



MAPLYTICS™ – User Manual



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Introduction

Maplytics is a geo-analytical mapping tool aimed to help visualize Dynamics CRM data on a map for geographical analysis.

- ✓ Ease of access
- ✓ Multiple language support
- ✓ Plot any entity record on the map
- ✓ Proximity Search across entities simultaneously
- ✓ Building Marketing list
- ✓ Point of Interest search
- ✓ Color coding of pushpins based on configurable categorizations
- ✓ Routing with multiple waypoints
- ✓ Ability to Save & Share Driving directions
- ✓ Sales analysis made easy with Opportunity and Sales Heat Maps
- ✓ You can now include Maplytics component on Dashboard through configurable queries
- ✓ Seamlessly integrated within Dynamics CRM / Dynamics 365 Customer Engagement

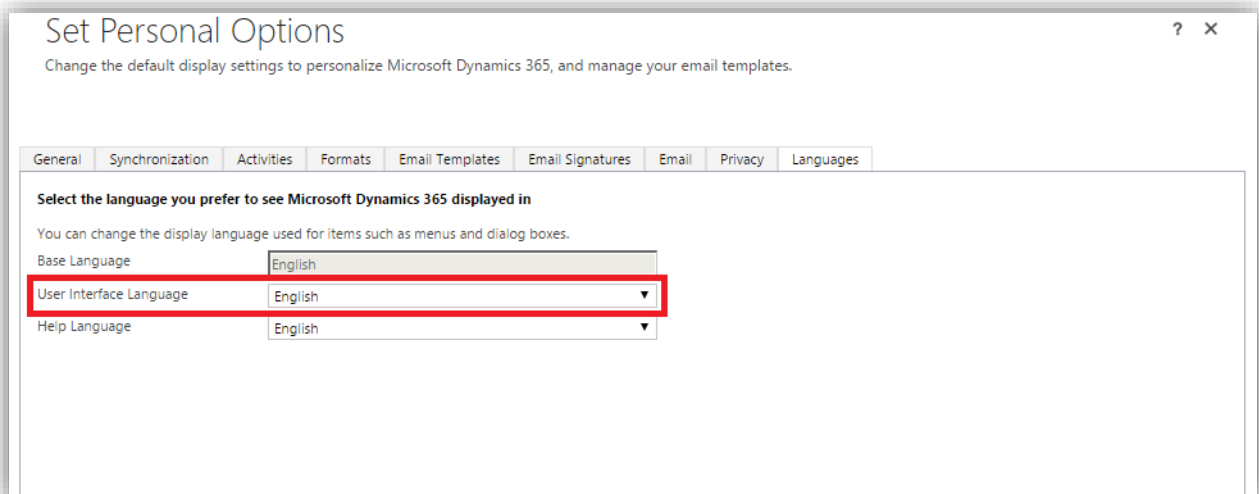
Language Support

Maplytics is currently available in six different languages namely:

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

Maplytics auto-detects the user language set in Dynamics CRM and sets its language accordingly. This means that the users do not need to worry about changing Maplytics language manually.

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



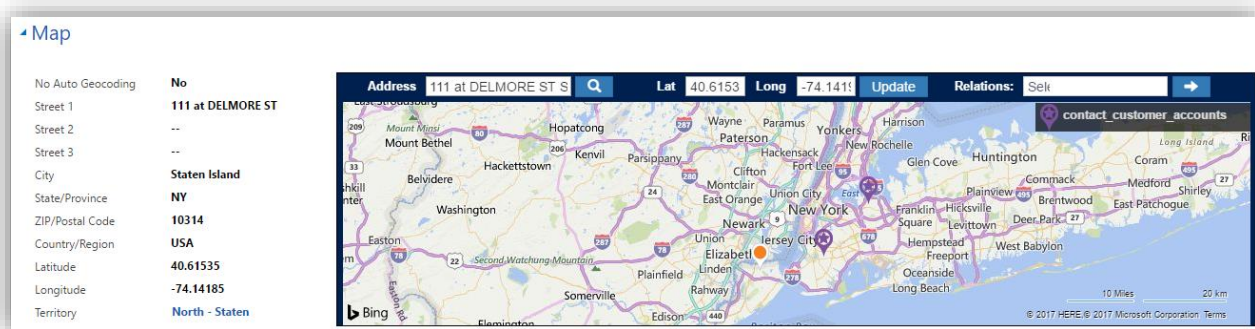
Maplytics Configuration (Personalization)

Each user of Maplytics can customize Maplytics configuration according to their preference. The user can Map center, zoom level, current location and a couple of other setting like Map View, default summary grouping, etc. Please go to **Settings > Maplytics Configuration Details** > you will find records related to each user added in Team Maplytics. Open a particular record and customize according to your needs.

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

Individual Record Map

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



Two types of pushpins are plotted on the map as follows:

1. **Orange color pushpin:**

This always indicates the record location on the map. This pushpin is **movable** on the map. This means, if the user is not satisfied with the automatic geocoding information stored for the record, they can manually move the pushpin to place it at 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** (Please refer above screenshot). Then click on **Search** button, which 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.

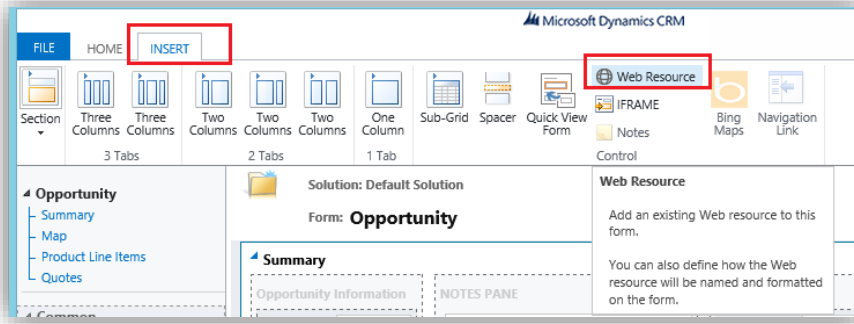
2. Related Record Pushpin:

All the pushpins with a star in between are indicating the related records. 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. Please use '**Relations**' drop-down to select the available relationships for this entity. Please see **Entity Map setting** (refer to Installation Manual) for setting Default relationship and adding more relationship to '**Relations**' dropdown.

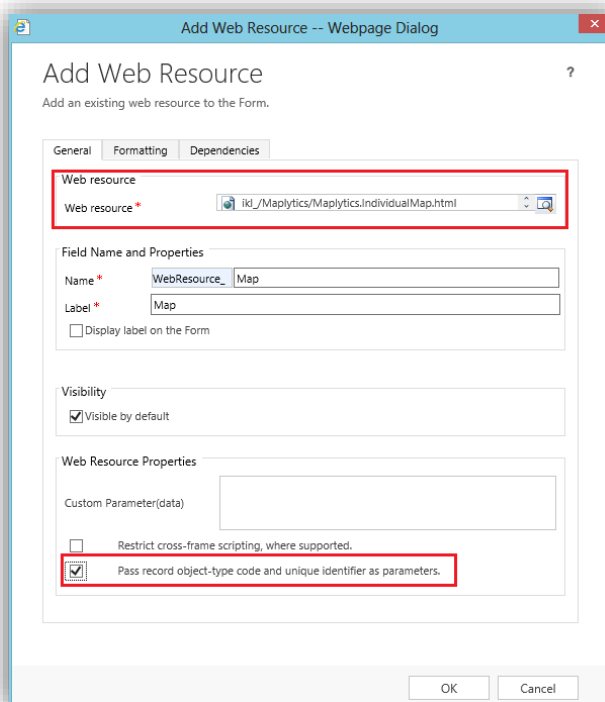
Steps to add the Map to other entity forms:

Open the entity form and go to the **INSERT** tab.

Click on **Web Resource** button, as shown in the below 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 below screenshot;

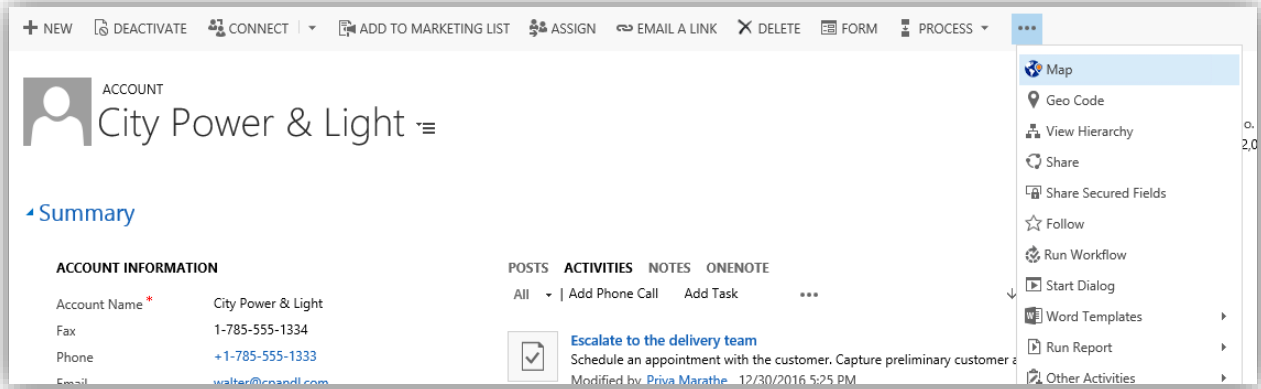


Click **OK**, then **Save and publish** the form to see the Map on the entity form.

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

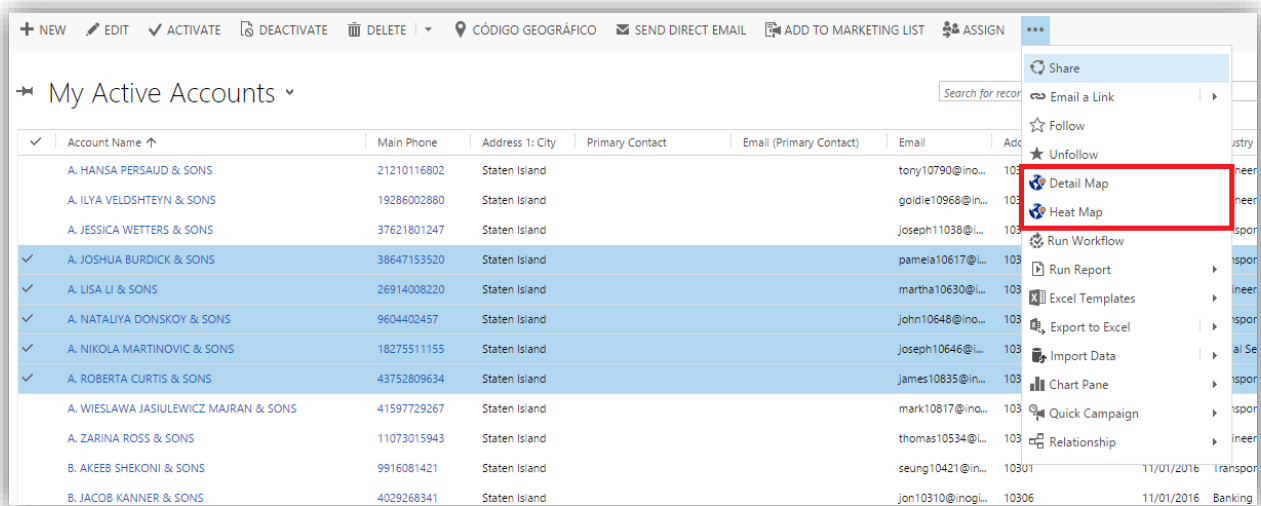
Detail Map

Maplytics button has been added to Entity forms as well as the Entity Homepages so that it can be easily accessed from anywhere.



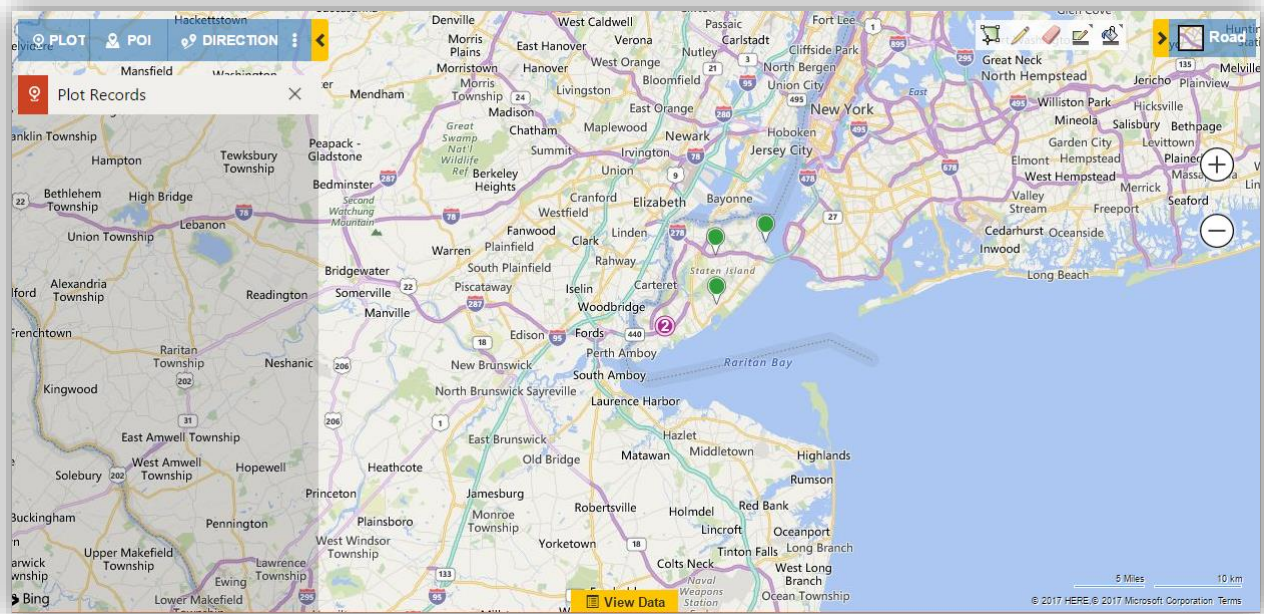
Using this button, the user can invoke the Maplytics application for detailed geographical analysis.

Maplytics provides both **Heat Maps view** as well as **Detail Map view** of the 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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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

We will discuss each of these in detail.

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

By Location

This helps the user to plot the data by geocode of each record.

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Plot Records

☐ Cluster map

Search Option
By Location

Current Location

Proximity
☒ Distance ☐ Time
 Miles

Select Datasource
Account

+
Select Category

Save Template Search

Select Datasource dropdown will list out all the entities configured for Maplytics and the active views (System, User defined, Marketing List and Maplytics Dashboards) 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.

Plot Records

☐ Cluster map

Search Option
By Location

Current Location

Proximity
☒ Distance ☐ Time
 Miles

Select Datasource
Account

+
Select Category

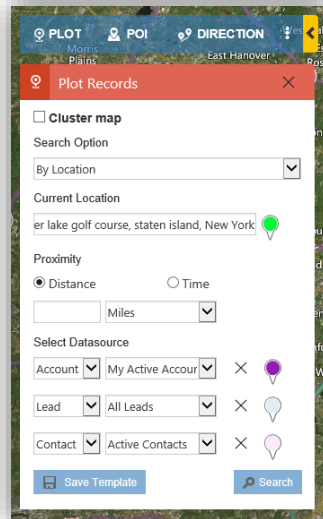
Save Template Search

- Accounts: Influenced Deals That We Won
- Accounts: No Campaign Activities in Last 3 Months
- Accounts: Responded to Campaigns in Last 6 Months
- Active Accounts
- Cientes
- Cuentas en seguimiento
- Cuentas sigio
- Inactive Accounts
- My Active Accounts**
- My Connections
- My New Accounts This Month
- Provedores
- Revendedores actuales
- Test Account 19.24
- Test Account View
- Test Marketing 1
- Test Marketing 19.34
- test view

Note: The user can also configure the 'Views List'. Refer to '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 views for plotting the data at a time.



This allows for viewing 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 selected entities.



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

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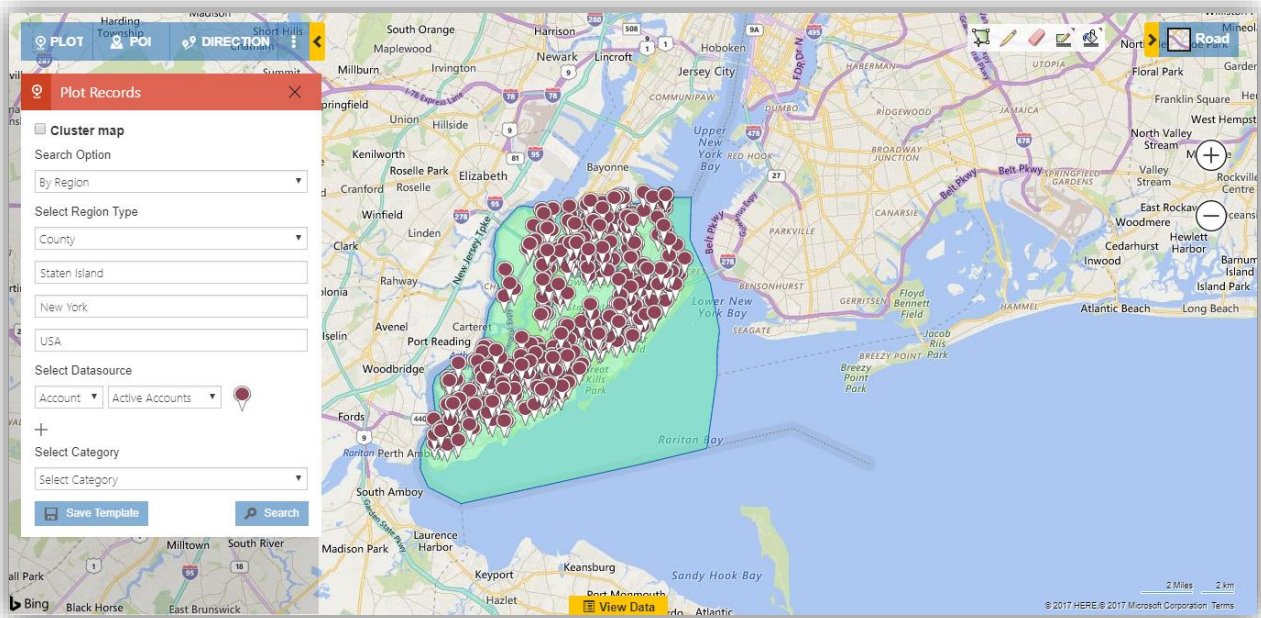
By Region

This helps the user to plot the data by the region of record, i.e., *City, State, County, Country, PostalCode or PostalCode Areas*. The user can plot multiple regions under a particular region type.

- **Postcode:** The smallest postcode category, such as a zip code.
- **Postcode Areas:** The next largest postcode category after Postcode1 that is created by aggregating Postcode1 areas.

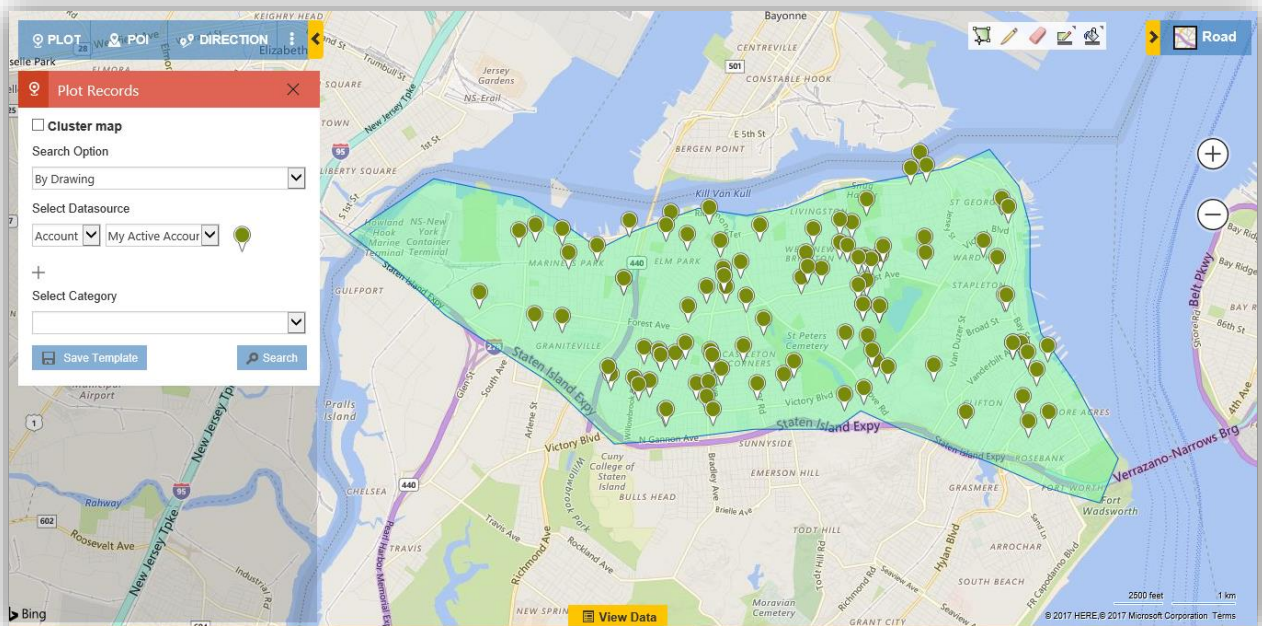
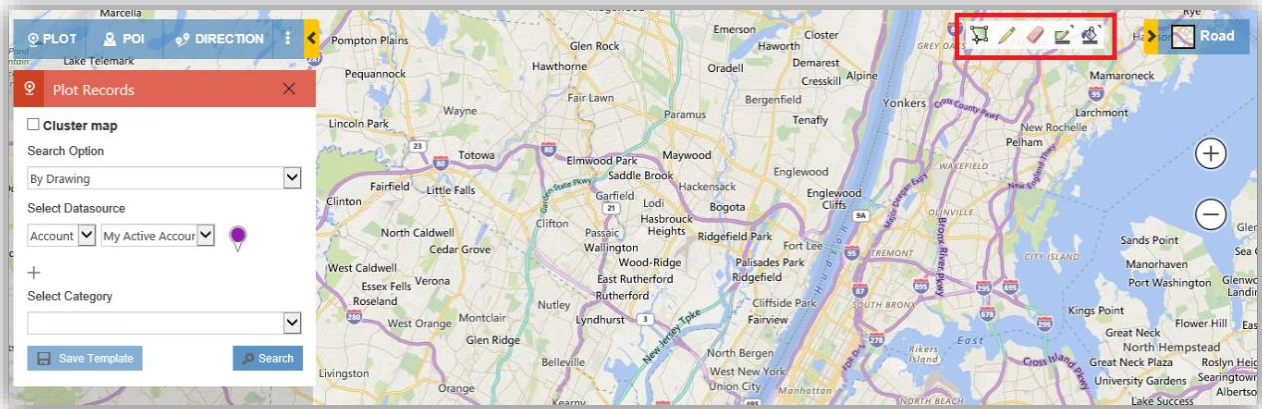
The 'Plot Records' dialog box is shown with the following settings:

- ☐ Cluster map
- Search Option: By Region
- Select Region Type: County
- Staten Island
- New York
- USA
- Select Datasource: Account, Active Accounts
- Select Category: Select Category
- Buttons: Save Template, Search




By Drawing

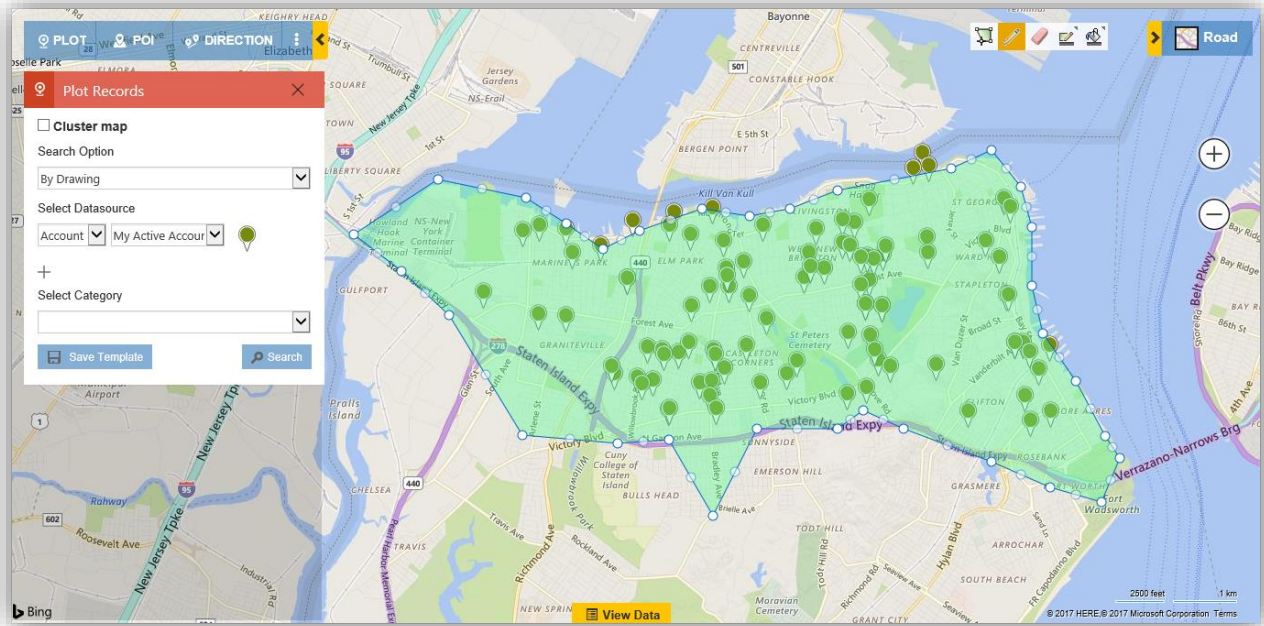
This helps the user to plot data by defining their own shapes. The user can use an n-sided polygon to define their shape.



Note: Please use 'Esc' key from keyboard to close the shape.

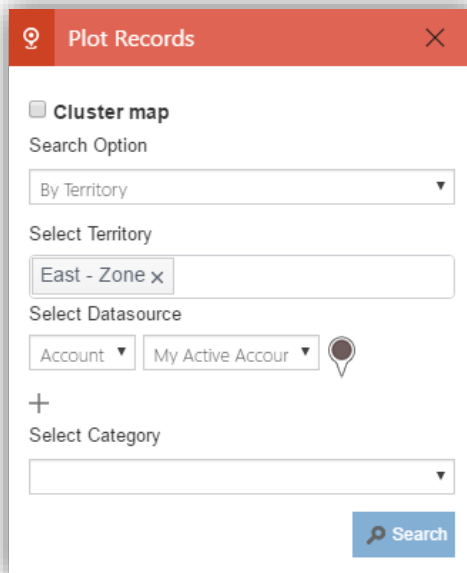
The user can further edit any plotted shape by clicking on  (Pencil icon) in Drawing Toolbar:

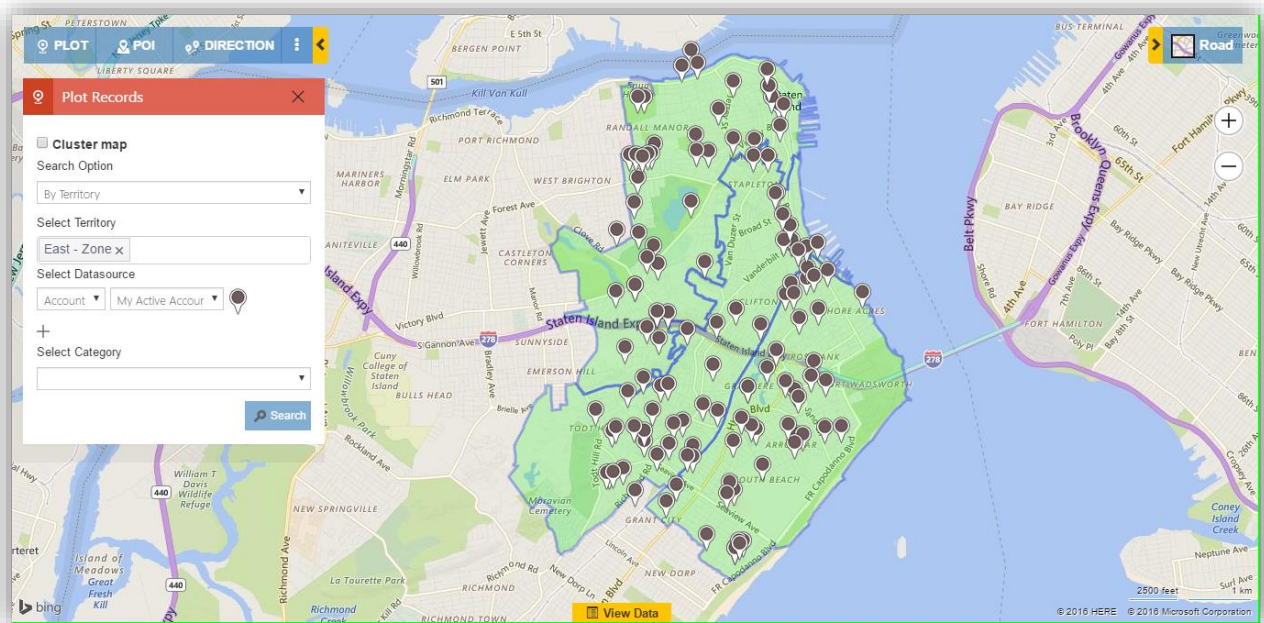
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By Territory

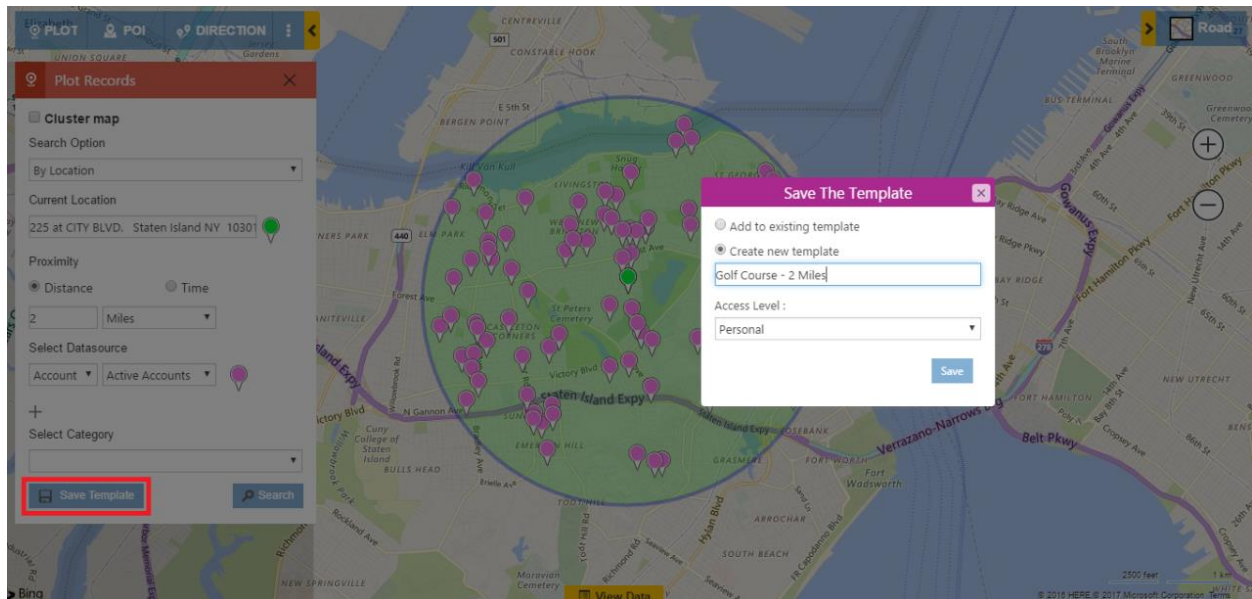
This helps the user to plot the data defined in a particular sales territory. The user can select multiple territories to plot on the map in **'Select Territory'** option.





By Template

This helps the user to plot the predefined search criteria in Detail Map. This helps the user to save a considerable amount of time. For example, if any user is assigned with a task where he/she has 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 also define the access level of the Template as described below:

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- **Personal** – If the user would like to limit the usage of this template to themselves
- **Public** – Anyone in the organization can use this template

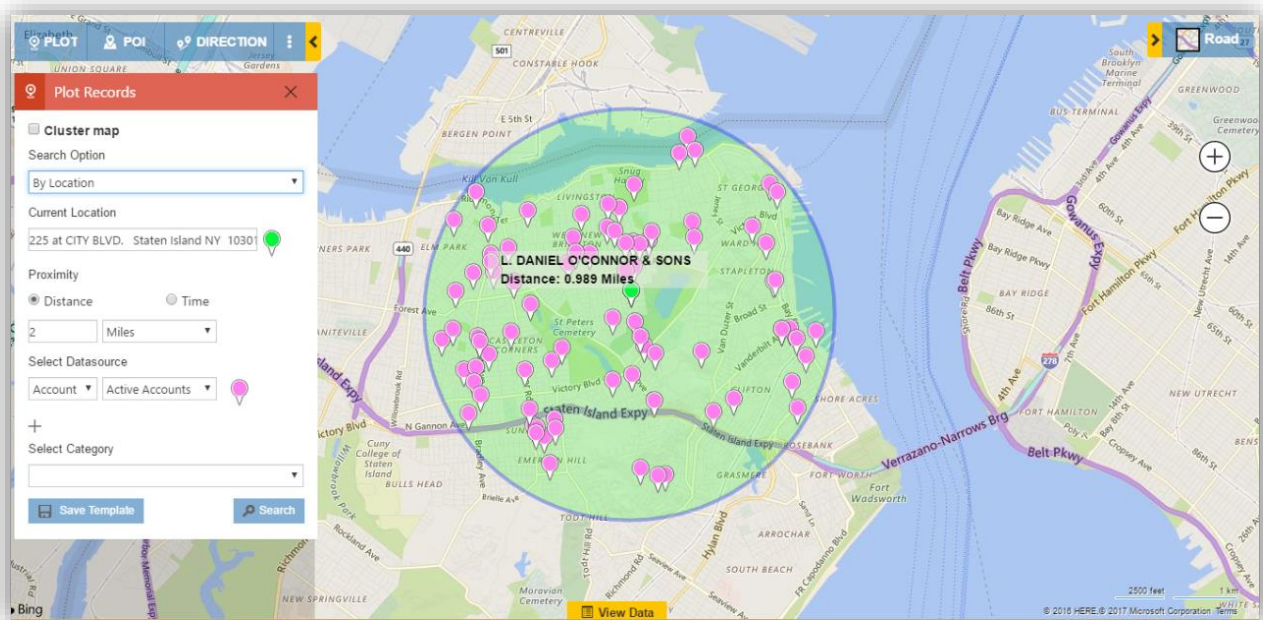
Apart from saving information of Plot Records, Category card, and filters from Grid, it also saves the zoom level & center of the map.

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

Proximity

There are two different option to perform Proximity Search.

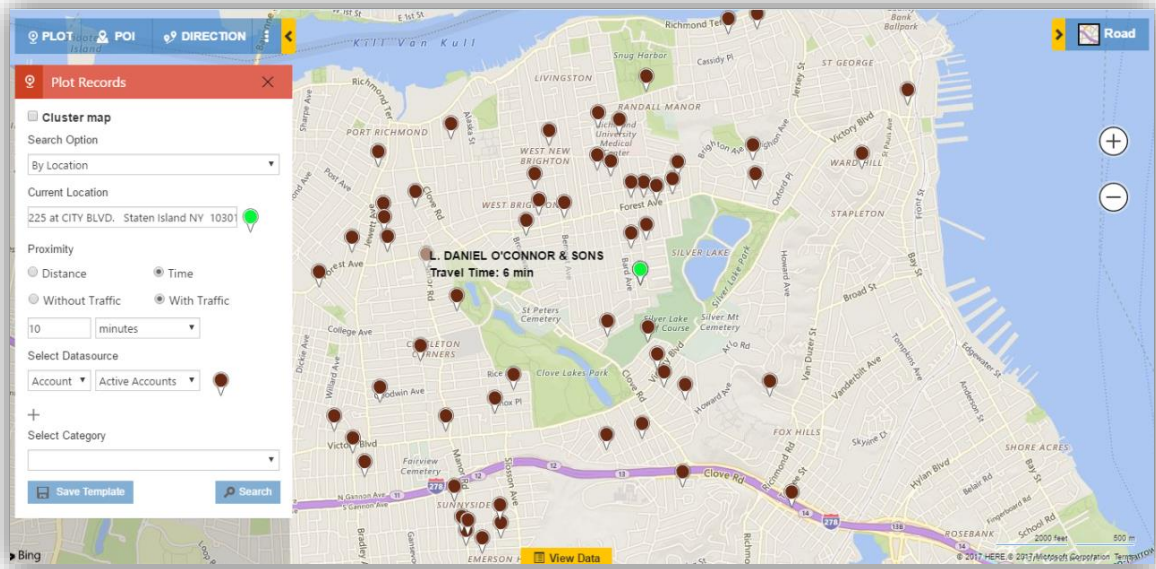
- **Distance:** This option will calculate the straight line distance between the current location and all the point which fall in the proximity parameter as shown below;



Enter the radius for the proximity search. 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.

Note: User can enter integer value from 1 to 2000 for distance proximity search.

- **Time:** This option will calculate how many points fall in 'x' minutes or hours of driving distance from current location. Please see the screenshot of the same below;



Enter the proximity parameters. The Proximity can be provided either in Minutes or Hours. The User can also hover over a pushpin and see the distance from current location.

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 logged in user.

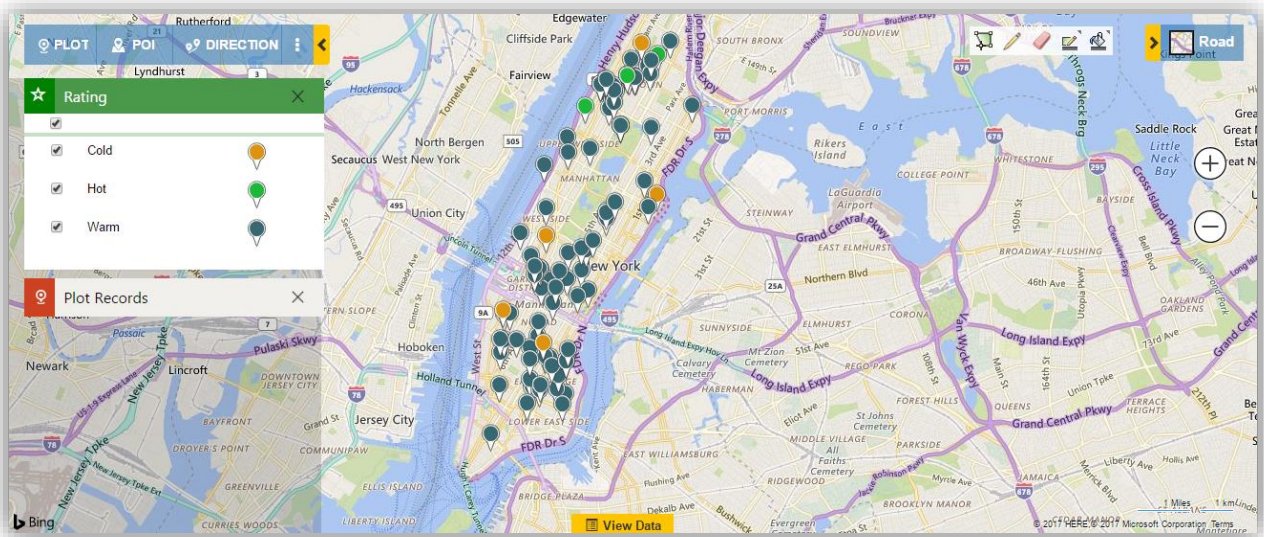
This is always represented by green color pushpin right next to the current location message box.

Category

This lists out all attributes of the selected entity. Choose the attribute by which the user would like to color-code the pushpins plotted on the map. Below is a screenshot showing categorization on open leads based on “Rating” which can be warm, hot, or cold.

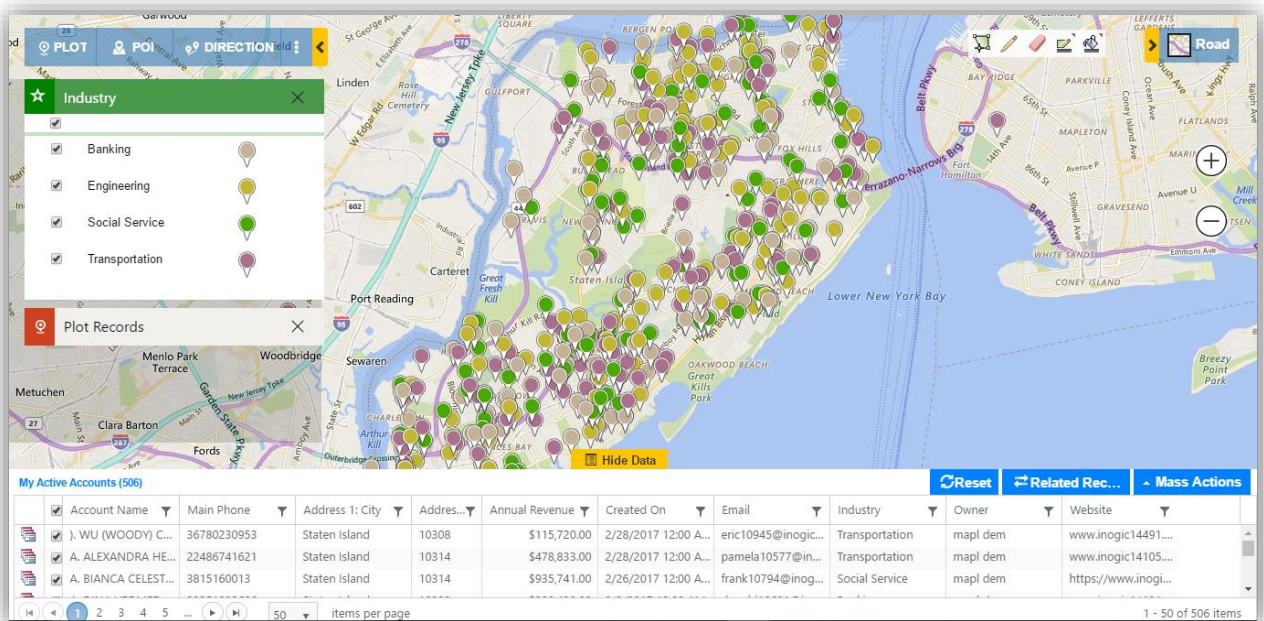
Note: The user can define the color as well as shape for each parameters of category. Refer to [Pre-Define Colors for Category section](#) for further details.

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.



Data Grid

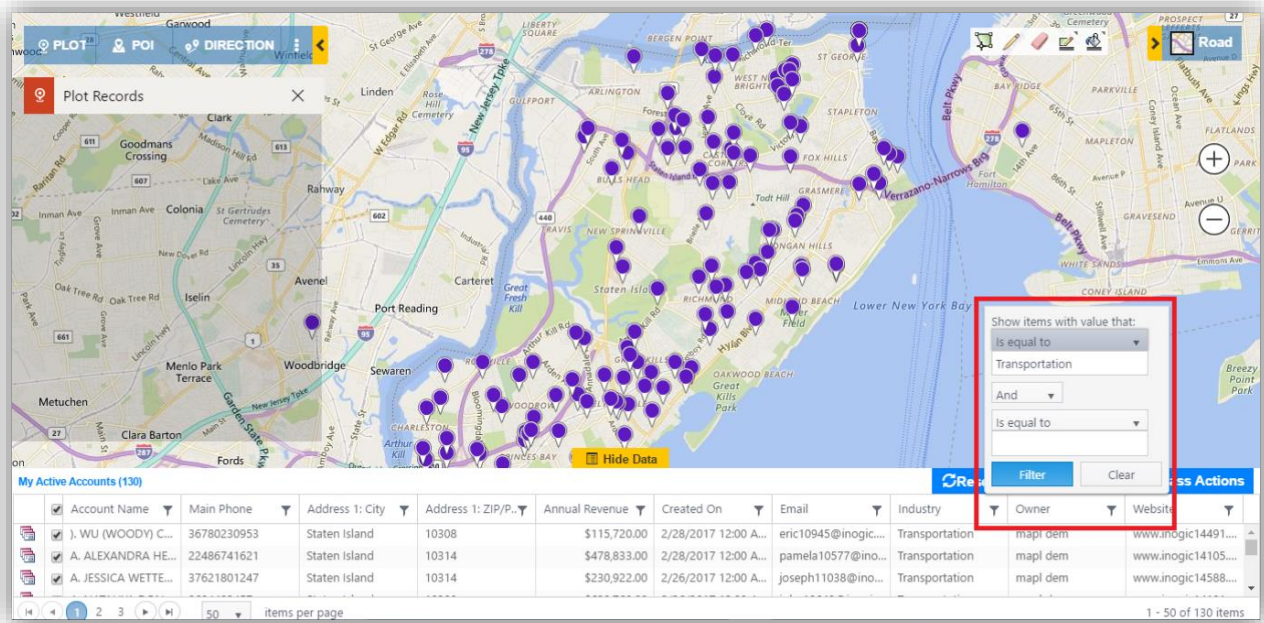
All plotted pushpins represent a unique record in Dynamics CRM, and data grid helps the users to access these records from the map screen, filter the data further and take some mass actions.



Filter Data: The user can use the filter present on the top of every column to filter the data further. Order of columns in the grid depends upon the CRM View selected to plot the data, and in the case of Marketing List & Maplytics Dashboard records, it is same as that of the Entity-View selected in Entity

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Map. The users can also customize the data columns to be visible in the grid by adding/removing columns from the entity view.



Reset: This will reset the grid to 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.

Mass Action Buttons: The user has the option to take action like adding to route or executing the workflow on selected records in the grid. Defined actions are as follow:

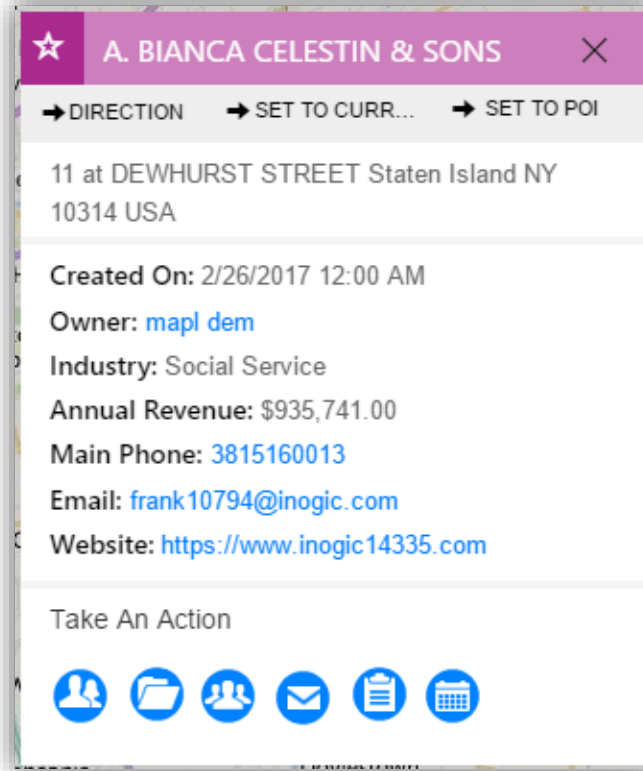
- **Add To Route:** This option will add selected data points to the route. The user can add at max 25 data points to the route.
- **Save Data:** The selected records can be saved as static Marketing List or Personal View in CRM
- **Change Owner:** The user can change the owner of the selected records
- **Manage Territory:** The User can assign or change the territory of selected records
- **Add Task:** The user can add task to the selected records. The user can define Subject, Duration, Owner and Due Date
- **Schedule Appointment:** The user can add an appointment to selected records. The user can define Subject, Start Date, End Date, Priority, Owner
- **Send Email:** The user can send a mass email to the selected records. This will open the list of available email templates or new blank email
- **Workflow:** The user can execute any on-demand workflow with this functionality

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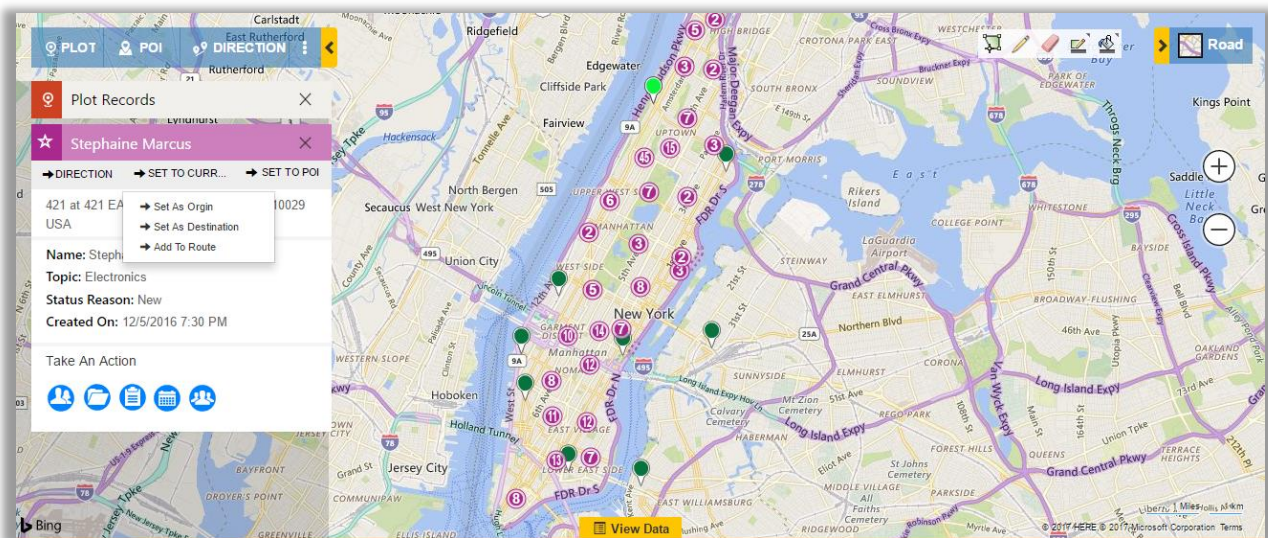
- **Export To Excel:** The user can use this feature to export data from the map to excel. This functionality adhere to CRM security roles, if the user does not have the permission to 'Export Data to Excel' in CRM then he/she will not be able to export data from Maplytics

Tooltip

Every Pushpin will display the record name, address as well as the contextual data defined in the tooltip section of the Entity Map under Settings.

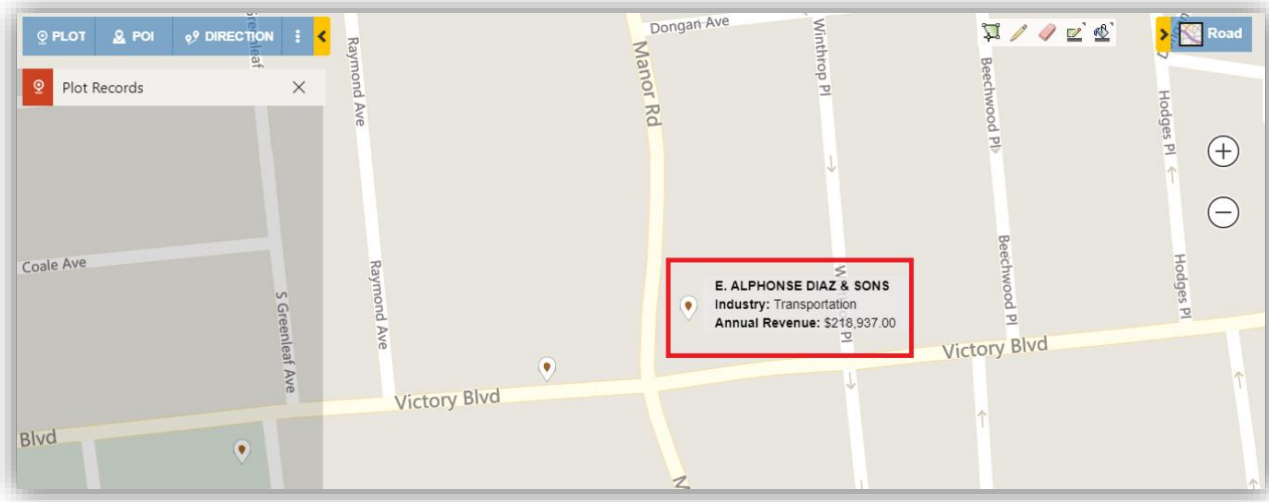


Now the user can set a particular record as **'Origin,' 'Destination,' 'Add to Route,' 'Set as Current Location' or 'POI location'** from the tooltip. Please see the below screenshot;






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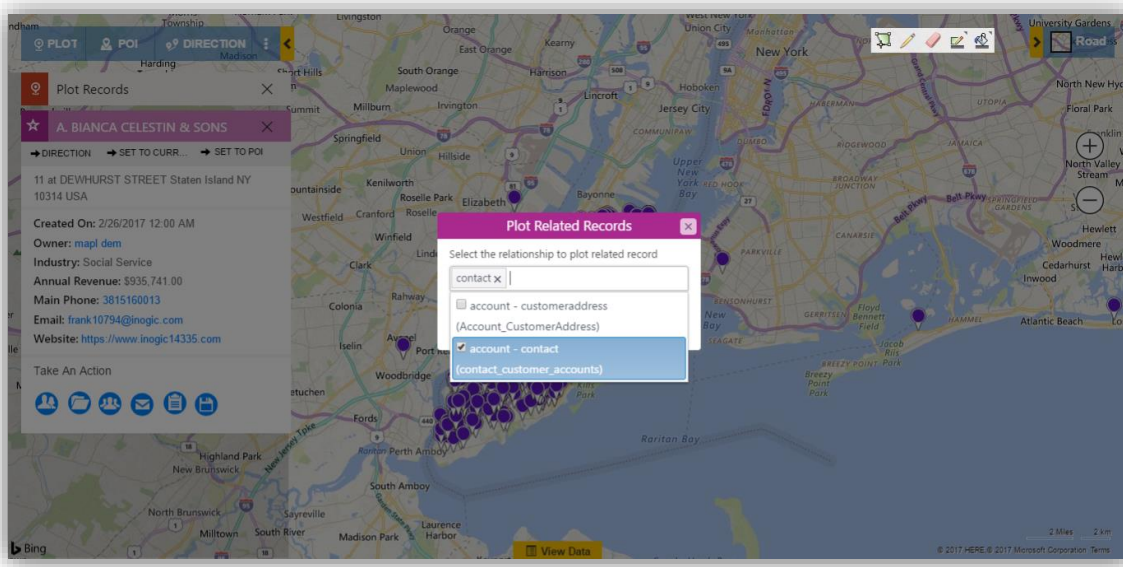
Hover: User can have a quick glance on the CRM Record as they hover on the attribute on the map as shown below:



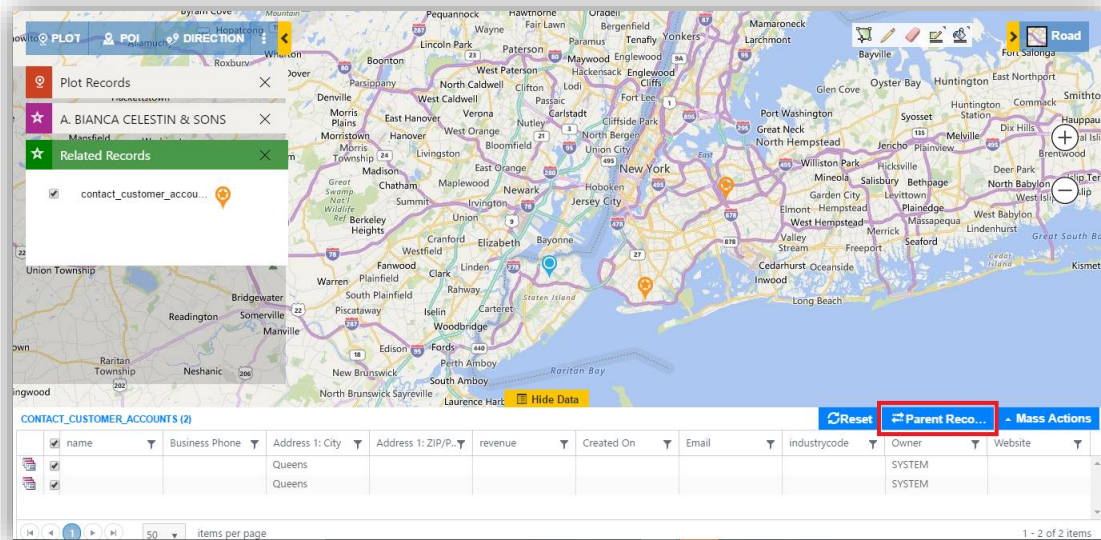
The user can have maximum 6 different attribute here apart from the title attribute. Refer to the 'Setup Entity Map' section of Installation Manual for further instruction.

Quick Call to Action Button: Every tooltip record can have seven associated quick action buttons. This helps in saving sales representative time while switching between screens to take action. First three actions are the default and cannot be changed by the user, but they can modify the rest four action items.

- **Owner**  : Change Owner of particular record
- **Open Record**  : Open record directly from this screen to edit any field
- **Plot Related Record**  : Plot different One to Many Relationships / Related records of a particular record as shown below;






Select the required relationship 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.

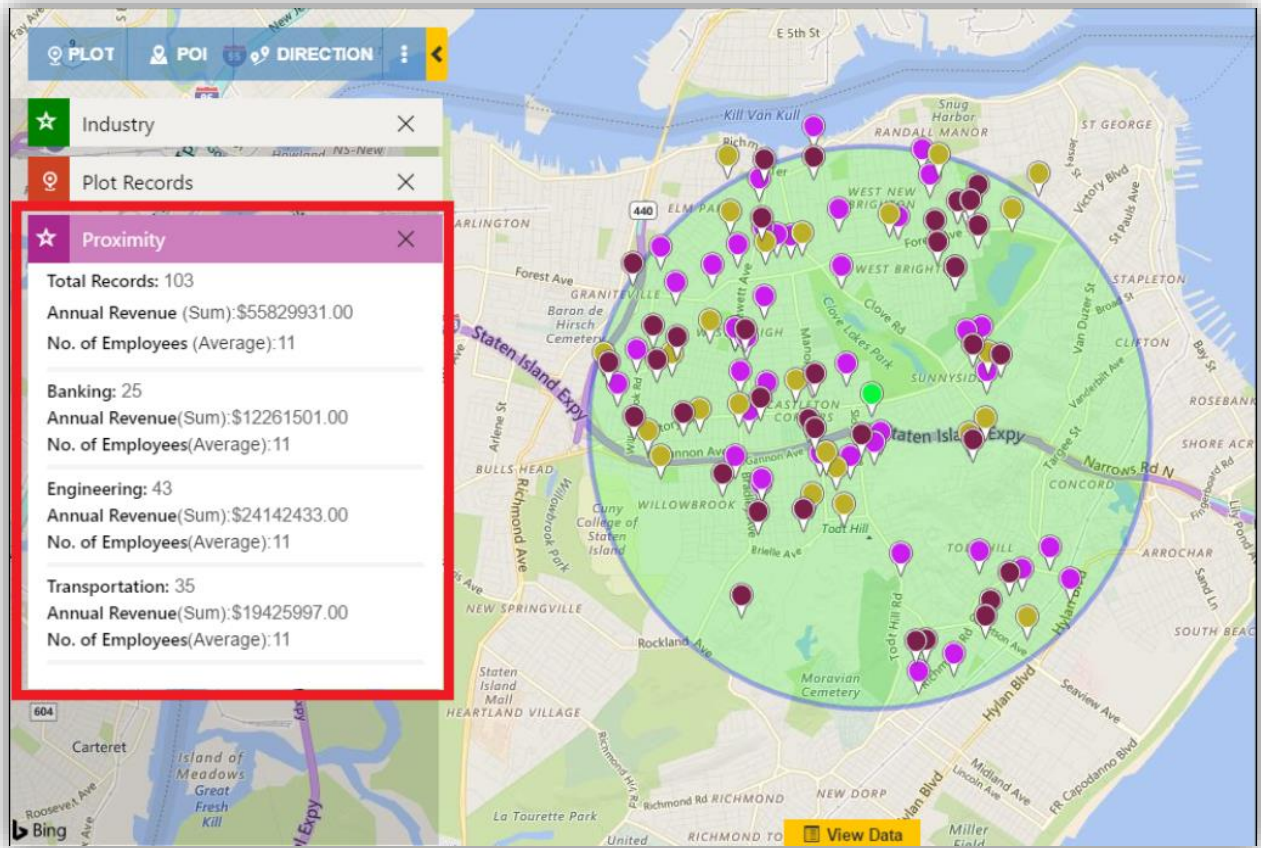
The user can customize rest 4 actions according to their requirement. In this example, we have added following three actions:

- **Email**  : Send email to this record
- **Add Task**  : Add task to this particular record
- **Appointment**  : Schedule appointment with this record

The user can also define these action. Please visit the Advance Setting in Entity Map. (**Setting > Entity Map > Select Required Record > Advance Settings** or refer to 'Setup Entity Map' section of Installation Manual for further instructions.)

Summary Card: The user can click on any enclosed area to get the summarized information of the area as shown below;

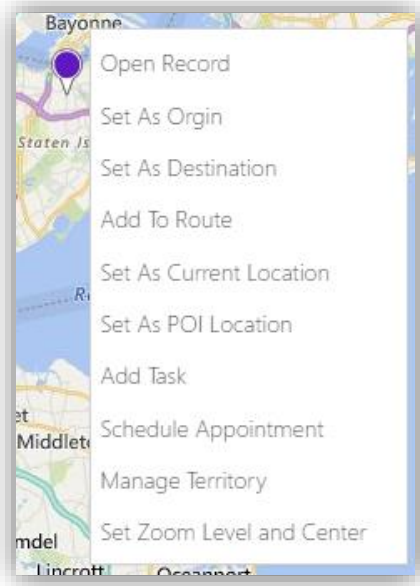
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The user can customize the setting for this using Maplytics Entity Maps. Refer to 'Setup Entity Map' section of Installation Manual for further details.

Contextual Menu

Pushpin Contextual menu provides the following additional options. These options provide commonly used features in CRM like creating a new task or scheduling an appointment with the prospect.



Open record:

Clicking on this option will allow the user to navigate to the record in CRM that is represented by the Pushpin.

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 you already have Point A and Point B selected as your route, and you 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 your 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 wishes to plot all the leads, which are in 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.

Add Task:

This option helps the user to create a new Task in 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 manage the territory, i.e., assign / re-assign territory from the map using this option.

Set Zoom Level and Center:

This is user specific and will help the user to set the zoom level and map center of Map. So whenever the user opens Detail Map, it is zoomed down to a particular location.

Steps to add Detail Map on CRM Dashboard / Entity Form:

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 Ex., if the user wants to plot a route from a dashboard like My today's appointment route. The user can automate the complete process.

Add Web Resource ? x

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

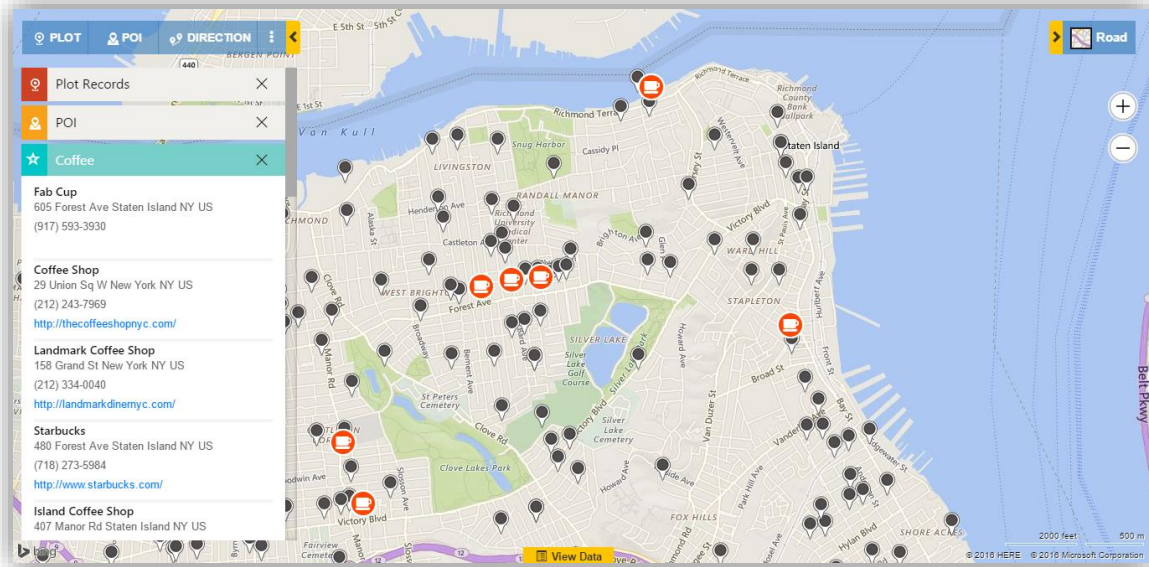
OK Cancel

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

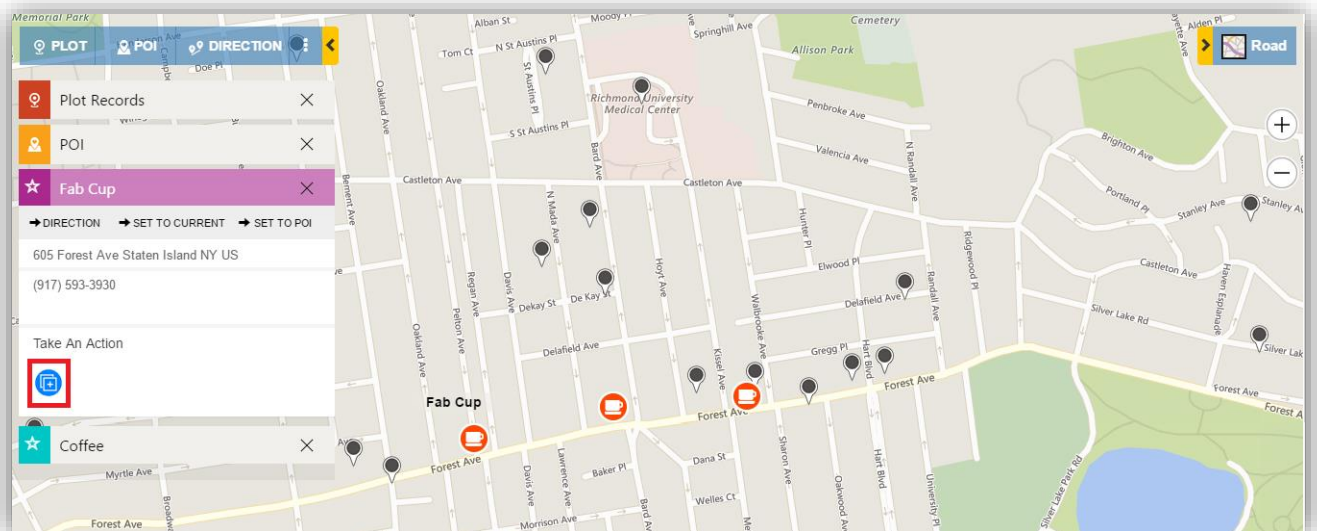
- <Dashboard Name>||dashboard||true
- Appointment Planner||dashboard||true

Point of Interest (POI) Locations

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.



Apart from plotting POI data, now Maplytics allows the user to add millions of businesses in Dynamics CRM record as lead, account, contact, or any custom-built entity.

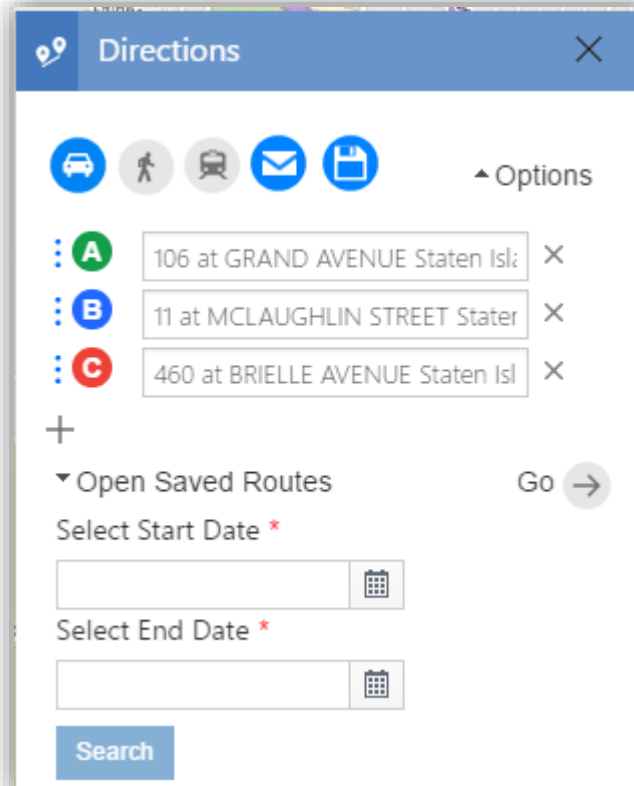


Routing

Another important feature of Maplytics is Routing across multiple waypoints.

Using the Contextual Menu options or Mass Actions explained above, the users could add multiple waypoints to their journey.

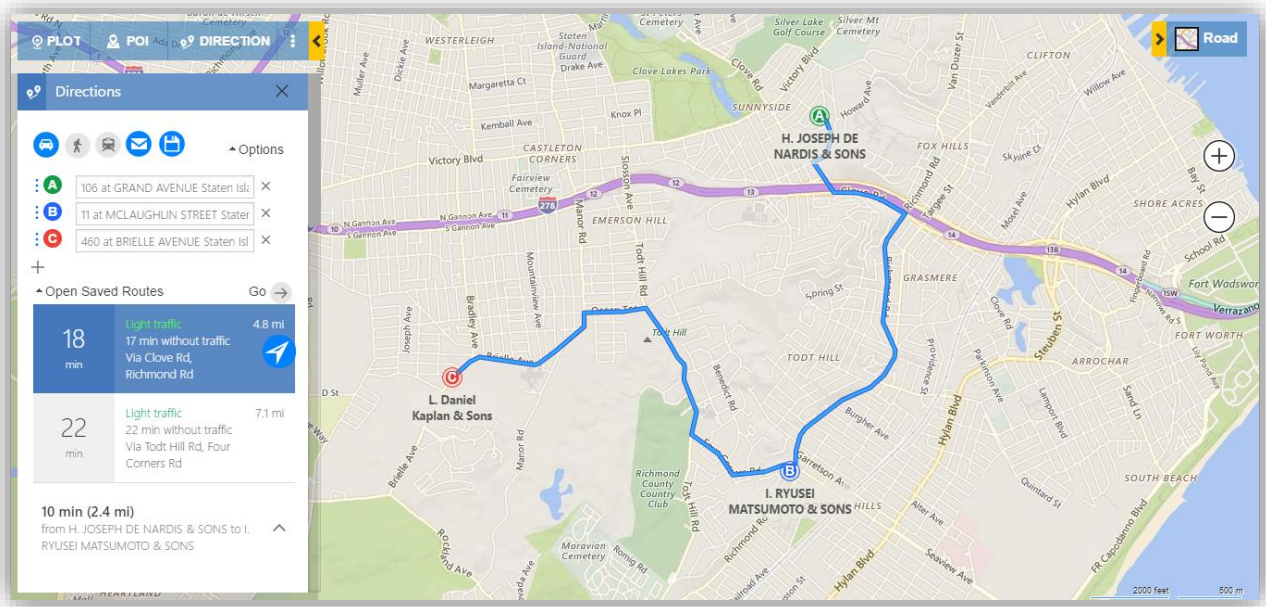
Once multiple waypoints have been added, select the Go button to bring up the Routing Screen as shown below;




The User can further retrieve the existing saved route between two dates.

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

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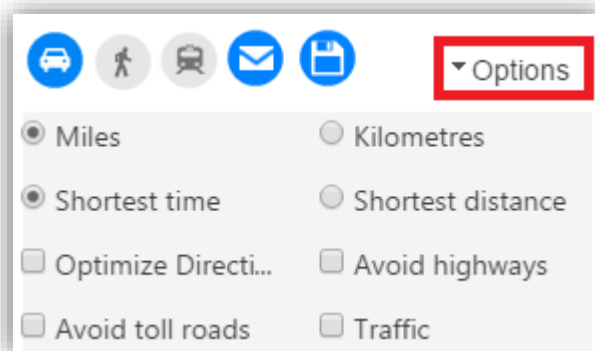


Use  button to redirect the following route to Bing Map in a new tab.

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

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

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




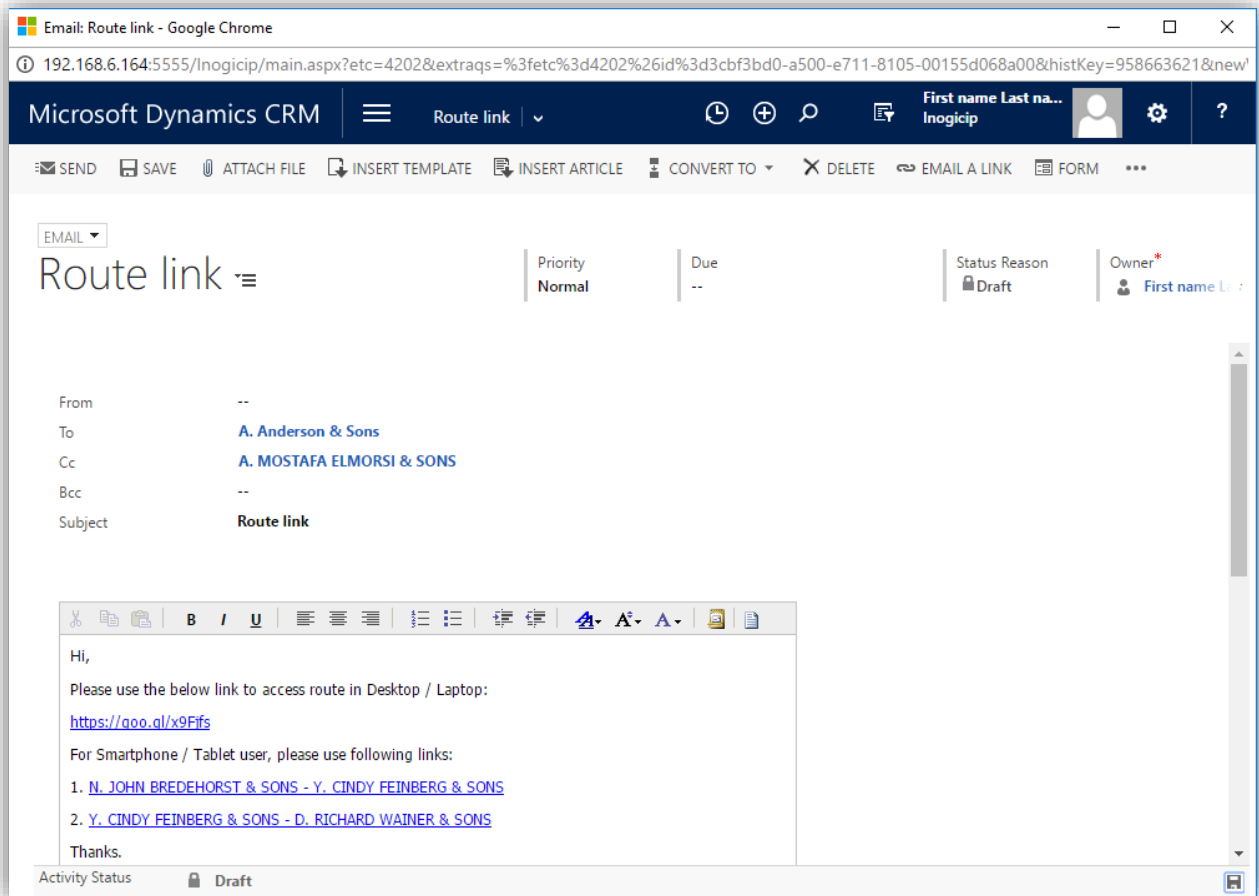
Optimize Direction

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.

Route Sharing

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

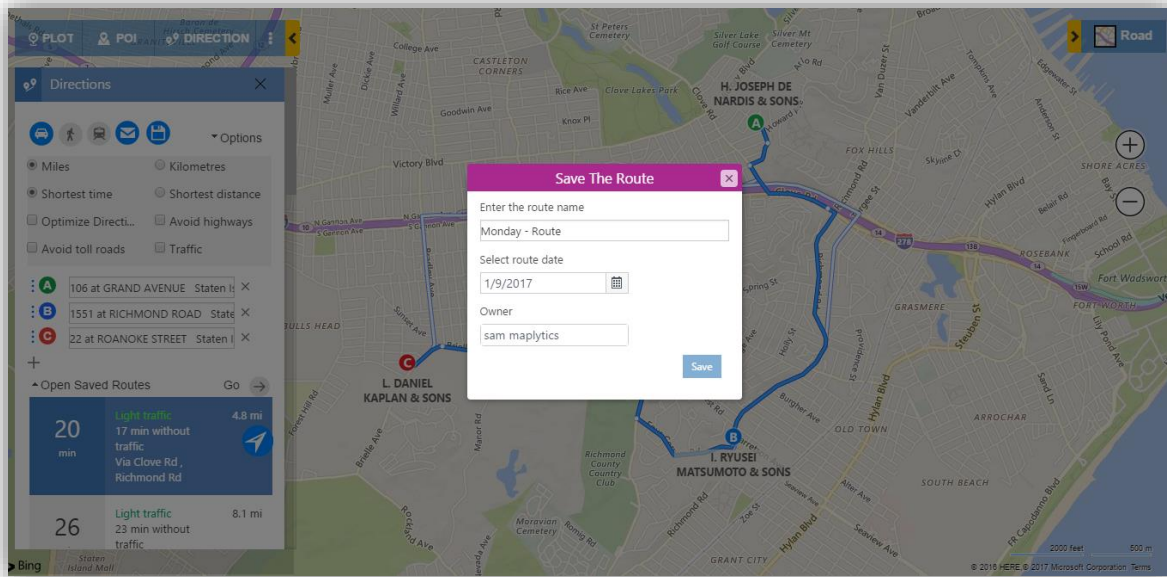
Email Route: The user can email route to any of the Dynamics CRM  records using email route option.



Save Route:

Now the users can take this a step ahead by saving their route planned for the next day as a CRM activity or share their saved route with any other CRM user.

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The route record will also save the information like number of waypoints, total distance and time for the route.

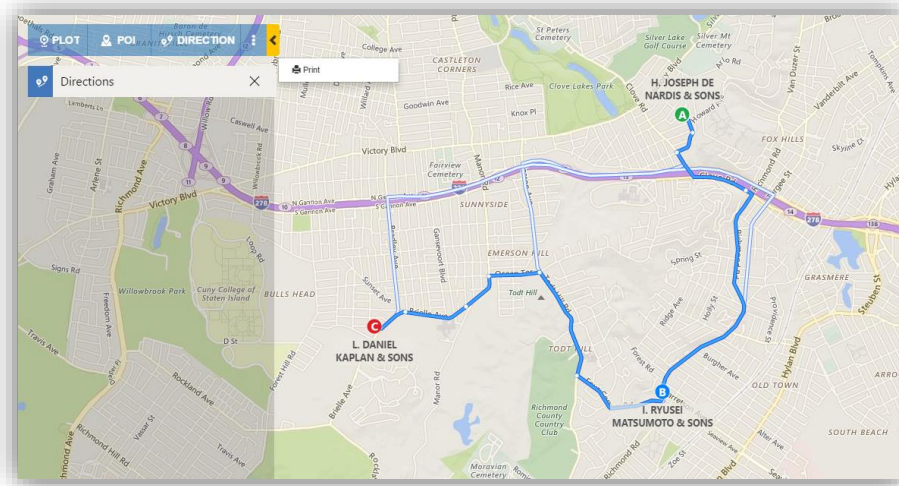
Print:

Using the Print button, the user can print the Directions as well as the adjoining Map.

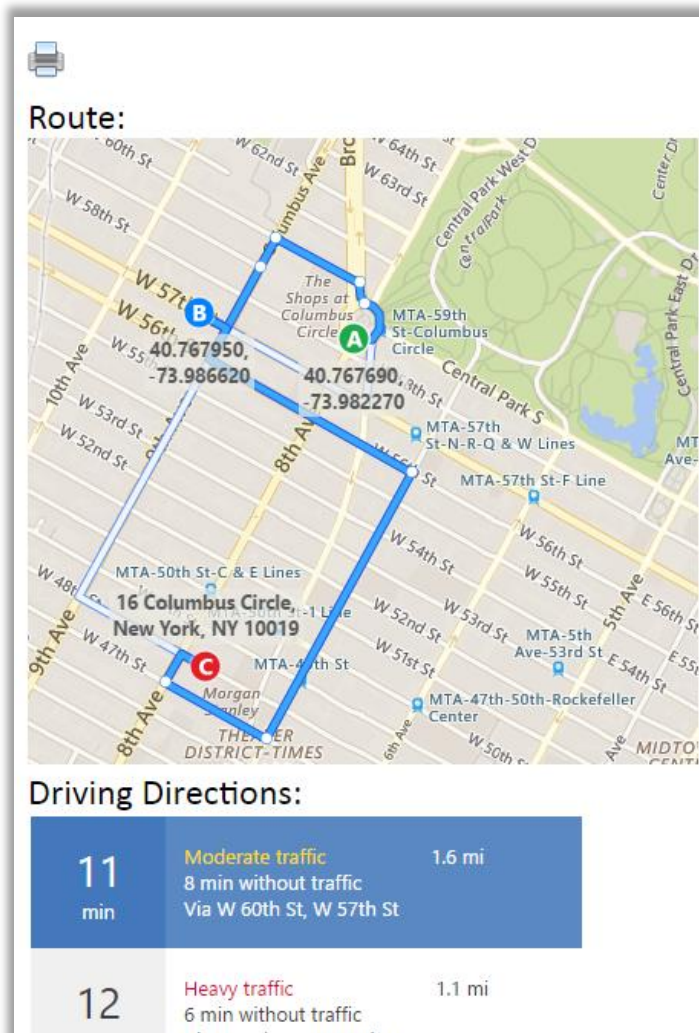
Once the route is plotted, users can click on the *More Options* button to open the Print option and then they can click on the Print button to print the route.



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Clicking on the Print button will open a new window with the map and directions on the page which can be seen in the below screenshot;



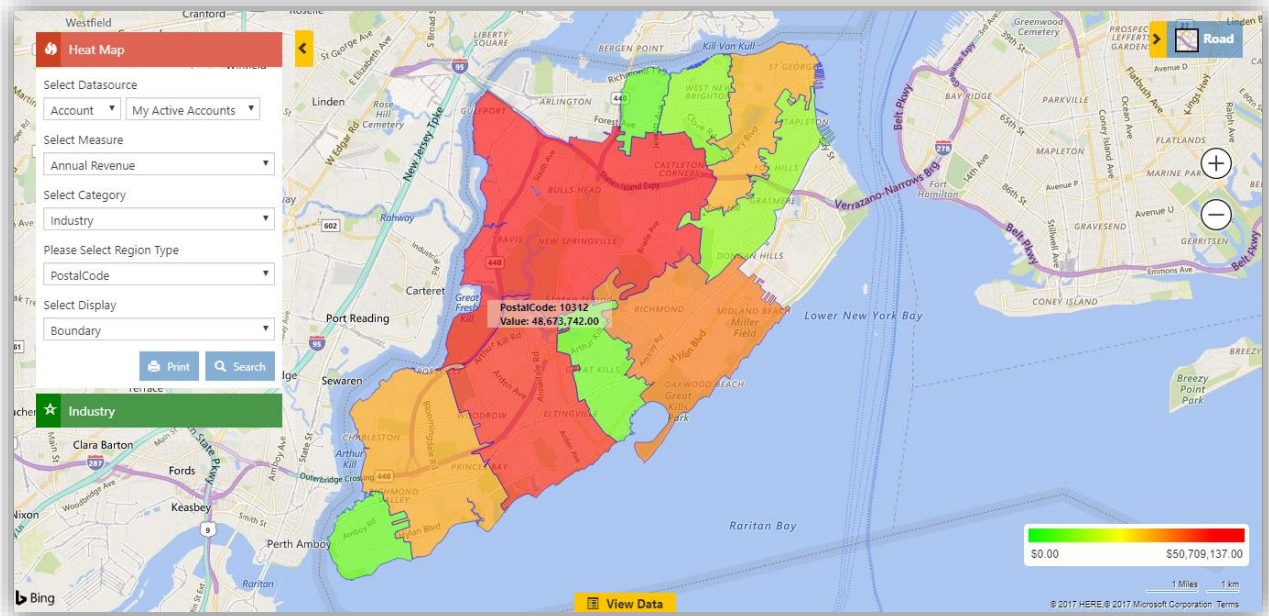
Click on the **Print Icon** to print the map and route instructions.

Note:

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

Heat Map

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

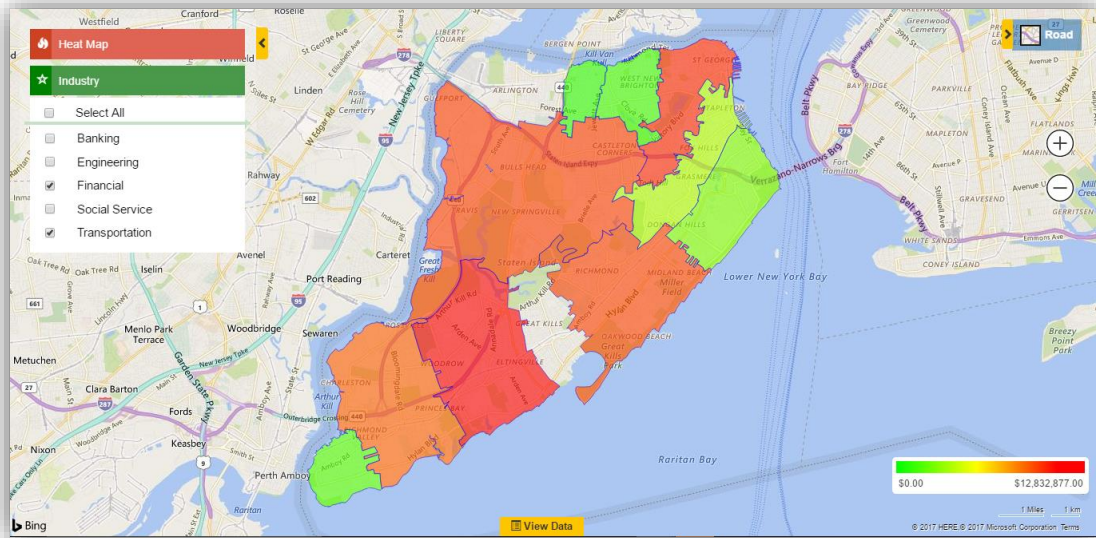


Select Datasource: This option helps the user to choose the entity and view combination to analyze the data.

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.

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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.
- **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.

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:

MAP CONFIGURATION DETAILS : INFORMATION

Maplytics

Product Name * Maplytics

Defaults

Map Mode	Road	Plot Data	Non Cluster
Distance Unit *	Mile	Records Per Page In Grid	50
Map Center	--	Zoom Level	0
Optimize Direction	No	Current Location	--
Live Traffic	No	User	mapl dem
Route Option	Shortest Time	Summary Grouping	City
Heat Map Type	Region		

Maplytics™ – User Manual

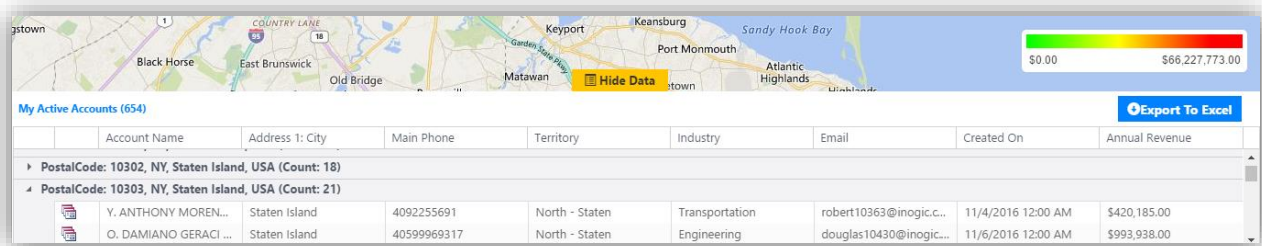
Select Display: There are two options available to analyze data on Heat Map:

- **Boundary:** This will create Heat Map on basis 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.

This can be auto-selected using Maplytics Configuration Setting where the user can customize Maplytics according to their requirement.

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.

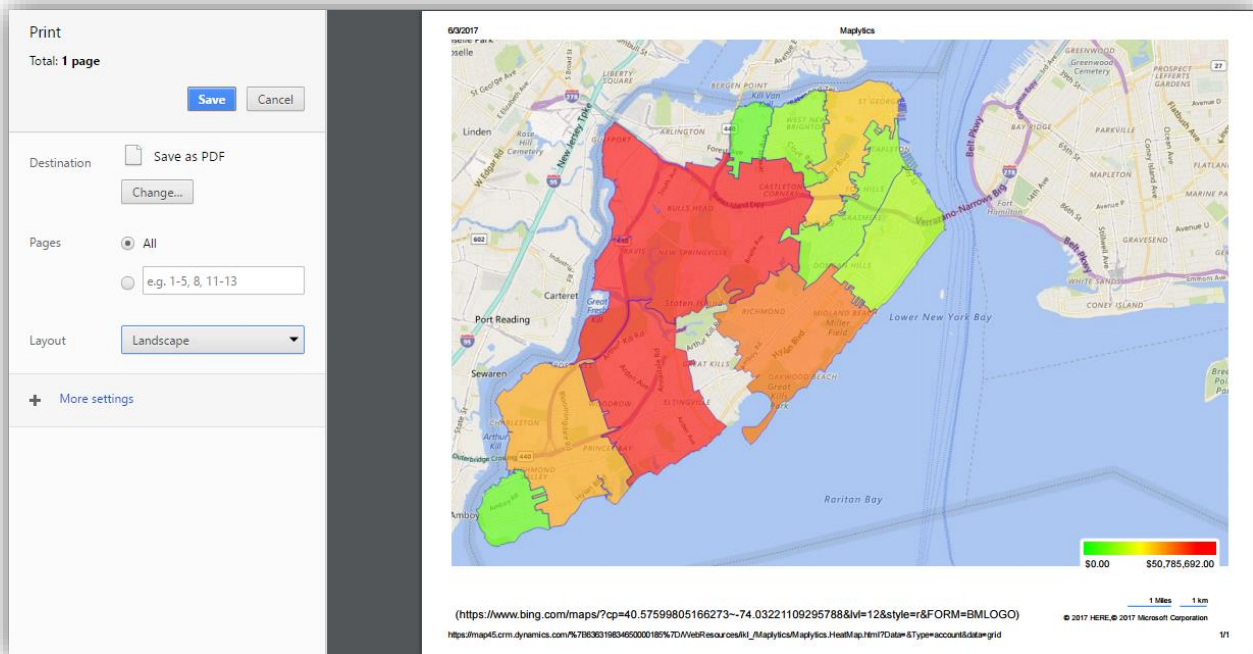
Export to Excel: The search results are listed by the grouping selected at the bottom of the screen and user can further export these data points using this button as shown below;



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.

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

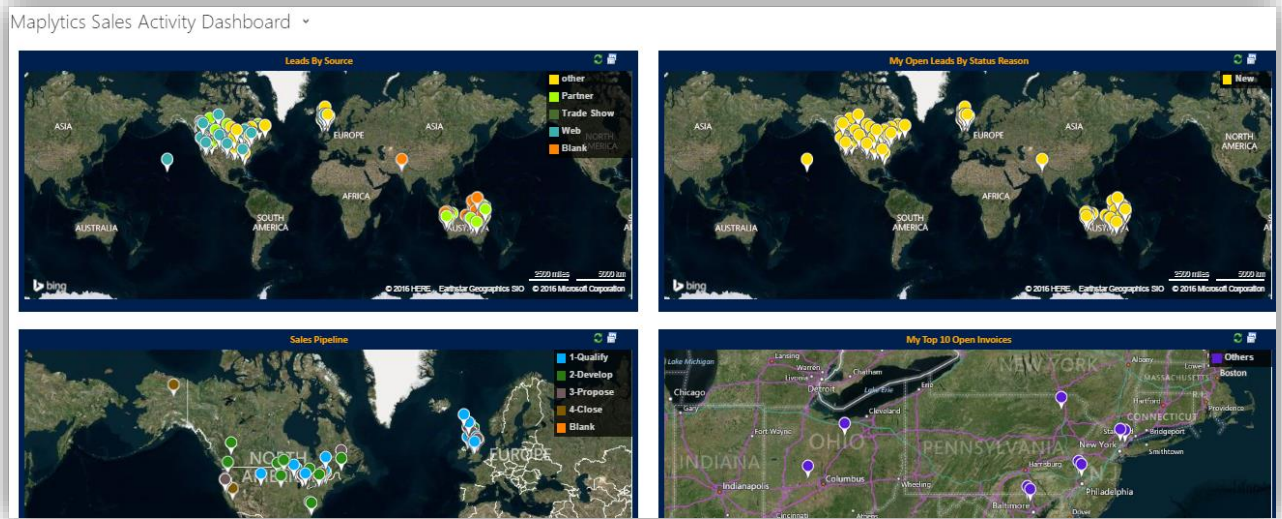


Note: A4 size paper with landscape mode is recommended while printing.

Maplytics Dashboard

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

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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.

Web Resource Properties

Modify this Web resource's properties.

Web resource

Web resource *

Field Name and Properties

Name *

Label *

☐ Display label on the Dashboard

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.

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 > Business > Business Management > Sales Territories** and click on new to create a sales territory.

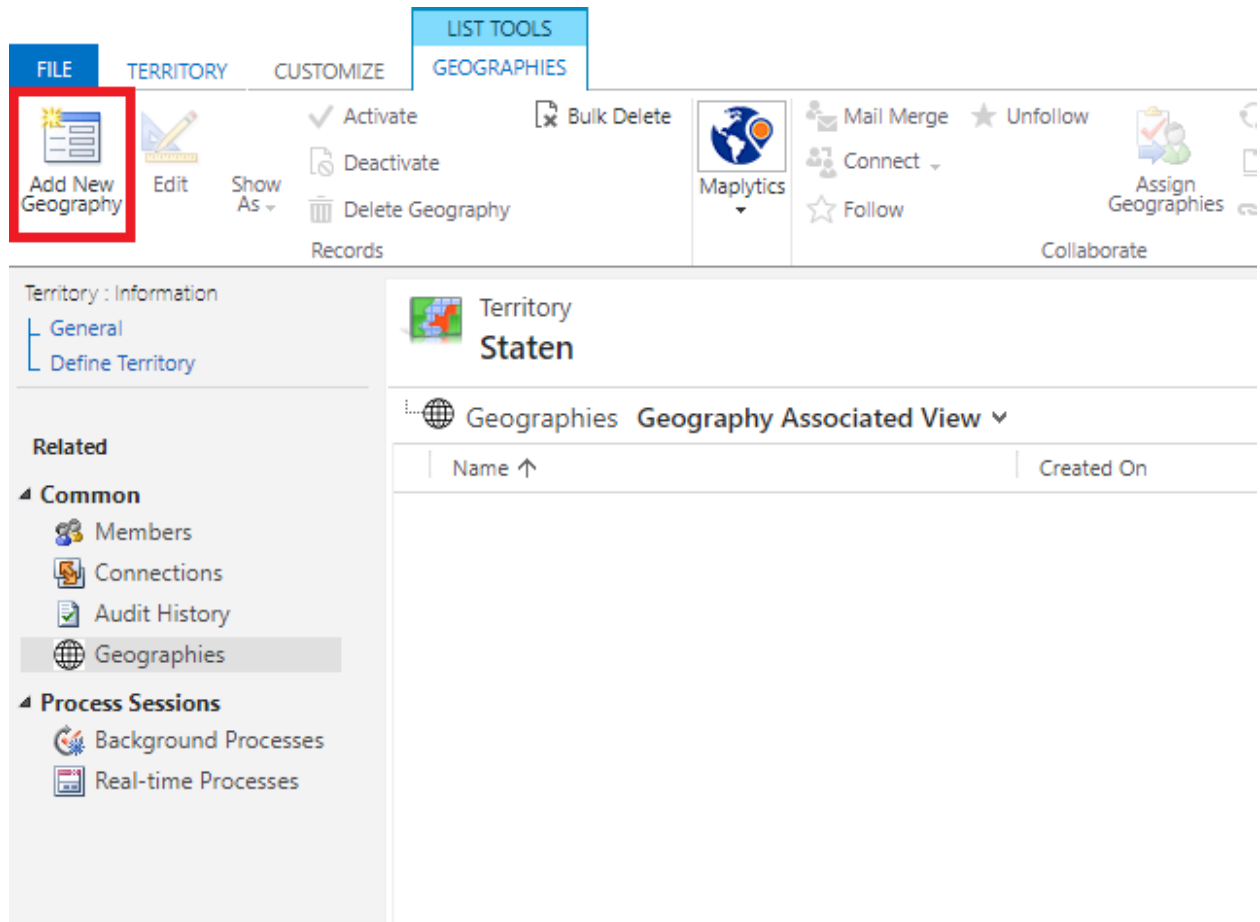
Maplytics™ – User Manual

The screenshot displays the Maplytics user interface. At the top, there are three tabs: FILE, TERRITORY (selected), and CUSTOMIZE. Below these tabs is a ribbon with various icons and labels. The ribbon is divided into four sections: Save (containing Save, Save & Close, and Delete), Collaborate (containing Connect, View Hierarchy, Copy a Link, Email a Link, Follow, and Unfollow), Process (containing Run Workflow and Start Dialog), and Data (containing Word Templates and Run Report). Below the ribbon, the left sidebar shows 'Territory : Information' with sub-items 'General' (selected) and 'Define Territory'. Under 'General', there is a 'Related' section with 'Common' and 'Process Sessions'. Under 'Common', there are 'Members', 'Connections', 'Audit History', and 'Geographies' (highlighted with a red box). Under 'Process Sessions', there are 'Background Processes' and 'Real-time Processes'. The main content area shows the 'New Territory' form. It has a title 'Territory New Territory' and a sub-section 'General' with a 'Territory Name' field and a 'Description' field. Below this is a 'Define Territory' section with a table that has two columns: 'Name' and 'Status'.

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**'.

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Here, the user has the option to visualize the geography on a map 'By Region' or "By Drawing".

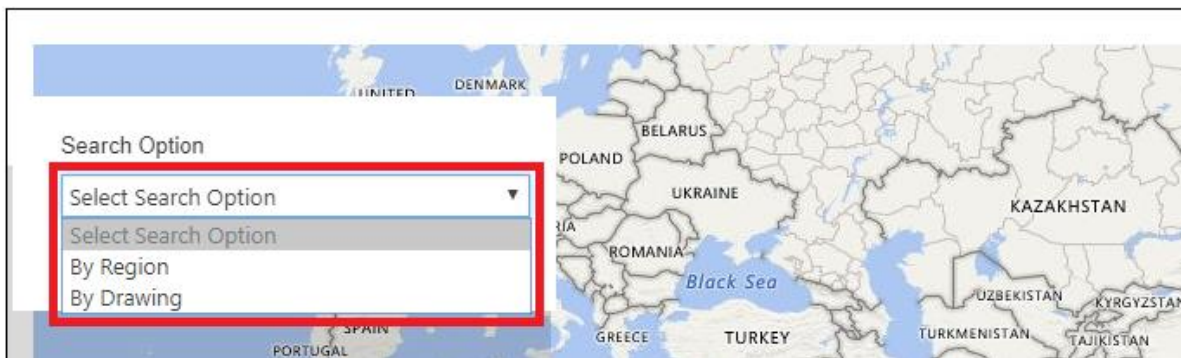
GEOGRAPHY : INFORMATION

New Geography

General

Name* **10301**
Territory* **Staten**

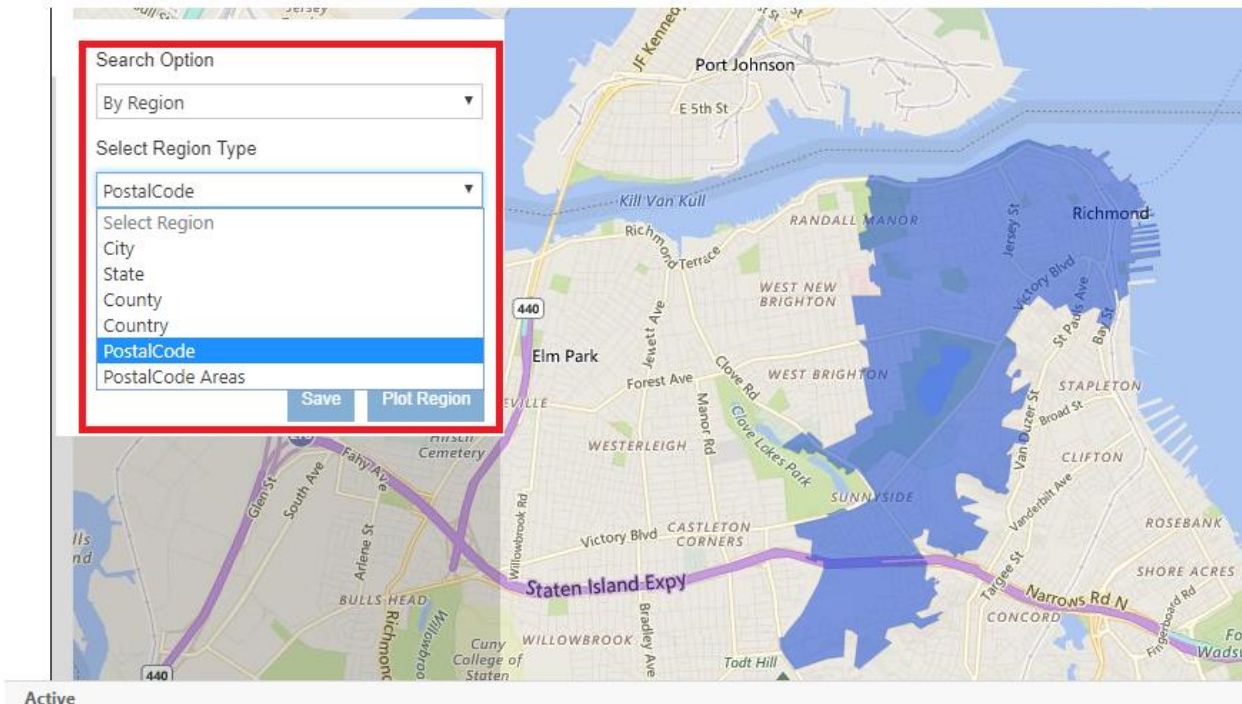
Map Preview



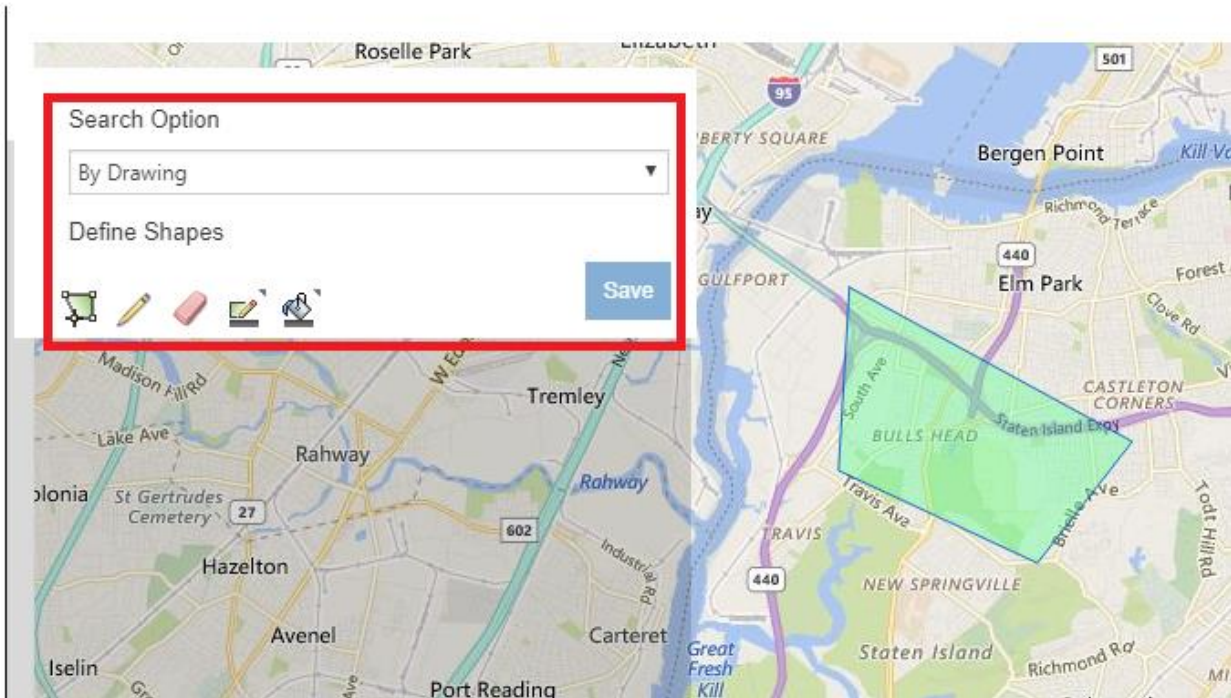
The 'By Region' option lets the user to plot the geography based on region types and the user has the freedom to choose the color for the plotted region.

GEOGRAPHY : INFORMATION

New Geography



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.

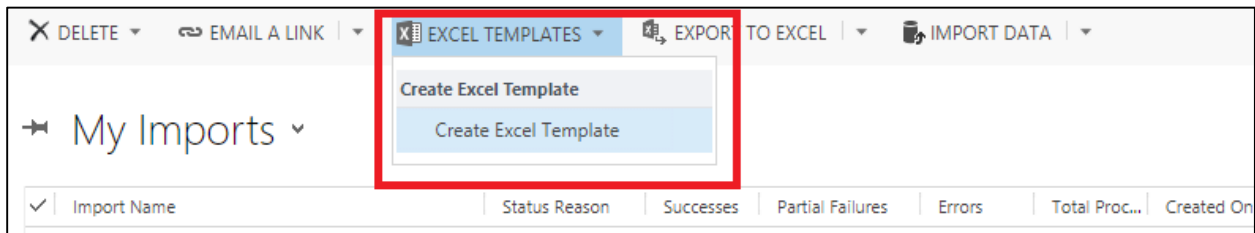


User can define multiple geographies for a single territory.

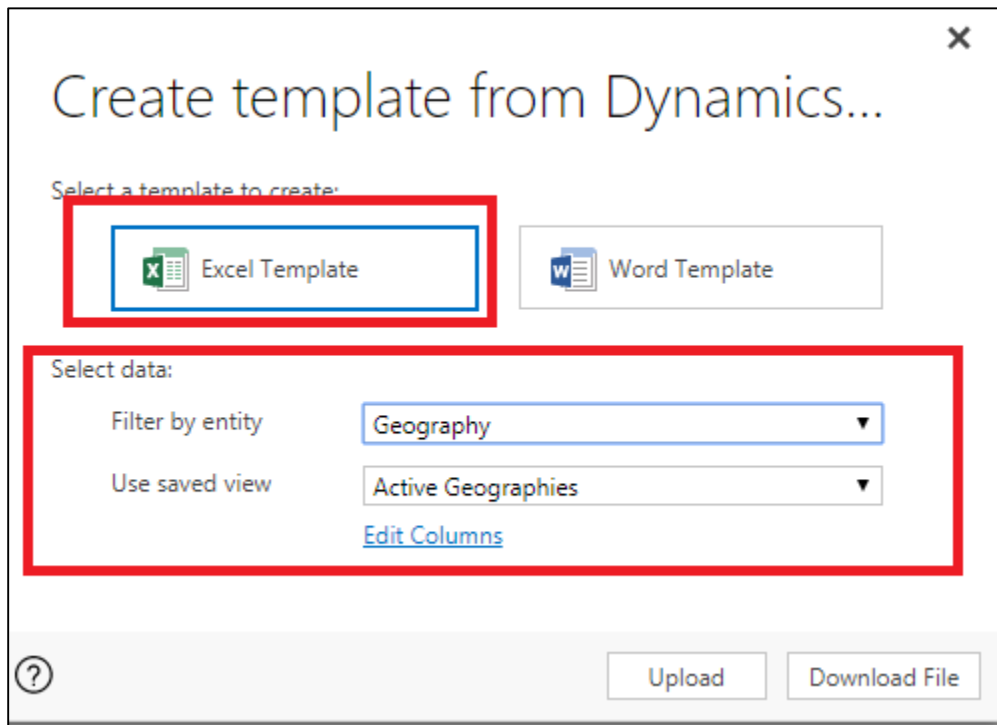
Adding Geographies in bulk using Maplytics

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

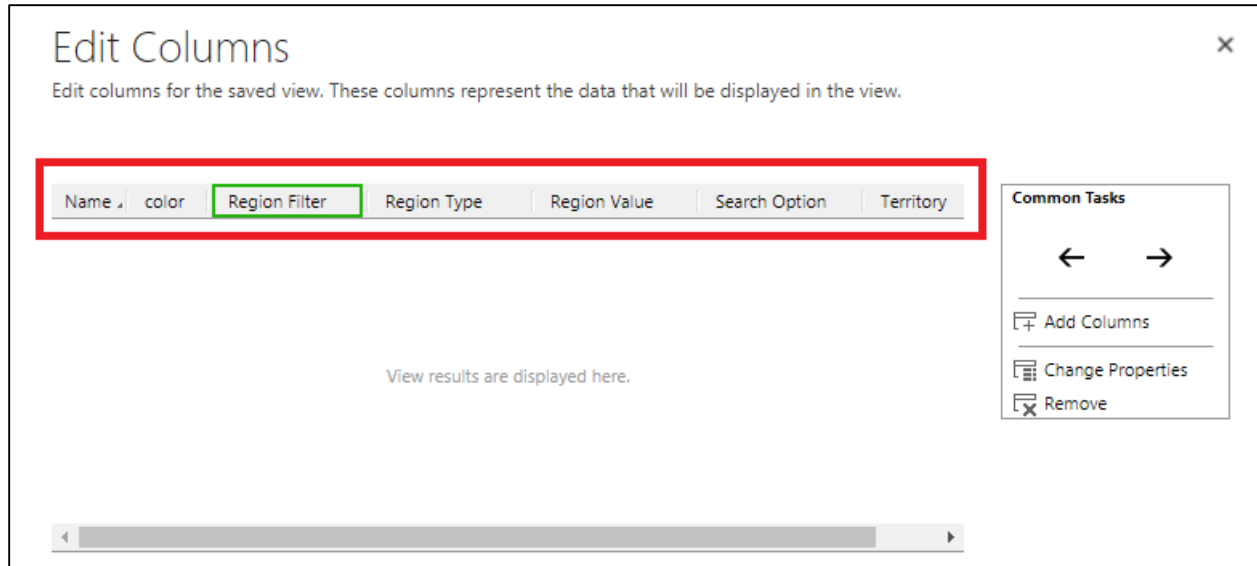
To upload the geographies in bulk, the user first needs to export an Excel template. Go to **Setting > Data Management > Imports** > select the '**Excel Templates**' and then click on the 'Create Excel Template' option.



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;



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 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).

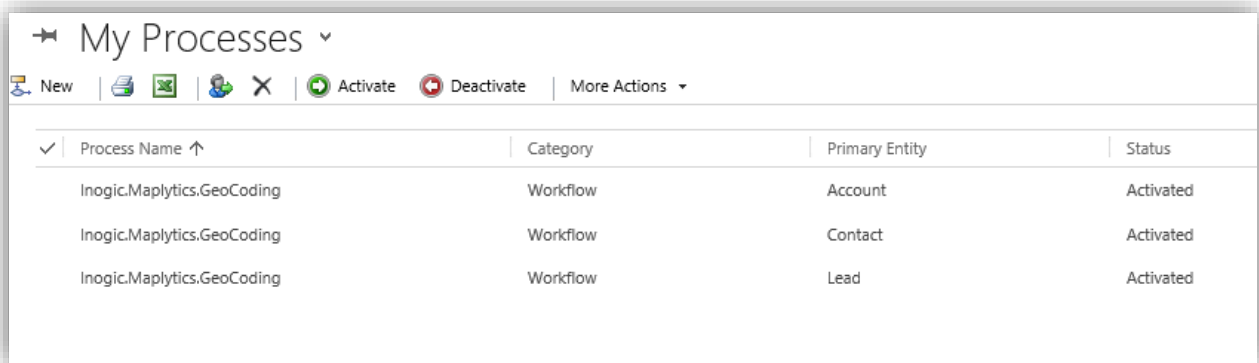
Region Value: If the user needs to create the geography based on Postal Code, then they can define the postal code values in this column. To define multiple geographies in single territory, use the comma separator (,).

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

Workflows

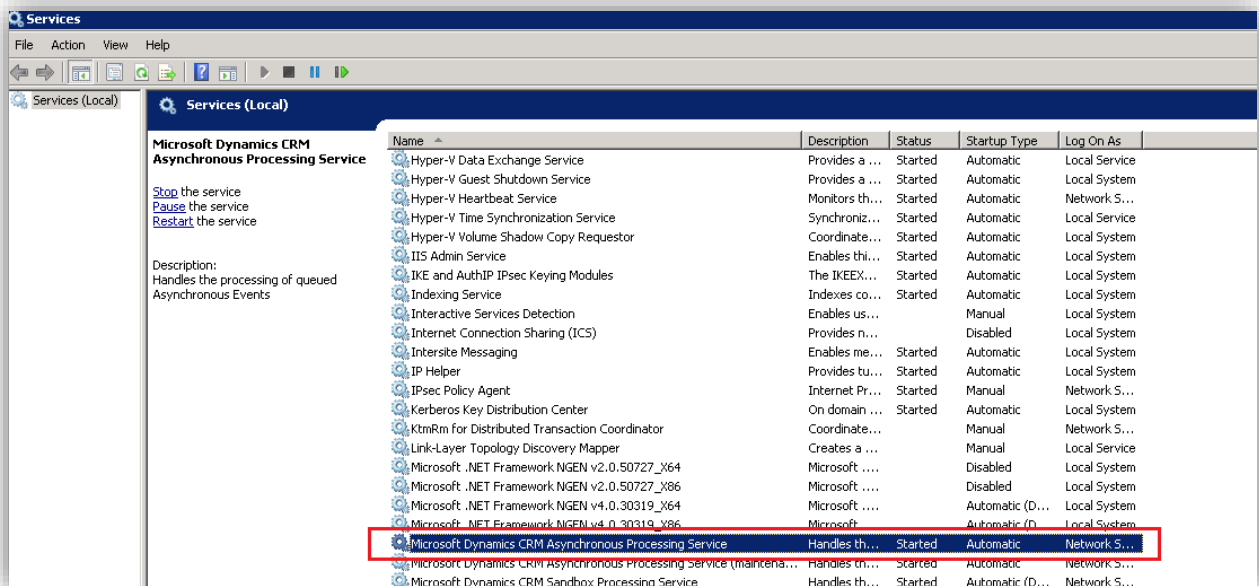
Maplytics ships with two different kinds of workflows – **Geocoding workflows** to geocode addresses and **Territory Assignment workflow** to assign territories to CRM records. We ship Geocoding workflow configured for Account, Lead, and Contact entities and Territory workflow for Account by default. The user can set up these workflows for custom entities also.

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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
Hyper-V Data Exchange Service	Provides a ...	Started	Automatic	Local Service
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	Manual	Local System
Internet Connection Sharing (ICS)	Provides n...	Disabled	Disabled	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	Manual	Network S...
Link-Layer Topology Discovery Mapper	Creates a ...	Manual	Manual	Local Service
Microsoft .NET Framework NGEN v2.0.50727_x64	Microsoft ...	Disabled	Disabled	Local System
Microsoft .NET Framework NGEN v2.0.50727_x86	Microsoft ...	Disabled	Disabled	Local System
Microsoft .NET Framework NGEN v4.0.30319_x64	Microsoft ...	Automatic (D...	Automatic (D...	Local System
Microsoft .NET Framework NGEN v4.0.30319_x86	Microsoft ...	Automatic (D...	Automatic (D...	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...

Steps to 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

Properties

OK Cancel

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: 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

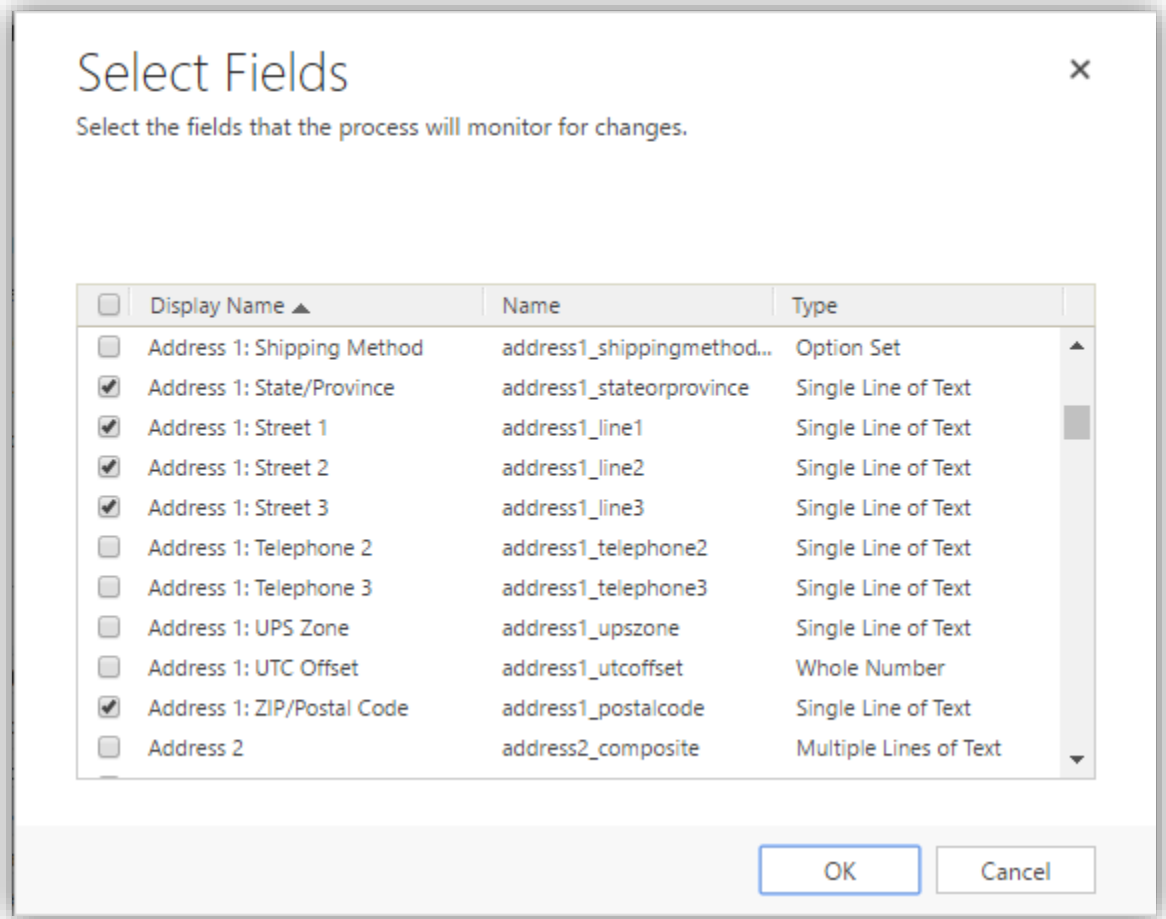
☐ Record status changes

☐ Record is assigned

☒ Record fields change [View](#)

☐ Record is deleted

- 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;



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

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

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Process: Inogic.Maplytics.Geocoding Working on solution: Default Sol

Information

Common

- Information
- Audit History
- Process Sessions

General Administration Notes

Process Name * Inogic.Maplytics.Geocoding

Entity Invoice

Activate As Process

Category Workflow

Available to Run

☐ Run this workflow in the background (recommended)

☒ As an on-demand process

☐ As a child process

Options for Automatic Processes

Scope Organization

Start when: After

Record is created ☒

Record status changes ☐

Record is assigned ☐

Record fields change ☒ [View](#)

Record is deleted ☐

Execute as:

☐ The owner of the workflow

☒ The user who made changes to the record

Workflow Log Retention

☒ Keep logs for workflow jobs that encountered errors

Set address input parameter to calculate the geocode.
Inogic.Maplytics.Geocoding (5.4.0.4);GeoCodeWorkflow.GeoCodeAddress [View properties](#)

Set calculated Latitude and Longitude.
Update: Invoice [View properties](#)

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

File [Save and Close](#)

Process: Inogic.Maplytics.Geocoding

Set Custom Step Input Properties

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 and Longitude to the output parameters returned by the workflow assembly as shown in the screenshot below;

Latitude: {Latitude|Set address input}

Longitude: {Longitude|Set address input}

Longitude|Set address input parameter

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).

Steps to Configure Territory Assignment workflow for custom entities:

- Follow the Steps 1 – 3 from configuring geocoding workflow for custom entities. This will help you create a new workflow.
- 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.

<input type="checkbox"/>	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_adresstypecode	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

- 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 *

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

☐ Record is deleted

Add 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)

Status: Draft

AssignTerritoryWorkflow.AssignTerritory

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

Set Custom Step Input Properties - Microsoft Dynamics 365 - Google Chrome

https://maplyticsdemo56.crm.dynamics.com/SFA/Workflow/customactivityform.aspx?activityname=CustomActivityStep1&customste

File Save and Close Help

Process: Inogic.Territory.Assignment.Workflow Working on solution: Default Solution

Set Custom Step Input Properties

Property Name	Data Type	Required	Value
Latitude	Floating Point Num...	Optional	{Address 1: Latitude(Contact)}
Longitude	Floating Point Num...	Optional	{Address 1: Latitude(Contact)}

Form Assistant

Dynamic Values

Operator: Set to

Look for: Contact

Address 1: Latitude

Add

X | ↑ ↓

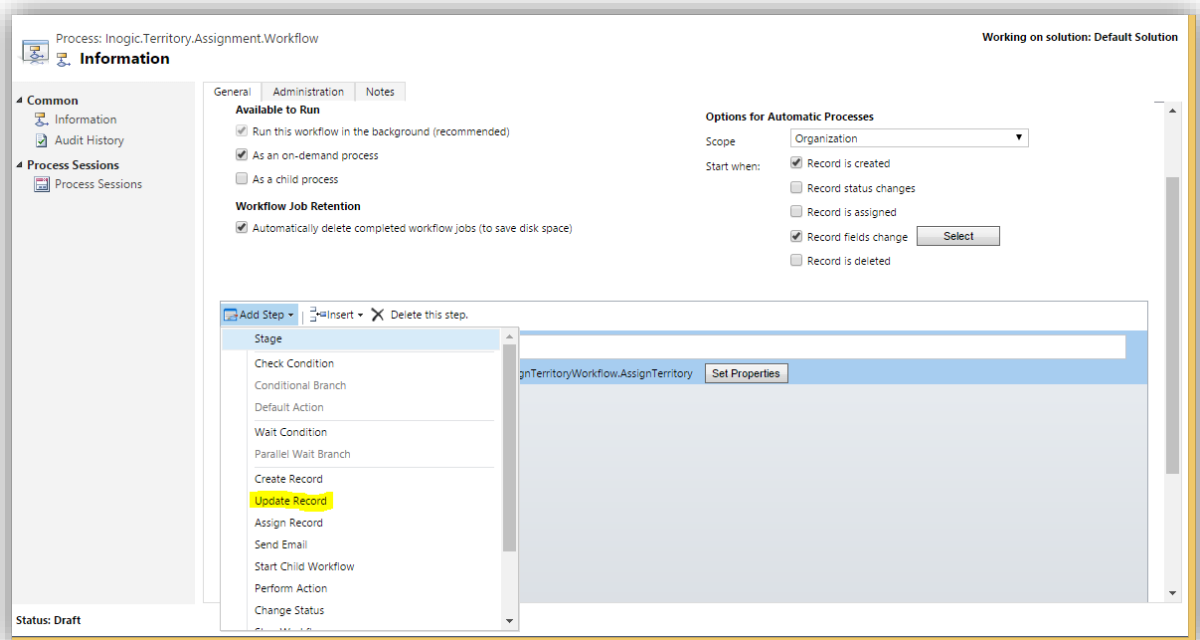
Address 1: Latitude(Contact)

Default value:

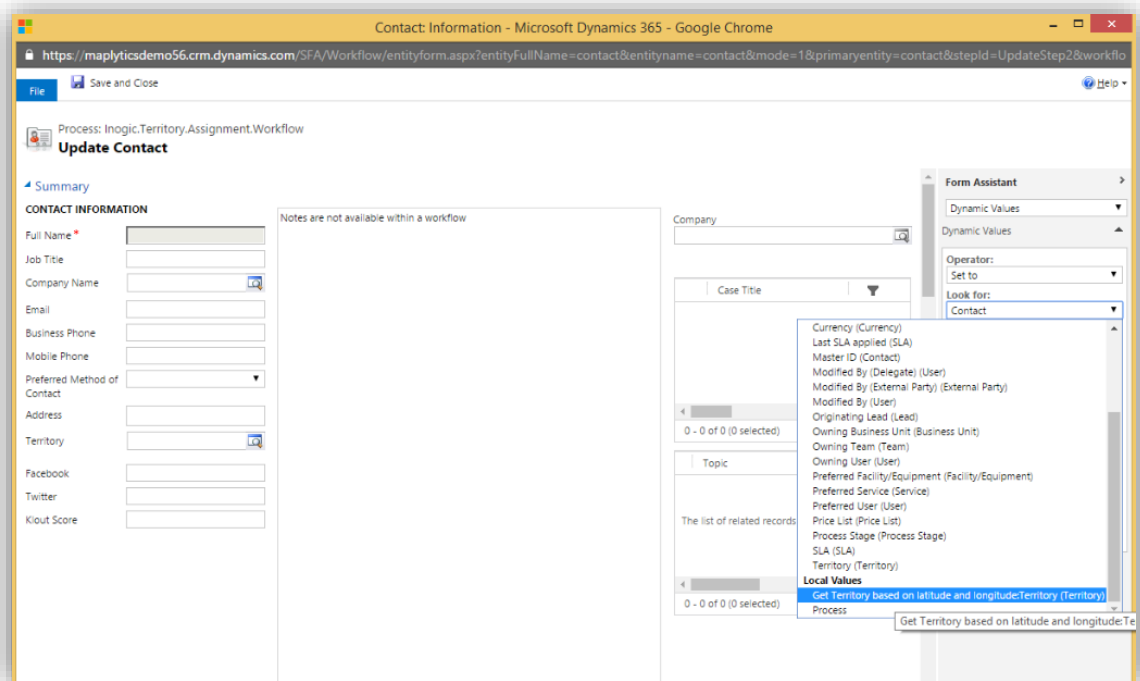
OK

- Choose **'Update Record'** from **'Add Step'** menu and select the same entity for which workflow is designed;

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- Click on '**Set Properties**' and select '**Get Territory based on Latitude and Longitude: Territory (Territory)**' in the '**Look for**' dropdown as shown below;



- Update the territory field on entity record with the new value from workflow assembly as shown below;

Maplytics™ – User Manual

Process: Inogic.Territory.Assignment.Workflow
Update Contact

Summary

CONTACT INFORMATION

Full Name*

Job Title

Company Name

Email

Business Phone

Mobile Phone

Preferred Method of Contact

Address

Territory: Territory(Get Territory based on latitude and longitude)

Facebook

Twitter

Klout Score

Notes are not available within a workflow

Company

Case Title

The list of related records is not available when you view this record.

0 - 0 of 0 (0 selected) | Page 1

Topic

The list of related records is not available when you view this record.

0 - 0 of 0 (0 selected) | Page 1

Form Assistant

Dynamic Values

Operator: Set to

Look for: Get Territory based on latitude and longitude

Territory

Add

Default value:






OK

Maplytics Batch Geocoding Tool

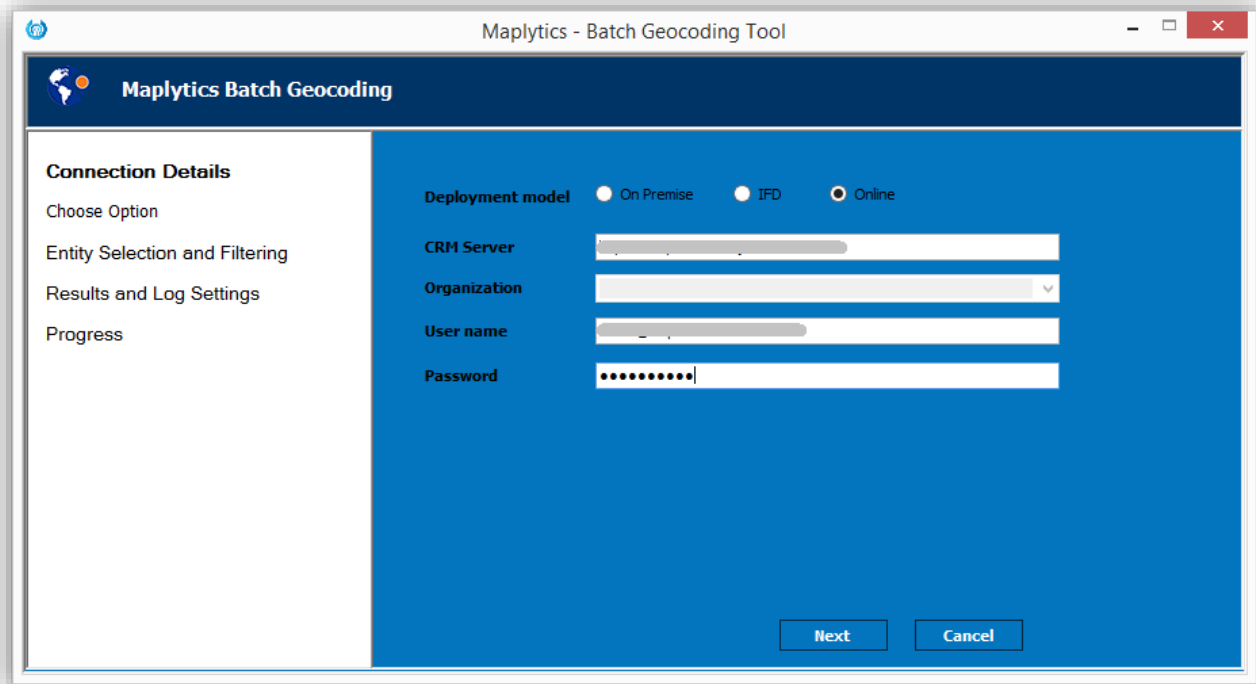
The workflow designed can be used on a day-to-day basis for addresses that are changed or added occasionally. However, for bulk geocoding of data, we recommend using the Batch Geocoding tool. This tool ensures that the bulk geocoding of records is handled as a single batch request rather than the individual transaction that each single geocode request is counted as. This tool helps the user to run all the Maplytics workflows for batch request including Territory assignment workflow.

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 Geocoding tool zip and select the **BatchGeocoding** as shown in below screenshot;

Name	Type	Compressed size
 BatchGeocoding	Application	73 KB
 BatchGeocoding.exe	CONFIG File	1 KB
 microsoft.crm.sdk.proxy.dll	Application extension	55 KB
 microsoft.xrm.client.dll	Application extension	115 KB
 microsoft.xrm.sdk.dll	Application extension	132 KB

Executing Batch Geocoding 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 above screenshot depending on their deployment.

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

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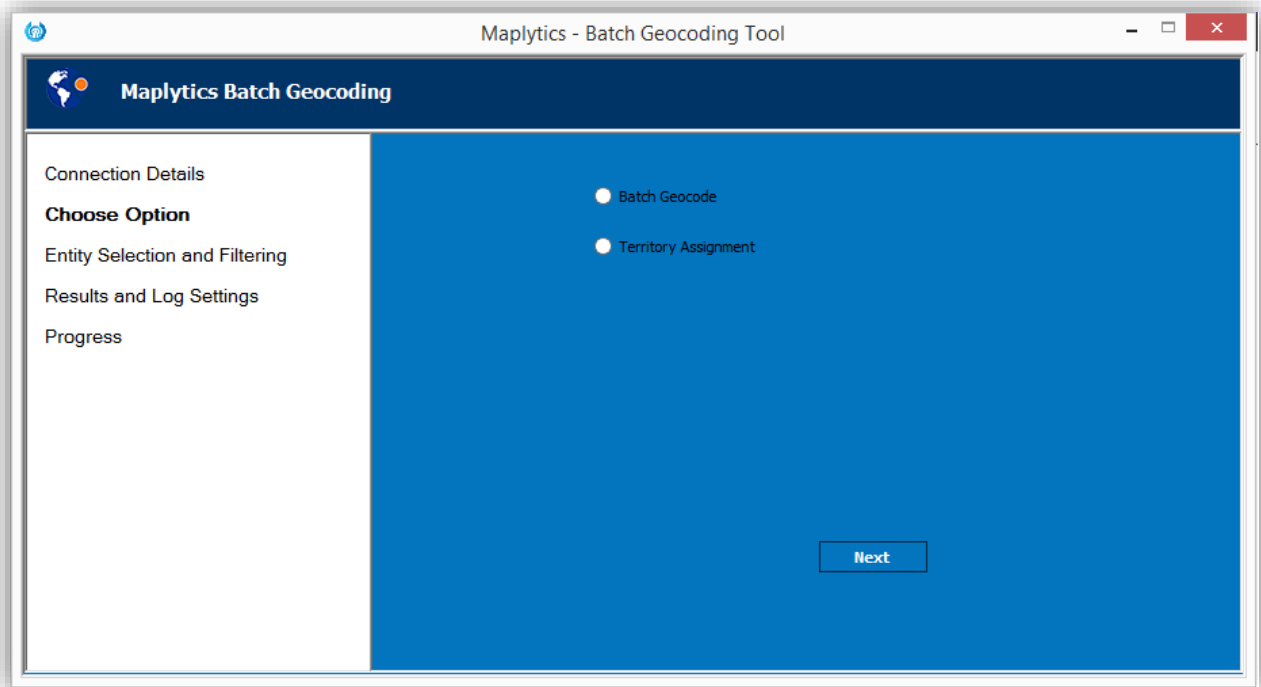
Organization: If the deployment model is '**OnPremise**' then the user has to specify the organization name. For other deployment models leave this blank.

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.

Password: Password of CRM user.

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;



Entity Selection and Filtering:

Please select the entity and view for which the user would like to run this tool. Please find the details of the same below;

Entity: Select the entity 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 view list. Select the required view.

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All records from the selected view are populated in the table below. The user can either choose to geocode all of the records, or select the records from the table for geocoding the record.

Maplytics Batch Geocoding

Entity: account

Views: My Active Accounts OR All Records ☐

Show Results

Total Records: 65

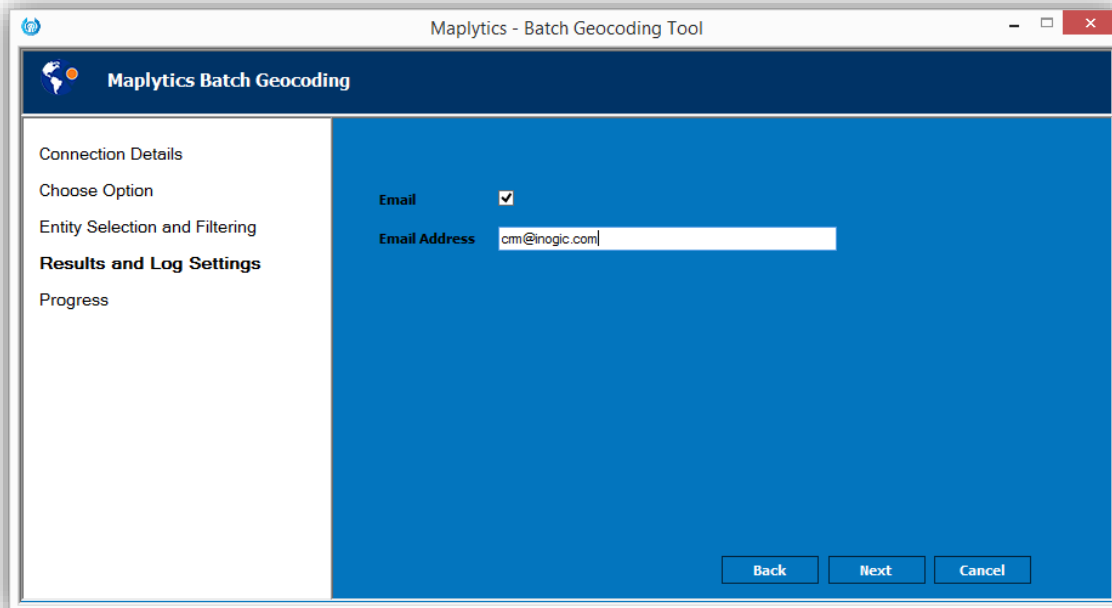
<input checked="" type="checkbox"/>	Name	Address	City	State	County	PostalCod
<input checked="" type="checkbox"/>	A. ROBERTA CU...	782 at STAFFOR...	Staten Island	NY		10309
<input checked="" type="checkbox"/>	D. AHMED SHA...	88 at SLEEPY H...	Staten Island	NY		10314
<input checked="" type="checkbox"/>	D. CORTLAND ...	104 at MANOR ...	Staten Island	NY		10310
<input checked="" type="checkbox"/>	D. DAVID HUNT...	40 at LASALLE S...	Staten Island	NY		10303
<input checked="" type="checkbox"/>	D. EDWARD RA...	65 at FRASER S...	Staten Island	NY		10314
<input checked="" type="checkbox"/>	D. LENFORD PI...	24 at CECIL CT	Staten Island	NY		10303

Back Next Cancel

Results and Log Settings:

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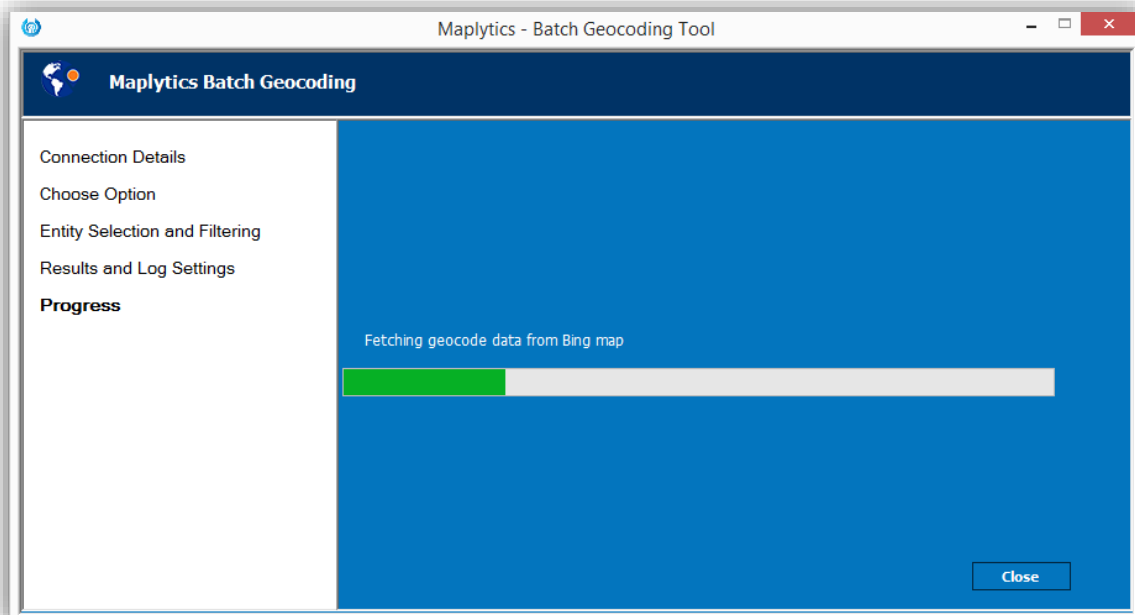
Since this is executed as a batch process in the background, enter the email address, if the users would like the job results to be mailed to them.



The screenshot shows the 'Maplytics Batch Geocoding Tool' window. The left sidebar contains a list of tabs: 'Connection Details', 'Choose Option', 'Entity Selection and Filtering', 'Results and Log Settings' (which is selected), and 'Progress'. The main area has a blue background. At the top, there is a header bar with the Maplytics logo and the title 'Maplytics Batch Geocoding'. Below this, there are two labels: 'Email' with a checked checkbox and 'Email Address' with a text input field containing 'cm@inogic.com'. At the bottom right, there are three buttons: 'Back', 'Next', and 'Cancel'.

Progress :

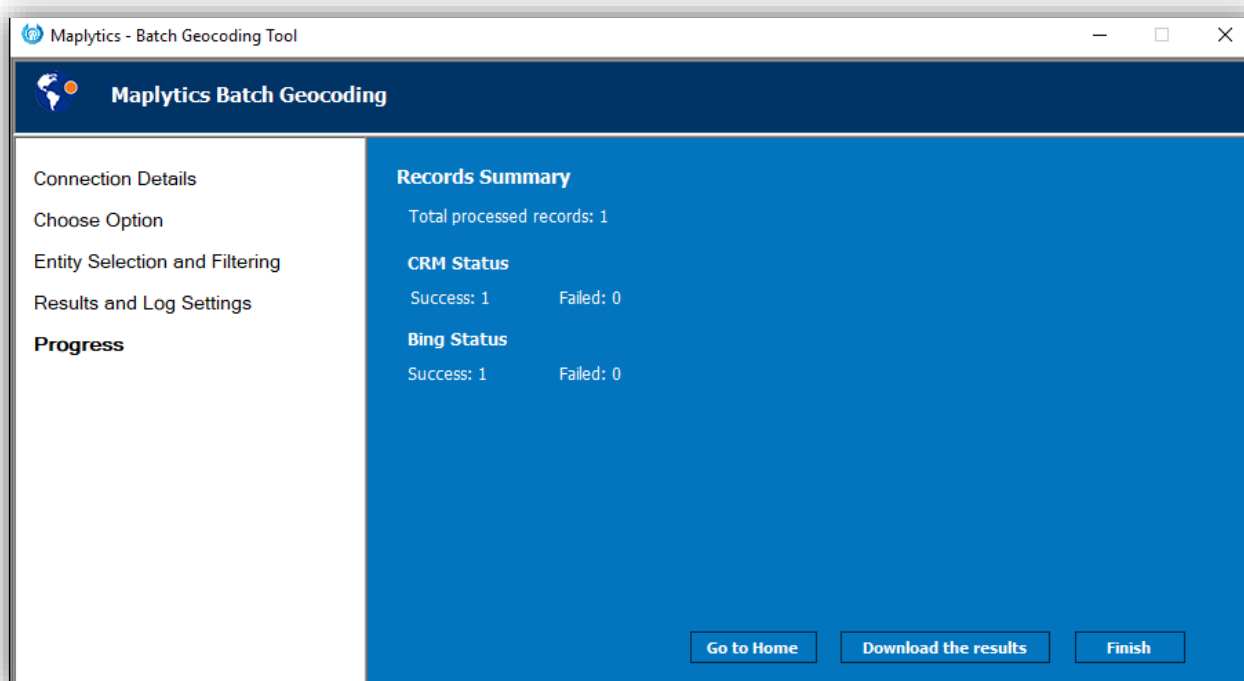
In this section, the user can see the progress of the geocoding process.



The screenshot shows the 'Maplytics Batch Geocoding Tool' window with the 'Progress' tab selected. The left sidebar shows the same list of tabs as the previous screenshot, with 'Progress' now selected. The main area has a blue background. At the top, there is a header bar with the Maplytics logo and the title 'Maplytics Batch Geocoding'. Below this, there is a progress bar with a green segment indicating the progress. Above the progress bar, the text 'Fetching geocode data from Bing map' is displayed. At the bottom right, there is a 'Close' button.

After completing the geocoding process, the user can download the results. The results will be

downloaded in CSV format.



CRM Status: shows geocode data has been successfully updated to CRM records.

Bing Status: shows how many records have been successfully geocoded from Bing.


Pre-defined colors for Categories

The users now have the ability to define colors for the categories of the plotted records. To define the color of the category attribute, the users have to follow the below steps;

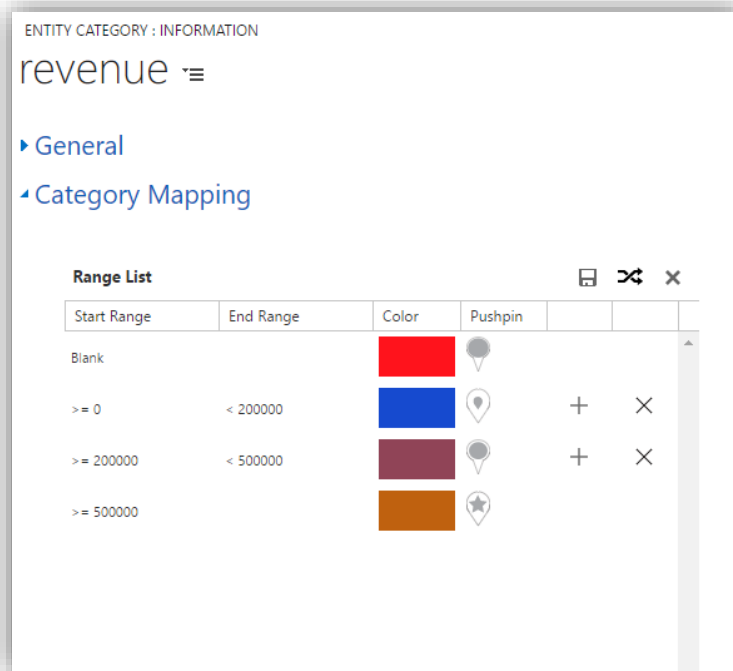
- Go to **Settings > Maplytics > Entity Maps** and select the entity map of the entity for which the user needs to define the color.

The screenshot shows a web interface for configuring an entity map. At the top, it says 'ENTITY MAP : INFORMATION' followed by the entity name 'account'. Below this is a section titled 'Category Configuration'. Under this section is a dropdown menu labeled 'Active Entity Categories' with a downward arrow. Below the dropdown is a table with three columns: 'Name ↑', 'Entity Map', and 'Data Type'. The table contains one row with the values 'revenue', 'account', and 'money' respectively.

Name ↑	Entity Map	Data Type
revenue	account	money

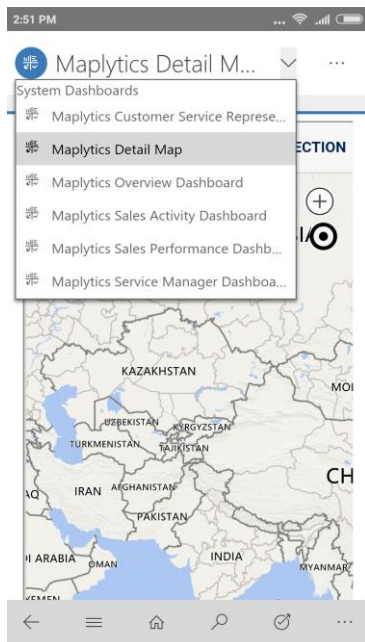
- Click on the plus (+) icon of the Category Configuration subgrid to open the new Entity Category form. Enter the logical name of the category attribute in the Category text box and save the form.
- The user can select only OptionSet, Two options, Numeric, String, Lookup and Money attributes to define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

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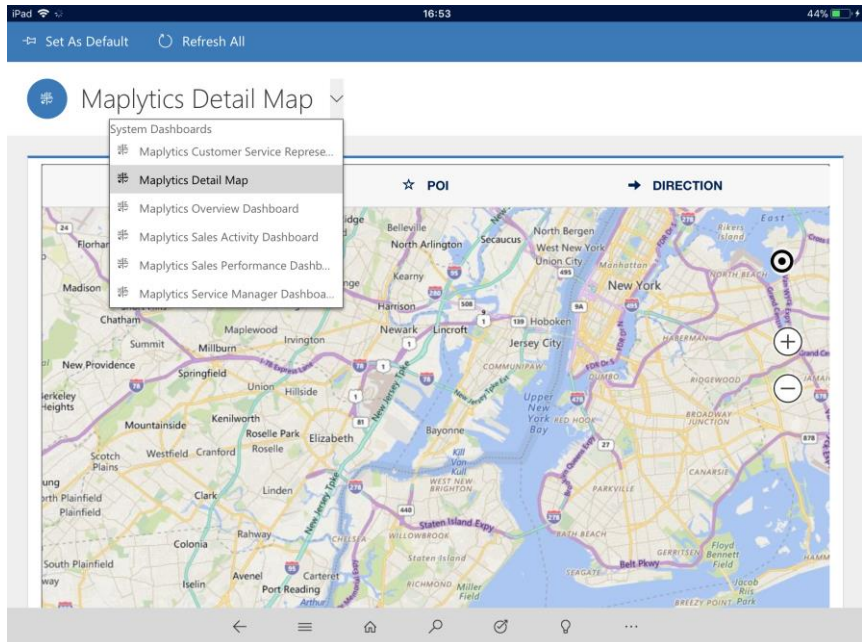


Maplytics – Tablet / Mobile

Maplytics is accessed from the Dynamics CRM App on Tablet & Mobile device using a dashboard for detail map. To open Detail map; **Go to Dashboard > Maplytics Detail Map** as shown below:



Mobile



Tablet

Maplytics™ – User Manual

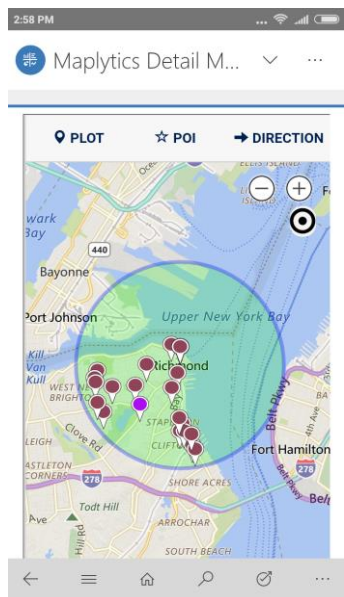
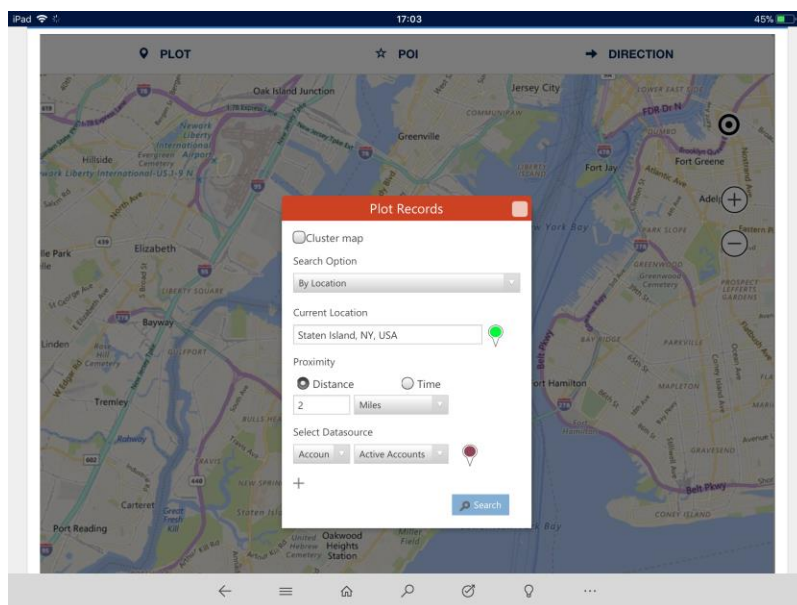
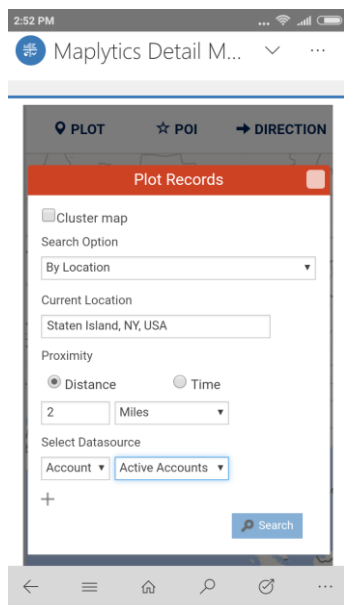
Plot:

There are three ways to plot the data on Map, namely:

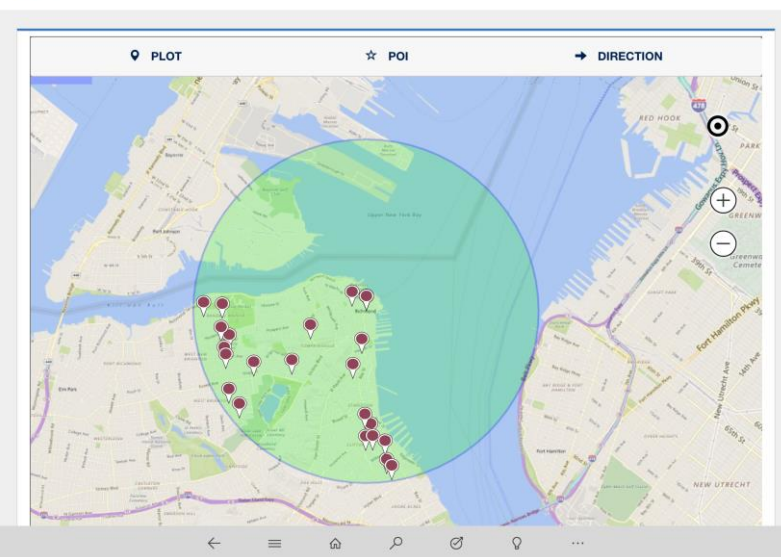
- [By Location](#)
- [By Region](#)
- [By Territory](#)

Proximity:

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



Mobile

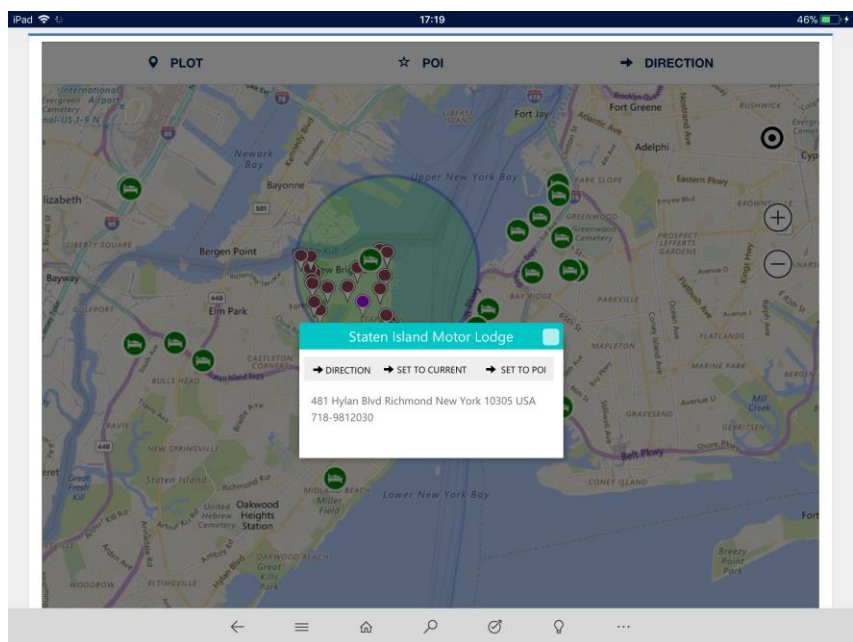
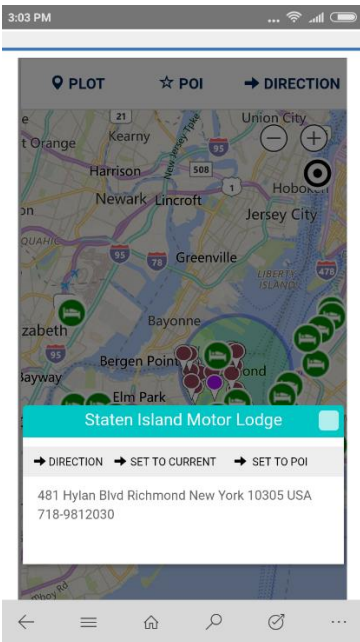
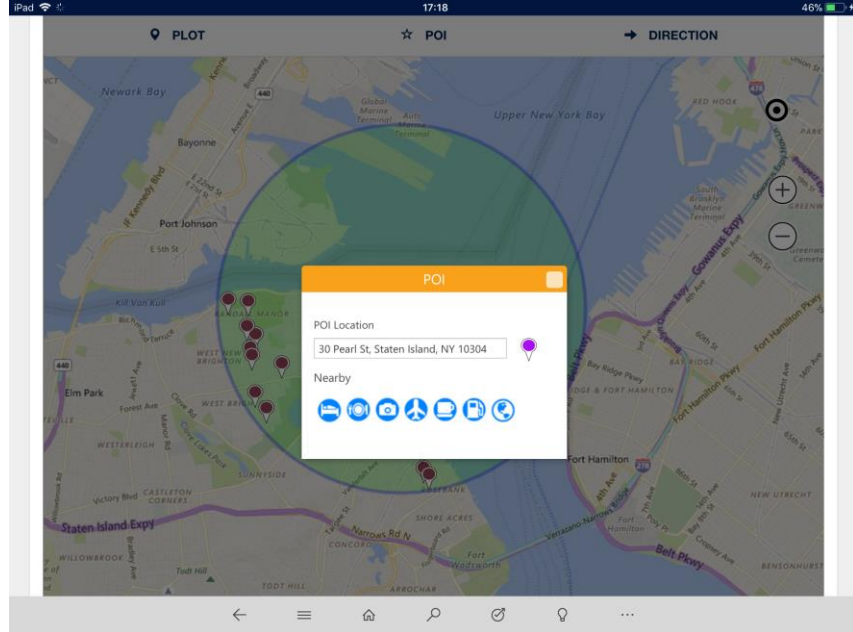
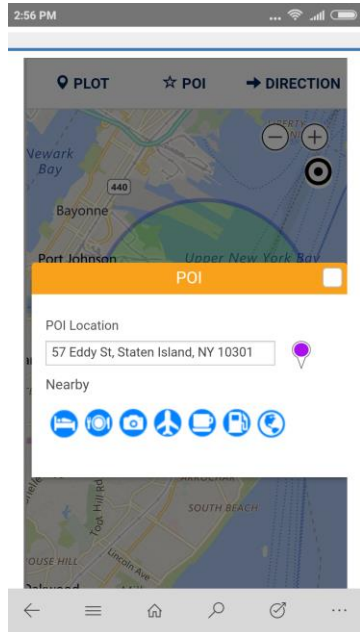


Tablet

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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.




Mobile

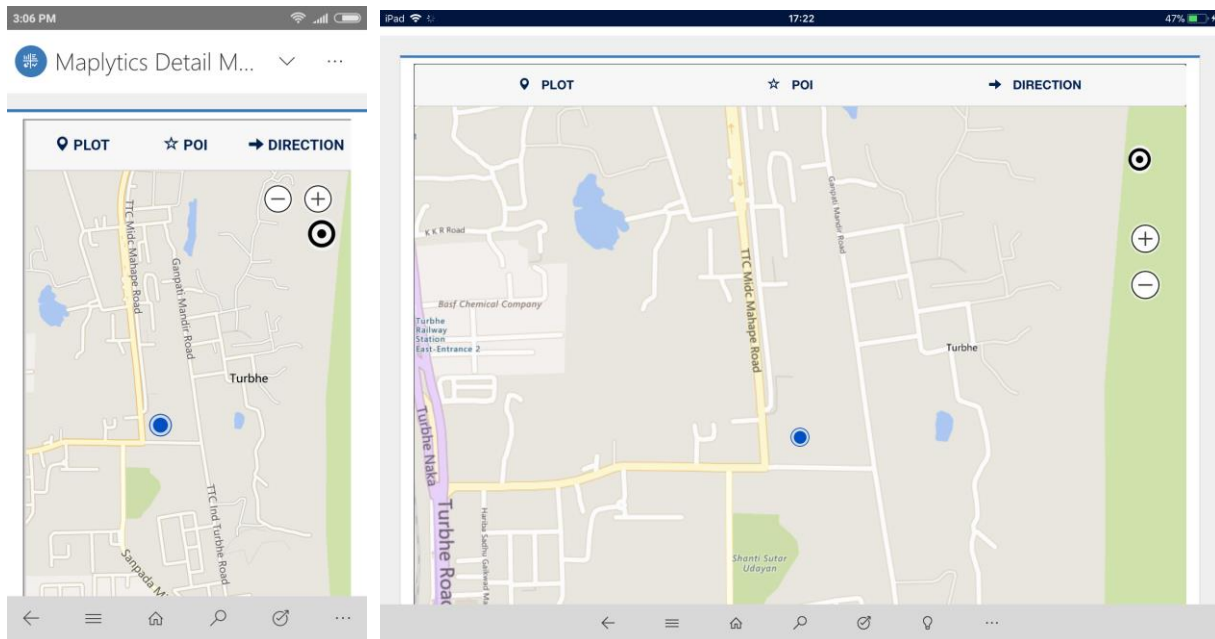
Tablet

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.

GPS 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.

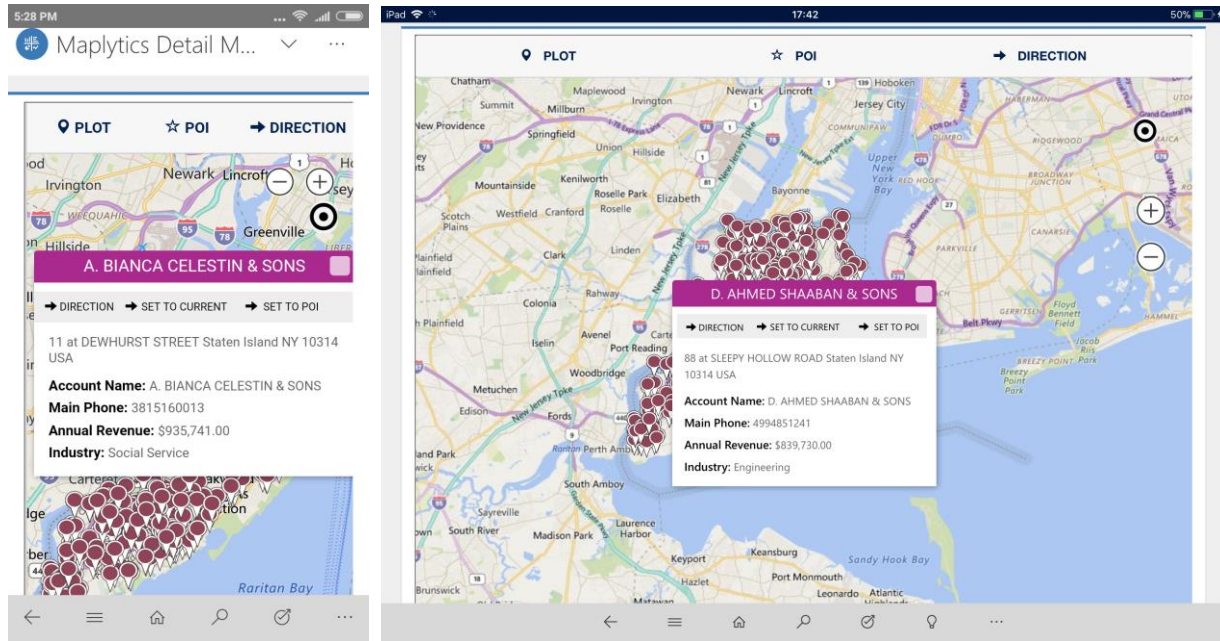
Note: Please ensure the following points for the GPS functionality to work:

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

Tooltip:

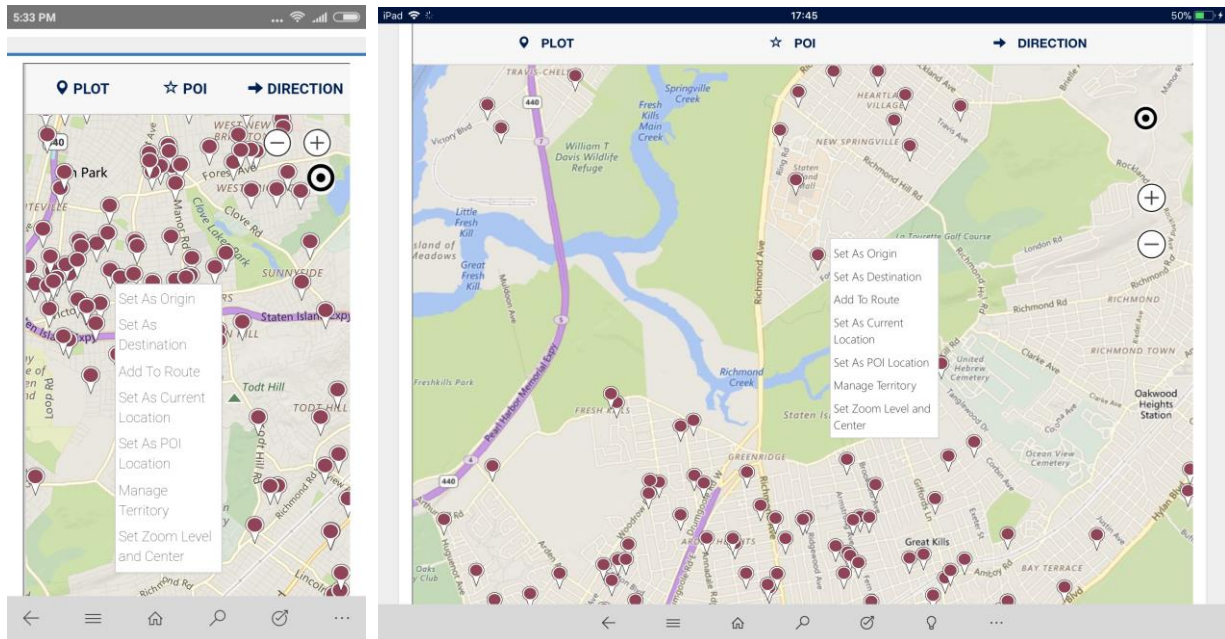
Every Pushpin will display the record name, address, as well as the contextual data defined in the tooltip section of the Maplytics Configuration.

Maplytics™ – User Manual



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.

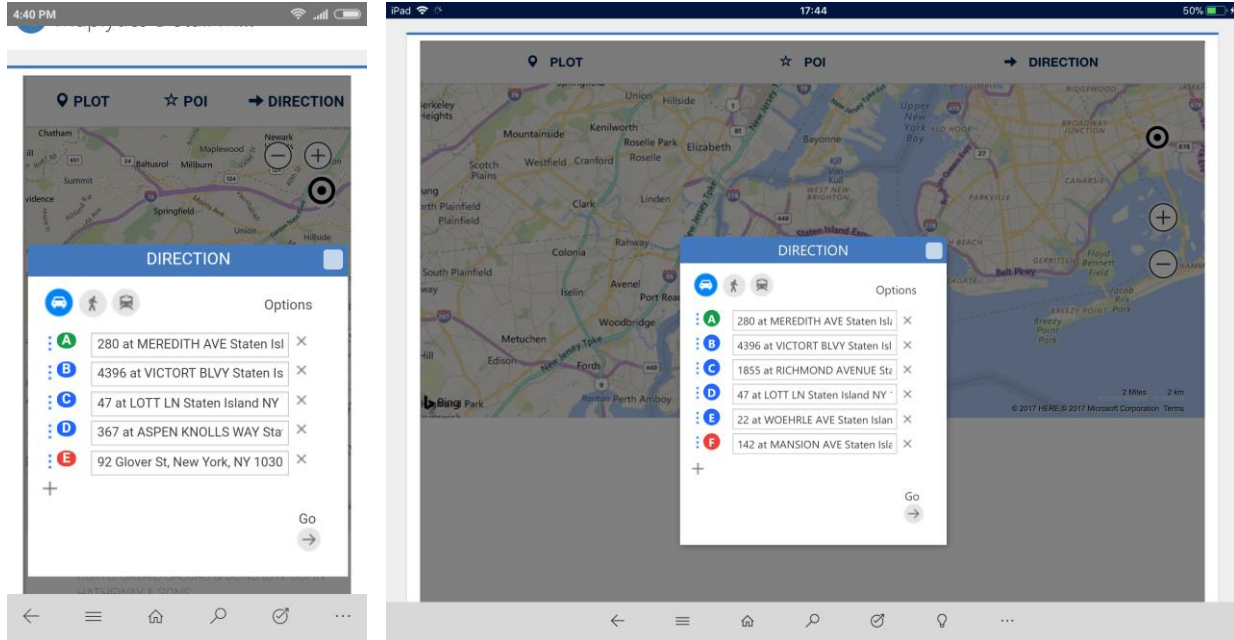
Manage Territory:

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

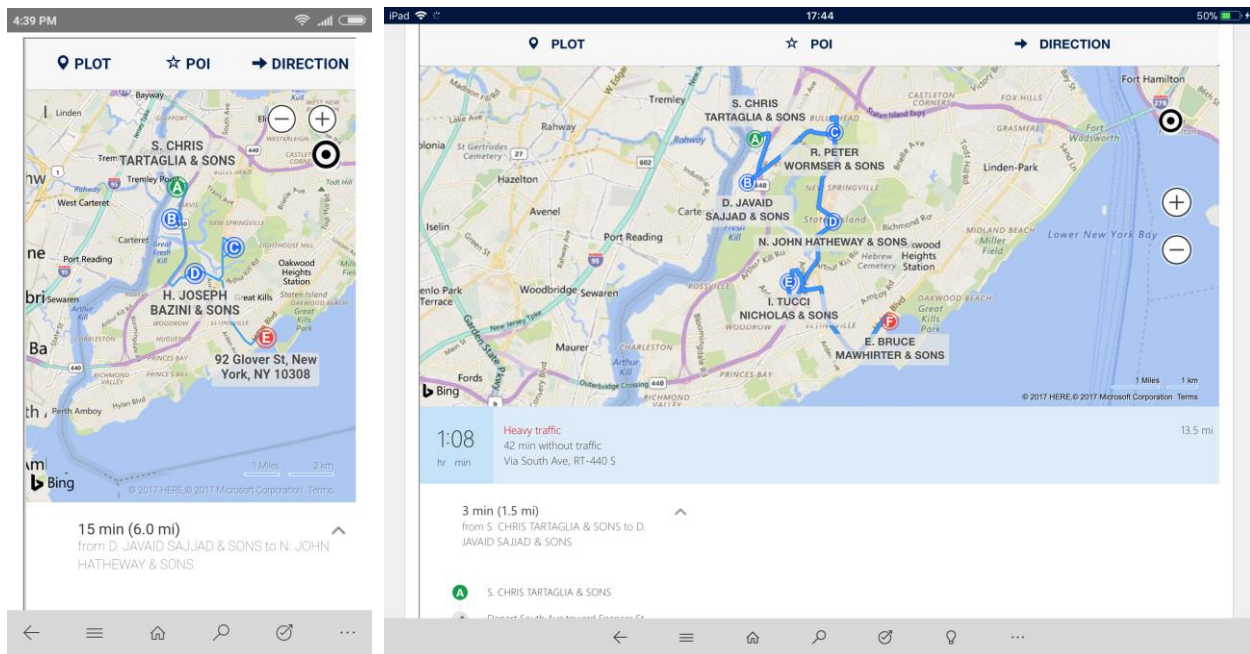
Routing – Tablet / Mobile

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 10 waypoints in direction**.

Maplytics™ – User Manual



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

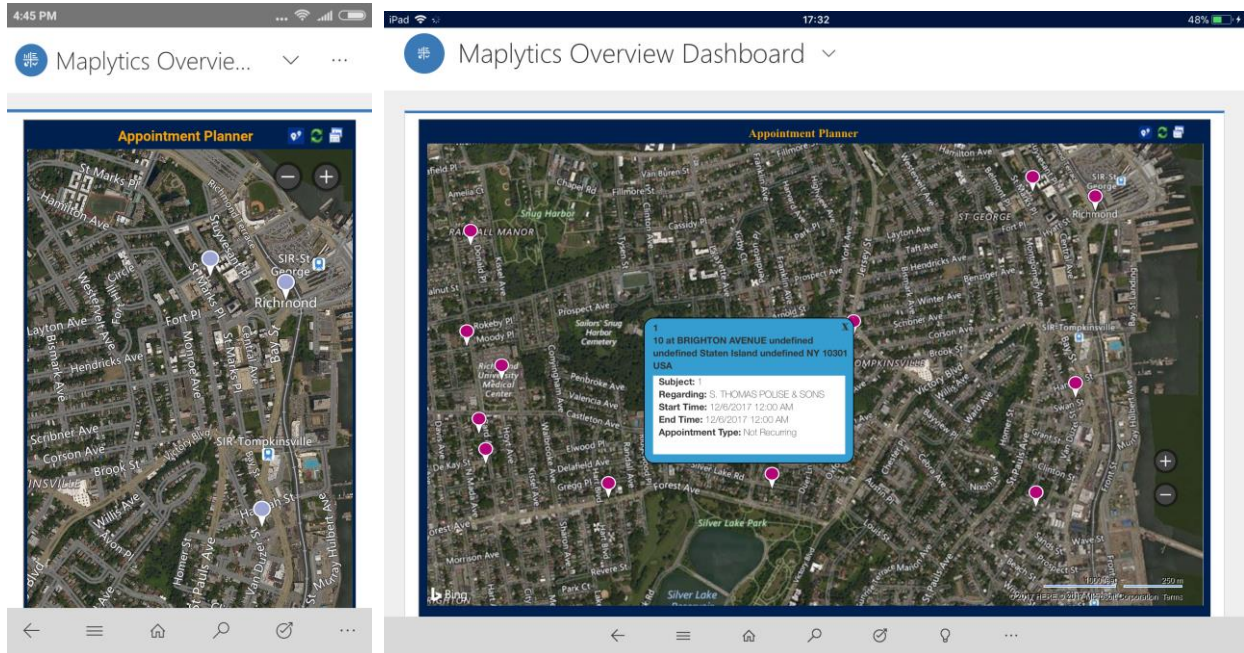


Mobile

Tablet

Dashboards in Tablet:

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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