

“ANALYSIS OF VARIOUS MARKET RESEARCH SERVICES WITH SPECIAL FOCUS ON TITLE GENERATION THROUGH USE CASES”

Project Report submitted in partial fulfilment of the requirement for the degree
of
Bachelor of Technology
in
BIOINFORMATICS



By

AAKRITI CHAUHAN

171503

Under the enlightenment of

Mrs. Shreeja Bakare

Market Research Consultant

(Operations- Market Research wing)

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DECLARATION

I thusly announce that the work titled "**ANALYSIS OF VARIOUS MARKET RESEARCH SERVICES WITH SPECIAL FOCUS ON TITLE GENERATION THROUGH USE CASES** " is submitted as a Project Work has been completed by me at **Talwar and Talwar Consultants and Services Pvt. Ltd., Mohali** under the direction of **Mr. Punit Talwar**. The Supervisor at **Talwar and Talwar Consultants and Services Pvt. Ltd., Mohali**, must give his or her prior express written consent to any further expansion, extension, or implementation of this training.

For my 7th Semester project, titled **Database on Epigenetics of Alzheimer's disease** was carried out under the supervision of **Dr. Tiratha Raj Singh**.

I further declare that the training work or any part thereof has not been previously submitted for any degree or diploma in any university.

Signature:

aakriti

Name: Aakriti

Date: 17 May 2021

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I owe my gratitude to everyone who assisted and mentored me during this training. I'd want to express my sincere gratitude to several individuals who assisted me in successfully completing my preparation. I'd want to express my gratitude to each and every one of them for their efforts and constant support.

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I am also thankful to my colleagues and friends, Kirti Arora, Neha Verma, Aadhya Bajpai, Ananya Bajpai, Tarun Arora for their support.

Thank you very much!

Signature: *aakriti*

Name: Aakriti

Date: 17 May 2021

CERTIFICATE

This is to certify that the project work entitled, "DATABASE ON EPIGENETICS OF ALZHEIMER'S DISEASE" submitted by **Aakriti Chauhan** during the 7th semester in fulfilment of the requirement for the degree of Bachelor of Technology in Bioinformatics from Jaypee University of Information Technology, has been carried out under the supervision of **Dr. Tiratha Raj Singh**.



Name: Dr. Tiratha Raj Singh

Associate Professor

Department of BT and BI

Date: - 19th May 2021

Ref. No: HRD/REC/TTCS/55/2021-2022

Date: May 18, 2021

TRAINING LETTER

Name – Aakriti Chauhan

Employee Code: TTCS - 103

This is to certify that Aakriti Chauhan is working with “Talwar and Talwar Consultants and Services Pvt. Ltd.” Her designation is Market Research – Intern. Her ongoing internship started from Feb 8, 2021. During her tenure in the organization, her performance is satisfactory.

S. S. Bisht

Manager- HR

Chapter - 1

COMPANY OUTLINE

TT (Talwar & Talwar) consultants and services (ISO 27001 and ISO 9001: 2008 certified) has established itself as one of the leading providers of high-quality material with a place and innovative services, assisting clients in assessing risks and resolving issues. With time, TT Consultants and services has worked with its customers to give chief patent legitimate continuing help like Patent Drafting, searches related to Patentability, Invalidation, Freedom To Operate and Patent Prosecution Services.

TT Consultants has a global presence with five offices in India, the United States, and Taiwan, and has demonstrated their expertise to customers in more than 30 major topographies.

TT Consultants and Services provide data-driven market research-based solutions for customers' business problems, assisting them in aligning their commercial objectives with consumer/market requirements by bringing together the top experts on the planet. TT Consultants and services is among the prime logical control partnerships in Asian countries, offering patents types of assistance throughout the previous thirteen years and market research based solutions to a developing rundown of glad customers wherever the world. In its steady interest to start, it's been prepared to with progress accept the various frameworks, tools and services pointed towards giving utmost quality answers for its customers.

CHAPTER – 2

INTRODUCTION TO THE ALLOCATED TASK

2.1 Gathering and Processing Data of Diverse Industries- It goes without saying that data collection is a crucial aspect in any level of research work. There are infinite ways of gathering data depending on the nature of research work. Data collection is a method of collecting and analysing information from a variety of sources in order to provide useful information. Our main sources of data are-

1. White Board
2. Statista
3. ZoomInfo
4. Yahoo Finance
5. LinkedIn
6. Literature Sources which include reports of various market research firm, online published papers & articles.
7. Company's Official Website
8. Start-up insights
9. Research Gate
10. Online News Article

2.2 Research Title Generation- Generated the titles for various industries to name a few For Healthcare Industry- Internet of things in Healthcare market, Digital Health Market, Artificial Intelligence in Healthcare Market. For Agriculture Industry- Agriculture Drone Market, Plant Genomics Market.

2.3 Recent Technological Trends in Primary, Secondary and Tertiary Industries-

In the industries, new technologies are being built at a rapid rate. What seemed like futuristic technology ten or twenty years ago is now here and being deployed and used by a variety of companies all over the world. Industries are made up of businesses or organisations that manufacture or provide products and services. They are divided into three categories: main, secondary, and tertiary.

2.3.1 Primary Industry Agriculture, forestry, fishing, mining, and quarrying are examples of primary industries. It is further divided into two categories: genetic industry, which means that raw material production can be increased by human interaction, and extractive industry, which means that raw material production can be supplemented by cultivation. The recent technological trends in Primary Industries are-

In Agriculture	Spray Technology Using Artificial Intelligence and Machine Learning.
	Satellites for weather prediction and crop sustainability & Machine Learning.
	Sat Satellites and drones for Monitoring Crop Health.
	Computing and sensor technology.
	Laser Technology for Scarecrows.
In Mineral	Spatial Data Visualization using 3D, Virtual Reality. Augmented Reality.
	Geographical Information Systems for Mineral Exploration, Geochemical and hydrology data.
	Artificial Intelligence for mineral processing & exploration and Autonomous Vehicles & Drillers.

2.3.2 Secondary Industry-This industry is also known as the Manufacturing Industry because it transforms raw materials into customer goods and then further transforms them into finished goods. According to their rank, it is divided into small-scale, light, heavy, and large-scale industries. Large-scale industries include iron and steel production, motor manufacturing, and many others. Plastics manufacturing and food processing are examples of light or small-scale industries.

In Food Processing-	Frozen food technology.
	Vacuum freezing and freeze-drying technologies.
	Sugar Reduction Technology helps in making Chocolate sweeter and sweeter
	Blo Blockchain helps in Food Chain Supply.
	Use of 3D Printing for Production Efficiency.
	Slim, Lighter Weight Parts & Tools. Automation and Industry 4.0 which helps in automation.
	Use of Biodegradable Plastics.

2.3.3 Tertiary Industry- This category also includes industries that manufacture intangible products and services, and is also known as the Service Industry. Banking, finance, insurance, transportation, security, defence, and a long list of other industries are included in this field.

In Security-	Artificial Intelligence enables threat detection systems which can predict new attacks.
	Increased use of Multi-Factor Authentication.
In Defence-	Combat Simulation & Technology Using Automatic Sensors.
	Self-steering Bullets.
	Unmanned Autonomous Vehicles (UAVs) using Autonomous.
	Battlefield Healthcare.

2.3.4 Quaternary Industry-It is a branch of tertiary industry that deals with knowledge-based or information-based products and services. Information Systems and Information Technology, Media and Communications Technologies, and Educational Technologies and Services are also included.

In Media & Communication Technology-	5G & Wifi 6
	Wearable Journalism- Get Quick updates
In Information Technology-	Secure Software Updates.
	Artificial Intelligence Data Integration.
	Wireless IIoT Communication.
	Autonomous Mobile Robotics.
	Internet of Industrial Maintenance.
	Remote Industrial Connectivity.

2.4 Market Collateral Writing- Information sheets, papers, reports, brochures, and flyers are examples of written material that aids in the promotion of a company, product, service, or concept. Although the types of collateral differ, there are certain general guidelines that all collateral must follow.

Step 1- Research and Plan- First and foremost, determine your goals and target market. Decide what kind of collateral you'll need to write as well.

Step 2- Write a Draft- Start with an eye-catching title. Focus on three to five main points to discuss.

Step 3- Revise and Proof- Re-read it again before submitting or publishing it.

2.4.1 Article Writing- Written an Article -> According to TT Consultants, the global digital transformation market in healthcare will grow at a 17 percent compound annual growth rate (CAGR) over the next five years. It contains strategies used by key players in the digital transformation market, as well as some interesting statistics on healthcare digitization as of 2021.

2.4.2 Report Description Writing- Written a report on the market size, share, and trends of artificial intelligence in agriculture. Forecasts for 2021-2030 by component (software, hardware), technology, applications (precision farming, drone analytics), region, and segment. It consists of Market Overview, Products & Services Overview, Application Overview & Key Market Players, Report Scope, AI in Agriculture Market Segmentation.

2.5 Analysed Published Data and Statistics-It is the final phase of Market Research after all of the data has been consolidated. Draw conclusions from the data and provide sufficient information to address all of the Market Research Questions. Statistical Testing is normally in charge of this.

2.6 Company Profile - It's a formal presentation of the company and its operations to educate customers and stakeholders about the company's goods, services, and current status. It precisely describes all of the essential and key facts, using numerous visual appeals to make it easy to comprehend. The Company Profile's general format includes a corporate overview, product and service descriptions, history, expansion and development, public relations, client portfolio, industry information, and accomplishments.

2.6.1 Alphabet Inc., is a prestigious American multinational technology conglomerate. It is involved in the acquisition and operation of various businesses. Google and Other Bets are the segments that have been published. Google, specifically the search engine business and Alphabet's flagship segment, which includes advertisements, android, chrome, hardware, google cloud, google maps, google play, search, and YouTube. Calico, Capital, GV, Verily, Waymo, and X are only a few of the operating segments that make up Other Bets. Nest, DoubleClick, Looker, YouTube, Waze, Fitbit Inc, Calico, CapitalG, DeepMind, Google, Google Fiber, GV, Sidewalk Labs, Verily, Waymo, Wing, X are some of Alphabet's subsidiaries. It is regionally present in the United States, Europe, the Middle East, Africa, Asia Pacific and the other Americas. The company was founded in October 2, 2015 by Larry Page and Sergey Brin and headquartered in California, United states. It includes Business Overview, Mission & Vision, Company Details, Company snapshot, Organization Structure- Management, Product Offerings, Product Service Offerings, Key Clients, Swot Analysis & Key Competitors. Recent Developments.

2.6.2 Apple Inc. leads the world in product design and development, branding, marketing, and app ecosystems. The company also provides third-party digital content and applications, as well as related apps, utilities, hardware, networking solutions, and networking solutions. It includes Business Overview, Mission & Vision, Company Details, Company snapshot, Organization Structure- Management, Product Offerings, Product Service Offerings, Key Clients, Swot Analysis & Key Competitors. Recent Developments.

CHAPTER - 3

Market Research Elucidation

3.1 Market Research

Personal interviews with prospective customers are conducted as part of market research to ascertain the viability of a new service or product. Market research allows a company to pinpoint its target market and gather feedback from consumers on their interest in a product or service. This type of research can be carried out in-house, by the company, or by a market research firm specializing in the field. This can be accomplished by surveys, product testing, and focus groups. Test subjects are usually compensated with product samples or a small stipend in exchange for their time. Market research is an essential component of a new product or service's research and development (R&D).

Main Objective of Market Research: -

- 1) **Administrative:** Assist a company's or business's growth by ensuring adequate planning, coordination, and management of both human and material resources, and thus meeting all relevant market needs at the appropriate time.
- 2) **Social:** Provide a required product or service to meet a customer's unique needs. When it comes to consumers, the product or service should meet the needs and desires of the consumer.
- 3) **Economical:** Determine the economic degree of success or failure that a business may have when new to the market or otherwise launching new goods or services, offering certainty of any measures to be taken.

3.2 Types of Market Research

3.2.1 Primary Research: Primary research is characterised as a technique that researchers use to collect data directly rather than relying on data from previous studies. They technically “own” the info. Primary research is conducted primarily to solve a specific issue that necessitates in-depth study.

Businesses and organisations may perform primary research themselves or hire someone else to do so on their behalf. One of the main advantages of primary research is that it is "targeted," meaning that it is focused on a single issue or problem and all efforts are made to find solutions.

3.2.2 Secondary Research: Secondary research, also known as desk research, is a form of research that makes use of previously collected data. To improve the overall efficacy of analysis, existing data is summarised and compiled. Research information contained in research reports and other related documents is considered secondary research.

Public libraries, websites, and data from previously completed surveys, among other sources, will make these documents accessible. Some government and non-government organisations often store data that can be accessed and used for research purposes. Secondary research is much more cost-effective than primary research because it uses data that already exists, unlike primary research, which requires companies or firms to gather data themselves or hire someone else to do so on their behalf.

3.2.3 Qualitative Research: Qualitative market research is a form of open-ended (conversational) research that heavily relies on focus groups, in-depth interviews, and other novel research methods. It is based on a limited but well-validated sample size, typically between 6 and 10 people.

Interviewing business leaders and delving deeper into subjects of interest, psychological profile surveys, and other types of qualitative market analysis are often used in political campaigns to clarify public perceptions of political candidates and their policies.

Qualitative market research is a less costly way to learn more about two important factors: "what" the respondents want to know and "how" they want to know it.

3.2.4 Quantitative. Research: Quantitative market research is a method of asking structured questions to a target audience via surveys, polls, or questionnaires. Responses may be evaluated to help make well-informed choices on how to improve goods and services, which can help boost respondent satisfaction.

Quantitative analysis is used by organisations for predictive data assessment because it provides comprehensive, accurate information about the issue at hand or the target audience. Surveys, questionnaires, and polls are used in this market research methodology, and the information gathered is analysed numerically, statistically, and mathematically in order to develop better marketing strategies and plans.

3.3. Steps for conducting Market Research

3.3.1 Understanding Clients Pain Points and Problem Statement: A pain point is a particular issue that your company's potential customers are having. The pain points can be categorized in four main types of:

- 1) Financial Pain Points: Prospects believe they are overpaying for their current provider/solution/products and want to cover their expenses.
- 2) Productivity Pain points: Wasting too much time with their existing provider/solution/products and want to be more productive with their time
- 3) Process Pain points: - Internal procedures, such as assigning leads to sales reps or cultivating lower-priority leads, are something the prospects want to develop.
- 4) Support Pain points: -At crucial stages of the consumer journey or sales process, the prospects aren't getting the help they need.

By categorising consumer pain points, the company will begin to consider how to place the business or product as a solution to the prospects' issues, as well as what is needed to keep the customers happy.

3.3.2 Market Scope and Definition Finalization: The general problem must be stated, and the basic components of the marketing research problem must be identified. Analysis can only be correctly planned and performed once the marketing research issue has been clearly identified.

The scope of marketing analysis stretches from identifying consumer desires and needs to the evaluation of customer satisfaction. The entire marketing strategy is based on satisfying the needs of the customer. It's essential to understand what the customer needs, how he or she perceives the product (service), what exactly (ideally) does he or she want to get out of the product (service), how he or she chooses a brand, what knowledge sources and influence mechanisms are accessible, and so on.

3.3.3 Designing Research methodology: A research design is a blueprint that outlines how to perform a study. It's a strategy that outlines how the projections will be calculated, how they'll be computed, and how models will be checked and refined. A successful research design defines all of the items that need to be estimated and determines the most effective way to calculate them.

Secondary data analysis, qualitative research, quantitative data methods (survey, observation, and experimentation), required details, calculation and scaling techniques, questionnaire design, sampling process and sample size, and a data analysis plan are all part of the research design.

3.3.4 Market Assessment and Forecast: A market assessment is a thorough and realistic assessment of new products, business ideas, or investment's potential.

A business forecast is an essential part of any market study. It forecasts the size, characteristics, and patterns of your target market in the future. The estimated number of potential customers is divided into segments in a typical survey.

Steps to conduct Market Assessment: -

- 1) Industry Overview
- 2) Define the target market
 - Market Size
 - Demographics
 - Location
 - Psychographics
 - Trends
 - Behaviours
- 3) Competition
- 4) Pricing and Forecast

3.3.5. Data Triangulation and Validations: The method of using multiple sources of data or multiple

approaches to interpreting data to improve the credibility of a research study is known as triangulation. Triangulation, which has its roots in navigation and surveying, brings together different viewpoints and contributes to a more detailed interpretation of the phenomena of interest.

Triangulation allows data to be validated by comparing results from several sources. It verifies the accuracy of results obtained using various instruments and increases the likelihood of controlling, or assessing, some of the threats or multiple factors that influence our outcomes.

3.3.6 Market Segments and Geographical Insights: The process of segmenting a target market into smaller, more specific categories is known as market segmentation. It categorises consumers and audiences based on shared demographics, tastes, needs, or geographic location. The four bases of market segmentation are:

- Demographic segmentation
- Psychographic segmentation
- Behavioural segmentation
- Geographic segmentation

Demographic Market Segmentation: This is a term that refers to statistical information about a group of people.

Examples

- Age
- Gender
- Income
- Location
- Family Situation
- Annual Income
- Education
- Ethnicity

Psychographic Market Segmentation: -Psychographic segmentation divides viewers and consumers into groups based on personality traits and attributes.

Examples

- Personality traits
- Values
- Attitudes
- Interests

- Lifestyles
- Psychological influences
- Subconscious and conscious beliefs
- Motivations
- Priorities

Behavioural Market Segmentation: - focuses on how the customer acts.

Examples

- Purchasing habits
- Spending habits
- User status
- Brand interactions

Geographic segmentation separates a target market into geographical segments so that advertisers can better represent consumers in specific areas. This market segmentation is focused not only on the geographic units themselves (countries, states, towns, and so on), but also on a variety of geographic factors including climate, cultural habits, population, and so on.

3.3.6 Competitor Analysis and Insights: A competitive analysis defines and compares the company's rivals' tactics in order to identify their strengths and weaknesses in relation to the brand. A SWOT analysis is also used in a strategic analysis to help the marketer identify a competitive marketing strategy.

A competitive analysis covers five key topics:

1. Your Company's Competitors
2. Competitor Product Summaries
3. Competitor Strengths and Weaknesses
4. The Market Outlooks

3.3 Benefits of Market Research:

1. **Make well-informed decisions:** How management takes decisions has an effect on the growth of a company. Management can make strategic decisions based on obtained results that back up their insight and expertise using market research techniques. Market research is useful for evaluating market trends, but it should be done on a regular basis to get a complete picture of the customers.
2. **Obtain accurate information:** Market forecasting provides accurate information that can assist the business in planning for any possible mishaps. A business would eventually advance and, as a result, gain an advantage over its current competitors if it properly researches the market.

3. **Determine the market size:** A researcher may estimate the size of the market that must be covered in order to make a profit while selling a product or service.
4. **Choose a suitable sales system:** Select a precise sales system based on what the consumer demands, and the product/service can then be placed in the market accordingly.
5. **Learn about customer preferences:** It's useful to understand how clients' desires (and tastes) evolve over time so that the business can cater to certain preferences, buying patterns, and income levels. Researchers can determine the type of product that must be manufactured or marketed based on the specific needs of consumers.
6. **Obtain information about the brand's perception by customers:** In addition to gathering data, market research assists a researcher in assessing how consumers perceive an individual or brand.
7. **Analyse customer communication methods:** Market research helps you communicate with existing and future customers.
8. **Productive business investment:** It is an excellent investment for any company because it provides them with useful knowledge and teaches researchers how to proceed in order to achieve the desired sales.

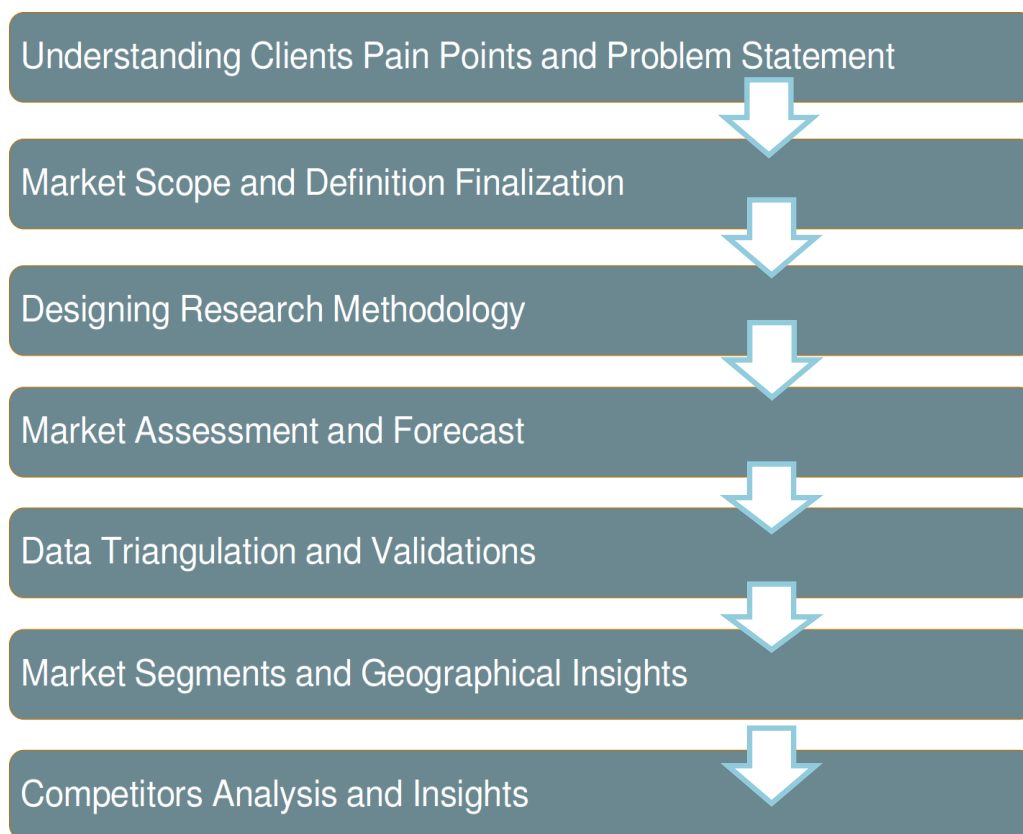


Figure 1- Market Research Process

CHAPTER - 4

Qualitative Research Elucidation

4.1 Primary Research: Primary research is characterised as a technique that researchers use to collect data directly rather than relying on data from previous studies. They technically “own” the info. Primary research is conducted primarily to solve a specific issue that necessitates in-depth study.

4.1.1 Direct Methods: Respondents are able to deduce the true intent of the study using direct methods.

4.1.1.1 In-person Discussion (Ethnographic Interview): Ethnographic analysis is the most comprehensive observational approach for studying people in their natural habitat. This approach allows researchers to adjust to the conditions of their target populations, which may range from an organisation to a city or any remote area. When gathering data, geographic restrictions may be a problem. The aim of this study is to learn about the cultures, difficulties, motives, and settings that arise. Instead of depending on interviews and discussions, you get a first-hand look at the natural settings.

4.1.1.2 Focus Group Discussion: A focus group is another one of the most popular qualitative analysis techniques for data collection. A focus group normally consists of a small number of people (6-10) from your target market.

The key goal of the focus group is to find answers to the questions "why," "what," and "how." One benefit of focus groups is that there is no need to communicate with the participants in person.

4.1.1.3 In-depth Interviews: One of the most popular qualitative research techniques is conducting in-depth interviews. It is a one-on-one interview conducted with one respondent at a time. This is purely a conversational approach that allows you to elicit more information from the respondent. One of the benefits of this approach is that it allows for the collection of accurate data regarding people's beliefs and motives. If the researcher is qualified, asking the right questions will aid in the collection of useful data. If more information is required, the researchers should ask follow-up questions to aid in the collection of additional data.

4.1.2 In-direct Methods (Projective Techniques): The indirect techniques are referred to as projective techniques because they do not attempt to project the respondent's motives, values, behaviours, or feelings into ambiguous circumstances.

4.1.2.1 Association techniques are a type of projective technique in which the respondent is given a stimulus and asked to answer with the first thing that comes to mind. A projective technique in which participants are given a list of terms one by one is known as word association. After each word, they are asked to say the first word that comes to mind.

4.1.2.2 Completion Techniques (sentence completion, paragraph Completion): a projective technique that requires the respondent to complete an incomplete stimulus situation.

Sentence completion: a projective technique in which participants are given a list of incomplete sentences and asked to complete them.

Paragraph completion: a useful technique in which respondents are given a portion of a paragraph and asked to write the ending in their own words.

4.1.2.3 Construction (Picture response, cartoon tests): a method in which the respondent is asked to create an answer in the form of a plot, dialogue, or description.

Picture response technique: A projected technique in which the respondent is shown an image and asked to say a story about it is known as the picture response technique.

Cartoon tests: The problem is illustrated by cartoon characters in a scenario that is important to the problem.

4.1.2.4 Expressive (Role playing): The respondent is presented with a verbal or visual scenario and asked to relate the feelings and attitudes of the other people in the situation using expected techniques. In role playing respondents are asked to assume the behavior of someone else.

4.1.3 Other Methods:

4.1.3.1 Diary Method: Diary studies are a form of qualitative study in which participants write entries about their daily lives in a log, diary, or journal about the action or experience that is being studied.

4.2 Company Analysis- Company Analysis is an essential part of any analysis because It helps to understand the business better and helps the company to make viable changes in order to improve the organization goals. It is Nothing but a process of evaluating the company's profitability, products, and services. Here are the few Steps for a company Analysis-

1. Look at the company's financial statements of the last 5 years.
2. Find the Key Competitors
3. Identify the size of the market
4. SWOT Analysis

4.3 Market Drivers- The forces that push customers to buy goods and pay for services are known as market drivers. These are also the factors that cause markets to grow and develop. Here are the Key Market Growth Drivers-

- 1) Social Drivers-Population density
 - Mindset of Sustainability
 - Lifestyle Trends among Youth
 - Independent Lifestyle

2) Economic Drivers- Growth of World Population

- Scared Resources
- Economic Disparities
- Inaccessible Luxury

3) Technology Drivers-Social Networking Technologies

- Mobile Technologies
- Payment Systems

4.4 Market Restraints- Market Restraints are nothing but the factors which affect the Business. There are many factors which affect the business such as Trade Barriers, Capacity Challenges, Legal Restrictions, Culture Differences, National and Prejudices, International Conflicts and many other factors.

4.5 Market Opportunities & Threats-

Market Opportunities- It is a tool to identify and assess the attractiveness of business opportunities and which revolves around the following factors- Customers, Competition, Company, Technology. Below are the few strategies to consider for Market Opportunities-

- Research about the Customers and Competitors.
- Get a closer view of the Market.
- Explore new opportunities using a Proactive approach.
- Understand Business Environment Factors such as Technological Developments, Government Regulations, Geopolitical Shifts, Economic indicators, Trade Policies last but not least Social & Cultural Norms.

Market Threats- It is a tool to identify and assess the negative impact on a company's ability to meet the goals. It can be done using SWOT Analysis.

4.6 Market Trends and Technology Trends-

Market Trends are just upward or downward movement of a market at a certain time. Further, It is an analysis of past and current market behaviour and what are the dominant trends in the market and what do consumers want. This will provide the perspective of the external factors that impact the market. It will allow us to keep the business ahead of competitors in the market. Here are the a few techniques-

- Customer Analysis
- Competitors Analysis
- Risk Analysis
- Product Research
- Marketing Mix Modelling
- Advertising the Research
- Simulated Test Marketing

Technology Trends are emerging technologies which reimagine how we organize, operate and strategize in the workplace, create better human experience. Some trends Artificial Intelligence, Internet of Things, Predictive and Personalized Medicine, Augmented Reality/Virtual Reality, Cybersecurity, Blockchain, Edge Computing, Machine Learning.

4.7 Competitive Landscape- It is a business Analysis method that gives you a complete description of competitors and their relative position in the market. It identifies direct or indirect competitors on the basis of their mission & vision, core values, strength and weakness, niche market, collaboration, market outlook, recent developments, Strengths & Weaknesses using frameworks: SWOT and PEST. Here are the steps to follow-

1. Collect Internal Resources
2. Investigate Competitors Resources.
3. Verify and Validate.

4.8 Market Segmentation- It is a process of segmenting (dividing) a broad market into a group with common needs and having a similar marketing action just to identify the high yield segments. Researchers look for common characteristics like needs, common interests, lifestyle, demographic profiles. There are four types of Market Segmentation:

1. Demographic
2. Psychographic
3. Behavioural
4. Geographic

4.9 Market Assessment & Feasibility-

Market Assessment or Market Analysis is a detailed study of the potential of new products or services in the Market. It is a complete analysis of market trends, competitors, risks, entry barriers, opportunities, resources,

constraints, external forces.

Few steps to be followed for Market assessment-

- Determine the purpose.
- Get the detailed outline of the current state of the Industry.
- Identify the target customer based on their age, gender, needs, interest, education, occupation.
- Understand the competitors' strategies.
- Last, put it into work.

Market Flexibility- It refers to how quickly a firm responds to changing conditions in the Market to make the workforce more adaptable.

CHAPTER - 5

PROJECT TACKLED

5.1 Technology, Media and Telecom Industry Outlook (US Based)

Company outlook describes the current state of the company as well as its future prospects. Scale, patterns, life cycle, and expected growth are all important market metrics to consider.

Industry Outlook explains the industry in sufficient detail to someone who is unfamiliar with it, so that it can understand what the company is like, what are the threats, and what the future holds. Mentions about how big the company is, how it's rising, and what the future holds.

Created a table of 500 US based companies based on the technology Media & telecom. Which included the following entries: -

- Headquarters of the Company
- Market Capital
- Number of Employees
- Description about the company
- Company Revenue
- Industry Sub-sector
- Type Of Company (Pvt, Pub)
- Source of information for all the above-mentioned entries was: -
- LinkedIn (Company Description, Type of company, Industry sub-sector, headquarters)
- ZoomInfo (Revenue, No. of employees)
- Yahoo Finance (Market Cap)

Name of the Company	Employees	Business Description	Revenues	Company Type
ACD (telecommunications company)	35	ACD Telecommunications handles everything from cabling, servers, unified communications, legacy digital business systems, security services, and installation.	\$6 Million	Pvt
Ace Communication Group	6	Ace Telephone is a telephone business that also provides local and long-distance service, as well as Internet, security, computer repair, IT consulting, and digital television services.	\$1 Million	Pvt
Aeneas Internet and Telephone	50	Local Long Distance, Broadband, Managed IT Services, Hosted Business Phone Systems, Business Continuity Services, and Cloud-Based Services are all specialties of the Aeneas organisation.	\$34 Million	Pvt
IntelePeer	200	They give your firm with the advice, software, hardware, and services it needs to complete its digital transition.	\$73 Million	Pvt

Table 1- Technology, Media com Industry

5.2 Predictive Analytics Use Cases by Industry

5.2.1. Generation of Use Cases, Industry Trends and Titles for different industries: -

A use case is a written explanation of how the industry can use the technology to accomplish tasks. Each use case is interpreted as a series of simple steps, starting with the user's goal and ending with the achievement of that goal. Predictive maintenance helps in maintaining assets and has the potential to dramatically reduce operating costs, saving businesses millions of dollars. Managers in a variety of industries are able to predict when a piece of equipment will malfunction by using recent trends and technologies.

A qualitative and quantitative report on a particular sector of economic activity identified by national or international industry classification systems is known as an industry trend analysis. Some market trend analysis studies equate the performance of a specific company to the performance of the entire industry.

Generated the use cases for the following industries which consist of different entries like Mega Trends, Technology, use cases/Application, Region, Competitors, Company Names, Reports Available.

AGRICULTURE

In the last ten years, the agriculture industry has undergone a transformation. In the COVID-19 pandemic, we've all seen Disruptive Innovations, such as the use of sensors, computers, machines, and information technology in agriculture. In line with IoT and Cloud Computing, today's agricultural activities make extensive

use of Artificial Intelligence. Robots, temperature and moisture monitors, aerial photographs, and GPS technology are all used in modern farming techniques.

Mega Trends	Technology	Application or Use Case	Company Name	Titles	List of Companies In this Market
Digital Agriculture	Aeroponics technology	The term Aeroponics farming refers to the process of growing plants in an air or mist environment without the use of soil or any earth-like material, which is known as geoponics.	Aero Farms	Aeroponics Market	Plenty, Green Spirit Farms, Bowery Farming, BrightFarms
Internet of Agriculture Things	IoT technology	Motor Leaf is a platform that uses IoT in agriculture to manage the yield and quality of crops. This technology allows farmers to make data-driven decisions about how to best grow their crop	Motor Leaf	Agriculture IoT market	The Yield, AgroSmart

Table 2. Agriculture

MINING

The new mining technology developments point to a significant industry change toward sustainability. Wireless Wearable Sensors, Robots, Augmented Reality, Virtual Reality, Autonomous Trucks, and other digital technologies are working harder than ever to produce a genuinely new, secure, and profitable mine that meets the increased demand for mined materials while also exceeding customer expectations.

Mega Trends	Technology	Application or Use Case	Company Name	Titles	List of Companies In this Market
Digital	Augmented Reality	NexTech AR Solutions predicts that AR can be exclusively used in the mining sector, for the routine PM (preventive maintenance) rather than stereotyping it and being taken for granted maintenance tasks.	NexTech AR Solutions	Augmented reality Market	Berkley Renewables (BKS), Big Tree Group (BIGG), and Copperbank Resources (CBK).
Digital	Diffraction technology	Diffraction technology aids in determining the amount of useful resources present in a given piece of ore, reducing wasted hunting by focusing on high-value materials. The XRD technique will reveal a lot about a mineral's crystalline structure.	ALROSA	X-ray Diffraction Equipment Market	De Beers Group. Petra Diamonds. Graff Diamonds. Rio Tinto. Gazprom. Harry Winston. BHP Group.

Table 3. Mining

FOOD & BEVERAGES

In terms of warehousing, consumer demand, and technology, the food and beverage industry are rapidly changing. Advanced technology like warehouse management systems and automated driven vehicles are assisting managers in improving quality control, speeding up inventory staging and sorting, and efficiently restocking products.

Mega Trends	Technology	Application or Use Case	Company Name	Titles	List of Companies In this Market
IoT	Automated Guided Vehicles (AGV)	In the food and beverage industry, WEWO Techmotion AGVs mainly transport ingredients and finished products. Automated guided vehicles are suitable for: - Bulk handling, transporting raw materials, Moving dirty pallets.	WEWO Techmotion	Automated Guided Vehicle (AGV) Market	Kovo B.V. Talent In Control Brand Builders Instyle Concepts Alpharainbow Bosvillapark Eureka
Artificial Intelligence	Robotics	The artificial intelligence-driven robot Flippy was introduced at CaliBurgers Pasadena. Miso Robotics developed the robot. Flippy has the ability to cook burgers and serve them on buns.	Miso Robotics	Artificial Intelligence Robots Market	Chowbotics, Creator, Spyce, Moley Robotics, EKIM, Open Bionics, Picnic, Dishcraft Robotics and Shadow Robot

Table 4. Food & Beverages

MEDIA

The COVID-19 pandemic, which began in spring 2020, has sparked systemic problems and developments in the media and entertainment industry. The media and entertainment industry's digital transformation developments included a rise in video advertising, a demand for digital experiences using AR/VR headsets, and the use of emerging technologies such as eye-tracking and facial recognition.

Mega Trends	Technology	Application or Use Case	Company Name	Titles	List of Companies In this Market
Wearable Journalism	Wearable technology	Consumers' access to news is shifting thanks to wearable technology.	Apple	Wearable Technology Market	Xiaomi Technology Co., Ltd. (China), Garmin, Ltd. (U.S.), Samsung Electronics Co. Ltd. (South Korea), Alphabet (U.S.)
Digital	Virtual Reality	In the field of news and journalism, virtual reality (VR) is being used in the following ways: Stories may be experienced rather than just listened to in the NYT VR app	New York Times Company	Virtual Reality Market	NewsCorp, The Washington Post Company, Time Inc., Gannett Co., Inc.

Table 5. Media

HEALTHCARE

The healthcare industry has undergone a transformation in the last decade. We have all witnessed Disruptive Innovations in the COVID-19 pandemic, to name a few IoT powered devices that make healthcare more secure, accessible, and swift, such as wearables, real-time location tracking, personalised treatment, and image analysis using machine learning, as well as help in the detection of rare diseases using big data, and the list goes on.

Mega Trends	Technology	Application or Use Case	Company Name	Titles	List of Company in this Market
Virtual Reality	Telehealth	Nutrimed is a Telehealth company established in the United States that provides evidence-based therapeutic nutrition management to patients in their homes.	Nutrimed	Virtual Reality in Healthcare market	CAE Healthcare, Stryker corporation, Brainlab AG, Philips Healthcare, Vital image, Medtronic
Virtual Reality	Telemedicine	Beam has developed a service that allows doctors to collect payments for telemedicine visits using an end-to-end solution that streamlines the reimbursement process for online medical appointments.	Beam	Virtual Reality in Healthcare market	Bluebird bio, spark, casma, sangamo, ember therapeutics, uniQure, Ambry Genetics, Recombinetics

Table 6. Healthcare

PHARMA & BIOTECHNOLOGY

Artificial intelligence, machine learning, augmented reality, virtual reality, digital apps, the internet of things, blockchain, 3D printers, and organ-on-chips are among the technologies that are beginning to change the pharmaceutical & biotechnology industry in the same way they have transformed other industries.

Mega Trends	Technology	Application or Use case	Company Name	Titles	List of companies in the Market
Cancer Detection	Next Generation Sequencing (NGS)	Thermo Fisher Scientific received the US FDA premarket approval for the OncoPrint Dx Target Test as an NGS-based companion diagnostic (CDx) test to identify RET fusion-positive, metastatic non-small cell lung cancer.	Thermo Fisher	Next Generation Sequencing Market	Braker Corporation, Eppendorf, Shimadzu, Agilent Technologies, Waters,
Dairy Culture	Cultured Milk	BIOMILQ, works on cultured milk. The start-up's patent-pending process uses mammary cells from expectant mothers.	BIOMILQ	Dairy Culture Market	TurtleTree, Perfect Day, Follow Your Heart, New Culture, Impossible Foods

Table 7. Pharma & Biotechnology

5.3 Company Analysis- Aforementioned, it is a Professional Introduction of the Business and its activities to inform people about the company's products, services and current status. It outlines all the important and key information in a precise manner using visual appeals like Philips to make it easy to understand. The General format for the Company Profile includes Description of the business, product and service description, History, expansion and the growth, Public relations, Client portfolio, Industry Information, Achievements. It can be presented in PowerPoint presentations, word files, anything one likes. We made company profile of Alphabet Inc, and Apple Inc.

5.3.1 Alphabet Inc, is a tech giant company. We have elaborated about its business overview, Company snapshot, Organization Structure- Management, Product Offerings, Product Service Offerings, Key Clients, Swot Analysis & Key Competitors. Recent Developments.

5.3.1.1 Company Snapshot using Data Visualization Tools- It is a concise electronic record of a company which consists of Total revenue, Net income, Gross Profit margin, Revenue by Business Segment, Revenue by Business Geography.

Compared the Total Revenue, Net Income, Gross Profit Margin of 2020, 2019, 2018 and We observed the Gross profit margin is contracting from 2018 to 2020. Notwithstanding, Revenue and Net Income is progressively increasing from 2018 to 2020. The source for the data is 10K (Annual Revenue Report of 2020) of Alphabet Inc,

Calculation of Gross Profit Margin= Gross Margin = (Revenue-Cost of Goods Sold)/Revenue

Figure 2- Compared Revenue by Business Segment i.e., the portion of business that generates revenue by selling a different line of products or services. Every Segment has their own discrete associated costs and operations i.e independent to one another. Alphabet reported segments are Google and Other Bets. Google, in particular the search engine company and flagship segment of Alphabet which includes ads, android, chrome, hardware, google cloud, google maps, google play, search and YouTube. Further, Other bets is a combination of multiple operating segments to name a few, Calico, Capital, GV, Verily, Waymo and X. The Subsidiaries of Alphabet include Nest, Doubleclick, Looker, YouTube, Waze, Fitbit Inc, Calico, CapitalG, DeepMind, Google, Google Fiber, GV, Sidewalk Labs, Verily, Waymo, Wing, X (As per the source-10K of Alphabet). In a Nutshell, Alphabet's most revenue comes from Google rather than Other bets.

Calculation for Revenue by Business Segment percentage- (Segment Revenue/ Total Revenue) * 100

Figure 3- Compared Revenue by Business Geography. /Region i.e., the portion of business that generates revenue by regions. It aids in understanding a company's revenue in other countries and improves business mix and productivity. It is regionally present in the United states, Europe, Middle East, Africa, Asia Pacific

and the other Americas (As per the source-10K report of Alphabet).

Calculation for Revenue by Business Geography percentage- $(\text{Segment Revenue} / \text{Total Revenue}) * 100$

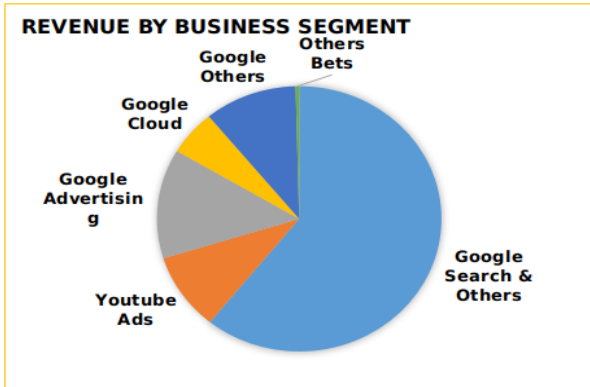


Figure 2. Revenue by Business Segment

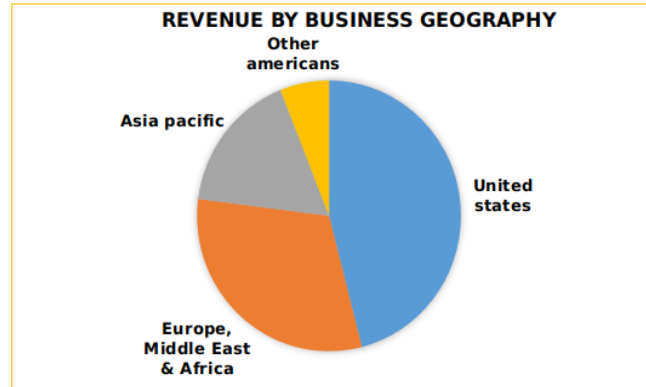


Figure 3. Revenue by Business Geography

5.3.1.2 Organization Structure Management- It is an outline defining how certain activities are done in order to achieve the goals of an organization. It includes tasks allocation, coordination and Supervision. In short, it's a visual representation of a company's operations, including what employees do, who they report to, and how decisions are taken. There are various types of Organizational Structure for instance Functional Organization Structure, Product-Based Divisional Structure, Market-based Divisional Structure, Geographical Divisional Structure, Process-Based Structure, Matrix, Circular Structure, Network Structure.

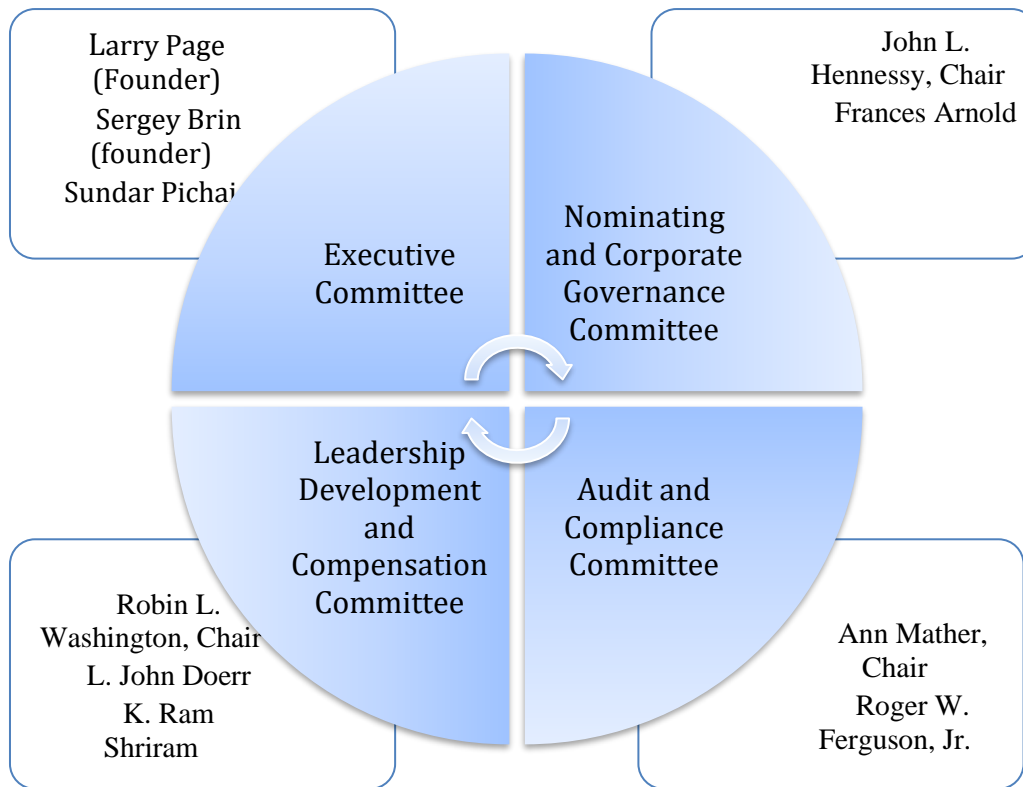


Figure 4. Organization Structure (Board of Directors)

5.3.1.3 Product & Service Offering- Product & Service Offering is nothing but the line of products & Services offered by the company to their wide range of customers by highlighting features of each product and Service offered. Here is the list of a few Products & Services offered by Alphabet.

Services offering-

Services	Description
Google AdSense	The Advertising Program was launched in 2013 and revenue over USD 146.92B in 2020
Ad Management & Ad Serving Solutions	It acquired DoubleClick at USD 3.1 B in March 2008. It offers Online Ad Serving Services to Microsoft, General Motors, Coca-Cola, Apple Inc., Nike and many more.
Media Streaming	Google Cast offers entertainment apps from a phone, tablet or laptop on a TV or Speakers.
Internet Services	Google Fiber provides fiber-to-the-premises service. IPTV & Broadband Internet.

Table 8. Services Offering

Product Offering-

Category	Sub Types	Product	Description
Electronics	Wearable fitness devices and app	Fitbit Sense, Fitbit Versa	It acquired Fitbit at USD 2.1 Billion in January 2021 & leverages wireless technology to enhance user's health and fitness.
	Smartphones, tablets, laptops	Pixel, Pixel 5	It acquired HTC Pixel Smartphone team worth of USD 1.1 Billion in September 2017. It is a brand of Consumer Electronic devices.
	Smart Home	Nest Secure Alarm system, Nest Hello Video Doorbell	It acquired smart thermostat creator Nest Labs at USD 3.2 Billion in January 2014. There modern home products equipped with sensor-driven, wifi-enabled.
Software & Operating Systems	Business Intelligence software & data analytics	Google Cloud	It acquired Looker worth at USD 2.6 Billion. Also, it helps customers to quickly analyse and find insights.
Statistical Tool	-	Google Analytics	A Web analytics Services offered by Google is used by many tech giants to name a few Twitter, uber to track & reports website traffic.

Table 9. Product Offering

5.3.1.4 Key Clients- are the clients for whom you made a specific change in your usual approach so it is quite important to manage your clients. It can be identified according to the revenue spend, profit maximization and many more. Here we have identified on the basis of revenue utilised by different companies on Alphabet.

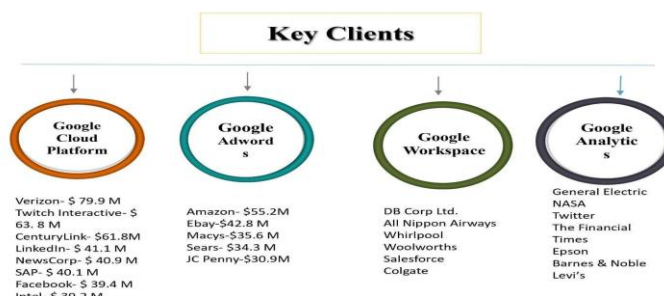


Figure 5. Key Clients of Alphabet

5.3.1.5 SWOT Analysis- It is vital for all organisations to know their strengths, Weaknesses, Opportunities and Threats. It is a Framework used to evaluate the company’s position and to develop strategic planning. It assesses internal and external factors, current and future potential which helps the organization to focus on every aspect of the business. Strengths should answer questions like what is the competitive advantage of an organization, what are the best products and services in the Market. Weaknesses should answer questions like Where the organization needs to improve, what products and services aren’t liked by customers. Threats should answer questions like What new regulations threaten operations, what do our competitors do in different manners. Opportunities should answer questions like What new market segment should the company explore, what technology should the company needs to improve. Here is the SWOT Analysis of the Alphabet Inc, using its 10K Annual Report.

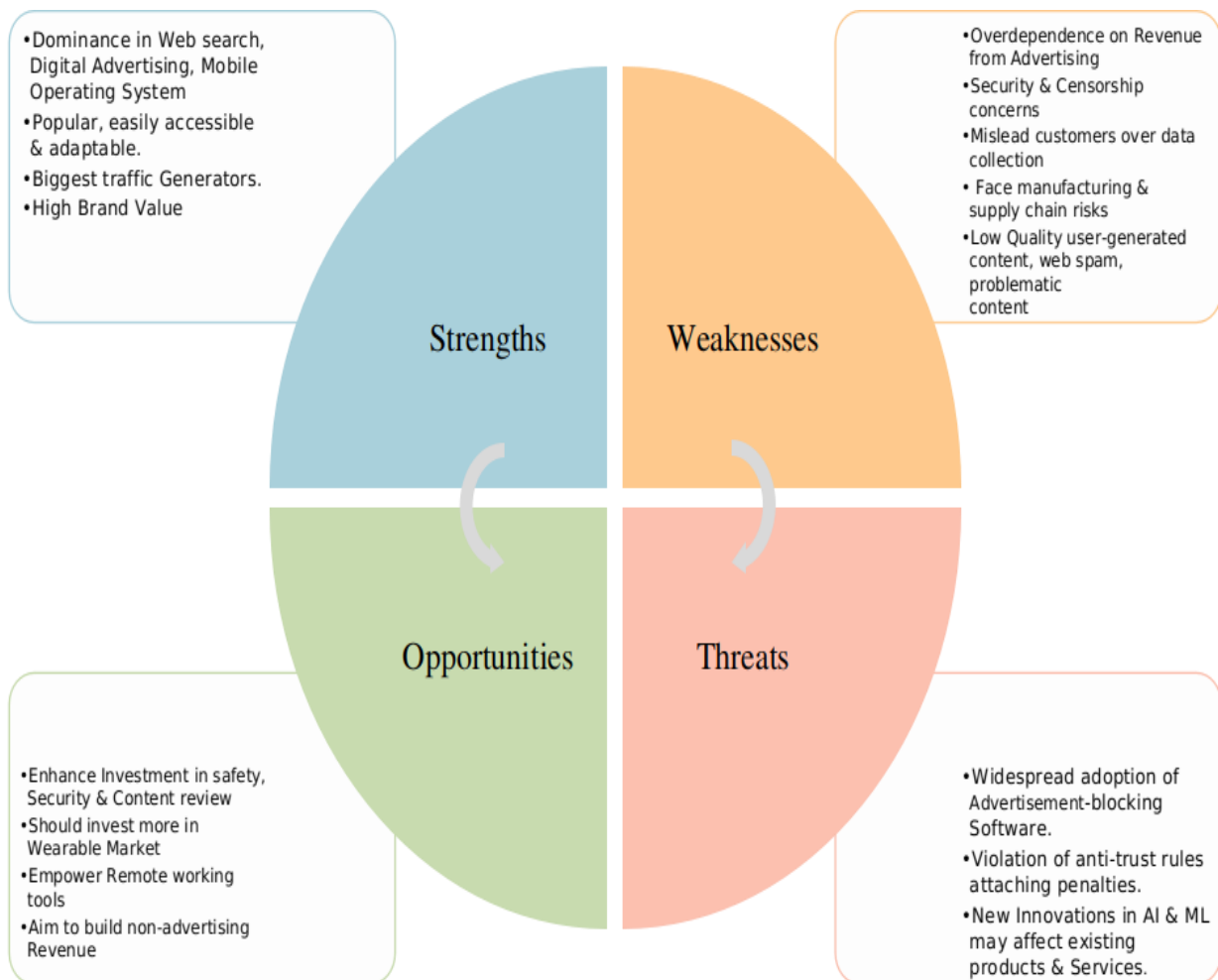


Figure 6. SWOT Analysis

5.3.1.6 Key Competitors- It is important to understand the competitors in the Market to improve further and to find a gap in the market. It will also help to enhance your own business strategy. Here is the visual diagram which shows the competitors of Alphabet.

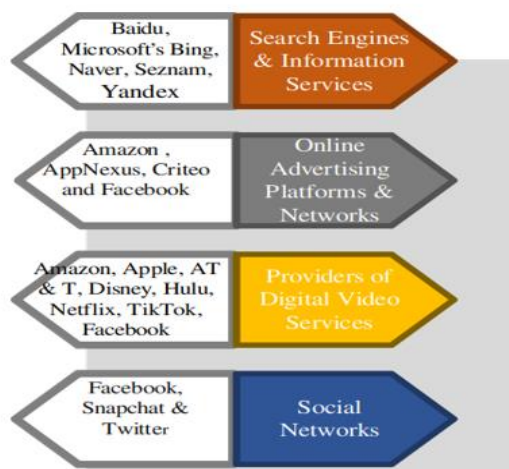


Figure 7, Key Competitors

5.3.2 Apple Inc, is a tech giant company. We have elaborated about its business overview, Company snapshot, Organization Structure- Management, Product Offerings, Product Service Offerings, Key Clients, Swot Analysis & Key Competitors. Recent Developments.

5.3.2.1 Company Snapshot Using Data Visualization Tools- It is a concise electronic record of a company which consists of Total revenue, Net income, Gross Profit margin, Revenue by Business Segment, Revenue by Business Geography.

Figure 8- Compared the Total Revenue, Net Income, Gross Profit Margin of 2020, 2019, 2018 and We observed the Gross profit margin, Revenue and Net Income contracting from 2018 to 2019 later it surged exponentially in 2020. The source for the data is 10K (Annual Revenue Report of 2020) of Apple Inc.

Calculation of Gross Profit Margin= $Gross\ Margin = (Revenue - Cost\ of\ Goods\ Sold) / Revenue$

Figure 9- Compared Revenue by Business Segment i.e., the portion of business that generates revenue by selling a different line of products or services. Every Segment has their own discrete associated costs and operations i.e independent to one another. iPhone, iPad, Mac, iPod, Apple Watch, Apple TV, a series of consumer and technical software apps, iPhone OS (iOS), OS X, and watch operating systems, iCloud, Apple Pay, and a variety of accessory service, and support offerings are among the company's products and services.

Calculation for Revenue by Business Segment percentage- $(Segment\ Revenue / Total\ Revenue) * 100$

Figure 10- Compared Revenue by Business Geography. /Region i.e., the portion of business that generates revenue by regions. It aids in understanding a company's revenue in other countries and improves business mix and productivity. The Americas (North and South America), Europe (European countries, as well as India, the Middle East, and Africa), Greater China (China mainland, Hong Kong, and Taiwan), Japan, and the Rest

of Asia Pacific) are the Company's reportable divisions (Australia).

Calculation for Revenue by Business Geography percentage- (Segment Revenue/ Total Revenue) * 100

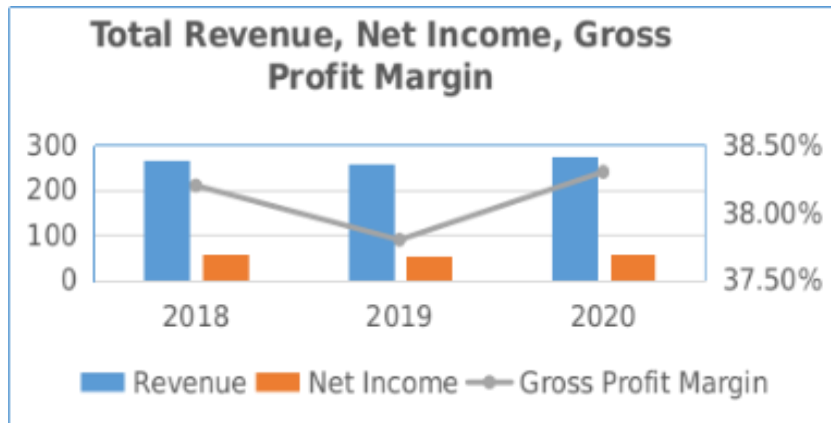


Figure 8. Total Revenue, Net Income, Gross Profit Margin

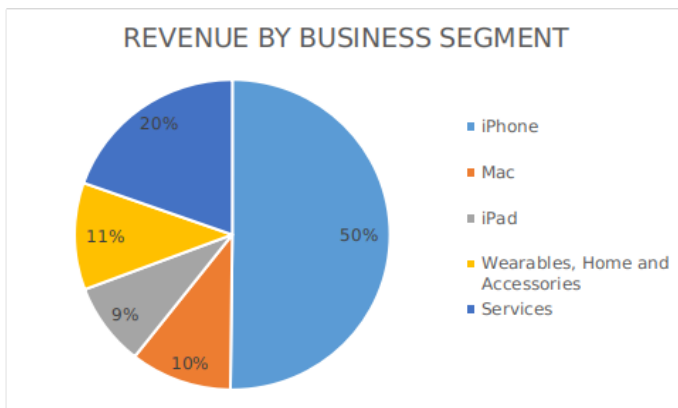


Figure 9. Revenue by Business Segment

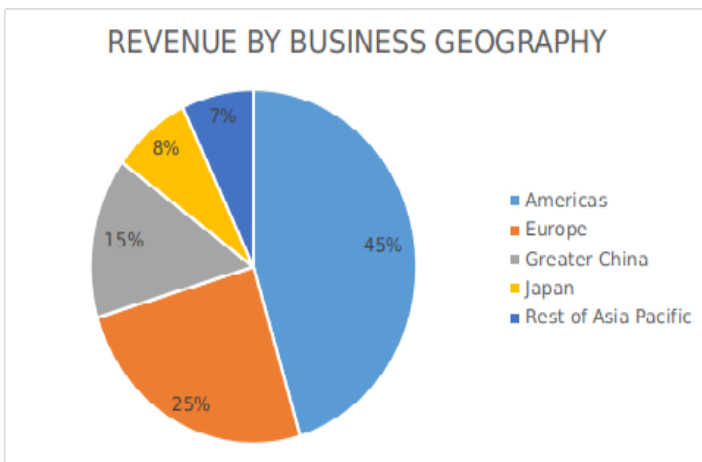


Figure 10. Revenue by Business Geography

5.3.2.2 Organization Structure Management- It is an outline defining how certain activities are done in order to achieve the goals of an organization. In short, it's a visual representation of a company's operations, including what its employees do, who they report to, and how decisions are taken. There are various types of

Organizational Structure for instance Functional Organization Structure, Product-Based Divisional Structure, Market-based Divisional Structure, Geographical Divisional Structure, Process-Based Structure, Matrix, Circular Structure, Network Structure. Here is the Organizational Structure Management of Apple Inc.

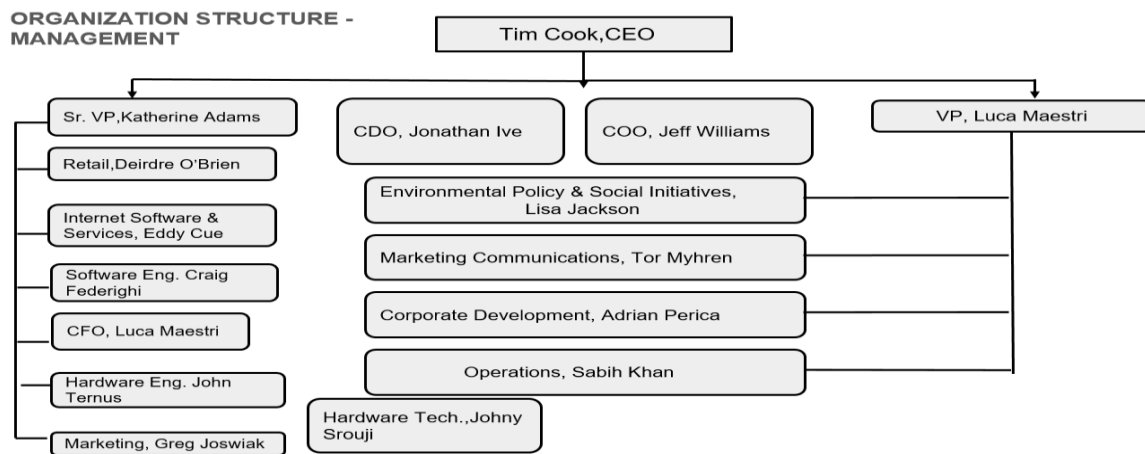


Figure 11. Organization Structure Management

5.3.2.3 Product & Service Offering- Product & Service Offering is nothing but the line of products & Services offered by the company to their wide range of customers by highlighting features of each product and service offered. **Here is the list of a few Products & Services offered by Apple Inc,**

Product Offering-

Category	Product	Description
Hardware	iPhone	The iPhone® brand refers to the company's line of handsets that run on the iOS operating system.
	Mac	Macintosh The Mac® series of personal computers is based on the company's macOS® operating system.
	iPad	The iPad® family of multi-purpose tablets is powered by the company's iPadOS® operating system.
Operating Systems	iOS (current version is 14.x)	iOS (formerly iPhone OS) is a mobile operating system, developed for the iPhone, Apple TV, iPod touch and iPad.
	macOS	macOS (Macintosh Operating System), is Apple Inc.'s operating system for Apple Macintosh computers.

Table 10. Product Offering

Service Offering-

Services	Offering
AppleCare	Access to: - Apple technical support Apple authorized service network (repair and replacement services) Additional coverage for instances of accidental damage, theft and loss.
Cloud Services	Store data (photos, files) on remote servers Share and send data to other users Manage <u>Apple</u> devices if lost or stolen.
Digital Content	Apple News+, Apple Card Apple Arcade, Apple TV+
Payment Services	Apple Pay®, a cashless payment service, and Apple Card™, a co-branded credit card.
Advertising	Print Advertising TV Advertising Digital Marketing.

Table 11. Service Offering

5.3.1.4 Key Clients- are the clients for whom you made a specific change in your usual approach so it is quite important to manage your clients. It can be identified according to the revenue spend, profit maximization and many more. Here we have identified on the basis of revenue utilised by different companies on Apple.

Clients	Products
Voce Communications, Inc.	iOS
QA Limited	
U.S. Security Associates, Inc.	
Accenture	iPhone & iPad
At&t	
Faxconn	
Verizon	
Salesforce	
Deloitte	iOS, pads
SAP	
IBM	Apple development tools
cisco	iOS, pads, macOS
Quanta Computer	iMacs, MacBook

Table 12. Key Clients

STRENGTHS	WEAKNESSES
MOST VALUABLE AND GLOBALLY ICONIC BRAND TOP TECHNOLOGY BRAND OF CHOICE SUSTAINABILITY THROUGH LIAM PROFICIENT RESEARCH EXPANSION IN SERVICES	HIGH PRICED PRODUCTS LIMITED ADVERTISEMENTS AND PROMOTIONS INCOMPATIBILITY WITH OTHER SOFTWARE ALLEGATIONS OF TRACKING UNFAIR BUSINESS PRACTICES
OPPORTUNITIES	THREATS
CONSISTENT CUSTOMER GROWTH QUALIFIED PROFESSIONALS EXPANSIVE DISTRIBUTION NETWORK LACK OF GREEN TECHNOLOGY SMART WEARABLE TECHNOLOGY	COVID 19 OUTBREAK SUPPLY CHAIN DISRUPTION APPLE BULLIED BY COUNTERFEITS INCREASING COMPETITION MARKET PENETRATION

Table 13. SWOT Analysis of Apple Inc.

5.3.2.5 SWOT Analysis- It is vital for all organisations to know their strengths, Weaknesses, Opportunities and Threats. It is a Framework used to evaluate the company’s position and to develop strategic planning. It assesses internal and external factors, current and future potential which helps the organization to focus on every aspect of the business. Strengths should answer questions like what is the competitive advantage of an organization, what are the best products and services in the Market. Weaknesses should answer questions like Where the organization needs to improve, what products and services aren’t liked by customers. Threats should answer questions like What new regulations threaten operations, what do our competitors do in different manners. Opportunities should answer questions like What new market segment should the company explore, what technology the company needs to improve. Here is the SWOT Analysis of Apple Inc, using its 10K Annual Report.

5.3.2.6 Key Competitors- It is important to understand the competitors in the Market to improve further and to find a gap in the market. It will also help to enhance your own business strategy. Here is the visual diagram which shows the competitors of Apple.

Common Products	Key Competitors
Personal Computers	Dell
	HP
	Lenovo
	Acer
Tablet	Samsung
	Amazon
	Lenovo
Smartphones	Samsung
	LG
	Lenovo
	Huawei
Entertainment & Applications	Netflix
	Amazon
	Google
	Microsoft
	Spotify

Table 14. Key Competitors

5.4 Market Research Collateral- As mentioned earlier, It is a type of written material which helps in marketing a business, product, service or idea such as information sheets, articles, reports, brochures, flyers. Here are some glimpses of our work i.e, the article writing and Market Report.

Sample of Article Writing

TT Consultants Predicts That Worldwide Digital Transformation Market in Healthcare to Grow 17% CAGR in Next Five Years

We're all fighting the coronavirus, which has impacted almost every industry from mining to healthcare and has shed light on how to improve healthcare. The World Health Organization's (WHO) Global Strategy on Digital Health aims to enhance health for all, anywhere by accelerating the creation and acceptance of appropriate, open, affordable, scalable, and long-lasting person-centric digital health solutions to prevent epidemics and pandemics. Enabling countries to use health data to achieve health-related Sustainable Development Goals is also a priority (2019-2023). According to a study by Leeway Hertz, "Digital

Transformation in Healthcare is a Building Block of a Patient-Centered Approach to Healthcare that provides streamline processes, understand what the patient needs, create loyalty and trust, and deliver a better user experience." There is no doubt that going digital is successful. Digital services such as Digital Health, Internet of Medical Things, Virtual/Augmented/Mixed Reality, 5G Network, Artificial Intelligence & Machine Learning, and Wearables are being adopted and offered by healthcare facilities. Telehealth, EHRs, Smart Watches, Smart Pills, Smart Hospitals, AI-powered radiology, mHealth, Robot-Assisted Surgery, Advance Diagnosis, Nanomedicine, and the list goes on and on. Coordination between doctors and patients, as well as medical system automation, reduces costs, eliminates errors, and improves performance.

Sample of Agriculture Market Report

Artificial Intelligence in Agriculture Market Size, Share, and Trends Analysis Report 2021-2030 by Component (Software, Hardware), Technology, Applications (Precision Farming, Drone Analytics), Region, and Segment Forecasts.

Market Overview

The Agriculture Artificial Intelligence (AI) market is projected to develop at a CAGR of 25% over the forecast period, with a market value of USD billion in 2020. (2020 - 2030). The use of internet of things (Biosensors) in agriculture, high crop productivity or yield, proper crop management, and the use of drones for pesticide spraying and data generation via aerial images for crops are all major factors positively affecting the market. Another breakthrough that is gaining momentum in the industry is driverless tractors. These tractors can use GPS-based technology to steer themselves, lift tools from the field, detect farm boundaries, and be managed remotely via tablet.

AI Trends in Agriculture

The use of smart sensors in agriculture is a significant advancement in AI in the agricultural sector. Thanks to sensor-based technology, farmers can now precisely map their fields and monitor and apply crop treatment agents such as weedicides and fertilisers only to the areas that need it. One of the most notable innovations in AI in the agriculture industry is the use of smart sensors in agriculture.

CHAPTER-6

PRACTICAL APPLICATIONS

Marketing analysis can be used in a variety of ways in the marketing mix. Product, distribution, pricing, advertisement, and promotion, sales, and market are some of the wide areas of marketing research applications.

Product Research: Marketing analysis can be used in product creation to assess innovative product concepts, determine the need to adjust current product mix, test new product adoption, test product positioning, and package testing in terms of cosmetic appeal, product safety, and ability to withstand transportation and stocking. It includes research into product design, features, quality, brand monitoring, brand preferences, product lines, and product line rationalisation.

Advertising Research: Marketing analysis can be used to test key elements of advertisement copy, such as the basic theme, ideas, appeals, and headlines, as well as to evaluate its attention value, communication clarity, memory value, and conviction value. Marketing analysis may be used to determine the most cost-effective media strategy for assessing the efficacy of ads and audience measurement. It can also be used for media analysis, motivation research, and determining the advertising campaign's effectiveness.

Distribution Research: Identification of current and potential distribution channels, selection of suitable intermediaries, determination of channel expectations, reduction of distribution cost, encouragement for distribution channels, measuring and assessing the efficiency of the channels and different intermediaries, measuring relative effectiveness of different intermediaries are some of the broad areas of distribution study.

Pricing Research: The aim of this study is to determine consumer price expectations as well as their reactions and responses to various product price levels in order to determine demand elasticity. It also entails assessing consumer price preferences in various market segments, putting alternative pricing strategies to the test, tracking the evolution of competitor pricing strategies, researching the factors that influence pricing decisions, understanding consumer psychology, and tracking the evolution of a company's pricing policies and strategies.

Consumer Research: The business may conduct market research to determine the demographics of current and potential customers, to determine demographic characteristics of current and potential customers, to determine psychographic characteristics of consumers, to identify purchasing motivations, to understand consumer purchase patterns, and to determine reasons for consumer dissatisfaction.

Sales Research: The primary goal of sales research is to determine the product's sales potential as well as the company's sales success over time. In sales analysis, proper investigation may be carried out on a variety of topics. Sales Research may include the creation of sales territories, the calculation of personnel sales output in

terms of volume and benefit, the revision of sales territories, the evolution of sales methods, the determination of sales quotes and other performance criteria for sales personnel, the discovery of appropriate methods of compensation for sales personnel, and steps to improve motivation and morale of sales personnel.

CHAPTER-7

CONCLUSION

As a trainee at TT Consultants Chandigarh, my main goal was to gather maximum data and analyse them for the organization through research. I worked in the Market research department and still continue to work exactly as I was trained by my training managers. This key point of my profile is to Analyse data and statistics.

As a part of the Market Research Department, I have been taught to investigate market activity, analyse published data and statistics, evaluate past performance of the product or services, collect data on consumers & competitors and consolidate it into actionable reports, presentations, and items. My work has taught me a lot and everything I know today as a professional due to good as well as bad experiences.

Every day, I learn a little more with each experience. My failures and my achievements both have taught me something new each day. I am more confident of the business acumen I have acquired during my training. Also, Market Research Analyst is an evergreen field which helps in collecting and analysing data or information on a product or service.

Unequivocal, dealing with data everyday not only aids me in analysing data but also gives me immense knowledge of the Market like what is or will be recent trends in the market, what is or will be market scope, what are the new products or services into the market and the list is endless. My experience with them (TT Consultants) so far has been very life changing. The opportunities that I get every day helps me to embrace myself and get fully equipped with knowledge and help me to achieve endeavour.

I'm looking forward to many more amazing adventures.

References

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