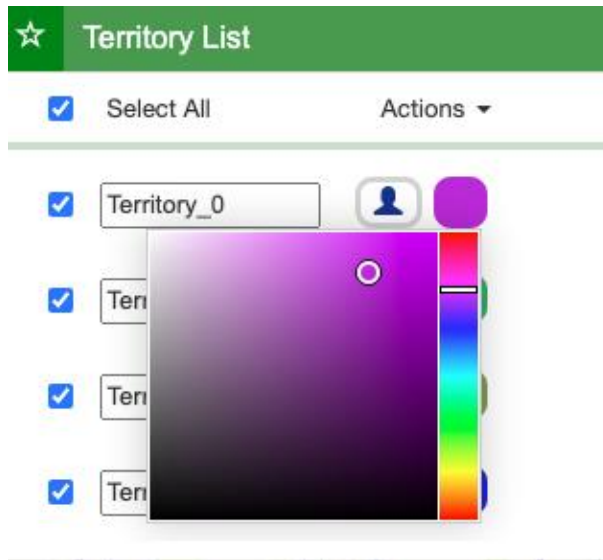


User can also set the required user as a manager for the territories processed, by clicking on the ‘Select manager’ icon.



**Note:** Users who have already been assigned as a manager for another territory will not be visible in the list of users to be selected as a manager of the territory.

User can also set the colors for the territories using the option of 'Fill color'.



User can further choose to take an action on the territories processed on the map by using 'Actions'. There are three Actions available:

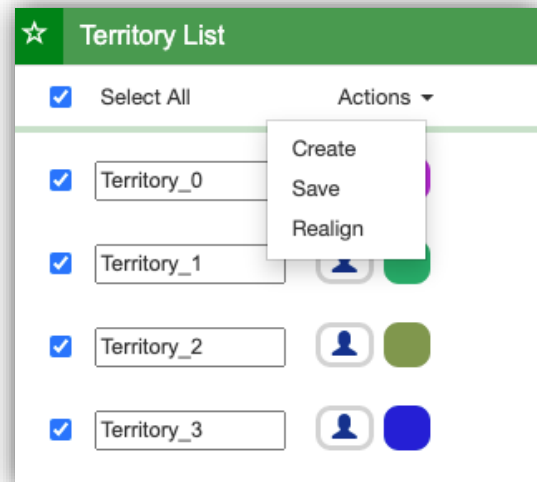
**Create:** If the user is satisfied with the territories processed, then they can choose this option to create the territories processed on the map within the CRM.

**Save:** If user needs to work on the territories processed to further make any changes or take an opinion on the same from a colleague, they can use this option to save the territories processed as Draft Territories within the CRM.

**Realign:** User can further rework on the territories processed using this option. This will allow the user to revise the number of territories processed.

### Assign territories to record

If user chooses to create territories from the 'Actions', then after creating the territories, user will be asked if they want to assign the territories created to the respective records plotted on the map. User can click on 'Yes' to do so.



### Confirm!

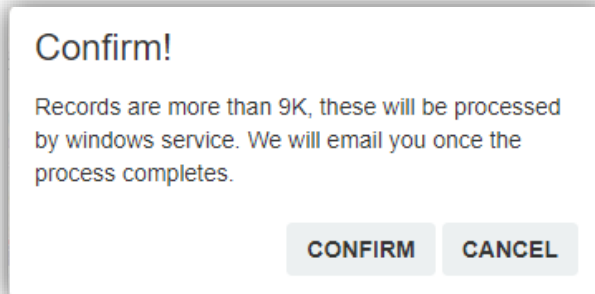
Territory(ies) created successfully. Click on confirm to assign territories to records.

CONFIRM

CANCEL

### Register to Windows Service

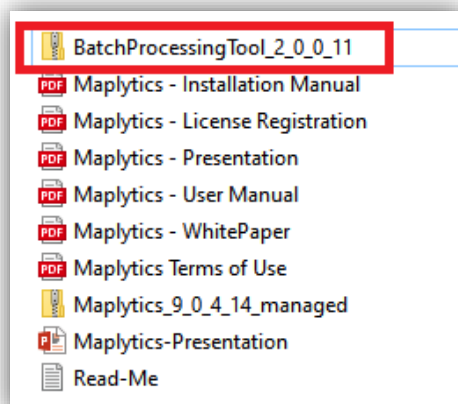
If the number of records is more than 9K, then user needs to register to Windows service in order to create multiple territories. With more than 9K records plotted on the map when user tries to create multiple territories then the below message will be shown and these records will be processed by Windows Service. When the user clicks on 'Confirm' then it will create the territory records with the status 'Process by WS' and Windows Service will process these territories by distributing the records to create the specified number of balanced territories based on the number of records.



Windows service runs at the interval that user will set. For example, user can set it for every 1 hour. When windows service runs and finds territories with the status 'Process by WS' then it will process them one by one. It takes one territory and performs the logic and distributes the records properly to create the respective number of territories and while updating these territories it changes the status of those territories to draft. User can plot this draft territory and create the respective territories into the CRM.

To install Windows Service, user can go to the 'Batch processing tool'.

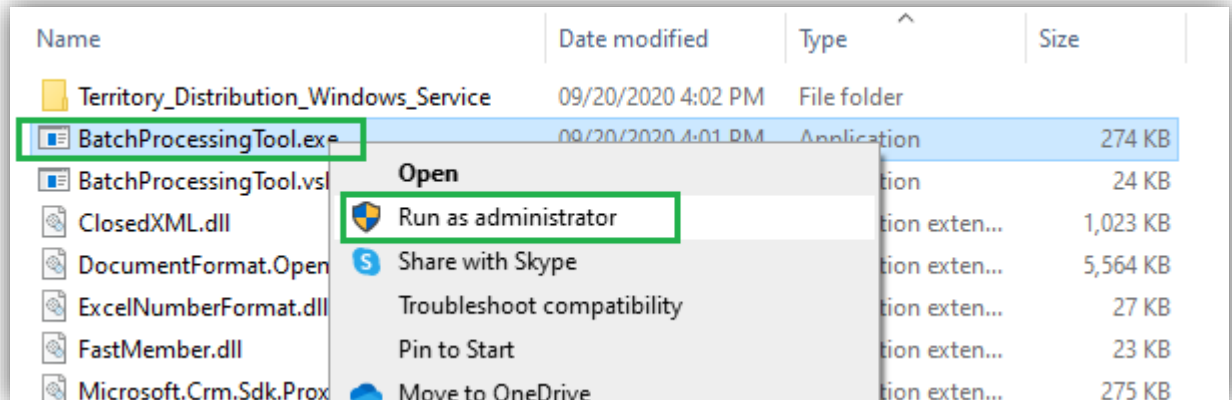
1. To get the tool, Extract the Batch Processing tool .zip file from the extracted Zip folder of downloaded Maplytics solution.



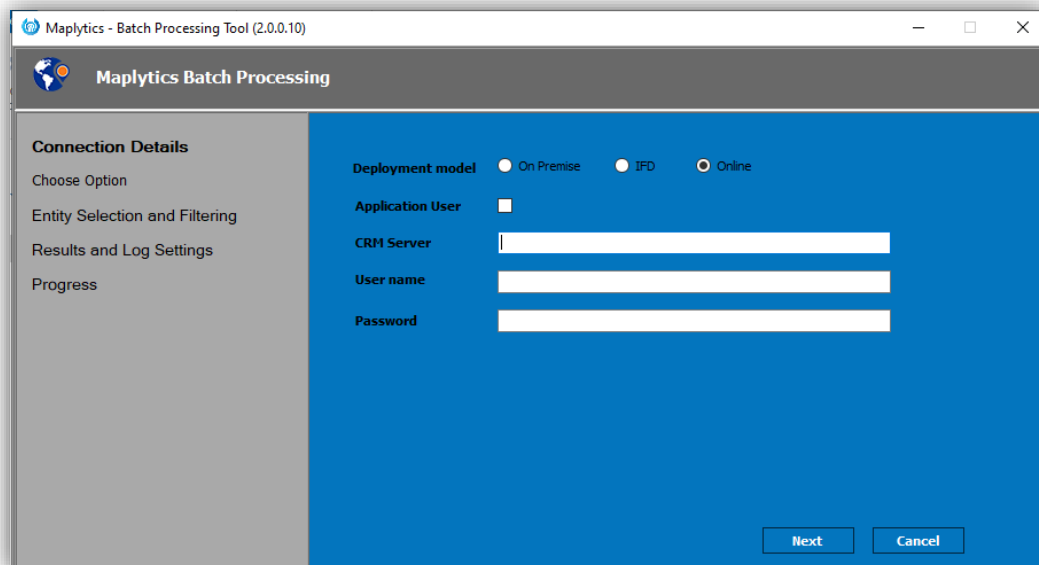


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2. Run the **BatchProcessingTool** as Administrator as shown below.

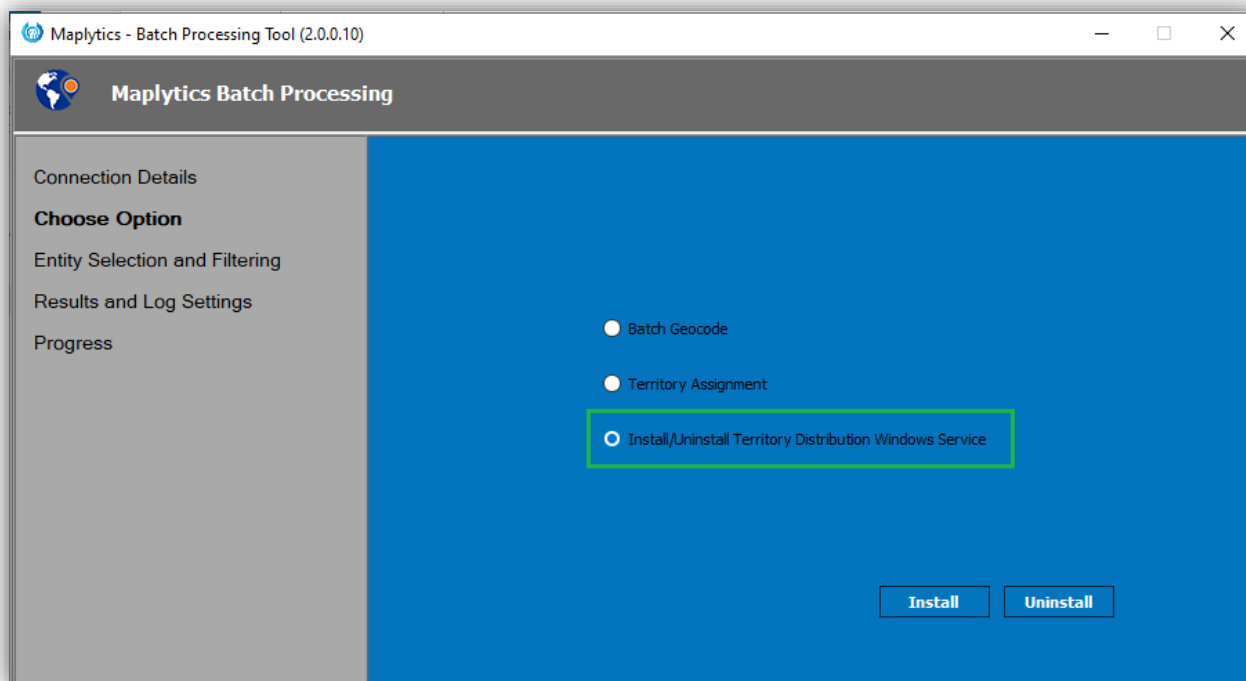


3. Once the user runs the tool, the following window will open where they need to enter the credentials and click on 'Next'.



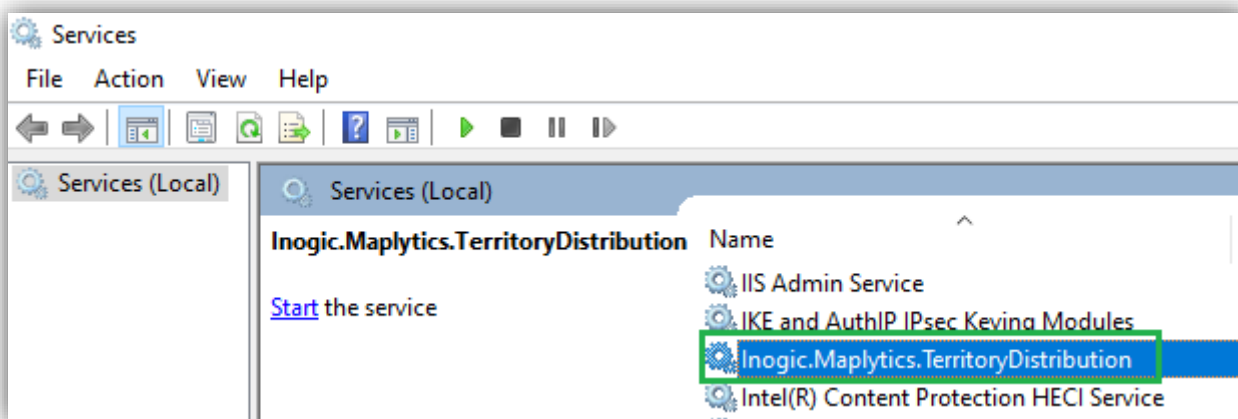
4. Once user clicks on 'Next', it validates the credentials and if credentials are valid then the below window shows up. Here, user needs to select the option to Install/Uninstall Territory Distribution Windows Service and click on 'Install'.

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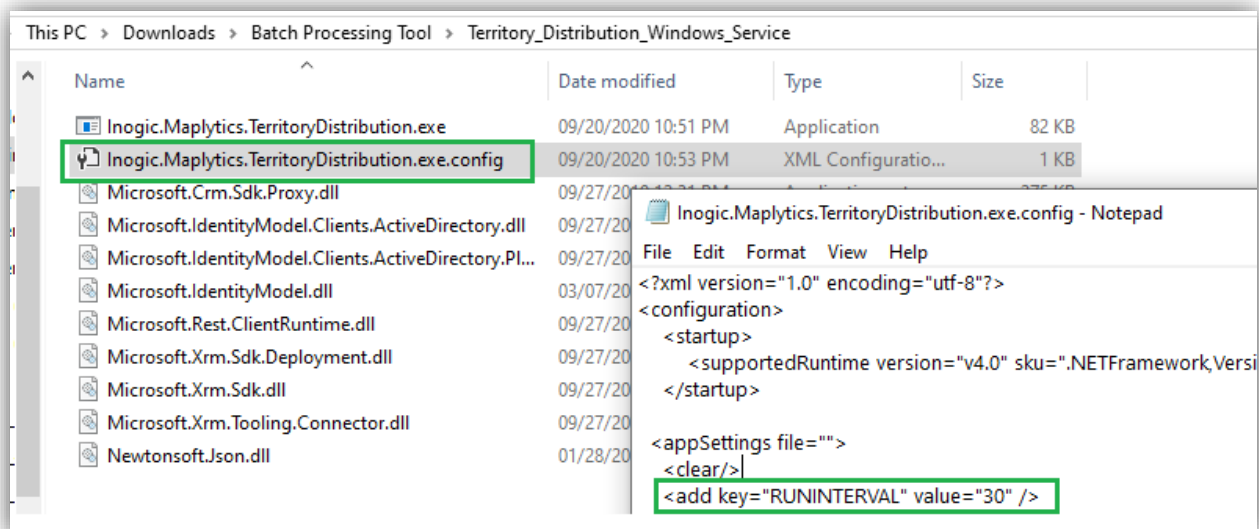
Once clicked on 'Install' the 'Territory Windows Service' will be installed in the PC as shown below. User can click on 'Uninstall' to uninstall 'Territory Windows Service'.

User can start and stop windows service using 'Start' and 'Stop' button.



*To update the windows service run interval, user needs to change "RUNINTRERVAL" in the app config of windows service (Inogic.Maplytics.TerritoryDistribution.exe.config).*

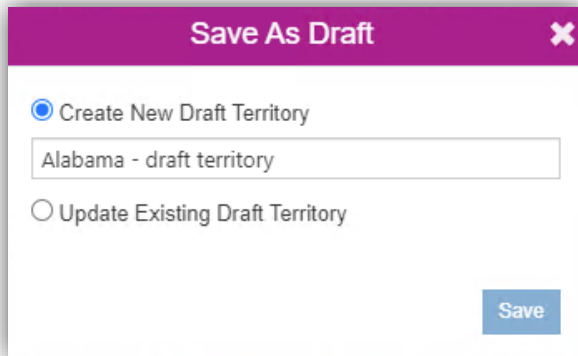
## Maplytics™ – User Manual



**Note:** Make sure the PC in which the Windows Service is installed is running all the time because if the PC is turned off, the Territory Windows Service will also get turned off and it will not perform any task.

## Draft territories

If the users need to further work on the territories processed or needs to make any changes, they can choose the 'Save' from the Actions and save the territories processed as a 'Draft territories' within the CRM.



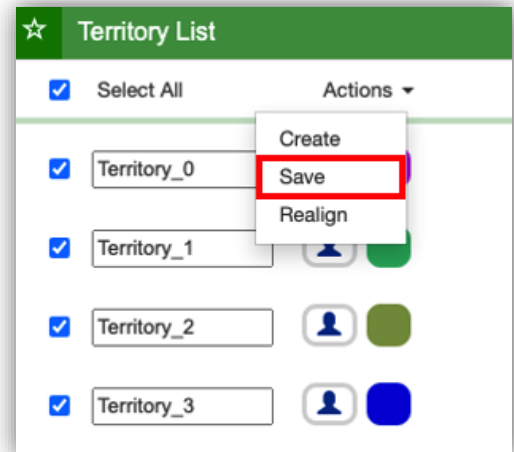
**Save As Draft** [X]

☒ Create New Draft Territory

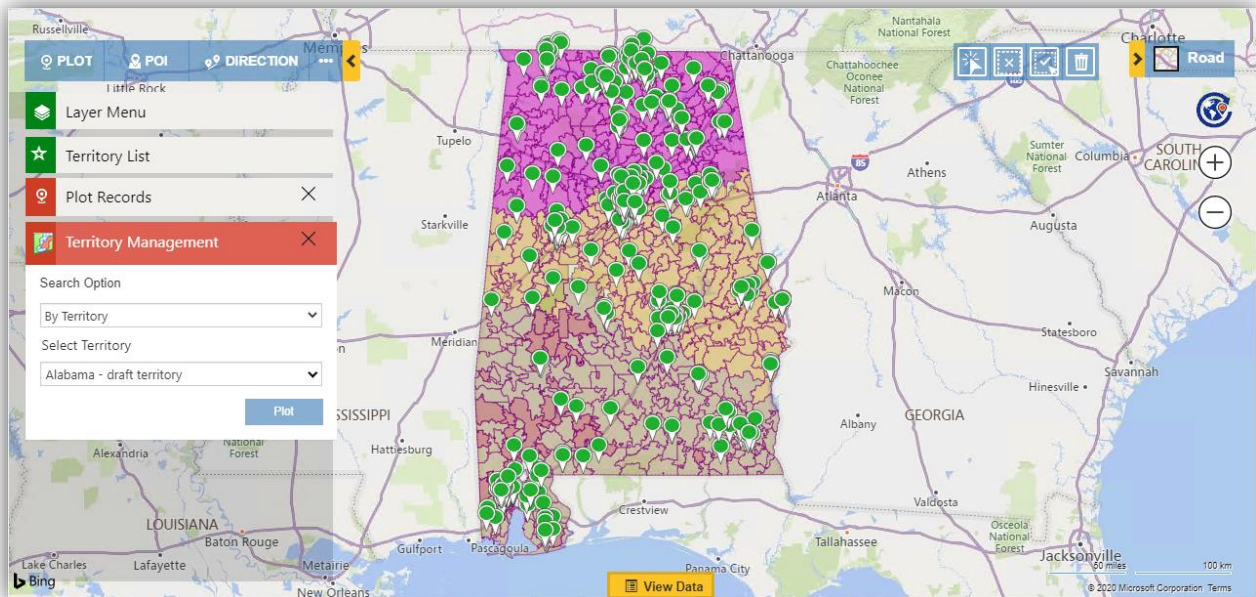
Alabama - draft territory

☐ Update Existing Draft Territory

Save



After saving a draft, user can use the option of 'By Territory' within the 'Territory Management' card to plot the draft territories saved in CRM and rework on them. Further, user can choose to save it again as a draft with the updates done or create the respective territories in the CRM using the option of 'Create' from the Actions. If user wants to create the respective territories from the draft, they can also choose whether or not to delete the respective draft territory.



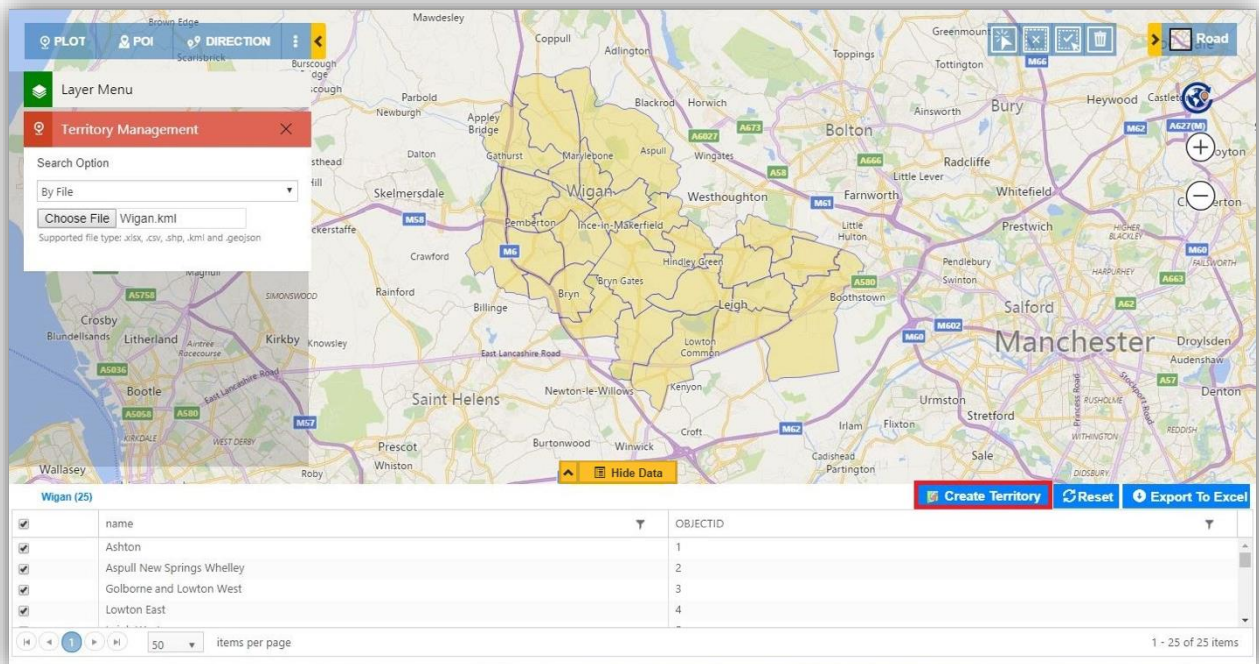


### Create territory on one click

User can create multiple territories with a single click on 'Create Territory' button. User can plot shape files or excel files on the map to view the shapes required as geographies and follow the steps mentioned below to create territories:

#### By Shape file

After plotting a shape file on the map, user can click on the 'Create Territory' button to create a new territory with the plotted shapes as geographies or create the plotted shapes as geographies into a selected existing territory.



**Create Territory**

☐ Add To Existing Territory

☒ Create Single Territory

Select Geography Name

Select Manager

☐ Create Multiple Territories

Proceed

User can provide the name for the new/existing Territory to be created and select the column from the excel file for 'Select Geography Name' and the respective names of geographies will be fetched from the file.

### By excel file

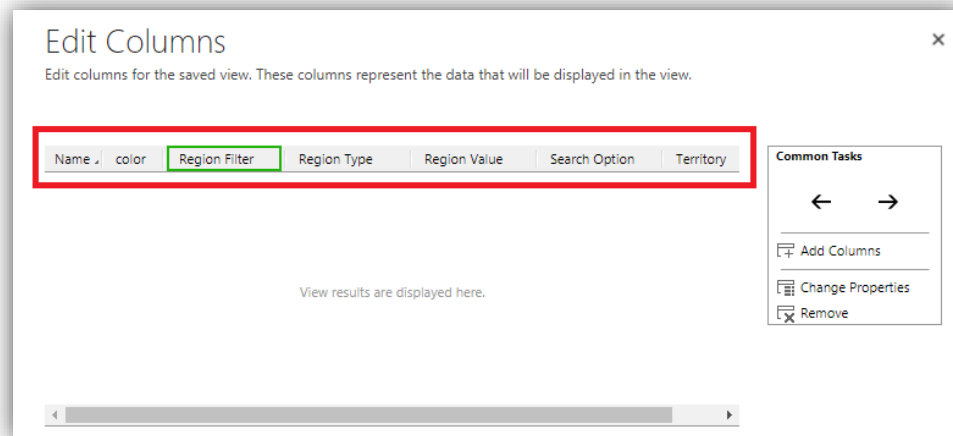
After plotting an excel file, user can click on the 'Create Territory' button to create territories with the shapes plotted on the map as Geographies. The names of the territories and the respective Geographies will be fetched from the excel file.

The excel file should be in the supported file format as mentioned below.

**Name:** Name of the Geography.

**Search Option:** Bulk geography feature is available only for the 'By Region' option, so this value should always be '1'.

**Color:** Color should be in Hexadecimal format i.e. (#DAF7A6). If the user enters the color in other format then the default color (Blue) will be set.



### Region

**Type:** There are 6 region types that the user can define to create the geography. (Country, State, County, City, PostalCode1, PostalCode2).

**Region Value:** If the user needs to create the geography based on Postal Code, then they can define the postal code values in this column. To define multiple geographies in single territory, use the comma separator (,).

**Territory:** This is a lookup value to define which geography belongs to which territory.

**Manager:** The names of the users can be provided here. While creating territories, the managers for the respective territories. However, the column of 'Manager' is not mandatory to be in the excel file.

#### **Note: For Territory management:**

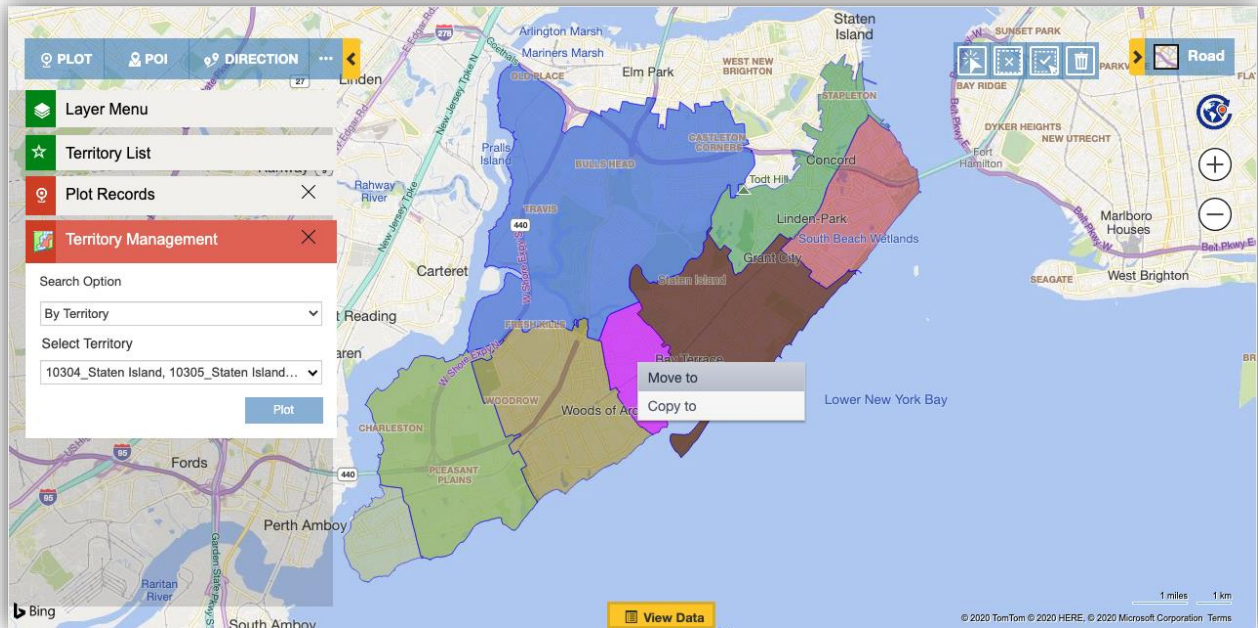
- **The column of 'Territory' should contain the Names of the territory(ies)**
- **Color:** Color should be in Hexadecimal format i.e. (#DAF7A6). If the user enters the color in other format then the default color (Green) will be set.
- **There are 8 region types that the user can define to create the geography. (Country, State, County, City, PostalCode1, PostalCode2, PostalCode3, PostalCode4).**

### Alignment of Existing territories

User can plot the existing territories and align them to get the proper distribution of the regions. User can use the following two options to align the territories.

#### Move to

User can select some geography(ies) of one or more territories and move it to another plotted existing territory or create a new territory. This will remove the geographies from the original territory.



**Move to** ✕

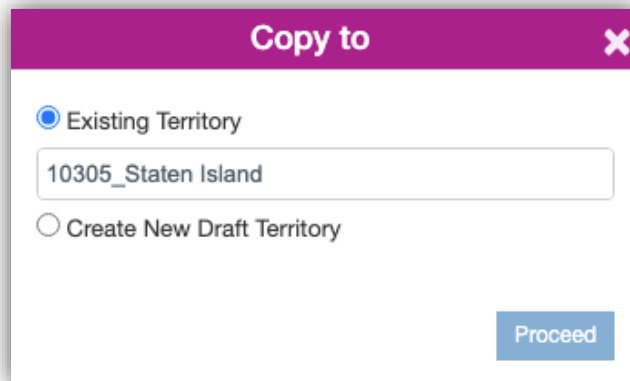
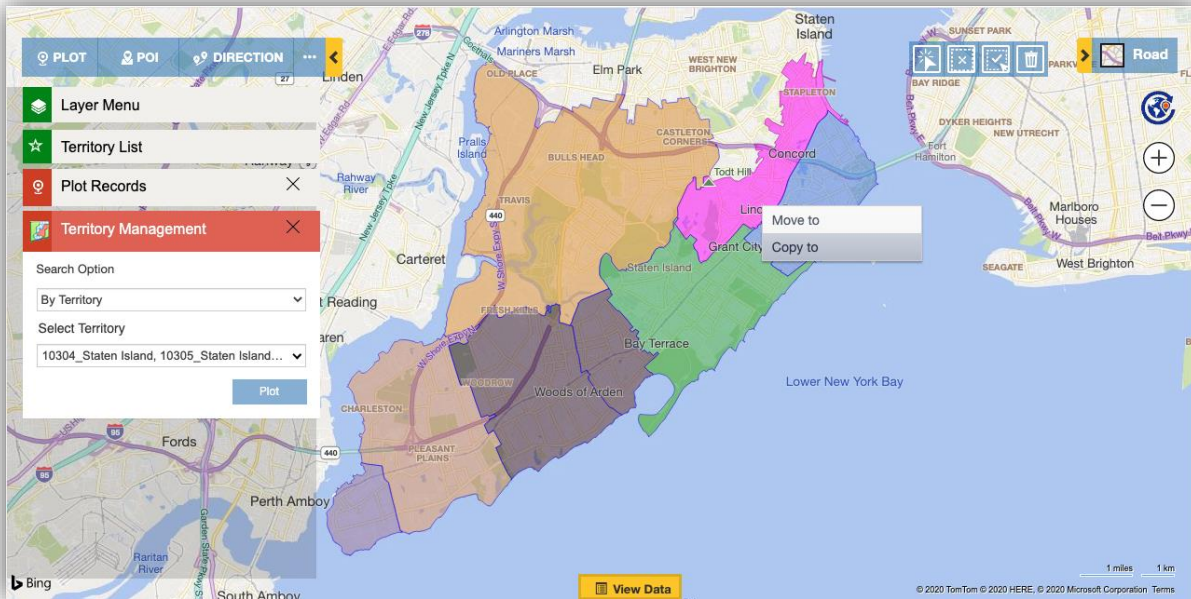
☒ Existing Territory

☐ Create New Draft Territory

**Proceed**

### Copy to

User can select some geography(ies) of one or more territories and copy it to another plotted existing territory or create a new territory while keeping the geography in the original territory.



### Shape Operations in Territory Management

User can perform Binary operations on the shapes, regions or territories plotted on the map. User can select the shapes on which they want to perform operations and right click on them to select the Binary operations. There are five Binary options available: Difference, Intersection, Union, Union Aggregate and Disjunctive Union. Please refer to the section of the Shape operations to know more about these Binary operations.

#### Note:

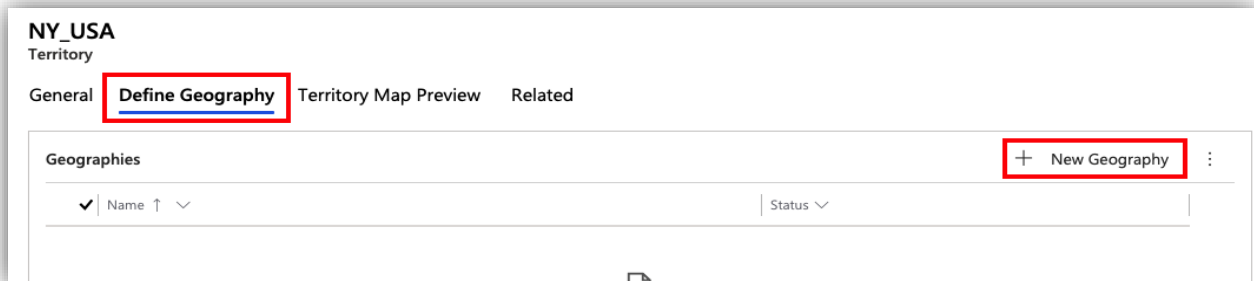
- *The shapes should overlap each other to be available for performing shapes operations*
- *There should be a layer of drawing overlapped with the shapes on which binary operations has to be performed*
- *The required shapes should be selected before performing Binary operations*



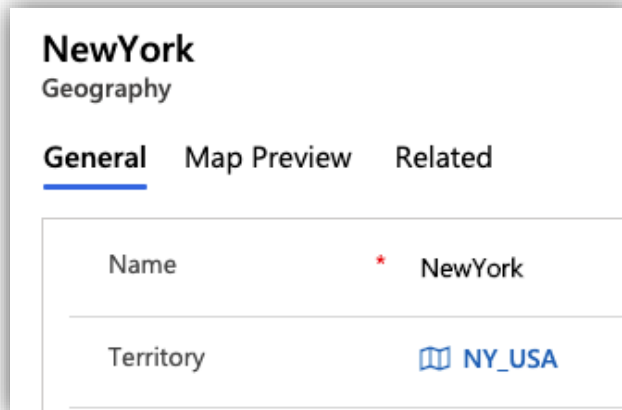
## Defining Geographies for Sales Territory using Maplytics

The users can create sales territories using the native Dynamics CRM 'Sales Territories' feature and define geographies for the sales territories on a map using Maplytics.

To create geographies for sales territory, go to **Settings > Territories** and click on 'New' to create a sales territory. With Maplytics a 'Geographies' Entity is added on the territory. User can use this feature to visualize and create geographies for the sales territory. To create a new geography, click on '**Add New Geography**'.

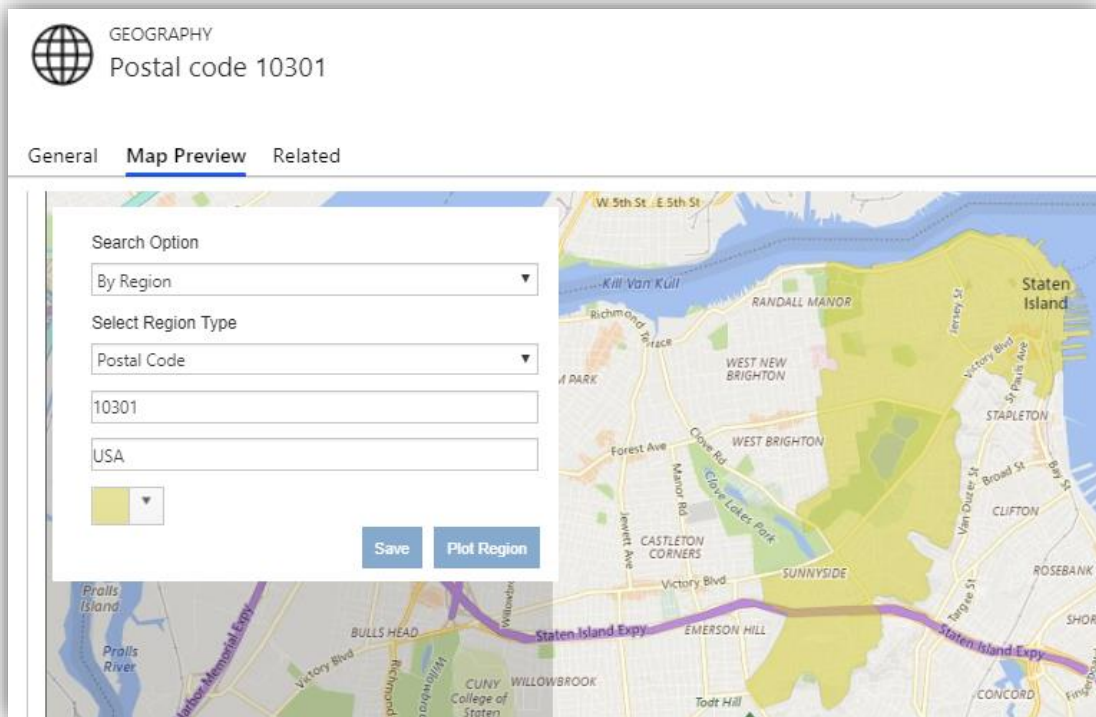


In the section '**General**', provide a name for the Geography.

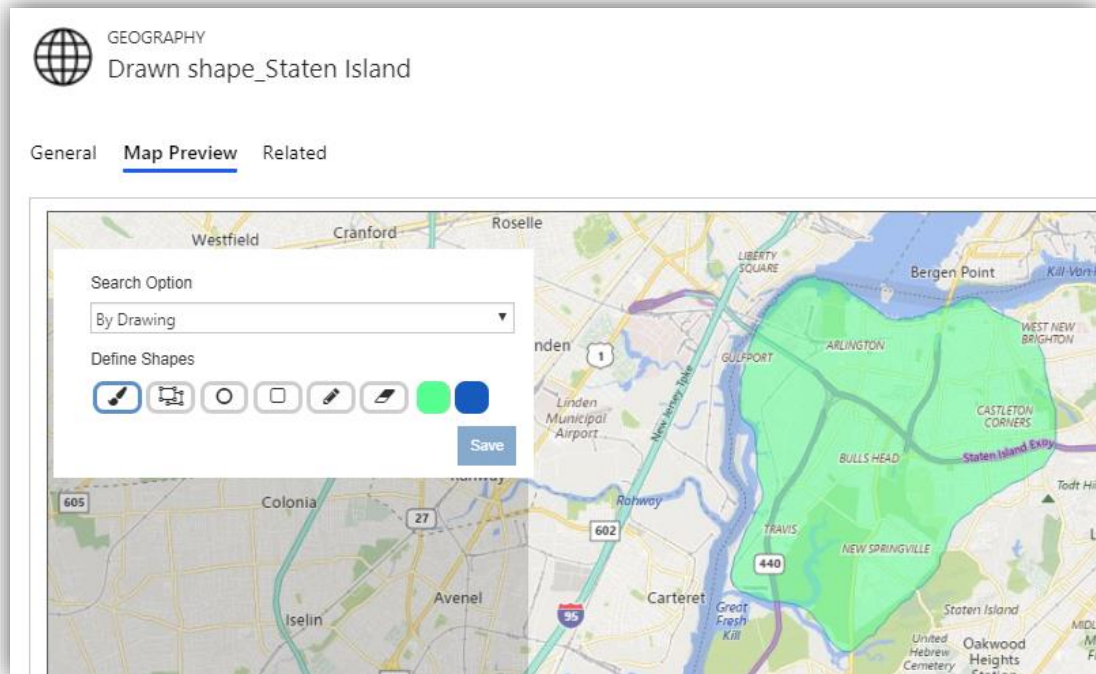


Within the section '**Map preview**', the user has the option to visualize the geography on a map 'By Region' or 'By Drawing'. The 'By Region' option lets the user to plot the geography based on region types and the user has the freedom to choose the color for the plotted region.

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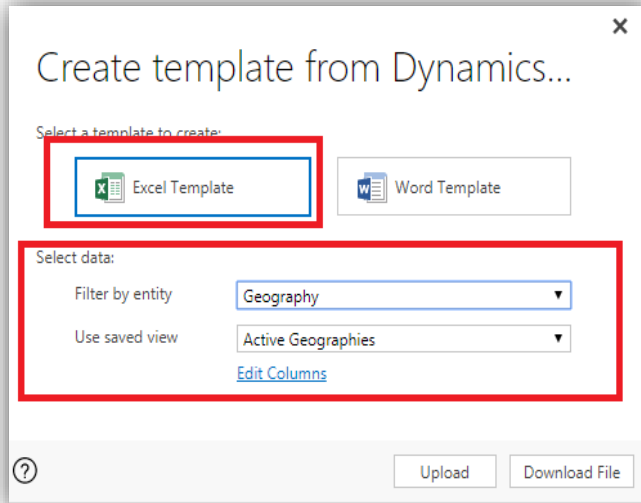
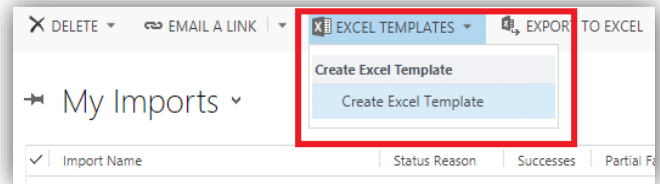
The 'By Drawing' option lets the user to plot the geography by drawing a shape on the map and the user can further edit the shape based on their needs.



**Note:** User can define multiple geographies for a single territory.

## Bulk Geographies by uploading an Excel file

The users also have the option to upload multiple geographies through an Excel files supported by CRM using the Bulk Geographies feature in Maplytics.



To upload the geographies in bulk, the user first needs to export an Excel template. Go to **Settings > Data Management > Imports >** select the '**Excel Templates**' and then click on the 'Create Excel Template' option. Select the 'Excel Template' and in the 'Select data' section, select the 'Geography' Entity in the 'Filter by entity' field.

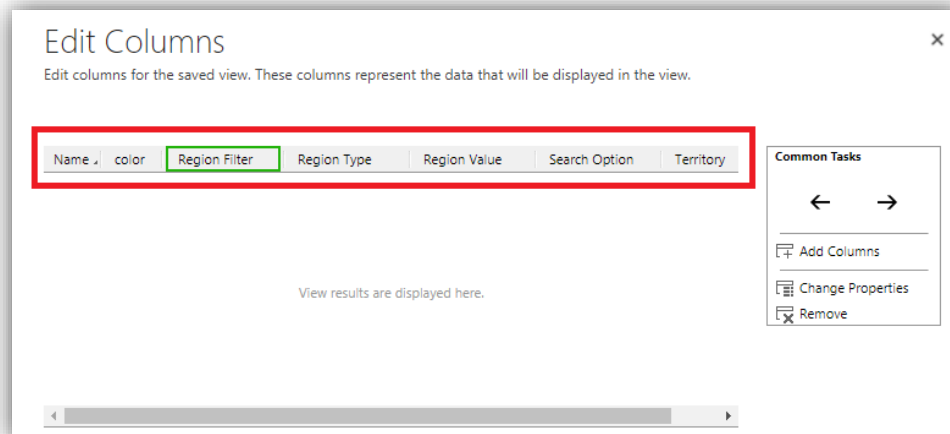
Click on 'Edit Columns' and select the below columns;

The excel file should in the supported file format as mentioned below:

**Name:** Name of the Geography.

**Search Option:** Bulk geography feature is available only for the 'By Region' option, so this value should always be '1'.

**Color:** Color should be in Hexadecimal format i.e. (#DAF7A6). If the user enters the color in other format then the default color (Blue) will be set.



**Region Type:** There are 6 region types that the user can define to create the geography. (Country, State, County, City, PostalCode1, PostalCode2).

**Region Value:** If the user needs to create the geography based on Postal Code, then they can define the postal code values in this column. To define multiple geographies in single territory, use the comma separator (,).

**Territory:** This is a lookup value to define which geography belongs to which territory.

**Note: For Territory management:**

- *The column of 'Territory' should contain the Names of the territory(ies)*
- *Color: Color should be in Hexadecimal format i.e. (#DAF7A6). If the user enters the color in other format then the default color (Green) will be set.*
- *There are 8 region types that the user can define to create the geography. (Country, State, County, City, PostalCode1, PostalCode2, PostalCode3, PostalCode4).*



## Multiple Territories assigned to records

If a user needs to assign more than one territory to the entity records, user can enable the feature of Multiple Territories for a record. This feature will help the user to visualize records which lie in single or multiple territories. After assigning the territories, they can plot the territories to visualize the respective records lying into them.

To start using the feature of Multiple Territories for a record, user can follow the steps mentioned below:

### **Step 1: Enable Multiple Territories**

Go to Settings > Maplytics > Maplytics Configuration Details > Default configuration detail record > Configuration option > Select 'Enable Multiple Territories'.

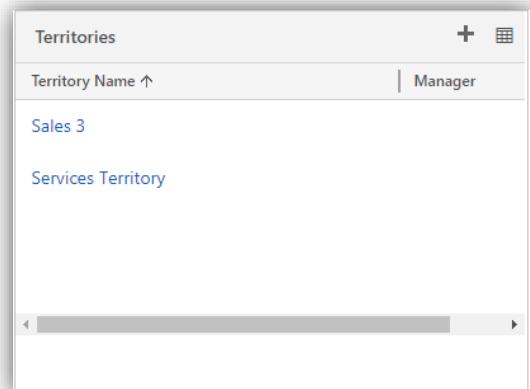
**Note: User cannot undo this option, once selected and saved.**

### **Step 2: Creating N: N relationship of entity with Territory.**

Go to Settings > Customizations > Customize the System > Entities > Select Entity > N: N Relationships > New Many-to-Many Relationship

### **Step 3: View the list of territories assigned to a record**

User can add a sub-grid to show the territories that an entity record is associated with. This step is optional, even if a sub grid is not added, the assigned territories will get associated with the records in background.



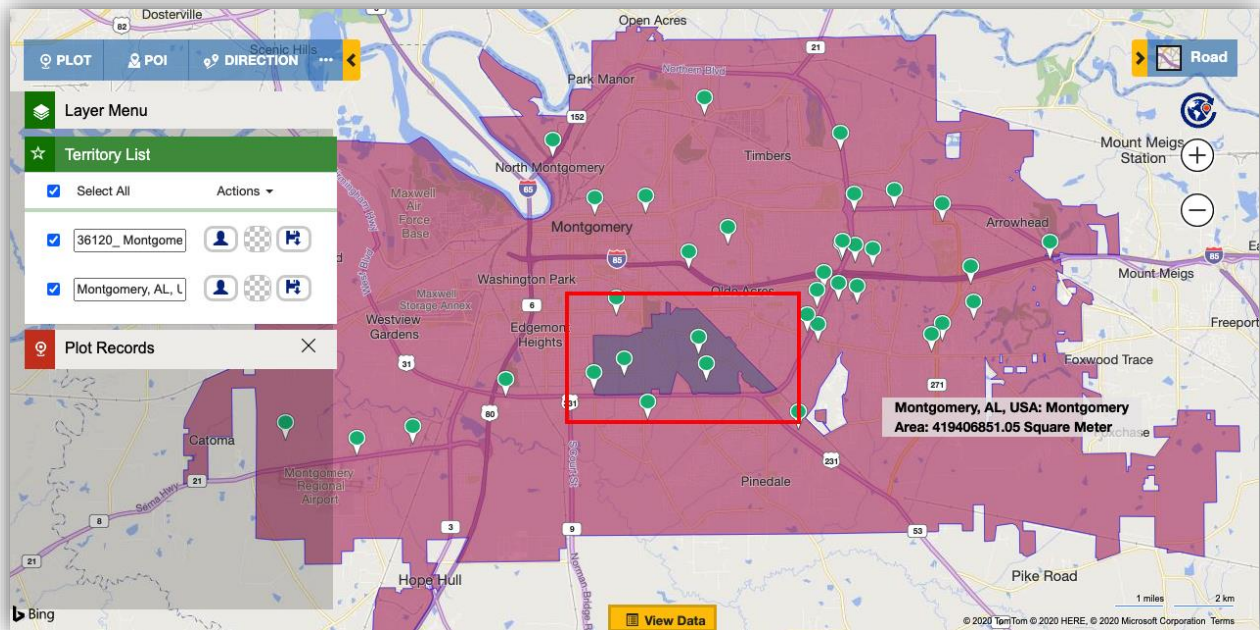
### **Step 4: Select relationship for the field 'Territory Relationship' in Attribute mapping section of Entity map.**

Go to Settings > Maplytics > Entity maps > Attribute mappings > Territory Relationship > Select 'Entity - Territory' relationship

### Step 5: Assign territories to records

User can either run **Batch Processing tool** or the **Inogic.Maplytics.AssignTerritoryWorkflow** on the records to assign the territories to the records.

After assigning the territories, user can choose the Search option of 'By territory' to plot the territories along with the respective records. The below screenshot shows two territories plotted on the map, 36120, Montgomery, AL and Montgomery, AL which overlap on each other and have three pushpins in common.



## Detail Map on CRM Dashboard

To include the Maplytics Detail Map component on the Dashboard, click on the 'new' button and select 'Add Web Resource'. Select '**ikl\_/Maplytics/Maplytics.DetailMap.html**' web resource. The User can further modify this web resource by including some custom parameter. For Example, if the user wants to plot a route from a dashboard like Appointment Planner. The user can automate the complete process.

**Add Web Resource**

Add an existing web resource to the Form.

General | Formatting | Dependencies

Web resource

Web resource \*

Field Name and Properties

Name \*

Label \*

☐ Display label on the Form

Visibility

☒ Visible by default

Web Resource Properties

Custom Parameter(data)

☐ Restrict cross-frame scripting, where supported.

☐ Pass record object-type code and unique identifier as parameters.

☒ Enable for tablet

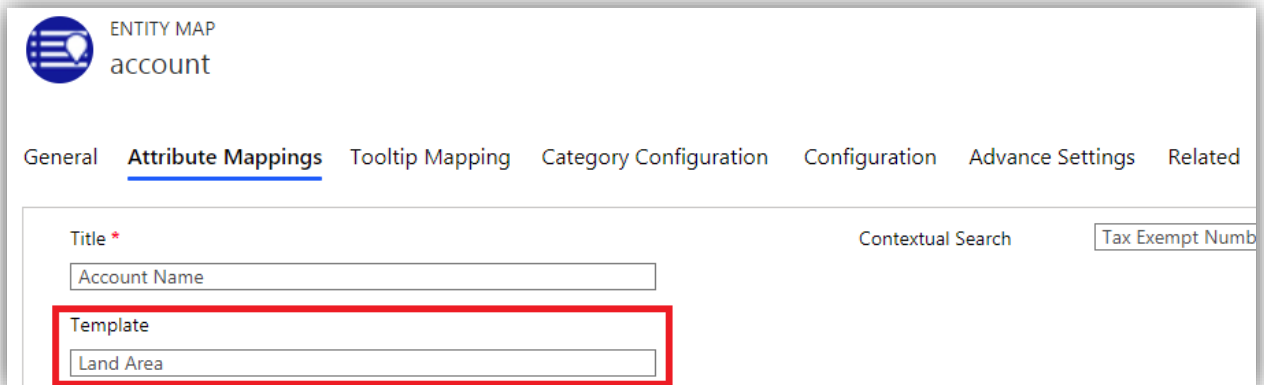
OK Cancel

Custom Parameter(data) : You need to provide the Custom Parameter(data) as

- **<Dashboard Name>| |dashboard| |true**
- **Appointment Planner| |dashboard| |true**

## Saved Template Visualization on CRM Entity Form

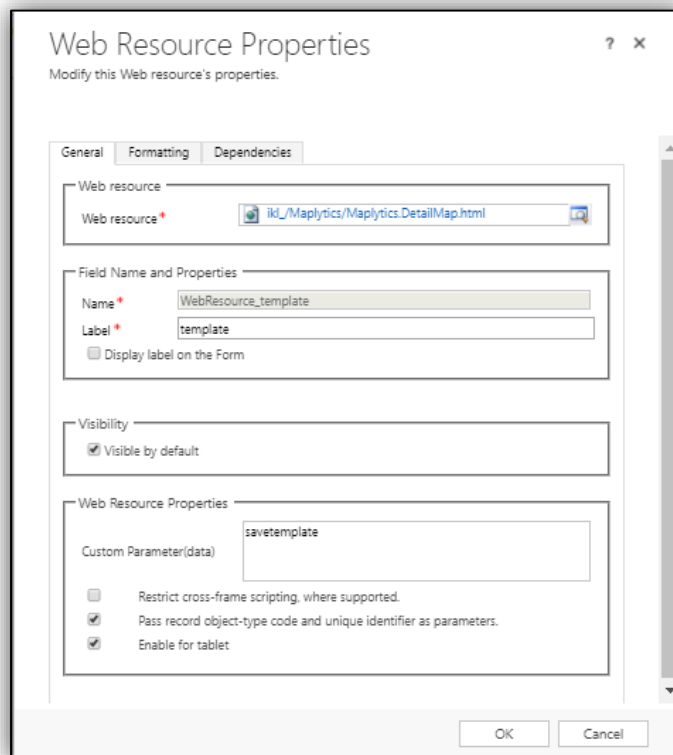
Users can include the Maplytics Detail Map component that loads a saved template associated with the Entity record on the Entity Form. For this, the user needs to create a 'Template' lookup field on the Entity form where user can select the required Maplytics Template. The user also needs to select the name of that field in the 'Template' field under 'Define Attributes' section on the Entity Map for that particular entity.



The screenshot shows the 'ENTITY MAP' configuration for an 'account' entity. The 'Attribute Mappings' tab is active. Under the 'Define Attributes' section, the 'Template' field is highlighted with a red box, and the 'Land Area' value is entered in the adjacent field.

On the Entity form, the user needs to 'Insert' a new Tab and select 'Add Web Resource'. Select '*ikl\_/Maplytics/Maplytics.DetailMap.html*' web resource. The user now needs to add a Custom Parameter for the saved templates.

- Custom Parameter (data): Provide the Custom Parameter(data) as **savetemplate**

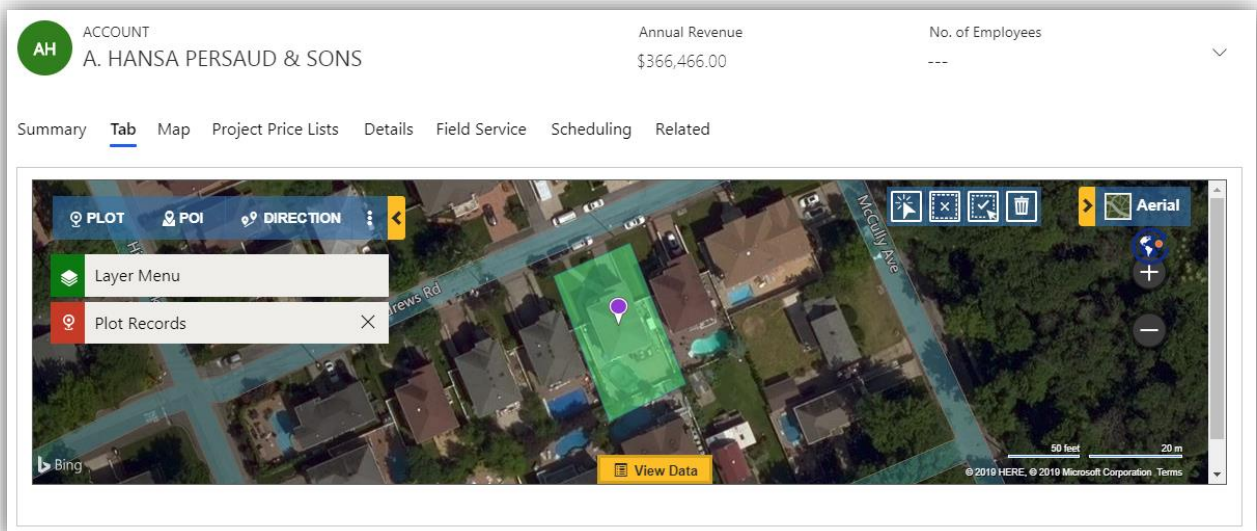


The screenshot shows the 'Web Resource Properties' dialog box. The 'Web resource' field is set to 'ikl\_/Maplytics/Maplytics.DetailMap.html'. The 'Field Name and Properties' section shows 'Name' as 'WebResource\_template' and 'Label' as 'template'. The 'Web Resource Properties' section shows 'Custom Parameter(data)' as 'savetemplate'.

## Maplytics™ – User Manual

Now, when the user selects a Maplytics Saved Template on the 'Template' lookup field on the Entity form, the selected template will be plotted on the Detail Map component added on the Entity form.

The screenshot shows the 'Entity' form for 'A. HANSA PERSAUD & SONS'. The form has a header with the company name and a green 'AH' icon. Below the header is a tabbed interface with tabs for 'Summary', 'Map', 'Project Price Lists', 'Details', 'Field Service', 'Scheduling', and 'Related'. The 'Summary' tab is active. On the left side of the form, there are several fields: 'Ticker Symbol', 'Relationship Type', 'Product Price List', and 'Template'. The 'Template' field is highlighted with a red rectangular box. Below the 'Template' field, there is a blue button labeled 'Land Area'. The right side of the form is a large empty area, likely for a map or other visual representation.





## Routing Optimization

User can select some locations on the map as waypoints to plot an optimized route. User can follow this route to visit the required locations and complete their meetings. User can also redirect themselves for turn-by-turn navigation in order to reach the right location on time.

### Directions Card

Directions card provides the user with all the routing features. The user can open the Directions Card directly by clicking on Directions tab.

The Directions Card also opens up when the user adds a waypoint(s) to the route either through the Contextual Menu, ToolTip Card or using the 'Add to Route' mass action. User can select the required waypoints and the leaving/arriving time.

The screenshot shows the 'Directions' card with a blue header and a close button. Below the header is a row of icons for different transport modes: car, walking, bus, train, and a mail icon. Underneath is an 'Options' section with a list of waypoints, each with a lettered marker (A, B, C, D) and a delete button (x). The waypoints are: N. JOHN COOGAN & SONS: 14, M. WILLIAM ROCKWELL & SOI, N. BRIAN GILLEN & SONS: 17C, and P. PHILIP TOSCANO & SONS: . Below the list are buttons for 'Add destination' and 'Leave now' (with a clock icon), and a large blue 'Go' button. At the bottom, there is a section for 'Open Saved Routes'.

Below the waypoints list, there is a section for selecting a departure time. It includes a 'Leave now' button and a 'Leave at' button. The 'Leave at' button is active, showing a time of 6:50 PM. Below this is a calendar for March 2020, with the 18th highlighted. A hand icon is shown clicking on the 18th.

This screenshot shows a simplified version of the 'Directions' card. It has a blue header with a location pin icon and a close button. Below the header are icons for car, walking, bus, and train. Underneath is an 'Options' section with 'From' and 'To' input fields, each with a menu icon (three horizontal lines). Below these fields are buttons for 'Add destination' and 'Leave now' (with a clock icon), and a large blue 'Go' button. At the bottom, there is a section for 'Open Saved Routes' with 'Select Start Date' and 'Select End Date' fields, each with a calendar icon.

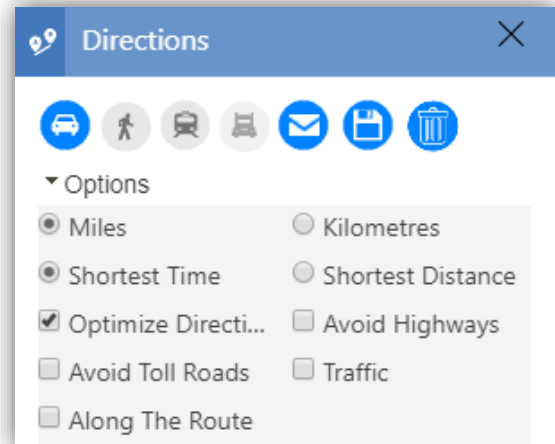
**Note: The user can add a maximum of 25 waypoints in the direction functions.**

Once the waypoints are selected, the user can choose the mode of transports like Driving, Walking, Transit or Truck to view the route.

The user can select different options to reduce the time, toll, highways, etc. by clicking on the Options button. Some of these can be auto-selected using Maplytics Configuration Settings.

The user can drag and drop the waypoints to change the order of route.

**Note:** To start using Truck route, please contact [crm@inogic.com](mailto:crm@inogic.com)



### Truck Route

To start using Truck route, please contact [crm@inogic.com](mailto:crm@inogic.com). Once the user has contacted us at [crm@inogic.com](mailto:crm@inogic.com) for the truck route, the user will be provided with a Maplytics license with Truck routing enabled into it.

To start using Truck route, user needs to update the license and then configure as mentioned below:

**Update the license:** Go to Maplytics App > Settings > License registration > Click on Activate.

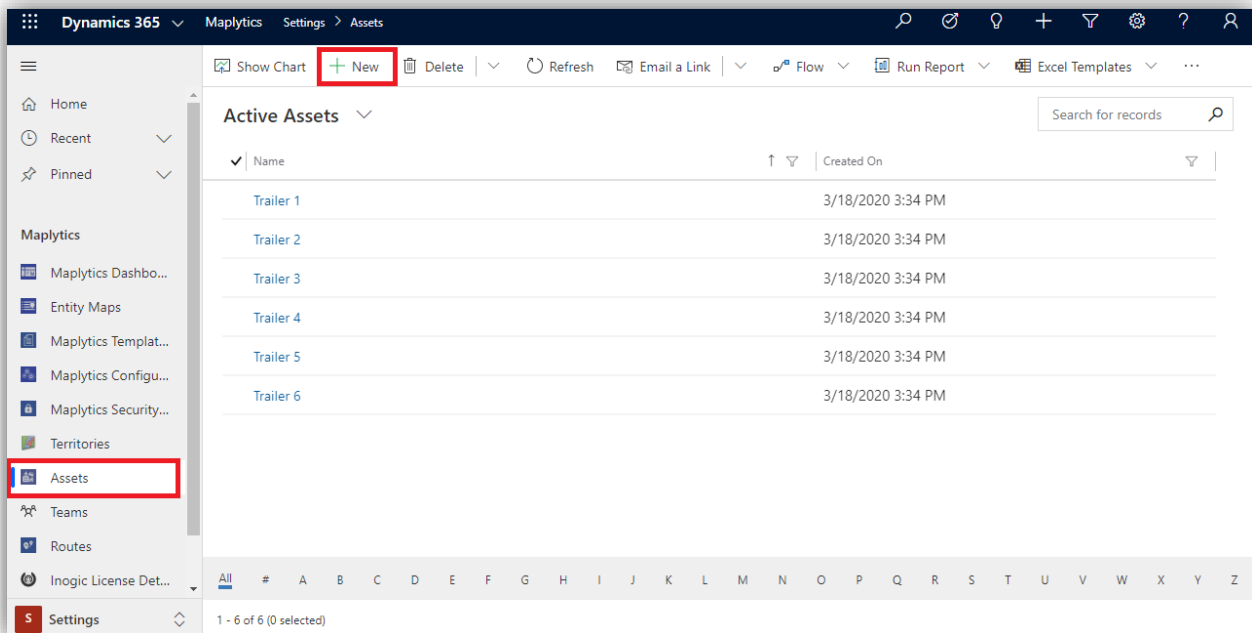
**Configure:** Go to Maplytics App > Settings > License registration > Configure Tab > Configure. Here the Asset data will be configured to the users Dynamics CRM.

	Name
<input type="checkbox"/>	Trailer 1
<input type="checkbox"/>	Trailer 2
<input type="checkbox"/>	Trailer 3
<input type="checkbox"/>	Trailer 4
<input type="checkbox"/>	Trailer 5
<input type="checkbox"/>	Trailer 6

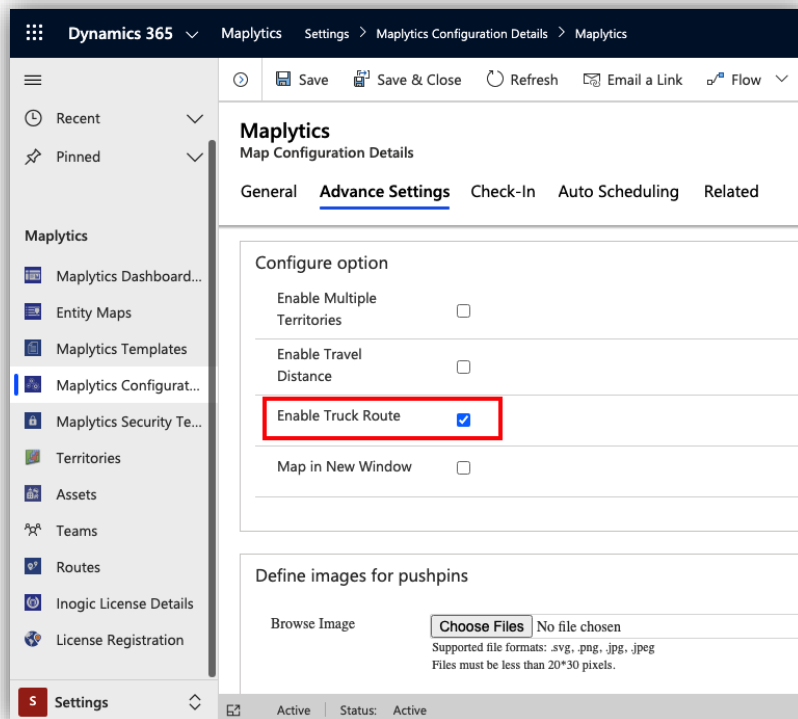
☒ Create Personalized Records Proceed

## Maplytics™ – User Manual

Assets data configuration will create some sample records for Trucks which user can select while using the feature of Truck routing. User can click on the 'New' button to create new records of Assets. They can also edit and save changes to the configured Assets.



After the sample records for trucks have been configured, user can enable the truck routing. To enable truck routing, go to Maplytics App > Settings > Maplytics Configuration Details > Default Configuration Detail record (with no user) > Advanced Settings > Enable Truck Route.



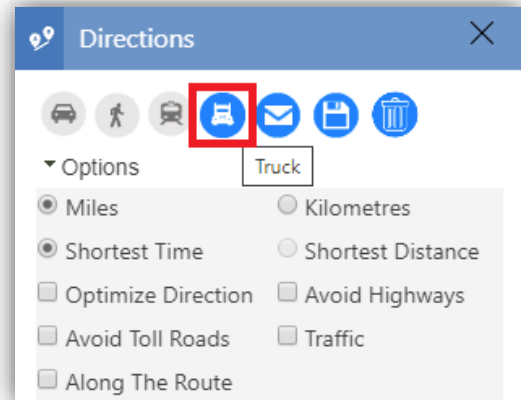
User can choose the truck icon on the Direction card to plot the route for a truck. On the selection of the truck icon a window will pop up to enter the Asset details.

Within the Asset Details, user can either select one of the sample truck types or select the custom option to enter their own details and then click on 'Go' to plot the route.

**Note: Optimization of the route with the Shortest Distance will not be available when Truck is selected as the mode of transport.**

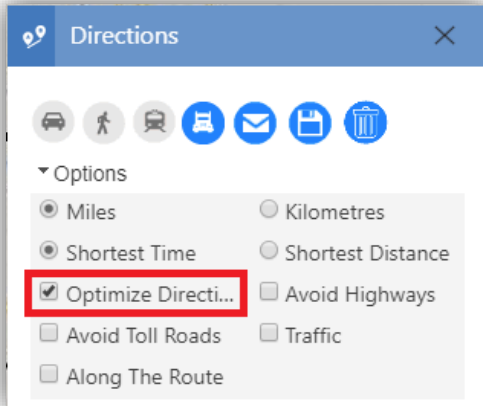
The Asset Details will be as follows:

1. **Asset type:** The asset for which the route has to be plotted. It can be selected from the following list of configured sample records. User can also select 'custom' to enter their own details.
  - Trailer 1
  - Trailer 2
  - Trailer 3
  - Trailer 4
  - Trailer 5
  - Trailer 6
  - Custom
2. **Axes:** The number of axles.
3. **Dimension Unit:** The unit of measurement of width, height, length. Can be one of the following values:
  - Meter
  - Feet
4. **Height:** The height of the vehicle in the specified dimension units.
5. **Length:** The length of the vehicle in the specified dimension units.
6. **Width:** The width of the vehicle in the specified dimension units.
7. **Weight Unit:** The unit of measurement of weight. Can be one of the following values.
8. **Weight:** The weight of the vehicle in the specified weight units.
9. **Hazardous Materials:** List of one or more hazardous materials for which the vehicle is transporting. Possible values are:
  - Combustible
  - Corrosive
  - Explosive
  - Flammable
  - Flammable Solid
  - Gas
  - Goods Harmful to Water
  - Organic



## Maplytics™ – User Manual

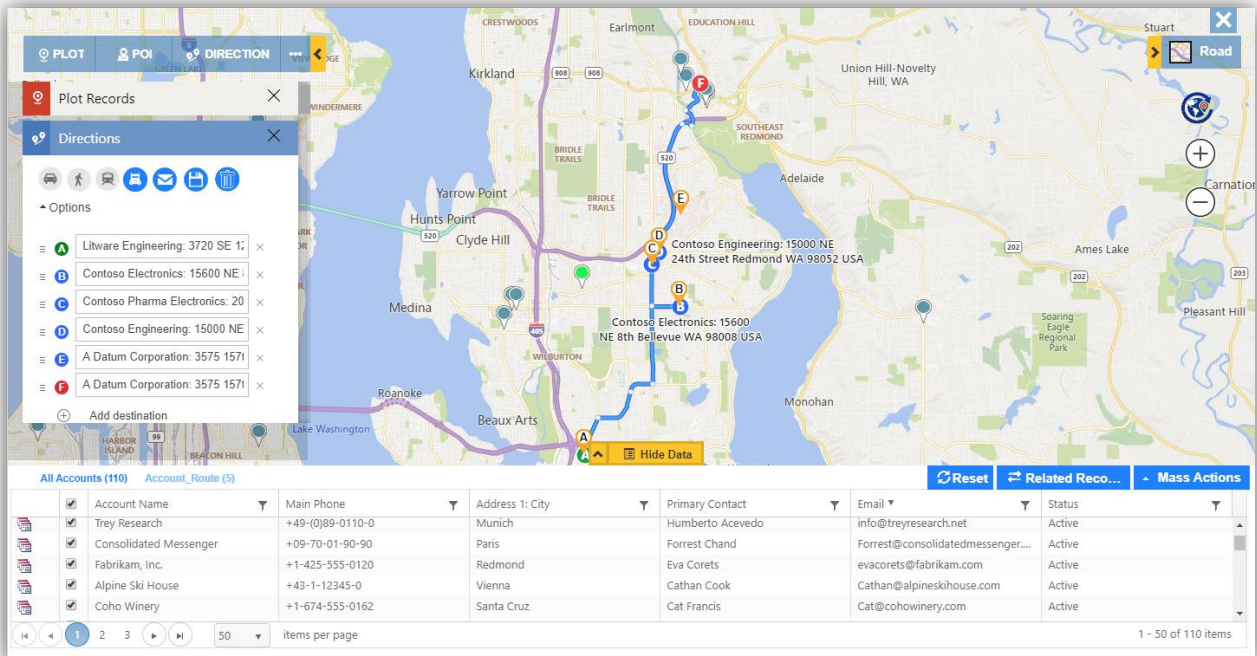
- Other
- Poison
- Poisonous Inhalation
- Radioactive
- None



### Optimize Direction

This can be selected from the Options. This option will provide the users with the optimized route direction between their waypoints keeping Origin & Destination as fixed waypoints.

Once the user clicks on 'Go' the route will be plotted and the directions will be available on the Directions Card.

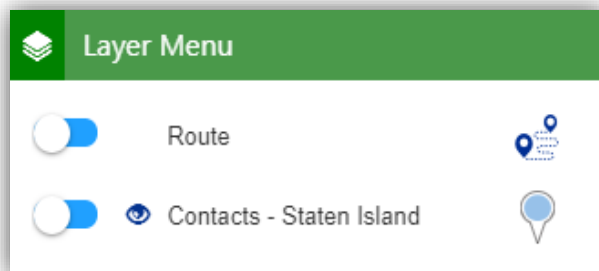
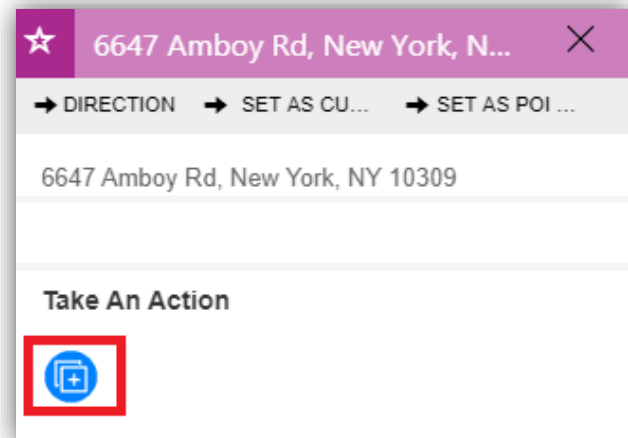


User can view all the details regarding the pushpins on the route in the view data grid in the tab named as entity\_Route. for example: Contact\_Route. Each waypoint on the route will be represented by a pushpin. User can hover or click on any pushpin to view the details of the waypoint. If the waypoints are records saved within Dynamics CRM, it will open the tooltip card on its click showing the respective data configured for tooltip card.



## Maplytics™ – User Manual

If the waypoint is just a location, on a click it will open a tooltip card showing its address and an icon which can be used to create a record for the location. This includes the Default origin and destination pushpin as well.

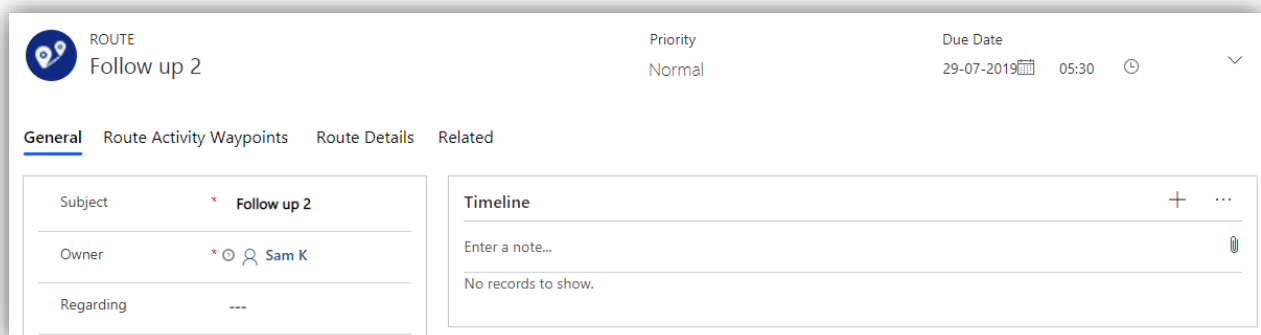
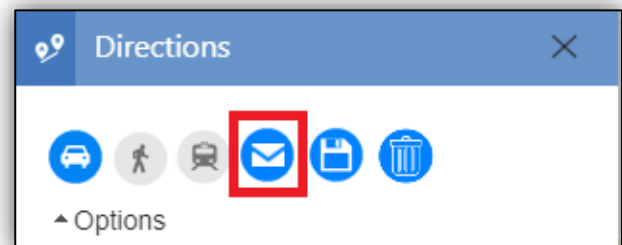


User can also choose to show or hide the layer of route from the layer card.

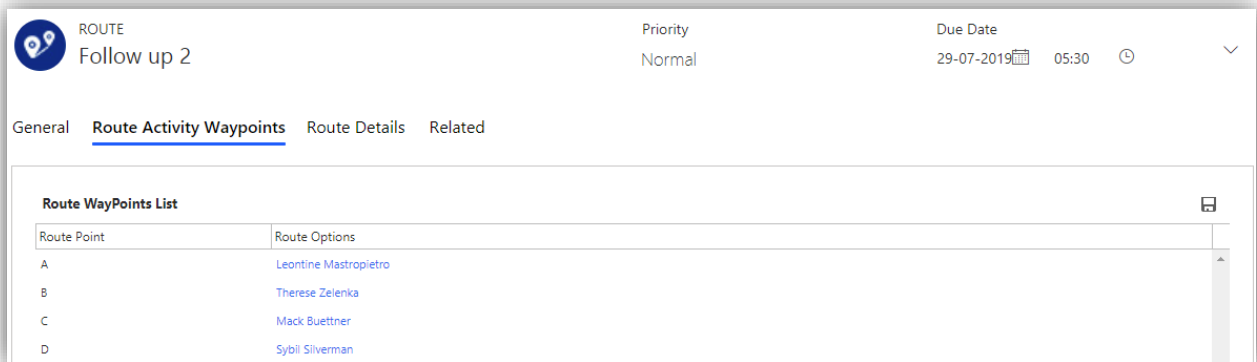
### Route Sharing:

Maplytics also helps the user to share a route in different ways.

Email Route:

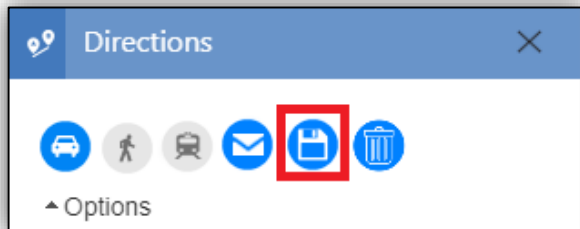


## Maplytics™ – User Manual

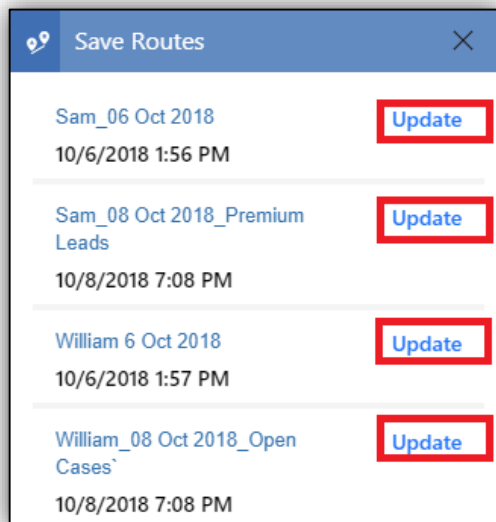
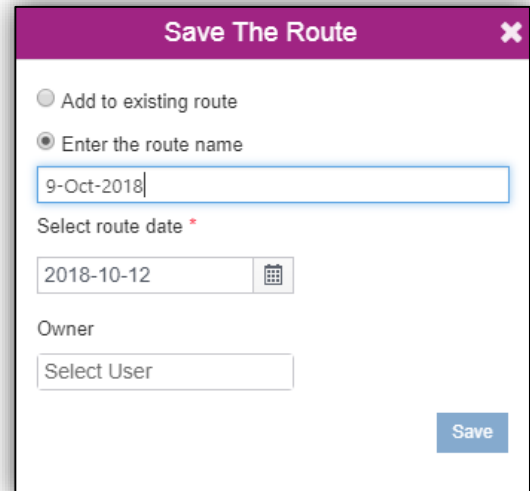


The user can email the route to any of the Dynamics CRM records using email route option.

### Save Route:



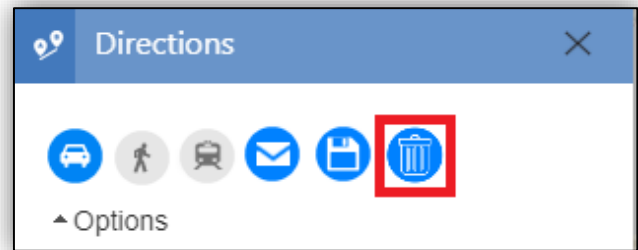
Users can also save their route plotted. The route record will also save the information like number of waypoints, total distance and time for the route. User can add the route to an existing route or save the route with a name & owner as a new route.



User can also update any route directly using the update button. User can search for route existing in the required duration and click on the update button besides the required route.

### Clear Route:

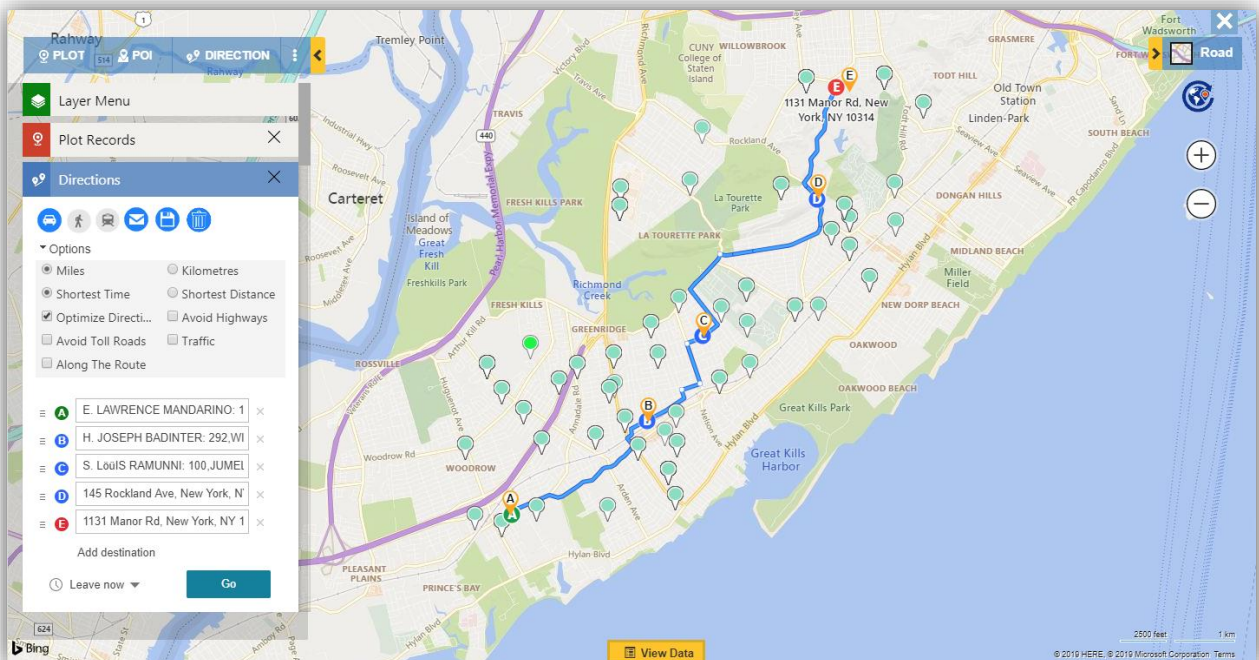
The user can use the **Clear Route** button to clear the route from the map. This will just clear the route and directions card will still be opened for further use.



Another important feature of Maplytics is Routing across multiple waypoints. All the routing features in Maplytics can be accessed from the Directions Card.

### Merged Route and Plot View

Now, when the user plots the data and then creates a route, both the plotted data and the route will stay on the map for an easy Route Management. This makes it easy for the user to add more waypoints to the route without switching between Plot and Directions card.



**Note: The route will remain on the map unless the user clicks on the 'Clear Route' button or closes the Directions Card**



## Default Origin and Destination

User can set default origin and destination for Route management.

**Go to Settings > Maplytics > Maplytics Configuration Details > Record of the user**

**Maplytics**  
Map Configuration Details

General   Auto Scheduling   Related

Defaults			
Distance Unit	Mile	Region Area Unit	Square Meter
Map Mode	Road	Plot Data	Non Cluster
Optimize Direction	No	Along The Route Distance	---
Live Traffic	No	Current Location	---
Route Option	Shortest Time	Navigate In	Google
Map Center	---	Records Per Page In Grid	50
Heat Map Type	Boundary	Zoom Level	---
Summary Grouping	City	User	 
Default Template	---	Maplytics Security Template	---
Set As Origin	Other	Set As Destination	Other
Other - Set As Origin	819 Catalpa Dr, Montgomery, AL 36112	Other - Set As Destination	819 Catalpa Dr, Montgomery, AL 36112

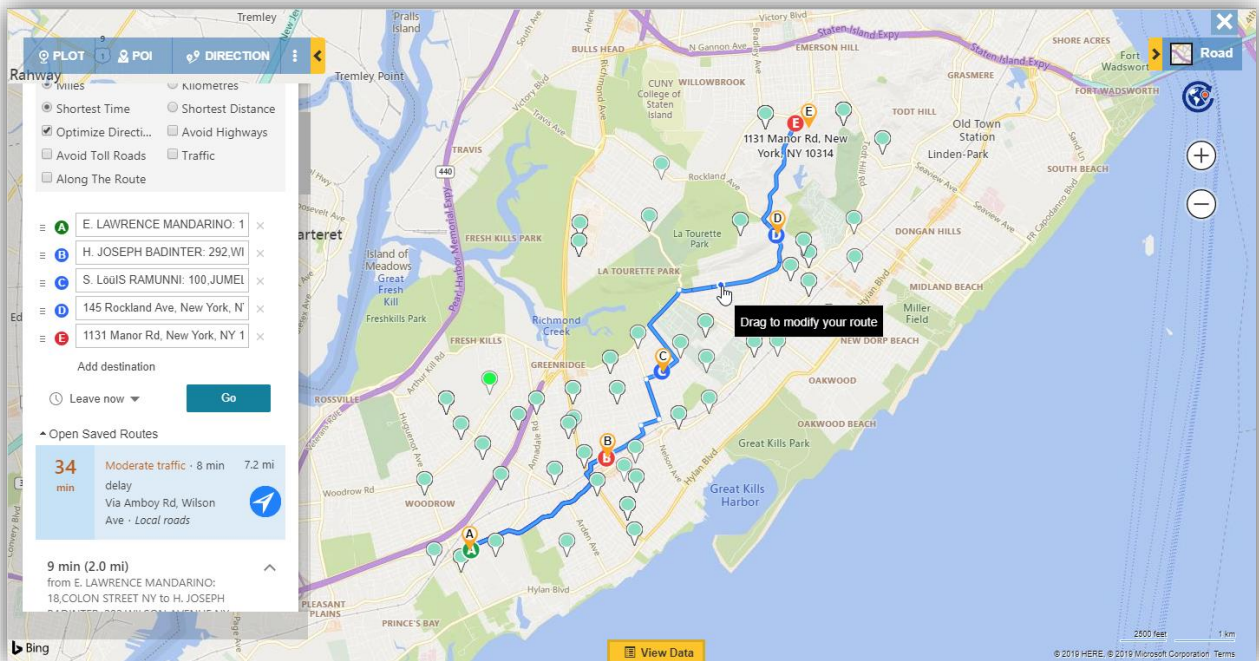
There are six options to select:

- **User Mailing Address** - Reads address from User mailing address
- **User Other Address** - Reads address from User other address
- **Business unit Bill to Address** - Reads address from logged in user's Business units bill to address
- **Business unit Ship to Address** - Reads address from logged in user's Business units ship to address
- **None** - If user do not want to set default origin/destination
- **Other** : It will have its own multiline textbox associated where user can enter their own address

**Note: If a user uses the "Plot route" button to plot a "Route" activity record on the Detail map, the Default origin/destination will not be set in the Direction card**

## Snap waypoint

This helps the user to edit a plotted route just by dragging the route to the required point on the map.

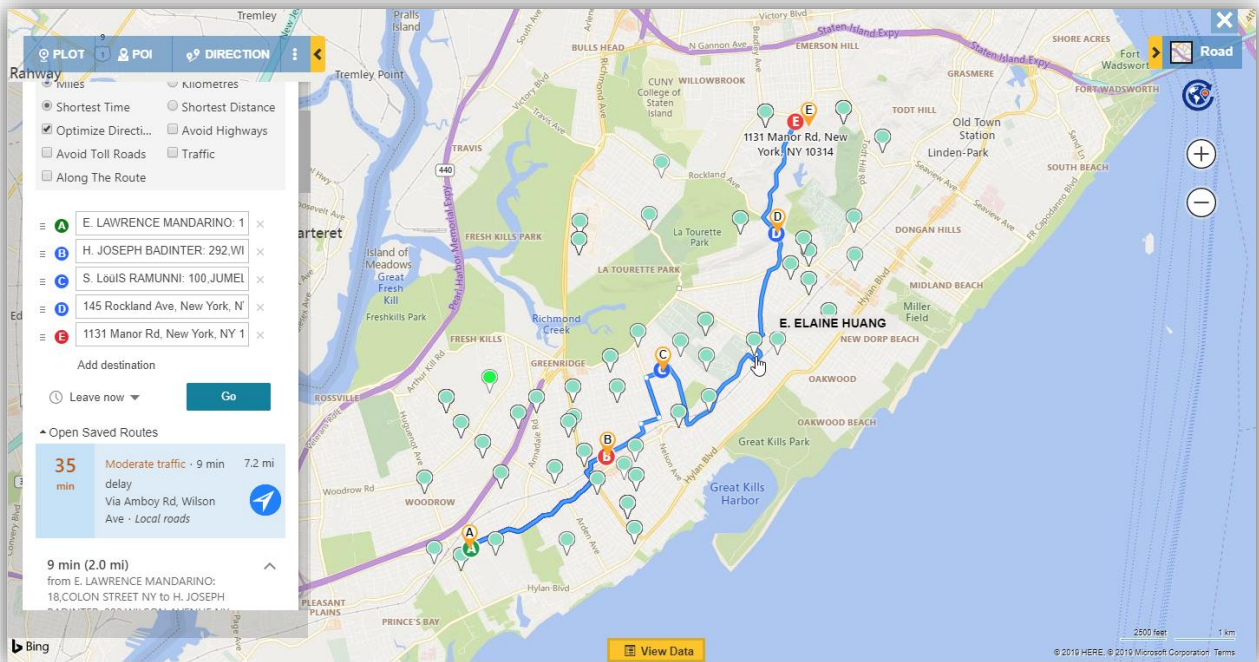


Drag to a location: User can drag a point on the route to a required location on the map. This will add the location as a waypoint at the dragged point in the route. This will also update the Directions card with the newly added waypoint.

Drag to a pushpin: User can also drag a point on the route to a pushpin plotted on the map. This will detect the record and add the record's location at the dragged point in the route. This will also update the Directions card with the newly added waypoint.

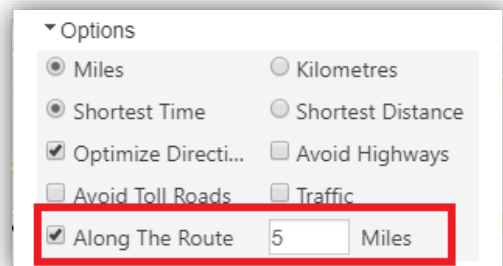
**Note: The option of snapping waypoints is not available for a route create for trucks.**



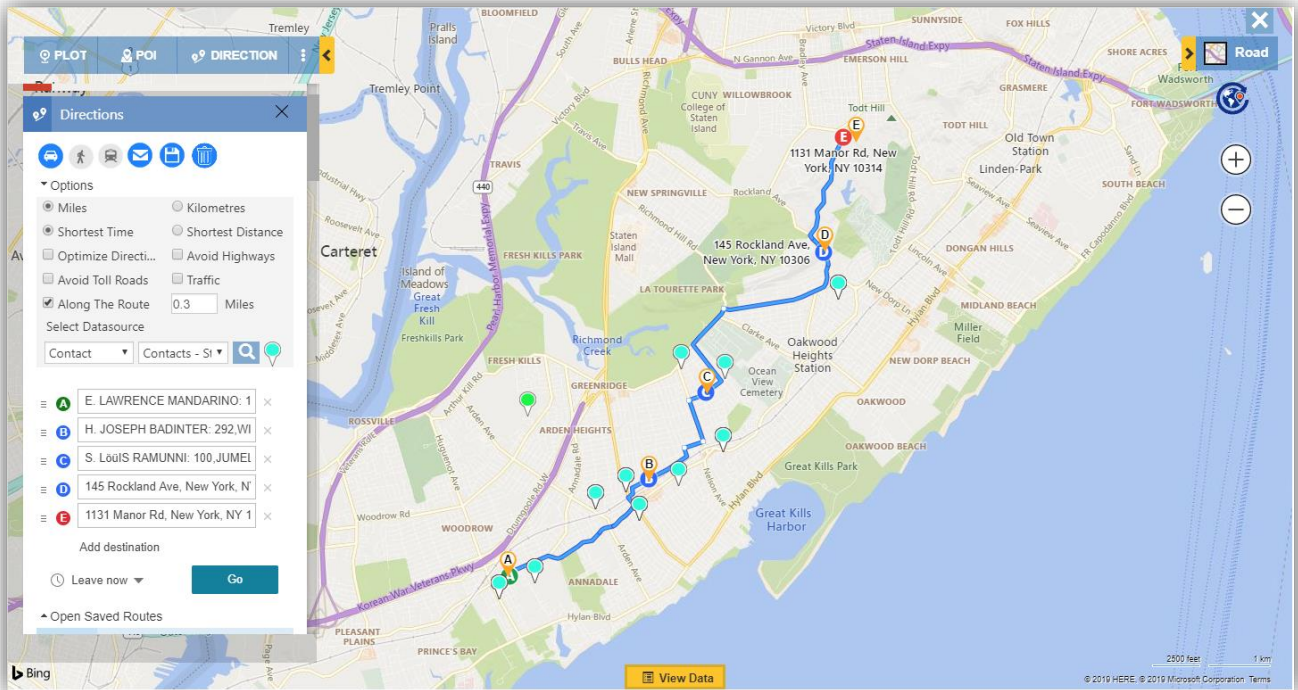


## Along the Route

This feature provides the user the ability to search the records that fall in the defined proximity along the route. The default value for Along the Route search can be configured in the Maplytics Configuration record. This will find all the records with the defined search parameter and that falls in the entered proximity along the route.



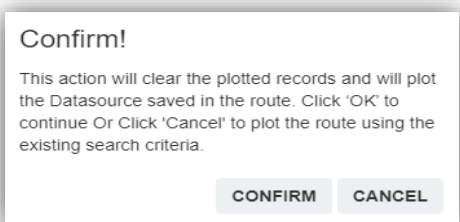
**Note:** The user can add the value between 0 – 25. The user can also add decimal values with a scale of 2 for the radius.



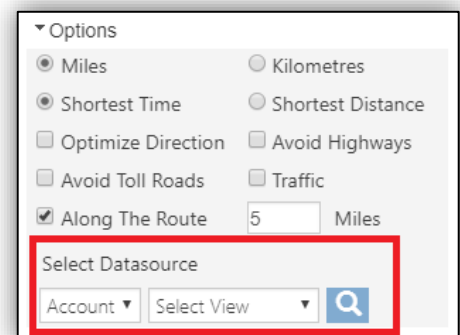
The Along the route records is also saved when the user saves the route. However, if the user has selected multiple Datasources on the Plot Card, only the first Entity and View combination in the Select Datasource will be saved for along the route search in the saved route.

If the user has plotted data on the map and opens a saved route that has along the route parameter saved as well:

- The user can either click on 'Confirm' to clear the plotted records and search along the route records with the Datasource saved in the route.
- Or, the user can click on 'Cancel' to search along the route records with the existing plotted data, ignoring the Datasource saved in the route.

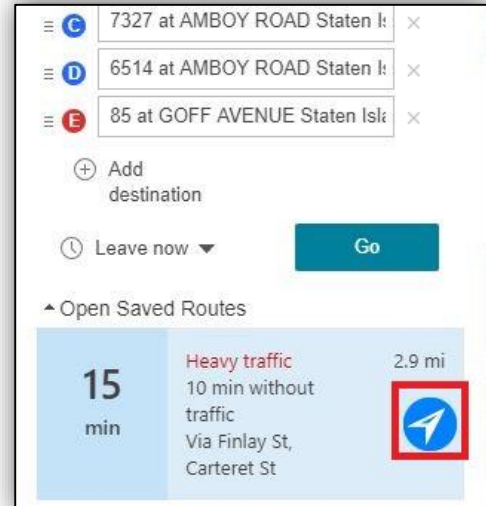
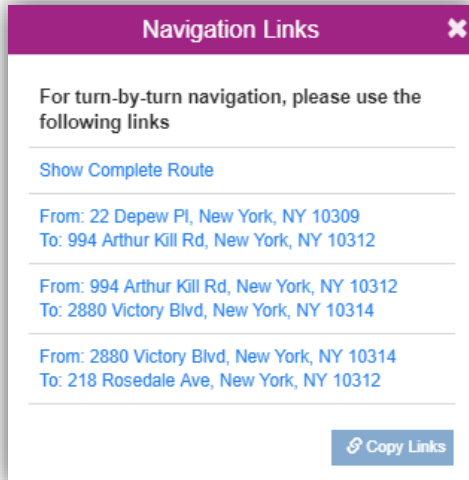


If the user opens the Directions card directly without plotting the data or opens a saved route without the along the route parameter saved, they have the option to select the Datasource for the Along the route search directly on the Directions Card.



## Route Redirect and Copy Route Links

After plotting the route, user can use the 'Redirect' button to open the 'Navigation Links' popup on the browser as well as the Dynamics 365 App for Phones and Tablets.



The user can click on individual links for route navigation from point A – B, B – C, and so on. User can also select the application within the User Configuration record to navigate the route. Refer the section of 'Maplytics Configuration Details (Personalization)' in the installation manual to select the application. These links will redirect the route to the app selected in the configuration.

## Redirect with Google Maps

User can view the turn-by-turn navigations on Google Maps site on desktop and Google Maps App on Phones and Tablets. User can also choose to view the complete route.

### Note:

- **The maximum waypoints to show the complete route is 10 waypoints.**
- **By Default, the navigation will be redirected to Google Maps.**

### Redirect with Waze

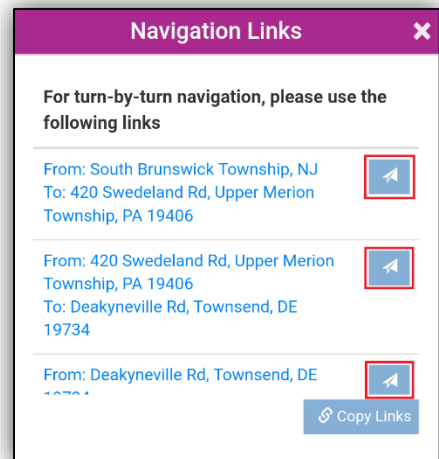
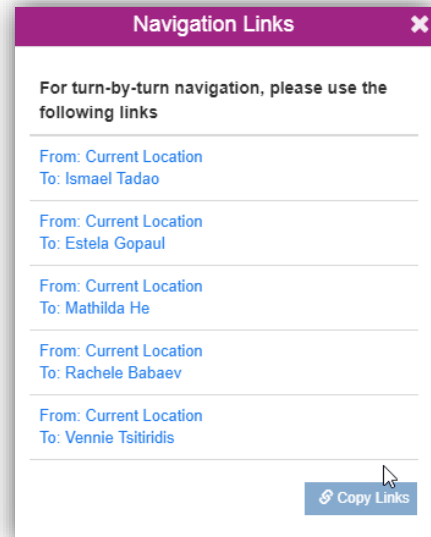
User can view the turn-by-turn navigations on Waze site on desktop and Waze App on Phones and Tablets. This will show the navigation links from current location to the waypoints.

**Note:** *The checkpoints should be under 3000 miles from the current location to view routes on Waze.*

Redirection on mobiles: User can click on the route navigation buttons to redirect on the Google maps/Waze. The user can also use the 'Copy Links' button to copy the links to send them as an email or save it into a note.

**Note:**

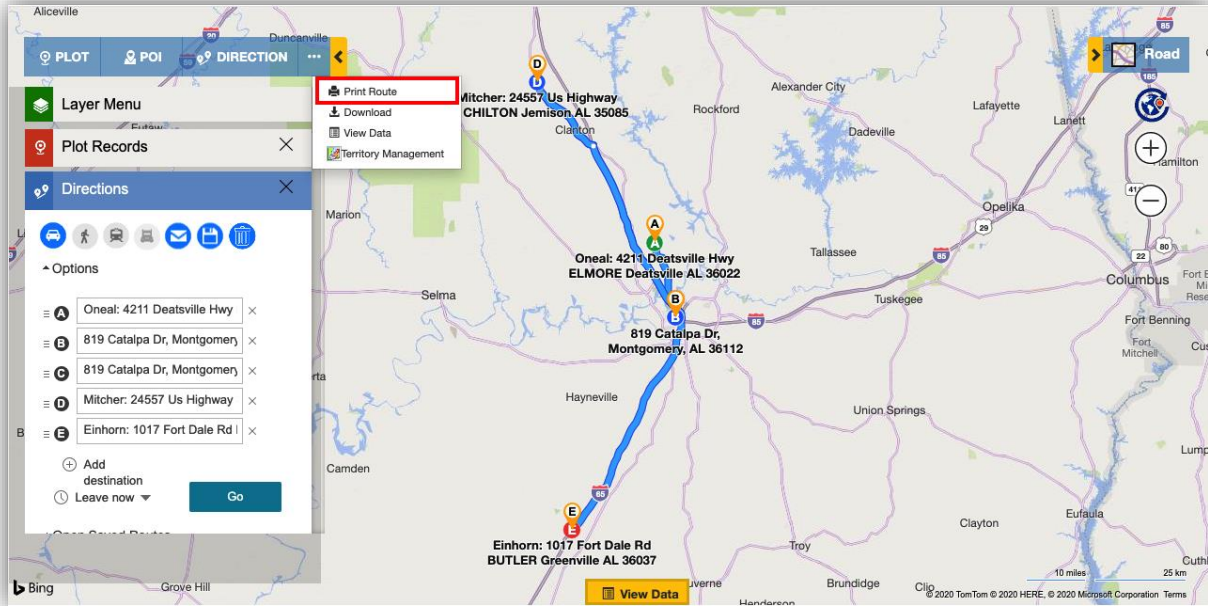
- **By default, the links will be redirected in Google Maps.**
- **The links redirect on the Dynamics 365 App for Phones and Tablet works with Dynamics 365 v9.x**
- **For other devices and Dynamics 365 v8.2, users can use the 'Copy Links' button.**





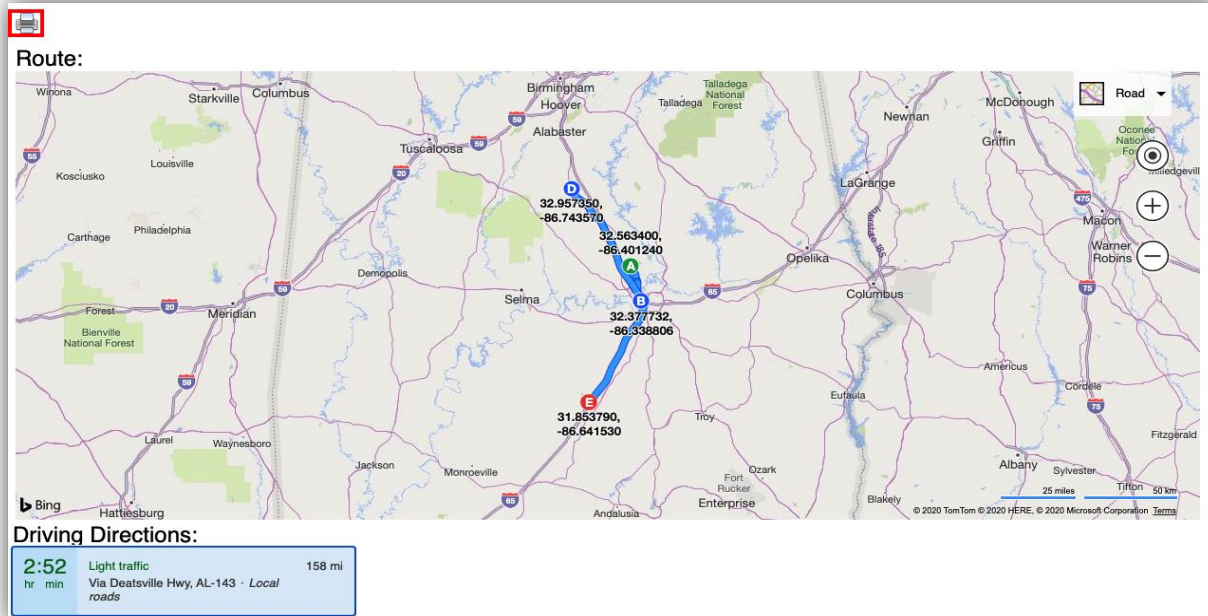
## Print Route

User can print a Route as well as the adjoining Map. User can plot a route on map, click on the 'More Options' button to click on 'Print Route' button.



Clicking on the 'Print Route' button will open a new window with the map and Route on the page, which can be seen in the below screenshot:

Click on the **Print Icon** to print the map and route instructions.



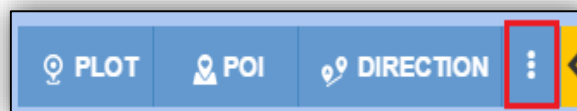
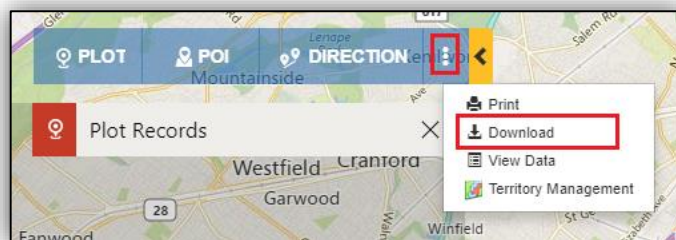
### Note:

- **Routing requires a minimum of two waypoints provided to create a route.**
- **A4 size paper with landscape mode is recommended while printing.**



### Download map

Using the Download map button, the user can download the map as visible on the screen.



**Note:** Download map is not supported for Internet Explorer.

## Auto Scheduling

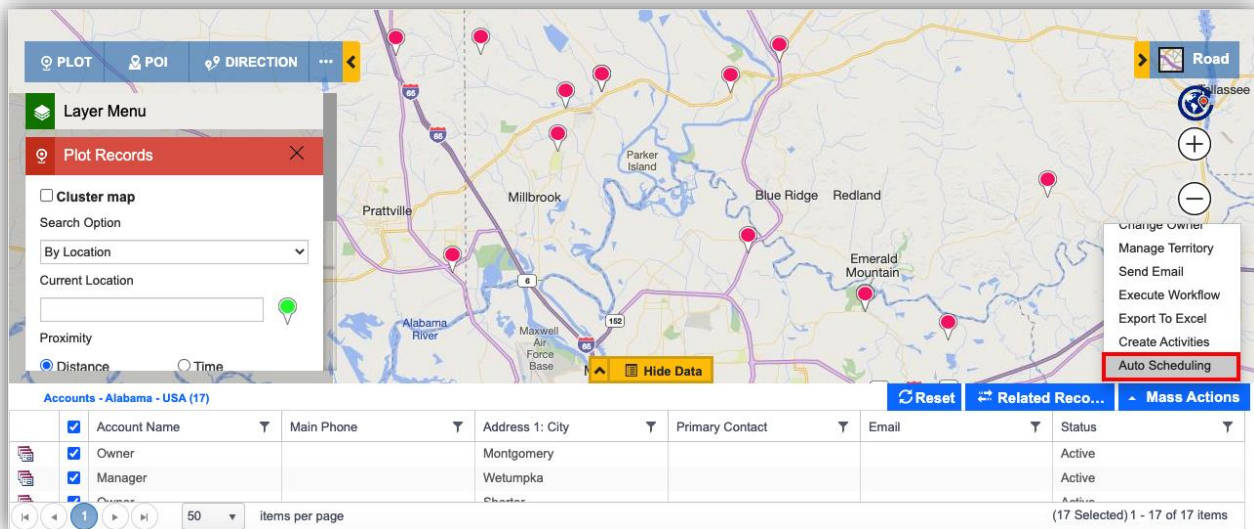
Auto Scheduling helps users to create an optimized schedule to be followed on the field over a span of days by the concerned field professionals. The user can perform Auto scheduling on the required set of records (eg. clients) to create Appointments and optimized routes, with the considerations of existing appointments, the preferred days of working, different meeting durations, availability of the selected users etc. This feature will help user to create appointments and optimized routes based on shortest time in order to provide an effective plan, hence saving the time and increasing the field productivity.

Users can contact at [crm@inogic.com](mailto:crm@inogic.com) to get the access of the feature and they will be provided with a Maplytics license with Auto Scheduling enabled into it.

**Note: The visibility of the option of 'Auto scheduling' into Mass Actions will be based on the Maplytics Security Template if any assigned to the user. Please refer to the section of 'Maplytics Security Template'.**

To perform Auto Scheduling user can go to the Mass Actions within the View Data grid. They can plot the Entity records on the map that are needed to be visited and open the 'view data' grid at the bottom to check the number of records plotted on the map and deselect the records that are not required.

**Note: Auto Scheduling can be performed on a maximum of 100 records plotted on the map**



After plotting the required records to be scheduled for, user can Go to **Mass actions > Auto scheduling**. This will consider all the records that are plotted on the map and will proceed to the Auto Scheduling page.

## Auto scheduling card

User can set the basic preferences as per the requirement so as to consider the same while creating a schedule. Users can also have these prefilled by setting default values for the preferences within their Configuration Detail Record. Please refer 'Configuration Detail Record' section Installation Manual to see configuration for Auto Scheduling.

Consider Existing meetings: Select this option to consider existing meetings saved in CRM assigned to the selected users.

Select users: Select the Maplytics user(s) to create Automated schedule for them. *A maximum of 10 users can be selected to create an automated schedule.*

Period: The number of days the schedule should be for. The meetings will be distributed among the number of days selected here. User can choose any one option from the following:

- 1 Day
- 2 Days
- 3 Days
- 4 Days
- 5 Days
- 1 Week
- 2 Weeks
- 3 Weeks
- 1 Month

Duration: The time frame required for each meeting. User can choose any one of the following options. User can also change duration for individual meetings in Advanced Preferences. User can further change the duration of individual meetings in the 'Advanced Preferences'.

- 5 Minutes
- 10 Minutes
- 15 Minutes
- 20 Minutes
- 30 Minutes
- 45 Minutes
- 60 Minutes
- 75 Minutes
- 90 Minutes
- 120 Minutes

Start Time: Time to start the schedule of each day. User can enter the time in 12-hour format (hh:mm)

End Time: Time to end the schedule of each day. User can enter the time in 12-hour format (hh:mm)

Break Time: Starting time of Break for each day. User can enter the time in 12-hour format (hh:mm)

Break Duration: Duration of the break during each day. User can select any one of the following options:

- 0 Minutes
- 5 Minutes
- 10 Minutes
- 15 Minutes
- 20 Minutes
- 30 Minutes
- 45 Minutes
- 60 Minutes
- 75 Minutes
- 90 Minutes
- 120 Minutes

Buffer time: User can add extra time to the schedule as buffer to be used in case of unforeseen situations to avoid changing the schedule.

- 5 Minutes
- 10 Minutes
- 15 Minutes
- 20 Minutes
- 30 Minutes

Working days: User can select the days for which the selected users will be working. The meetings will be distributed only within the working days selected here. User can select any day between Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday. *At least one day should be selected.*

**Note:**

- *If the logged-in user has set default values for the preferences in the respective Maplytics Configuration detail record, while opening the Auto scheduling section, the preferences will get prefilled with the same.*
- *If the logged-in user selects any other single user, the preferences will get prefilled if there are default values set in the Maplytics Configuration detail record of the respective selected user.*
- *If the logged-in user selects multiple users, the preferences will get prefilled if there are default values set in the Default Configuration detail record.*

## Advanced Preferences

User can further click on 'Advanced preferences' within the Auto Scheduling card to select further preferences to be considered while creating an automated schedule.

Buffer Time \*

10 Minutes

Working Days \*

☐ ☒ ☒ ☒ ☒ ☒ ☐

Su Mo Tu We Th Fr Sa

Advanced Prefere...

Proceed

User Details
Meeting Details
Existing Meetings

Meetings Per Day

20

Continuous Schedule

No

Reschedule Existing...

No

Selected Users

<input checked="" type="checkbox"/>	User	Origin	Destination	
<input checked="" type="checkbox"/>	Kelly John	1979 Davis Rd, Prattville,...	705 Grier Ln, Wetumpka, ...	Edit
<input checked="" type="checkbox"/>	Chris Butler	122 Grand Ridge Ln, Wet...	4759 Friendship Rd, Talla...	Edit
<input checked="" type="checkbox"/>	Gerard Grey	411 Boat Rd, Montgomer...	1801 Railroad St, Millbro...	Edit

**Meetings Per Day:** User can select the average meetings that should be scheduled for a day. A minimum of 1 and a maximum of 20 meetings can be selected.

**Continuous Schedule:** Instead of starting the route from the origin every day, if the route should be started on the ending location of the previous day, user can set it as 'Yes'. For example: A user starts the first day from Brookwood in Alabama, USA to follow the route assigned and reaches Alexander city, Alabama which is the destination of the route for the day. Now, if the 'Continuous Schedule' is enabled, the user does not need to go all the way to Brookwood to start the route for the next day, instead the user can directly go to the first appointment scheduled for the second day, from Alexander City itself.

**Reschedule Existing Meetings:** If the option of 'Consider Existing Meetings' has been selected within the Auto scheduling card, then the option of enabling 'Reschedule Existing Meetings' will be available. User can select 'Yes' in order to reschedule existing meetings. This might change the respective owners as well



to get the highest optimization. If the existing meetings are needed to be met at the set appointment time, the user should select 'No'.

**Note: If both Onsite and Offsite existing meetings have been considered, then, enabling reschedule existing meetings will make changes only to the Onsite meetings.**

### User Details

Selected users will be listed here along with the space provided for the Origin and Destination locations for the same. If the default locations for Origin and Destination are set in the default configuration details of the users, the same will be prefilled here. If not, then user can click on 'Edit' and enter the required locations for Origin and Destination for the respective users. *Location for Origin will be mandatory here.*

Update Address
✕

Origin \*

122 Grand Ridge Ln, Wetumpka, AL 36093

Destination

4759 Friendship Rd, Tallassee, AL 36078

OK

User can also uncheck any users in this list if they do not want to create an automated schedule for any user.

Selected Users				
<input checked="" type="checkbox"/>	User	Origin	Destination	
<input checked="" type="checkbox"/>	Chris Butler	122 Grand Ridge Ln, Wet...	4759 Friendship Rd, Talla...	<div>Edit</div>
<input checked="" type="checkbox"/>	Gerard Grey	411 Boat Rd, Montgomer...	1801 Railroad St, Millbro...	<div>Edit</div>
<input checked="" type="checkbox"/>	Kelly John	1979 Davis Rd, Prattville,...	705 Grier Ln, Wetumpka, ...	<div>Edit</div>

## Maplytics™ – User Manual

### Meeting Details

The details of the records selected to create the schedule will be listed here. Users can also deselect any record if they do not want to add the record to be considered while creating the schedule.

User Details Meeting Details Existing Meetings							
<input checked="" type="checkbox"/>	Duration	Account Name	Main Phone	Address 1: City	Email	Annual Reven	Status
<input checked="" type="checkbox"/>	30	3DInfotech	7990274947	Montgomery	vpratt@esp...	369011	Active
<input checked="" type="checkbox"/>	30	Atlantic Eq...	6893992729	Wetumpka	y.philbrick...	222321	Active
<input checked="" type="checkbox"/>	30	Sarah Ferh...	5839467589	Shorter	sales@han...	368922	Active
<input checked="" type="checkbox"/>	30	Gary Stenl...	653748293	Prattville	sales@mrs...	368290	Active
<input checked="" type="checkbox"/>	30	David Murp...	2563894559	Montgomery	sales@old...	600689	Active
<input checked="" type="checkbox"/>	30	Paul Coug...	2345835467	Millbrook	a.krueger...	347922	Active
<input checked="" type="checkbox"/>	30	Edward Bu...	3548720974	Mt. Meigs	admin@mr...	328233	Active
<input checked="" type="checkbox"/>	30	David Bonif...	3749576789	Millbrook	akolawa@...	357292	Active

Page 1 of 1 50 Displaying 1 to 17 of 17 items.

User can also click on the individual duration of meetings to change it for the respective meetings as well as enter a value in the blank space to filter the data based on the entered value. In the below screenshots the data has been filtered by meetings with the duration of 40 minutes and city Montgomery. User can filter the data for with the values for other columns as well.

User Details Meeting Details Existing Meetings							
<input checked="" type="checkbox"/>	Duration(Mins)	Account Name	Main Phone	Address 1: City	Email	Annual Reven	Status
	40			montgomery			
<input checked="" type="checkbox"/>	40	David Mu...	2563894559	Montgomery	sales@old...	600689	Active
<input checked="" type="checkbox"/>	40	Robert C...	4926482678	Montgomery	dmayo@st...	689543	Active

### Existing meetings

If user has selected 'Consider Existing Meetings' in the Auto Scheduling card, the Appointments, Bookable resource bookings etc. saved in CRM owned by the selected users will be listed here. User can also change the Meeting type of Onsite meetings to Offsite. They can further deselect the listed meetings or Activities they do not want to consider and also filter the meetings based on specified values. User can choose one among the options under 'Select Meeting', i.e. All Meetings, Appointments, Service activities or Bookable resource bookings to view the same in the list below that. Admins can also select the Activities within the Default Configuration Detail records that are needed to be considered here while Considering Existing Meetings.

User Details

Meeting Details

Existing Meetings

✕

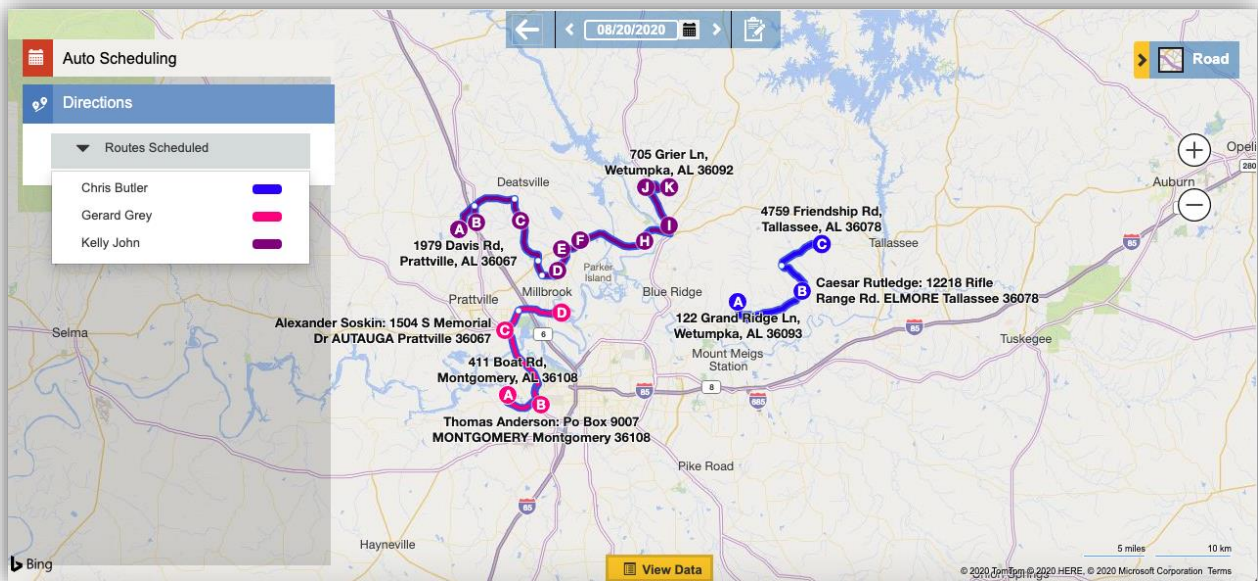
Select Meeting

All ▼

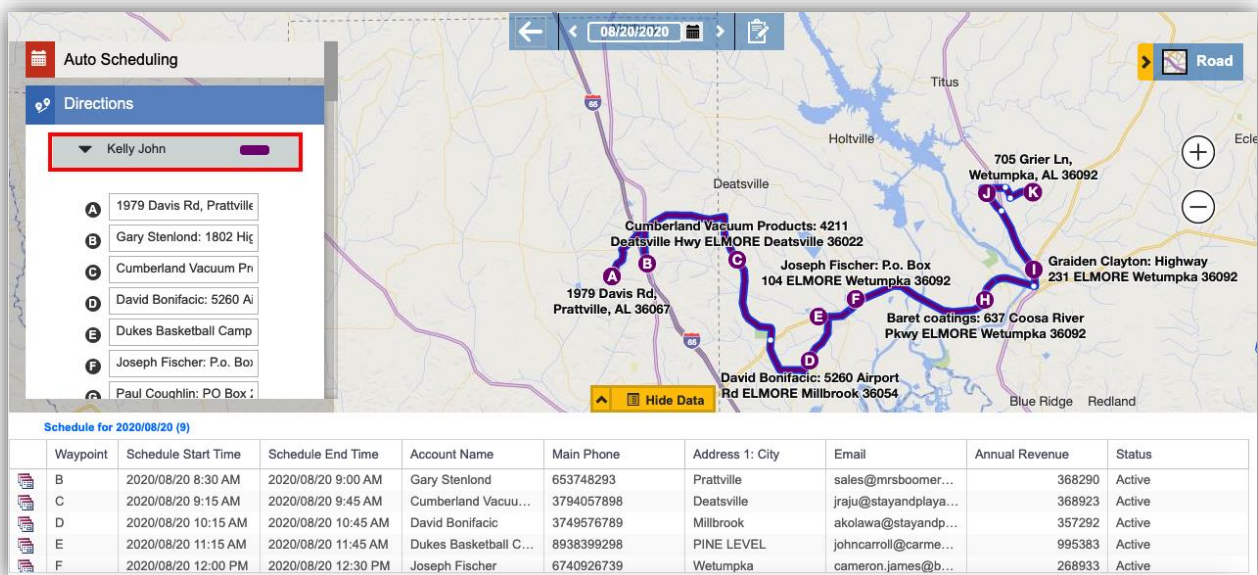
<input checked="" type="checkbox"/>	Subject/Topic	Regarding	Owner	Resource	Start Time	End Time	Duration	Activity Type	Meeting
<input checked="" type="checkbox"/>	Prod...	Rich...	Chris...		2020/08/20 09...	2020/08/20 10:...	60	Appo...	Onsite
<input checked="" type="checkbox"/>	Pre s...	Blue...	Kelly ...		2020/08/20 15...	2020/08/20 16:...	60	Appo...	Offsite
<input checked="" type="checkbox"/>	Prod...	Prior ...	Kelly ...		2020/08/20 16...	2020/08/20 17:...	60	Appo...	<input checked="" type="checkbox"/> Onsite <input type="checkbox"/> Offsite

User can click on 'Proceed' to get the optimized routes and appointments scheduled for the respective users based on the preferences provided by the user for the selected working days. Routes for each user will be shown on the map with different colors. User can select the required users in the card to view the route for the respective user.

## Maplytics™ – User Manual

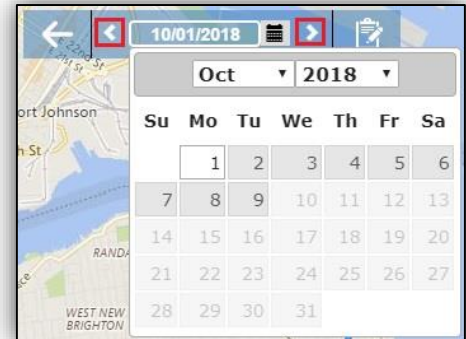


It will show the route for the selected user and the respective details of the meetings will also be available into the data grid below.



### Transition bar

User can use the transition bar to view the route planned for the selected user for different days. User can either click on the arrow buttons to go to the previous or next day's plan or they can also select the date in the Calendar to go directly to the date required.



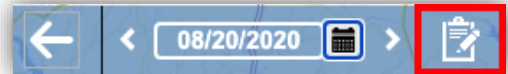


## Create Activities

User can save the schedule as Routes and Activities in the Dynamics 365 using 'Create activities' button. The user can create the following activities:

- Appointments
- Service Activities
- Bookable Resource Bookings

User can also select the option of 'Create Route(s)' in order to save the planned routes into 'Route' Activity Entity.



Create Activities

Select Activity \*

Appointment

Subject \*

Meetings

Schedule Start Time \*

2020-08-20

Schedule End Time \*

2020-08-21

Priority

High

☒ Create Route(s)
 

Create

Create Activities

Select Activity \*

Bookable Resource Booking

Name

New Clients

Schedule Start Date \*

2020-09-21

Schedule End Time \*

2020-09-22

Booking Status \*

In Progress

Booking Status \*

In Progress

Booking Type \*

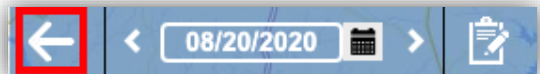
Liquid

☒ Create Route(s)
 

Create

**Note:** To make the option of Bookable resource booking visible, user needs to enable the OOB or any custom entity to create the bookable resource bookings.

Go to Detail Map: Using this button, user can go back to the Detail map



**Note:** All the scheduled data will be cleared, if 'Go to Detail Map' button will be used. To save the schedule created, user can use the option of 'Create activities'.

## Configuration Details for Auto Scheduling

System admin and Maplytics admin can set the default settings for Auto Scheduling in the Default Maplytics Configuration Detail record. They can also set the start time as the default start time for the first activity as well as default values for other preferences for Auto Scheduling.

***Go to Maplytics App > Settings > Maplytics Configuration Details > Default Configuration details record for the user > Auto Scheduling***

The screenshot displays the Maplytics configuration interface within the Dynamics 365 environment. The breadcrumb trail at the top indicates the path: Dynamics 365 > Maplytics > Settings > Maplytics Configuration Details > Maplytics. The left-hand navigation pane lists various Maplytics-related options, with 'Maplytics Configuration Details' currently selected. The main content area is titled 'Maplytics Map Configuration Details' and features several tabs: 'General', 'Advance Settings', 'Check-In', 'Auto Scheduling' (which is the active tab), and 'Related'. The 'Auto Scheduling' tab contains a list of configuration items, each with a label and a value field. The items are: Period (---), Duration (---), Start Time (---), End Time (---), Break (---), Break Duration (---), Buffer Time (---), Schedule Existing Meetings (checkbox), and Schedule first activity at start time (checkbox). At the bottom of the interface, there is a status bar showing 'Active' and 'Status: Active', along with a 'Save' button.

Configuration Item	Value
Period	---
Duration	---
Start Time	---
End Time	---
Break	---
Break Duration	---
Buffer Time	---
Schedule Existing Meetings	<input type="checkbox"/>
Schedule first activity at start time	<input type="checkbox"/>

**Maplytics**  
Map Configuration Details

General
Advance Settings
Check-In
**Auto Scheduling**
Related

Working Days

Sun	<input type="checkbox"/>
Mon	<input type="checkbox"/>
Tue	<input type="checkbox"/>
Wed	<input type="checkbox"/>
Thu	<input type="checkbox"/>
Fri	<input type="checkbox"/>
Sat	<input type="checkbox"/>

Admins can also select the Activities that are needed to be considered while Considering Existing Meetings in Auto Scheduling. If no Activities are selected here Auto Scheduling will consider all the Activities while Considering Existing Meetings. If Admins have selected Activities here then only selected activities will be considered while Considering Existing Meetings in Auto Scheduling.

**Maplytics**  
Map Configuration Details

General
Advance Settings
Check-In
**Auto Scheduling**
Related

Auto Schedule Activities Configuration

Select Entity

Select View

Add

Entity Name	Entity View	Remove
Appointment	My Appointments	×
Bookable Resource Booking	My Bookings for Today	×

Users can also set the default settings for Auto Scheduling in their respective Maplytics Configuration Detail record.

**Go to Maplytics App > Settings > Maplytics Configuration Details > Configuration details record for the user > Auto Scheduling**

Maplytics

Map Configuration Details

General Auto Scheduling Related

Period	5 Day
Duration	90 Minutes
Start Time	9:30 AM
End Time	8:30 AM
Break	1:00 AM
Break Duration	60 Minutes
Buffer Time	15 Minutes

Maplytics

Map Configuration Details

General Auto Scheduling Related

Working Days

Sun	<input type="checkbox"/>
Mon	<input checked="" type="checkbox"/>
Tue	<input checked="" type="checkbox"/>
Wed	<input checked="" type="checkbox"/>
Thu	<input checked="" type="checkbox"/>
Fri	<input checked="" type="checkbox"/>
Sat	<input type="checkbox"/>

**Note: Create Activities for Custom Entity:**

- **A custom entity should be linked to any OOB Entity into Entity Maps in order to Create Activities for the Entity**
- **If a custom entity has its own address, the option to create Appointment and Service Activity will not be available. The user can only create activity of Bookable Resource Bookings**

## Check-In/Check-Out

Check-In feature enables users to register their arrival and departure time for the Check Points while navigating on field with the help of Check-In and Check-Out buttons. These buttons will help to tag the geo-coordinates of the location while a user is visiting a meeting. This will also help the management to track the activities of the field professionals as well as the time they have spent on every meeting.

### Configuration

To get started with the feature of Check-In, the first step is to configure Maplytics. Configuration will create the Entity Map for the Check-In entity. Please refer to the section of 'Configure' under the 'Initial Setup - Maplytics License Activation, Configuration for Entity Map, Dashboards and Census data' within the Installation manual.

This feature can be enabled for any OOB or custom entity within their respective Entity Maps. To enable this, System Admin/Maplytics Admin can follow the steps mentioned below. The following screenshot shows the entity map of Appointment for an instance.

**Go to Settings > Maplytics > Entity Maps > Open Required Entity Maps Record > General Tab > Enable Check-In > Set the value to 'Yes' & click on 'Save'.**

ENTITY MAP		appointment	
General	Attribute Mappings	Tooltip Mapping	Category Configuration
Configuration	Advance Settings	Related	
Entity Name *	Appointment	Link To	Regarding
Total Records	22		
Geocoded Records	22	Enable Check-In	Yes

#### Note:

- **The default value for 'Enable Check-In' is set to 'No'.**
- **User cannot undo this option, once selected and saved.**
- **After enabling this feature, please wait for a while before using this.**

### View Related Check-In/Check-Out records

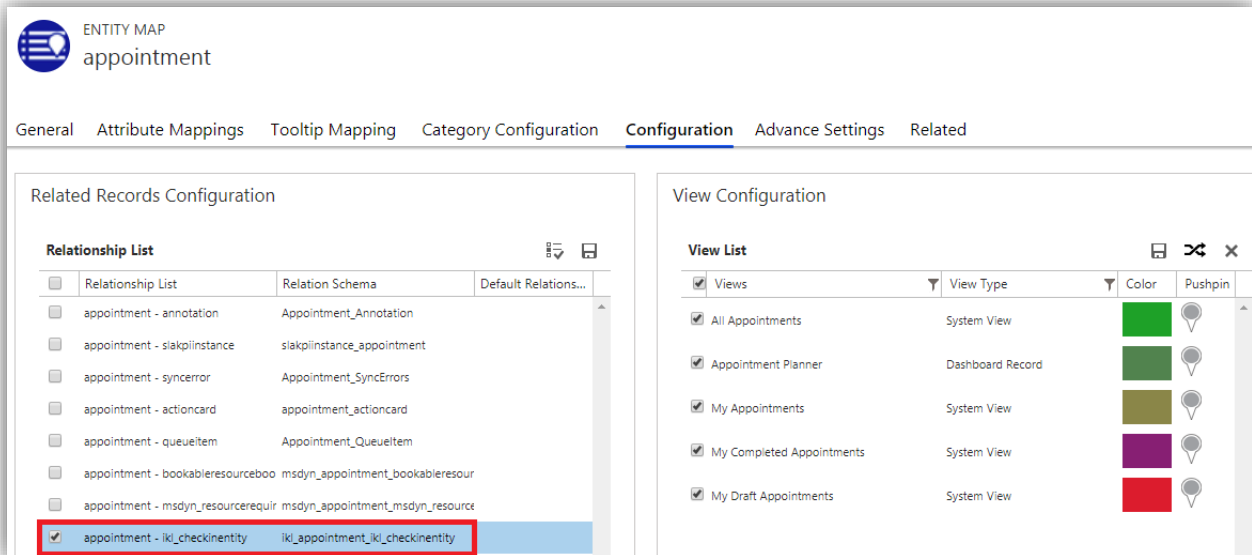
User can choose to view the related Check-In/Check-Out records for the plotted records (Appointments, Accounts, etc.) using the feature of 'Plot Related Records'. To plot related Check-In/Check-Out records, user needs to select the relationship. To select the relationships, user can follow the steps mentioned below. We have provided the steps for Appointments for an instance.



**Go to Settings > Entity Maps > Required Entity Maps record > Configuration > Related Records Configuration > Relationship List > Select appointment - ikl\_checkinentity**

User can also refer to the section of 'Related Record Configuration' under the Entity Maps within the Installation manual for the same.

**Note: User needs to select the respective Relationship with Check-in for every entity within their respective entity maps for which they want to see the related Check-In/Check-Out records.**

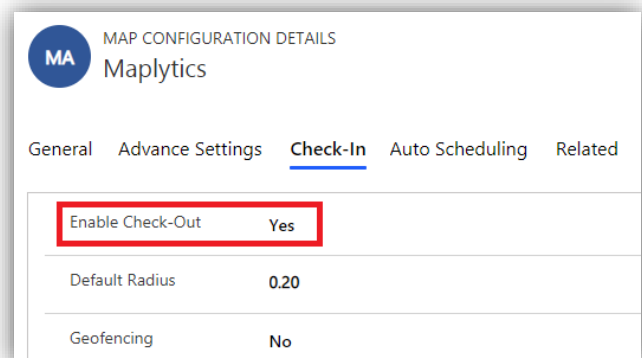


### Check-Out

After enabling the feature, user can also enable the option of 'Check-Out'. This way the user can first click on the Check-In button while visiting the meeting and then can click on the Check-Out button while completing the meeting. Here, the geo-coordinates for both the locations will be saved which will also help the management to track the time spent on the meetings.

In order to enable Check- Out, System Admin/Maplytics Admin can follow the steps mentioned below:

**Go to Settings > Maplytics Configuration Details > Default Configuration Detail Record (the one with no user name) > Check-In tab > Set the value for Enable Check-Out to 'Yes' & click on 'Save'.**




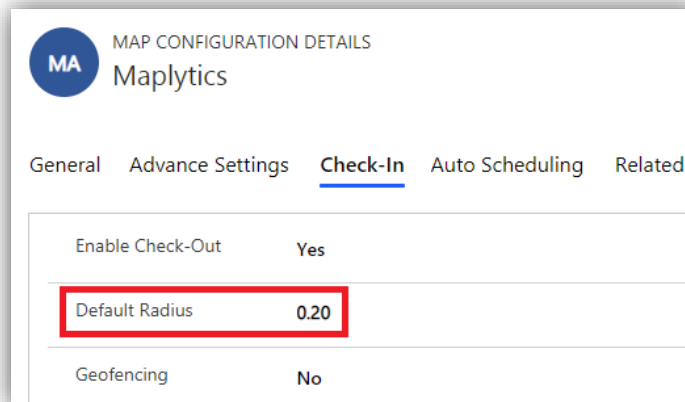
**Note:**

- *The default value for 'Enable Check-Out' is set to 'No'.*
- *User can anytime disable this option.*
- *Check-Out option can only be enabled for entities for which the feature of Check-In has been enabled.*
- *Check-Out can be enabled/disabled only at Organization level.*
- *Check-Out button will only be available for the records for which the user has checked-in.*

### Default Radius

It is the distance that the System admin/Maplytics admin can set to consider the accuracy of the Check-In/Check-Out records created by the field professionals. If the Check-In/Check-Out record do not lie within this radius then it will be considered as invalid record and will be shown with a pushpin with this Red

Cross. For example: 



The screenshot shows the 'MAP CONFIGURATION DETAILS' page for Maplytics, specifically the 'Check-In' tab. The page has a header with the Maplytics logo and the title 'MAP CONFIGURATION DETAILS'. Below the header are five tabs: 'General', 'Advance Settings', 'Check-In' (which is selected and underlined), 'Auto Scheduling', and 'Related'. The main content area is a table with three rows. The first row is 'Enable Check-Out' with a value of 'Yes'. The second row is 'Default Radius' with a value of '0.20', which is highlighted with a red rectangular border. The third row is 'Geofencing' with a value of 'No'.

MAP CONFIGURATION DETAILS	
Maplytics	
General Advance Settings <u>Check-In</u> Auto Scheduling Related	
Enable Check-Out	Yes
Default Radius	0.20
Geofencing	No

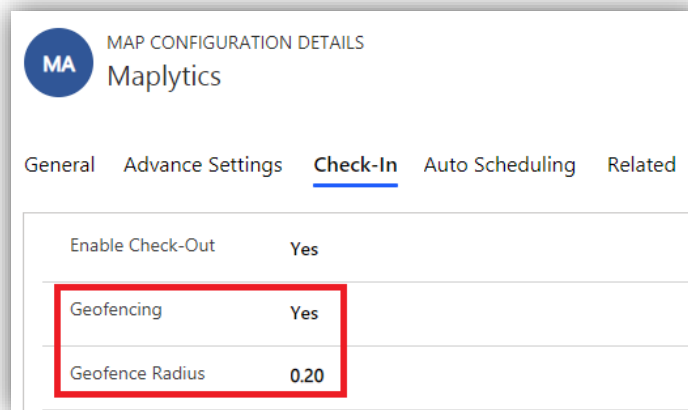
**Note:** By default, Geofence radius is 0.20 kilometers or miles depending on the unit set in User Configuration Detail record.

### Geofencing

Geofencing is creating a virtual geographical boundary of a specified Geofence radius around a record. If Geofencing is enabled, user needs to be within this radius to successfully Check-In/Check-Out for a record. If the user is not within this radius, the user will not be able to Check-In/Check-Out and will be shown a message specifying that they need to be within 'n' Km/Mi of distance from the Check-In/Check-Out location. This will help the management to have only valid Check-In and Check-Out records done by the field professionals.

In order to enable Geofencing, System Admin/Maplytics Admin can follow the steps mentioned below:

**Go to Settings > Maplytics Configuration Details > Default Configuration Detail Record > Check-In tab > Geofencing > Set the value for Geofencing as 'Yes'**



The screenshot shows the 'MAP CONFIGURATION DETAILS' page for 'Maplytics'. The 'Check-In' tab is selected. A table lists configuration options: 'Enable Check-Out' (Yes), 'Geofencing' (Yes), and 'Geofence Radius' (0.20). The 'Geofencing' and 'Geofence Radius' rows are highlighted with a red border.

MAP CONFIGURATION DETAILS	
Maplytics	
General   Advance Settings <u>Check-In</u> Auto Scheduling   Related	
Enable Check-Out	Yes
Geofencing	Yes
Geofence Radius	0.20

### Geofence Radius

After enabling Geofencing, System Admin/Maplytics Admin can set the default value for Geofence radius, which will be considered while a user Checks-In, or Checks-Out.

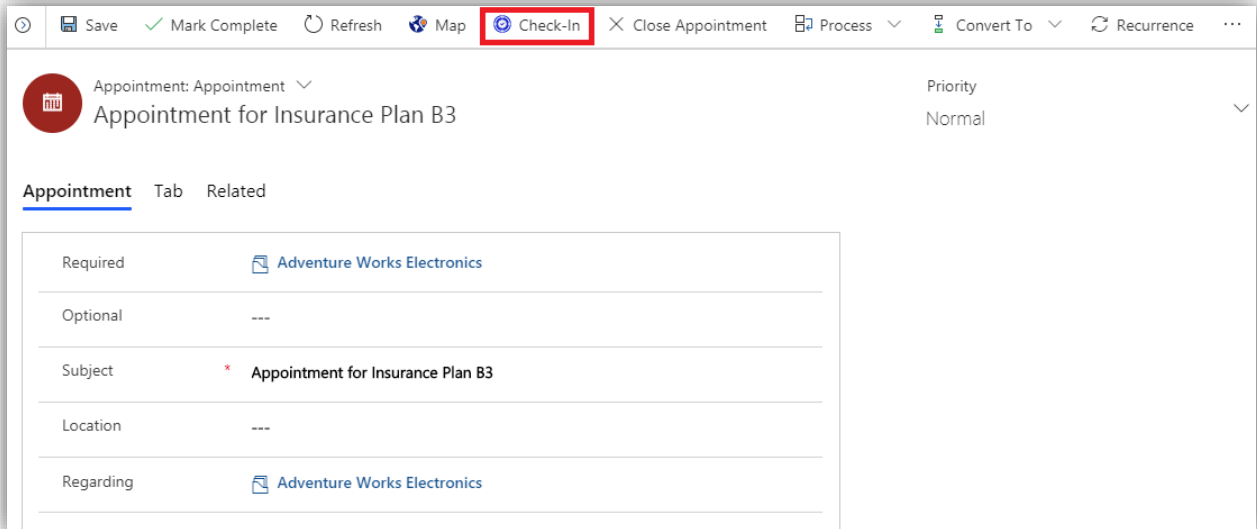
**Note:**

- **By default, Geofencing is disabled in which case the user can Check-In/Check-out from any location.**
- **By default, Geofence radius is 0.20 kilometers or miles depending on the unit set in User configuration Details record.**

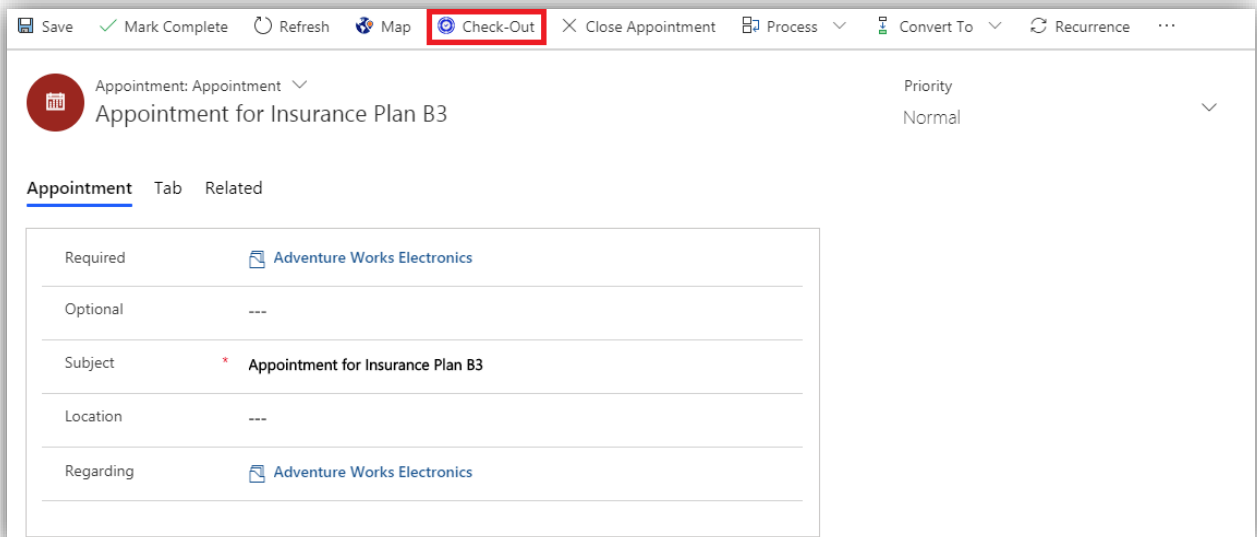
## Creating Check-In/Check-Out records

While navigating on field user can Check-In and Check-Out against any record. This can be done in the following two ways:

- **From Record Form:** User can open the required record (Appointments, Accounts etc.) and click on Check-In/Check-Out button on the ribbon.

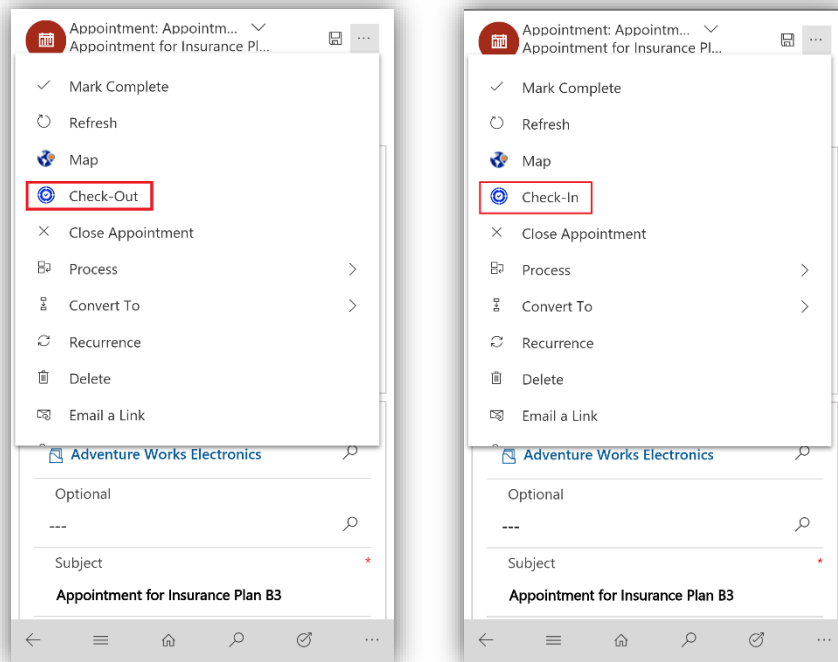


The screenshot shows the Maplytics interface for an appointment record titled "Appointment for Insurance Plan B3". The ribbon at the top includes buttons for Save, Mark Complete, Refresh, Map, Check-In (highlighted with a red box), Close Appointment, Process, Convert To, and Recurrence. The main content area displays the appointment details under the "Appointment" tab, including fields for Required (Adventure Works Electronics), Optional (---), Subject (Appointment for Insurance Plan B3), Location (---), and Regarding (Adventure Works Electronics).



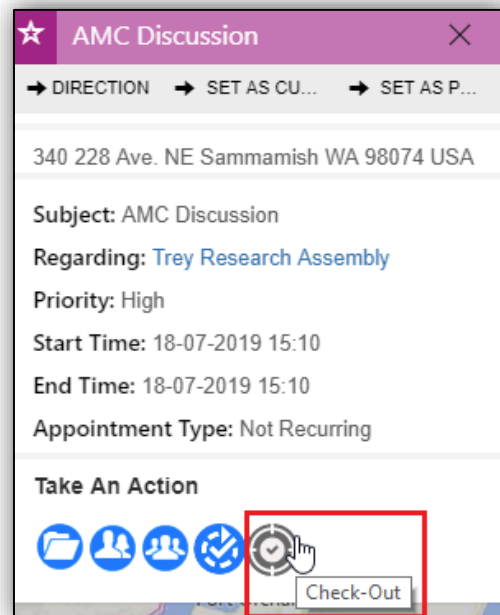
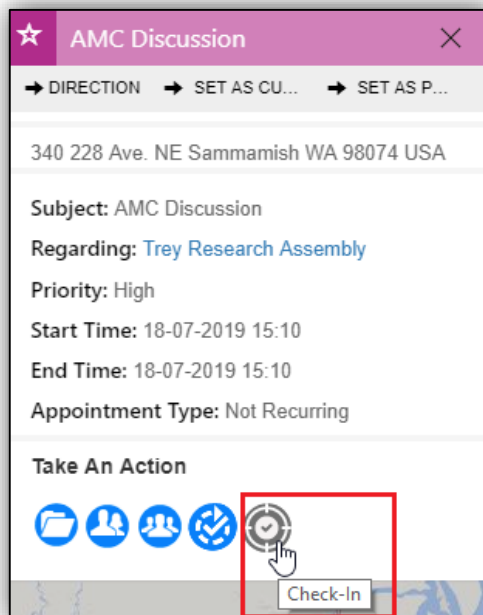
The screenshot shows the Maplytics interface for the same appointment record. The ribbon at the top includes buttons for Save, Mark Complete, Refresh, Map, Check-Out (highlighted with a red box), Close Appointment, Process, Convert To, and Recurrence. The main content area displays the appointment details under the "Appointment" tab, including fields for Required (Adventure Works Electronics), Optional (---), Subject (Appointment for Insurance Plan B3), Location (---), and Regarding (Adventure Works Electronics).

## Maplytics™ – User Manual

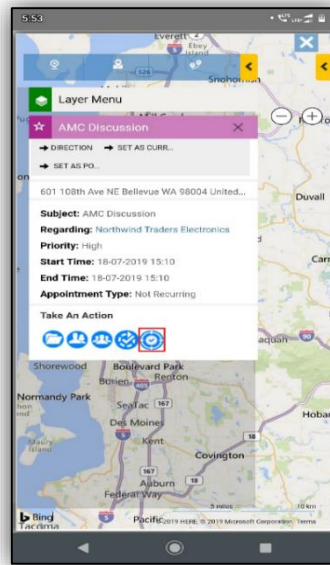


### Note:

- User needs to allow to read the GPS location of the device in order to Check-In/Check-Out.
- The Check-Out button will be available in the place of Check-In button after the user Checks-In.





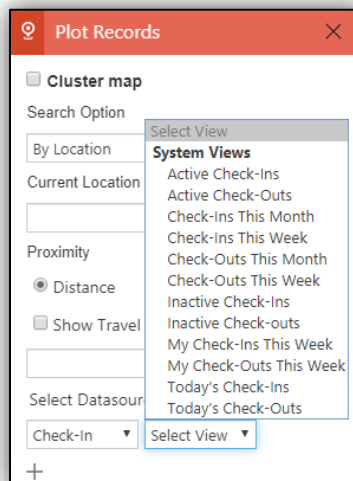


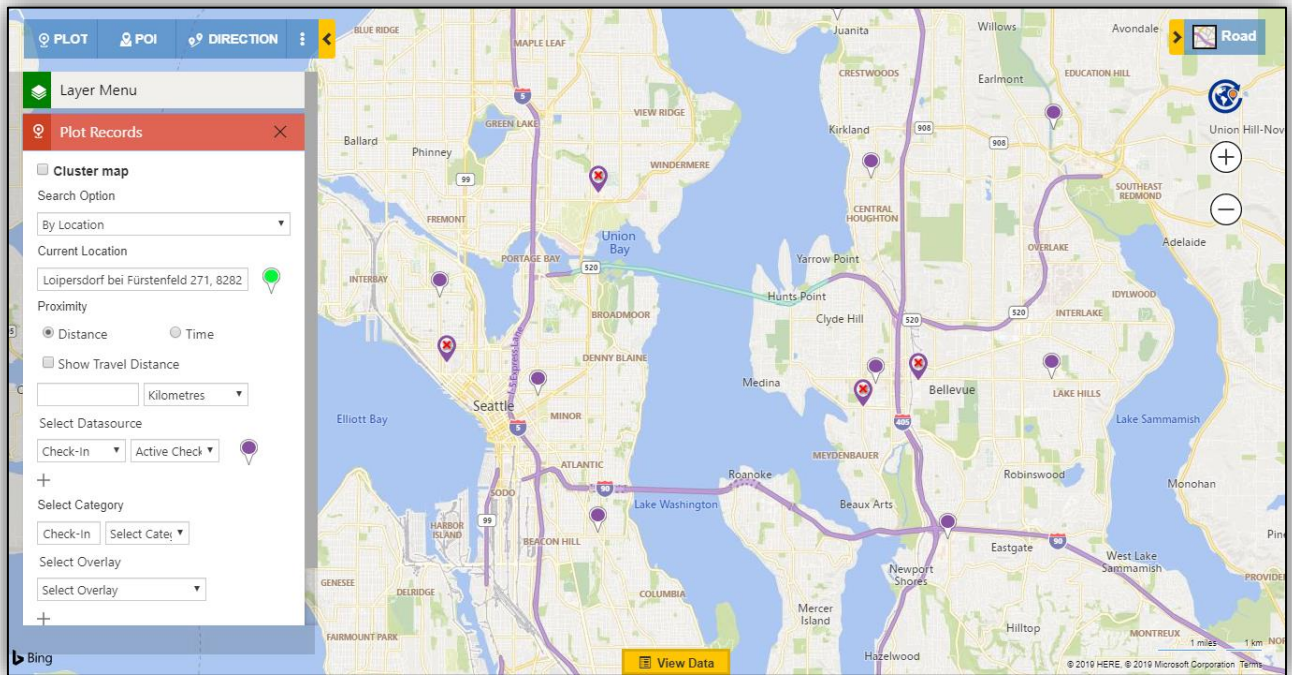
- Through Detail Map: User can click on any plotted records (Appointments, Accounts etc.) to open the Tooltip Card and click on the Check-In/Check-Out button.

**Note: Multiple Check-In/Check-Out records can be created for any record (Appointments, Accounts, etc.)**

## Visualize Check-In/Check-Out records on Detail Map



To analyze the activities of field professionals, Check-In/Check-Out records can be plotted on the map like other entity with the help of the Plot Card. User can select 'Check-In' as the Datasource and select a required view to visualize the records from that view.





## Analyze Check-In/Check-Out records

After plotting the records for Check-In and Check-Out, user can analyze the pushpins by distinguishing between the following two kinds of pushpins:

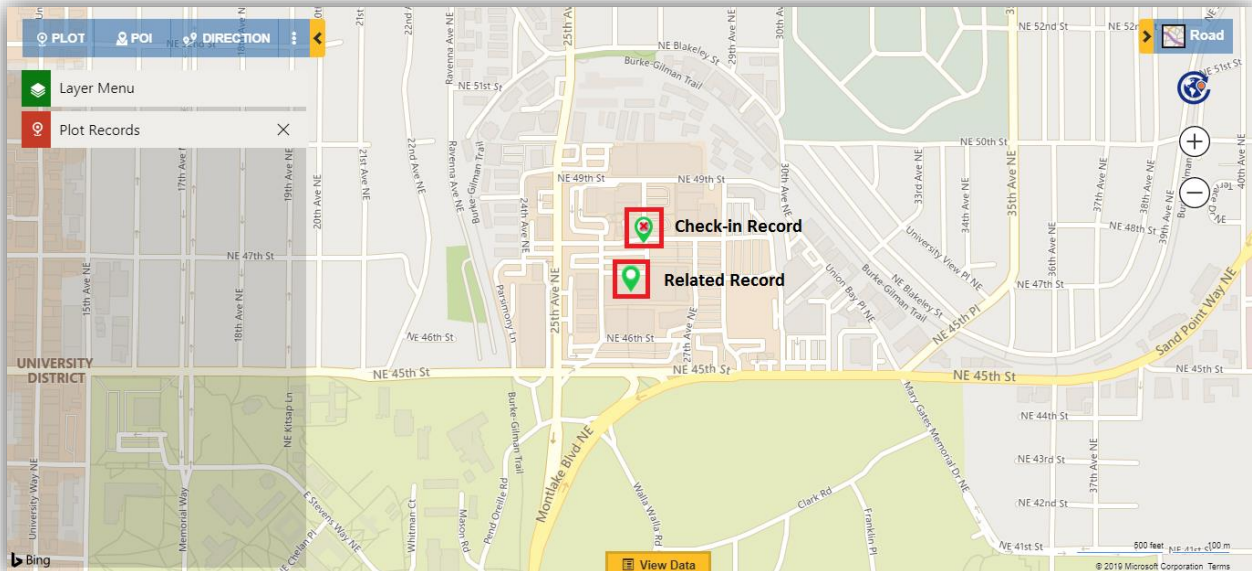
- Valid Check-In/Check-Out: When a user Checks-In/Checks-Out within the Default Radius or Geofence Radius, it is a valid record and will be represented by  pushpin.
- Invalid Check-In/Check-Out: When a user Checks-In/Checks-Out outside the Default Radius it is represented by  pushpin.

## Visualizing Related Records

After plotting the records for Check-in, user can also choose to view the records(Appointments, Accounts etc.) against which the plotted check-ins and check-outs were created.

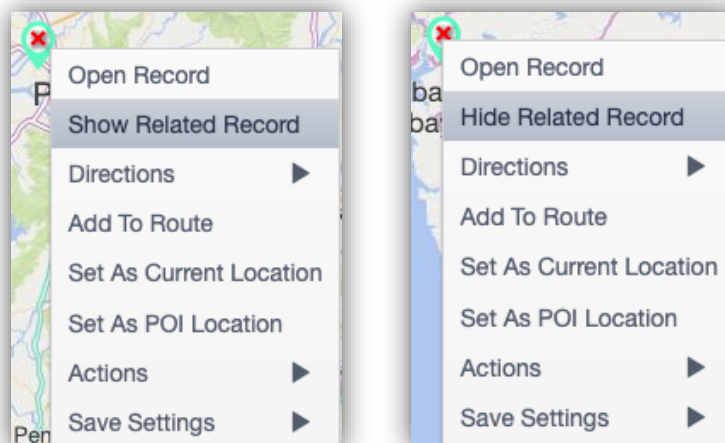
### Visualizing Related Record (Appointments/Accounts, etc.) for Check-In/Check-Out records

After selecting the relationship, user can choose to view the related record for any Check-in and Check-Out record plotted on the map.



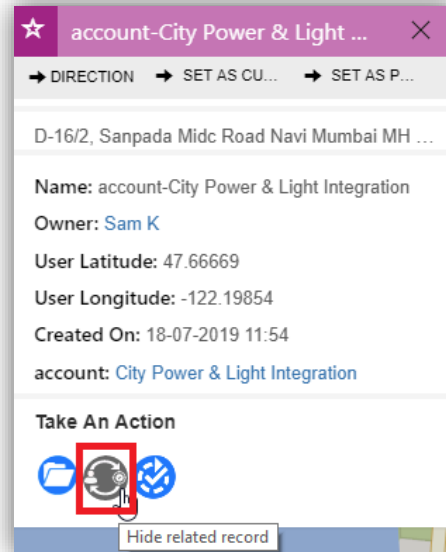
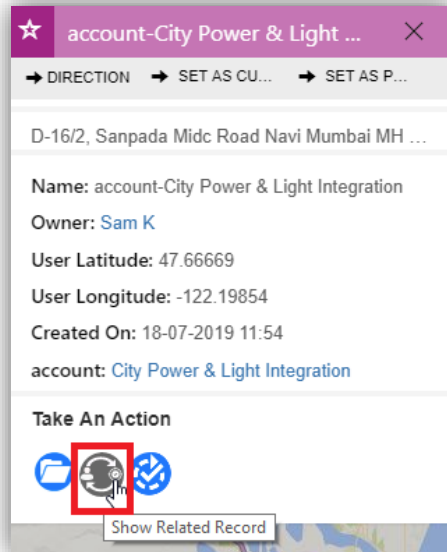
The related record can be visualized in the following two ways:

- By Contextual Menu: User can right click on any Check-In/Check-Out pushpin to open the 'Contextual menu' and click on 'Show Related Record'. This will plot the related record for the selected pushpin. To hide the related record, user can again right click on the same Check-In/Check-Out pushpin to open 'Contextual Menu' and click on 'Hide Related Record'.



## Maplytics™ – User Manual

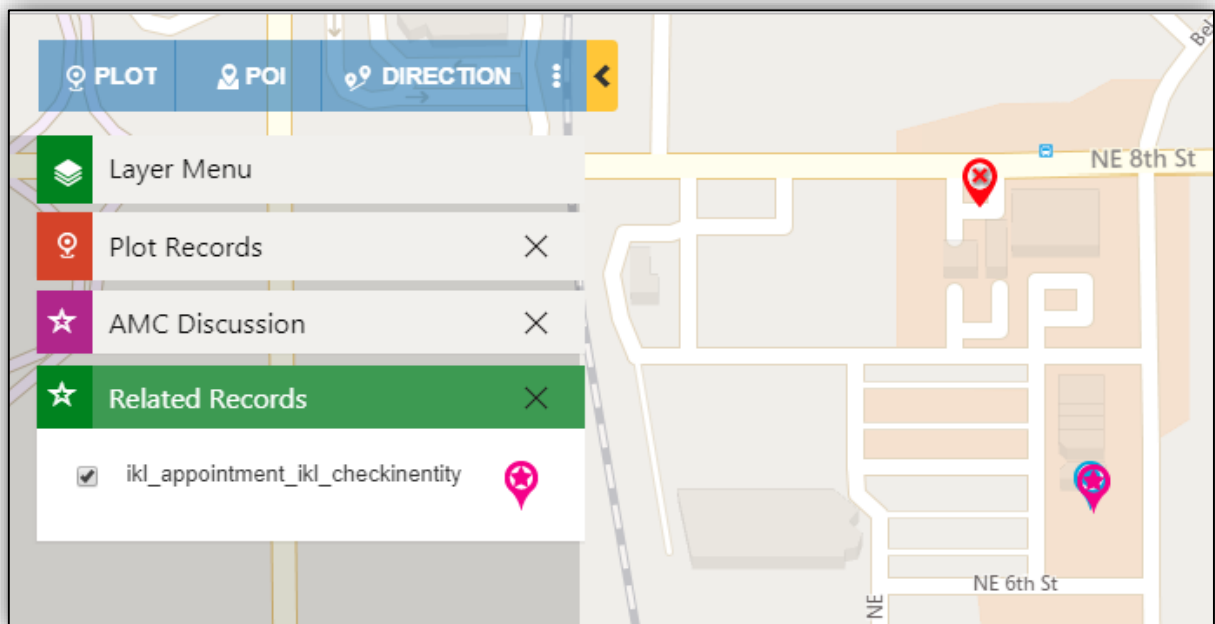
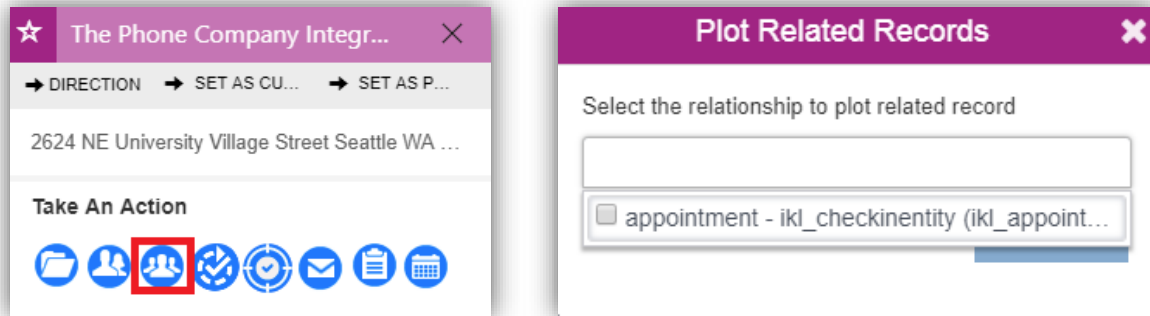
- By Tooltip Card: User can click on the Check-In/Check-Out pushpin to open the Tooltip Card and click on 'Show Related Record' from the 'Tooltip Card Actions'. To hide the related record, user can again click on same Check-In/Check-Out pushpin to open the Tooltip Card and click on 'Hide Related Record'.



## Maplytics™ – User Manual

Visualizing related Check-in/Check-Out records for plotted records (Appointments, Accounts, etc.)

After selecting the relationship for the required entity within the entity map as suggested above, user can click on any plotted record to open the Tooltip card and click on 'Plot related record' to plot the related Check-In/Check-Out records.





## PowerApps Component Framework

User can add custom controls on fields or grids within Dynamics CRM. These custom controls will help the user to view the respective records on the map on the record form or the entity grid without switching to any other screen. This will enhance the user experience while working with views and individual records. User can add the following custom controls:

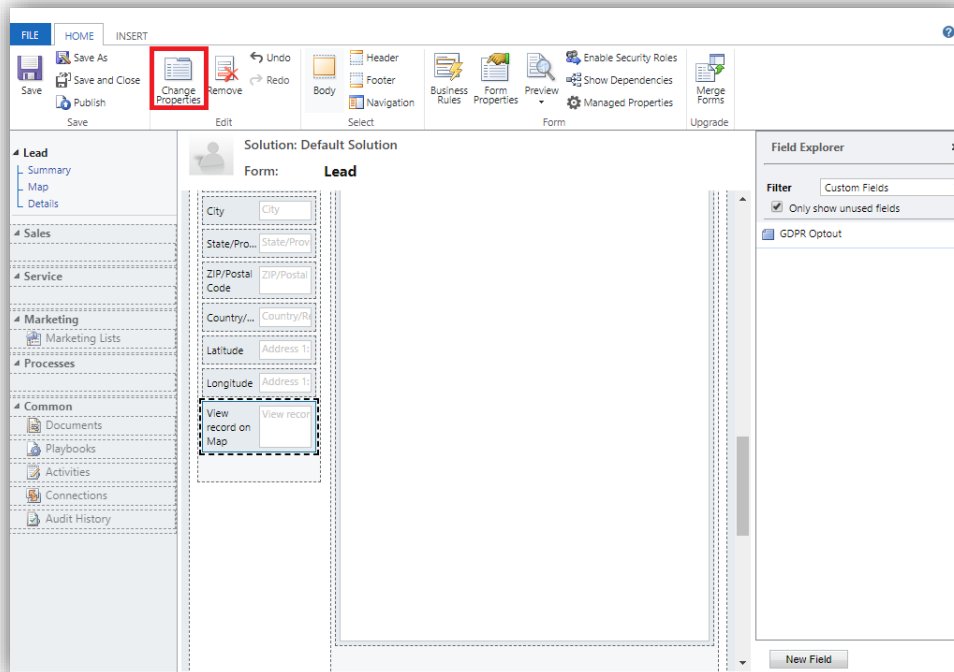
### Map View Control for Record

User can add this control on any of the field with the Data type ‘Single Line of Text’ of the record to view the respective record plotted on the map. User can further view the Address and geo-coordinates on the hover of the pushpin.

**Steps to Add control:** To add the control to a field within a record form, user can follow the steps mentioned below:

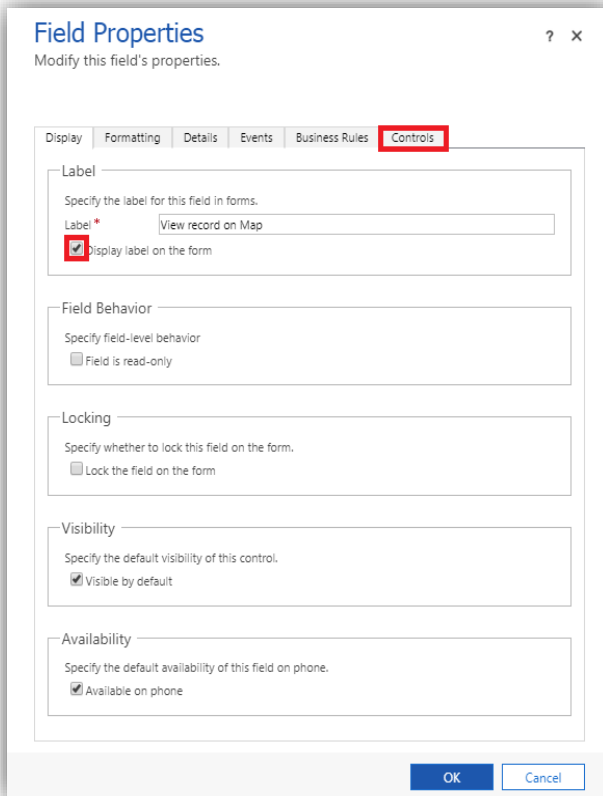
- Go to Settings > Advanced Settings > Customizations > Customize the System > Components > Entities > Required Entity**

Here, we have taken the Lead entity for an instance. **Within Leads, go to Forms > Main Form > Select a field > Change Properties**



**Note:** The data type of the field on which user needs to add control should be ‘Single Line of Text’.

### 2. Go to Controls > Add Control > Select Map View Control for Record > Add



The 'Field Properties' dialog box is shown with the 'Controls' tab selected. The 'Label' section has a red box around the 'display label on the form' checkbox, which is currently checked. The 'Field Behavior' section has a 'Field is read-only' checkbox. The 'Locking' section has a 'Lock the field on the form' checkbox. The 'Visibility' section has a 'Visible by default' checkbox. The 'Availability' section has an 'Available on phone' checkbox. The 'OK' and 'Cancel' buttons are at the bottom.

**Field Properties**  
Modify this field's properties.

Display Formatting Details Events Business Rules **Controls**

**Label**  
Specify the label for this field in forms.  
Label \* View record on Map  
☒ display label on the form

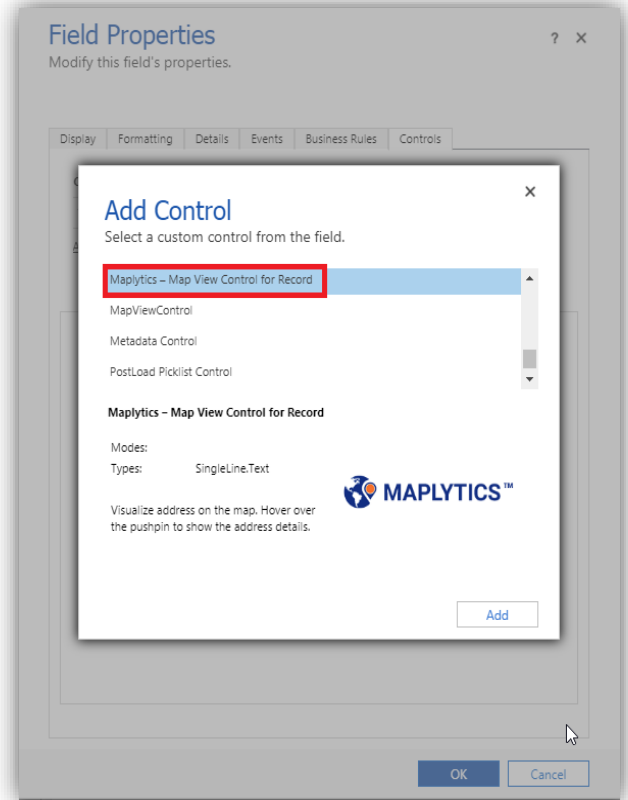
**Field Behavior**  
Specify field-level behavior  
☐ Field is read-only

**Locking**  
Specify whether to lock this field on the form.  
☐ Lock the field on the form

**Visibility**  
Specify the default visibility of this control.  
☒ Visible by default

**Availability**  
Specify the default availability of this field on phone.  
☒ Available on phone

OK Cancel



The 'Field Properties' dialog box is shown with the 'Controls' tab selected. An 'Add Control' dialog box is open over it. The 'Add Control' dialog has a list of controls, with 'Maplytics – Map View Control for Record' selected and highlighted with a red box. Below the list, the 'Maplytics – Map View Control for Record' section shows 'Modes: SingleLine.Text' and a description: 'Visualize address on the map. Hover over the pushpin to show the address details.' The 'Add' button is at the bottom right. The 'Field Properties' dialog has 'OK' and 'Cancel' buttons at the bottom.

**Field Properties**  
Modify this field's properties.

Display Formatting Details Events Business Rules Controls

**Add Control**  
Select a custom control from the field.

Maplytics – Map View Control for Record  
MapViewControl  
Metadata Control  
PostLoad Picklist Control

**Maplytics – Map View Control for Record**  
Modes: SingleLine.Text  
Types: SingleLine.Text  
Visualize address on the map. Hover over the pushpin to show the address details.

MAPLYTICS™

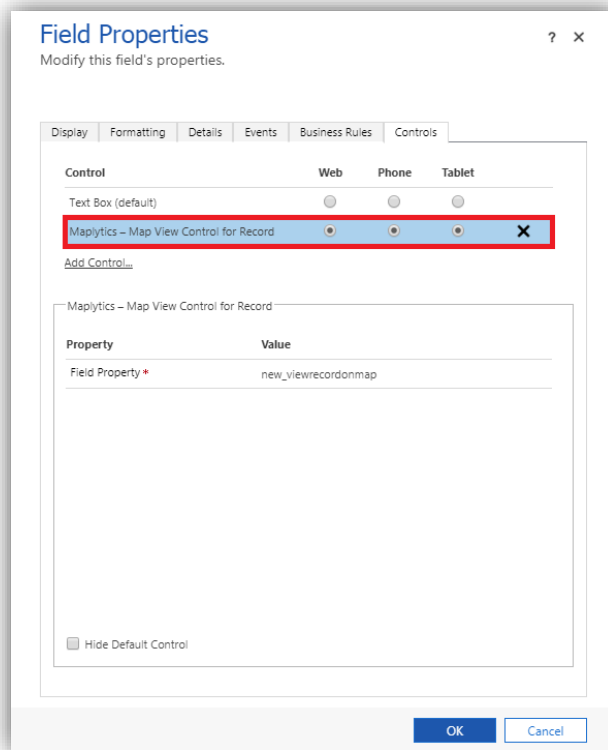
Add

OK Cancel

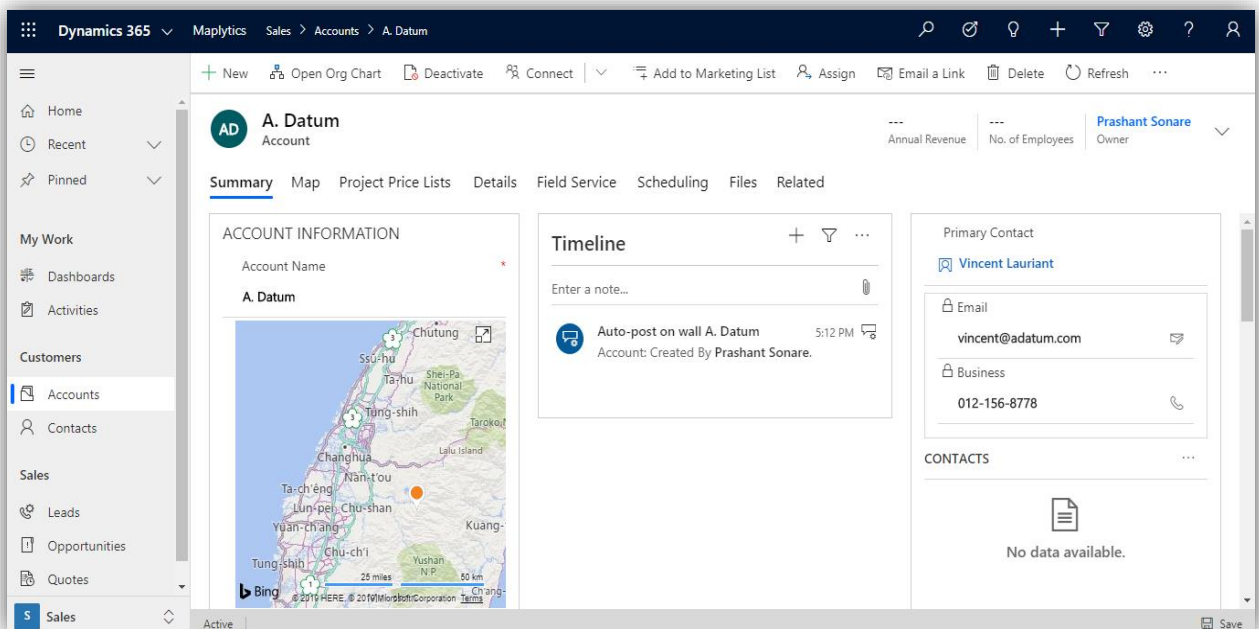
**Note:** Please uncheck the option of 'Display label' within the field properties for better visualization.

## Maplytics™ – User Manual

3. User can choose to allow the control on Web, Phone or Tablet. Click on '**OK**' > **Save & Publish**.



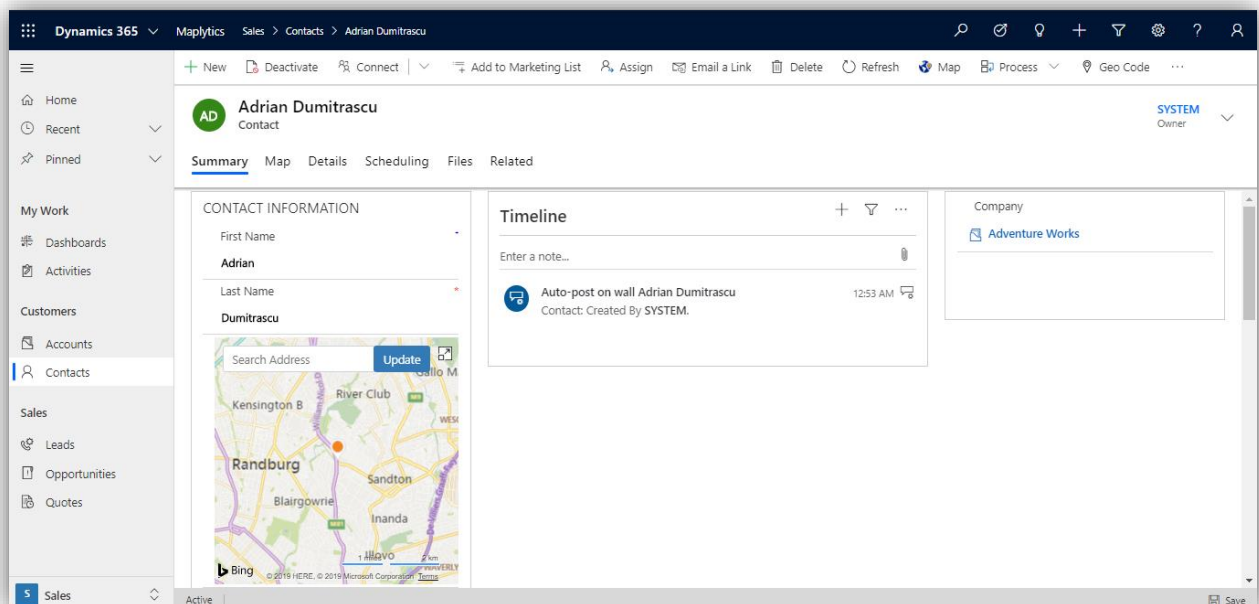
4. User can open any record of the entity to view this control added on the field.



### Map Edit Control for Record

User can add this control on any of the field with the Data type 'Single Line of Text' of the record to view the respective record plotted on the map. User can hover on the pushpin to see the coordinates as well as the address of the pushpin. User can further drag the pushpin around and drop it on the required location to update the new Address and the geo-coordinates for the record. User can also type in the address in the space provided and click on the update button to update the Address and the geo-coordinates for the record. Before updating this, the user will be shown a message where user can also choose if they want to save address and the geo coordinates or only the geo coordinates.

**Steps to Add control:** To add the control to a field within a record form, user can follow the steps mentioned above while selecting 'Map Edit Control for Record' in the Step2. After adding the control user can open any record of the entity to view this control added on the field.



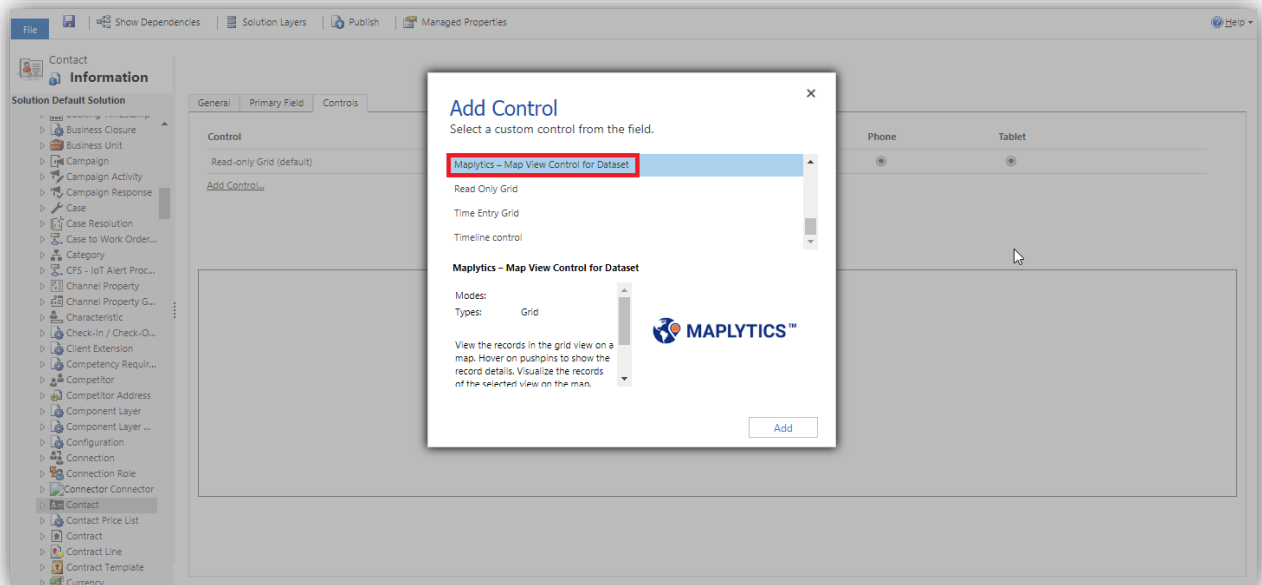
### Map View Control for Dataset

User can add this control to any entity to visualize all of the records of the view or sub-grid on a map. User can further hover on the pushpins to view the information regarding the records. The information on the hover of the records is customizable. To add more information on hover, please refer to the section of Advanced Settings within the Entity maps in the Installation manual. User can also click on the pushpins to highlight them. Highlighting multiple pushpins can help the users to perform various actions from the ribbon on all the highlighted records at once. User can also right click on any pushpin to open the respective record.

Steps to Add control: To add this control on an entity grid, user can follow the steps mentioned below:

1. **Go to Settings > Advanced Settings > Customizations > Customize the System > Components > Entities > Required Entity**

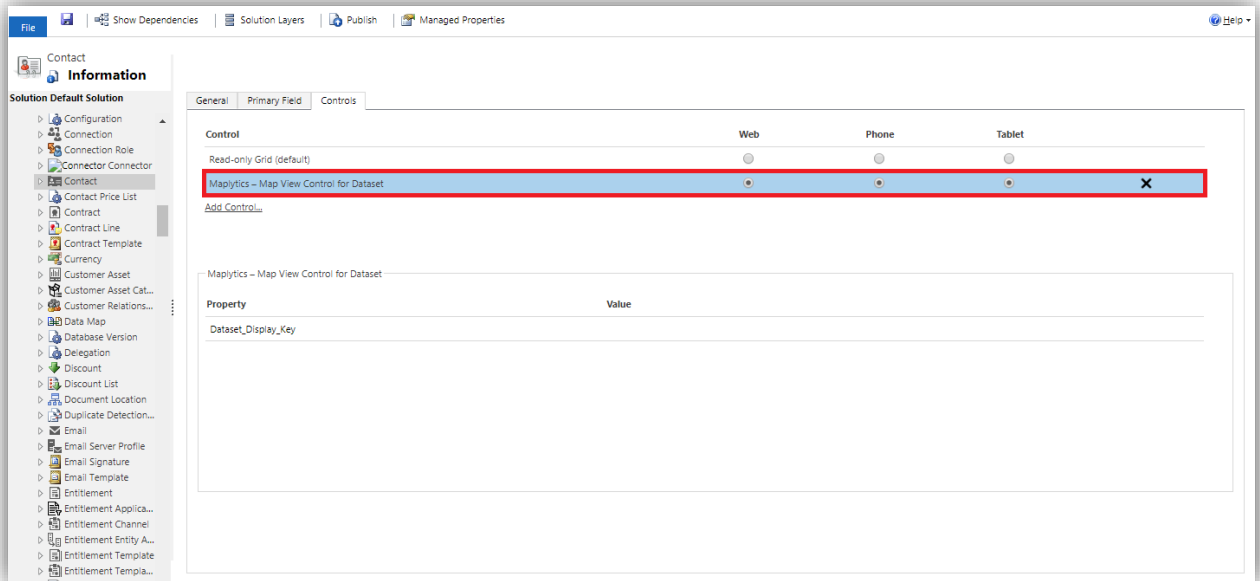
Here, we have taken the Contact entity for an instance. **Within Contacts, go to Controls > Add Control > Select Map View Control for Dataset > Add**



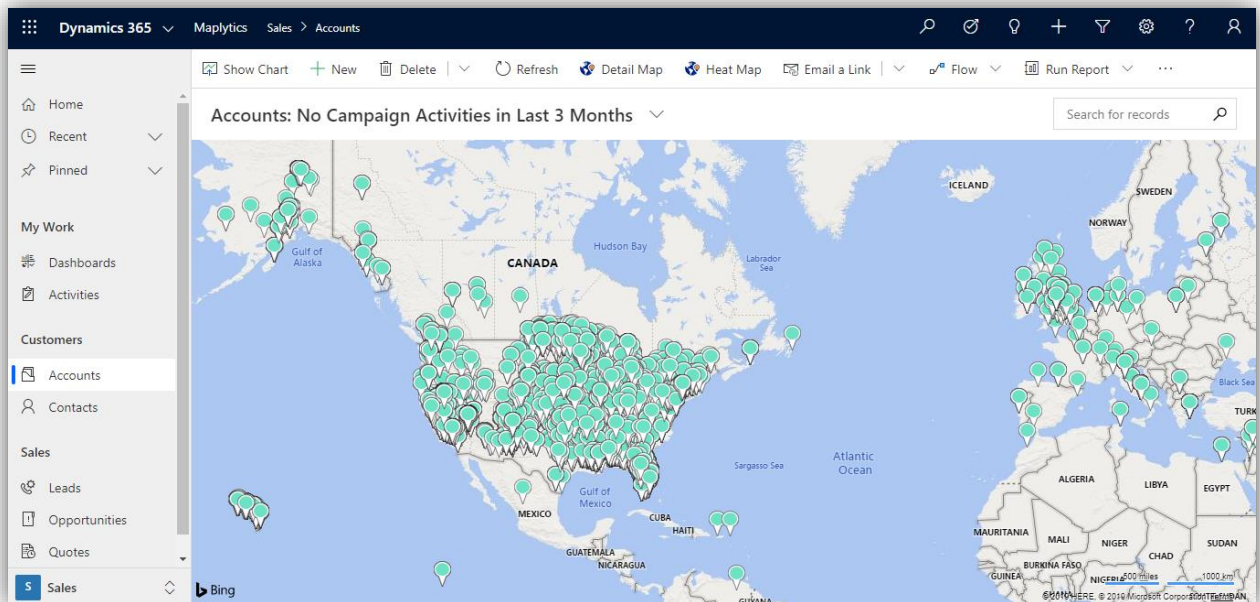


## Maplytics™ – User Manual

2. User can choose to allow the control on Web, Phone or Tablet. Click on Save > Publish.



3. User can open any view of the entity to view this control.



### Detail Map Control for Dataset

User can add this control to any entity or dashboard to visualize all of the records of the view, sub-grid or dashboard on a map. User can also click on the pushpins to highlight them. Highlighting multiple pushpins can help the users to perform various actions from the ribbon on all the highlighted records at once. Detail Map Control provides the user with the freedom of using Maplytics features right from the page without switching to any other screens. User can perform the following Maplytics features.

- Plot entity records – User will be able to view all entity records for that view on the map. They can hover on the pushpins to view the details regarding the pushpin and click on the pushpin to open the tooltip card for the pushpin. User can use right-click to open the contextual menu to open the record, set the respective location as current location, POI location, the origin for the route, a waypoint or the destination for the route.
- Plot categorized data- User can also select an attribute under the option of ‘Select category’ to categorize the plotted data based on the selected attribute.
- Proximity search – User can set any location as the current location from the tooltip card or contextual menu with a right-click on any location on map. Once the user sets the current location, they can perform Concentric Proximity Search and can look for the Line-of-Sight Distance on the hover or the tooltip card for any record plotted.
- POI locations – User can set any location as the POI location from the tooltip card or contextual menu with a right-click on any location. Once the user sets the POI location, they can use the POI card and view any geo-tagged Bing mapped locations by clicking on the icons available or entering the keyword for the required location. For example: Dentist.
- Route – User can set any location as the origin, destination or a waypoint from the tooltip card or contextual menu by right clicking on a record or anywhere on the map and get the route created for the waypoints selected. User will get further options like selecting the unit for the distance, avoiding highways etc. within the direction card. User can also use the turn-by-turn navigation directions given within the direction card to navigate themselves for the route.
- Map mode and labels- Two map modes are available viz. Road and Aerial view. User can also select to view the labels of regions on the map.

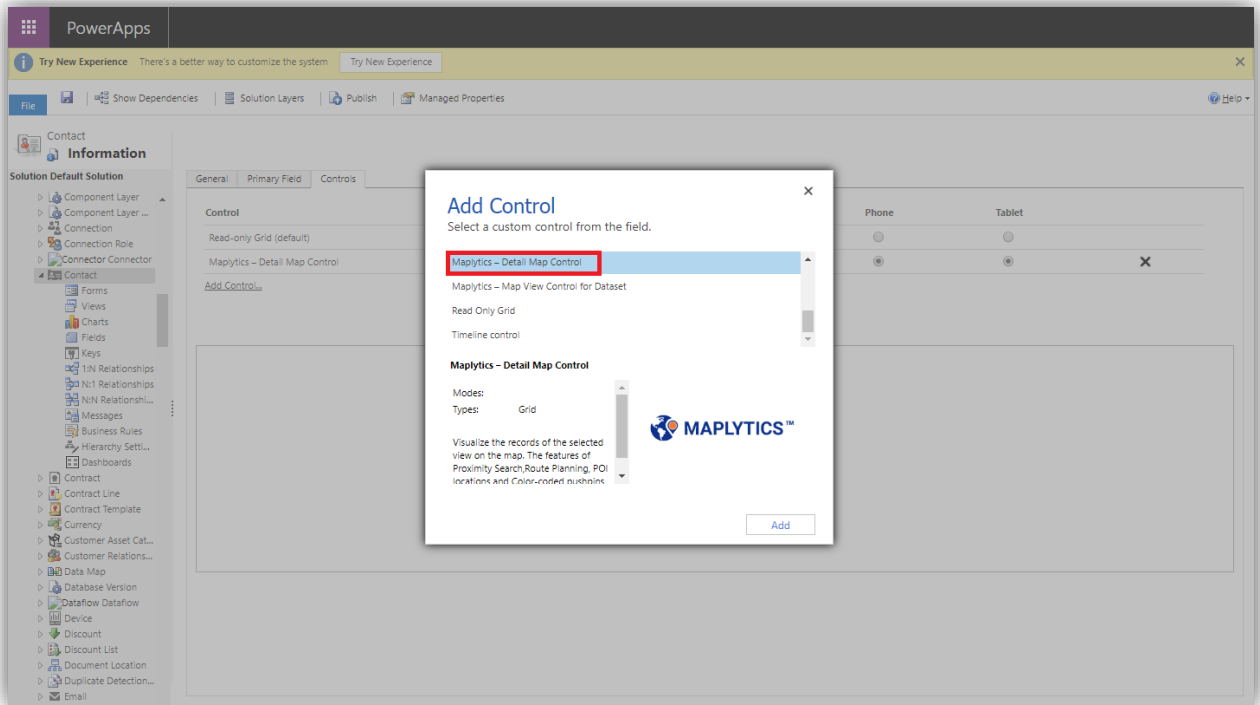
**Note: There are some limitations to some of the features mentioned above which will be available in our future releases.**

Adding control: To add this control on an entity grid, user can follow the steps mentioned below:

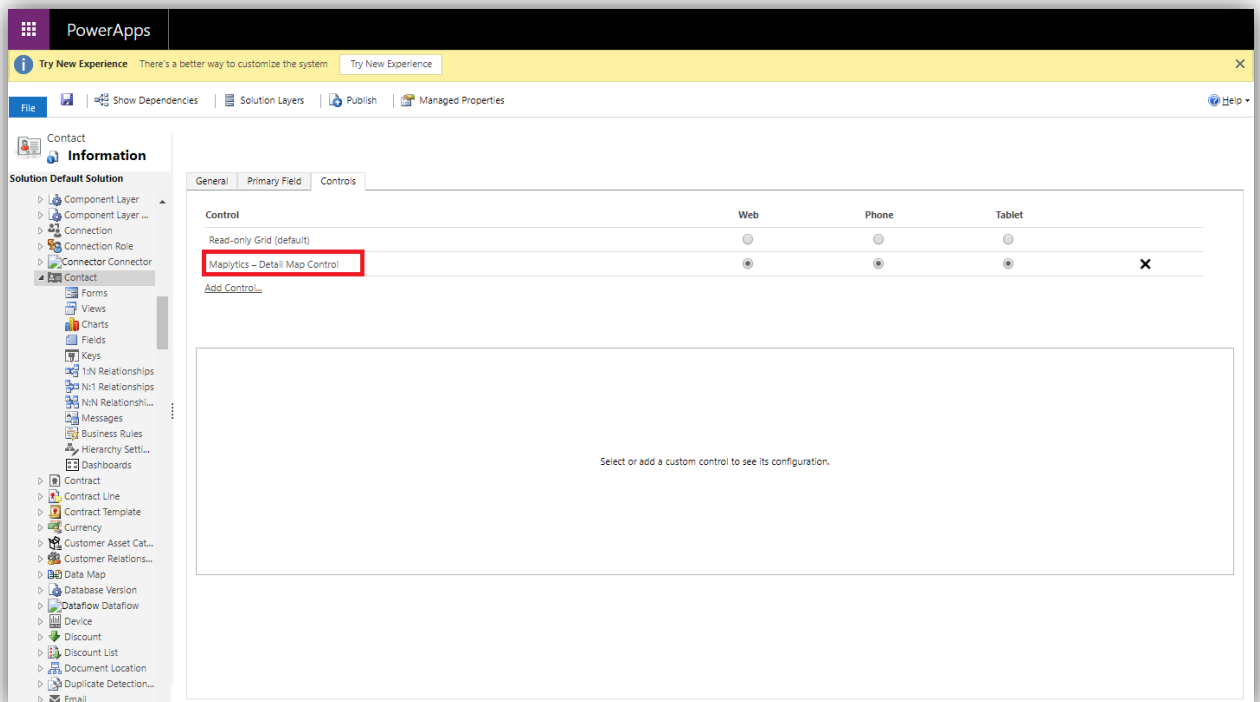
**4. Go to Settings > Advanced Settings > Customizations > Customize the System > Components > Entities > Required Entity**

Here, we have taken the Contact entity for an instance. **Within Contacts, go to Controls > Add Control > Select Detail Map Control for Dataset > Add**

# Maplytics™ – User Manual

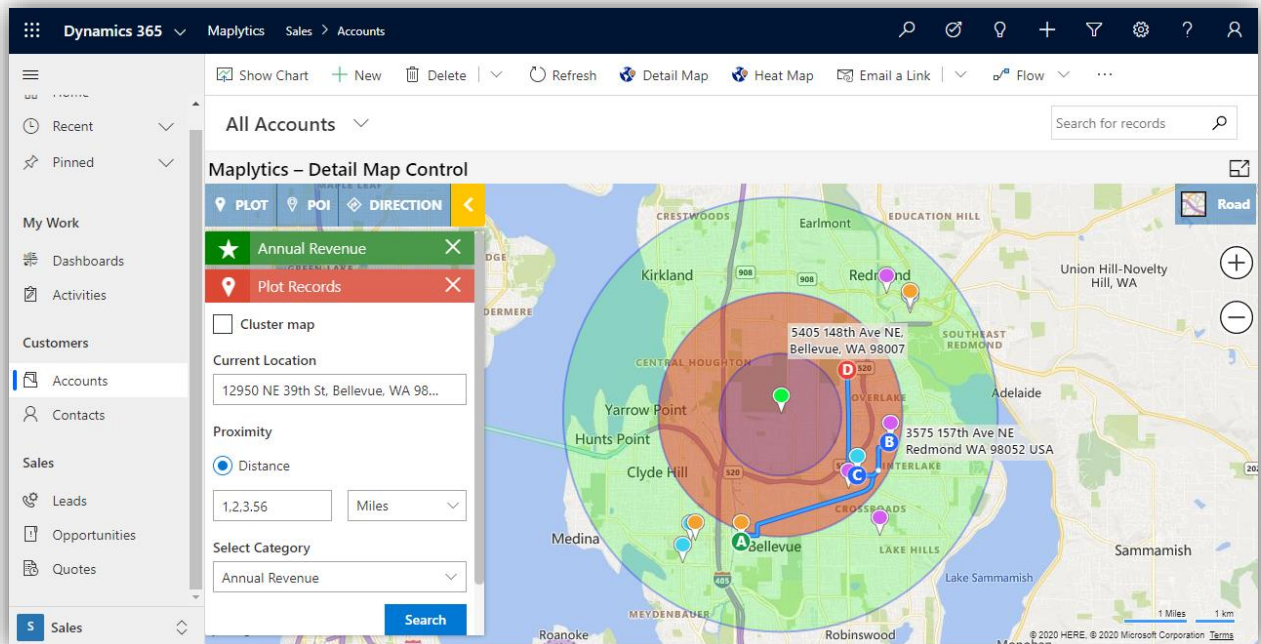


5. User can choose to allow the control on Web, Phone or Tablet. Click on Save > Publish.



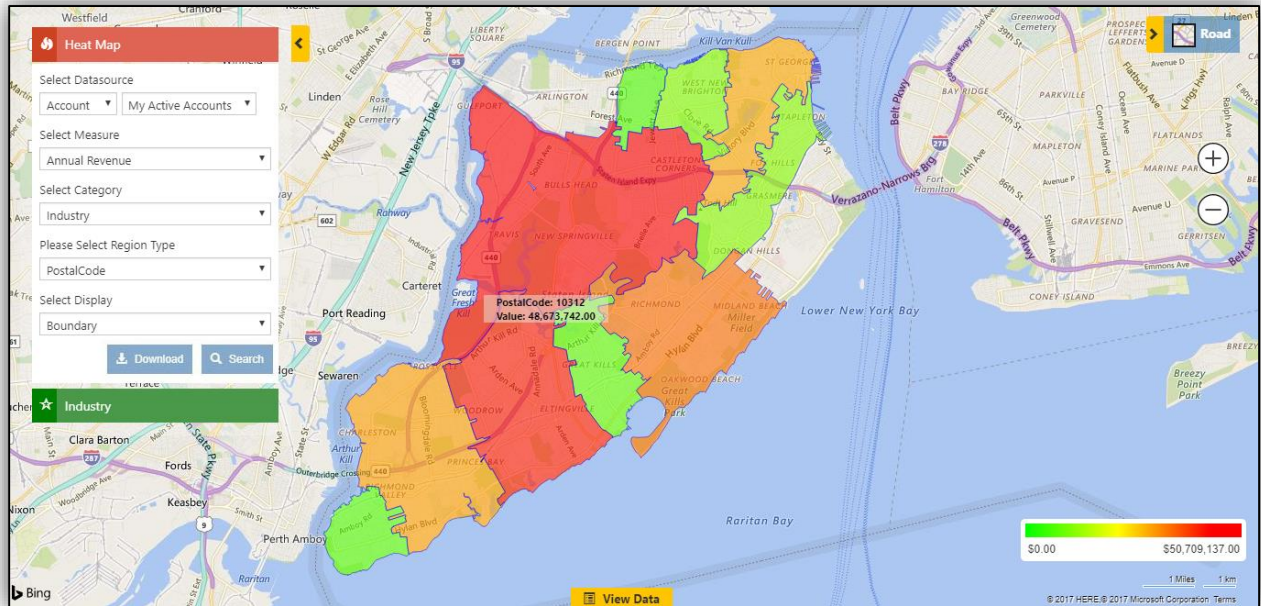
## Maplytics™ – User Manual

6. User can open any view of the entity to view this control.



## Heat Map

Clicking on the Heat Map command button will bring up the Heat Map Screen.



### Select Datasource:

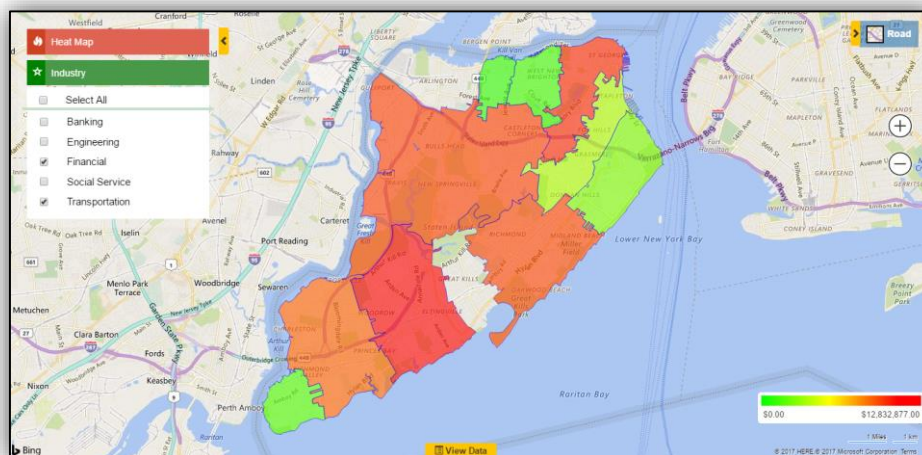
This option helps the user to choose the Entity and view combination to analyze the data.

### Select Measure:

This helps the user to define the aggregation method to be used to color code the region. By default, it is based on number of records (i.e. 'By Count'). The user can change this to any other field attribute from the drop-down. Dropdown contains the list of all numeric and currency fields.

### Select Category:

This option helps the user to filter data. The user can modify the search result using selection in the Category option.





### Select Region Type:

This option helps the user to define the geography level for aggregation. The user can choose any option from the drop-down:

- **City**
- **State**
- **County**
- **Country**
- **PostalCode:** The smallest postcode category, such as a zip code.
- **PostCode Sector:** The second '1' is called "Postcode Sector". Example: **CA1 1**
- **PostCode(Outward Code):** This is called Outward Code, the part of the postcode before the single space in the middle. Example: **CA1**
- **PostalCode Areas:** The next largest postcode category after Postcode1 that is created by aggregating Postcode1 areas.
- **Territory:** This option will use the Sales Territory defined in Dynamics CRM.

#### Note:

- *The regions that were plotted using the option Post code Areas before will now be plotted by using the option of Post code sector.*
- *The regions will be plotted as per the Bing maps.*

The default option is to summarize the addresses by City. You can find the default settings on the Maplytics Configuration record for the individual user as shown below:

The screenshot shows the Maplytics configuration interface with the following settings:

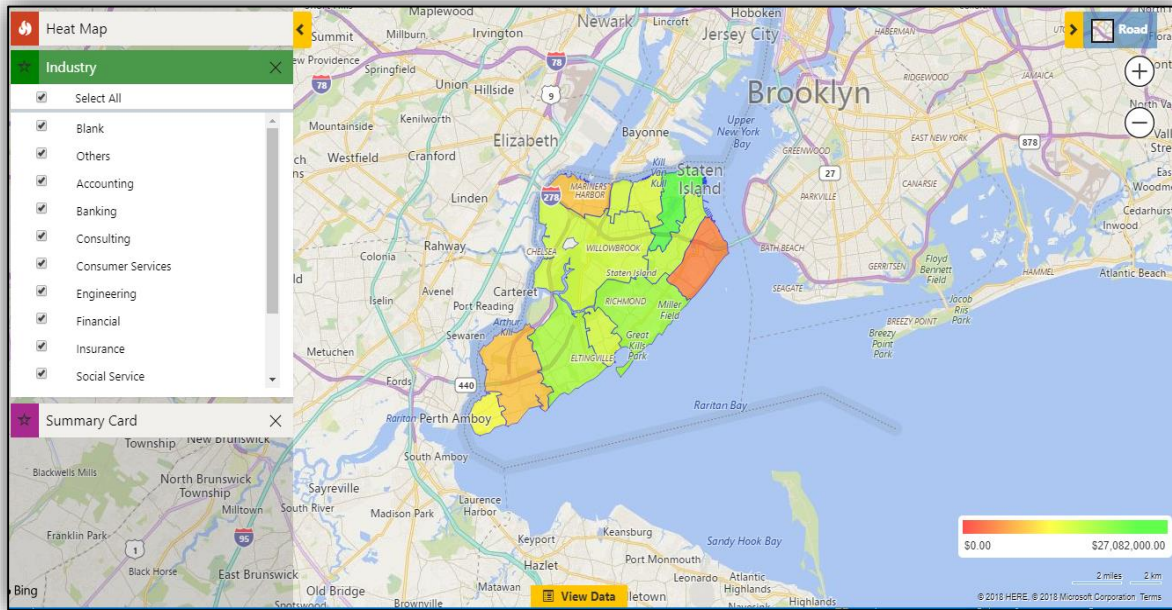
General		Advance Settings	Check-In	Auto Scheduling	Related
Optimize Direction	No	Default Location	Loipersdorf bei Fürstenfeld 271, 8282 Loipersdorf bei Fürstenfeld, Austria		
Live Traffic	No	Navigate Within	Waze		
Route Option	Shortest Time	Records Per Page In Grid	50		
Map Center	---	Zoom Level	---		
Heat Map Type	Boundary	User	---		
Summary Grouping	City	Maplytics Security Template	---		
Default Template	---	Set As Destination	Other		
Set As Origin	Other	Other - Set As Destination	Mont-devant-Sassey, Meuse, France		
Other - Set As Origin	10 Voie des Vaches, 08450 Angecourt				

### Select Display

There are four options available to analyze data on Heat Map. Default Heat map display can be selected using Maplytics Configuration Settings.

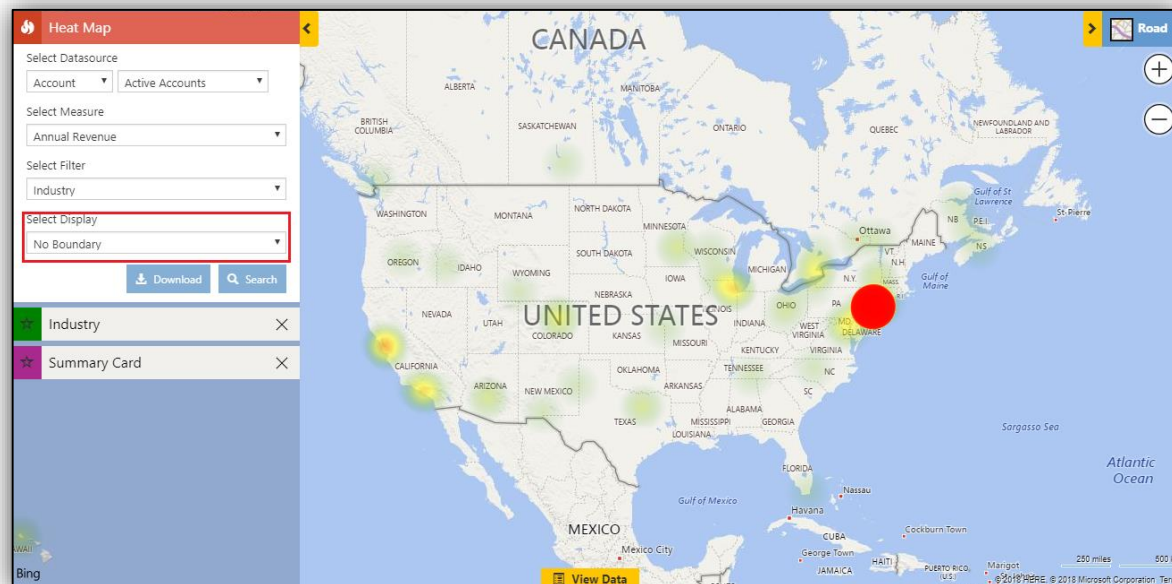
### Boundary

This will create Heat Map on basis of selected region type like City, Postal Code, Country, State, Territory, etc.



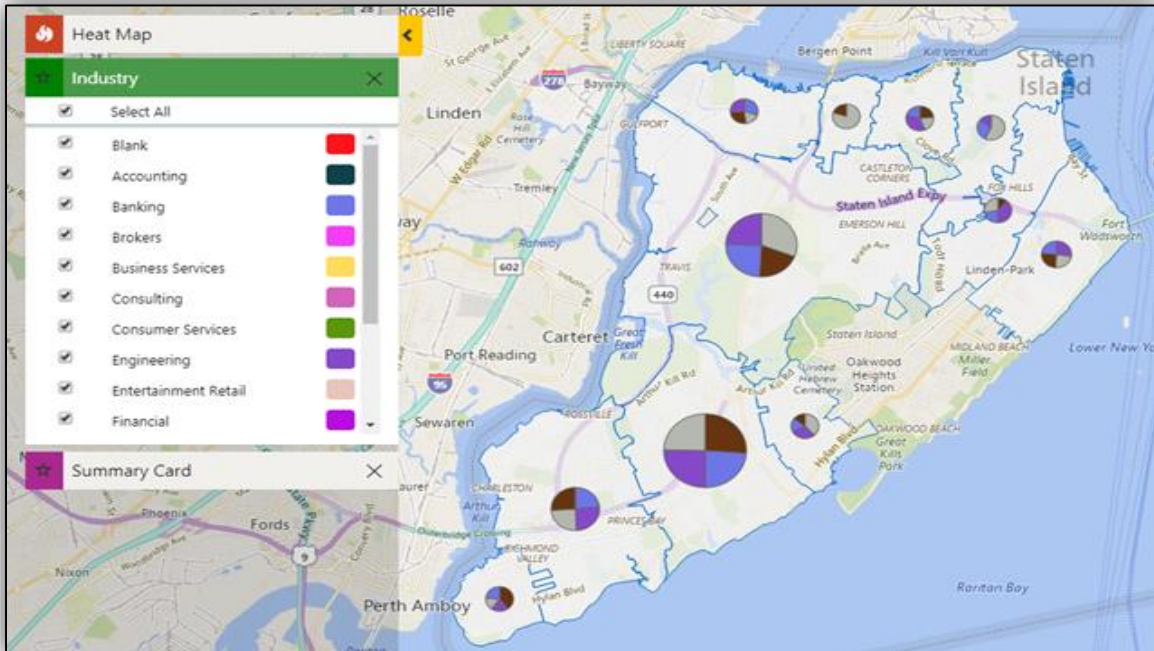
### No Boundary

This option does not consider the region type. It simply creates a Heat Map by the density of the measure selected without geographical boundaries.



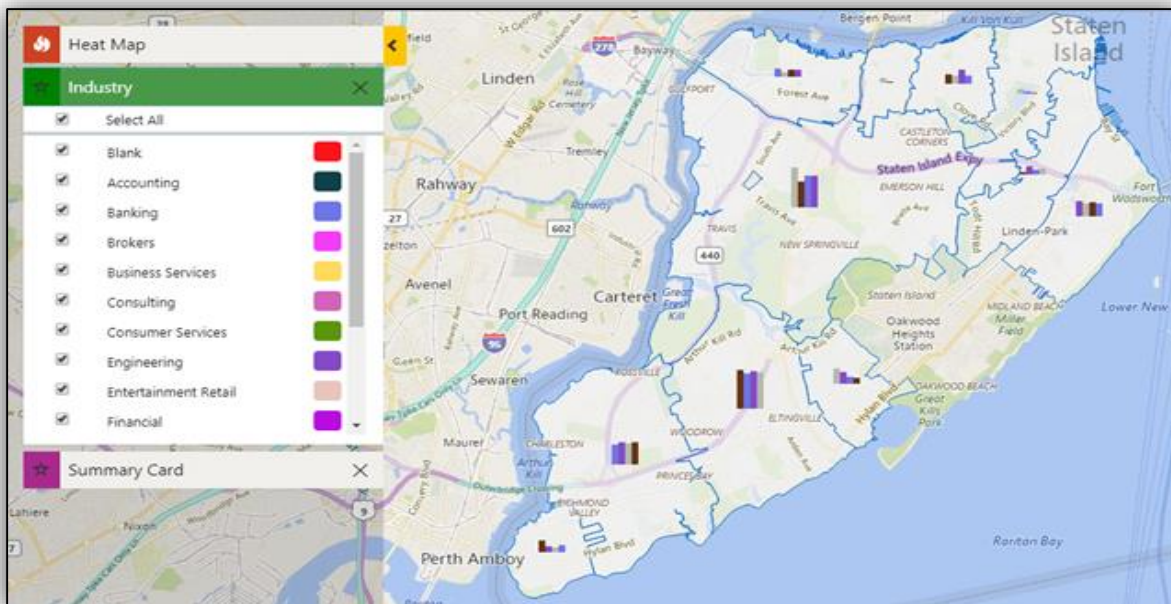
### Pie chart

Users can view the data in the form of Pie charts based on the heat of the attribute selected in the Measure and Filter. Pie charts help the users to analyze the data on the basis of comparative data shown by the Pie charts on the map.



### Column chart

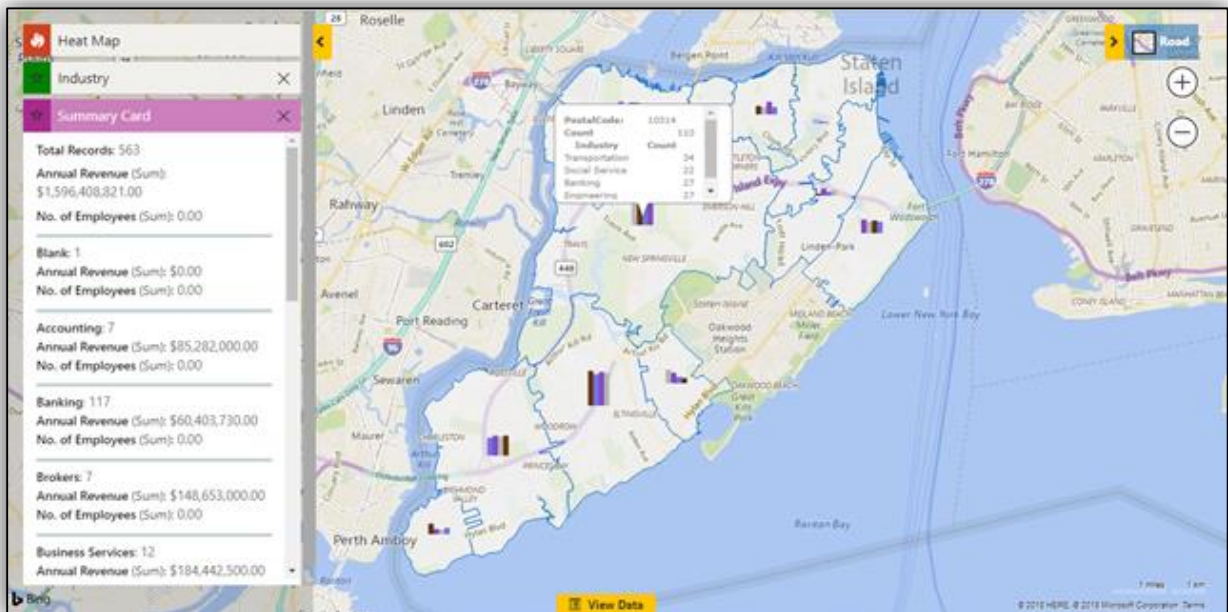
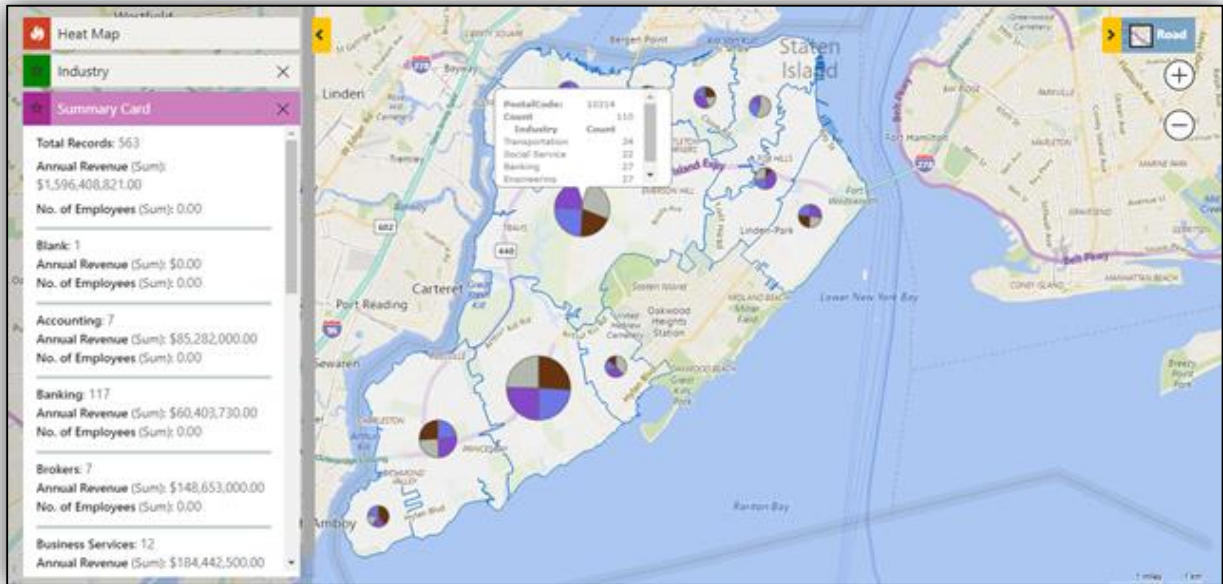
Users can view the data in the form of column charts plotted on the basis of the heat of the attribute selected in the Measure and Filter. User can easily analyze the plotted data on the basis of the proportions shown by the respective columns.





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- **Hover:** On hover, it shows the details of that Boundary/Pie chart/Column chart
- **Summary Card:** The user can click on any Boundary/Pie chart/Column chart to get the summarized information of the same.



**Note:** If Pie chart/Column chart is selected as the Display type, the option of Territory under Region Type will not be available.

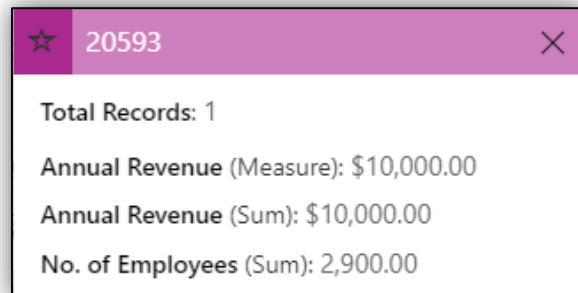
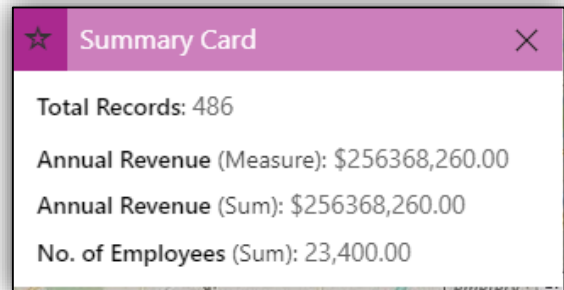
## Maplytics™ – User Manual

### Search:

Clicking on the 'Search' button will plot the addresses of all the records that were selected in the view and has already been geocoded. Records that do not have their latitude/longitude updated in the record will be ignored and will not be plotted on the map.

### Summary card:

Every time the users create a heat map visualization, a 'Summary Card' summarizing the aggregate information for the complete heat map will open up. This gives the users a brief summary of the heat map they created. The measure is also summarized by default.



The user can also click on any region plotted on the map to open the summary card for that region. This will also filter the data of the region in the data grid. To differentiate between the summary cards, the individual summary cards have the region name/number as the title.

If the user has selected a field attribute in the 'Filter' dropdown, the summary card will further summarize the information for the selected category filter as well.

**Export to Excel:** The search results are listed by the grouping selected at the bottom of the screen and user can further export these data points using this button as shown below;

The screenshot shows a map of the Staten Island area with a color scale for Annual Revenue ranging from \$0.00 to \$66,227,773.00. Below the map is a table titled 'My Active Accounts (654)' with columns: Account Name, Address 1: City, Main Phone, Territory, Industry, Email, Created On, and Annual Revenue. The table is filtered by 'PostalCode: 10302, NY, Staten Island, USA (Count: 18)' and 'PostalCode: 10303, NY, Staten Island, USA (Count: 21)'. An 'Export To Excel' button is visible in the top right corner of the table area.

	Account Name	Address 1: City	Main Phone	Territory	Industry	Email	Created On	Annual Revenue
▶	PostalCode: 10302, NY, Staten Island, USA (Count: 18)							
▲	PostalCode: 10303, NY, Staten Island, USA (Count: 21)							
	Y. ANTHONY MOREN...	Staten Island	4092255691	North - Staten	Transportation	robert10363@inogic.c...	11/4/2016 12:00 AM	\$420,185.00
	O. DAMIANO GERACI ...	Staten Island	40599969317	North - Staten	Engineering	douglas10430@inogic...	11/6/2016 12:00 AM	\$993,938.00

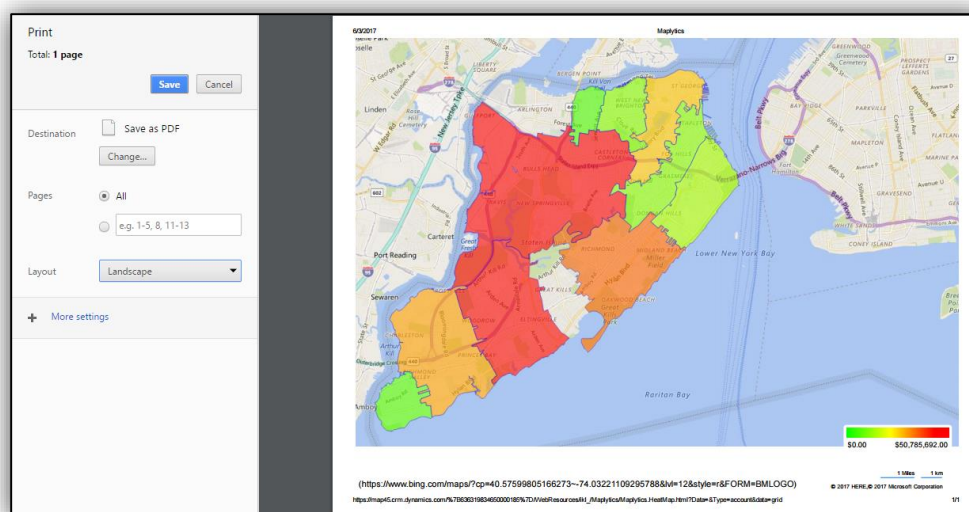
This functionality adhere to CRM security roles, if the user does not have permission to 'Export Data to Excel' in CRM, then he/she will not be able to export data from Maplytics.

Zoom Level of Heat Map uses personalized 'Zoom Level' setting for the logged in user. Also, the color scale for the Measure will be fetched from the defined 'Heat Map Measure Color Scale' in the Entity Category configuration on the Entity Map for that particular entity.

**Print:** Clicking on the print button will print the heat map, as shown in the screenshot below:



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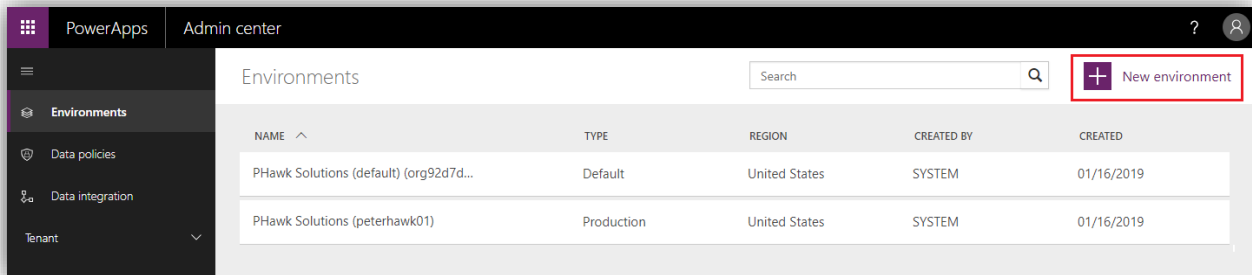
**Note: A4 size paper with landscape mode is recommended while printing.**

## Support for CDS

If user does not have Dynamics CRM, they can still use Maplytics by subscribing for the PowerApps platform. This platform comes packaged with some base entities that includes Accounts and Contacts along with other platform entities to provide support for it security and other infrastructure.

To use Maplytics within PowerApps, user can follow the steps mentioned below:

- A. Go to [admin.powerapps.com](https://admin.powerapps.com) > log in using PowerApps credentials.
- B. Click on 'New environment' > Enter the details > Create an environment



The 'New environment' form is shown. It includes fields for 'Environment name' (Maplytics), 'Region' (India (default)), and 'Environment type' (Trial). A red box highlights the 'Create environment' button at the bottom right.

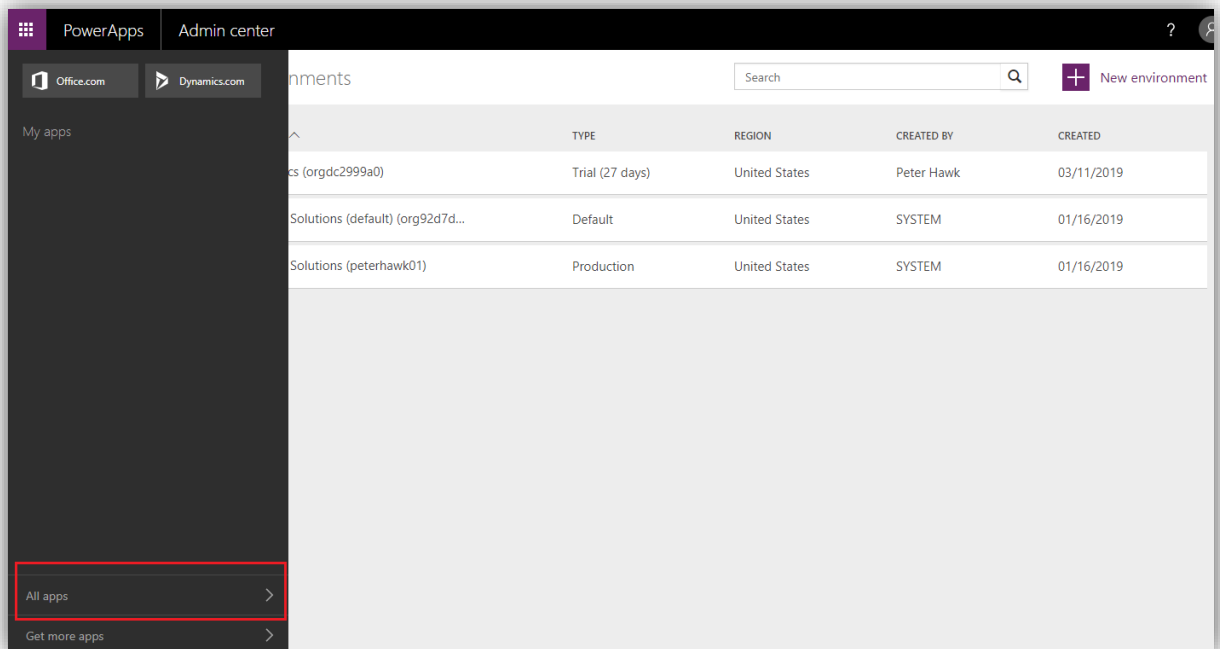
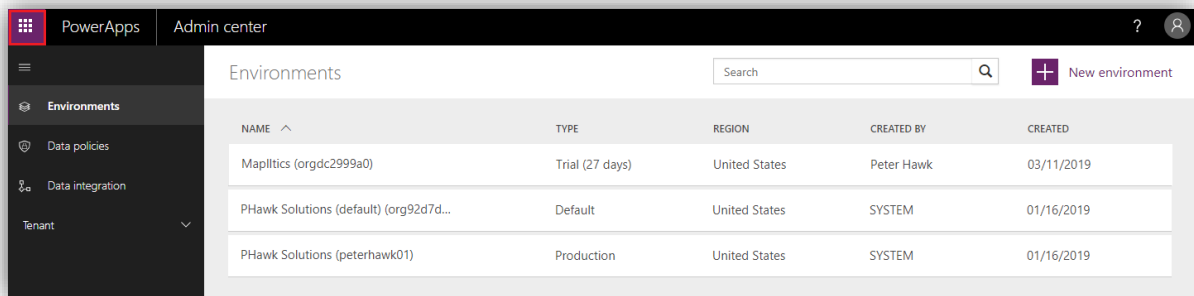
- Click on 'Create database' > Select the required details > Create database

The confirmation screen asks 'Do you want to create a database? (Recommended)'. It lists benefits of creating a database. A red box highlights the 'Create database' button at the bottom right.

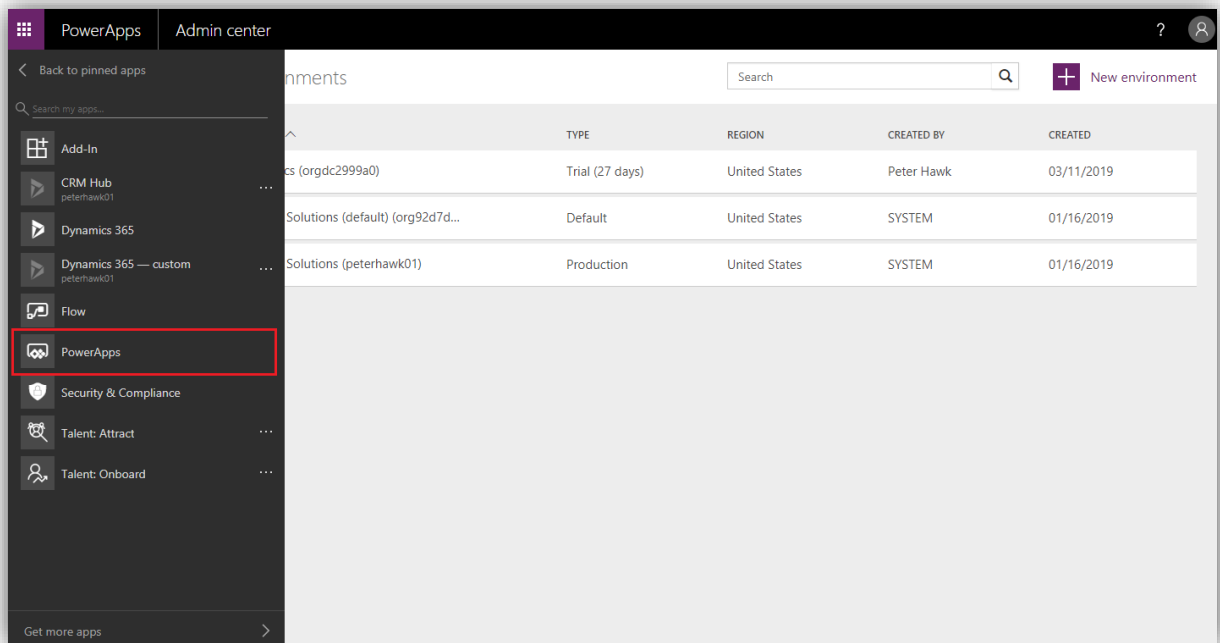
The 'Create a database for this environment' form is shown. It includes fields for 'Currency' (USD) and 'Language' (English). A red box highlights the 'Create database' button at the bottom right.

- Click on 'Navigate to other Applications' > All apps > Powerapps > Select required environment

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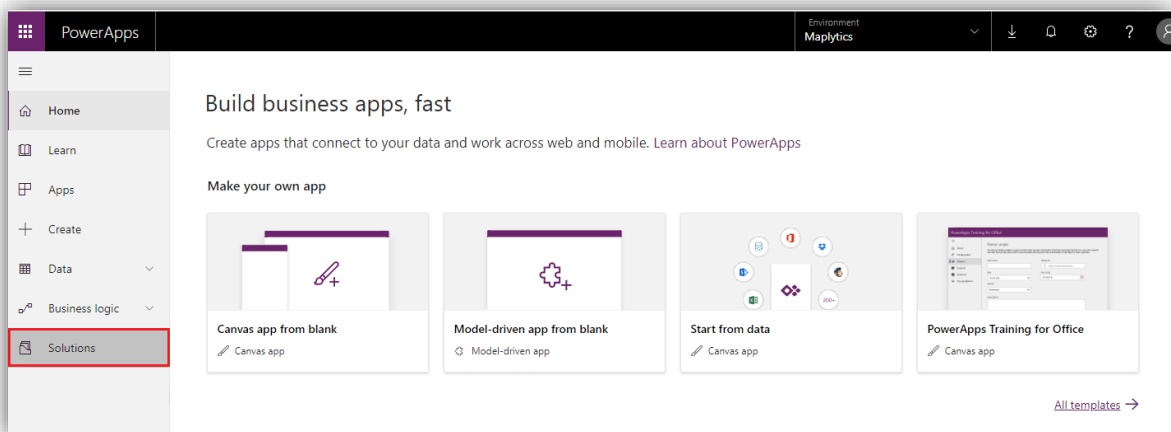


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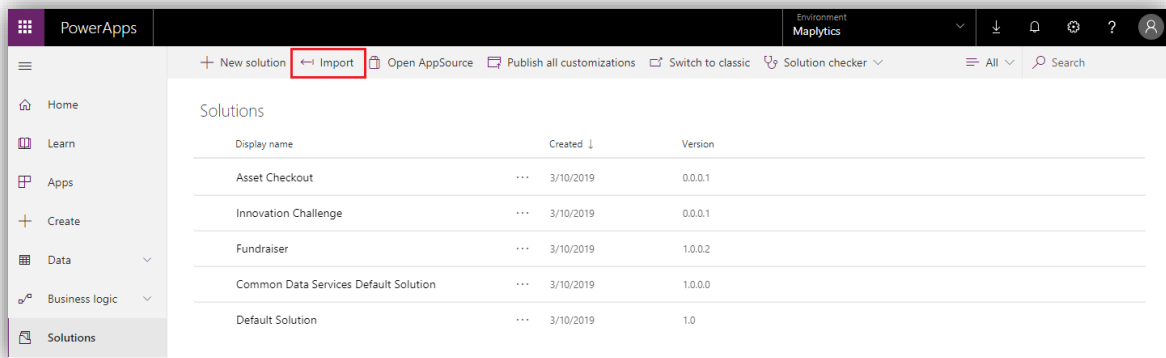


### Import Maplytics solution

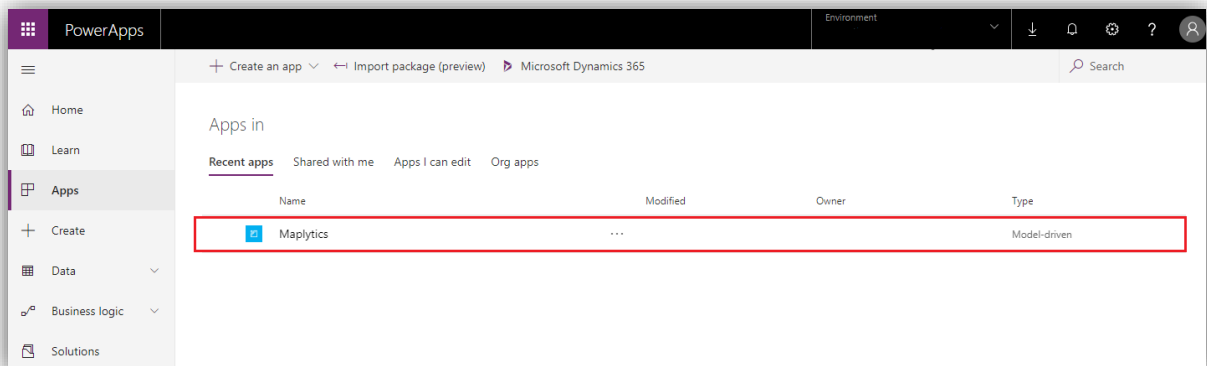
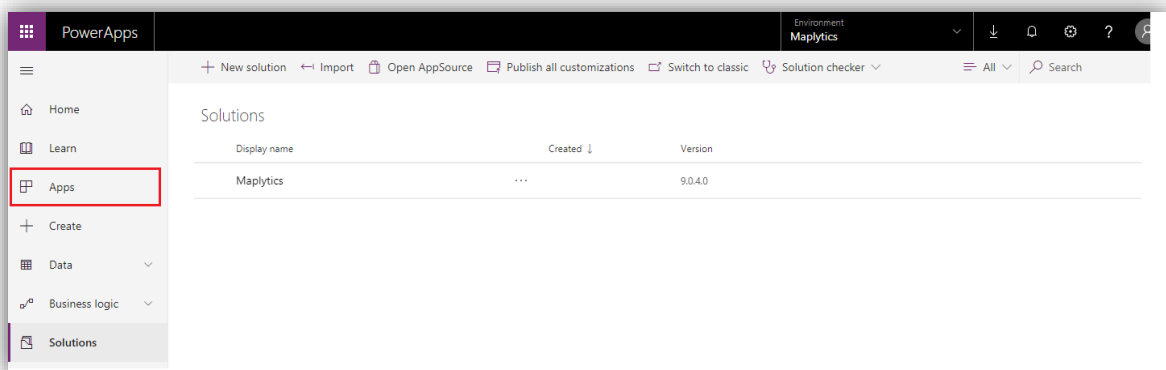
- Click on solutions at the left navigation pane > Import > Maplytics. This will create the Maplytics App.



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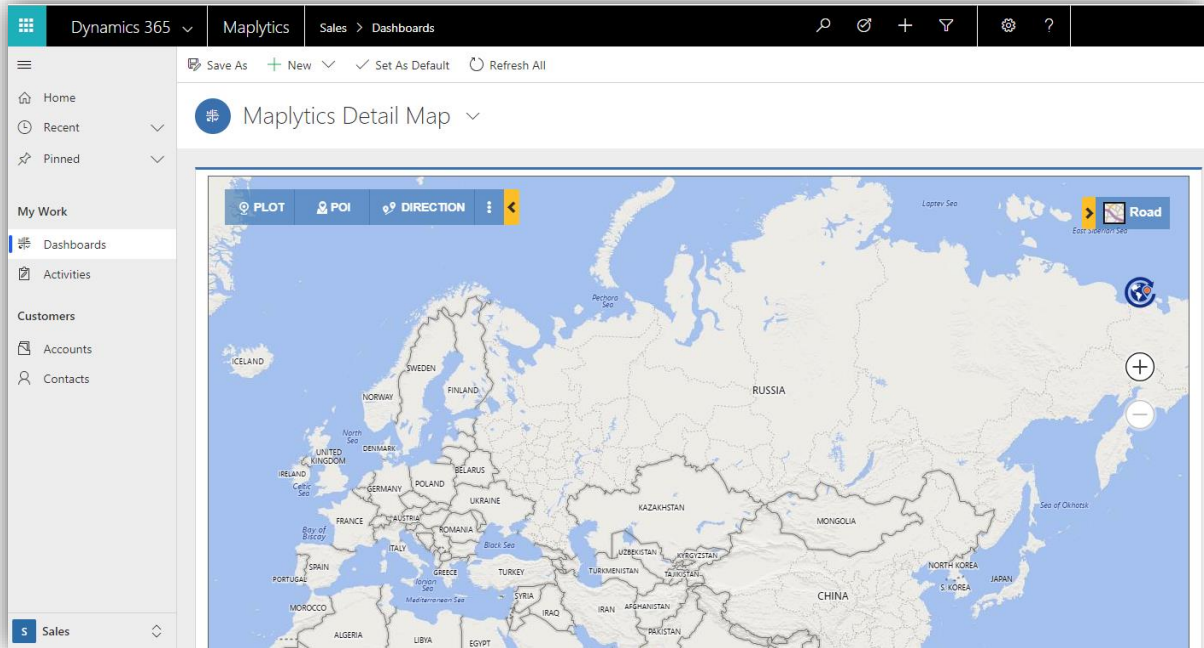
- To access the Maplytics App, click on Apps at the left navigation pane > Select Maplytics App.





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Clicking on the Maplytics app, following Maplytics dashboard will open.



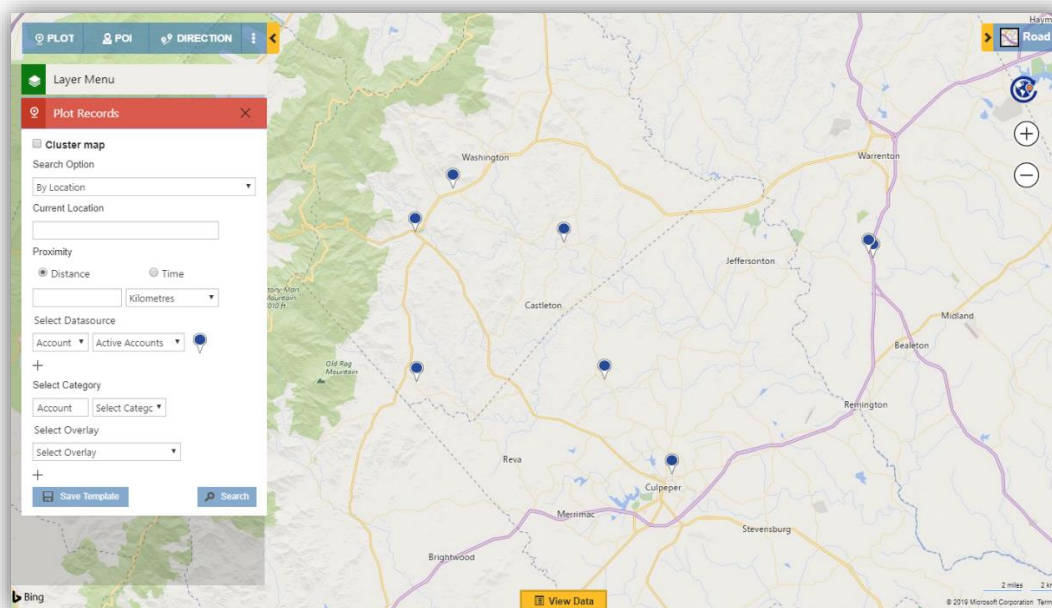
- Activate and configure Maplytics  
To access the Maplytics user needs to Activate and Configure Maplytics to start the license and configure the basic Entity maps, Dashboards and Census data.
  - Go to Settings > License registration > Click on Activate
  - Go to Settings > License registration > Click on Configure
- Add users to Maplytics team
  - Go to Settings > Teams > Maplytics team > Add users

**Note:**

- 1. Entities of leads, Cases, Opportunity, Invoices are not available in PowerApps**
- 2. Marketing lists are not available**
- 3. While configuring, four Entity maps will get created for Accounts, Contacts, Appointments and Customer Address**
- 4. Only three dashboards will get shipped on configuration**

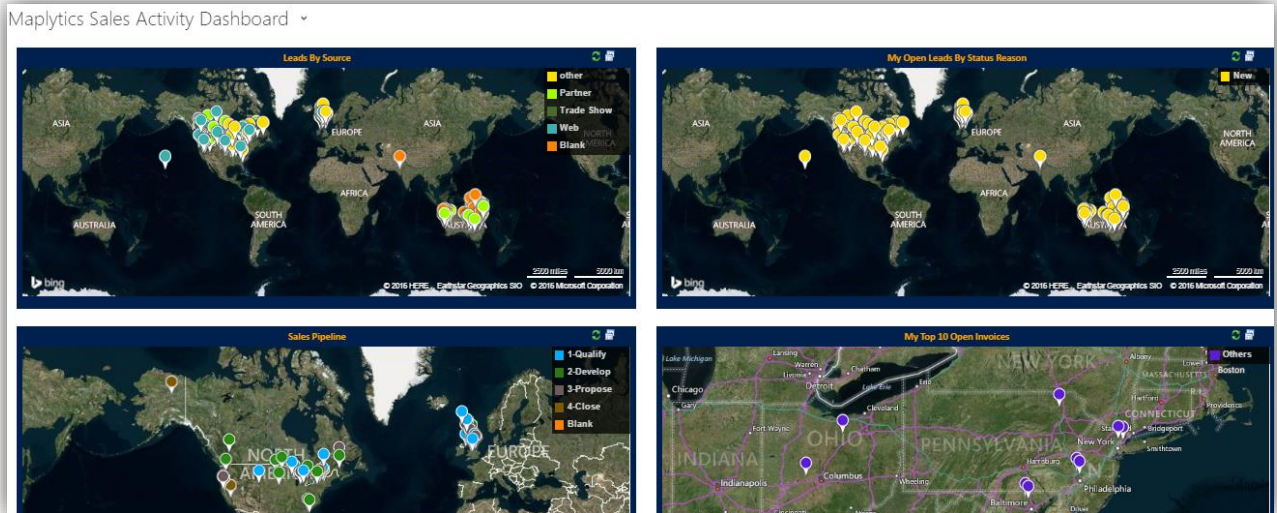
### Access Maplytics in PowerApps

User can use the credentials of the environment to log in to PowerApps and select the Maplytics app to perform Maplytics features. Use the buttons 'Details Map' or the 'Heat Map' to open the respective maps.



## Maplytics Dashboard

The users can define their Dashboard views for Maplytics and include them as web resources in standard Dynamics CRM Dashboards.



Maplytics ships with five pre-defined Dashboards for various Sales and Service Modules for different user roles. To set up more dashboards, please refer the 'Installation Manual'.

### Steps to add Maplytics View to Dashboard

To include the Maplytics component in Dashboard, click on the new button and select to add Web Resource. Select **'ikl\_/Maplytics/Maplytics.Dashboard.html'** web resource and set the name of the Dashboard record in the custom data parameter to be passed to the HTML web resource.

The screenshot shows the 'Web Resource Properties' dialog box with the following configuration:

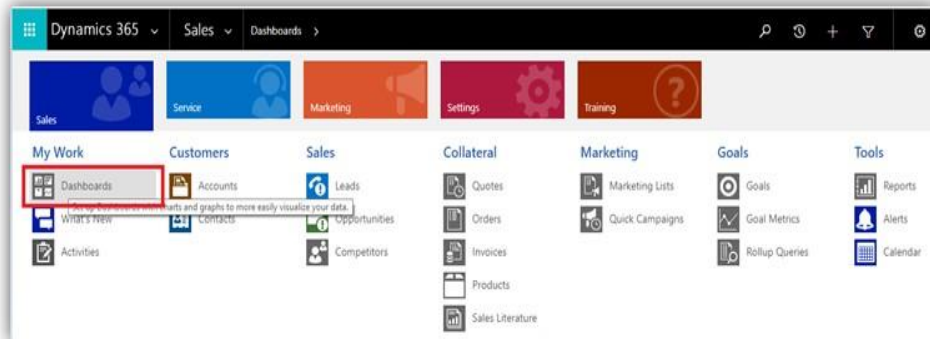
- Web resource:** ikl\_/Maplytics/Maplytics.Dashboard.html
- Field Name and Properties:**
  - Name:** WebResource\_MyFollowUpCasesByTodayByPriority
  - Label:** My Todays Follow-up Cases By Priority
  - ☐ Display label on the Dashboard
- Visibility:**
  - ☒ Visible by default
- Web Resource Properties:**
  - Custom Parameter(data):** My Todays Follow-up Cases By Priority
  - ☐ Restrict cross-frame scripting, where supported.
  - ☐ Pass record object-type code and unique identifier as parameters.

### Create a route dashboard

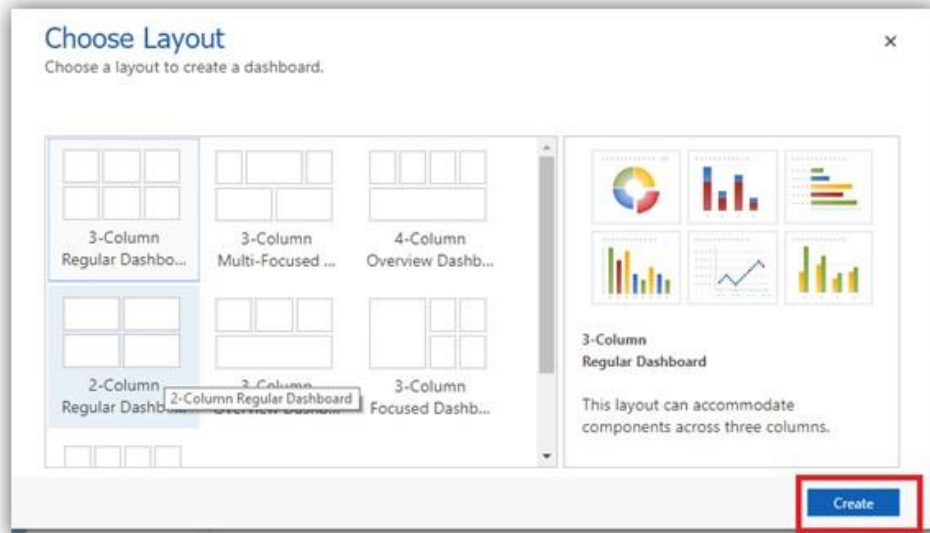
To plot route on a CRM dashboard follow the steps mentioned below:

1. User needs to include the Maplytics Detail Map component on the Dashboard. To do this click on the 'New' button in the section of dashboard and select 'Add Web Resource'. Select '[ikl\\_/Maplytics/Maplytics.DetailMap.html](#)' web resource.

**Go to Sales > Dashboards > Click on "New" button**



2. Choose any layout as shown below:

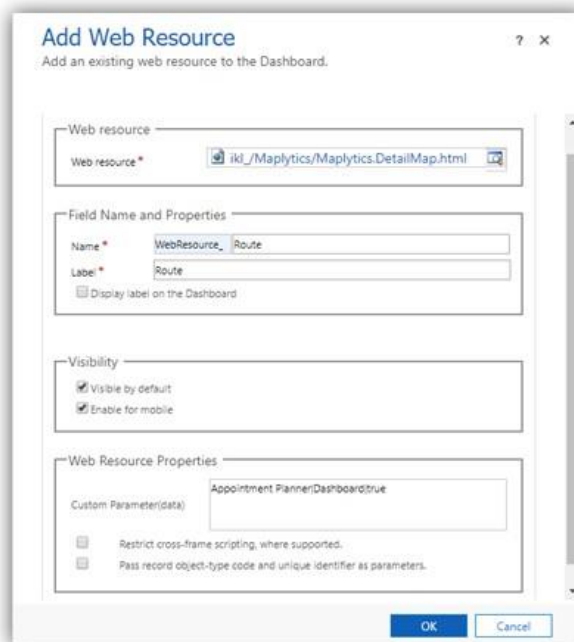


3. Provide the dashboard name and click on the web resource button to add the Detail map HTML web resource.

## Maplytics™ – User Manual



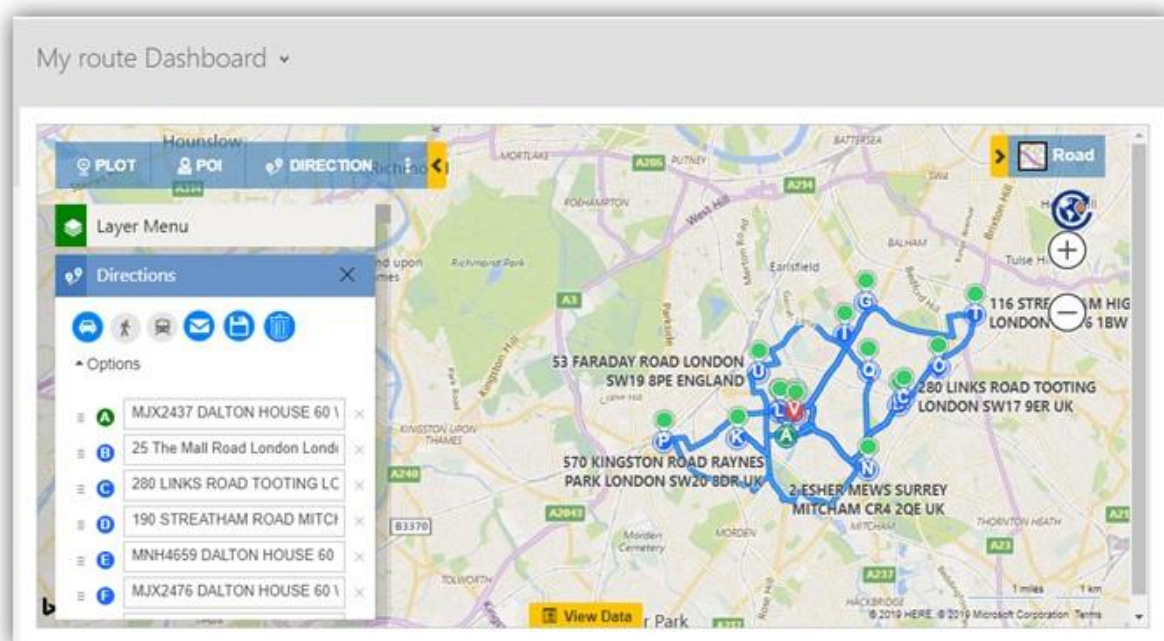
4. Add web resource :'*ikl\_/Maplytics/Maplytics.DetailMap.html*' web resource
5. Add a parameter in Custom Parameter (data) field as **<Dashboard Name>||dashboard||true** and click on 'OK'



6. After saving the dashboard and user can see the route plotted on the dashboard.



## Maplytics™ – User Manual



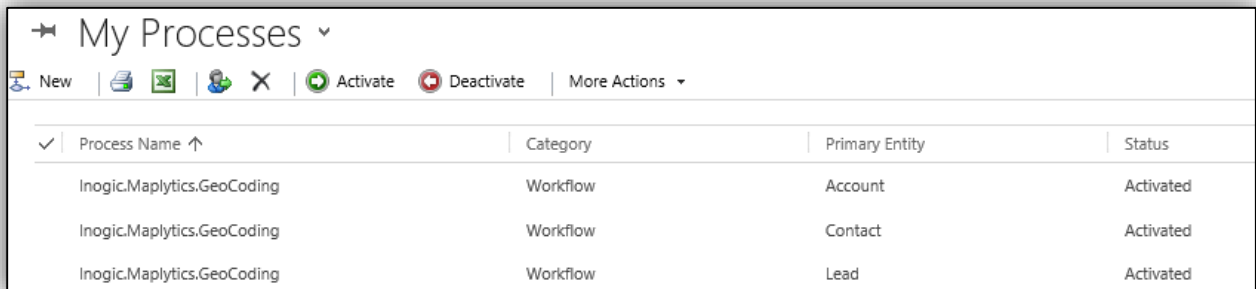
**Note:** Only 25 waypoints can be added into the route.

## Workflows

Maplytics ship the following workflows:

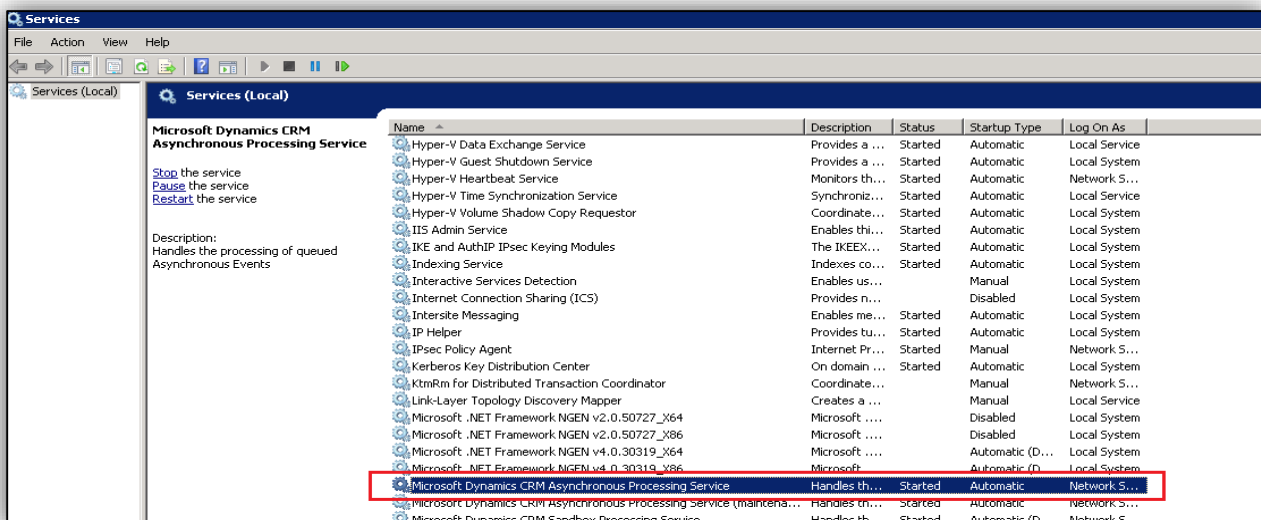
1. **Geocoding workflows** – This geocodes addresses of the records and provides the values for respective Latitude and Longitude.
2. **Territory Assignment workflow** – This assigns territories to CRM records on the basis of the addresses in the respective records.
3. **Driving Instructions workflow** – This automatically generates directions (in HTML and Plain text format) between two related entity records using their respective addresses.
4. **Get Time zone workflow** – This provides the time zone of the respective records in which they lie based on their addresses.

Geocoding workflow is configured for Account, Lead, and Contact entities and Territory workflow for Account by default. The user can set up these workflows for custom entities also.



Process Name	Category	Primary Entity	Status
Inogic.Maplytics.GeoCoding	Workflow	Account	Activated
Inogic.Maplytics.GeoCoding	Workflow	Contact	Activated
Inogic.Maplytics.GeoCoding	Workflow	Lead	Activated

**Note:** To run the workflow, please make sure the Microsoft Dynamics CRM Asynchronous Processing service is running as shown in below screenshot.



Name	Description	Status	Startup Type	Log On As
Microsoft Dynamics CRM Asynchronous Processing Service	Handles the processing of queued Asynchronous Events	Started	Automatic	Local System
Hyper-V Data Exchange Service	Provides a ...	Started	Automatic	Local System
Hyper-V Guest Shutdown Service	Provides a ...	Started	Automatic	Local System
Hyper-V Heartbeat Service	Monitors th...	Started	Automatic	Network S...
Hyper-V Time Synchronization Service	Synchroniz...	Started	Automatic	Local Service
Hyper-V Volume Shadow Copy Requestor	Coordinate...	Started	Automatic	Local System
IIS Admin Service	Enables thi...	Started	Automatic	Local System
IKE and AuthIP IPsec Keying Modules	The IKEEX...	Started	Automatic	Local System
Indexing Service	Indexes co...	Started	Automatic	Local System
Interactive Services Detection	Enables us...	Manual	Local System	Local System
Internet Connection Sharing (ICS)	Provides n...	Disabled	Local System	Local System
InterSite Messaging	Enables me...	Started	Automatic	Local System
IP Helper	Provides tu...	Started	Automatic	Local System
IPsec Policy Agent	Internet Pr...	Started	Manual	Network S...
Kerberos Key Distribution Center	On domain ...	Started	Automatic	Local System
KtmRm for Distributed Transaction Coordinator	Coordinate...	Manual	Network S...	Local System
Link-Layer Topology Discovery Mapper	Creates a ...	Manual	Local Service	Local System
Microsoft .NET Framework NGEN v2.0.50727_x64	Microsoft ...	Disabled	Local System	Local System
Microsoft .NET Framework NGEN v2.0.50727_x86	Microsoft ...	Disabled	Local System	Local System
Microsoft .NET Framework NGEN v4.0.30319_x64	Microsoft ...	Automatic (D...	Local System	Local System
Microsoft .NET Framework NGEN v4.0.30319_x86	Microsoft ...	Automatic (D...	Local System	Local System
Microsoft Dynamics CRM Asynchronous Processing Service	Handles th...	Started	Automatic	Network S...
Microsoft Dynamics CRM Asynchronous Processing Service (maintena...	Handles th...	Started	Automatic	Network S...
Microsoft Dynamics CRM Sandbox Processing Service	Handles th...	Started	Automatic (D...	Network S...

## Configure Geocoding workflows for custom entities

1. Go to **Setting > Processes** > Click on **'New'** to design a new Workflow Process.
2. Write Process name, choose **'Workflow'** under category section and select desired entity as shown below;

**Create Process**  
Define a new process, or create one from an existing template. You can create four kinds of processes: business process flows, actions, dialogs, and workflows.

Process name: \*

Category: \*  Entity: \*

☐ Run this workflow in the background (recommended)

Type: ☒ New blank process ☐ New process from an existing template (select from list):

Template Name ↑	Primary Entity	Owner
No process template records are available in this view		

0 - 0 of 0 (0 selected) Page 1

3. Select **'Organization'** under **'Scope'** dropdown. Select **'Record is created'** and **'Record fields change'** options as shown below:

Process: Inogic.Maplytics.GeoCoding Working on solution:

**Information**

General Administration Notes

▼ Hide Process Properties

Process Name \*

Activate As

**Available to Run**

☒ Run this workflow in the background (recommended)

☒ As an on-demand process

☐ As a child process

**Workflow Job Retention**

☒ Automatically delete completed workflow jobs (to save disk space)

Entity

Category

**Options for Automatic Processes**

Scope

Start when:

☒ Record is created

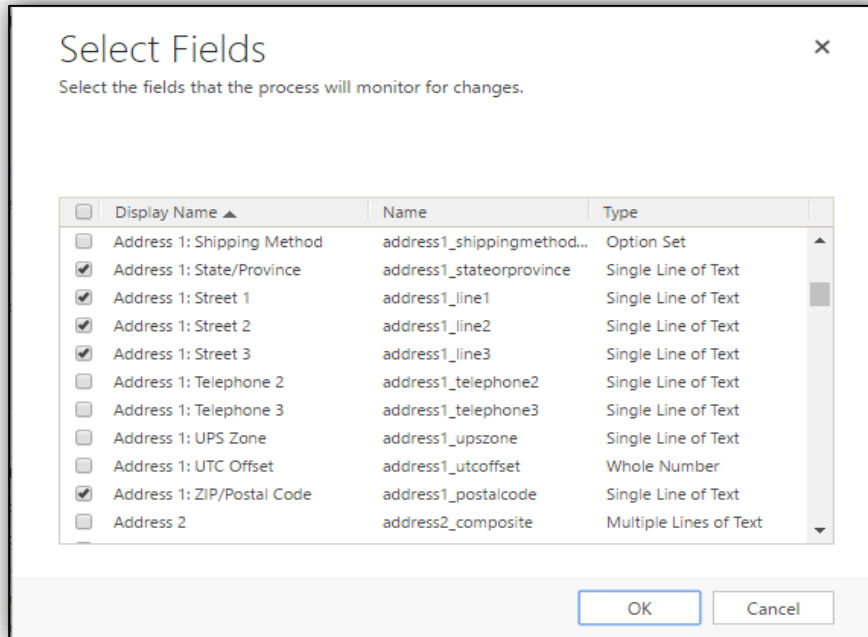
☐ Record status changes

☐ Record is assigned

☒ Record fields change [View](#)

☐ Record is deleted

- For the Record fields change option, select all of the address fields to ensure the address is geocoded when any of the address fields is changed as shown below;



Select Fields

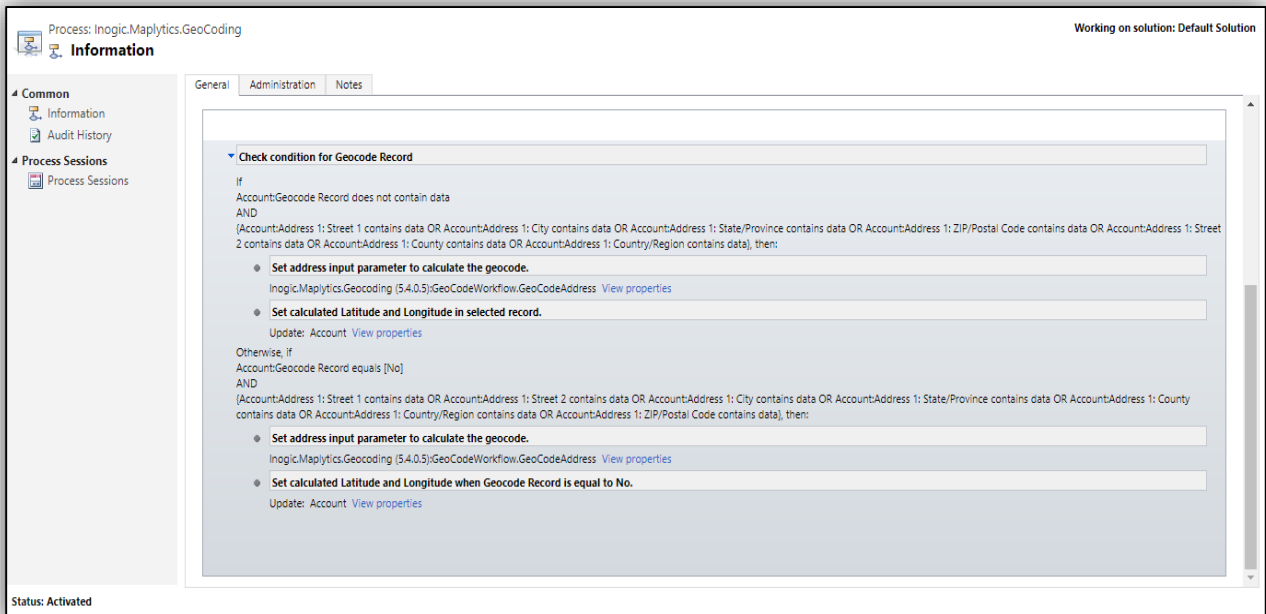
Select the fields that the process will monitor for changes.

<input type="checkbox"/>	Display Name ▲	Name	Type
<input type="checkbox"/>	Address 1: Shipping Method	address1_shippingmethod...	Option Set
<input checked="" type="checkbox"/>	Address 1: State/Province	address1_stateorprovince	Single Line of Text
<input checked="" type="checkbox"/>	Address 1: Street 1	address1_line1	Single Line of Text
<input checked="" type="checkbox"/>	Address 1: Street 2	address1_line2	Single Line of Text
<input checked="" type="checkbox"/>	Address 1: Street 3	address1_line3	Single Line of Text
<input type="checkbox"/>	Address 1: Telephone 2	address1_telephone2	Single Line of Text
<input type="checkbox"/>	Address 1: Telephone 3	address1_telephone3	Single Line of Text
<input type="checkbox"/>	Address 1: UPS Zone	address1_upszone	Single Line of Text
<input type="checkbox"/>	Address 1: UTC Offset	address1_utcoffset	Whole Number
<input checked="" type="checkbox"/>	Address 1: ZIP/Postal Code	address1_postalcode	Single Line of Text
<input type="checkbox"/>	Address 2	address2_composite	Multiple Lines of Text

OK Cancel

- Select the **Inogic.Maplytics.Geocoding** workflow assembly from the Add step menu as shown below;

**Note: Please don't select Latitude & Longitude field attribute here.**



Process: Inogic.Maplytics.Geocoding

Working on solution: Default Solution

Information

General Administration Notes

Common

- Information
- Audit History

Process Sessions

- Process Sessions

Status: Activated

Check condition for Geocode Record

If  
Account/Geocode Record does not contain data  
AND  
(Account/Address 1: Street 1 contains data OR Account/Address 1: City contains data OR Account/Address 1: State/Province contains data OR Account/Address 1: ZIP/Postal Code contains data OR Account/Address 1: Street 2 contains data OR Account/Address 1: County contains data OR Account/Address 1: Country/Region contains data), then:

- Set address input parameter to calculate the geocode.  
Inogic.Maplytics.Geocoding (5.4.0.5):GeoCodeWorkflow.GeoCodeAddress [View properties](#)
- Set calculated Latitude and Longitude in selected record.  
Update: Account [View properties](#)

Otherwise, if  
Account/Geocode Record equals [No]  
AND  
(Account/Address 1: Street 1 contains data OR Account/Address 1: Street 2 contains data OR Account/Address 1: City contains data OR Account/Address 1: State/Province contains data OR Account/Address 1: County contains data OR Account/Address 1: Country/Region contains data OR Account/Address 1: ZIP/Postal Code contains data), then:

- Set address input parameter to calculate the geocode.  
Inogic.Maplytics.Geocoding (5.4.0.5):GeoCodeWorkflow.GeoCodeAddress [View properties](#)
- Set calculated Latitude and Longitude when Geocode Record is equal to No.  
Update: Account [View properties](#)

**Note:** For custom workflows, add an 'AND' condition, if the address fields are not blank as shown in the above screenshot. This will avoid the trigger of the workflow if the address fields do not have any value.

- Click on **'Set Properties'** and set the address parameter as shown in below screenshot for the workflow assembly;

Property Name	Data Type	Value
Street1	Single Line of Text	{Bill To Street 1(Invoice)}
Street2	Single Line of Text	{Bill To Street 2(Invoice)}
Street3	Single Line of Text	{Bill To Street 3(Invoice)}
City	Single Line of Text	{Bill To City(Invoice)}
StateOrProvince	Single Line of Text	{Bill To State/Province(Invoice)}
County	Single Line of Text	
Country	Single Line of Text	{Bill To Country/Region(Invoice)}
PostalCode	Single Line of Text	{Bill To Street 3(Invoice)}

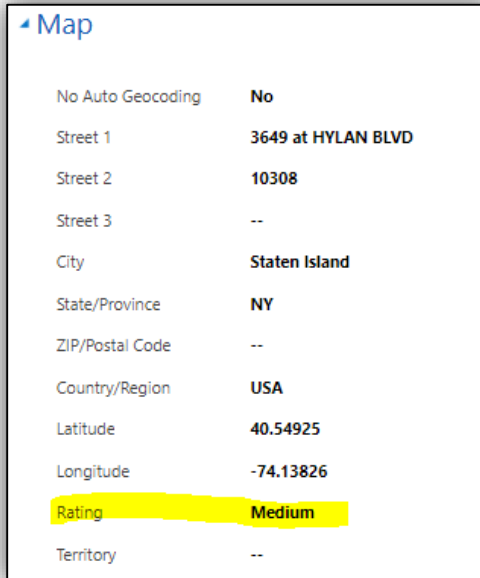
- Choose 'Update Record' from 'Add Step' menu after selecting 'Set Properties' record and select same entity for which workflow is being created.
- Click on 'Set Properties' of the new record and in the update window set the Latitude, Longitude and Rating to the output parameters returned by the workflow assembly as shown in the screenshot below;

Latitude	{Latitude(Set address i
Longitude	{Longitude(Set address
Rating	{Rating(Set address ing



### Geocoding Confidence Rating:

User can also check the geocoding confidence rating provided by Bing Maps. A 'Rating' field can be added that shows the confidence rating as High, Medium or Low. The 'Rating' field is set in the workflow as shown in the above screenshot.



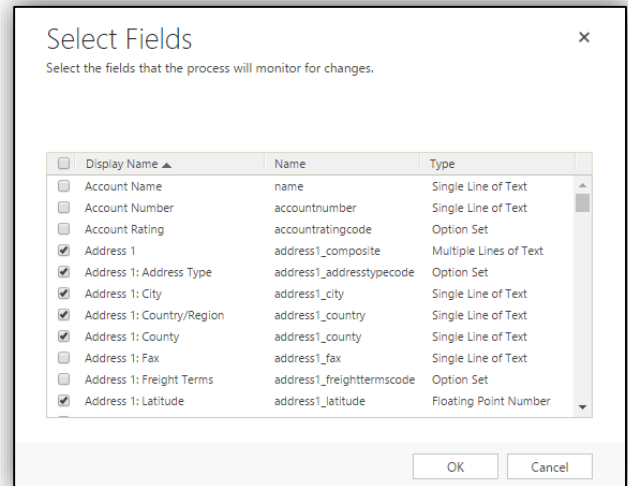
No Auto Geocoding	No
Street 1	3649 at Hylan Blvd
Street 2	10308
Street 3	--
City	Staten Island
State/Province	NY
ZIP/Postal Code	--
Country/Region	USA
Latitude	40.54925
Longitude	-74.13826
Rating	Medium
Territory	--

#### **Note:**

- ***Latitude and Longitude fields should of data type: 'Floating Point Number' with precision set to 5. Add minimum to maximum range of fields respectively Latitude (-90 to +90), Longitude (-180 to +180).***
- ***Geocoding Confidence Rating cannot be checked for Geocoding plugin***

## Configure Territory Assignment workflow for custom entities

1. Follow the Steps 1 – 3 from configuring geocoding workflow for custom entities. This will help you create a new workflow.
2. For the Record fields change option, select all of the address fields to ensure the territory is changed when any of the address fields is changed as shown below;



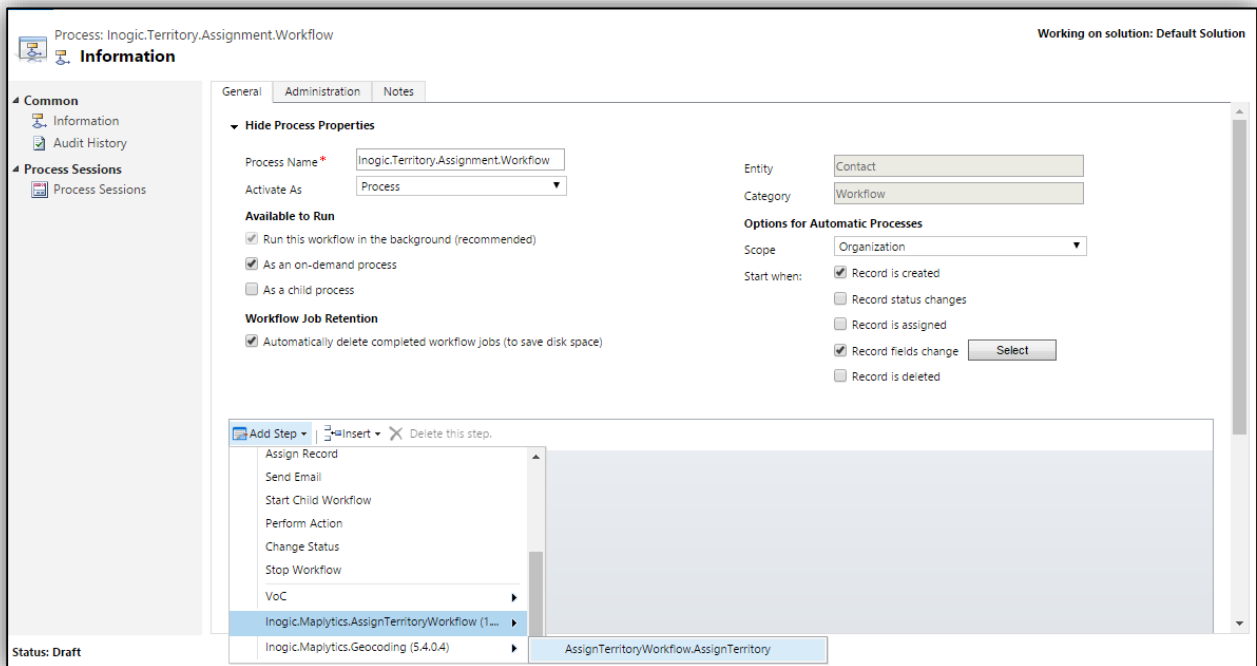
Select Fields

Select the fields that the process will monitor for changes.

Display Name	Name	Type
<input type="checkbox"/> Account Name	name	Single Line of Text
<input type="checkbox"/> Account Number	accountnumber	Single Line of Text
<input type="checkbox"/> Account Rating	accountratingcode	Option Set
<input checked="" type="checkbox"/> Address 1	address1_composite	Multiple Lines of Text
<input checked="" type="checkbox"/> Address 1: Address Type	address1_addresstypecode	Option Set
<input checked="" type="checkbox"/> Address 1: City	address1_city	Single Line of Text
<input checked="" type="checkbox"/> Address 1: Country/Region	address1_country	Single Line of Text
<input checked="" type="checkbox"/> Address 1: County	address1_county	Single Line of Text
<input type="checkbox"/> Address 1: Fax	address1_fax	Single Line of Text
<input type="checkbox"/> Address 1: Freight Terms	address1_freighttermscode	Option Set
<input checked="" type="checkbox"/> Address 1: Latitude	address1_latitude	Floating Point Number

OK Cancel

3. Click on 'Add Steps' and add 'AssignTerritoryWorkflow.AssignTerritory' assembly as shown below;



Process: Inogic.Territory.Assignment.Workflow

Working on solution: Default Solution

Information

Common

- Information
- Audit History

Process Sessions

- Process Sessions

General Administration Notes

Hide Process Properties

Process Name\* Inogic.Territory.Assignment.Workflow

Activate As Process

Available to Run

- ☒ Run this workflow in the background (recommended)
- ☒ As an on-demand process
- ☐ As a child process

Workflow Job Retention

- ☒ Automatically delete completed workflow jobs (to save disk space)

Entity Contact

Category Workflow

Options for Automatic Processes

Scope Organization

Start when:

- ☒ Record is created
- ☐ Record status changes
- ☐ Record is assigned
- ☒ Record fields change Select
- ☐ Record is deleted

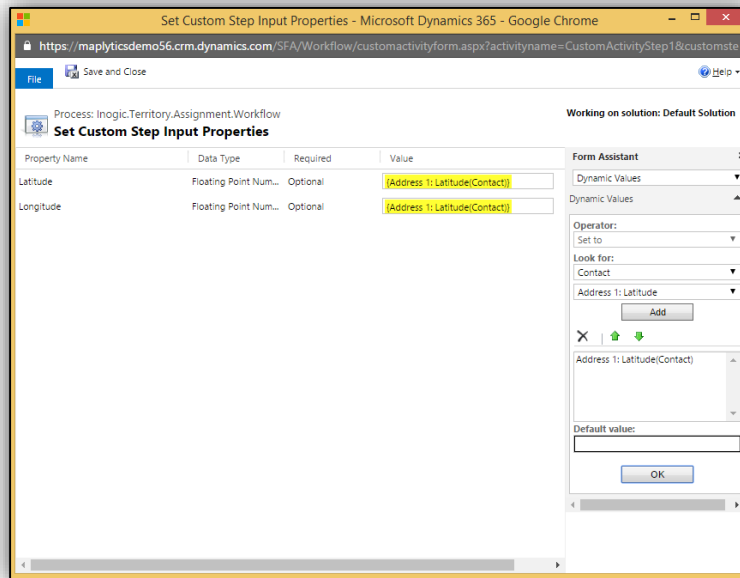
Add Step | Insert | Delete this step.

- Assign Record
- Send Email
- Start Child Workflow
- Perform Action
- Change Status
- Stop Workflow
- VoC
- Inogic.Maplytics.AssignTerritoryWorkflow (1...
- Inogic.Maplytics.Geocoding (5.4.0.4)
- AssignTerritoryWorkflow.AssignTerritory

Status: Draft

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- Click on '**Set Properties**' and set the address parameter as shown below and Save this;



### Configure Get Time Zone workflow

- Go to Settings > Processes > Click on 'New' to design a new Workflow Process.
- Write Process name, choose 'Workflow' under category section and select desired entity:

**Create Process**

Define a new process, or create one from an existing template. You can create four kinds of processes: business process flows, actions, dialogs, and workflows.

Process name: \*

Category: \*  Entity: \*

☒ Run this workflow in the background (recommended)

We recommend using [Microsoft Flow](#) instead of background workflows. [Click here](#) to start building Flows!

Type: ☒ New blank process ☐ New process from an existing template (select from list):

Template Name ↑	Primary Entity	Owner
-----------------	----------------	-------

3. Select 'Organization' under 'Scope' dropdown. Select 'Record is created' and 'Record fields change' options.

Process: Inogic.Maplytics.GeoCoding

Working on solution: 1

**Information**

General Administration Notes

**Hide Process Properties**

Process Name: [Redacted]

Activate As: Process

**Available to Run**

☒ Run this workflow in the background (recommended)

☒ As an on-demand process

☐ As a child process

**Workflow Job Retention**

☒ Automatically delete completed workflow jobs (to save disk space)

Entity: Account

Category: Workflow

**Options for Automatic Processes**

Scope: Organization

Start when:

- ☒ Record is created
- ☐ Record status changes
- ☐ Record is assigned
- ☒ Record fields change [View](#)
- ☐ Record is deleted

4. For the 'Record fields Change' option, select all of the address fields to ensure the address is retrieved when any of the address fields is changed.

Select Fields

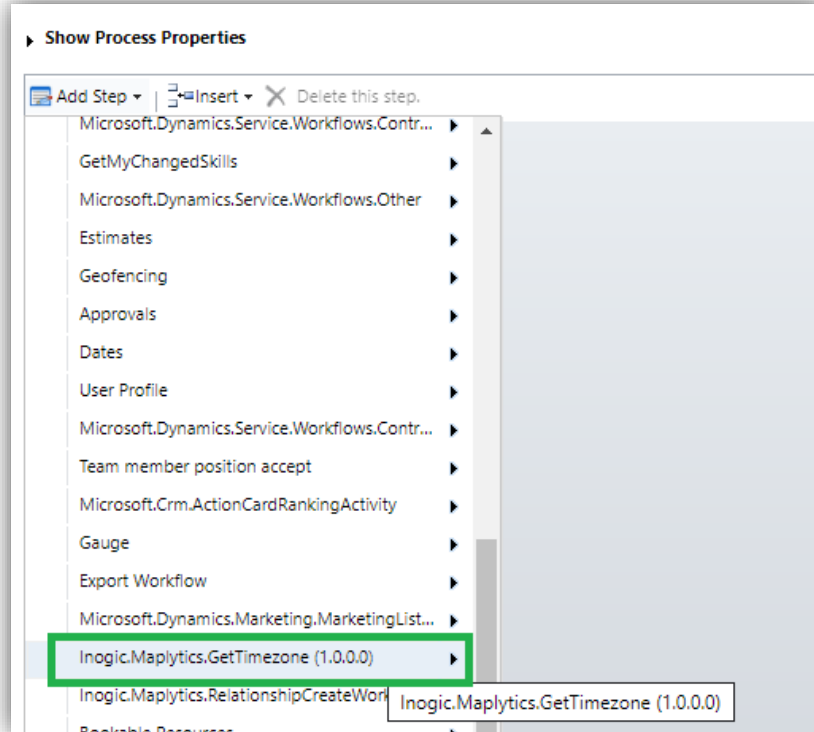
Select the fields that the process will monitor for changes.

Display Name	Name	Type
<input type="checkbox"/> Address 1: Shipping Method	address1_shippingmethod...	Option Set
<input checked="" type="checkbox"/> Address 1: State/Province	address1_stateorprovince	Single Line of Text
<input checked="" type="checkbox"/> Address 1: Street 1	address1_line1	Single Line of Text
<input checked="" type="checkbox"/> Address 1: Street 2	address1_line2	Single Line of Text
<input checked="" type="checkbox"/> Address 1: Street 3	address1_line3	Single Line of Text
<input type="checkbox"/> Address 1: Telephone 2	address1_telephone2	Single Line of Text
<input type="checkbox"/> Address 1: Telephone 3	address1_telephone3	Single Line of Text
<input type="checkbox"/> Address 1: UPS Zone	address1_upszone	Single Line of Text
<input type="checkbox"/> Address 1: UTC Offset	address1_utcoffset	Whole Number
<input checked="" type="checkbox"/> Address 1: ZIP/Postal Code	address1_postalcode	Single Line of Text
<input type="checkbox"/> Address 2	address2_composite	Multiple Lines of Text

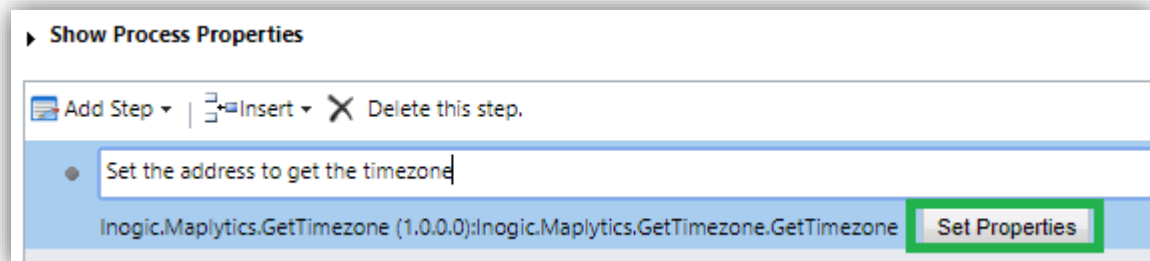
OK Cancel

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5. Select the ***Inogic.Maplytics.GetTimezone*** workflow assembly from the Add step menu.



6. Click on '***Set Properties***' and set the address parameter as shown in below screenshot for the workflow assembly.





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Process: Get Timezone Working on solution: Default Solution

### Set Custom Step Input Properties

Property Name	Data Type	Required	Value
Street1	Single Line of Text	Optional	{Address 1: Street 1(Account)}
Street2	Single Line of Text	Optional	{Address 1: Street 2(Account)}
Street3	Single Line of Text	Optional	
City	Single Line of Text	Optional	{Address 1: City(Account)}
StateOrProvince	Single Line of Text	Optional	{Address 1: State/Province(Account)}
County	Single Line of Text	Optional	
Country	Single Line of Text	Optional	{Address 1: Country/Region(Account)}
Zip/PostalCode	Single Line of Text	Optional	{Address 1: ZIP/Postal Code(Account)}

**Form Assistant**

Dynamic Values

Dynamic Values

**Operator:**  
Set to

**Look for:**  
Account

(Deprecated) Traversed Path

Add

X | ↑ | ↓

Default value:

Here, user needs to specify the address fields on the basis of which user wants to get the time zone. After this user needs to set the time zone in field (string type). Please follow below steps for the same:

1. Choose 'Update Record' from 'Add Step' menu after selecting 'Set Properties' record and select same entity for which workflow is being created.
2. Click on 'Set Properties' of the new record and in the update window set the TimezoneName, TimezoneAbbreviation to the output parameters returned by the workflow assembly.

Website

Parent Account

Ticker Symbol

Relationship Type

Timezone Abbreviation {TimezoneAbbreviation}

Timezone {TimezoneName(Provide input param)}

Product Price List

0 - 0 of 0 (0 selected)

TimezoneName

Add

X | ↑ | ↓

TimezoneName(Provide input param)

Default value:

Once user finishes all the above steps and activates the workflow, user can run it on any record of the respective entity which has address data. This will provide set the time zone set for the record as shown below.

AD

ACCOUNT

A. DINA VEDMED & SONS

Summary

Map

Area of service

Territories

Relationship Type

Timezone Abbreviation

EST

Timezone

Eastern Standard Time

## Configure Driving Instructions workflow

7. Go to Setting > Processes > Click on 'New' to design a new Workflow Process.
8. Write Process name, choose 'Workflow' under category section and select desired entity as shown below;

**Create Process**

Define a new process, or create one from an existing template. You can create four kinds of processes: business process flows, actions, dialogs, and workflows.

Process name: \*

Category: \*

Entity: \*

☒ Run this workflow in the background (recommended)

Type: ☒ New blank process ☐ New process from an existing template (select from list):

Template Name ↑ Primary Entity

Entity dropdown options: Account, Project Price, List, Actual, Actual Data Export (Deprecated), Address, Agreement, Agreement Booking Date, Agreement Booking Incident, Agreement Booking Product.

9. Select 'Organization' under 'Scope' dropdown. Select 'Record is created' and 'Record fields change' options as shown below;

Process: Inogic.Maplytics.GeoCoding

Working on solution: 0

**Information**

General Administration Notes

Hide Process Properties

Process Name \*

Activate As

Available to Run

☒ Run this workflow in the background (recommended)

☒ As an on-demand process

☐ As a child process

Workflow Job Retention

☒ Automatically delete completed workflow jobs (to save disk space)

Entity

Category

**Options for Automatic Processes**

Scope

Start when:

☒ Record is created

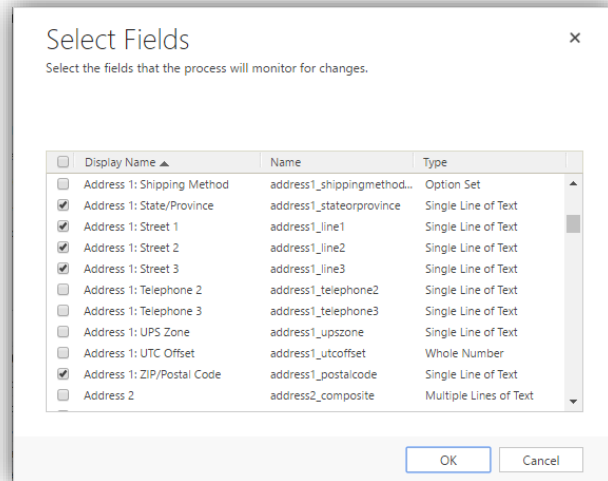
☐ Record status changes

☐ Record is assigned

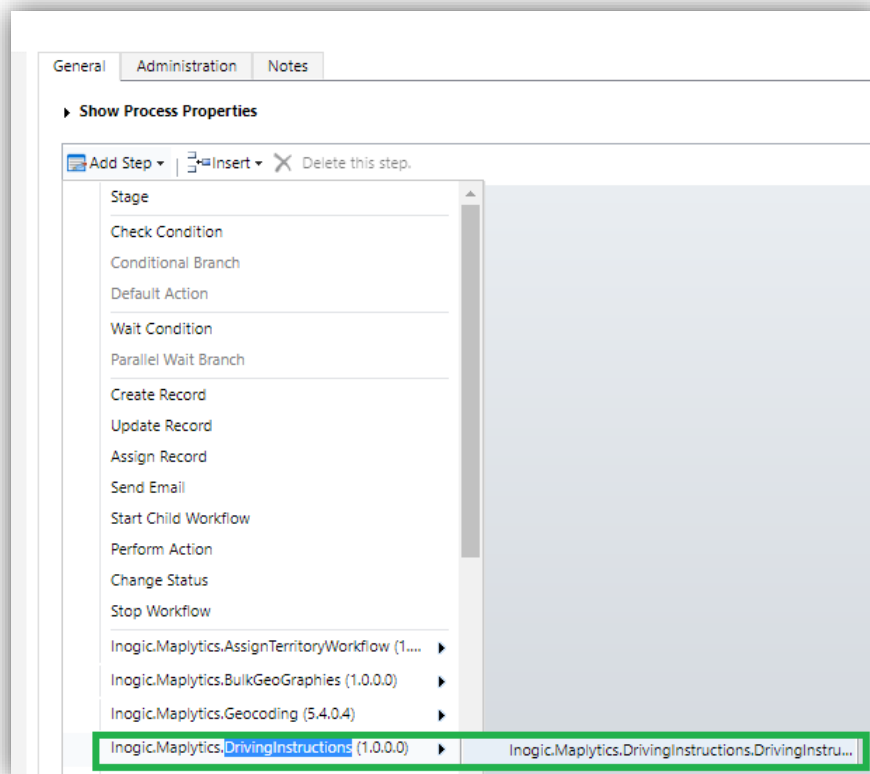
☒ Record fields change [View](#)

☐ Record is deleted

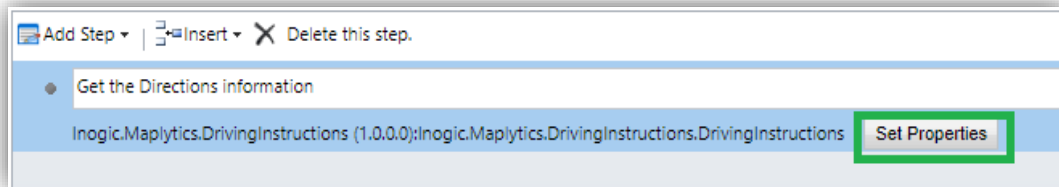
10. For the 'Record fields Change' option, select all of the address fields to ensure the address is retrieved when any of the address fields is changed as shown below;



11. Select the **Inogic.Maplytics.DrivingInstructions** workflow assembly from the Add step menu as shown below;



- Click on **'Set Properties'** and set the address parameter as shown in below screenshot for the workflow assembly;



The screenshot shows the 'Set Custom Step Input Properties' dialog box for the 'GetDirection' process. The dialog has a table for input properties and a 'Form Assistant' panel on the right.

Property Name	Data Type	Required	Value
FromAddress	Single Line of Text	Required	{Address 1: Street 1(Account)}
ToAddress	Single Line of Text	Required	{Address 1: Street 1(Primary Co
TravelMode	Single Line of Text	Optional	Driving
DistanceUnit	Single Line of Text	Optional	Mile

The 'Form Assistant' panel on the right includes sections for 'Dynamic Values', 'Operator:', 'Look for:', and 'Address 1'. The 'Operator:' section is set to 'Set to'. The 'Look for:' section is set to 'Primary Contact (Contact)'. The 'Address 1' section is set to 'Address 1'. There is an 'Add' button at the bottom of the panel.

In **'FromAddress'**: Select the address fields of the entity that you want the direction **'From'**. Select the all address field i.e. Street1, Street2, and City etc. and ensure sure you keep space between two fields.  
 {Address 1: Street 1(Account)} {Address 1: Street 2(Account)} {Address 1: City(Account)} {Address 1: State/Province(Account)}

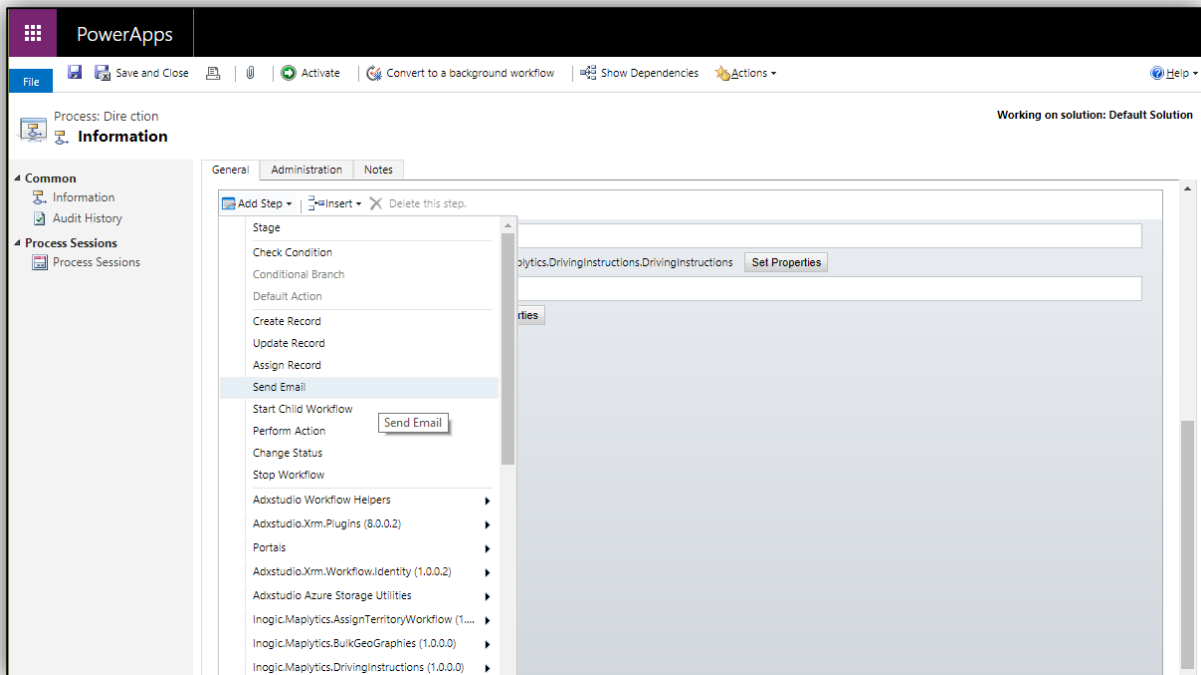
In **ToAddress**: Select the address fields of the entity that you want the directions **'To'**. Select the all address field i.e. Street1, Street2, and City etc. and ensure to keep space between two fields.

**Travel Mode**: Select the Travel mode. For example (Driving, Walking, Transit). If you do not specify the Travel mode then it will take Driving mode by default.

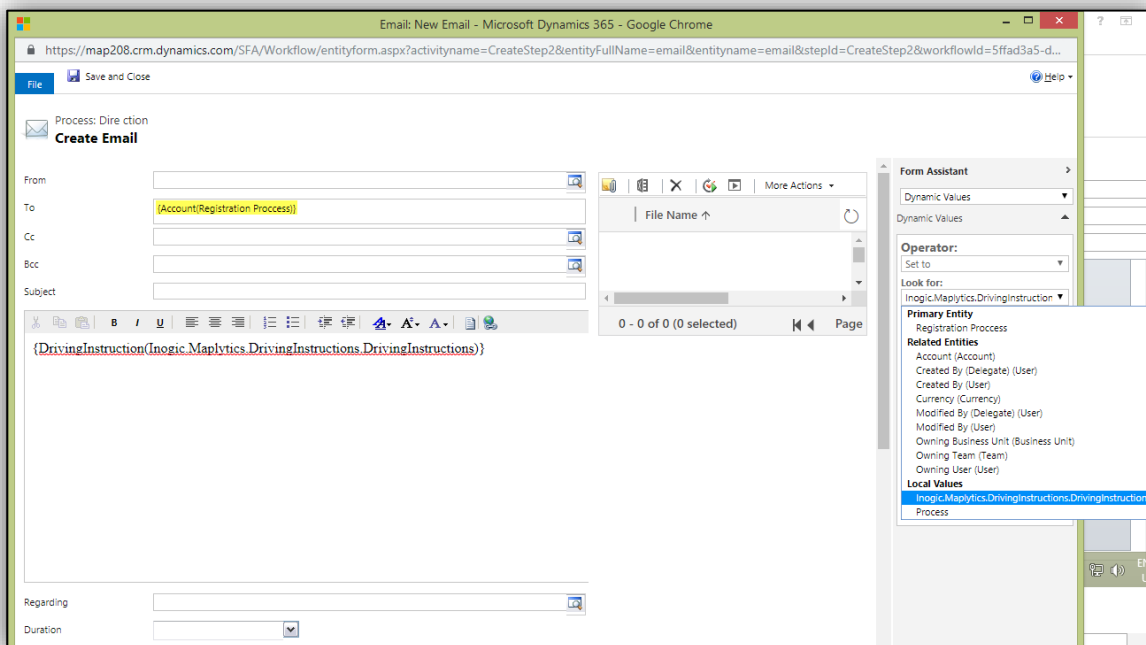
**Distance Unit**: Select the Distance unit. For example (Mile or mi, Kilometer or km). If you do not specify the unit then it will take Kilometer as default unit.

- Click on add step -> Send Email -> Click on set property

## Maplytics™ – User Manual



Click on Email body -> Select Look for -> local value “inogic.Maplytics.DrivingInstructions.DrivingInstruction”



Select DrivingInstruction for plan text or DrivingInstructionHTML for html page. Click on save and close.



14. The driving instructions will be returned both in HTML and Plain Text format as an output parameter to this workflow. User can use either of them. For example we have used HTML formatted direction instruction in Email here.






<b>From Address:</b> 1 NW 50th Ln Ocala FL 34482 USA	
<b>To Address:</b> 4350 US-98 Frostproof FL 33843 USA	
<b>Total Travel Distance:</b> 208.45 miles	
<b>Total Travel Duration:</b> 3 hrs 25 min	
Instruction	Distance
Depart NW 50th Ln toward NW 115th Ave	0.707
Turn right onto NW 115th Ave	0.613
Turn right onto NW Highway 464B / CR-464B	1.692
Keep straight onto NW 110th Ave	0.127
Turn right onto US-27 S / SR-500 S	11.539
Take ramp right for I-75 South toward Tampa	40.409
At exit 328, take ramp left for Florida's Turnpike South toward Orlando / Turnpike	30.912
At exit 289, take ramp right for US-27 toward Cleremont / Taveres	70.493
Turn left onto W Main St / CR-17	2.715
Turn right onto 10th St N	0.163
Road name changes to US-27 ALT / SR-17 / 10th St S	9.455
Turn left to stay on US-27 ALT / SR-17 / E Main St	18.945
At roundabout, take 2nd exit	16.91
Bear right onto McLeod Rd	0.353
Keep straight onto N Palm Ave	1.992
Turn left onto W 1st St	0.202
Arrive at Frostproof, FL	0

## Maplytics Batch Processing Tool

The workflows for Geocoding and Territory Assignment designed can be used on a day-to-day basis for addresses that are changed or added occasionally. However, for bulk geocoding/territory assignment on data, we recommend using the Batch Processing tool. This tool ensures that the bulk geocoding on records is handled in single batch. While in the territory assignment, this tool helps to assign the respective territories to all the selected records based on their Latitude and Longitude values.

**Note: To run this tool, the user needs to make sure that machine has Microsoft .net framework 4.0 and Maplytics installed in Dynamics CRM.**

To run the tool, Extract the Batch Processing tool .zip file and run the **BatchProcessingTool** application.

Name	Type	Compressed size
 BatchProcessingTool	Application	104 KB
 BatchProcessingTool.exe	XML Configuration File	1 KB
 Microsoft.Crm.Sdk.Proxy.dll	Application extension	58 KB
 Microsoft.IdentityModel.dll	Application extension	360 KB
 Microsoft.Xrm.Sdk.dll	Application extension	146 KB

### Executing Batch Processing Tool

#### Connection Details:

Please enter the CRM details on this screen. The users have to enter the following details:

**Deployment model:** The user can select either of the options given in below screenshot depending on their deployment.

**CRM Server:** Please enter the serverurl of CRM. For example, ***http://<servername>:<port>*** or ***https://<orgname>.crm.dynamics.com***

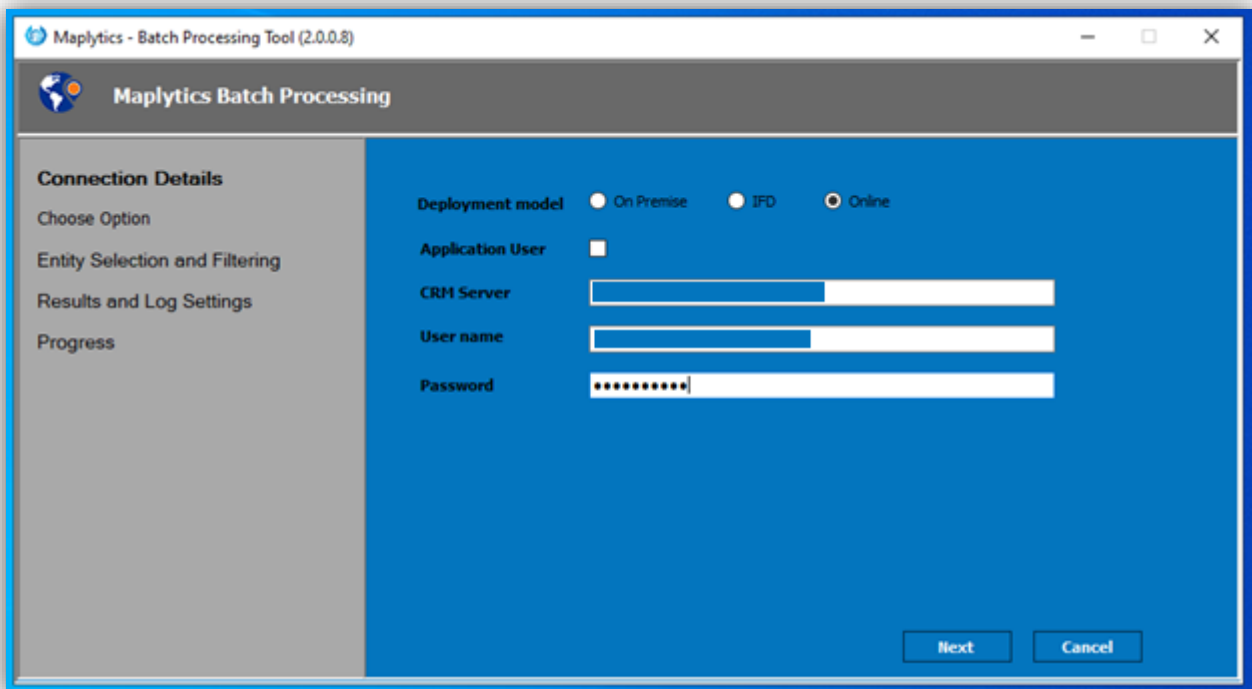
**Organization:** If the deployment model is '**OnPremise**' then the user has to specify the organization name. For other deployment models leave this blank.

When the user enters the server URL in case of On-Premise deployment model, the organization list will be auto-populated with the organizations available in CRM. Select the organization for which Maplytics is to be or already has been installed.

**Username:** Username of a valid CRM user. For example: mollyc@CRM166504.onmicrosoft.com  
In case of On-Premise deployment model, the organization list will be auto-populated with the organizations available in CRM. Select the organization for which Maplytics is to be or already has been installed.

**Password:** Password of CRM user.

## Maplytics™ – User Manual



Maplytics - Batch Processing Tool (2.0.0.8)

**Maplytics Batch Processing**

**Connection Details**

Choose Option

Entity Selection and Filtering

Results and Log Settings

Progress

**Deployment model** ☐ On Premise ☐ IFD ☒ Online

**Application User** ☐

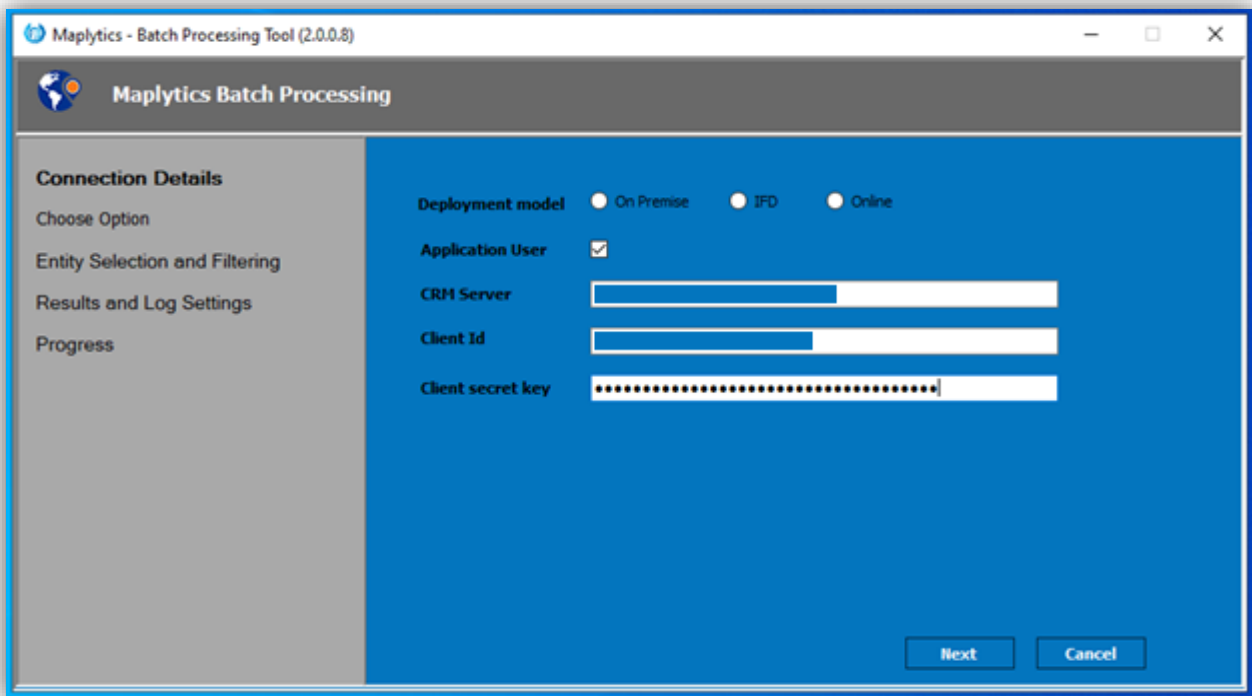
**CRM Server**

**User name**

**Password**

**Next** **Cancel**

User can also use their Client Id and Client secret key to log in for their respective CRM using Application user.



Maplytics - Batch Processing Tool (2.0.0.8)

**Maplytics Batch Processing**

**Connection Details**

Choose Option

Entity Selection and Filtering

Results and Log Settings

Progress

**Deployment model** ☐ On Premise ☐ IFD ☒ Online

**Application User** ☒

**CRM Server**

**Client Id**

**Client secret key**

**Next** **Cancel**

## Maplytics™ – User Manual

**Choose Option:** Here, the user can make selection whether they would like to run this tool for Geocoding (Batch Geocode) or Territory Assignment. In this example, we have chosen Batch Geocode as shown below:

Maplytics - Batch Processing Tool (2.0.0.8)

Maplytics Batch Processing

Connection Details

**Choose Option**

Entity Selection and Filtering

Results and Log Settings

Progress

☒ Batch Geocode

☐ Territory Assignment

Next

### Entity Selection and Filtering:

Please find the details of the same below:

- **Entity:** Select the entities on which the user would like to run this tool.
- **Views:** Once the user selects the entity, all the views defined for this entity are populated in the list of views. Select the required view.

Maplytics - Batch Processing Tool (2.0.0.8)

Maplytics Batch Processing

Connection Details

Choose Option

**Entity Selection and Filtering**

Results and Log Settings

Progress

Entity: Lead

Views: My Open Leads OR All Records ☐

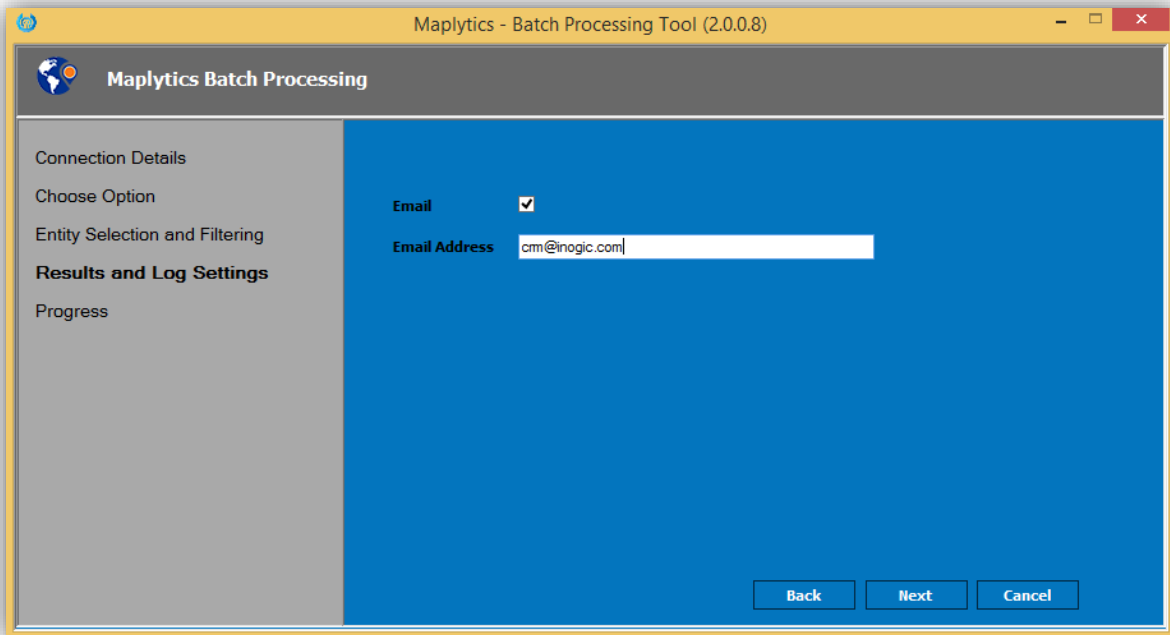
Add

Entity Name	View Name	Action
Account	Active Accounts	Remove
Lead	My Open Leads	Remove

Back Next Cancel

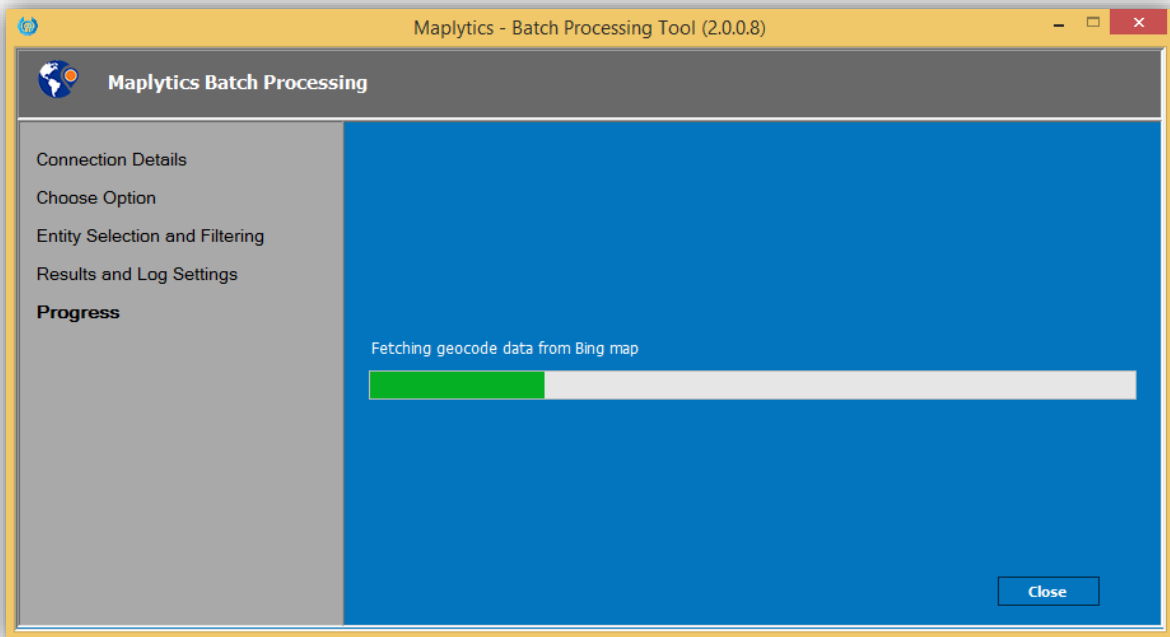
### Results and Log Settings:

Since this is executed as a batch process in the background, enter the email address, if the users would like the job results to be mailed to them.



### Progress :

In this section, the user can see the progress of the geocoding process.



**Note: The Batch Processing Tool takes time to process based on the number of records selected. Please do not close the window until this process is completed.**



### Record Summary:

#### Geocoding:

**Bing Status:** This shows the number of the records for which the geocoding from Bing maps were successful or failed.

**CRM Status:** This shows the number of the records for which the updation of geocoordinates (Latitude & Longitude) to the respective CRM records were successful or failed.

After completing the geocoding process, the user can download the results. The results will be downloaded in CSV format. User can check the columns of CRMDescription and BingDescription in the result to check the reason for failure of processes on the records.

Maplytics - Batch Processing Tool (2.0.0.8)

Maplytics Batch Processing

Connection Details  
Choose Option  
Entity Selection and Filtering  
Results and Log Settings  
**Progress**

**Records Summary**  
Total processed records: 2088

**Bing Status**  
Succeeded: 2088      Failed: 0

Entity	View Name	Succeeded	Failed
Account	Active Accounts	1044	0
Lead	My Open Leads	1044	0

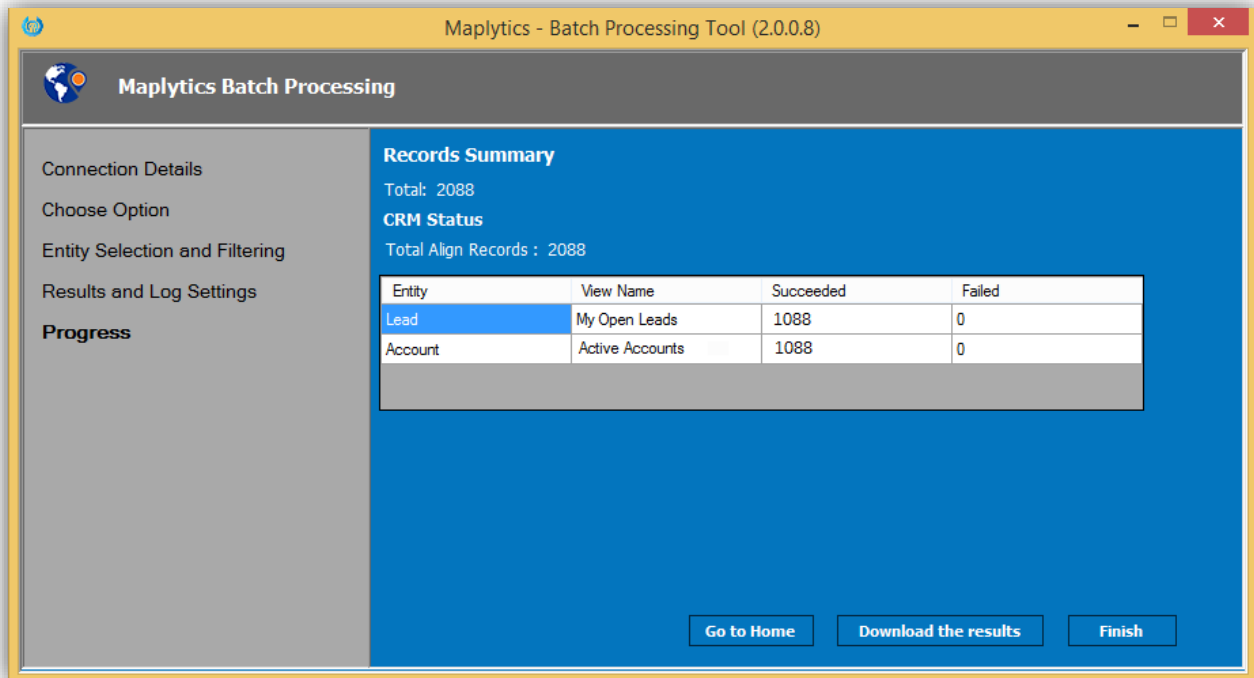
**CRM Status**  
Succeeded: 2088      Failed: 0

Entity	View Name	Succeeded	Failed
Account	Active Accounts	1044	0
Lead	My Open Leads	1044	0

Go to Home      Download the results      Finish

### ***Territory assignment:***

**CRM Status:** This shows the number of the records for which the updation of Territories for the respective CRM records were successful or failed.



### **Note:**

1. If a user selects 'All records' for an entity, then a view for that entity cannot be selected.
2. A user cannot select an entity with a same view twice.
3. If the user adds an entity with a view and then selects 'All Records' for the same entity, it will remove all the views selected for that entity with the user's permission.
4. All of the above instructions apply for running Batch processing tool for Territory Assignment.


## Set colors and pushpins for Categories

The users now have the ability to define colors and pushpins to visualise the categorised pushpins on map. This way user will be able to differentiate between the records that belong to different categories. To set the pushpins and colors define the color of the category attribute, the users have to follow the below steps:

- Go to **Settings > Entity Maps** and select the entity map of the entity for which the user needs to define the color and pushpins.

The screenshot shows the 'ENTITY MAP' configuration page for the 'account' entity. The page has a header with a menu icon and the title 'ENTITY MAP account'. Below the header are several tabs: 'General', 'Attribute Mappings', 'Tooltip Mapping', 'Category Configuration', 'Configuration', 'Advance Settings', and 'Related'. The 'General' tab is selected. It contains a form with the following fields:

- Entity Name \***: A text box containing 'Account'.
- Link To**: A text box.
- Total Records**: A label with a lock icon and the value '741'.
- Create New Record**: A label with the value 'Yes'.
- Geocoded Records**: A label with a lock icon and the value '715'.

- Click on the plus (+) icon of the Category Configuration subgrid to open the new Entity Category form. Select the name of the category attribute in the Category text box and save the form.
- The user can select only OptionSet, Two options, Numeric, String, Lookup and Money attributes to define category colors.
- Colors and shapes will be auto-populated, the user can also set their own preference.
- The user can click on the  'AutoSet' button to set random colors as well as pushpins for all the values, or the user can click on the Discard button to cancel the changes.

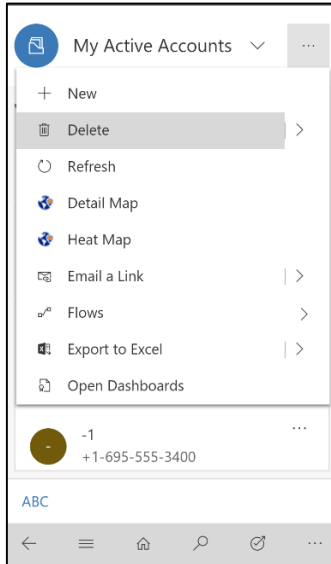
The screenshot shows the 'revenue' Entity Category form. The page has a header with the title 'revenue Entity Category'. Below the header are several tabs: 'General', 'Category Mapping', and 'Related'. The 'Category Mapping' tab is selected. It contains a 'Range List' table with the following columns: 'Start Range', 'End Range', 'Color', 'Pushpin', and two empty columns. The table has four rows:

Start Range	End Range	Color	Pushpin		
Blank		Red	Pushpin		
>= 0	< 5000	Green	Pushpin	+	×
>= 5000	< 10000	Dark Red	Pushpin	+	×
>= 10000		Dark Green	Pushpin		

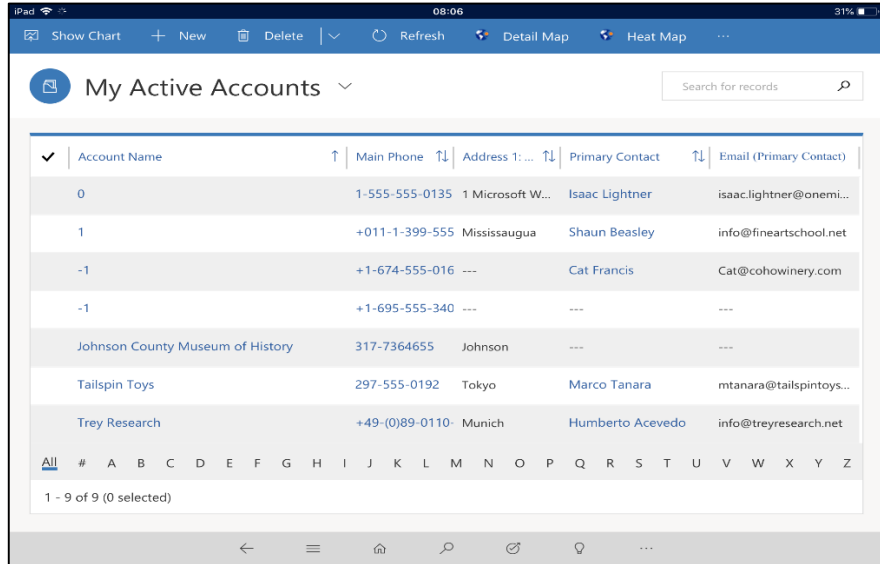
Below the table is a vertical toolbar with icons for 'AutoSet' (a crossed wrench and screwdriver), 'Discard' (a trash can), and 'Save' (a checkmark). A hand cursor is pointing at the 'AutoSet' button.

## Maplytics – Tablet / Mobile

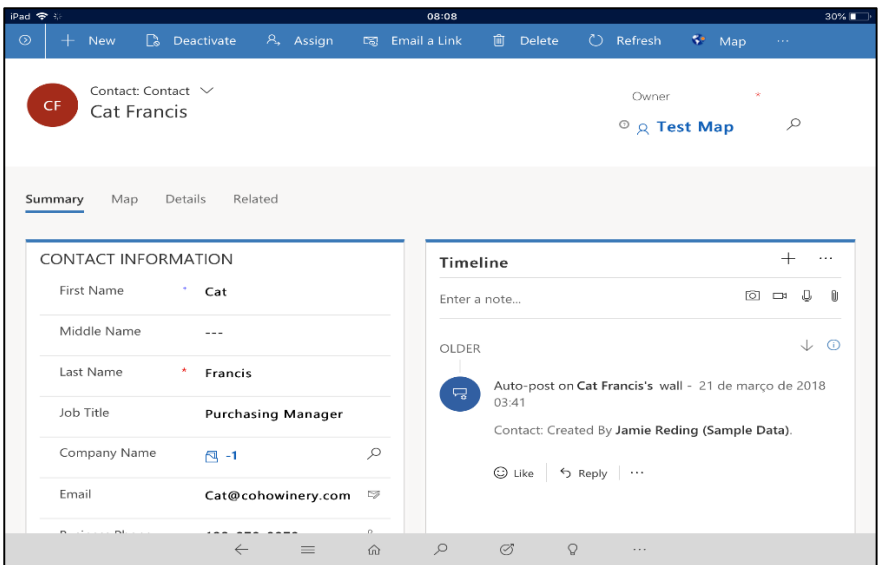
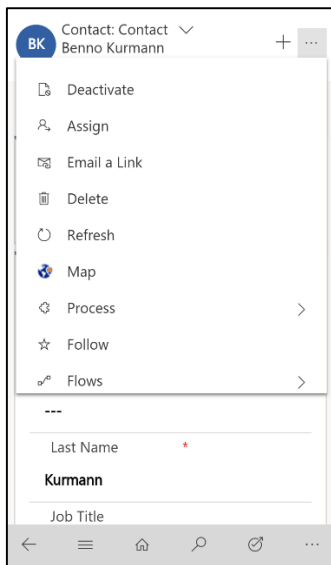
For Dynamics 365 v9.x, Maplytics can be accessed from the Entity homepage and entity form using the 'Detail Map', 'Heat Map' and 'Map' button respectively.



Mobile

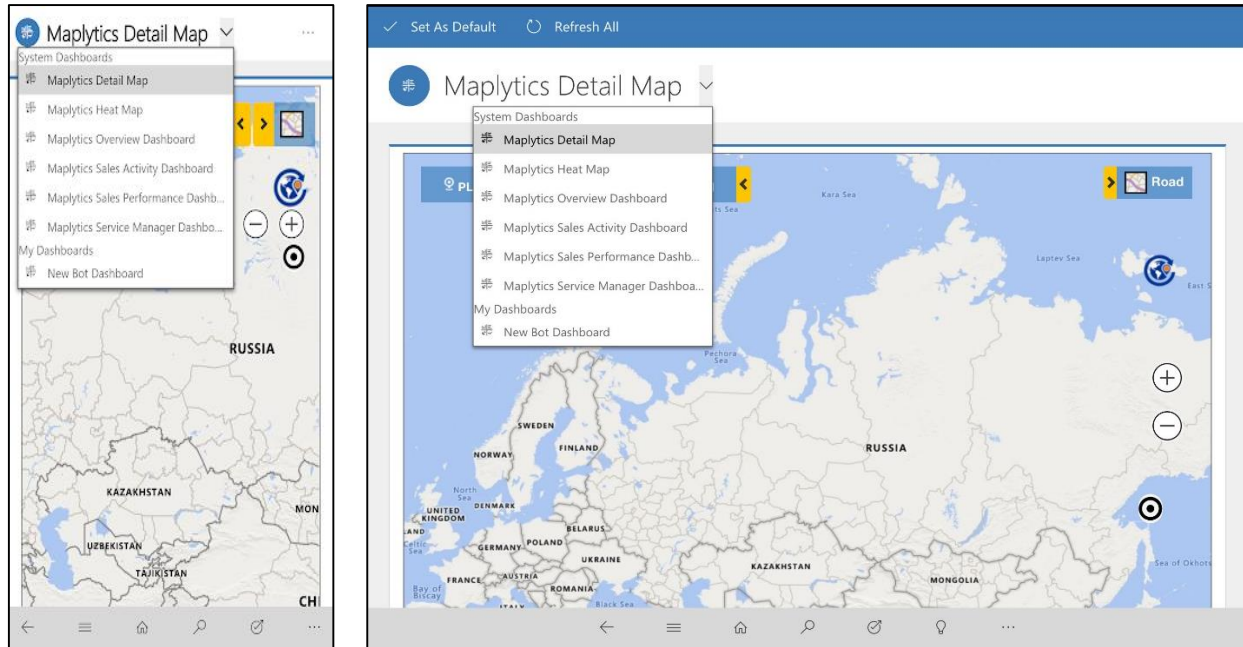


Tablet



## Maplytics™ – User Manual

Maplytics can also be accessed from the Dynamics 365 App for Phones and Tablets (both on Dynamics 365 v8.2 and v9.x) using a dashboard for detail map. To open Detail map; **Go to Dashboard > Maplytics Detail Map** as shown below:



### Detail Map

The Detail map consists of the following components. There are five ways to plot the data on Map, similar to the Detail Map on browser:

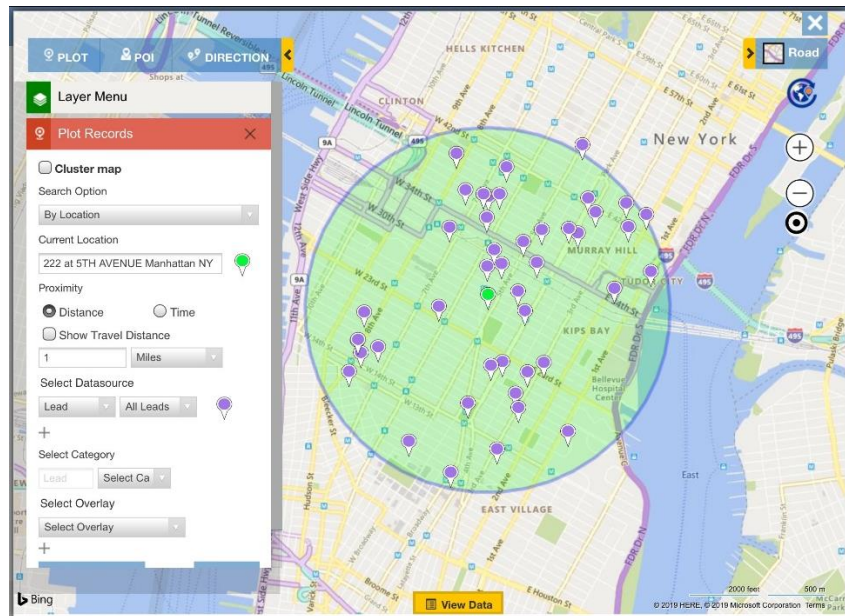
- By Location
- By Region
- By Drawing
- By Territory
- By Template



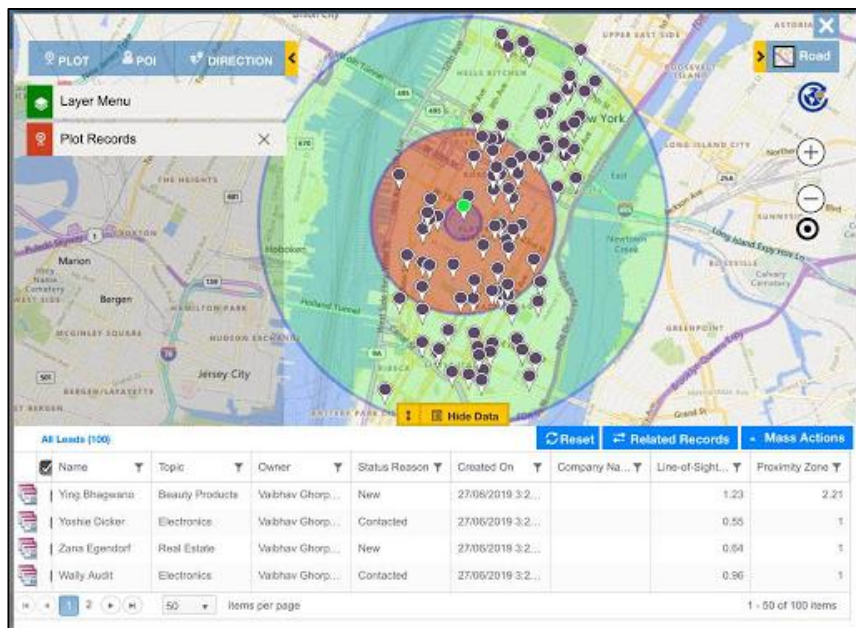
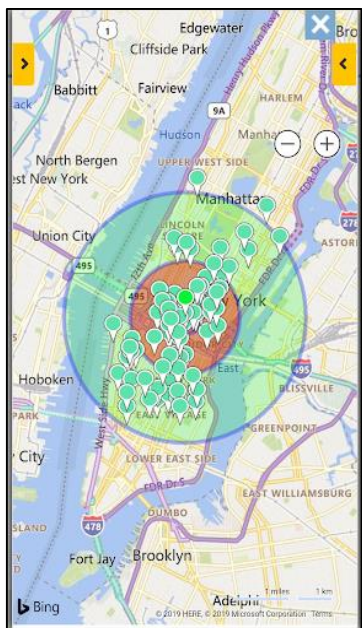
## Maplytics™ – User Manual

### Proximity

Enter the radius for the proximity search. The Proximity can be provided in either Miles or Kilometers.

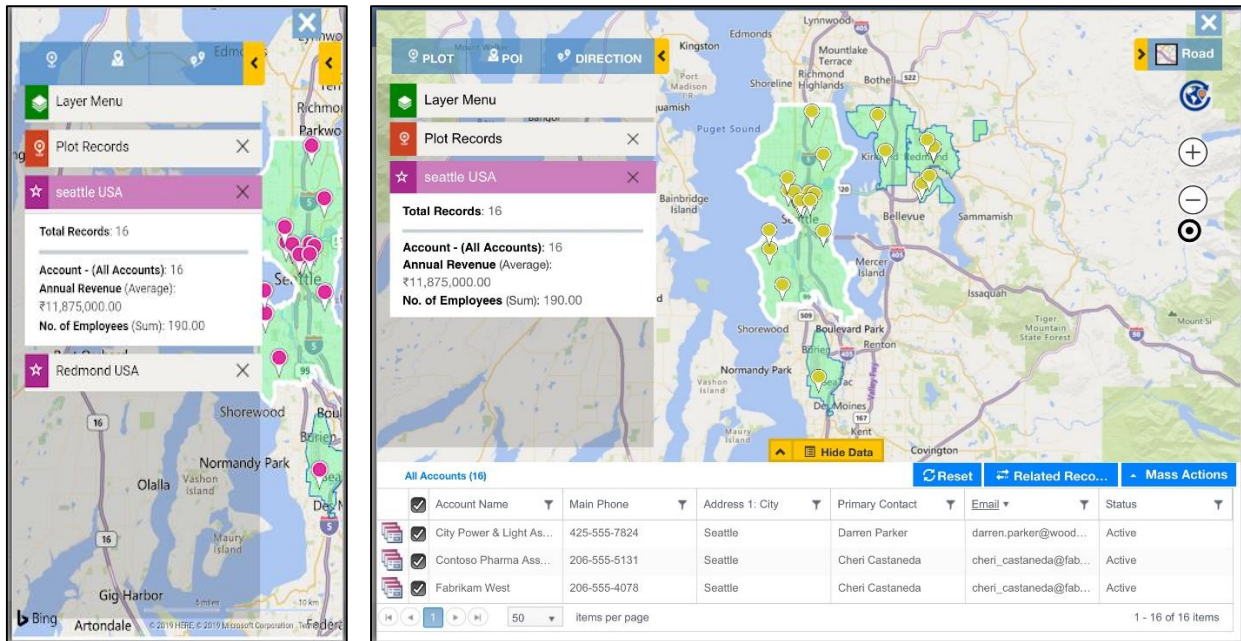


### Concentric Proximity Search



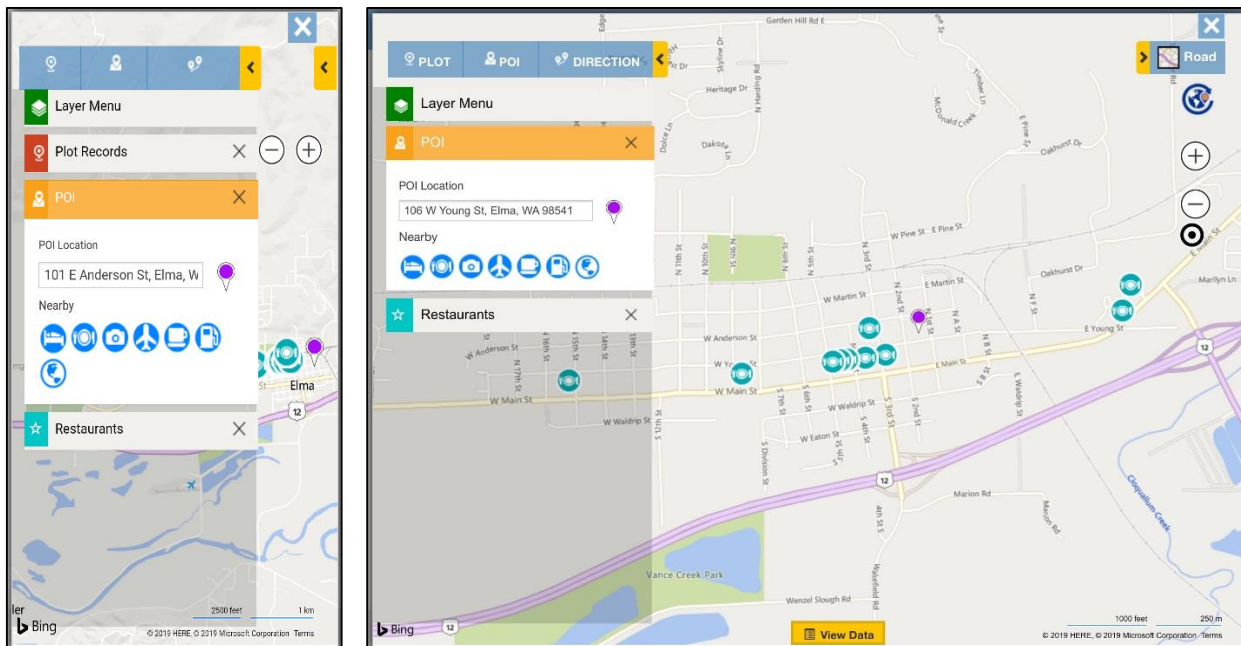
## Summary Card

Now users can also get the aggregated information for a particular closed shape on the map with Summary Card.



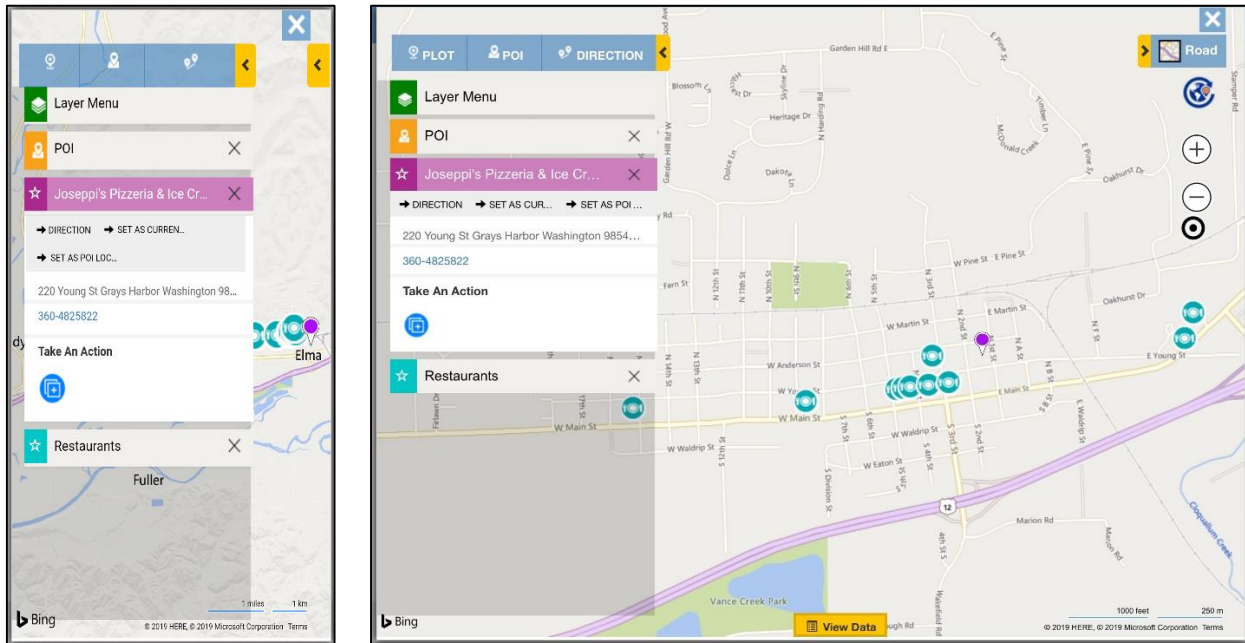
## Search POI

Ability to search for any Points of Interest (POI) like ATMs, restaurants, hotels, coffee shops, etc. in the vicinity. This will be plotted alongside the CRM data.



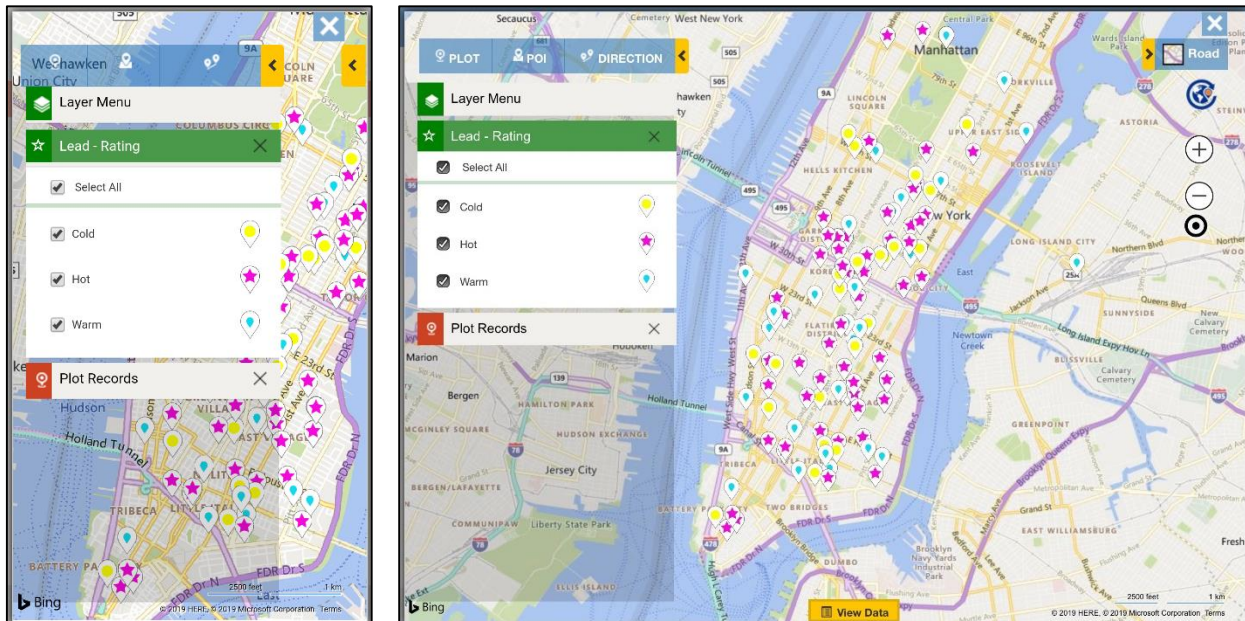


## Maplytics™ – User Manual



### Category Filter

User can categorize the data on the basis of an attribute of the Entity




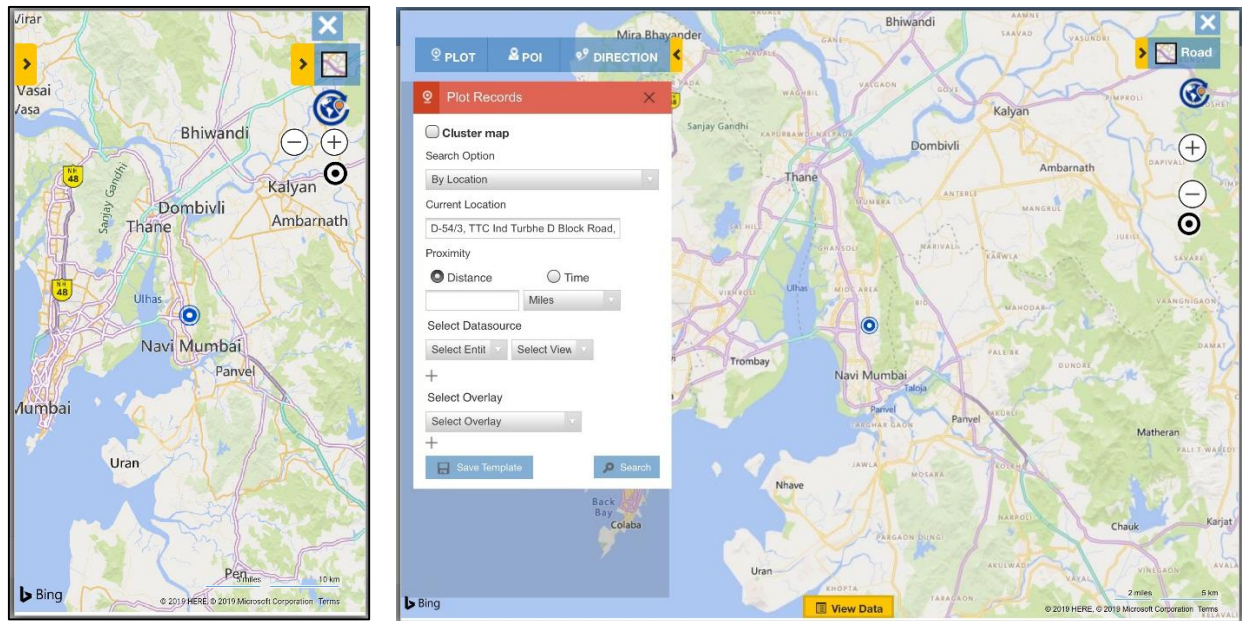
## Maplytics™ – User Manual

### Current Location

This is used in combination with Proximity to specify the center point for the proximity search. By default, this field displays the address stored in the Maplytics Personalized record of the logged in user.

### Set GPS Location as the current location

The user can also locate the GPS location of phone/tablet devices using  button.



GPS location is represented by 'Blue' circle on the map. It will automatically update the user's current location, making it easier to perform proximity (Near-Me) searches.

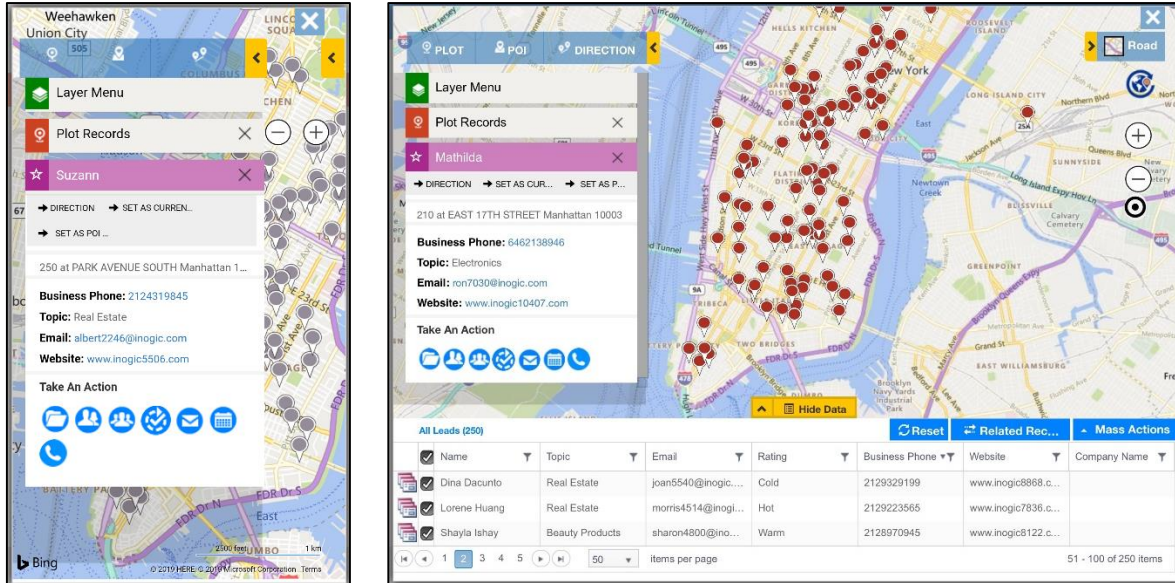
**Note: Please ensure the following points for the GPS functionality to work:**

- Provide 'Location' permission to Dynamics 365 App in phone / tablet device
- GPS location is turned ON of respective devices
- 'User Content and Location' is tuned ON in Dynamics 365 App



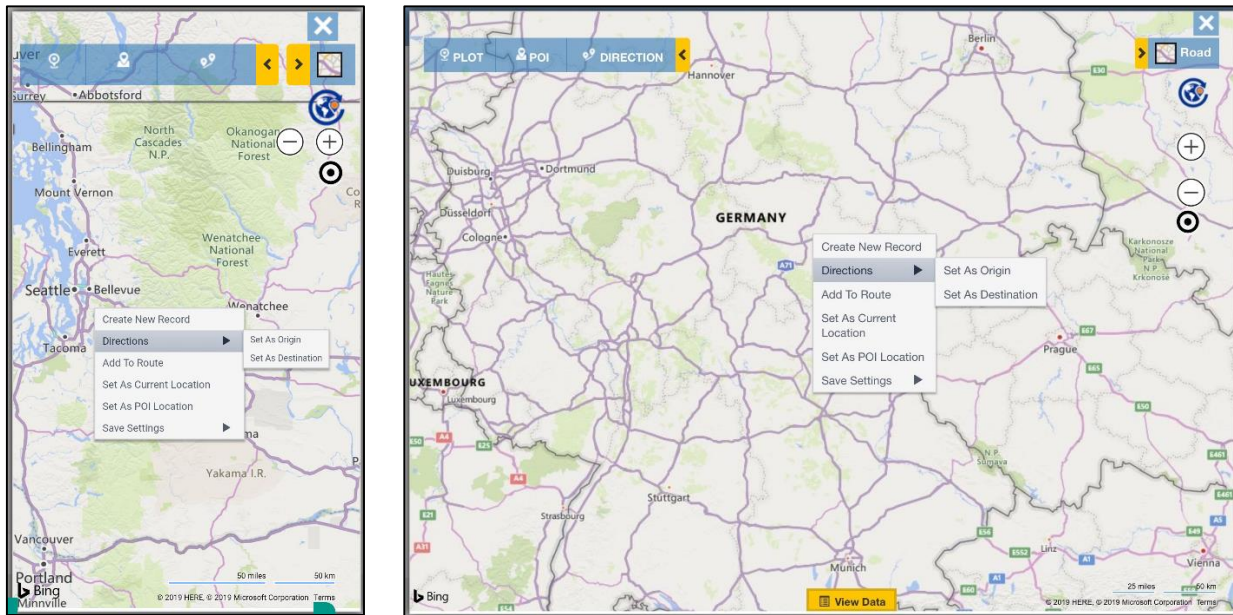
## Tooltip Card

Every Pushpin will display the record name, address, as well as the contextual data defined in the tooltip section of the Maplytics Configuration. The user can open the record, change owner and run workflow using the available quick actions button.



## Contextual Menu

To get a contextual menu on the map, long press anywhere on the map. Pushpin Contextual menu provides the following additional options. These option provides commonly used features in Maplytics like Set as Current Location, Origin, and Adding to Route, etc.



### Set As Origin:

Selecting this option will set the address of the pushpin as the start location of the route.

### Set As Destination:

Selecting this option will set the address of the pushpin as the end location of the route.

### Add to Route:

This option will set the address of the pushpin as a middle waypoint of the selected route. For example, if the users already have Point A and Point B selected as their route, and click on the **Add To Route** option, then the Point B will become Point C, and the address of the selected pushpin will become the Point B of their route.

### Set As Current Location:

This option is used to set the address of the pushpin as the current location, which can be used for proximity search. For example, if the user wants to plot all the leads that are within a radius of 100 miles from a particular record then the user can click on the **Set As Current Location** option to set the address as the current location and then the user can plot the records around this location.

***This option also removes the additional step to type the current location manually for the proximity search.***

### Set As POI Location:

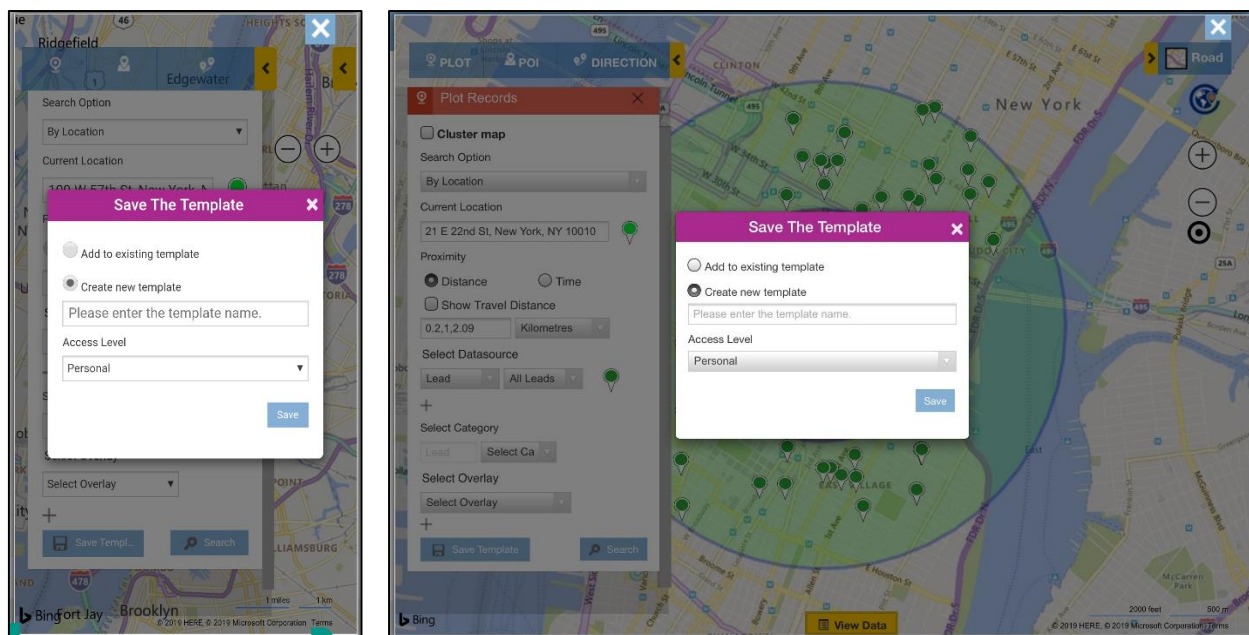
This option helps the user to set the center point for the Point of Interest (POI) searches like ATMs, restaurants, Airports, etc. Once this location is set as the POI location, the user can search for different POI around this location.

### Manage Territory:

The user can manage the territory, i.e., assign/re-assign territory from the map using this option.

### Save Template:

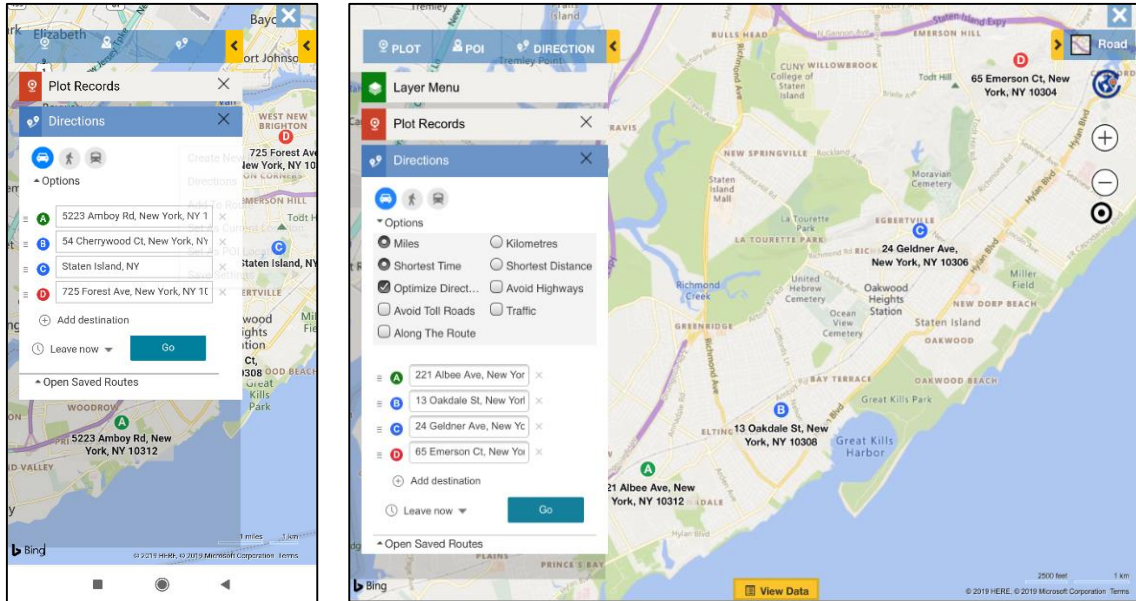
User can save the plotted search criteria as a template, so as to open the template directly instead of searching on the map again.



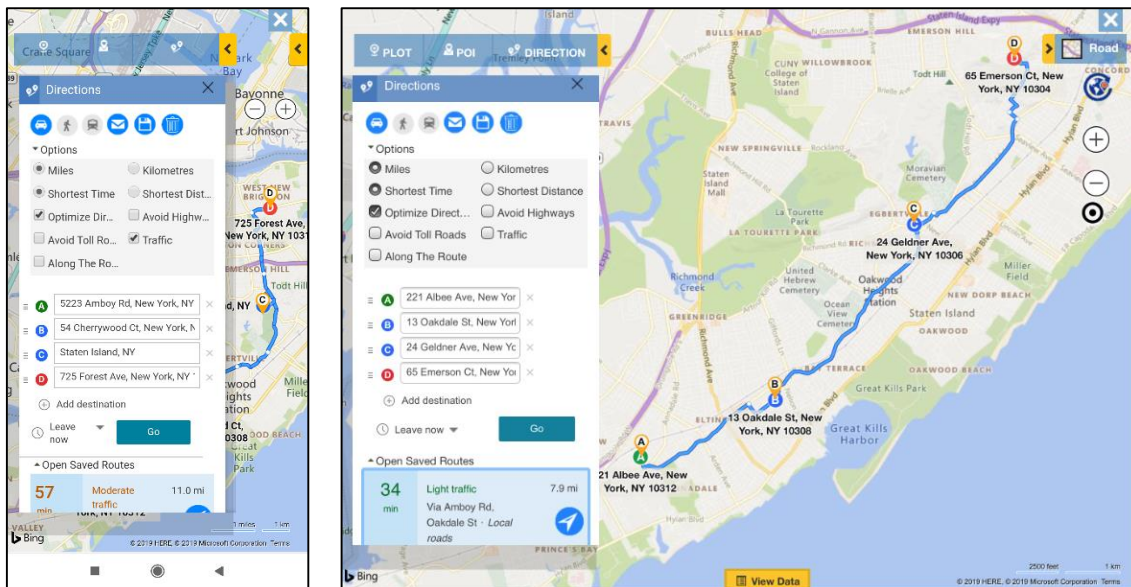


## Routing – Tablet / Mobile

Another essential feature of Maplytics is Routing across multiple waypoints. Using the Contextual Menu options explained above, the users can add multiple waypoints to their journey. At given point in time, the users can add **maximum 25 waypoints in direction**.



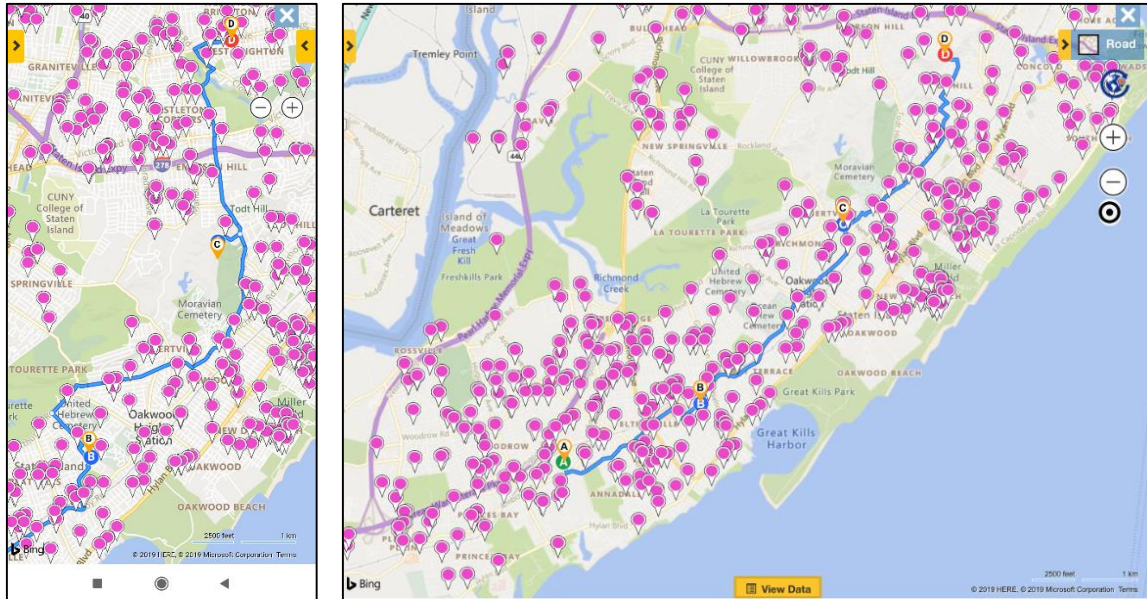
Once multiple waypoints have been added, click on **Go** button to bring up the Routing Screen shown below.



## Maplytics™ – User Manual

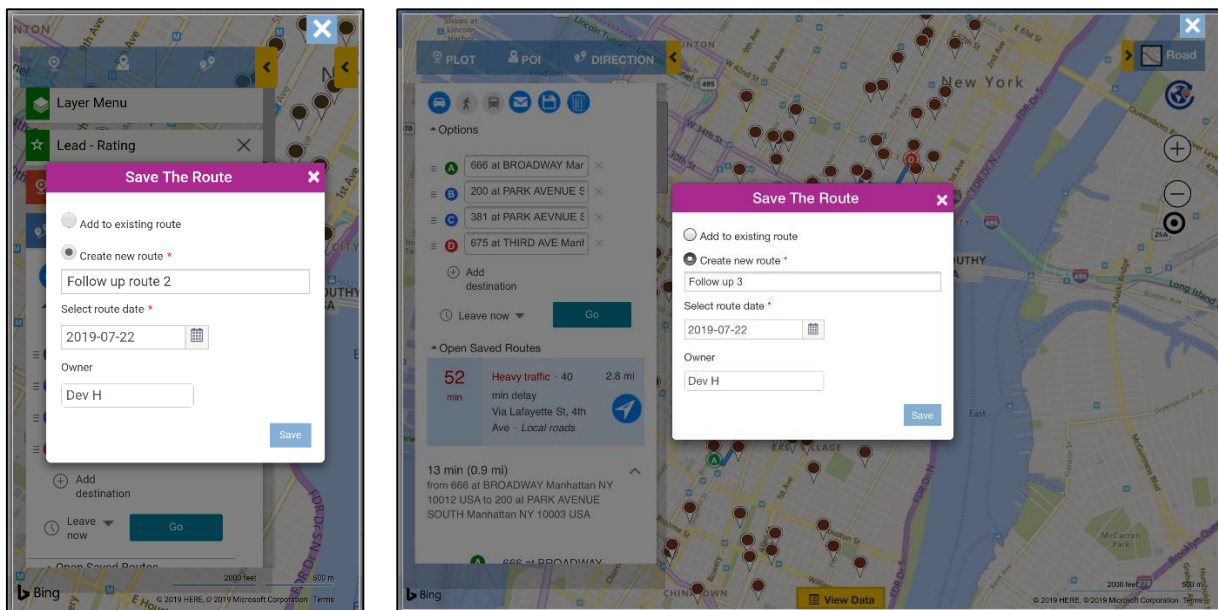
### Merged Route and Plot View

When the user plots the data and then creates a route, both the plotted data and the route will stay on the map. This makes it easy for the user to add more waypoints to the route without switching between Plot and Directions card. The route can be cleared using the 'Clear Route' button.



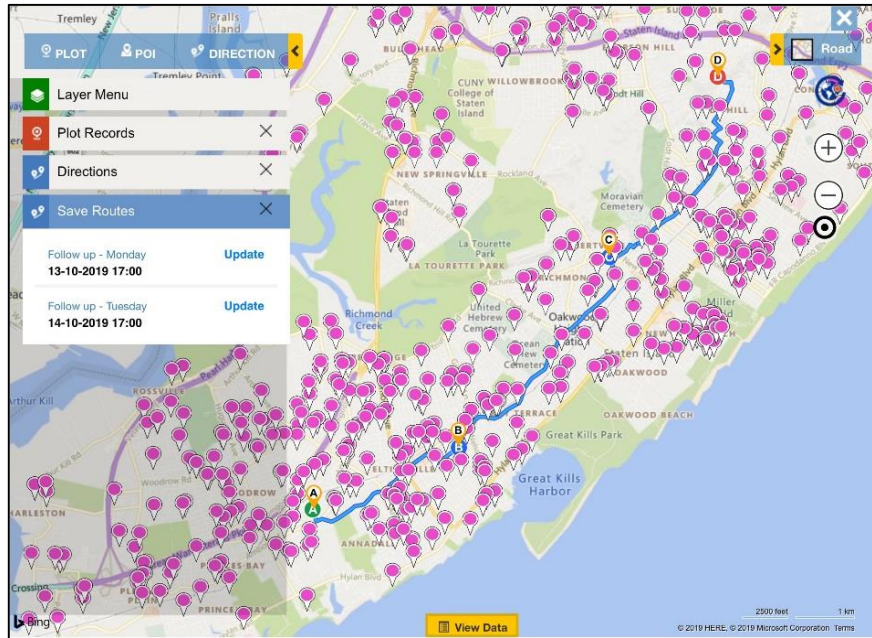
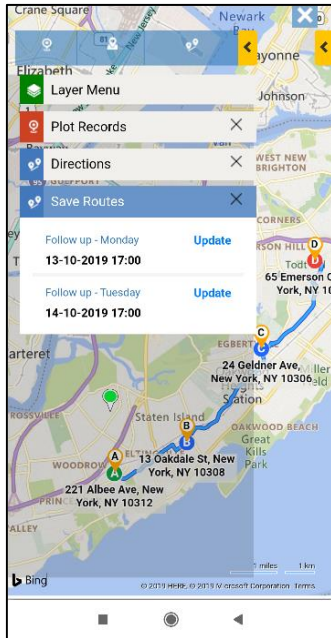
### Save Route and Plot Saved Routes

Users can now save the route from the Dynamics 365 App for Phones and Tablets and later use the 'Open Saved Route' feature to plot the saved routes.

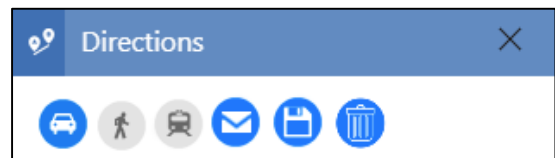




## Maplytics™ – User Manual

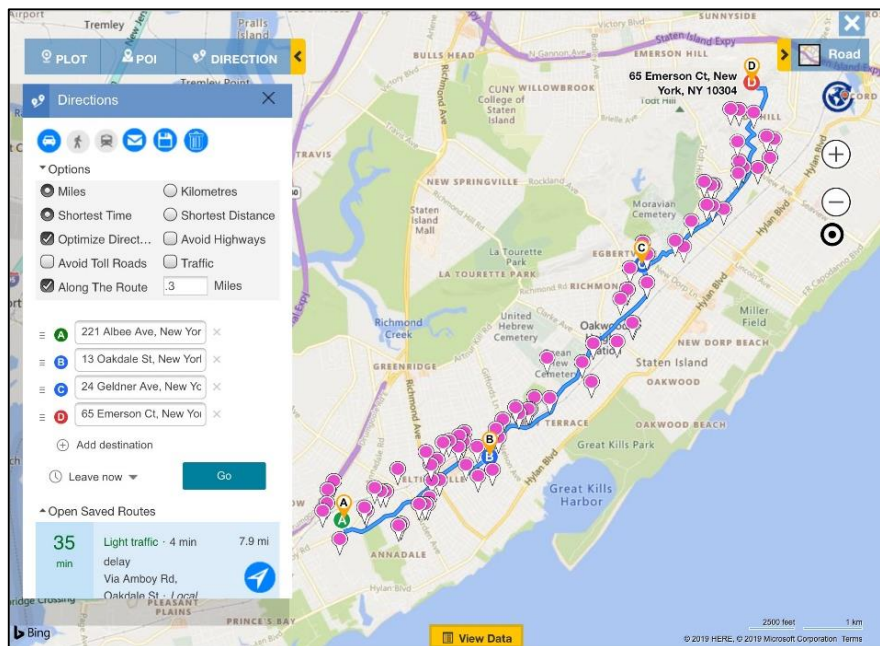
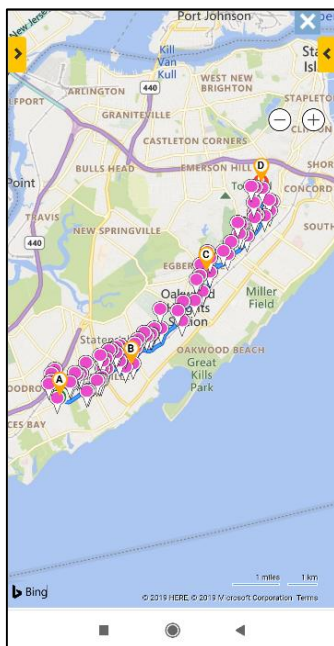


Email route - The user can email route to any of the Dynamics CRM records using email route option.



### Along the Route Search

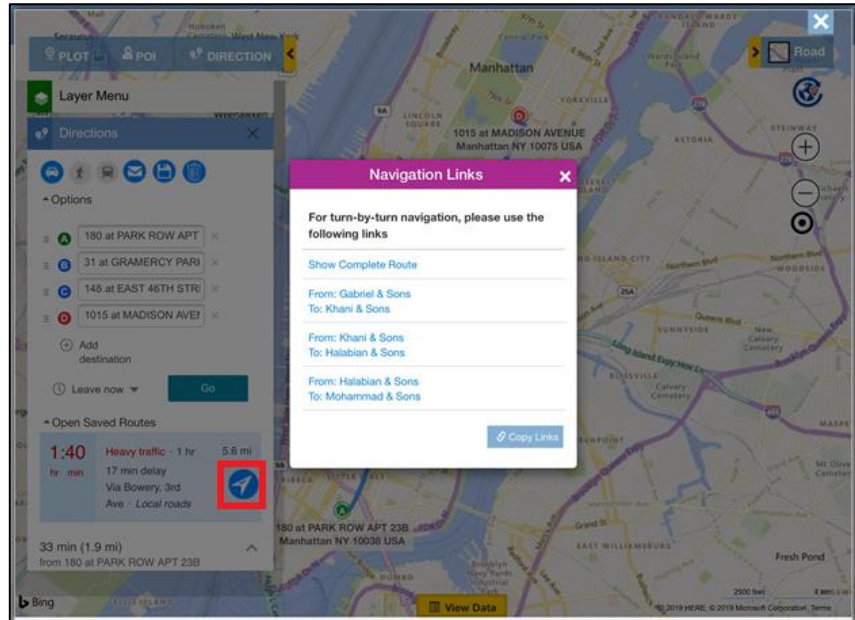
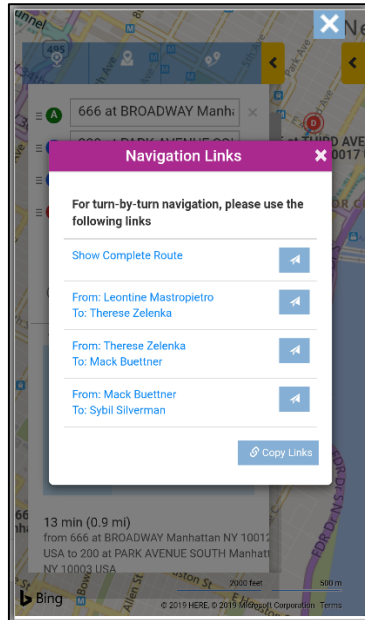
The user can also search the along the route records the same way as on the Browser.



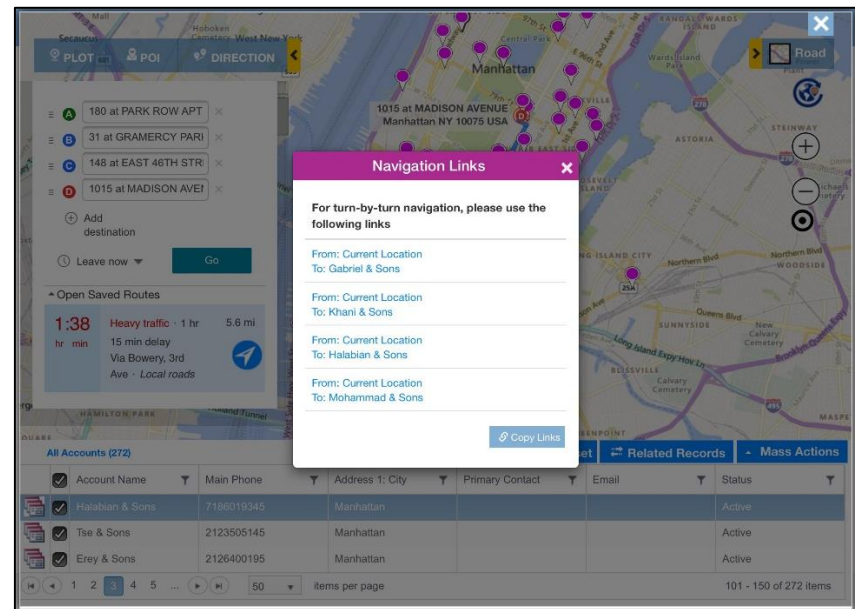
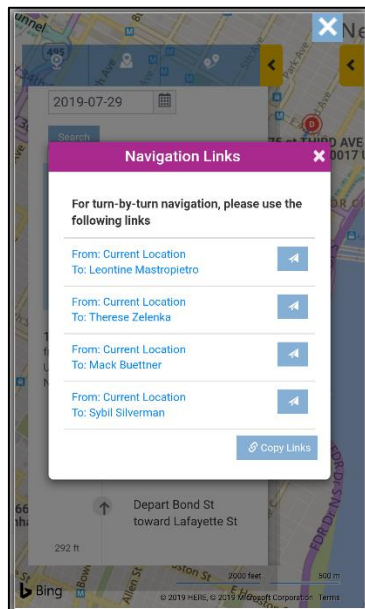
## Maplytics™ – User Manual

### Route Redirect and Copy Navigation Links

#### Redirect with Google Maps



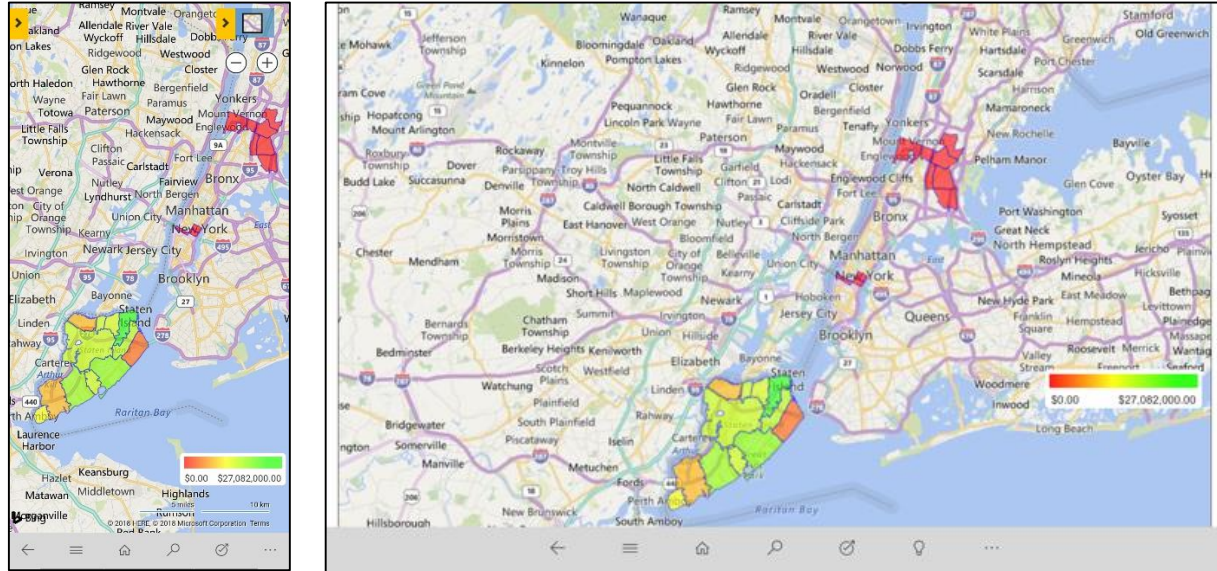
#### Redirect with Waze





## Heat Map – Tablet / Mobile

For Dynamics 365 v9.x, Maplytics can also from the Entity homepage and entity form using 'Heat Map'. When clicked on Heat Map button, it opens the heat map.

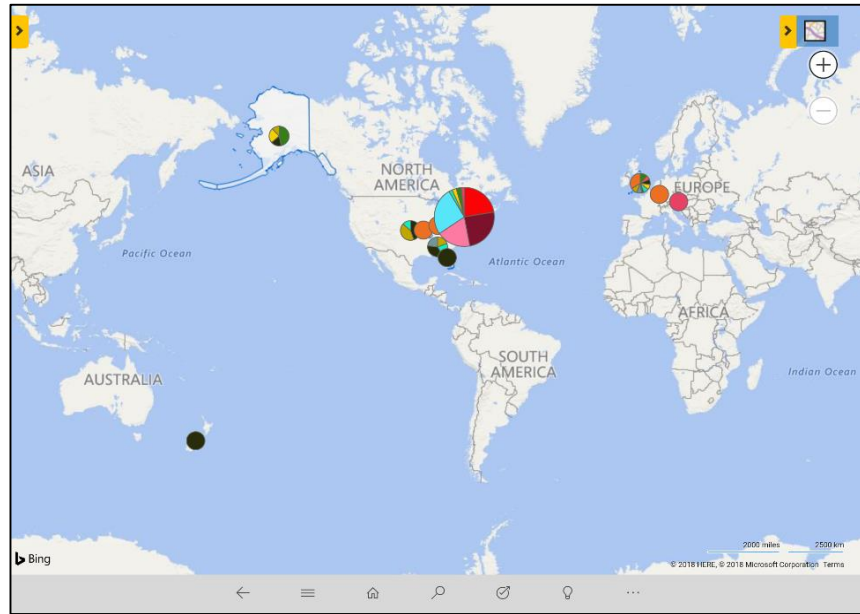
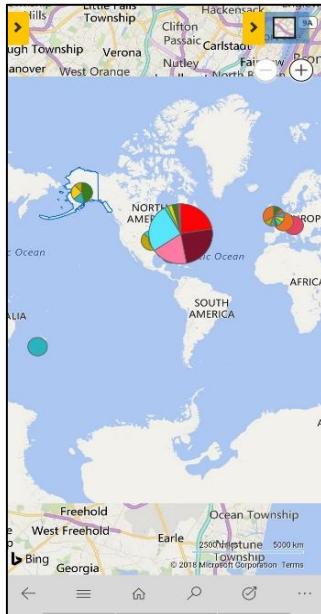


## Summary card

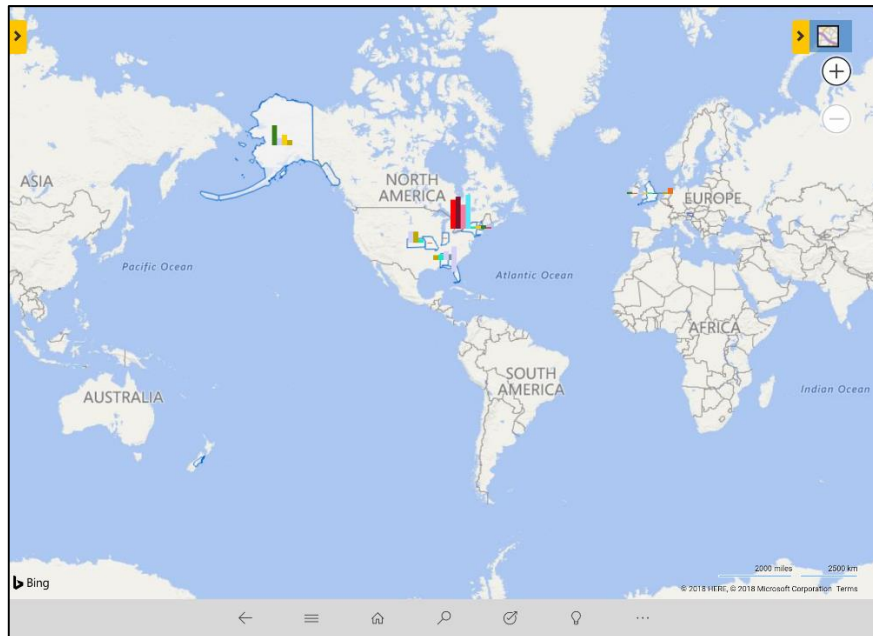




## Pie chart in Heat Map



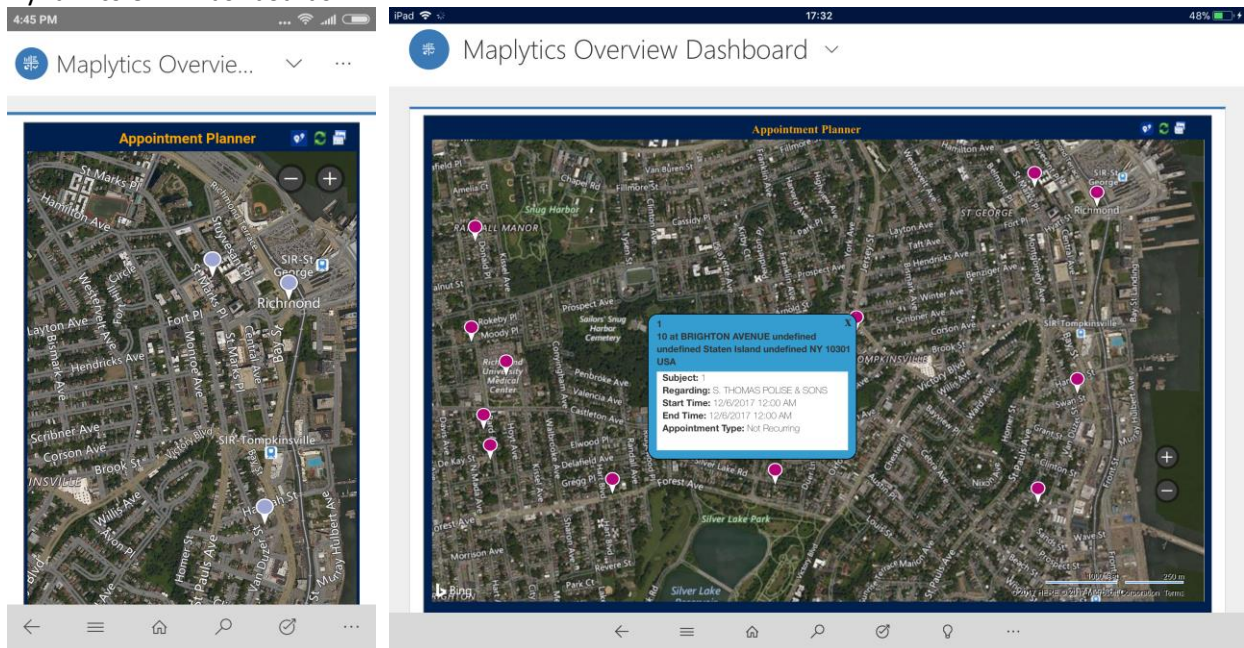
## Column chart in Heat Map



## Maplytics™ – User Manual

### Dashboards – Tablet / Mobile

The users can define their Dashboard views for Maplytics and include them as web resources in standard Dynamics CRM Dashboards.



Maplytics ships with 6 pre-defined Dashboards for various Sales and Service Modules for different user roles.

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## Contact Us

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**Twitter:** [@Maplytics](#); [@Inogic](#)

**Facebook:** [@Maplytics](#); [@Inogic](#)

**Website:** <http://www.maplytics.com/> ; <http://www.inogic.com/>