

**NATIONAL COLLEGE OF
IRELAND**

**Business Intelligence & Business
Analytics**

Continuous Assessment – II

KPM GAME DEVELOPMENT LIMITED

REPORT

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Abstract - This Research is about the sales of video games from different Genre, Platform, Publisher, Customer, and Location of North America, Europe, Japan, and total global sales right from the year 1980 to 2016. The childhood memories play's a major role while selecting this project of video game company. The idea of this analysis is to check how good is the overall sales of the video game gadgets in the market is taking place by checking the trends in the sales whether it is increasing or decreasing throughout the year, initially it was growing at a rapid pace, sales are facing a fall after certain years because of the introduction of various gaming platforms, different publishers, etc. The reason for the fall in sales of the games can be anything based upon the data parameters. This study [1] is trying to tell us that sales value is based on the use of internet search volume for a particular game. [1] uses time series forecasting for the weekly sales value of a game. This research [1] trying to convey when there is a correlation exists between internet search and sales, it is mirroring out the same for both sales and usage of the internet to search for games. This research is focused on predicting the sale value of video games in various aspects like Game-wise, Genre, Platform, Publishes, customer, location, year sales. Through this, Business sales can be improved by implementing various business systems which helps to improve customer relationships using Dynamics CRM, improving marketing strategy, promoting good advertisements, focusing on a targeted audience, etc.

Organization Background and History: The organization chosen for this research is a fictitious company based on the gaming industry. So, the company is called KPM Game development Limited in Dublin. The organization setup is based on following the guidelines provided in the book [2]. The book gave knowledge on how to set up the platforms for the games, resources. The company recruit game developers and designers for building a video game to upgrading the existing one with new features .The entire product development lifecycle which includes the development idea, process, actual game development, testing the game, end product, and distribution, launch in the market and contracts about the post-release support, Also there is another aspect of developing a game which is based on genre [2] and age category to stay up to date in the market, while designing innovative games.

The founders of “The KPM Game Development Limited” decided to set up a game development center in 1980 in Dublin with the idea of promoting video games and gaining more customers at the early stage by providing quality games. The business got a gradual growth all over the year from 1980's in terms of sales. But suddenly got a huge dip of almost 25% of sales in 2009. Then the founders of the organization as a data analyst, set up a team among themselves to analyze the current situation using the available data and started researching more on the topic for better understanding of the trends among the children and youth using the data visualization to provide solutions to improve the business in terms of sales.

KPM Game Development Limited offers good quality games with different genres, suitable for different platforms, based on various publishers running under their company name to their customers. Custom Game Development can also be done for the customers as per their requirements with their technical team. Currently, the company's products are available in 12 different genres, 25 different platforms supported games and 56 various publisher games publishing under the name of “KPM Game Development Limited”.

Marketplace Participation:

KPM Game Designing Limited was founded very early in the industry and they were the one started introducing the Gaming culture in Dublin by inaugurating their Business center. Since they are the first development center and when there is no setup market for gaming, they faced some challenges in bringing the new business to the market and creating customers for their product. As the years go on, their business gradually started increasing in terms of sales and that can be

achieved by delivering good quality and innovative and interesting games as per the customer's demand. So, customers gradually got attracted to their business and started paying attention to them for their next releases and new game launches. They attracted all classes of people by making all the games available at a wide range of price and they do not compromise with the quality. These qualities make them stand unique in the market for a very long time and created a good rapport with the customers for their brands either it can be a new customer or existing customers. With their standard, they started introducing all-new innovative games and got connected and retain their customers. Although sales had a 25% dip in 2009, But they had a very successful business with the customers for a very long time from 1980 till 2008 with good growth in terms of average and retaining and attracting a huge number of customers. This shows that the KPM Game Development Limited will go a long way in their business by extending their development centers in many cities in Ireland and then through the globe with a huge number of customers.

Vision of Organization:

The vision of the organization is to deliver good quality games with innovation, which is available for all types of customers in terms of price and that covers all types of audiences in retaining their position in business markets.

The vision of the organization is to extend their quality businesses all over the cities in Ireland and all over the other nations by having abundant customers.

Objectives:

- To increase the sales in business without giving any compromise in the quality of the product.
- To maintain the sales cycle run efficiently without any outage.
- To expand their business all over the cities in Ireland and other nations
- To retain their customers in their business without dissolving.

Process Flow Diagram:

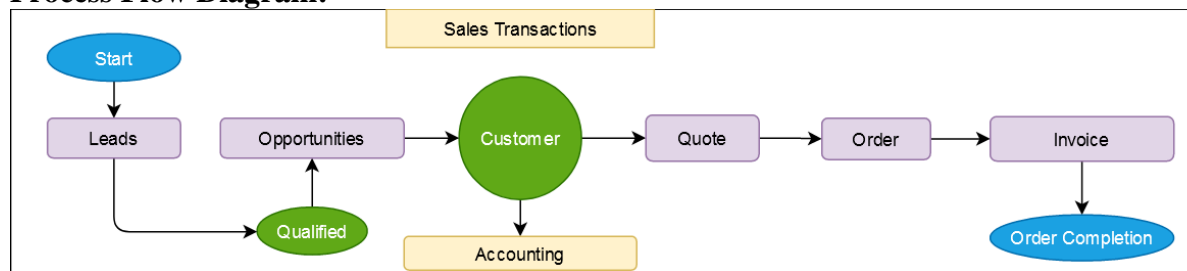


Figure 1 Life cycle of Sales transactions.

Data Capture Points:

Data Capture Point	
Capture Point	Data
Lead	Details of Leads
Employee	Deatails of Customer
Customer	Details of Customer
Product	Deatil of Product
Location	Deatil loaction of Sale
Transection	Deatil of Transaction
Location	Deatil loaction of Sale

Figure 2 Data Capture Point

Analytical Requirements:

The design of the database for KPM Game Development Limited feeds details for each client in their respective tables right from the starting the conversation with the client will generate a lead in the CRM system for successful sales by generating an invoice for the completion of the sale. Each step in the entire process flow is unique and important. These stepwise implementation helps the company to troubleshoot whenever there is an issue in any of the steps and it will not affect the entire process flow in completion. This kind of implementation reduces the time taken for the whole process and fixes the issues. The additional advantage of going with the database will enable us to slice the results based on certain conditions.

- To analyze the sales value generated by KPM Game Development Limited for different Genres, Platforms, Publishers and across various years and locations.
- To plot the distribution of customers across various locations, Genres, Platforms, and over years.

SWOT Analysis:

SWOT Analysis is the most important aspect of all businesses in terms of strategic planning [3] and strategic management [3]. SWOT can be expanded as Strength, Weakness, Opportunities, and Threat. SWOT can be distributed as only 2 factors like Internal and External factors [4]. The Internal factors are classified as Strengths and weaknesses as they are the attributes within the organization [3]. The external factors Opportunities and threats are often referred to as the attributes of the environment [3]. It is a method assisting strategy formulation [5]. This is also used for planning based on resource and merged it with the final overall process strategy [5]. It is also a measure of business process where we keep the longevity of our business alive by fixing the SLA (Service level agreements) and achieving the target.



Figure 3 SWOT Analysis

CRM offers a low price point for increasing revenue. The cons of SWOT analysis that is not recommended where the business requirement is data protection as it has limited features with few real-time information systems. Support of customer services is poor in that part of aspect and maintaining backups are inconvenient when it comes to data.

Database Design:

Entity Relationship Diagram represents the relationship between the entities using the primary key and foreign key.

As shown in the Figure [4] Employee, Customer, Location, Product, Leads are individual entities joined on the basis of EID, CID, LID, PID.

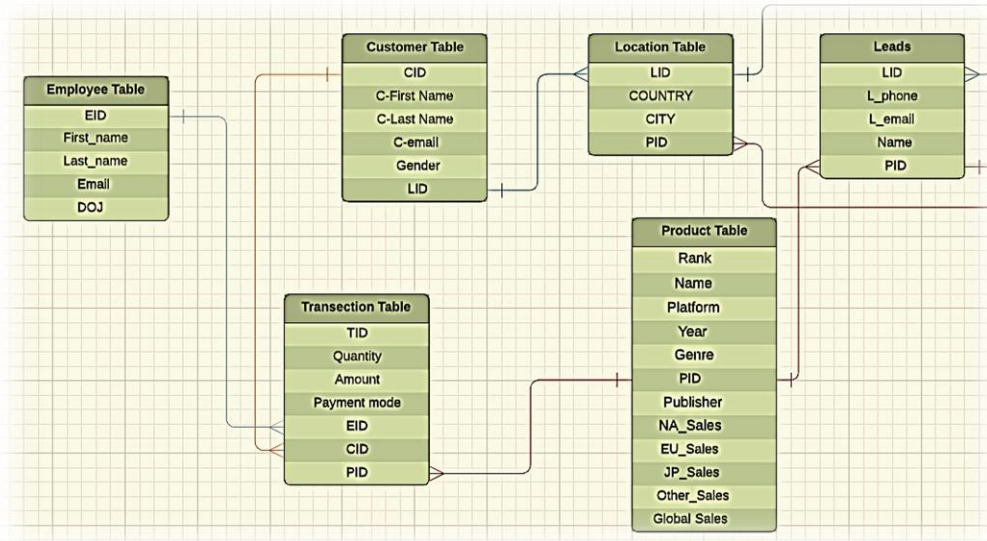


Figure 4 Entity relation diagram

Data Dictionary:

Employee Table		
Attribute Name	Data Type	Discription
EID	String/integer	Employee ID
First_name	String	First Name of employee
Last_name	String	Last name of employee
Email	String	Email contact of employee
DOJ	Date	Date of joining of employee

Figure 5 Data Dictionary for Employee of the company

Leads Table		
Attribute Name	Data Type	Discription
LID	String/integer	Leads ID
L_phone	Integer	Contact number of lead
L_email	String	Email of lead
Name	String	Name of lead
PID	String/integer	Product ID

Figure 6 Data Dictionary for Leads (Potential customers) of the company.

Product Table		
Attribute Name	Data Type	Discription
Rank	Integer	Rank of product
Name	String	Product Name
Platform	String	Platform of product where game in made
Year	Date	Year of publishing
Genre	String	Genre of product/game
PID	String/integer	Product ID
Publisher	String	Publisher Name
NA_Sales	Integer	Total Sales of product in North America
EU_Sales	Integer	Total Sales of product in Europe
JP_Sales	Integer	Total Sales of product in Japan
Other_Sales	Integer	Total Sales of product in Other Categories
Global_Sales	Integer	Total Sales of product Globally

Figure 7 Data Dictionary for Products of the company.

Figure 8 Data Dictionary for transactions of the company.

Location Table		
Attribute Name	Data Type	Discription
LID	String/integer	Leads ID
Country	String	Country for Sale
City	String	City for Sale
PID	Integer	Product ID

Figure 9 Data Dictionary for location of sales for the company.

Customer Table		
Attribute Name	Data Type	Discription
CID	Integer	Customer ID
C-First_name	String	First Name of Customer
C-Last_name	String	Last name of Customer
C-Email	String	Email contact of Customer
Gender	String	Gender of Customer
LID	String/integer	Leads ID

Figure 10 Data Dictionary for customers of the company.

Balanced Scorecard & Strategies

A Balanced Scorecard is used to evaluate the business progress and its performance using a scorecard that helps in taking initiatives for building plans by prioritizing the work, and Key Performance Indicators (KPIs) [1, 2]. It is a kind of management tool to create reports for the business managers for keeping the track of employee's performance. It controls the delay and helps to build a smooth mechanism. It can be used by individuals to keep a track of their work and plan accordingly.

The four characteristics of this strategy are:

- priorities the focus on the goal
- Evaluate the performance against the goal.
- It keeps the track of financial and other data together.
- build a design to achieve objects for information purposes.

It is different from other strategic scorecards which focus only on keeping the track of progress but also guide the organization [5] through the steps, that adjust with what the company is doing in its trade [3, 4]. It not only strengthens the finance-related issues but also tackles them within the business [5]. For instance, for customer-oriented organizations, a well-constructed it develops a foundation that makes the business stand alone in the market. The process is set to attract more buyers for more profits.

The four stages involved in the balanced scorecard are:

- Budgeting
- Buying
- Trading
- Discover & develop.

The main requirement of these stages is:

- **Objective:** Plan the goals for the organization.
- **Measures:** Use KPIs to monitor the progress.
- **Targets:** goals with long, short-medium duration plan.
- **Initiatives:** splitting the process into achievable stages. For KPM Game development Limited, a Balanced Scorecard is developed with the stages involved to achieve the target.

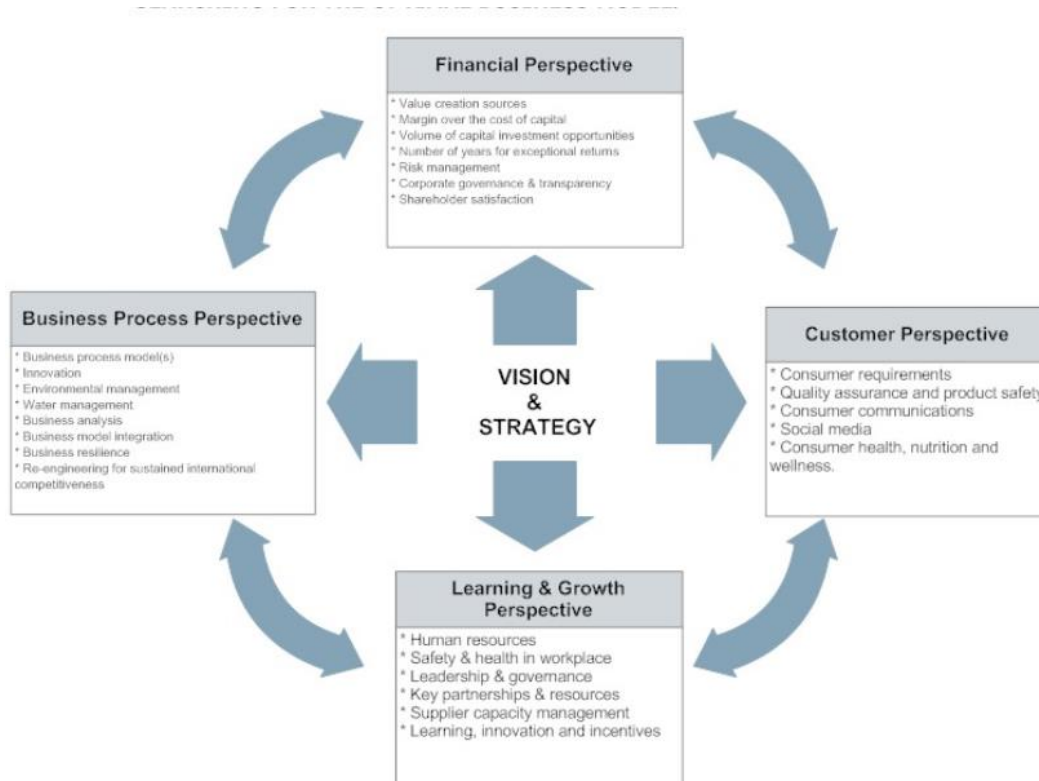


Figure 11 Balance score card

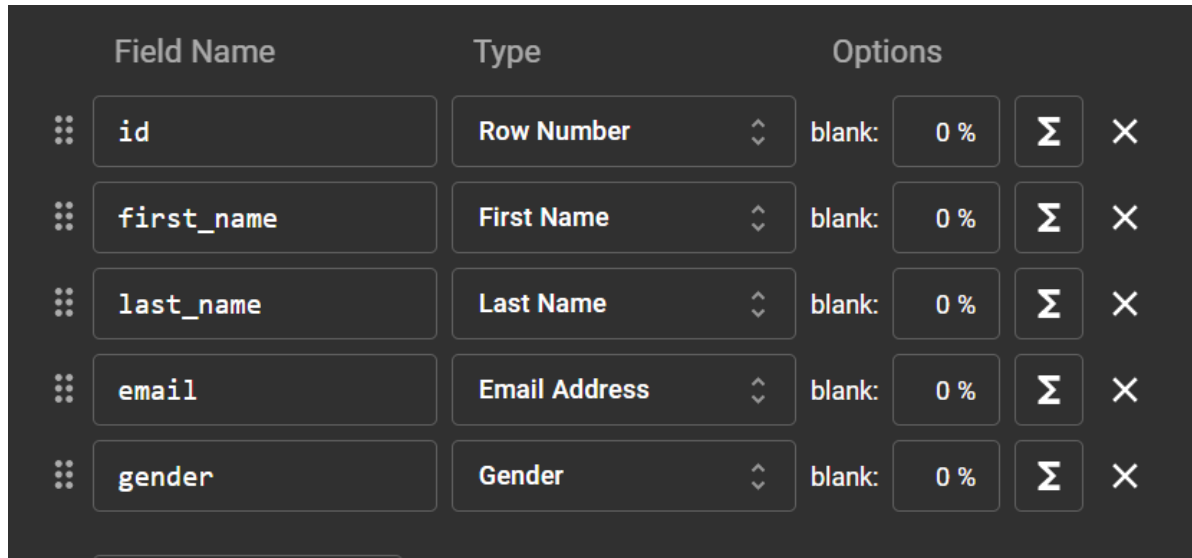
STRATEGY FOR KPM GAME DEVELOPMENT LIMITED				
	OBJECTIVE	MEASURES	TARGETS	INITATIVES
Financial	increase the revenue	increase profit	20% revenue	18K
customers	increase in new customers	percentage	increase by 15%	100
Learning and growth	fast decisions	increased skills	150 employees	100
internal	fast decisions	smooth workflow	weekly	10 days

SOLUTION DEVELOPMENT PROCESS

The first stage followed to evaluate the business designed from scratch is to build a dataset from scratch with relevant entities. Using Mockaroo online tool to create random data and Kaggle (open source for datasets). Microsoft's Excel spreadsheets were used after cleaning, preprocessing, and transforming the rows for the designed objective.

Mockaroo.com

Desired datasets were created on [Mockaroo.com](https://mockaroo.com) after studying the topic and backend complexity of video game manufacturing companies.



	Field Name	Type	Options			
⋮	id	Row Number	blank:	0 %	Σ	×
⋮	first_name	First Name	blank:	0 %	Σ	×
⋮	last_name	Last Name	blank:	0 %	Σ	×
⋮	email	Email Address	blank:	0 %	Σ	×
⋮	gender	Gender	blank:	0 %	Σ	×

Figure 12 Mockaroo dataset creation

KPM Game development limited: Multiple entities were built by keeping the primary and foreign key concept in mind for better representation of the data on Mockaroo.com with a fake Company_ID, name, Email_Id, Contact, etc.

Every entity table has a unique Id (Primary key) and relevant entities are connected using the foreign key concept.

The mock data created or the mock company KPM is piped in Microsoft *Dynamic 365 Sales Hub* as *Leads* (prospective customers).

Using the data from 1980 to 2016 we have found trends in the sales price and visualized them using dashboards. The patterns depict the fall in sales of video games.

- Rank - Ranking of overall sales
- Name - The games name
- Platform - Platform of the games release (i.e. PC,PS4, etc.)
- Year - Year of the game's release
- Genre - Genre of the game
- Publisher - Publisher of the game
- NA_Sales - Sales in North America (in millions)
- EU_Sales - Sales in Europe (in millions)
- JP_Sales - Sales in Japan (in millions)
- Other_Sales - Sales in the rest of the world (in millions)
- Global_Sales - Total worldwide sales.

Figure 13 Data columns for product table

Required records for the analysis of sales from 1980 to 2016 are created and fetch for representing the legacy data for comparison of the sales over the *year*.

Microsoft Excel and Python

Using Microsoft excel and python panda's library the missing outliers, missing values, and Nan are checked for preprocessing of the data. We have one Kaggle dataset with 7 Mackaroos tables that are joined based on the primary and foreign key concept using the L_ID (Location id) as the most relevant one in all the columns. We evaluated the revenue of each country with the global revenue and visualized for better understanding of the sales for KPM using the CRM we decreased the prices for the affected location revenue for leads.









-  CUSTOMER TABLE
-  EMPLOYEE TABLE
-  Leads
-  Location
-  PID
-  Product_table
-  SUPPLIER
-  Transaction Table

Figure 14 tables created in Mackaroos.

Out[7]:

	Rank	Name	Platform	Year	Genre	Publisher	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales	COUNTRY	CITY	C-First Name
0	1	Wii Sports	Wii	2006.0	Sports	Nintendo	41.49	29.02	3.77	8.46	82.74	United States	New Orleans	Dale
1	2	Super Mario Bros.	NES	1985.0	Platform	Nintendo	29.08	3.58	6.81	0.77	40.24	Japan	GyÅda	Kirsteni
2	3	Mario Kart Wii	Wii	2008.0	Racing	Nintendo	15.85	12.88	3.79	3.31	35.82	United States	Rockford	Arch
3	4	Wii Sports Resort	Wii	2009.0	Sports	Nintendo	15.75	11.01	3.28	2.96	33.00	Ireland	Sallins	Felix
4	5	Pokemon Red/Pokemon Blue	GB	1996.0	Role-Playing	Nintendo	11.27	8.89	10.22	1.00	31.37	Japan	Nishio	Dotty
...
995	997	State of Emergency	PS2	2002.0	Action	Take-Two Interactive	0.86	0.67	0.00	0.22	1.76	Japan	Komoro	Lyndsey
996	998	BioShock Infinite	PS3	2013.0	Shooter	Take-Two Interactive	0.72	0.69	0.04	0.31	1.76	Japan	Kamimaruko	Tobie
997	999	Hitman: Absolution	X360	2012.0	Action	Square Enix	0.68	0.90	0.01	0.17	1.76	United States	Pompano Beach	Amby
998	1000	2 Games in 1 Double Pack: The Incredibles / FI...	GBA	2007.0	Action	THQ	1.26	0.47	0.00	0.03	1.76	United States	Cedar Rapids	Noak

Figure 15 Data set used to evaluate the revenue.

Out[9]:

	Rank	Year	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales	Amount
count	1000.000000	990.000000	1000.000000	1000.000000	1000.000000	1000.000000	1000.000000	1000.000000
mean	500.847000	2004.862626	2.079090	1.258700	0.550780	0.400740	4.289180	4.960250
std	289.212225	7.236669	2.616129	1.623482	1.038156	0.643864	4.814629	2.893113
min	1.000000	1980.000000	0.000000	0.000000	0.000000	0.000000	1.760000	0.030000
25%	250.750000	2001.000000	0.977500	0.490000	0.000000	0.130000	2.180000	2.480000
50%	500.500000	2006.000000	1.500000	0.900000	0.075000	0.240000	2.890000	5.005000
75%	751.250000	2010.000000	2.235000	1.470000	0.665000	0.440000	4.390000	7.422500
max	1001.000000	2016.000000	41.490000	29.020000	10.220000	10.570000	82.740000	10.000000

Figure 16 describing the insights of the data using pandas.

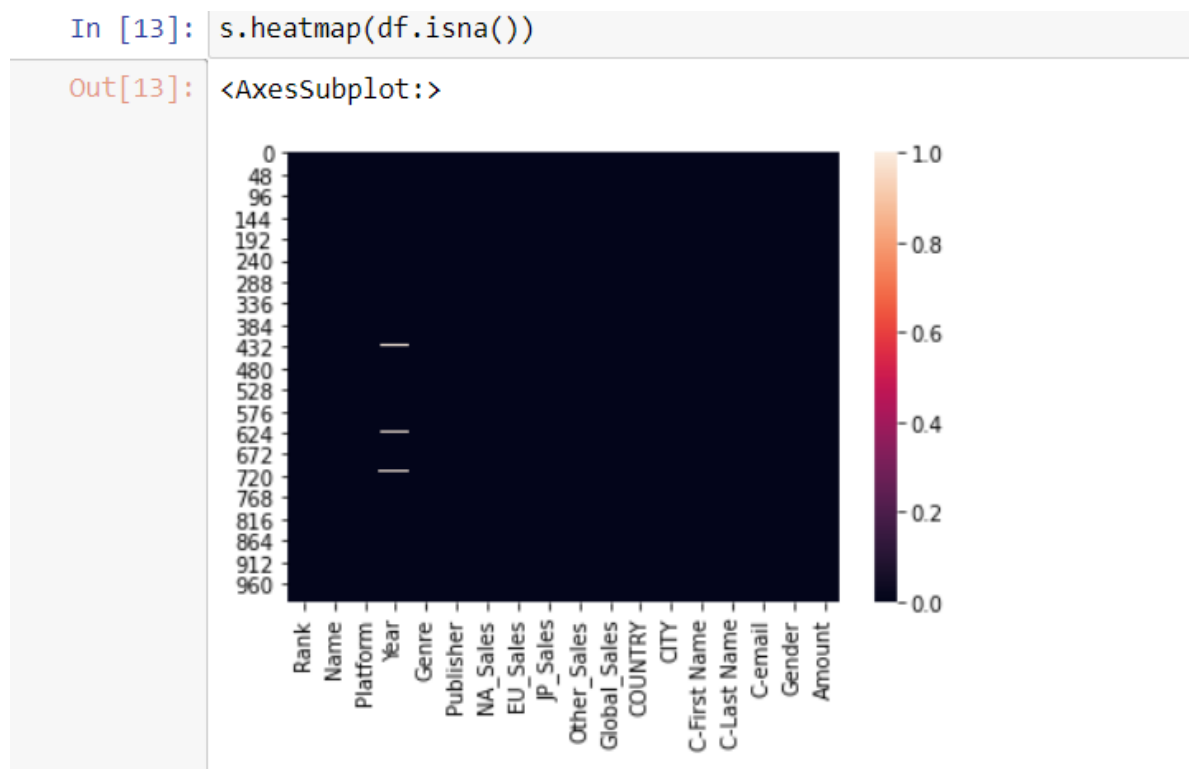


Figure 17 visualizing the null values in dataset.

```
Out[17]:
```

	Rank	Year	NA_Sales	EU_Sales	JP_Sales	Other_Sales	Global_Sales	Amount
Rank	1.000000	-0.025203	-0.505591	-0.533709	-0.360796	-0.416372	-0.588136	-0.005523
Year	-0.025203	1.000000	-0.088385	0.146866	-0.231002	0.198410	-0.021763	0.016425
NA_Sales	-0.505591	-0.088385	1.000000	0.679323	0.370042	0.510497	0.920483	0.015780
EU_Sales	-0.533709	0.146866	0.679323	1.000000	0.347726	0.633478	0.865994	-0.000581
JP_Sales	-0.360796	-0.231002	0.370042	0.347726	1.000000	0.158821	0.555188	0.000858
Other_Sales	-0.416372	0.198410	0.510497	0.633478	0.158821	1.000000	0.658975	-0.014572
Global_Sales	-0.588136	-0.021763	0.920483	0.865994	0.555188	0.658975	1.000000	0.006603
Amount	-0.005523	0.016425	0.015780	-0.000581	0.000858	-0.014572	0.006603	1.000000

Figure 18 correlation matrices

In Excel, unique IDs of each column were linked to each other and a relationship was created between the datasets.

Connections between Services

As business is increasing daily for the gaming industry KPM being the one in the market for the last 30 years faced a decline in sales. The dashboards are showing the trend in the decreased sale of video games. The possible reason might be the availability of internet and gaming feature support with graphic cards in television and laptop the sale of video games may be affected. The dataset will be migrated to the cloud-like other tech giants for data storage flexibility, disaster recovery, and security. Using the CRM, we created the opportunity for increasing the sale and leads for new customers.

Implementation of the Solution

Dynamics 365 Sales Hub Integration:

Dynamics 365 is a Customer Relationship Management tool developed by Microsoft to maintain an interactive relationship with the customer. The main idea is to eliminate the usage of traditional documentation systems and everything has to be tracked in one single system. There are different kinds of CRM tools. Here, this research uses Dynamics CRM to implement in their business systems to provide solutions in terms of improving their sales and to reduce the investment loss.

The main factors of the CRM system are listed below:

- **Leads:** Leads initiate a conversation for the business relationship with one organization that can either be a person or an organization.
- **Opportunities:** Opportunities can be treated as an offer given by the organization to the lead, and it is in hands to accept the offer or not.
- **Account:** Account is defined as an organization or a company visible under the accounts tab in CRM.
- **Contact:** Contacts are defined as an individual who is responsible for the business-related activity created with the organization that can be a lead creator as well.

The system implementation to improve their business is explained below with each step screenshots.

The KPM Game Designing Limited is facing a dip in 2009 sales after 2008. In that dip, only 6 Genres are making the dip to the total overall sales. The remaining 6 Genres are doing great. So, to avoid the dip caused by 6 Genres like Adventure, Fighting, Misc., Racing, Role-Playing, and simulation. The solution is to combine 2 Genre which is making a dip with the Genre which is making a profit. So, the idea is to make combo offer that makes customer who wants genre making profit needs to buy it in the combo. So, all genres will do it in a great way. For implementing that solution, trying to create each product and combine it as a family and making them finally as a bundle.

← Save Save & Close Preview Clone Revise Retire Delete Refresh Check Access Process Email a Link

Product: Fighting Product · Product Active Status

PRODUCT DETAILS Product Properties Additional Details NOTES FIELD SERVICE Related

Name	* Fighting
Product ID	* FGHT01
Parent	---
Valid From	---
Valid To	---
Description	Creating as each product to group

Unit Group	* Default Unit
Default Unit	* Primary Unit
Default Price List	* Retail
Decimals Supported	* 2
Subject	---

Figure 19 Step – 1: Creating a product for Fighting Genre Game and making it as unique one.

← Save Save & Close Preview Clone Revise Retire Delete Refresh Check Access Process Email a Link

Product: Racing Product · Product Active Status

PRODUCT DETAILS Product Properties Additional Details NOTES FIELD SERVICE Related

Name	* Racing
Product ID	* RCNG02
Parent	---
Valid From	---
Valid To	---
Description	---

Unit Group	* Default Unit
Default Unit	* Primary Unit
Default Price List	* Retail
Decimals Supported	* 2
Subject	---

Figure 20 Step – 2: Then adding another Genre Racing as separate product under product by feeding the required details.

← Save Save & Close Preview Clone Revise Retire Delete Refresh Check Access Process Email a Link Flow

Product: Action Product · Product Active Status

PRODUCT DETAILS Product Properties Additional Details NOTES FIELD SERVICE Related

Name	* Action
Product ID	* ACTN01
Parent	---
Valid From	---
Valid To	---
Description	---

Unit Group	* Default Unit
Default Unit	* Primary Unit
Default Price List	* Retail
Decimals Supported	* 2
Subject	---

Figure 21 : Step – 3: Now, As mentioned earlier trying to combine Low sale Fighting and Racing with Genre giving high sale Action.

←

📄

💾 Save

💾 Save & Close

📄 Publish

⌵

🔍 Clone

↺ Revise

🚫 Retire

🗑 Delete

↺ Refresh

🔍 Check Access

🔄 Process

⌵

✉ Email a Link

⋮

CO

Product Family: Combo

Product · Product ⌵

Active Status

PRODUCT DETAILS

Product Properties

NOTES

FIELD SERVICE

Related

Name	* Combo
Product ID	* FGRCAC01
Parent	---
Valid From	---
Valid To	---
Description	---

Unit Group	---
Default Unit	---
Default Price List	---
Decimals Supported	2
Subject	---

Figure 22 Step – 4: Now, Combining all three and making it as family under one product family named “Combo”.

←

💾 Save

💾 Save & Close

📄 Preview

🔍 Clone

↺ Revise

🚫 Retire

🗑 Delete

↺ Refresh

🔍 Check Access

🔄 Process

⌵

👤 View Hierarchy

✉ Email a Link

GC

Bundle: Gift Combo

Product · Product ⌵

Active Status

PRODUCT DETAILS

Bundle Products

Product Properties

Additional Details

NOTES

FIELD SERVICE

Related

Name	* Gift Combo
Product ID	* GFCM01
Parent	Combo
Valid From	---
Valid To	---
Description	---

Unit Group	* Default Unit
Default Unit	* Primary Unit
Default Price List	* Retail
Decimals Supported	* 2
Subject	---

Figure 23 Step – 5: As final Step, creating a Bundle under add Bundle and mapping the Combo product ID here in bundle to map all each product under same bundle and that can be easier for sale. This can be a solution of selling a good revenue generating Genre.

←
Save
Save & Close
+ New
Deactivate
Connect
↓
Add to Marketing List
Assign
Email a Link
Delete
Refresh
🔍

DT

Dale Trodler
 Contact · Contact ▾

Murugappa
Owner

Summary
Details
Scheduling
Files
Related

CONTACT INFORMATION

First Name

+ Dale

Last Name

* Trodler

Job Title

Executive Sales Lead

Account Name

Proseware, Inc.

Email

dale.trodler@prose ...

Business Phone

0898983445

Mobile Phone

Fax

Preferred Method of

...

Timeline

+

▽

≡

:

🔍 Search timeline

✎ Enter a note...

🗣️ Auto-post on Dale Trodler

Contact: Created By Murugappan Murugappan.

17:25 ▾

Assistant

No notifications or su

Check back later to see what's new

Company

Proseware, Inc.

Opportunities

📄

No data availa

Figure 24 Step – 6: In this step, adding a contact to CRM system for particular account (company) that contact can be used whenever particular account is making any purchases.

My Active Accounts ▾

▽

Search this view 🔍

✓	Account Name ▴ ▾	Main Phone ▾	Address 1: City ▾	Primary Contact ▾	Email (Primary Contact) ▾
	V Games LLC	0898992323	Dublin	John Cena	john.cena@vgames.com
	V Games LLC	0898982323	Dublin	Rod Laver	rod.laver@vgames.com
	V Games LLC	898982323	Dublin	Rod Laver	rod.laver@vgames.com
	Vgames	0898992323	Dublin	Rod Laver	rod.laver@vgames.com

Figure 25 Step – 7: The above screen the list of new accounts (company) added in the CRM system.

← Save Save & Close + New Copy Refresh Check Access Close as Won Close as Lost Close all quotes Recalculate Opportunity

Summer Gift Combo

Opportunity · Project Information

Est. Close Date Est. Revenue Status In Progress Murugappan Murugappan Owner

Opportunity Sales Process Active for less than one minute

Qualify (< 1 Min) Develop Propose Close

Summary Opportunity Lines Quotes Related

Topic * Summer Gift Combo

Contact Dale Trodler

Account Proseware, Inc.

Account Manager * Murugappan Murugappan

Contracting Unit * Fabrikam US

Purchase Timeframe ---

Currency * Euro

Product Price List ---

Timeline

Search timeline

Enter a note...

Auto-post on Summer Gift Combo
Opportunity: Created by Murugappan Mu...
17:28

STAKEHOLDERS

Name Role

Dale Trodler Stakeholder

Page 1

SALES TEAM

Name Role

No data available.

Figure 26 Step – 8: Creating an opportunity to post it as offer for the customer and Dale Trodler from Proseware account is willing to take this opportunity.

Summer Gift Combo

Opportunity · Project Information

Est. Close Date Est. Revenue Status In Progress Murugappan Murugappan Owner

Opportunity Sales Process Active for 1 minute

Qualify Develop **Propose (< 1 Min)** Close

Summary Opportunity Lines Quotes Related

Topic * Summer Gift Combo

Contact Dale Trodler

Account Proseware, Inc.

Account Manager * Murugappan Murugappan

Contracting Unit * Fabrikam US

Purchase Timeframe Immediate

Currency * Euro

Product Price List ---

Timeline

Search timeline

Enter a note...

Auto-post on Summer Gift Combo
Opportunity: Created by Murugappan Mu...

Active for less than one minute

- Identify Sales Team ☒ completed
- Develop Proposal ☒ completed
- Complete Internal Review ☒ completed
- Present Proposal ☒ completed

Next Stage

SALES TEAM

Name Role

No data available.

Figure 27 Step – 9: Once the opportunity is accepted, it can be qualified and develop to next stage by giving proposed finish date and once the proposal is approved then finish everything.

← Save Save & Close + New Copy Refresh Check Access Close as Won Close as Lost Close all quotes Recalculate Opportunity

Summer Gift Combo

Opportunity · Project Information

--- Est. Close Date --- Est. Revenue In Progress Status Murugappan Murugappan Owner

Opportunity Sales Process Completed in 2 minutes

Qualify Develop Propose Close

Summary Opportunity Lines Quotes Related

Topic	* Summer Gift Combo
Contact	Dale Trodler
Account	Proseware, Inc.
Account Manager	* Murugappan Murugappan
Contracting Unit	* Fabrikam US
Purchase Timeframe	Immediate
Currency	* Euro
Product Price List	---

Timeline

Search timeline

Enter a note...

Auto-post on Summer Gift Combo
Opportunity: Created by Murugappan Mu...
17:28

STAKEHOLDERS

✓ Name ↑ ↓ Rol

Dale Trodler St

Page 1

SALES TEAM

✓ Name ↑ ↓ Rol

No data available.

Figure 28 Step -10: Finally, make this opportunity as Won as shown icon above.

← Save Save & Close + New Copy Refresh Check Access Close as Won Close as Lost Close all quotes Recalculate Opportunity

Summer Gift Combo

Opportunity · Project Information

--- Est. Close Date --- Est. Revenue In Progress Status Murugappan Murugappan Owner

Opportunity Sales Process Completed in 2 minutes

Qualify Develop Propose Close

Summary Opportunity Lines Quotes Related

Topic	* Summer Gift Combo
Contact	Dale Trodler
Account	Proseware, Inc.
Account Manager	* Murugappan Murugappan
Contracting Unit	* Fabrikam US
Purchase Timeframe	Immediate
Currency	* Euro
Product Price List	---

Close Opportunity

Provide the following information about why this opportunity is being closed.

Status Reason * Won

Actual Revenue * €100,000.00

Close Date * 04/05/2021

Competitor ---

Description ---

OK Cancel

STAKEHOLDERS

✓ Name ↑ ↓ Rol

Dale Trodler St

Page 1

SALES TEAM

✓ Name ↑ ↓ Rol

No data available.

Figure 29 Step -11: After that by marking the revenue and closing date and click ok.

← Copy Refresh Check Access Close all quotes Reopen Opportunity Assign Email a Link Delete Process Share Follow

Read-only This record's status: Won

Summer Gift Combo

Opportunity · Project Information

Est. Close Date Est. Revenue Won Status Owner Murugappan Murugappan

Opportunity Sales Process Completed in 2 minutes

Quality Develop Propose Close

Summary Opportunity Lines Quotes Related

Topic	* Summer Gift Combo
Contact	Dale Trodler
Account	Proseware, Inc.
Account Manager	* Murugappan Murugappan
Contracting Unit	* Fabrikam US
Purchase Timeframe	Immediate
Currency	* Euro
Product Price List	---

Timeline

Search timeline

Enter a note...

Auto-post on Summer Gift Combo
Murugappan Murugappan won Opportun...
17:31

Opportunity Completed by Murugappa...
€100,000.00
17:31

Auto-post on Summer Gift Combo
Opportunity: Created by Murugappan Mu...
17:28

STAKEHOLDERS

Name Role Stakeholder

Dale Trodler

SALES TEAM

Name Role

Won

Figure 30 Step – 12: This is the final screenshot of how the opportunity looks after making it as won.

← Show Chart New Delete Refresh Email a Link Flow Run Report Excel Templates Export to Excel

Won Opportunities

Search this view

Topic	Potential Customer	Status	Actual Revenue	Actual Close Date
Summer Gift Combo	Proseware, Inc.	Won	€100,000.00	04/05/2021
Sales Lead Discussion	V Games LLC	Won	€20,000.00	03/05/2021
Home Appliances Quotation	Proseware, Inc.	Won	\$14,230,000.00	17/03/2017
Very likely will order Product SKU JJ105 this year	Litware	Won	\$4,910,000.00	08/03/2017

Figure 31 Step – 13: Once after making opportunity as Won, It can be verified in CRM system under won opportunities. First available is Summer Gift Combo which is created.

Figure 32 Step – 14: Now, this is to show how giving offers to two customer account contacts and how they are accepting the offer and processing. Here, created a lead for each customer account and it is new lead for dale Troller.

Figure 33 Step -15: Created a new separate lead for another customer account contact For Felix Vain in New State

Figure 34 Step -16: Showing both the leads created for customers.

From these two leads, one customer is going to accept the offer and willing to take the opportunity. After that, need to qualify the lead, then develop the lead to a proposal. Once the proposal is accepted, then mark everything as finished and mark the opportunity as won by entering Revenue and Close Date.

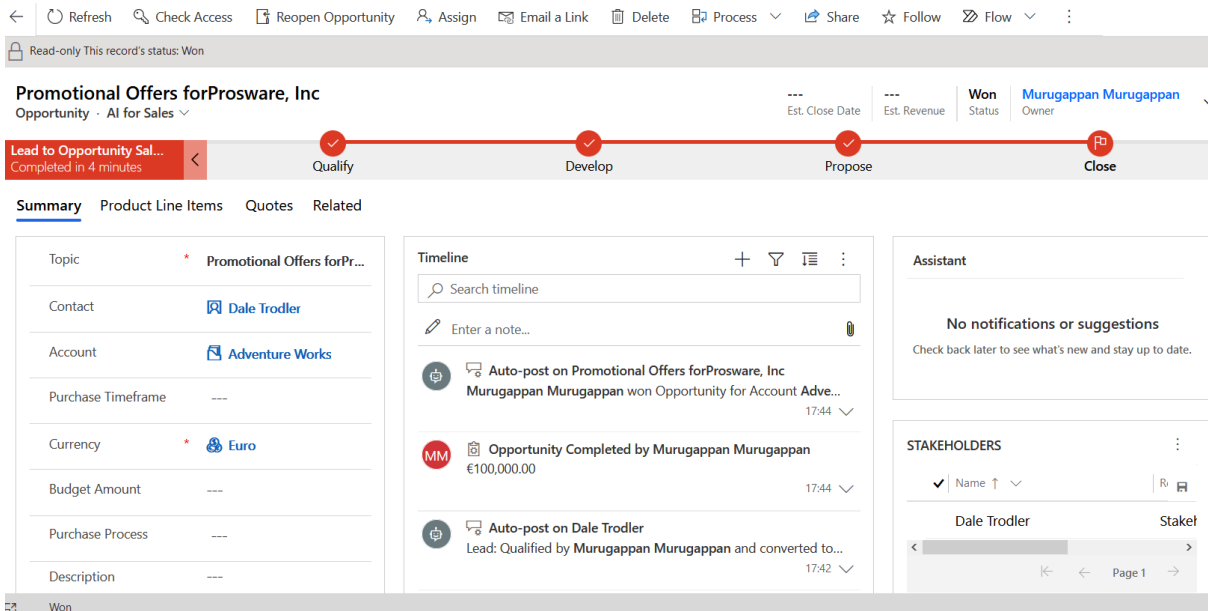


Figure 35 Step – 17: This is the screen after marking it has won.

Won Opportunities					Search this view
Topic	Potential Customer	Status	Actual Revenue	Actual Close Date	
Promotional Offers forProware, Inc	Adventure Works	Won	€100,000.00	04/05/2021	

Figure 36 Step -18: This won opportunity can be verified in CRM systems under won opportunities.

Opportunity pipeline

Opportunity pipeline by sales shows the revenue generated from the stages of develop, propose, and Qualify for “KPM GAMING DEVELOPMENT LIMITED”. Opportunity by Status chart shows the total number of won, lost and open opportunities.

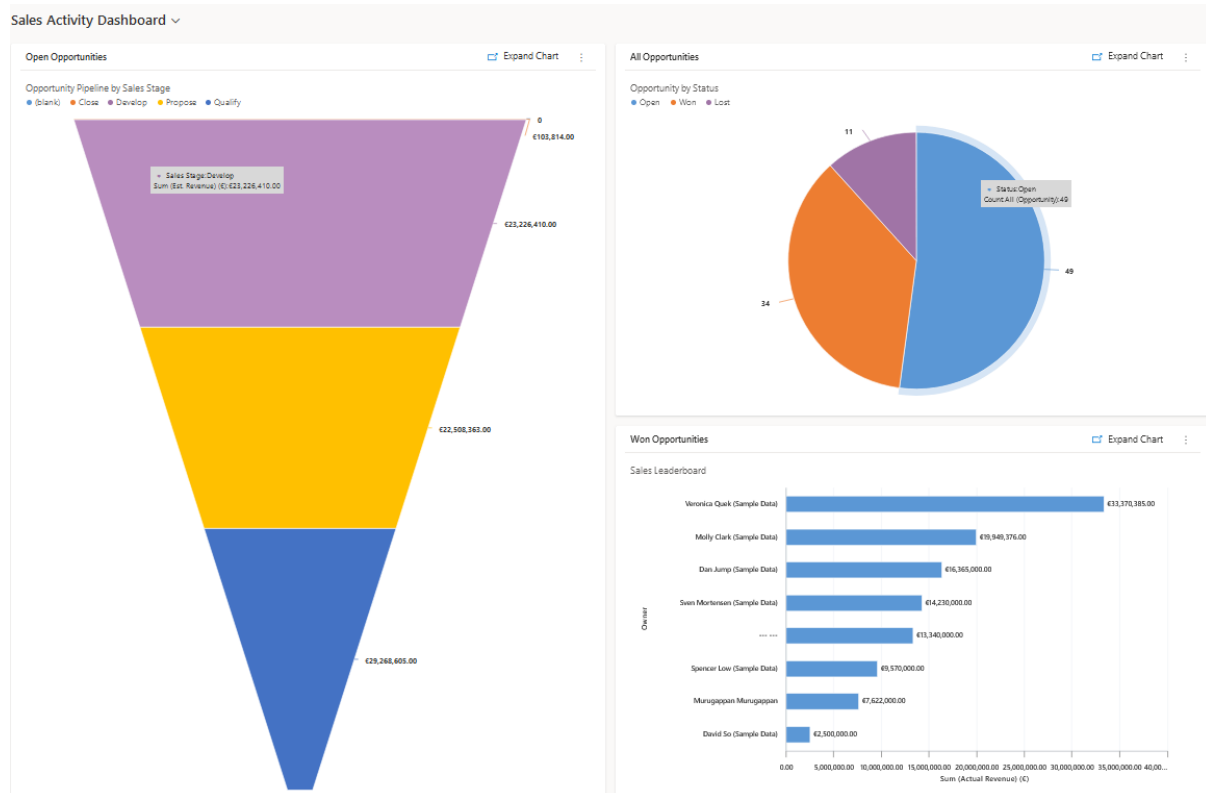


Figure 37 Sales Activity Dashboard

Dashboards on Tableau

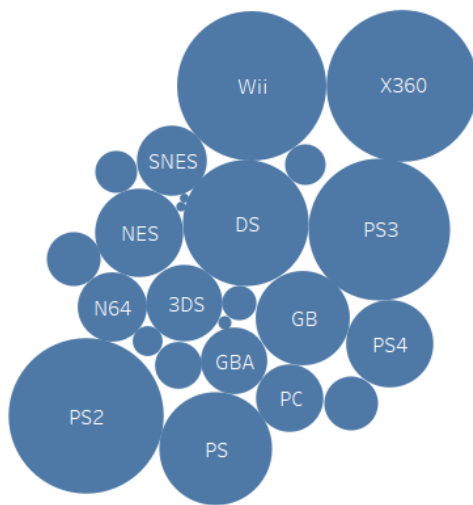
Sales Dashboard:

Sales dashboard is a representation of sales related data that can help manager or sales team to get incite and make decisions accordingly to improve sale of the company.

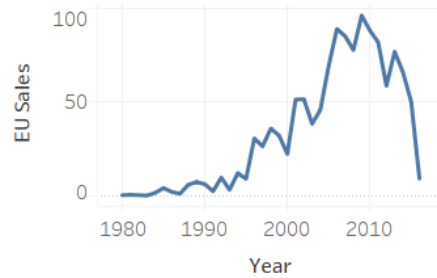
Sales for Genre

Genre	
Action	783.5
Adventure	62.8
Fighting	185.8
Misc	372.3
Platform	535.1
Puzzle	114.1
Racing	351.7
Role-Playing	514.8
Shooter	606.8
Simulation	157.6
Sports	564.6
Strategy	40.0

Sales for Platform

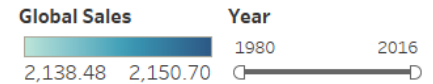


Sales graph for Europe

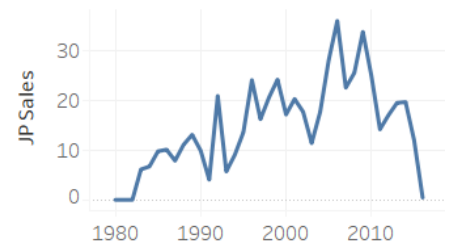


Sales as per Gender

Gender	
Female	2,150.70
Male	2,138.48



Sales Graph for Japan



Sales Map



Global Sales Graph

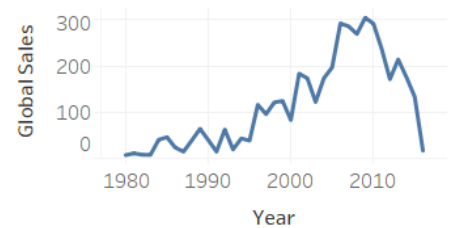
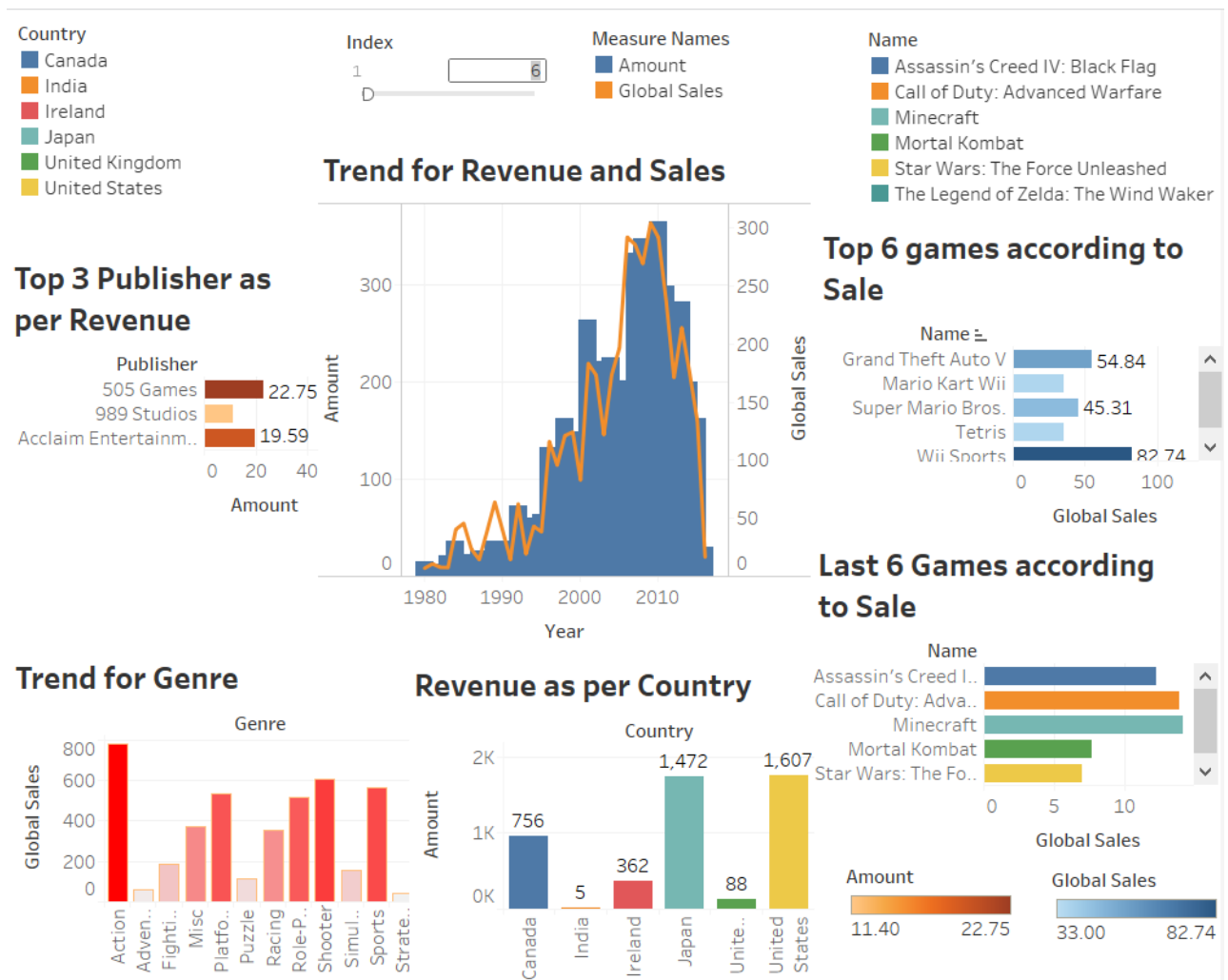


Figure 38 Sales Dashboard

- Sales for genre table in dashboard depict the count of global sales done by the company for genre till now. Action is the genre having the most sales.
- Sales graph for Europe in dashboard depicts the movement of sale by company in Europe according to year. Sales start to dip after 2009.
- Sales graph for Japan in dashboard depicts the movement of sale by company in Japan according to year. Sales start to dip after 2009.
- Global Sales graph in dashboard depicts the movement of sale by the company for overall countries according to year.
- Sales as per the gender table in the dashboard are showing sales based on gender.
- The sales map in the dashboard is showing the location of sales by the company.
- The sale for platform graph is depicting sales of the company according to the platform of the product.

Trends Dashboard:

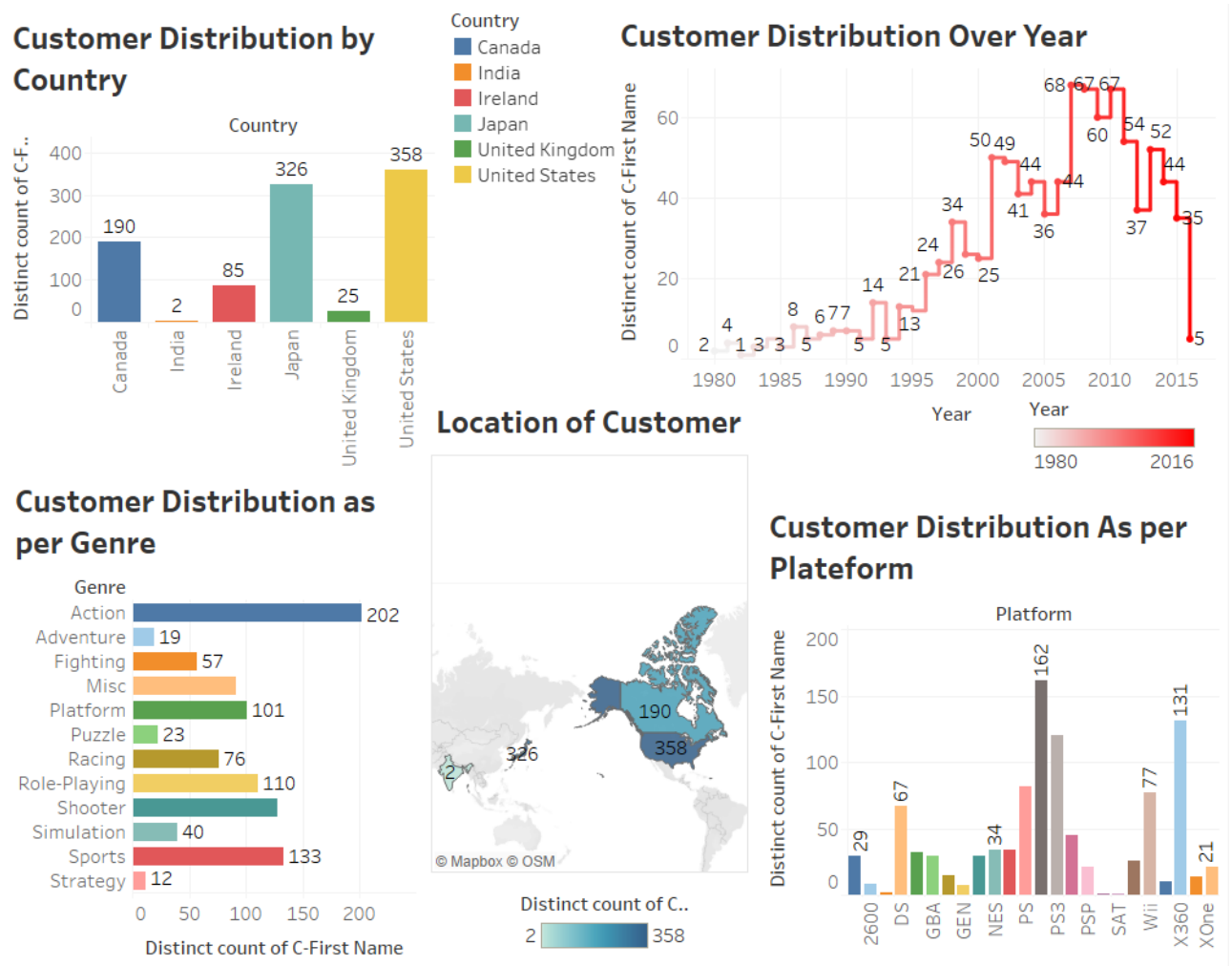
Trend's dashboard is the pictorial representation of data over time so that it can help decision-makers to make a data-driven decision.



- Top 3 Publishers as per revenue plot is depicting publisher 505 Gamers, 989 Studios and Acclaim Entertainment are top three publishers as per the revenue of company.
- Trend for Genre plot is showing Global sales are more for Action games followed by shooter.
- Revenue as per country is showing most of the revenue for sale is generated by USA followed by Japan.
- Top 6 games according to sale is depicting will sports followed by Grand Theft Auto V sales are most by the company.
- Last 6 games according to sale is showing the games for which the sale of the company is least.
- Trend for revenue and sales graph is depicting the trend in revenue and global sales of the company with respect to year.

Customer Dashboard

Customer Dashboard depicts distribution and category of customers, to help company know who are import customers and make decision accordingly.



- Customer distribution by country plot in customer dashboard is showing most of the customers are from US followed by Japan.
- Customer distribution as per Genre is depicting which genre of product has more customers.
- Location of customer map is showing the location of customer.
- Customer distribution over the year is showing the trend of customers over the year.
- Customer distribution as per platform is depicting various plate forms of product the company have customers for.

Benefits of the Solution

1. The benefit of this solution is to get a clear picture of our business using the total revenue and predict the future steps required by studying the historical data segregated based on year, location, and genre. As our business is going down in the recent year that shows the prices needs to be lower down for the sales and different offers need to be given via advertising for better opportunities and sales.

2. As shown by the Customer Dashboard (figure 17), the customer base on U.S for action video games of the company has expanded by almost 1.5 times relative to previous years in 2005-2010.
3. The solution increased our revenue as it helped to take quick decisions. The Profits generated by the company after implementing the dashboards increased the revenue by 20%. It helped in a smooth workflow of process in the company. We started taking surveys in the stores where sales are less as per the dashboards predictions and trained the employees of that stores.
4. As per our solution company identify promotional offers for customers which helped to increase the sales of the company.

Conclusions

Based on the insights displayed by the dashboards, we concluded that the business can be uplifted smoothly by lowering the prices for genre of the video games where the sales is less and few promotional offers by studying the market for better opportunity creation.

Further Work

The association considered for this venture was fictional. It was made just to portray the operations on various stages and to introduce the arrangement carried out by the gathering. For a future venture, a genuine association might be considered to more likely imitate the genuine states of a commercial centre. The cloud service can be used where the project can be deployed on the Azure using the postgres we can create the database to manipulate the tables.

References:

- 1) Ruohonen, J. and Hyrynsalmi, S., 2017. Evaluating the use of internet search volumes for time series modeling of sales in the video game industry. *Electronic Markets*, [online] 27(4), pp.351-370.
- 2) Gershenfeld, A., Loparco, M. and Barajas, C., 2013. *Game plan*. New York: St. Martin's Press.
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Appendix: Teamwork

- The aim of working in a team is to get multiple ideas from different people and achieving the goal quickly. We also used appropriate tools to connect with each other

like Microsoft teams and zoom calls where we divided the work on every stage and shared the progress by scheduling multiple calls.

- We evaluated each other work and gave feedbacks for improvement on timely basis.
- We used our Machine learning knowledge in this project to understand the datasets.
- The research was not limited to the tools only we studied about the gaming industry in depth for different platforms.
- We own gaming laptops like LENOVO(LEGION) and ASUS ROG that made our research easy as we understand the user requirement that will play a major role for building a business.
- A time slot after every class was dedicated every day for discussions in a WhatsApp group Call.