



NATIONAL COLLEGE of IRELAND

MSc DATA ANALYTICS

BUSINESS INTELLIGENCE & BUSINESS ANALYTICS

“Action Tour Guide”

Team - 17

Student name:
Dhanshree Bauskar
Student Number: x19230460

Student name:
Dhwani Hingu
Student Number: x19216742

Student name:
Anurag Ratnaparkhe
Student Number: x19229992

Lecturer

Sean Heeney
Department of Computing

Contents:

1. Abstract	3
2. Background Information.	3
3. Marketplace	3
4. Scope of processes	4
5. System Design	4
6. Analytics requirements	7
7. Customer Integration	7
8. Database Design	7
9. Creation of test Data	9
10. Introduction of project implementation	12
11.SWOT Analysis	12
12. Implementation in CRM	14
13. Tableau Dashboard implementation.	22
14. Benefits of Solution	25
15. Teamwork	25
References	26

1. Abstract:

This Project is about Business Analysis for “Action Tour Guides”, a well-established company in USA which develops self-guided tours for the customers. The Company was performing well in USA and so decided to expand business in Europe and thus Ireland was the starting point back in 2019, when the company developed and launched its first self-guided tour app for Ireland. During the period of 2019-2020 the company was selling steady number of applications, but when the travel restrictions were imposed in the start of March 2020 due to the impact of COVID-19 the sales of the apps went down rapidly. That is when Business Analytical Solutions using analytical tools were suggested and implemented and as soon as the travel restrictions were lifted the sales once again went up hastily. In this project, a project specification document was created to better understanding of the problem definition and for the project implementation part Microsoft Dynamics CRM, Tableau were used

2. Background Information:

ATG is an acronym for “Action Tour Guides”, It is an IT company which develops mobile based audio tours for museums, parks, hop-on-hop-off's, cruise excursions, scenic drives and city walking tours. The app is big help for people who love to travel alone according to their own space as well as want to get information and education about the area/tour[1].

Industry Type: Information Technology & Services

Company Size: 11-50 (According to LinkedIn)

Headquarters: Barrington, Rhode Islands

Founded: 2013

CEO: Snehal Shah

Specialties: Audio Tour Guides, Information Technology, Application, Audio Guide, Travel guide, Museum Guide, Walking Tours, driving tours, GPS tours, Augmented Reality, Offline Support, and Hop on Hop off tours

3. Marketplace:

Action Tour Guides majorly deals with mobile application development based on the various tourist locations and develops “Self-Guided Tour” mobile applications. ATG also has a service-based aspect in which the company through won opportunities develops and maintains tour apps for the different businesses some of which includes, ‘Dublin City hall’ ‘National Wax museum’ etc. The apps are majorly launched on play-store/ Appstore and some selected third-party websites, and for specific business needs also on the client’s webpage.

4. Scope of processes:

To keep the growth of the ATG steady in these challenging times we have proposed the following solutions.

- a. Successive Discounts: There is a high probability if a traveler purchases one of the tour apps in any county, Traveler may be visiting another tourist place as well so in order to increase the sales of the apps associated with one county, we have proposed successive discounts in which if a traveler/customer purchases an app, a successive discount of substantial amount will be offered to the other tour apps of nearby locations.
- b. Group Discounts: It is not rare to find a group of friends going together on a tour, so in this proposed solution a 'Group Discount' is awarded to the customer purchasing more than a threshold number of apps together.
- c. Tour App Customer Feedback: In order to understand the needs of the customer better, a feedback is always necessary, In this solution customer using tour apps will be asked to fill a quick feedback form, which includes rating of the app, area of improvement etc.
- d. Digital Marketing campaigns: Social media is the fastest growing platform for the marketing of products these days, for cost efficient and effective marketing social media marketing is proposed to increase the sales of the tour apps.

5. System Design:

System design gives the overall methodology and flow of how the proposed solutions are going to be implemented.

The below Figure (Figure 1) illustrates the flow of the Discount solution provided in which, the solution starts when a tourist purchases an app package, based on the package which could be either of three i.e. 'Single', 'Group' or 'Bundle' different magnitude of discounts are provided. A single package is one where the tourist/customer is sole app buyer and purchases a single tour app of particular area, in which case no discounts are provided.

The Group package is one where a group of people that can be friends, colleague etc, purchases multiple number of apps at the same time and thus gets 10 percent of discount on all of the individual apps. The third group which is Bundle package is one where either a person or a group purchases bundle of apps which includes all of the apps of particular county and thus gets a discount of 10 percent on all of the apps. Next step begins when the tour ends and the customer is asked for the feedback, if the customer likes the overall experience and gives rating of more than 2, customer is then asked whether they would like to buy more apps

of the same are if initially they did not buy the bundled package otherwise will be asked whether they would like to buy bundle of another city.

If they agree to buy as a single customer they would get additional standard discount, on the other hand if they purchase apps as a group they would get stacked up discount, and if they don't buy the feedback is acknowledged.

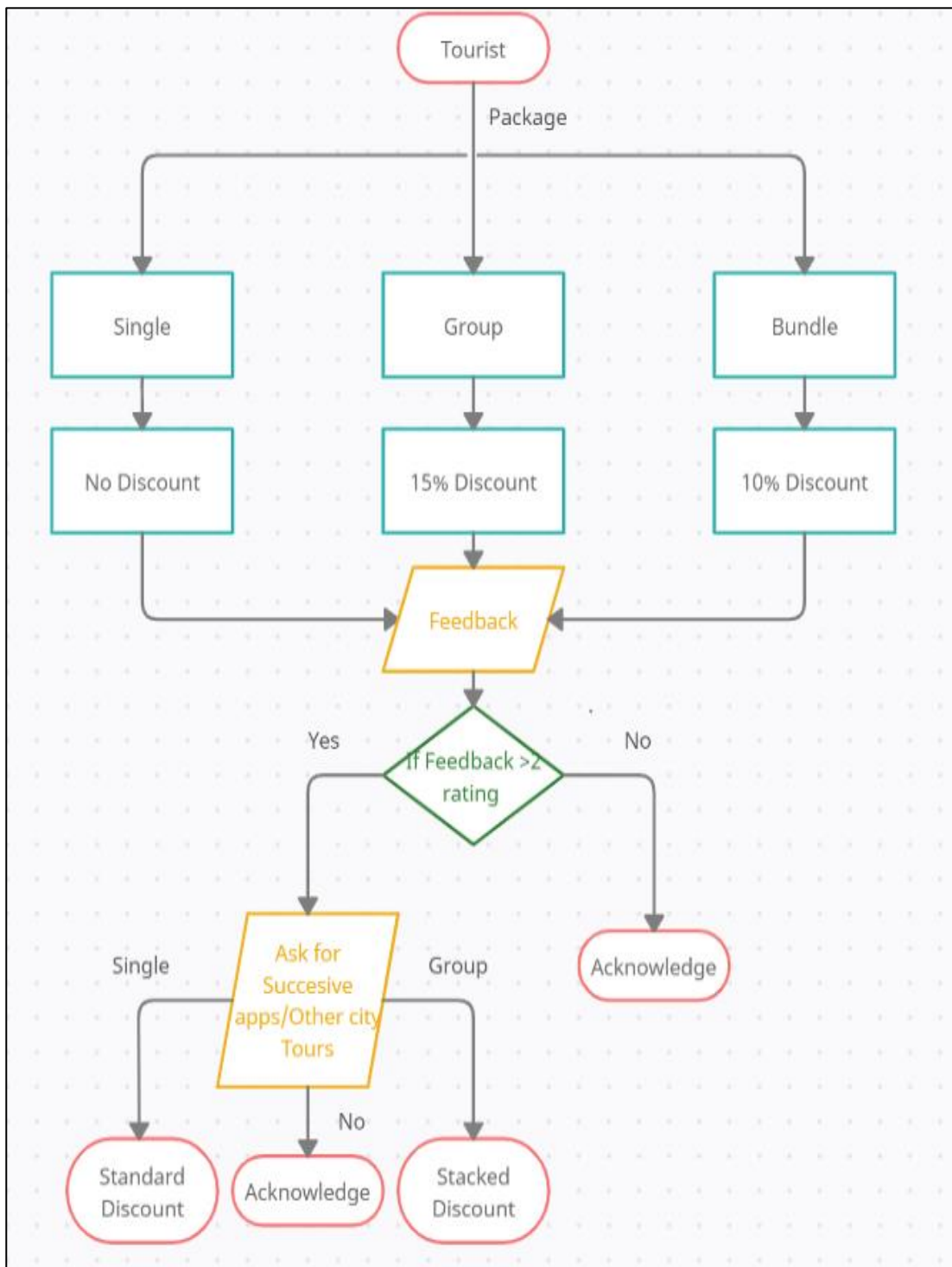


Figure.1 Flow chart of Discount System

6. Analytics Requirements:

The need for different Analytical methods such as dashboards, visualizations etc, plays a key role in the solutions provided as it helps get deeper insights into the customer behavior patterns and purchase patterns. By analyzing different customer purchase behaviors through visualizations, we can then make important decisions such as what amount of discount would be optimal, so as to increase sales as well as the profitability to the organization and helps to answer the questions such as should bundled package be provided? Is there a need of stacked discount?

7. Customer Integration:

Customer Integration plays a vital role in any business analytics model, same concept applies in the solutions provided in above sections to increase sales and profitability to the organization, in the flow of solution provided above customer feedback is the central part from where we can make certain decisions such as is the app tour quality up to the standards or not, we can analyze this by comparing the average rating of the tour app and then the apps can be improved based on the feedback.

8. Database Design:

The need for database design specifications is very crucial before employing any business analytics module or solution as only by using data we can get deeper insights of the patterns, and so as to make it easier and quick to access the data, a good database design schema is needed.

For the database schema two ER diagrams are created. Figure 2 illustrates the ER diagram for Customer information and product information table which has one to many relationship through customer info. to product information. The customer info. table has CID as primary key and PID as foreign key there are some multivalued attributes which are color coded differently.

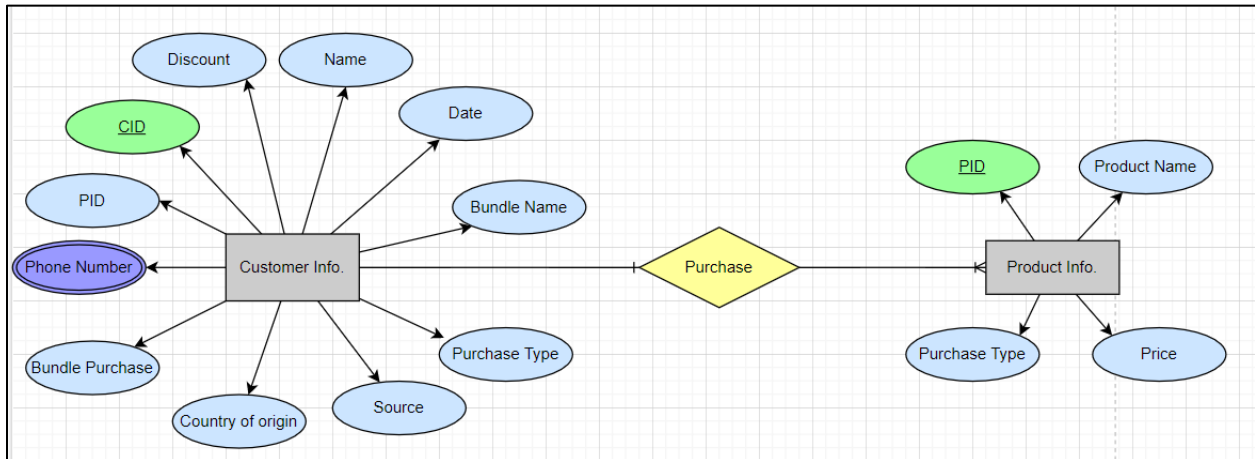


Figure.2 ER Diagram of Product and Customer

The Figure.3 illustrates different attributes of B2B table, which essentially describes the different businesses approaching Action Tour Guides app development and maintenance. ID is the primary key attribute along with E-mail as multivalued attributes.

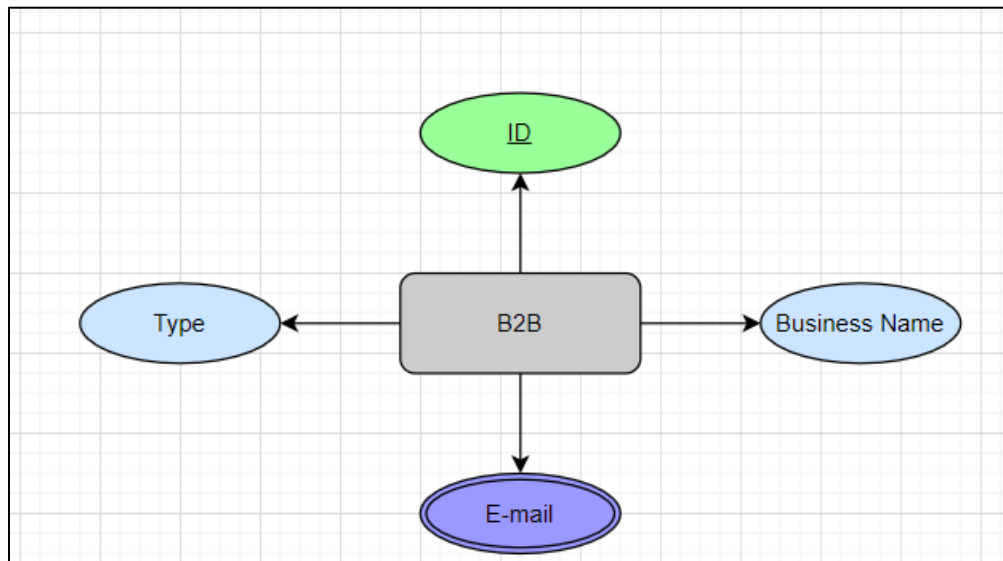


Figure.3 B2B ER Diagram

9. Creation of Test Data:

For Action Tour Guide, Test data was composed of following tables, which were used for analysis in Tableau and Dynamics CRM.

Data was created through Mockaroo website as it helps in generating random data, as we are working with test data for making business analysis.

9.1 Customer Information Table:

- This table contains information about Customer and the type of purchases they have made.
- The fields in the table are Customer Name, Phone number, Country of Origin, Bundle Purchase, Bundle Name, Purchase Type, Source, Date and Discount.
- There are five Bundle Purchase categories which are allocated to Bundle Names.
- There are four Bundle Names each one is assigned with an unique ID like North Dublin Bundle Packages as 1, Kerry Bundle Package as 2, Cork Bundle Package as 3 and Galway Bundle Package as 4 and if customer has not availed any package then it is assigned as 0. The Bundle package means that it comprises of 2-3 tours which will cover whole area like North Dublin Bundle will cover whole of the North Dublin, Kerry Bundle Package will cover all tours in Kerry.
- The “Purchase Type” field contains 3 categories Single, Bundle Package and Group Packages. Single means that the tour is for single person, Bundle package is bunch of tours ,Group Package means the tour is purchased for a group of people.
- In “Discount” column it is formulated that if the Purchase Type is Single then there is no discount, if it is Bundle Package then discount of 10%, if it is Group purchase then discount of 15%.
- The Customers can be from Google Play Store, App Store or any third-party website.

Field	Type	Configuration	Blank	Sum	Cancel
CID	Row Number		0 %	Σ	X
Customer Name	First Name		0 %	Σ	X
Phone Number	Phone	format: (###) ###-####	0 %	Σ	X
Country of Origin	Country	restrict countries...	0 %	Σ	X
Bundle Purchase	Custom List	0,1,2,3,4	0 %	Σ	X
Bundle Name	Custom List	Cork Bundle Package, North Dublin Bundle Package, Galway Bundle Package, Kerry Bundle Package	0 %	Σ	X
Purchase Type	Custom List	Single, Bundle Package, Group Package	0 %	Σ	X
Source	Custom List	Google Play Store, App Store, Third Party Website	0 %	Σ	X
Date	Datetime	1/01/2019 to 1/31/2020 format: m/d/yyyy	0 %	Σ	X
Profession	Custom List	Student, Homemaker, Working, Retired	0 %	Σ	X
Age	Number	min: 18 max: 80 decimals: 0	0 %	Σ	X

Figure 4: Creation of Customer Information

9.2 Product Information:

This table comprises of Product ID, Product Name, Price and Purchase Type. The price of product is defined by the Product Name

Product info

Field Name	Type	Options
PID	Row Number	blank: 0% Σ X
Product Name	Custom List	Cliffs of Moher, Bray Head Cliff walk, Howth Cliff walk, Ballycotton Cliff walk, Donabate Portran Cliff walk, Ri random blank: 0% Σ X
Price	Formula	if field("Product Name") == "Cliffs of Moher" then 10 elif field("Product Name") == "Ri" blank: 0% Σ X
Purchase Type	Custom List	Single, Bundle Package, Group Package random blank: 0% Σ X

ADD ANOTHER FIELD

Figure 5 : Creation of Product Information table

9.3 Newsletter:

The table is about the customers who have subscribed on our website and is expressed by the fields First name, last name, User id, “Country” of origin of the customer, Phone Number.

Newsletter

Field Name	Type	Options
id	Row Number	blank: 0% Σ X
first_name	First Name	blank: 0% Σ X
last_name	Last Name	blank: 0% Σ X
email	Email Address	blank: 0% Σ X
Country	Country	restrict countries... blank: 0% Σ X
User ID	Username	blank: 0% Σ X
Phone Number	Phone	format: (###) ###-#### blank: 0% Σ X

ADD ANOTHER FIELD

Figure 6 : Creation of subscribed customers

9.4 B2B Information:

B2B information table consists of information about different business which approached Action Tour Guides for development and maintenance of the self-guided tour mobile applications, The table contains attributes like ID which is the primary key, Business Name which is the name of the business approaching the organization, Type which is type of business approaching for example is it a museum, park etc. and last is e-mail which is the contact detail of the business approaching.

The screenshot shows a table creation interface for a table named "B2B". It features a table with four columns: Field Name, Type, and Options. The table contains four rows of field definitions. Each row has a three-dot menu icon to its left. The "id" row has a "Row Number" type and "blank" and "0 %" options. The "Business Name" row has a "Custom List" type and a list of locations: "Kilkenny Castle, Dublin Castle, Malahide Castle, National Wax Museum, Irish Museum of Modern Art", along with a "random" dropdown, "blank", and "0 %" options. The "Type" row has a "Custom List" type and a list of "Castle, Museum", along with a "custom" dropdown, a bar chart icon, "blank", and "0 %" options. The "email" row has a "Formula" type and a formula: "if field('Business Name') == 'Kilkenny Castle' then 'kilkennycastleevents@opw.ie' elsif", along with a question mark icon, "blank", and "0 %" options. At the bottom left, there is a button labeled "ADD ANOTHER FIELD".

Field Name	Type	Options
id	Row Number	blank: 0 % Σ X
Business Name	Custom List	Kilkenny Castle, Dublin Castle, Malahide Castle, National Wax Museum, Irish Museum of Modern Art random blank: 0 % Σ X
Type	Custom List	Castle, Museum custom blank: 0 % Σ X
email	Formula	if field("Business Name") == "Kilkenny Castle" then "kilkennycastleevents@opw.ie" elsif ? blank: 0 % Σ X

ADD ANOTHER FIELD

Figure 7 : Creation of B2B table

10. Introduction to Implementation :

This is the start of implementation phase of the report where the various topics like Business model Analysis, CRM implementation, Tableau implementations are included.

11. Swot Analysis:

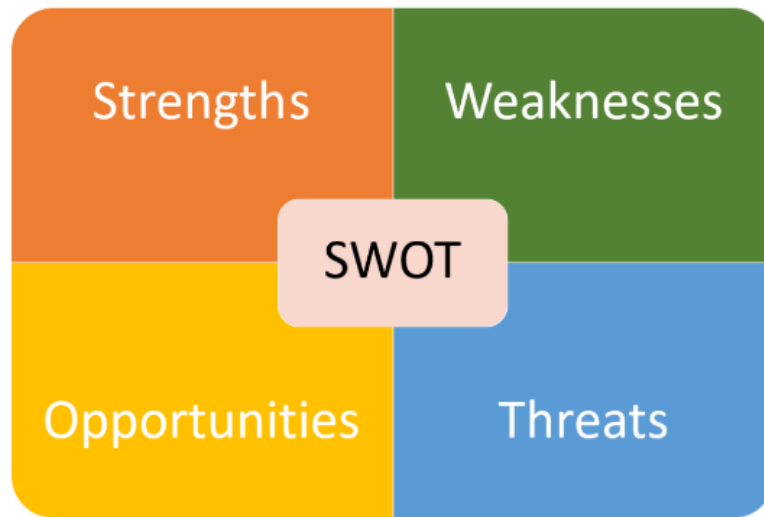


Figure 8 SWOT Analysis

SWOT Analysis helps analyze the organizations Strengths, Weaknesses, Opportunities and Threats and helps make a rationale business decision based on all these factors[2].

In the case of Action Tour Guides we assessed the **strengths** of the organization to be ,

- Unique Idea
- Good Quality Apps
- Low price as compared to the competitors.
- They include good quality images, videos and narration as compared to other competitors.
- Tours can be purchased from multi sources.

For The **weaknesses** we analyzed that the organization have following weaknesses:

- still does not have strong social media marketing presence.
- It does not have Tours in other European countries, as compared to competitors.
- Do not have a container (App which includes all the tours) app.
- Unlike other competitors, does not provide free tours per country.

Opportunities:

- Collaboration with Dublin Bikes and offer cycling tours throughout the city.

- As they have started creating National park tours, can collaborate with local government.

Threats: Following are the list of competitors/threats for Action Tour Guides in Ireland.

- Izi travels
- Nishan
- SmartGuide
- PocketGuide
- Roosevelt Retailers

12. Implementation in CRM

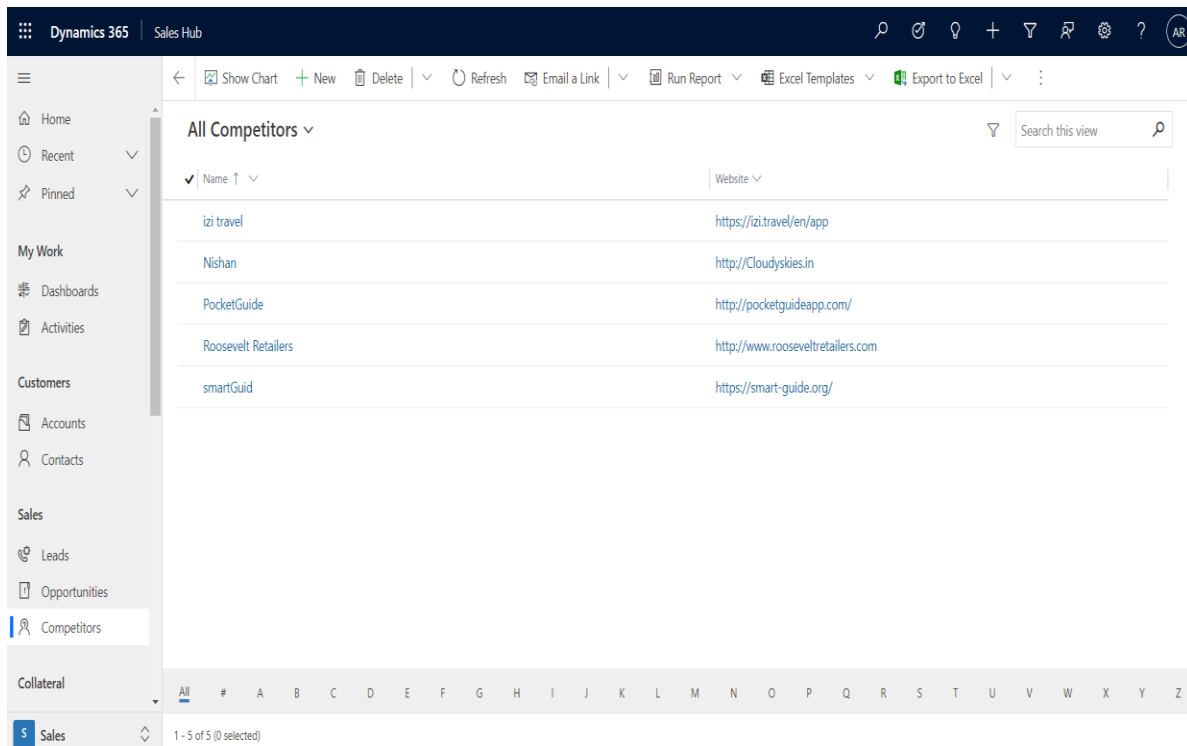
Customer Relationship Management :

CRM helps organization to maintain, manage and keep track of all their leads, customers and other businesses, basically CRM is one of the vital aspects for any business to maintain relation and interaction with their customers and other organization.

Microsoft Dynamics CRM[3] consist of lot of things that helps the business grow in all aspects, Action Tour Guide(ATG) company was not using CRM system till date, as business analyst we approached Action Tour Guide(ATG) to use CRM and demonstrated benefits of same.

12.1 Finding Competitors in Irish Market:

As Action Tour Guide have globally established in USA and have just entered Irish market. So, in order to establish in Irish market, ATG needs to know about their customers also what are the strengths and weakness of their competitors. In CRM, you can create list of competitors as shown in the below fig.9



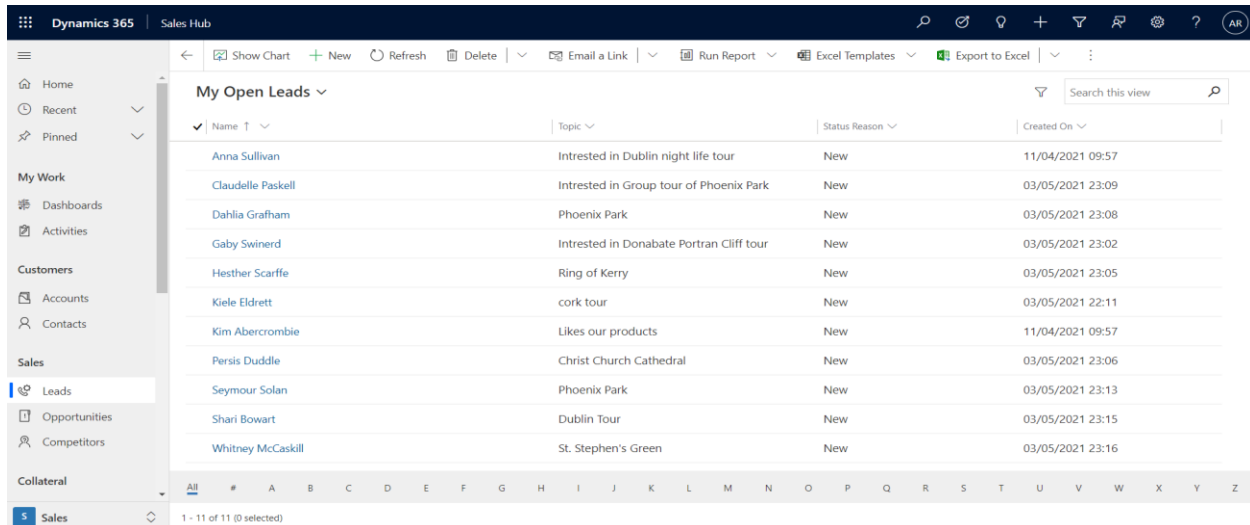
The screenshot displays the Microsoft Dynamics 365 Sales Hub interface. The left-hand navigation pane shows the 'Competitors' section selected under the 'Customers' category. The main area displays a table titled 'All Competitors' with two columns: 'Name' and 'Website'. The table contains five entries: 'izi travel', 'Nishan', 'PocketGuide', 'Roosevelt Retailers', and 'smartGuid', each with its corresponding website URL. The interface includes a search bar, a toolbar with various actions like 'New', 'Delete', and 'Refresh', and a bottom status bar indicating '1 - 5 of 5 (0 selected)'.

Name	Website
izi travel	https://izi.travel/en/app
Nishan	http://Cloudyskies.in
PocketGuide	http://pocketguideapp.com/
Roosevelt Retailers	http://www.rooseveltretailers.com
smartGuid	https://smart-guide.org/

Figure 9 : Competitors

12.2 Leads:

ATG has organized campaigns, advertisements, marketing events and meetings with stakeholders and they were able to grab potential customers. These potential customers were then saved as leads in CRM. Fig.10 shows the list of open leads ATG received.



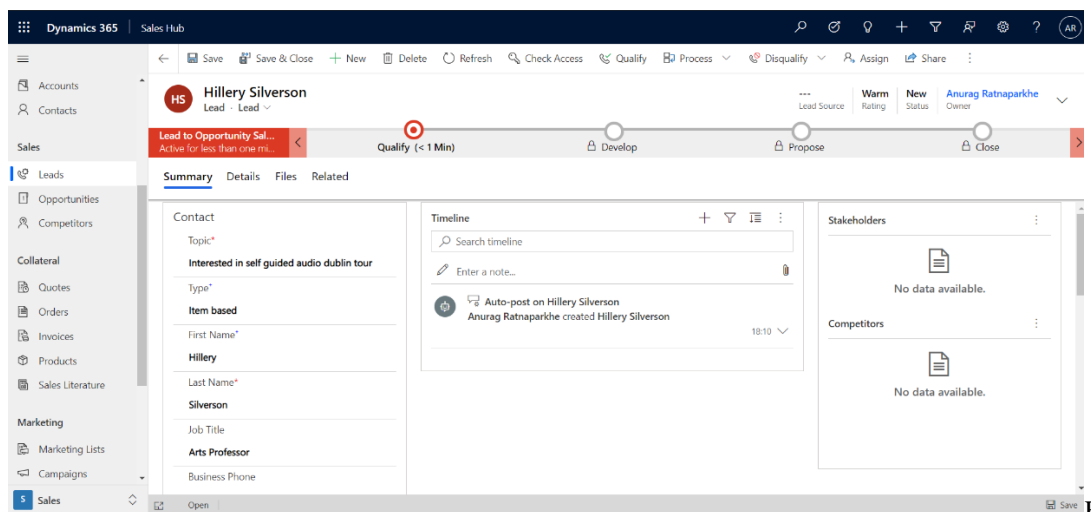
The screenshot displays the 'My Open Leads' view in Microsoft Dynamics 365 Sales Hub. The interface includes a left-hand navigation pane with options like Home, Recent, Pinned, My Work, Dashboards, Activities, Customers, Accounts, Contacts, Sales, Leads (selected), Opportunities, and Competitors. The main area shows a table of leads with columns for Name, Topic, Status Reason, and Created On. The table lists 11 leads, all with a 'New' status. Below the table, a status bar indicates '1 - 11 of 11 (0 selected)'.

Name	Topic	Status Reason	Created On
Anna Sullivan	Interested in Dublin night life tour	New	11/04/2021 09:57
Claudelle Paskell	Interested in Group tour of Phoenix Park	New	03/05/2021 23:09
Dahlia Grafham	Phoenix Park	New	03/05/2021 23:08
Gaby Swinerd	Interested in Donabate Portran Cliff tour	New	03/05/2021 23:02
Hesther Scarffe	Ring of Kerry	New	03/05/2021 23:05
Kiele Eldrett	cork tour	New	03/05/2021 22:11
Kim Abercrombie	Likes our products	New	11/04/2021 09:57
Persis Duddle	Christ Church Cathedral	New	03/05/2021 23:06
Seymour Solan	Phoenix Park	New	03/05/2021 23:13
Shari Bowart	Dublin Tour	New	03/05/2021 23:15
Whitney McCaskill	St. Stephen's Green	New	03/05/2021 23:16

Figure 10 : Open Leads

12.2 Generating Lead:

A lead is an individual or a business you met during any conference, meeting or event as well as people who approached you through any advertise or campaign. The people might not be potential customer but may be they can be your leads until they contact you. Once they contact you, they become your lead and in CRM you can add your lists with all their details. Fig.11 shows ATG got one lead who is interested in their Dublin's self guided audio tour.



The screenshot shows the 'Summary' tab of a lead record for 'Hillery Silversen'. The lead is in the 'Qualify (< 1 Min)' stage. The 'Contact' section includes fields for Topic, Type, Item based, First Name, Last Name, Job Title, and Business Phone. The 'Timeline' section shows an auto-post from Anurag Ratnaparkhe. The 'Stakeholders' and 'Competitors' sections are empty.

Field	Value
Topic	Interested in self guided audio dublin tour
Type	Item based
First Name	Hillery
Last Name	Silversen
Job Title	Arts Professor
Business Phone	

Figure.11 : Leads to Opportunity

12.3 Qualify Lead:

When a potential customer agrees and wants to take a call forward then we can qualify the lead. Fig.12 below shows that Hillery is interested in ATG's product and want to take it forward.

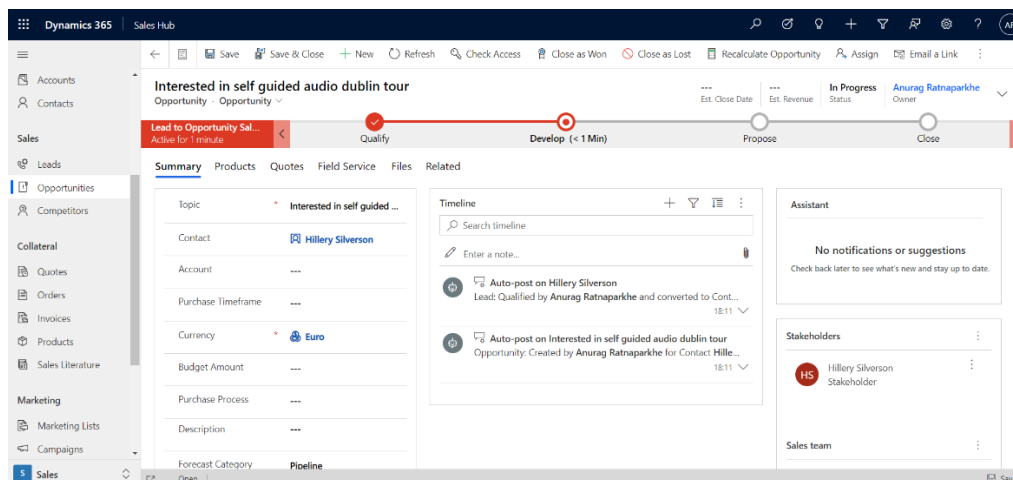


Figure 12 : Qualified Lead

12.4 Disqualify Lead:

If any lead is not interested in your business for any reason or the lead did not contact you for any reason, the lead can be assigned as disqualify with one of the option given in the CRM. Fig.13 shows that Whitney lead was not interested to take a call forward with ATG's product. CRM gives an option to reactive any disqualifying lead if the lead is interested in future.

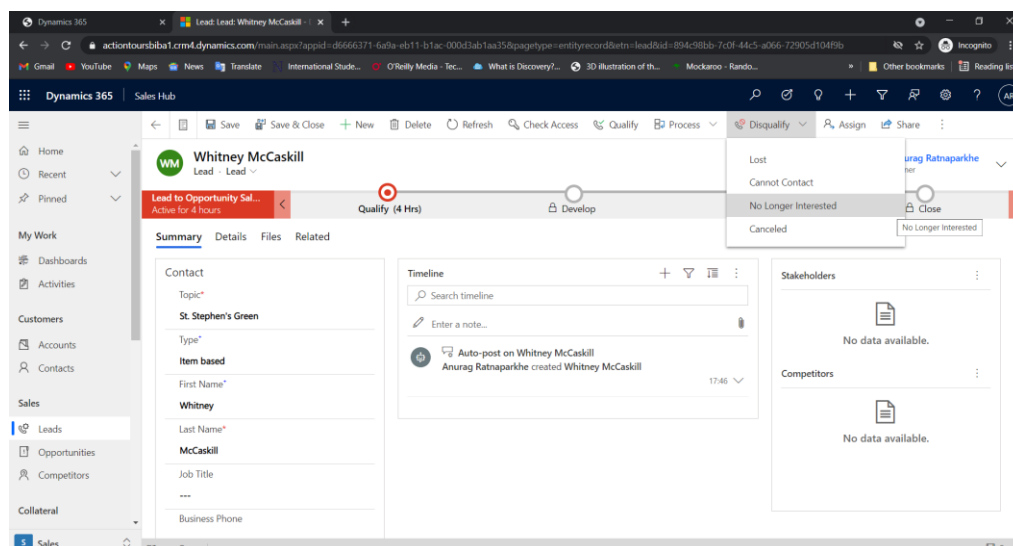


Figure 13 : Disqualify Lead

12.5 Quote:

Once the lead is qualified it becomes your opportunity that the customer can give you sale. When they ask you for quotation means they are interested in your product and might buy your product. You can send quote to the customer as per their requirements, inside quote you can put product requested for, price of the product, budget etc. Once the quote is ready, one needs to click on activate quote to create order.

The screenshot displays the Dynamics 365 Sales Hub interface for a quote. The top navigation bar includes the Dynamics 365 logo and the Sales Hub title. The left sidebar shows the navigation menu with categories like Accounts, Contacts, Sales, Leads, Opportunities, Competitors, Collateral, Quotes, Orders, Invoices, Products, Sales Literature, Marketing, Marketing Lists, and Campaigns. The main content area is titled 'Interested in self guided audio dublin tour' and shows a quote with a total amount of €0.00 and a status of 'In Progress'. The quote details include the Quote ID (QUO-01001-XSSSP1), Revision ID (0), Owner (actiontoursbiba1), Name (Interested in self guided audio dublin tour), Currency (Euro), and Price List (Self guided audio tours). The Products section shows a table with columns for Product Name, Unit, Price Per..., Quantity, and Discount. The table contains one row for 'Dublin ...' with a unit of 'N...' and a price of €8.00. The Sales Information section shows the Opportunity (Interested in self guided audio dublin t...) and the Potential Customer (Hillery Silverson). The Description section is empty.

Product Name	Unit	Price Per...	Quantity	Discount
Dublin ...	N...	€8.00	1.00000	

Detail Amount	Amount
Detail Amount	€0.00
(-) Discount (%)	---
(-) Discount	---
Pre-Freight Amount	€0.00

Figure 14 : Quote sent to the Lead

12.6 Order:

Once the quote is activated, order is created. Fig.15 shows that an order for Self Guided audio tour for Dublin is created.

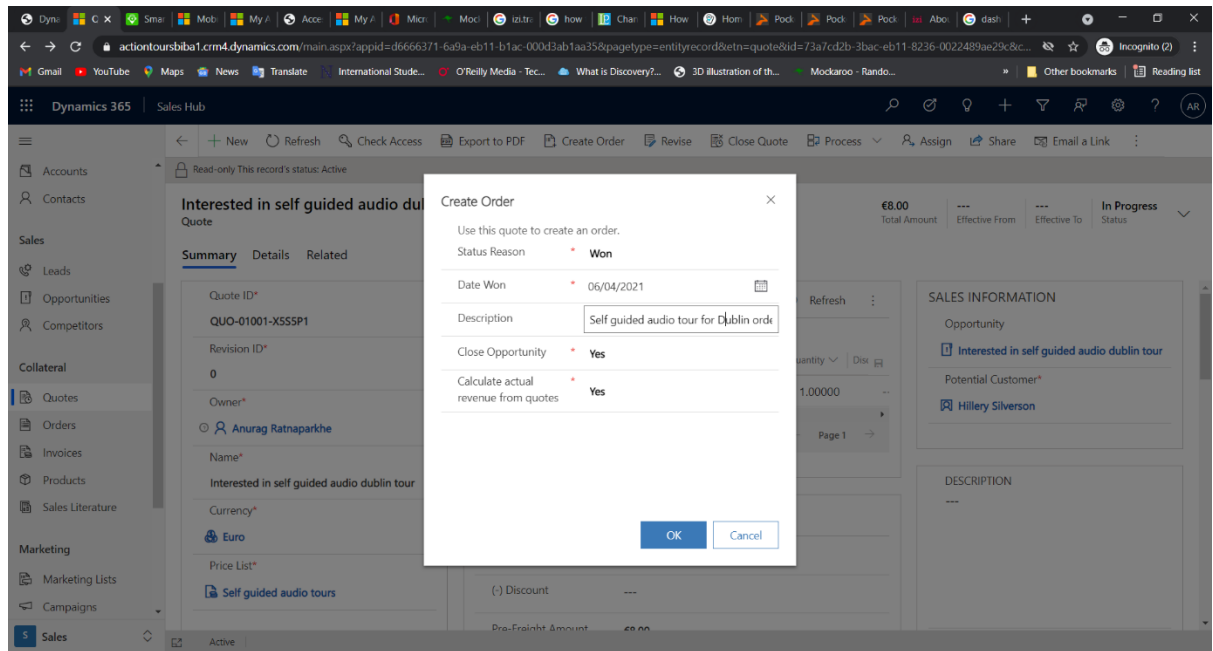


Figure 15: Using Quote created Order

12.7 Fulfill Order:

Once the order is accepted by the customer and if the customer has paid the amount for product, one can click on fulfill order and complete the order.

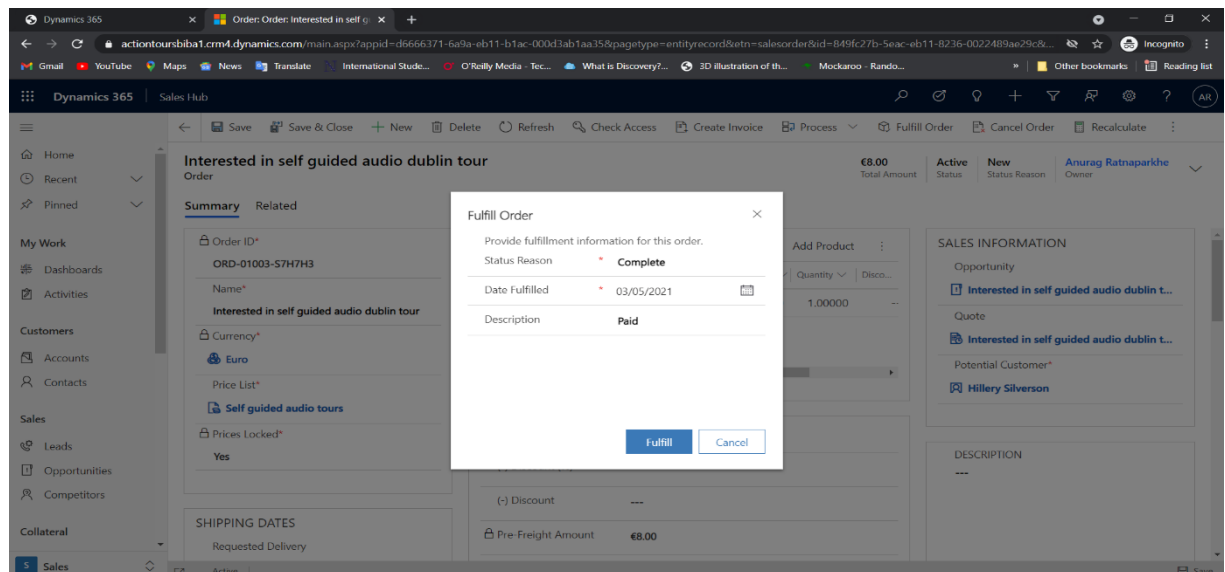
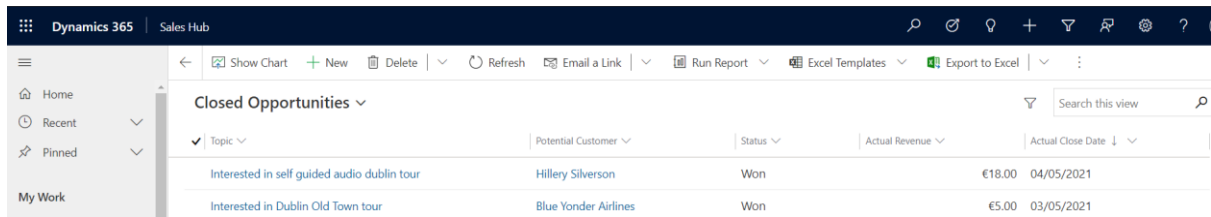


Figure.16 : Order Fulfilled

12.8 Closed Opportunities:

Once the order is complete the opportunity gets closed as the business got sale and close it.



Topic	Potential Customer	Status	Actual Revenue	Actual Close Date
Interested in self guided audio dublin tour	Hillery Silverson	Won	€18.00	04/05/2021
Interested in Dublin Old Town tour	Blue Yonder Airlines	Won	€5.00	03/05/2021

Figure 17 : Closed Leads

Fig.18 shows incoming leads analysis by months. In CRM you can keep track of all of your active and incoming leads and follow up leads

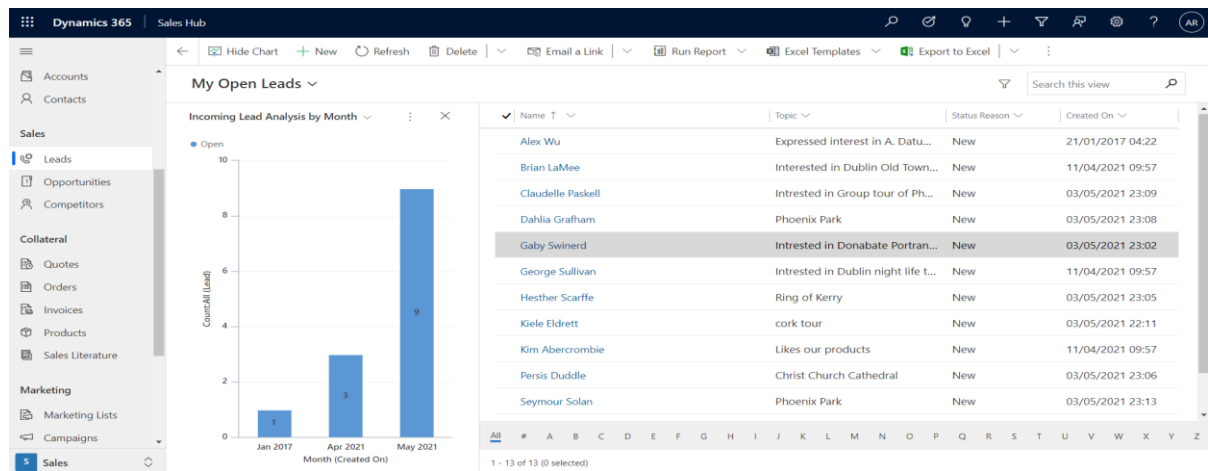
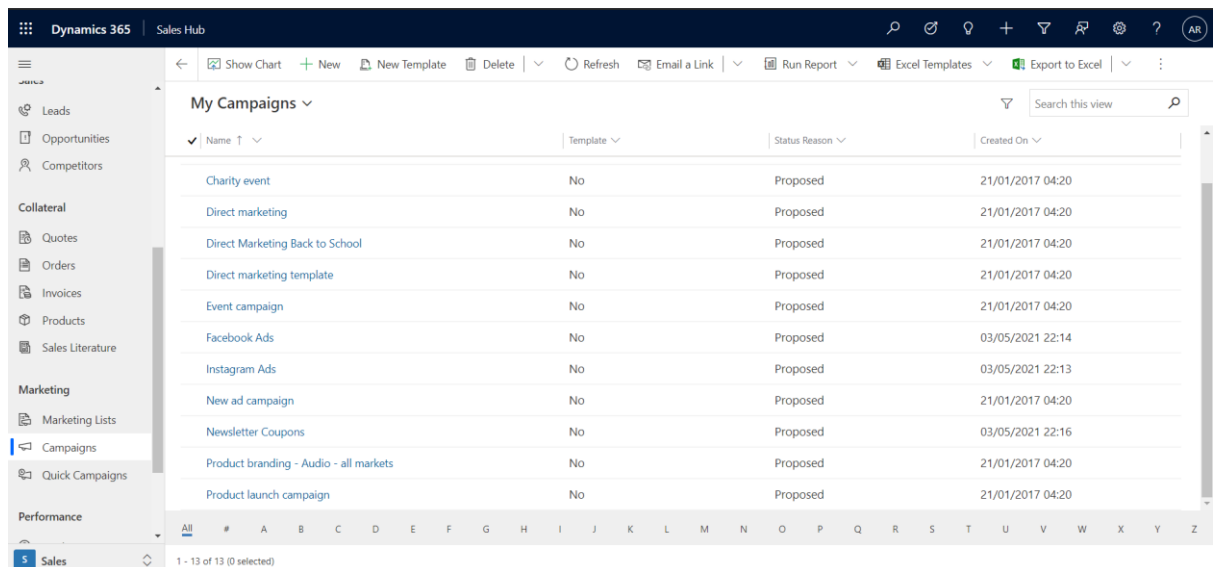


Figure 18 : Leads by Month

12.9 Campaigns:

As ATG is new to Irish market, ATG created few advertisements and campaigns on CRM to get leads. By doing these campaigns and running advertises on social media, ATG was able to reach to many people.



Name	Template	Status Reason	Created On
Charity event	No	Proposed	21/01/2017 04:20
Direct marketing	No	Proposed	21/01/2017 04:20
Direct Marketing Back to School	No	Proposed	21/01/2017 04:20
Direct marketing template	No	Proposed	21/01/2017 04:20
Event campaign	No	Proposed	21/01/2017 04:20
Facebook Ads	No	Proposed	03/05/2021 22:14
Instagram Ads	No	Proposed	03/05/2021 22:13
New ad campaign	No	Proposed	21/01/2017 04:20
Newsletter Coupons	No	Proposed	03/05/2021 22:16
Product branding - Audio - all markets	No	Proposed	21/01/2017 04:20
Product launch campaign	No	Proposed	21/01/2017 04:20

Figure 19 : List of Campaigns

12.10 Leads by Source:

After running campaigns and ads ATG got many requests for their tours and following fig shows current open leads through all the sources

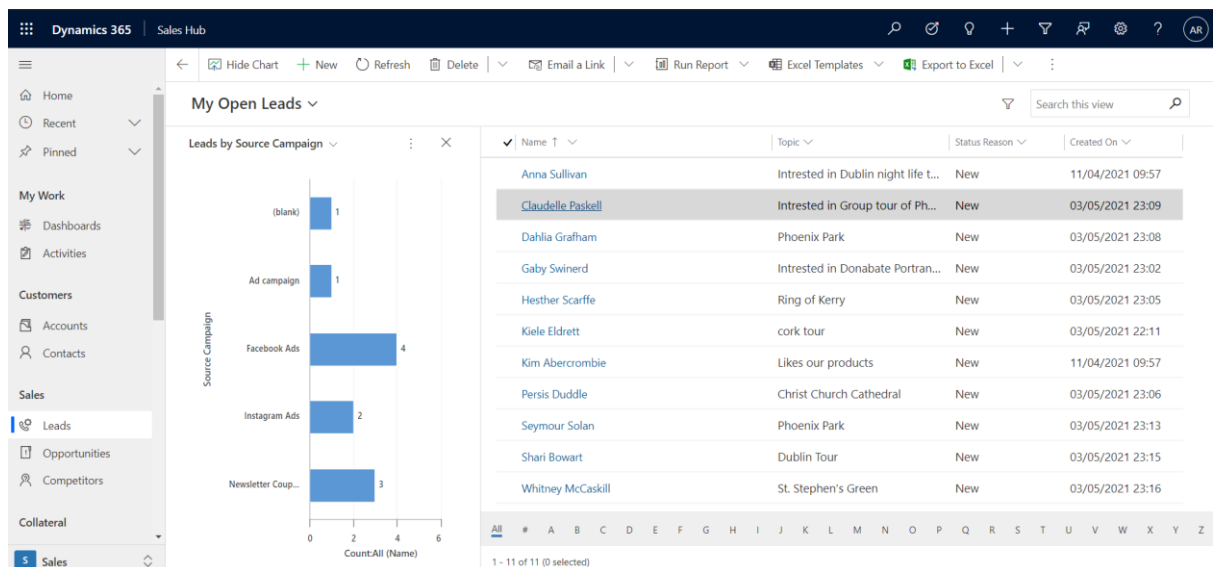


Figure 20 : Leads by Source

12.11 CRM Dashboard:

One can create a CRM dashboard as per the business requirement, following funnel and pie charts are some of the common visualization that can help ATG to maintain relation with their leads and potential customers. Fig.21. shows open opportunity as funnel, all opportunity as pie chart and list of on open leads.

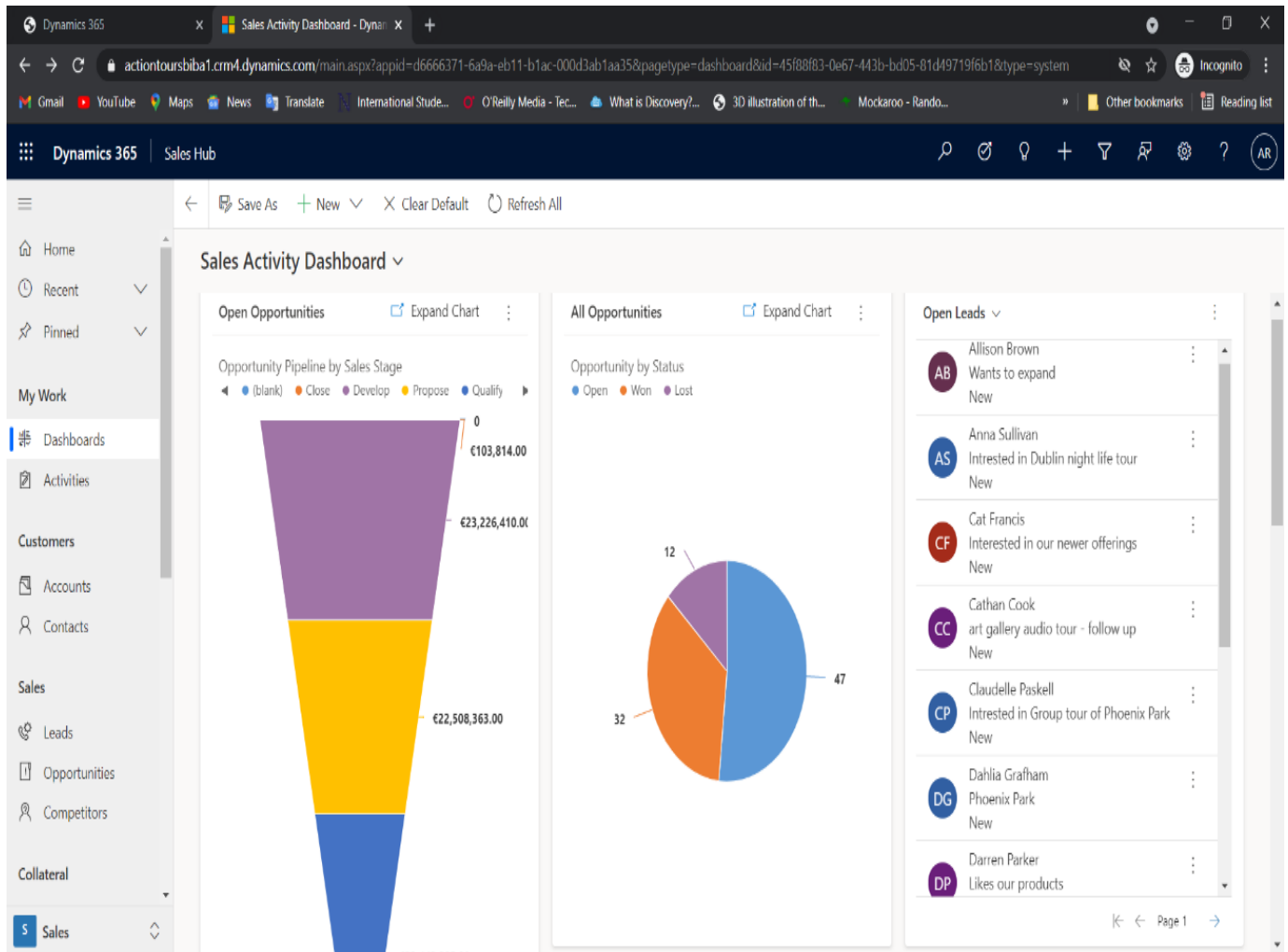


Figure 21 : CRM Dashboard

13. Tableau Dashboards Implementation

Users can create immersive, real-time visualizations with Tableau dashboards in minutes. They can merge data sources, apply filters, and drill down into relevant information with just a few clicks[4].

13.1 Revenue Dashboard:

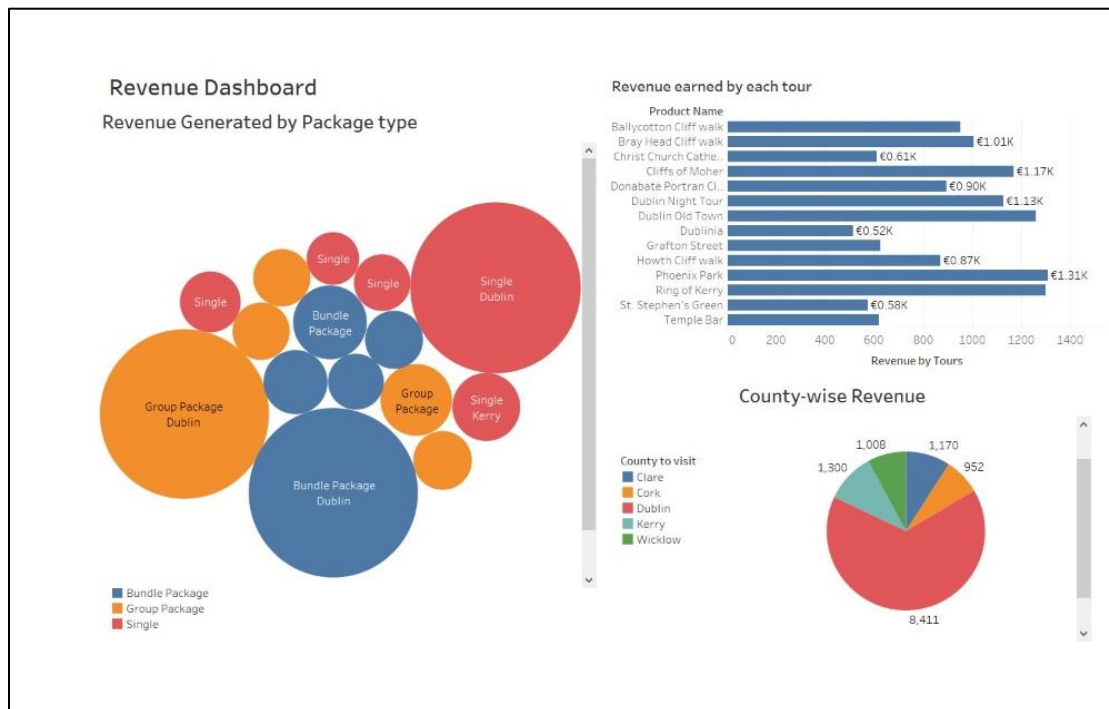


Figure 22 : Revenue Dashboard

The above dashboard is related to company's revenue. Every company's main moto is to have progressive revenue by each quarter of the year. Thus, this dashboard helps ATG to know about their revenue by as well as which tours are hot selling. This dashboard consists of following three visualization:

Revenue by package type: ATG consists of various packages so a bubble chart is made, bigger the bubble large number of sales can be seen. So, by the bubble chart it can be observed that group package Dublin, bundle package Dublin and single Dublin tour have been sold a lot. By this chart ATG can analyze whether group/bundle tour packages are selling or no. Just in case if any of group/bundle package are not being sold than the company can improvise or stop selling those tours.

Revenue by each tour: ATG consist of lot of single tours, a horizontal bar graph is made as second graph on the right side of the dashboard. This horizontal bar graph demonstrates revenue by each tour. So, by the graph it can be seen that phoenix park have been sold a

lot followed by Dublin night tour and Cliffs of Moher. By this graph ATG can analyze which of their tour is hot selling.

County-Wise Revenue: A pie chart have been created and can be seen at the bottom of the dashboard. This pie chart illustrates total number of revenues from every county and its been observed that Dublin through Dublin highest number of revenue have been generated.

13.2 Sales Dashboard:

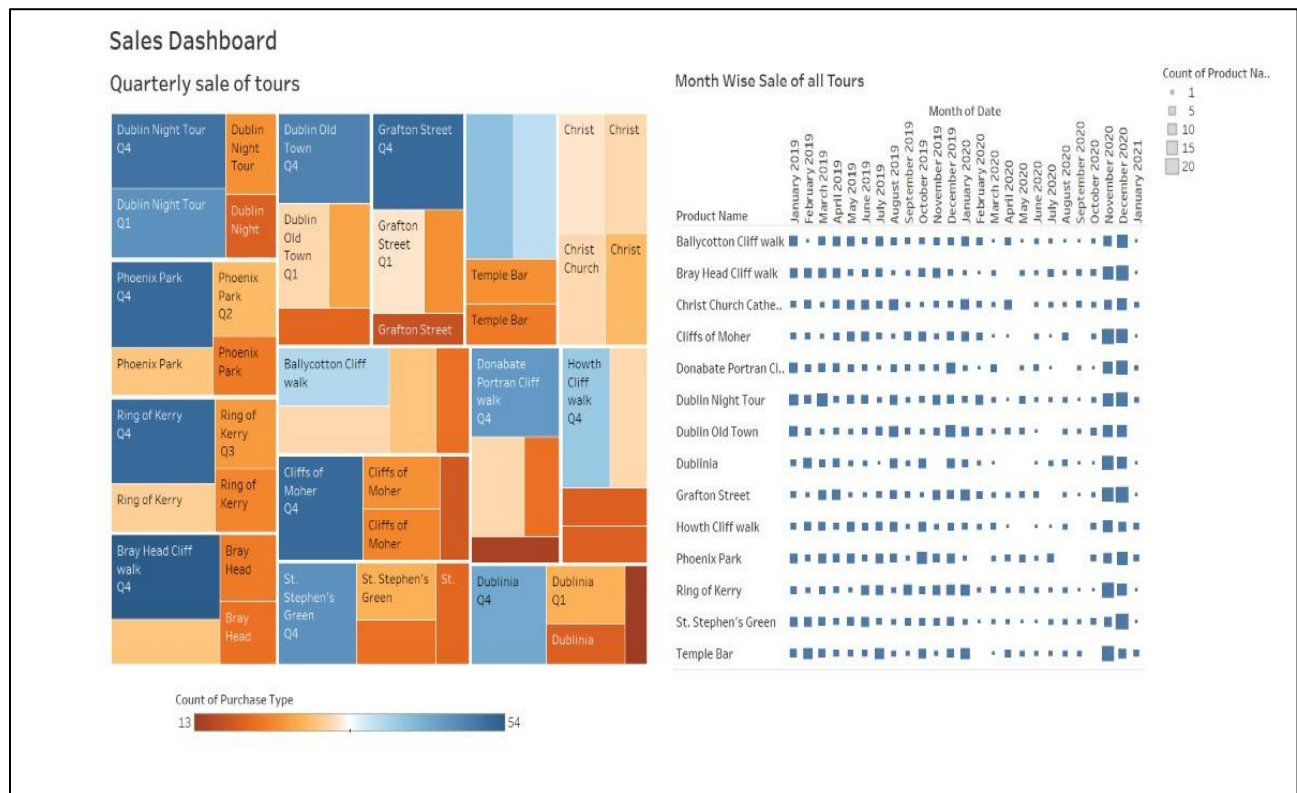


Figure 23 : Sales Dashboard

The above dashboard Contains two visualizations:

1. Month Wise Sale of all Tours
2. Quarterly analysis of sales.

1. The “Month Wise Sale of all Tours” illustrates the fluctuation in sales for different self-guided tour apps such as ‘Temple Bar’, ‘Cliffs of Moher’ etc. At the Start of January 2019 up till end of the year the sales of the tours(Apps) are steady and starting February of 2020 sales of the tours started declining which is caused due to the impact of COVID-19 on travel restrictions, In the interval of February to start of October the sales were very low and when in November the restrictions lifted due to holiday season the sales again went up but due to cases rising and lockdowns taking place, the sales again went down.

2. In Quarterly analysis, each tour is divided into four quarters of different colors showing the count of purchases made by customers, highest count of sales will give dark blue color accompanied by light blue color then orange color to brown shade .If the color of box is dark blue then the respective quarter has achieved great count of sales similarly if the color is orange to brown that means the count of purchase is least.

13.3 Purchases Dashboard:

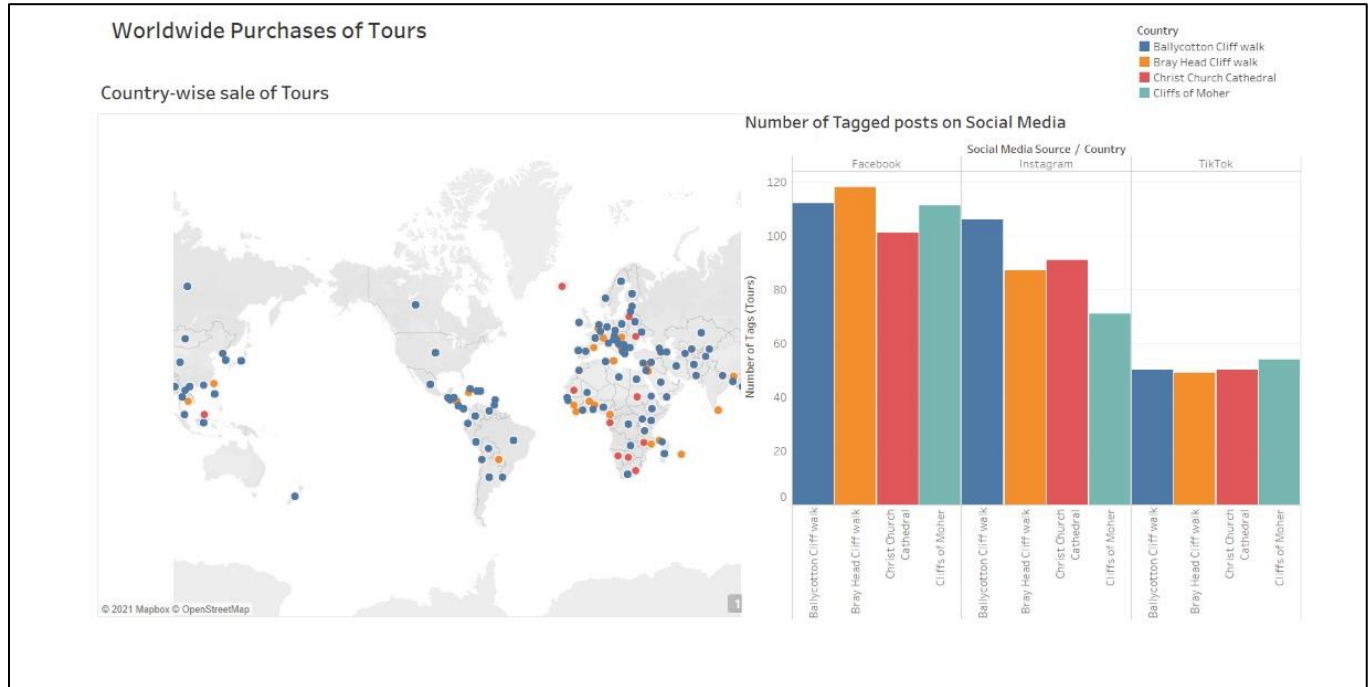


Figure 24 : Purchases of Tours Worldwide

The app is globally known and people from other countries were purchasing our tours which can be seen in the map. The Blue dots show that the purchase type of customer is "Bundle Package", yellow dot shows the "Group Package" and red dots show that the app purchased is for "Single". It can be observed that most of the international customers choose bundle package instead of single or group.

Through Social media people who have used our apps and are happy, they share it on social media platform like Facebook, Instagram, TikTok by tagging us. It can be seen that most of tags are coming from Facebook followed by Instagram and TikTok. From Facebook, the tour "Bray Head Cliff walk" is most visited and appreciated by our customers after that comes Cliffs of Moher and Ballycotton Cliff walk whereas on Instagram Ballycotton Cliff walk tour is most admired followed by Christ Church Cathedral and Bray Head Cliff walk.

14. Benefits of Solution

By providing successive discounts and discounts based on the need of the customer such as if the customer wants to buy a bundled package or a group package a substantial amount of discount is provided so as to increase sales and attract more customers, the major strong point of this solution was the timing when it was implemented as the travel restrictions were recently lifted and people were already eager to travel outdoor tours finding good deals on the self-guided tour apps the sales went up exponentially.

By implementing Social media marketing such as by the use of Social media tags, we were able to reach wide amount of potential tourists. By executing feedback feature we were able to acknowledge the needs and suggestions of the customers and were able to increase efficiency in our work to meet the needs of customers.

15. Team Work

Our Team consisted of three members and showcased great teamwork efforts by dividing and pipelining the work equally. We decided the major work required in our project was:

1. Company Information Gathering
2. Data acquisition
3. Database Design
4. System Design
5. Business Model Analysis
6. CRM
7. Tableau
8. Report Writing

And then divided the tasks based on magnitude, and also helped each other to optimize the end results of each individual module.

References :

- [1] "Home," Actiontourguide.com. [Online]. Available: <https://www.actiontourguide.com/>.
- [2] Amit, "SWOT Analysis – What is it and How to do it," Tallyfy.com, 27-Jul-2018
- [3] buck1ey, "Microsoft Dynamics 365 documentation," *Microsoft.com*. [Online]. Available: <https://docs.microsoft.com/en-gb/dynamics365/>.
- [4] N. H. Rasmussen, M. Bansal, and C. Y. Chen, *Business dashboards: A visual catalog for design and deployment*, 1st ed. Chichester, England: John Wiley & Sons, 2009