Study on Use of AI in Marketing and its Impact on Traditional Marketing Strategies Adopted by Siemens, Goa.

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by

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Under the mentorship of
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Goa Business School
Master of business administration (MBA)

GOA UNIVERSITY
May 2024

Examined by:

Seal of the School

DECLARATION BY STUDENT

I hereby declare that the data presented in this Internship report entitled, **"Study on Use of AI in Marketing and its Impact on Traditional Marketing Strategies Adopted By Siemens, Goa"** is based on the results of investigations carried out by me in the Discipline of Management Studies at Goa Business School, Goa University, under the mentorship of Dr. Suraj Pavto Velip and the same has not been submitted elsewhere for the award of a degree or diploma by me. Further, I understand that Goa University or its authorities/College will not be responsible for the correctness of observations / experimental or other findings given the internship report/work.

I hereby authorize the University authorities to upload this dissertation to the dissertation repository or anywhere else as the UGC regulations demand and make it available to any one as needed.

Nehal Prashant Naik

Seat Number: 22P0280039

Date: 03/05/2024

Place: Goa University

COMPLETION CERTIFICATE

This is to certify that the internship report **"Study on Use of AI in Marketing and its Impact on Traditional Marketing Strategies Adopted By Siemens, Goa"** is a bonafide work carried out by **Mr. Nehal Prashant Naik** under my mentorship in partial fulfillment of the requirements for the award of the degree of **Master of Business Administration** in the Discipline of Management Studies at the Goa Business School, Goa University.

Date: 03/05/2024

Dr. Suraj Pavto Velip
Project Guide

Goa Business School ★ Goa University ★
School Stamp

Signature of Dean of School/HoD

Date:

Place: Goa University

ACKNOWLEDGEMENT

I would like to express my genuine appreciation to all those who helped and contributed to this research.

Firstly, I would like to thank my mentor and Manager of Siemens Business Administration & Marketing Department, **Mrs. Reshma Sawant** and the HR of Siemens, **Mrs. Prajakta Harmalkar** for their unwavering guidance throughout the research process. Their valuable insights, constructive feedback, and encouragement were instrumental in shaping the direction of this project. Special thanks to everyone at Siemens for guiding me to this opportunity.

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Lastly, I would like to thank my family & friends for their immense support and encouragement throughout this research endeavor. Their love, patience, and understanding have been invaluable. Thank you all for your contributions to this research project.

SIEMENS

Programme Director
Management Discipline
Goa Business School, Goa University
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PA/HRL-IN 15.01.2024

Dear Sir/Ma'am,

Sub: Approval to undergo Internship Training for Nehal P Naik

With reference to your letter dated 01.03.2023, please note that your student Nehal P Naik has been accorded permission to undergo internship in our organization from 11.05.2023 to 07.07.2023 and from 15.01.2024 to 11.03.2024

Mrs. Reshma Sawant, Manager, would be the internal guide during the internship.

Canteen facility would be extended to your student; the student will have to commute on his own to the Factory. The student will have to make his own arrangements for PPE's like safety shoes, etc. which is mandatory.

We wish Nehal P Naik, a fruitful learning experience in our Plant.Thanking you,

For **SIEMENS LIMITED**,

Pankaj Fondekar
Sr. Manager – People & Organization

SIEMENS

Name : Prajakta Harmalkar
Department : GBS/H2R
Fax :
E-mail : Prajakta.harmalkar@siemens.com

Our Reference: GW/HR/Gen/2023

Date 07.07.2023

TO WHOMSOEVER IT MAY CONCERN

- This is to certify that Mr.Nehal Prashant Naik, student of Goa Business School, Goa University has successfully completed his internship at Siemens Ltd – MV Factory, Verna Industrial Estate, Verna Goa 403722 for the period of 2 months from 11th May 2023 to 07th July 2023.

  During the internship, he was found to be sincere, hardworking & dedicated towards the tasks assigned to him.

  We wish him all the best & success in his future endeavors.

For,
SIEMENS LIMITED

Pankaj Fondekar
Sr. Manager – People & Organization

SIEMENS

Name : Prajakta Harmalkar
Department : GBS/H2R
Fax :
E-mail : Prajakta.harmalkar@siemens.com

Our Reference : GW/HR/Gen/2023

Date : 11.03.2024

TO WHOMSOEVER IT MAY CONCERN

- This is to certify that Mr.Nehal Prashant Naik, student of Goa Business School, Goa University has successfully completed his internship at Siemens Ltd – MV Factory, Verna Industrial Estate, Verna Goa 403722 for the period of 2 months from 15th January 2024 to 11th March 2024.

During the internship, he was found to be sincere, hardworking & dedicated towards the tasks assigned to him.

We wish him all the best & success in his future endeavors

For,
SIEMENS LIMITED

Pankaj Fondekar
Sr. Manager – People & Organization

Table of Contents

EXECUTIVE SUMMARY

This executive report summarizes my internship experience at Siemens, Goa a renowned German multinational technology firm specializing in automation, digitalization, and smart infrastructure solutions.

Founded in 1847, Siemens has evolved into Europe's largest industrial manufacturing firm, with a global workforce of approximately 320,000 employees and €78 billion in sales in 2023. The company is at the forefront of innovation in automation, manufacturing processes, rail transport solutions, health technology, and digital care, reflecting its commitment to excellence and technological advancement.

During my internship at Siemens, I was entrusted with crucial responsibilities aimed at improving customer satisfaction and enhancing the company's digital presence. I conducted comprehensive market research to understand customer preferences and gathering valuable feedback through surveys and interviews. I acquired necessary skill sets during the internship and new capabilities as well. We worked specifically with market research data, employing tools such as descriptive statistics and qualitative techniques, from which we were able to tease out findings that would be helpful to the improvement of the process.

The internship brought me a few of difficulties too. Addressing the varying customer demand, especially evoked by typing someone online, was a great lesson for me. The need for multitasking comprising market research, contents creation, and customer services in strict timeframes thereby required the demonstration of details oriented time management skills. A further important skills was a focused interpretation of marketing research data and customer feedback. Eventually, the biggest challenge came from applying the creative and innovative social media tactics to make my business profile stand out and keep up with the dynamic online trends.A significant aspect of my internship at Siemens was gaining practical experience in research planning and data analysis.

This hands-on experience not only broadened my understanding of research methodologies but also equipped me with valuable skills in data-driven decision-making and problem-solving. Overall, my internship at Siemens was helpful in fostering personal and professional growth, providing me with practical skills and insights that will undoubtedly shape my future endeavors in technology and customer service.

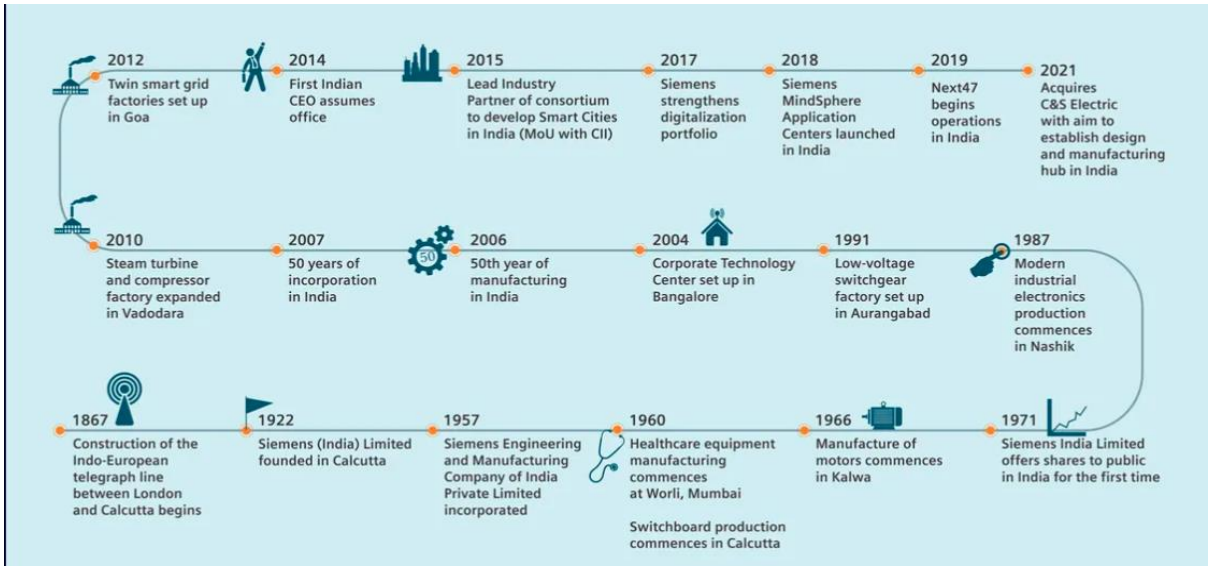
STUDY OF USE OF AI IN MARKETING AND ITS IMPACT ON TRADITIONAL MARKETING STRATEGIES ADOPTED BY SIEMENS, GOA.

1.1 Birds-eye-view

Siemens AG is a German multinational technology firm. The company is engaged in the fields of automation and digitalization in the field of processes and manufacturing, in intelligent activity and distribution systems, in the solutions of rail transport, in the field of health technology, and digital care . Siemens is Europe's largest industrial manufacturing company and the world's leader in smart infrastructure automation and warehousing software.

The roots of the conglomerate can be traced back to 1847 when Werner von Siemens and Johann Georg Halske established the Telegraphen Bau-Anstalt von Siemens & Halske in Berlin. In its present structure, it was created in 1966 underwent a merger between three firms: Siemens & Halske, Siemens-Schuckert and Siemens-Reiniger-Werke. Siemens, with its affiliates, headquartered in Munich and Berlin, has around 320,000 staff globally and created sales of around €78 billion in 2023. Is a constituent of both the DAX and Euro Stoxx 50 stock market indicies. In December 2023, considering market value, Siemens is the second-largest German corporation

As of today (2023), Siemens comprises Digital Industries, Smart Infrastructure, Mobility, Health. and Financial Services divisions. The health-care and mobility divisions of Siemens Group have run independently as Siemens Healthineers and Siemens Mobility since March 20, 2022. Siemens amassed significant number of new companies, among them Infineon Technologies which was established in 1999, Siemens Mobile – 2005, Gigaset Communications – 2008, Osram a photonics company – 2013, and Siemens energy – 2020.



Source- https://www.siemens.com/in/en

Siemens in India

Siemens does expansive corporeal business in India and opened its first branches in Bombay (Mumbai) nearly in 1920. Siemens' history in India is as old as the 150 years, which went back to when the company started building the Indo-European Telegraph line from Calcutta (currently Kolkata) to London in 1867. The Indo-European Telegraph company is headquartered in London, England. It was established in 1868 as a subsidiary company and took charge of the building and general operation of the new line. The first message was sent in April 1870 after two years of constructing the line, it reached Calcutta, UK from London in approximate 28 minutes.

SSW started its journey from India after the telegraph line reached its destination which is usually called one thing that we know. This enterprise commenced its business operation by engaging the import- export company of Schröder, Smidt & Co in India in 1903 to represent it in local trade. In 1908, S &H led by Siemens Brothers Ltd. (a subsidiary of Siemens Britain) was born with the name "Central Overseas Administration" and had the mandate of executing bigger projects in India.

Siemens performed considerably in the early stages of development of power supply in which Siemens established her core strength as a power generation company. The establishment of several power plants, which the company still treats as hallmarks that show the country's independent power production capacity, was also a notable feature of the early 1950s. In 1955, the Pathri hydroelectric plant was built on the Upper Ganges Canal (near Hardwar), and in 1955- the Pench National park was inaugurated in Maharashtra state.

The production of Siemens India was equally expanded that of 1950s where a small workshop was set up on Mahalaxmi Bridge in Bombay in 1955. In 1957, Siemens founded a switchgear plant at Worli near Bombay: Subsequent to setting up its first unit at Thane in 1958, the Company counselled numerous production facilities all over the country which started churning out a wide variety of electrical goods-from motors, switchgear, transformers, cables, etc. The large producers have different facilities including the electric motor plant opened in 1966 and now called a "green" sustainable and environmentally friendly production factory. At this plant the world's largest solar installation on a Siemens factory roof was held and a sophisticated recycling system was introduced.

It is in 1958 that Siemens, a German multinational, started working with Indian companies, the inaugural venture being with Bharat Bijlee Ltd. and Cable Corporation of India Ltd., which was set in 1977. In 1977 Siemens signed a permitted undertaking with state-owned Bharat Heavy Electricals Limited (BHEL) under which they jointly tried to generate a brand of 600 MW turbines. It was the largest German-Indian cooperation project to date.

Year 1967 was the time when Siemens India Ltd. was renamed, and a contributory pension scheme was introduced as well, which was aimed to give retirement benefit to every employee. The company's consistent evolution from the early 1970s to the present time absorbed all business that existed more than 40 years ago. 1971 marked the public IPO of Siemens India on

the BSE and the entry to the Indian market with major domestic orders. In 1981 there came the turn of Siemens to establish a plant in the area of Nashik. The firm had come to manufacture electronic parts of the latest types and to cover nearly 140,000 square feet of land. Over to now the number of employees reaches above 300 and production is forty times more than the initial one.

In the next century, Siemens India will be one of the biggest tasks with the completion of East-South HVDC high voltage direct current line that is 2200 km long. Siemens India is proud to be the contractor of the largest power transmission projects which is expected to come on stream in July ’2023. Company has created a 78o-kilometer-long HVDC transmission line that connects Uttar Pradesh and Rajasthan together, making the availability of power in New Delhi area stronger.

In the mid-1990s Siemens set up a hi-tech plant for gas insulated high-voltage switchgear in Aurangabad that produced the first of the world's 1200 KV SF6 circuit breaker in 2011. Instantly, because of the increasing business and the market, it was decided to build two new production halls in Aurangabad. These were subsequently made to meet the growing needs in India for high voltage products.

Siemens is already implementing the latest railway machinery in the construction of several metro lines in India, for instance, the Calcutta's east-west metropolitan line was built in 2011, the Gurgaon line in the Greater Delhi and the Chennai lines in the year of 2006.

Siemens, Goa

Siemens is an international technological corporation with a significant historical presence in India, especially Goa. The company has been operational in India since 1867. During the 1970s, Siemens founded a significant manufacturing plant in Verna, Goa, dedicated to the production of switchgear, transformers, and many other electrical equipment. The corporation established a research and development unit in Goa to create unique solutions for the Indian market.

Siemens has steadily increased its influence in Goa and the rest of India, establishing a robust presence in many sectors such as energy, healthcare, transportation, and infrastructure. The company's activities in Goa have been crucial in aiding the state's progress and advancement, and it is dedicated to continuing to invest in the region's future.

Siemens is currently a prominent supplier of energy technology and solutions, specialising in power production, transmission, and distribution systems. The corporation has persistently allocated resources to develop sustainable energy sources, specifically emphasising wind and solar power. Siemens is innovating innovative technologies for energy storage, smart grids, and other sectors that will influence the future of the energy industry.

1.2 PRODUCTS & SERVICES

Operations

In 2023, there is Siemens, which is the parent organization of Siemens Healthineers and Siemens Mobility, which are both two of their companies which operate separately. Siemens also manages several "Portfolio Companies" that provide products tailored to specific markets.In 2020, Siemens separated its energy division into a new company called Siemens Energy AG, while still holding a 17.1% ownership as of December 2023.

Digital Industries

The Digital Industries branch is dedicated to responding to the specific issues facing discrete and process industries as regards the replacement of both humans and machines. The branch of the company are into innovative and reliable software for industrial control systems.

Digital Industries creates PLM software and testing of mechatronics systems, as well as the MindSphere operating system, which exists in a cloud and a hardware interface. The software suite includes the low-code platforms Mendix, the Supplyframe marketplace for goal-oriented connected services among electronics professionals, and the interactive enterprise 3D utilities marketplace Pixeom. Among the major customer segments we serve is automotive industry.

Siemens's CEO Mr. Roland Busch has big plans for the shift of sales values of software companies to 20% within three years and put it up to date for the year 2023160. Siemens rolled out a new digital platform named "Siemens Xcelerator" in June 2023. The platform has IOH hardware, software, and digital services which have been designed around the futuristic Internet of Things.

Smart Infrastructure

Smart Infrastructure solution products of Siemens are divided into buildings, energisation, and energy products. The supported buildings' community contains building automation systems, energy efficiency services, and much more. As well, the Alternative Transportation Strategic Plan includes charging station systems for electric vehicles. Within the electrical products division, the business designs and produces a wide range of electrical devices for the home and industrial applications – it manufactures low-voltage switchgear, providing measurement of loads and meter reading systems, and medium-voltage switchgear.

The firm strives to supply numerous products in the renewable energy field which are further used in constructing or managing diverse microgrids, no matter their size. The system involves

production and delivery of electricity and managing microgrid as well as observing this process. The most major of this operations is the implementation of renewable energy sources, practice which is frequently made by legislative laws issued by authorities. It was the first real sustainable storage facility for Ventotene microgrid with a storage system for the island of Ventotene, Italy.

As part of the Siemens portfolio, Mobility Unit's mission is to enable the transportation of people or goods. This covers the provision of rolling stock that ranges from low-floor trams for cities, through metro and regional trains, to high-speed rail units to serve long-distance routes.

Abroad, it acts as an international healthcare provider and offers clients a wide array of options involving the manufacturing and selling of diagnostic and therapeutic drugs, clinical consultation, and other training services. The operations are categorised into four primary sectors: x-rays, MRI, CT scans, new technology by Varian, and innovative treatments. Among these are: magnetic resonance, computed tomography, X-ray, molecular and ultrasound systems. The diagnoses segment includes a complete range of in vitro diagnostic reagents for both laboratory and the point-of-care needs.

Financial Services

Siemens Financial Services (SFS), a unit that offers a broad array of funding products, belongs to the SFS division. The company services both the existing Siemens' customer and external firms and, in doing so, does equity and debt placement. Businesses look to SFS for reviewing risk profiles before committing to projects or using business models.

Siemens showed that its fiscal year 2023 (FY2023) revenue totaled €77 769b, resulting in the growth of 8% as compared to the previous fiscal year (FY2022). Shares of Siemens were valued at around US$93 each as of December 2023 (the market capitalization of the company being US$147 trillion). The Kleine Untersuchungen Uni-Hannover was single German corporation

that was part of the World's 100 Most Valuable Companies as per December 2023 Ernst & Young research.

Year	Revenue in €billion	Net income in €billion	Total assets in €billion	Employees
2013	▼ 75.882	▲ 4.284	▼ 101.936	▼ 362,000
2014	▼ 71.920	▲ 5.373	▲ 104.879	▼ 357,000
2015	▲ 75.636	▲ 7.282	▲ 120.348	▼ 348,000
2016	▲ 79.644	▼ 5.450	▲ 125.717	▲ 351,000
2017	▲ 83.049	▲ 6.046	▲ 133.804	▲ 372,000
2018	▼ 83.044	▼ 5.807	▲ 138.915	▲ 379,000
2019	▲ 86.849	▼ 5.174	▲ 150.248	▲ 385,000
2020*	▼ 57.139	▼ 4.030	▼ 123.897	▼ 293,000
2021	▲ 62.265	▲ 6.161	▲ 139.608	▲ 295,000
2022	▲ 71.977	▼ 4.392	▲ 151.502	▲ 311,000
2023	▲ 77.769	▲ 8.529	▼ 145.067	▲ 320,000

* In 2020, Siemens Energy became an independent company.
Source- wikipedia

1.3 Sections within the organization

- Manufacturing Department: Responsible to produce switchgear, transformers, and other electrical equipment as mentioned in the provided information.
- Research and Development (R&D) Department: Focuses on developing innovative solutions tailored for the Indian market, potentially housed in the research and development center established in Goa.
- Sales and Marketing Department: Handles the promotion and distribution of Siemens products and services across Goa and possibly other regions in India.
- Engineering Department: Engaged in designing and engineering solutions for energy, transportation, healthcare, and other sectors, in line with Siemens' offerings.
- Operations Department: Oversees day-to-day operations of Siemens facilities in Goa, ensuring efficiency and compliance with regulations.
- Quality Assurance/Quality Control Department: Ensures that products manufactured meet Siemens' quality standards through rigorous testing and inspection processes.
- Supply Chain Management Department: Manages the procurement of raw materials, logistics, and supply chain operations to support manufacturing and distribution activities.
- Human Resources Department: Responsible for recruitment, training, and employee relations within Siemens Goa, ensuring a skilled and motivated workforce.
- Finance Department: Handles financial matters such as budgeting, accounting, and financial reporting for Siemens operations in Goa.
- Customer Service Department: Provides support to customers, including maintenance, repair, and technical assistance for Siemens products and services.

2- INTRODUCTION

Digital Advertising and Artificial Intelligence

Artificial intelligence indicates computer systems that collect and utilise data to perform tasks in a manner similar to intelligent creatures. Guruduth Banavar, the director of IBM's AI research, characterises AI as "a portfolio of technologies" due to its diverse range of sorts. These AI technologies have diverse functions and are advancing at varying speeds, all with the goal of emulating human intelligence in computers to enhance their cognitive abilities. This type of intelligence aids managers in making well-informed decisions and plans by utilising relevant, timely, accurate, and precise data that aligns with the organization's aims and objectives (Ganesh, 2020).

AI is typically developed by collecting data about consumer demands, their attitudes and behaviours, and prospective changes in the corporate environment that could impact customers (Kumar & Bagga, 2020). Digital marketers excel at anticipating client needs, even if consumer behaviour is often intricate and requires regular analysis. Consumer reaction analysis can be enhanced by utilising suitable AI tools. By adapting to the evolving digital media landscape and providing real-time solutions to enhance outcomes, emerging technologies can help address the main challenges in the digital advertising environment (Bhosale et al., 2020).

AI can provide processed data for strategic planning and decision-making by collecting marketing information from databases, stakeholders (such as consumers, employees, and suppliers), or internet platforms like social media and blogs. Business organisations experience increased profitability and competitive advantage through this approach. AI helps organisations improve their ability to predict and fulfil client requirements. This competitive environment allows them to sustain a competitive edge by processing information quickly and launching new products and services at a low cost or with unique characteristics (Weng, 2020).

2.1 Theoretical background

Artificial Intelligence and Marketing Strategy

The development of a marketing strategy is determined by its clear visions, missions, and goals, scenario analysis, comprehensive alternative evaluation, and strategy design process (Slater et al., 2006). The competitive positioning, market segmentation, and industrial environment of a firm are interconnected with a market share according to Tseng (2016). Companies need to monitor both their internal and external environments for any possible changes in order to ensure their survival, growth, and profitability (Rodgers, 2022).

Developing and executing a management system often involves collecting, retrieving, assessing, interpreting, and predicting data about the organization's internal and external circumstances (Claver-Cortés et al., 2012). Furthermore, crucial for fostering MS advancement within a company is the AI proficiency. MS is commonly practiced in businesses. Business executives need to evaluate the updated information regarding the situation and adjust their planned and emergent strategies if needed (Janssen, van der Voort, & Wahyudi, 2017). AI is crucial for making strategic decisions and ensuring accurate updates to keep up with evolving competition, as stated by Akter et al. (2016). A corporation can utilise AI skills to collect and analyse the cost structures and unique characteristics of comparable goods and services in order to determine the most suitable market categories for CL and DF (Weng, 2021). To maintain a current and competitive cost position, a corporation must gather and analyse marketing information regarding cost analysis across all levels. Considering consumer preferences and unique characteristics (Mchergui, 2021).

In order to provide a unique product at a competitive price, a company needs to distinguish its products and control its cost structure (Xie et al., 2016).

The application of artificial intelligence (AI) in B2B marketing

The companies generally discover in the abyss of vast data mining new strategies that would not be able to be done with human analysis, thus resulting in huge cost saving. While abundance of studies have been conducted to investigate the applicability of AI approaches in B2C marketing by the research communities in marketing, B2B marketing area remains little examined in terms of the rigorous studies of AI applications. While Kotler and Keller (2012) claim that more exchange of goods and money transpire in B2B compared to B2C or business-to-customers market, this is proof that the former is more dominant than C2B or business to customer segment.

A number of research papers have been devoted to the effect of new technologies on B2B processes in a broad time-frame, paying attention to artificial intelligence (AI) being one of the most underresearched subjects. Primarily done by existing studies, they focus on designing business processes bringing in tangible customer service experience improvements, customer segmentation and profiling as well as a quantitative identification of leads and their scores.

The AI deployment in B2B marketing gives rise to a number of challenges for both companies and their employees (Han, Xu, and Markets, 2021). De Bruyn et al. (2020) highlight two main obstacles in AI applications in marketing: automation of processes, technology making decisions, and the ethics of automation. The technical hurdles related to applying AI in B2B transactions demonstrate that the AI is currently not far enough to be implemented in this setting. (Castillo et al., 2020).

The challenges such as high volume and value of B2B buying process, need for relationship management, empathy and other cognitive skills are still not addressable by AI which is heavily human-centric (Syam and Sharma, 2018). Basically, AI in B2B competently uses historical data to foresee the future patterns as put forward byDavenport et al. (2020) but according to

Dwivedi et al (2021a), AI faces problem in processing the shift. In AI accountability the concern lies with the operations of a preprogrammed algorithm which has a tendency to be faulty and therefore it is viewed as biased by women. This is evidenced by facial recognition algorithms being seen to be inappropriate to women and being criticized for sexism and racism (Zou & Schiebinger, 2018). There are two groups of consumers (end-users and B2B marketers) whose trust in AI marketing solutions have been recently emerged in the trust sense of exploration by Balakrishnan & Dwivedi (2021). Thus, the fact that AI, though powerful, possesses a degree of complexity warrants a keen analytical understanding of this technology among the B2B marketers. On the other hand, the use of AI in B2B marketing disrupts the historical method of B2B service ecosystem functioning, where outside providers offer AI systems as solutions in a marketing context, thus arriving at the automatization of marketing procedures. The study of the different technologies in B2B networks has been conducted previously, and to a lesser extent, there is not much literature on the marketer's stand as far as adoption and implementation of artificial intelligence are concerned.

We will look in depth how AI is used to marketers in the B2B business to overcome not only the technical and working processes limitations. AI affects marketing strategies, processes and practices; although there are significant consequences for practice, this is due to factors of technology being an overestimation (false impression) or underestimation (unjustly low impression) of technological performance. This also promotes scrutiny of the socio-cultural factors affecting AI back and forth usage made by B2B markets where culture and standards applied in both encounters are examined.

2.2 AI-powered marketing

Literature review

Artificial intelligence and machine intelligence, in many cases, play a critical role in industrial industries marketing (Bag et al., 2021). When it comes to those online giant corporations, like Google, Amazon or Microsoft, programmes that collect various sorts of stakeholders' feedback, to be analyzed by systems on big data, are gaining o rapidly inside companies' strategic decision-making processes (Davenport et al., 2020). Leone et al. (2020) found that the role of AI in industrial marketing is influenced through the price level, buying behavior of customers and sales (Martinez-Lopez & Casillas, 2013; Syam & Sharma, 2018). AI relieves senior market gurus of their typical high-level management activities and instead facilitates automation process, and hence it is different from all the other marketing efficiency technical advances (Paschen et al., 2020a). At the moment, academic scholars concentrate the study of how machines and the artificial intelligence support marketing techniques; its effect on the way marketers function is minimal.

AI marketing solution' technology competence remains a poorly researched area yet widens a gap in human effort knowledge (Paschen et al., 2020). Huang and Rust conducted research to propound framework that helps action time such as personalization, research like segregation and strategy with advance AI. In this article, Paschen et al. (2020a) render obvious how AI can be useful for lead generation, qualification, nurturing, scoring, competitor information as well as customer service after their order has been shipped. However, there is also appear to be the need for better process improvement discussions among marketing managers as AI aspirations come into play.

The destruction process has the dire effects, although every AI research lies in how to make it run. Although authors have pointed out that there are AI application barriers, some of the problems to which they referred to deal with the issue of, for examples, algorithmic coding

bias. Users' apathy can be caused by flaws that disappoint customers and partners, making it into buyer-supplier conflicts (Dwivedi et al., 2021a). To assure the customer, AI marketing solution vendors must emphasize complex implementation of AI and machine learning prepared for high perspective (Syam & Sharma, 2018). AI can replace or assist marketing in some of the areas and it might also cause buyer-supplier disagreements. Briefly, the buyers of AI marketing tools could expropriate the function of the system and make it autonoummus, which would lead to the disruption of the service ecosystem.

Yet, AI is the product of health artificial intelligence, computers that possess human cognitive and emotional mechanisms. Information that were the last two decades witnessed the AI scientists doing a great job in developing its attributions. Data analytics and machine learning became more powerful due to these applications in various tasks and instances. We are constantly exposed to movies and shows where robots function alongside as a superior or an assistant to humans. This makes artificial intelligence do replicate Google images of robots working for us, a thing that becomes stereotypical.

Conception that Artificial Intelligence is aimed at any system which thinks like human and solves problems usually all along the way and is a pivotal point for understanding its application. These AI attributes are precisely what help workers embark on tasks that are usually frustrating and involves lots of the same actions. The AI systems allow people to no longer have some non-interesting duties, for instance, computer systems can fulfil such kind of duties by fast and diversify that people used to do. Bai et al. (2022) stated that most machine learning algorithms, based on this opinion, tend to learn a model using the data available for training that has the same data distribution that will be present when the model is implemented. But a lot of cases have nothing to do with people being anxious when making decisions.

The evidence provided by research tells us that the way of collecting training data for algorithms of the spam filters results in datasets with properties of different distribution compare to the distribution of all e-mails and the users' email distribution. It appears in many areas such as artificial intelligence especially language processing. Feng et al. (2021) AI was known as computer science jargon in the mid-20th century, indicating the thought of trying to replicate human mind. Machine learning, which enables computers to make decisions, by analyzing data fast and accurately, accounts for a large part of the current interest of cognitive and social science professors and practitioners.

Big data is involved as the foundation for B2B marketing digitization generation and elaboration. Now the centralised databases are now the islands where Structured data (sales, customer) and unstructured data(such as videos, photos) is stored. To analyse this data advanced AI algorithms are needed. AI models are becoming of growing interest with ML being the most prominent among them. Business adoption of AI relates to several considerations.

In business-to-consumer interfaces, such as social media, AI has recently been used with these processes. B2B marketing professionals are eager to follow what the AI can do to rationalize processes and increase profits which are behind. Numerous limitations may prohibit B2B enterprises from becoming more involved in employing AI. As stated, B2B market choices are more complicated and affected by human heterogeneity . Thus, AI is an intolerable method due to the tremendous level of side-effect and subjectivity. B2B marketers are privileged in this aspect because AI creates accurate forecasts based on a system that has many variables and complex probability distributions.

Having a longer and broader process of B2B transactions eases AI models to help B2B marketers use them for understanding their customers and decision makers making the process

faster for them to close sales promptly. As second reason, as B2B purchases are rather rather are complex, companies in B2B may consider that human involvement is necessary for process management (Aichner & Gruber, 2017). Yet, machines may excel at more challenging assignments when humans can be more artistic or efficient by delegating routine or more analytical tasks to robots to begin with. Robots are capable of identifying patterns and coping with massive data flow quickly, and would be most effective when the saving of the time of employees is the priority here and their knowledge will duplicate that of a machine for the administration of a B2B company.

One the other hand, the problem that b2b marketers might face is that they frequently have less datasets to analyse and use AI solutions compared to b2c. AI and automation might be able work even without observations of very large datasets (Pham, 2017). With small scale data, B2B organisations can improve model performance by means of observing and adjusting the output model with the aid of reinforcement learning (Salehi & Burgueño, 2018). There seems to be the fourth aspect in all these –B2B buyers are indeed beginning to demand that the on-demand buying experience that is in their personal life (b2c customers) extend to the business world,yet business organizations are still reluctant to trust computers in dealing with their customers' important concerns.

As AI is famous for close personalisation in emails, written and other statements, they can likely close the gap with regard to the gap in consumers' expectations (Koskinen, 2021). Tried business that operates not towards or ever which ignore customization solution such as AI must be avoided. Sixth, AI (artificial intelligence) industry strives on advanced technologies, enhanced knowledge and machine querying ability to take this benefit (Li, Hou, Yu, Lu, & Yang 2017).

However, all the data shows that many B2B organizations do not adopt AI. Less than 20% of B2B companies adopt Artificial Intelligence's machine learning algorithms in the marketing and sales function, the data by Demandbase show in 2018. Artificial intelligence may be the most exciting field now, yet there is no practical implementation of it at the level that we expect. Many corporations feel that implementing AI systems is costly and resource-consuming. Therefore, we study AI usages and benefits (Dwivedi et al., 2021; Dwivedi et al., 2021; Han et al., 2021), to help B2B companies do a cost-benefit analysis of AI ROI. This work evaluates how AI is being embraced among B2B marketers, conducted through a scientific review of the literature. Next we will discuss the current AI approaches, pros, cons, and B2B marketing applications. To do so, we - the literature analysis - will employ Technology Acceptance Model (TAM) framework (Ryan and Gunn, 1978; Davis, Bagozzi, and Warshaw, 1989). Next, we had aimed to analyse and to synthesise five B2B industry surveys, in which we could reveal the motivators and barriers, impeding AI adoption for B2B marketers.

2.3 Research methodology

Research methodology is art and science of conducting investigation to solve the problem. It is nothing but creating a framework for conducting survey.

Category of Research:

For the study under consideration, a type of Quantitative investigation i.e. "Descriptive research" is being utilized because the study aims to describe the current scenario of, impact of use of AI technologies in marketing strategies at Siemens, Goa.

It involves both primary and secondary research i.e.

a. Primary research: The researcher has collected first hand data from respondents in chosen area of operation with the help of “Structured questionnaire” in order to get in-depth idea about the topic under study.

b. Secondary research: The researcher has also collected information about the topic from sources like books, news articles, review articles, online website, annual reports etc in order to enhance the quality of the research and get in-depth knowledge of the subject.

 Sample population

The target population chosen for the study is the employees of Siemens, Goa

 Sampling Technique:

The study is based on “non-probabilistic convenience sampling”. In this sampling the researcher has collected response from respondents of Siemens, Goa plant.

 Sample Size

Sample size of the study is based on the people working in the company.

 Sources of Data:

The data can be collected from various sources like:

a) Primary Data Source:

The basis of the primary data collection is on the survey method. The survey is done using “structured Questionnaire schedules” in order to enhance the quality of data collection amongst employees where the Researcher himself has collected data from Respondents in order to reduce bias and increase accuracy in data collection.

b) Secondary Data Source:

Secondary data for the study is collected by the Researcher through:

 Websites

 Annual Reports

 Reference Books

 Published Articles

 Journals

Tools for Data Collection and Analysis:

In order to collect information for the study different data gathering tools have been utilized such as

 Structured Questionnaire Schedule administered by Researcher to the Respondent

2.4 Research gap

Siemens has significantly evolved over the previous decade, embracing technology and other software tools for extended marketing. Siemens primarily focuses on B2B operations. Despite being at the forefront of technology and AI, there are instances where traditional marketing strategies are more effective in certain business settings. After analysing 20 articles on AI in marketing and B2B business from various industries worldwide, it is evident that there is a lack of research on Siemens' adopting AI technology in marketing, and the transition from traditional to digital and AI marketing. This study aims to analyse the different business models employed by Siemens in their marketing strategies.

2.5 Research questions

1. What are the challenges in implementation of AI in marketing activity in a B2B Model?
2. What are the AI tools that are used in a B2B marketing setup?
3. What are the AI tools that Siemens use in their marketing campaigns?
4. What is the impact of AI implementation on the social media and digital marketing at Siemens?

2.6 Research Objectives

1. To Identify and analyse the challenges hindering the implementation of AI tools in marketing at Siemens, Goa.
2. To Investigate the perception of employees directly involved in AI implementation in marketing over traditional marketing practices, focusing on their attitudes towards the integration of AI tools.
3. To analyse the training and skill development needs of employees involved in AI implementation in marketing, aiming to identify the factors hindering the adoption process.
4. To evaluate the impact of AI implementation on job roles and responsibilities within B2B marketing teams at Siemens, Goa.
5. To provide insights and recommendations for optimizing the AI adoption process.

2.7 Hypothesis

1. H0(Null Hypothesis): There is no significant challenges that hinder the implementation of AI tools in marketing at Siemens, Goa.

H1(Alternate Hypothesis): There is a significant challenge that hinder the implementation of AI tools in marketing at Siemens, Goa.

2. H0(Null Hypothesis): There is no significant change in the perception of employees towards the implementation of AI in Marketing over traditional marketing activities in the department.

   H1(Alternate Hypothesis): There is a significant change in the perception of employees towards the implementation of AI in Marketing over traditional marketing activities in the department.

2.8 Plan of Analysis & Interpretation

Tabulations, graphs, and charts are used for the study. For the sake of analysis, collected data is first tabulated and then represented using graphs. Simple percentage method is utilized to draw data from important questions asked to employees and then analysis is carried out in 2 stages:

- Analysis about why AI is essential in current business environment from a marketing perspective.

- Hypothesis Testing: Depending on the variables from the collected primary data the hypothesis framed will be analysed using appropriate statistical tests (Anova, t-test, Chi-square).

2.9 Limitations of the study

 The present study is only confined to Siemens; Goa plant & may not be generalized to all units of Siemens in India.

 The findings of the study will be based on the information provided by respondents and hence may be biased and not 100% accurate.

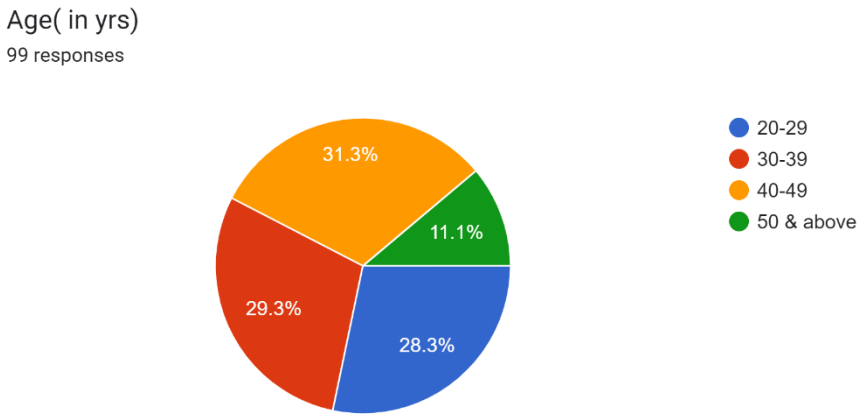
2.10 Data Analysis

Descriptive statistics

Table 3.1 depicting the Age of the respondents.

Age(in yrs)	No. of Respondents	Percentage(%)
20-29	28	28.3
30-39	29	29.3
40-49	31	31.3
50 & above	11	11.1
Total	**99**	**100**

Analysis: From the above table it is evident that the age distribution among the employees are almost equal. Majority of the respondents fall under the age group of 40-49 years, followed by 29.3% of them belong to the age group of 30-39 years, while a small percentage of 11.1 belong to the age group of 50 years & above.



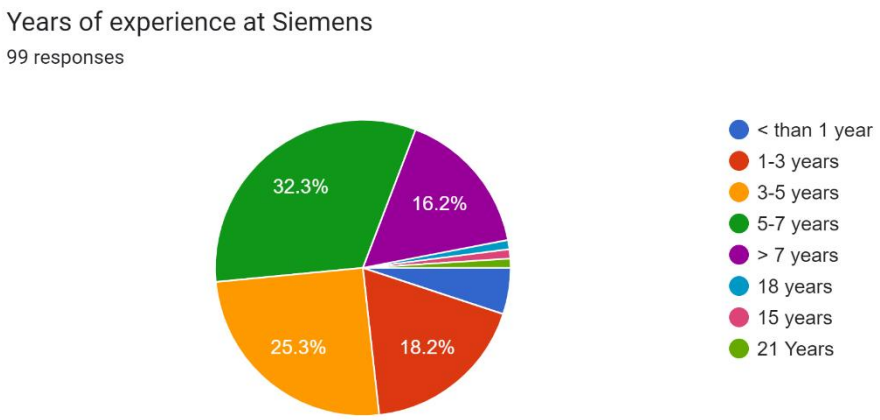
Interpretation: From the above graph we can infer that employees are distributed equally with respect to age group, hence the opinions gathered through the questionnaire method will yield a fair result regarding implementation of AI in marketing activities at Siemens, Goa.

Employees of the age group 20-49 years can adapt to the new changes that will be brought about by the AI Implementation.

Table 3.2 depicting the years of experience of employees at Siemens

Years of experience	**No. of Respondents**	**Percentage(%)**
< than 1year	5	5.1
1-3 years	18	18.1
3-5 years	25	25.2
5-7 years	32	32.3
>than 7 years	16	16.1
Total	99	100

Analysis: From the above table we understand that 5% of the employees have < 1 year experience, whereas 18.1% of the employees have experience between 1-3 years, while majority of the employees have work experience at Siemens between 5-7 years and 25% of them have experience between 3-5 years, lastly 16 % of them have > 7 years' experience working at siemens, Goa.



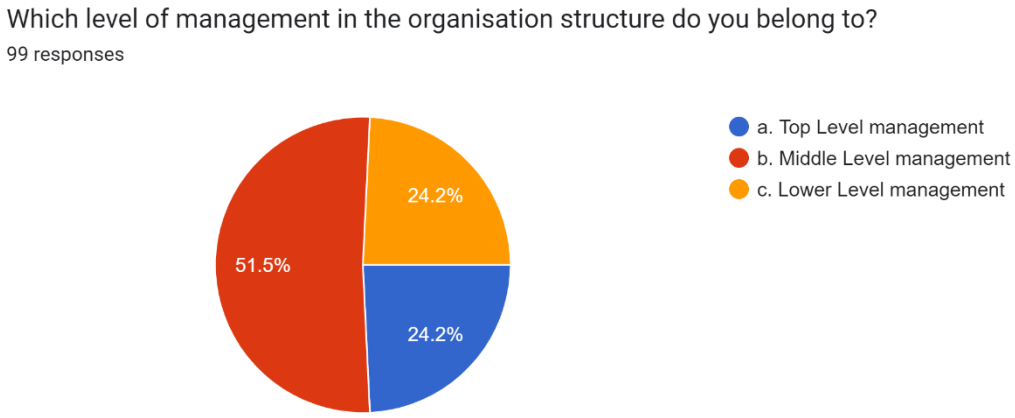
Interpretation: From the above chart it can be inferred that majority of the employees have an experience of 5-7 years working at Siemens, Goa. Hence we can claim that most of the employees are accustomed to the work culture of Siemens, and would encourage the implementation of AI in Marketing activities as their goals are aligned with the organization's goal.While a minority of the employees have experience spanning more than 7 years, as they will be important in handholding the organization while it is undergoing a technological change such as implementation of AI.

Table 3.3 depicting the level of management the employees in the marketing department.

Level of Management	**No. of Respondents**	**Percentage(%)**
Top Level	24	24.2
Middle Level	51	51.5

Lower Level	24	24.2
Total	**99**	**100**

Analysis: From the above table we can analyze that majority of the employees belong to the middle level of management in the organization structure that is 51.5%, while 24.2 % belonged to the top level management & rest 24.2 belonged to the lower level management in the organization.

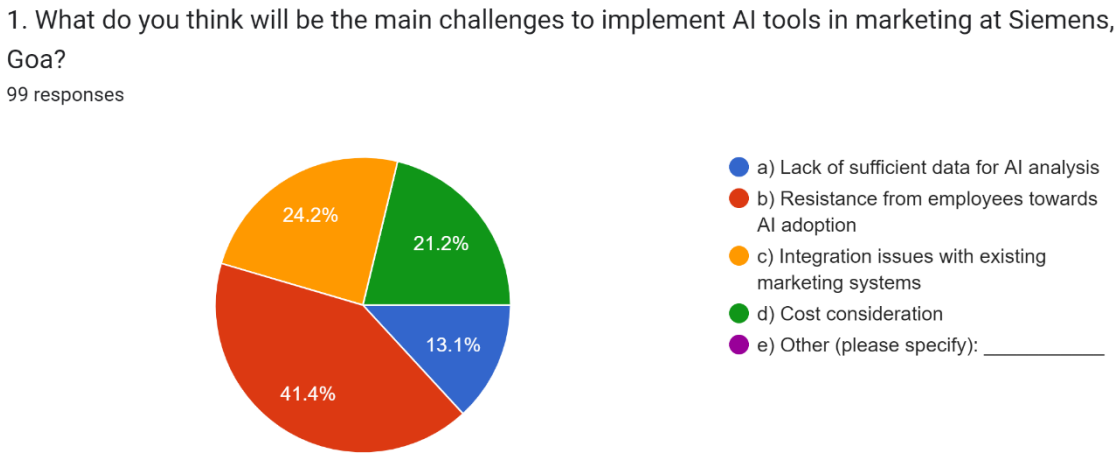


Interpretation: From the above chart we infer that majority of the employees belong to the middle level of management. Hence it is promising that managers will play an important role in the execution of implementing AI in the marketing activities, while equal portions of employees belong to the top level and lower level management, which signifies that both will play a decisive part in deciding to invest and adopt AI in marketing activities at Siemens,while the other will be influential in the operational level in the process of implementation.

Table 3.5 depicting the challenges of AI Implementation at Siemens

Challenges	**Frequency**	**Percentage(%)**
a) Lack of sufficient data for AI analysis	13	13.1
b) Resistance from employees towards AI adoption.	41	41.4
c) Integration issues with existing marketing systems	24	24.2
d) Cost consideration	21	21.2
Total	**99**	**100**

Analysis : From the statistic above we find that majority i.e 41.4 % of the respondents feel resistance from the employees towards AI Implementation as the biggest challenge, while responses are equally distrubuted among Integration isuues and cost considerations of adoption of AI, while minority of the responsdents i.e 13% feel lack of data availabliy could be a challenge in implementation of AI at Siemens.

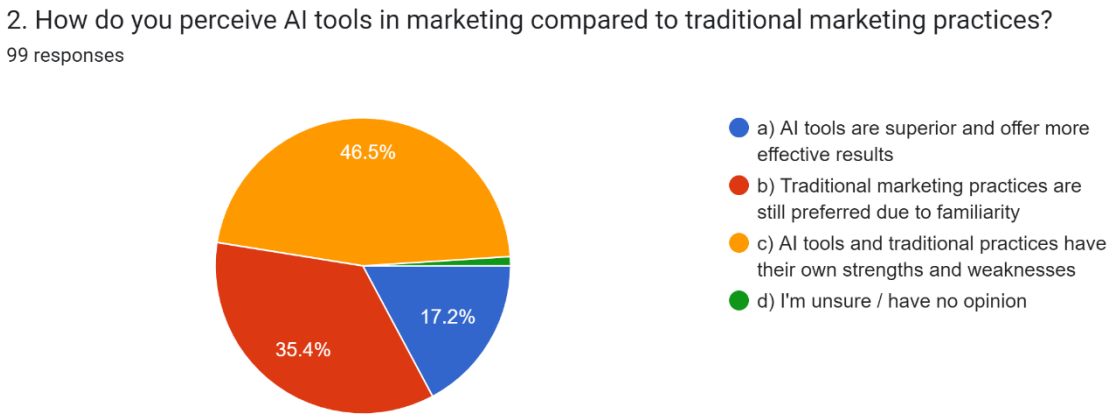


Interpretation: From the chart it is clear that resistance from the employee side is the greater challenge in AI implementation among other challenges, hence we understand that steps has to be taken by Siemens to align the Organization's goal to the individual goal, so that employees embrace the adoption of AI in marketing. Also the respondents opined that Integration of AI in marketing may also be a challenge to the top level management, while 21.2% of them also felt that implementation of AI is capital intensive move & can pose a great challenge to the management of Siemens.

Table 3.6 showing perception of AI tools over traditional marketing tools

Perception of AI tools	**Frequency**	**Percentage(%)**
a) AI tools are superior and offer more effective results	17	17.2
b)Traditional marketing practices are still preferred due to familiarity	35	35.4
c) AI tools and traditional practices have their own strengths and weaknesses	46	46.5
d) I'm unsure / have no opinion	1	1.2
Total	**99**	**100**

Analysis: From the above table we find that majority of the employees i.e 46.5% perceive that a blend of using AI tools and traditional practices in marketing will be impactful, whereas 35.4 % of them perceived that Traditional marketing practices are still preferred due to the familiarity, while 17.2% of the employees opined AI tools are far superior than traditional tools in generating effective results and 1% of the employees did not have an opinion on this question.

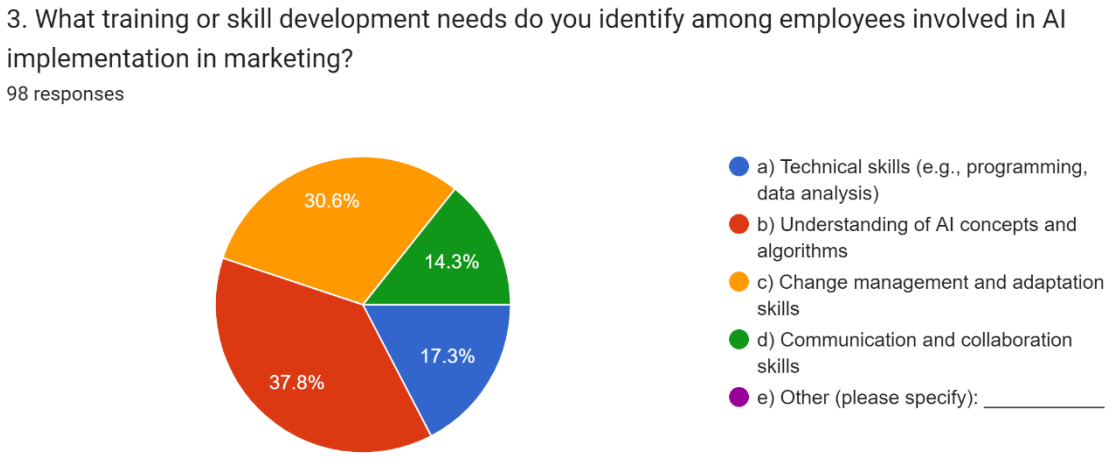


Interpretation: From the above chart we can infer that majority of the employees perceive both AI tools and traditional marketing practices are equally important. While a smaller portion of employees perceived AI tools give superior results over traditional practices. Hence by this we can infer the employees are inclined to adopt the hybrid model of learning and implementing AI tools in their marketing practices and as well as to continue to use traditional practices which have yielded results so far at Siemens, Goa.

Table 3.6 depicting skill identification while adopting AI in Marketing

Skill identification in adopting AI in Marketing	**Frequency**	**Percentage(%)**
a) technical skills (e.g., programming, data analysis)	17	17.2
b) Understanding of AI concepts and algorithms	37	37.8
c) Change management and adaptation skills	30	30.6
d) Communication and collaboration skills	14	14.3
e) Others	4	4.1
Total	**99**	**100**

Analysis : From the statistic above we find that majority of the employees i.e 37.8% opined that understanding AI concepts and its algorithms are the utmost skill in implementing AI in marketing, while 17.3% of them viewed developing technical skills is the key and 30.6% of them opined adopting to the change that is AI implementation is important as its an influential factor, while 14.3% of employees feel communication and collaboration between departments and teams are important.

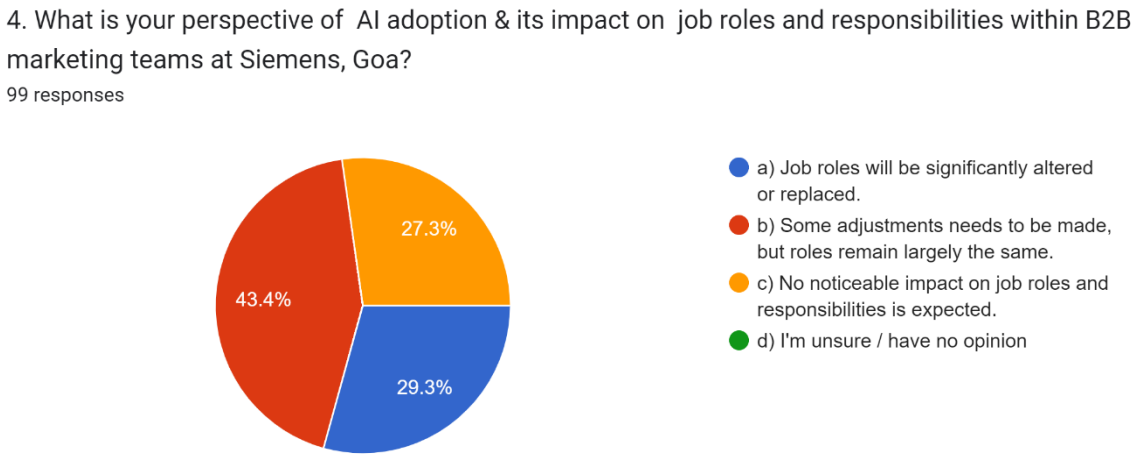


Interpretation: From the graph above we can infer that majority of the employees feel understanding of AI concepts and its algorithms as a skill is more important than developing technical skills or adopting to the change i.e AI implementation and Communication, collaboration between teams, as it is imperative to understand how AI works and how can the department train the AI model to align with its goal to maximize results and revenue generation to distribute manpower to other places which require human intervention.

Table 3.7 depicting impact of AI Implementation on Job roles

Impact of AI Implementation on Job roles	**Frequency**	**Percentage(%)**
a) Job roles will be significantly altered or replaced.	29	29.3
b) Some adjustments needs to be made, but roles remain largely the same.	43	43.4
c) No noticeable impact on job roles and responsibilities is expected.	27	27.3
Total	**99**	**100**

Analysis: From the statistic above we find that majority of the employees(43.4%) believe there will be some adjustments in the job roles in the marketing team as a result of implementation of AI, while 29.3% of them agreed that job roles will be significantly altered also 27.3% of them felt no major changes will be seen on job roles in the marketing department at Siemens, Goa.

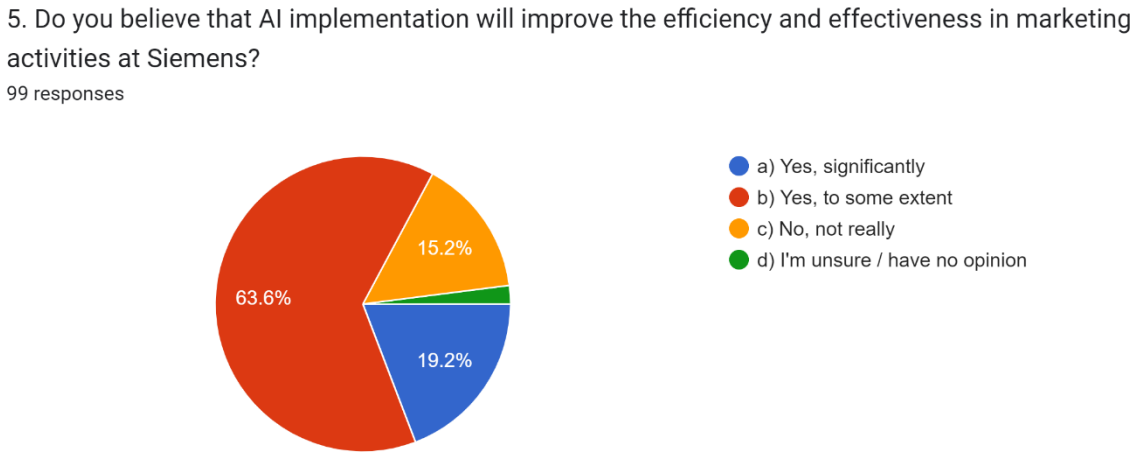


Interpretation: From the graph above we understand that majority of the employees believe some adjustments and modifications will be made to the job roles as AI implementation can re-define job roles create new description within the jobs, while a portion of responses indicated that the job roles will be significantly altered as AI can generate contents for a website or an ad campaign, while another section of responses indicate that no noticeable change is expected after AI implementation.

Table 3.8 depicting impact of AI implementation on marketing at Siemens.

Impact of AI Implementation	**Frequency**	**Percentage (%)**
a) Yes, significantly	19	19.2
b) Yes, to some extent	63	63.6
c) No, not really	15	15.2
d) I'm unsure / have no opinion	2	2
Total	**99**	**100**

Analysis: From the table above we can find that majority of the respondents (63.6%) have indicated that implementation of AI in marketing activities will impact the effectiveness to an extent, while 19.2% of the respondents agreed that AI will have a significant impact and further 15.2% believe that current efficiency of marketing will not significantly improve after AI implementation.

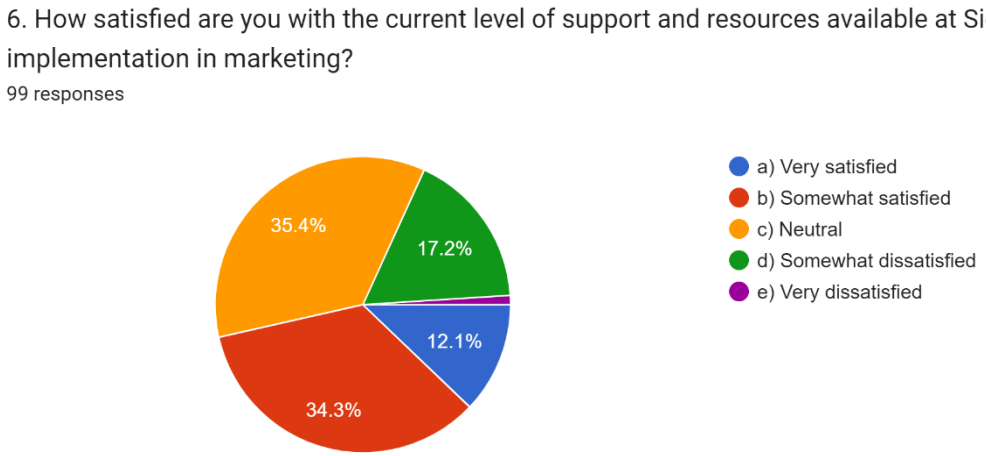


Interpretation: Majority of the respondents have opined that AI implementation in marketing will significantly improve the efficiency and effectiveness of the marketing activities to some extent, hence we can infer that the efficiency will not drastically improve on implementation of AI. While few of the respondents expressed that AI would have a significant impact as it's the leading technology in the Industry 4.0 era.

Table 3.9 depicting satisfaction of current resources for AI Implementation

Satisfaction of current resources for AI Implementation	**Frequency**	**Percentage (%)**
a) Very satisfied	12	12.1
b) Somewhat satisfied	34	34.3
c) Neutral	35	35.4
d)Somewhat dissatisfied	17	17.2
e) Very dissatisfied	1	1
Total	**99**	**100**

Analysis: The table above depicts the satisfaction of respondents on the resources available for AI implementation at Siemens. Majority of the respondents (35.4%) are neutral on the satisfaction scale whereas a portion of responses(34.3%) close to the majority feel they are somewhat satisfied with the resources and support available from Siemens, while 12.1% of them feel Siemens will provide adequate resources and support for AI implementation in the marketingsetup.

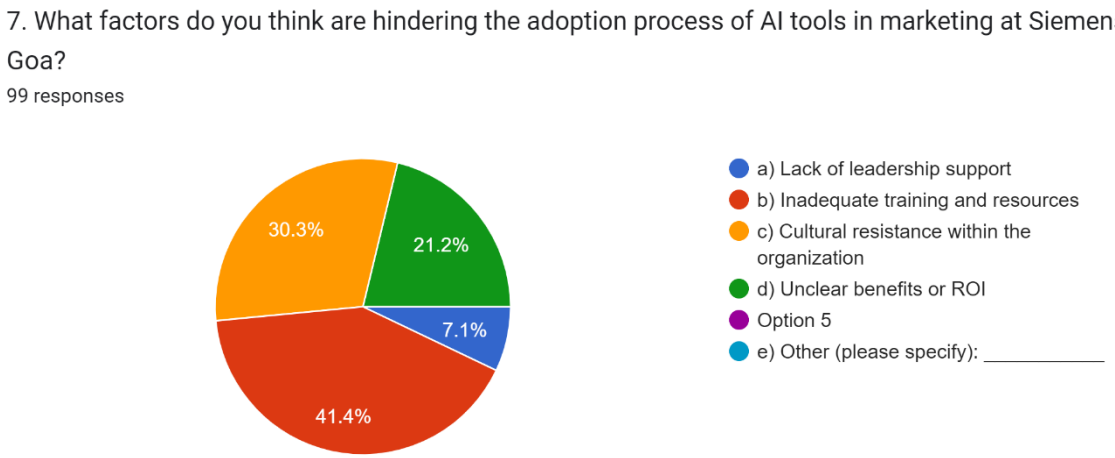


Interpretation: By observing the above chart we are able to infer that Siemens is ready to support and provide resources to implement AI in the marketing setup of the department as majority of the respondents are somewhat satisfied with the efforts by Siemens in this initiative, while some of the respondents are neutral on the satisfaction scale, by which we can interpret that Siemens has to take constructive action in this regard to support the smooth function of AI integration process.

Table 3.10 depicting factors that might hinder AI Adoption

Factors hindering AI Adoption	**Frequency**	**Percentage (%)**
a) Lack of leadership support	7	7.1
b) Inadequate training and resources	41	41.4
c) Cultural resistance within the organization	30	30.3
d) Unclear benefits or ROI	21	21.2
Total	**99**	**100**

Analysis: From the above statistic we find that majority of the respondents(41.4%) feel Inadequate training & resources is the major factor that might hinder the AI adoption, while 30.3% of the employees opined that cultural resistance within the organization might be a potential obstacle, whereas 21.2% expressed that unclear benefits or ROI of AI implementation might slow down the adoption process and minority of the responses feel Lack of leadership support might be the reason for non-streamlined adoption of AI at Siemens.

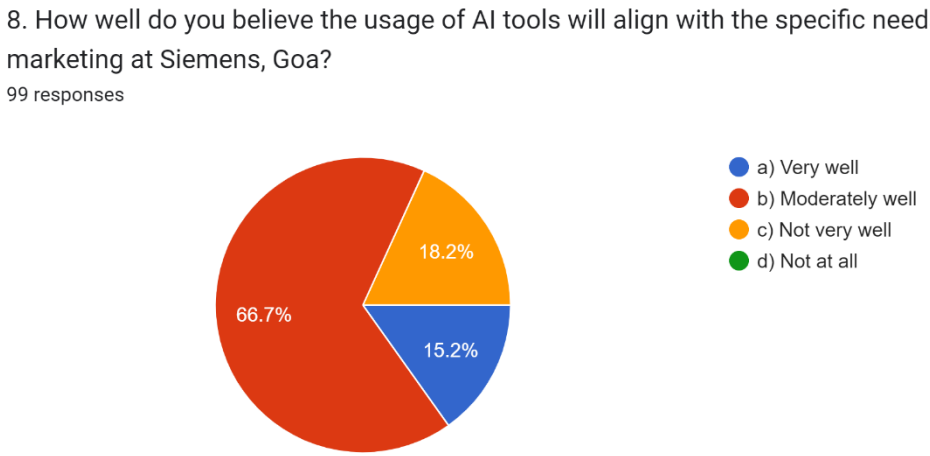


Interpretation: By the above graph we can infer that majority of the respondents stated that inadequate training and resources can be an important factor that might hinder the AI implementation process at Siemens.

Table 3.11 showing alignment of AI tools with goals of marketing

Alignment of AI tools with goals of marketing	**Frequency**	**Percentage (%)**
a) Very well	15	15.2
b) Moderately well	66	66.7
c) Not very well	18	18.2
d) Not at all	0	0
Total	**99**	**100**

Analysis: From the above table we find that majority of the respondents (66.7%) believe that the usage of AI tools will align moderately with the specific needs and goals of Siemens marketing department, while 18.2% feel AI tools may not align with the goals, whereas 15.2% of the responses indicate that usage of AI tools will be in sync with marketing goals at Siemens.

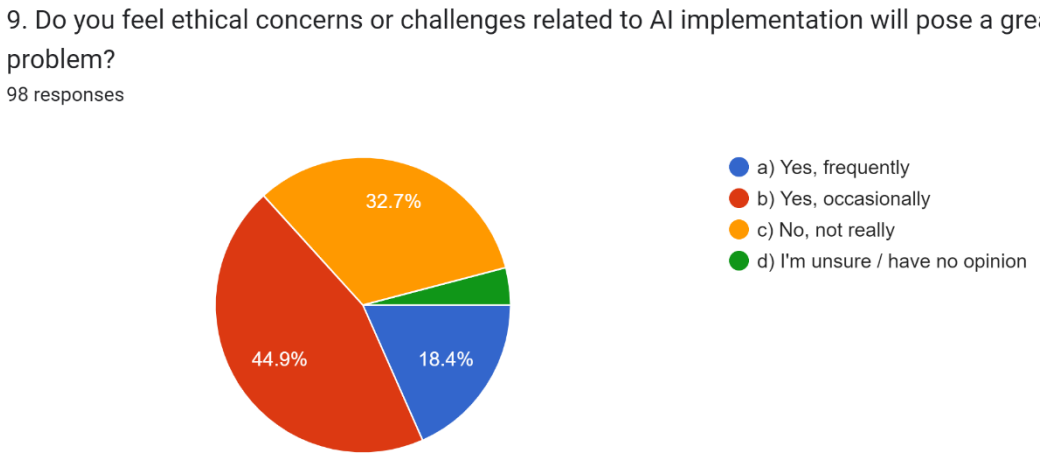


Interpretation: By the graph we can infer that majority of the respondents feel usage of AI tools will align moderately well to the specific needs and goals of the marketing dept. Hence, we can understand that a certain level of training has to be given to the AI models that will be adopted in the marketing setup to suit the style and culture at Siemens.

Table 3.12 depicting ethical challenges of AI implementation.

Ethical challenges of AI implementation	**Frequency**	**Percentage (%)**
a) Yes, frequently	18	18.4
b) Yes, occasionally	44	44.9
c) No, not really	32	32.7
d) I'm unsure / have no opinion	3	3
Total	**99**	**100**

Analysis: From the above table we can analyse that majority of the respondents feel ethical concerns will pose a threat to the conduction of marketing process occasionally as human intervention is moderately less as compared to traditional practices. While 32.7% of the employees believe that ethical issues may not arise on the eve of implementation of AI in the marketing process, whereas 18% ethical issues will be a problem in AI implementation.

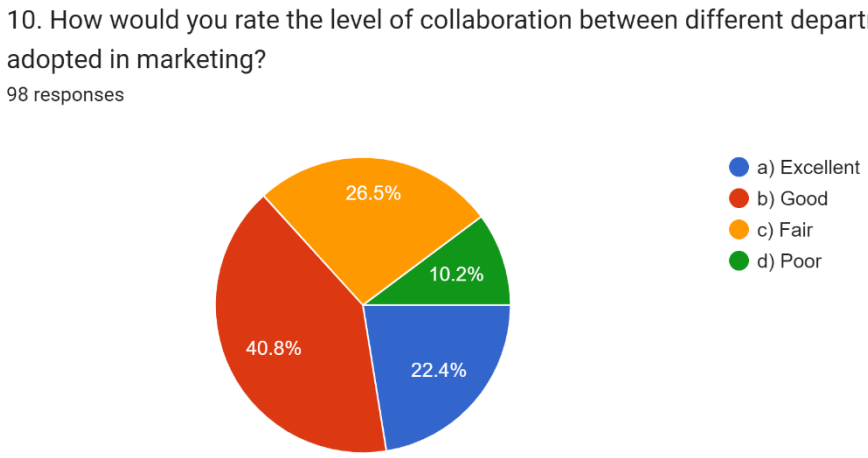


Interpretation: A majority of respondents believe that ethical concerns will occasionally pose a threat to the marketing process. This perception might be influenced by the fact that human intervention is comparatively less in AI-driven marketing practices than in traditional methods. Approximately 32.7% of the employees are optimistic and do not anticipate ethical issues to arise during the implementation of AI in marketing. This suggests that there is a level of confidence among this group that AI can be implemented ethically and without major concerns.

On the other hand, 18% of the respondents foresee ethical issues as a significant problem during the AI implementation in marketing. This indicates a level of apprehension or concern among this segment of respondents regarding the ethical implications of using AI in marketing.

Table 3.12 depicting level of collaboration between departments with regard to AI implementation.

Level of collaboration between departments	**Frequency**	**Percentage (%)**
a)Excellent	22	22.4
b) Good	40	40.8
c) Fair	26	26.5
d) Poor	10	10.2
Total	**99**	**100**



Analysis and Interpretation:

The data gives insights as per to how various departments or teams concepts collaboration when implementing AI in marketing. Among interactants opinions the number of them who think the AI in marketing decision will overwhelm the quantity overall the level of collaboration between departments or teams is excellent is 22.4 percent. With this, we can argue that there is a glimmer of hope among this group of people who think that the future of AI is going to promote inter and intra-departmental coordination.

The majority of respondents (40%) based on their opinion that the level of collaboration is satisfactory when AI is considered in marketing integration. This shows that there is a significant section of respondents who have neutral sentiment with a positive faced towards AI as an asset that will be helpful in bridging communication gaps arising from different departments or teams.

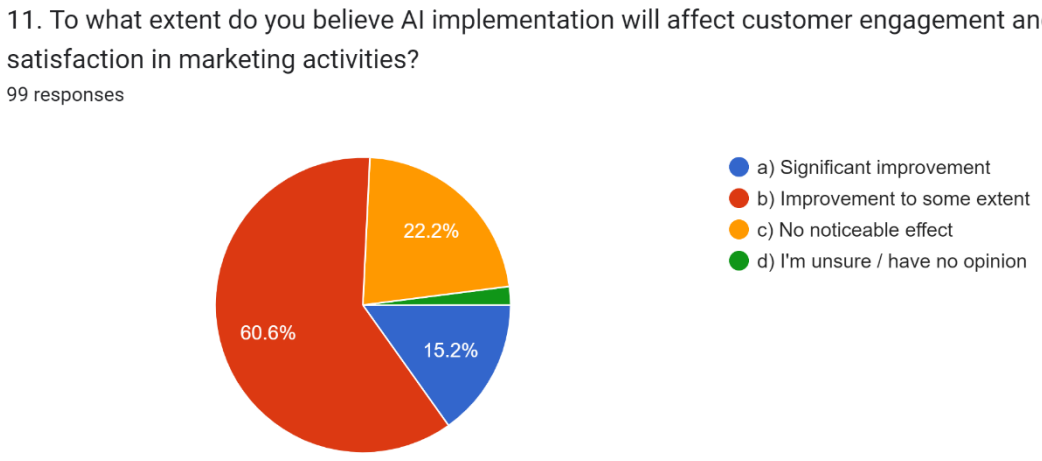
As a remarkable part of respondents (26% of them) believe that relationships between marketing and AI have as good as fair level of collaboration when AI is introduced to marketing. This implies that while there is a certain presumption that work will be carried out

in an orderly manner across divisions, there might be some factors that could impede the heaps from flow within these teams.

A considerably small percentage of the respondents indicated a low potential for collaboration in areas such as departments and groups due to AI adoption in marketing. This implies that this group might not be satisfied if left alone with the AI automation and they believe AI can only with the collaboration and coordination across all functional areas.

Table 3.13 depicting affect of AI in customer engagement & satisfaction

Effect of AI in customer engagement & satisfaction	**Frequency**	**Percentage (%)**
a)Significant improvement	15	15.2
b) Improvement to some extent	60	60.6
c) No Noticeable effect	22	22.2
d) Im unsure/have no opinion	2	2.2
Total	**99**	**100**



Analysis:

Majority of the respondents, accounting for 60.6%, believe that AI implementation will lead to an improvement in customer engagement and satisfaction to some extent. This suggests that there is a general optimism among this group that AI can positively influence marketing activities by enhancing customer interactions and satisfaction levels.

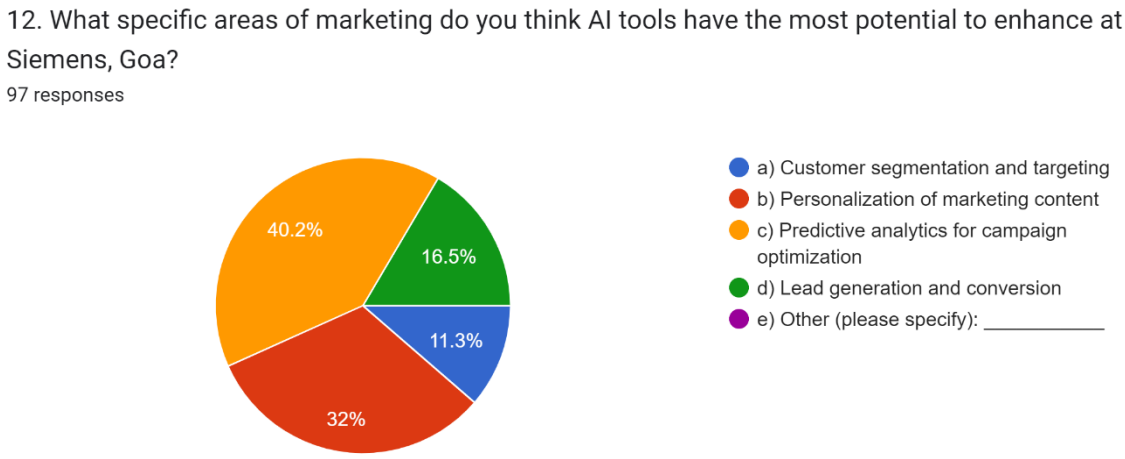
Furthermore, 15.2% of the respondents anticipate a significant improvement in customer engagement and satisfaction due to AI implementation. This indicates that a smaller but notable segment of the respondents have high expectations for the transformative impact of AI on marketing practices. On the other hand, 22.2% of the respondents do not expect AI implementation to have any noticeable effect on customer engagement and satisfaction. This suggests a level of scepticism or uncertainty among this group regarding the effectiveness of AI in enhancing marketing activities. Lastly, a minimal proportion of respondents (2.2%) are unsure about the potential impact of AI on customer engagement and satisfaction, indicating a need for more information or clarity on this topic among this segment.

Inference

In conclusion, the results of the survey show that the vast majority of respondents are hopeful that artificial intelligence may be applicable in marketing activities that will improve customer satisfaction and engagement, and yet a positive percentage of the respondents are unlearned or cautious about its effectiveness. These results, therefore, stress the proper conveyance of the advantages of AI in marketing, as well as the message of resolving the existing issues, to enable the smooth AI implementation and adoption.

Table 3.14 depicting potential of AI tools to enhance usage at Siemens

Potential of AI tools to enhance usage at Siemens	**Frequency**	**Percentage (%)**
Customer Segmentation and Targeting	11	11.3
Personalization Of Marketing Content.	32	32
Predictive Analytics for Campaign Optimization	40	40.2
Lead Generation and Conversion	16	16.5
Total	**99**	**100**



Analysis and Interpretation:

The data indicates the following distribution of opinions among respondents regarding the areas of marketing where AI tools have the most potential to enhance operations at Siemens in Goa:Only a very small proportion of those questioned (11.3%) think that AI can be utilized to boost consumer segmentation and aiming. The data imply that there exists a group of users

who consider personalizing audiences and address by AI to likelihood to succeed. Meanwhile, who perceive AI as the idea technology that can enhance the personalization of marketing content, however, most are satisfied with the currently available AI tools. The sale indicators imply strong faith AI enough to personalize marketing content to individual inclinations and actions, eventually enhancing engagement and product/service uptake.

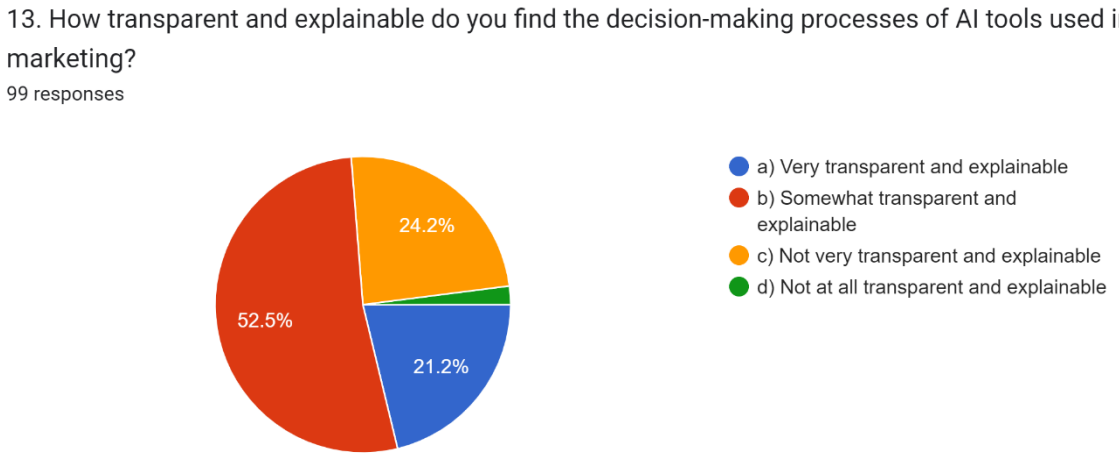
A wider margin (40.2%) of the interviewees believe that a big improvement in AI stands to be made in predictive analytics for campaign optimization. This implies a general awareness of AI as a one type of data analysis tool that allows companies throw such challenges forecast trends, optimize marketing campaigns and a have a well-founded strategic plan n that 16.5% are moderately seeing the benefits of using the AI lead generation and conversion tools. However, also this aspect will not make AI rock heading but still shows that the level of dependence on the AI technology to improve the lead generation and conversion processes is existing.

Inference:

The data presents an obvious faith of the Siemens leaders in Goa that AI tools can be famous for improving predictive analytics of campaign optimization, and platform customized marketing content. What these findings convey is such that Siemens in Goa is of a belief that AI is anticipated to be a key player in helping in decisions through data driven ones, campaign optimization, and that of personalizing marketing strategies.

Table 3.15 depicting transparency of decision making with AI tools

Transparency of decision making with AI tools	**Frequency**	**Percentage (%)**
very transparent and explainable	21	21.2
somewhat transparent and explainable	52	52.5
not very transparent and explainable	24	24.2
not at all transparent and explainable	2	2.1
Total	**99**	**100**



Analysis & Interpretation:

The largest source of responses (52.5%) inspected AI decision-making in marketing as "quite understandable and explainable". It means at least there is a level of meaningful understanding among users how AI tools work, but there is a room for actual improvement of clarity on other occasions. When speaking about AI decision-making processes, nearly a quarter of respondents

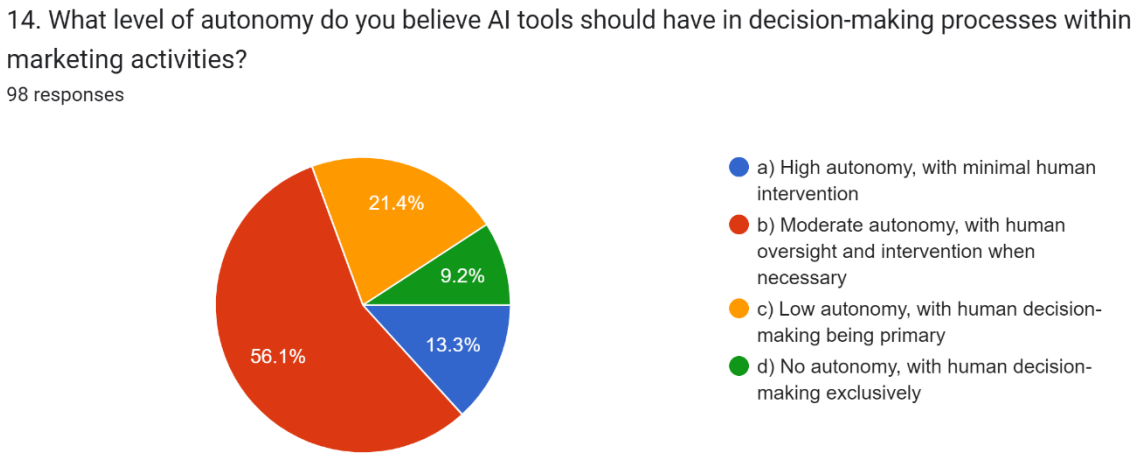
(24.2%) are not very confident in the transparency/explainability of AI algorithms and criteria. Therefore we conclude, that this faction holds one significant concerns regarding regarding the opacity or intention complex of AI algorithms and their decision-making criteria in marketing applications.

While negative feedback is given by 70.8% of people who see AI decision-making in marketing as "transparent and explainable", it is good that 21.2% of respondents regard it as "transparent and explainable". Though the number might be small (2.1%), but still a part of respondents is reluctant about AI decision even though they consider not transparent and explainable at all which, does show their point of view about the transparency of AI while making decision in marketing.

Generally, the data show a seedling of opinion, with both critical and positive views regarding AI decision-making processes transparency and explainability. Though the most of concerned people feel that the transparency of these processes are quite good enough, almost a significant portion of them are unsatisfied with the resistance to the transparency and clarity in the AI algorithms. By dealing with these concerns and improving AI decison making transparency and explainability, we can achieve a better level of trust and AI adoption, which will go a long way in enhancing the industry stance.

Table 3.16 depicting level of autonomy AI tools should have in marketing decision-making

Level of autonomy AI tools should have in marketing decision-making	**Frequency**	**Percentage (%)**
High Autonomy, Requiring Minimal Human Intervention	13	13.3
Moderate Autonomy with Human Oversight and Intervention When Necessary	56	56.1
Have Low Autonomy, With Human Decision-Making Being the Primary Driver.	21	21.4
No Autonomy, With Human Decision Exclusively	9	9.2
Total	**99**	**100**



Analysis:

The data reveals the following preferences among respondents regarding the level of autonomy AI tools should have in marketing decision-making:13.3% of respondents believe that AI tools should operate with high autonomy, requiring minimal human intervention.A majority of respondents, accounting for 56.1%, prefer AI tools to have moderate autonomy. They advocate

for human oversight and intervention when necessary, suggesting a balanced approach to AI-driven decision-making in marketing.21.4% of respondents feel that AI tools should have low autonomy, with human decision-making being the primary driver. The smallest percentage of respondents, 9.2%, are in favor of AI tools having no autonomy at all, emphasizing that human decision-making should be exclusive in marketing activities.

Interpretation:

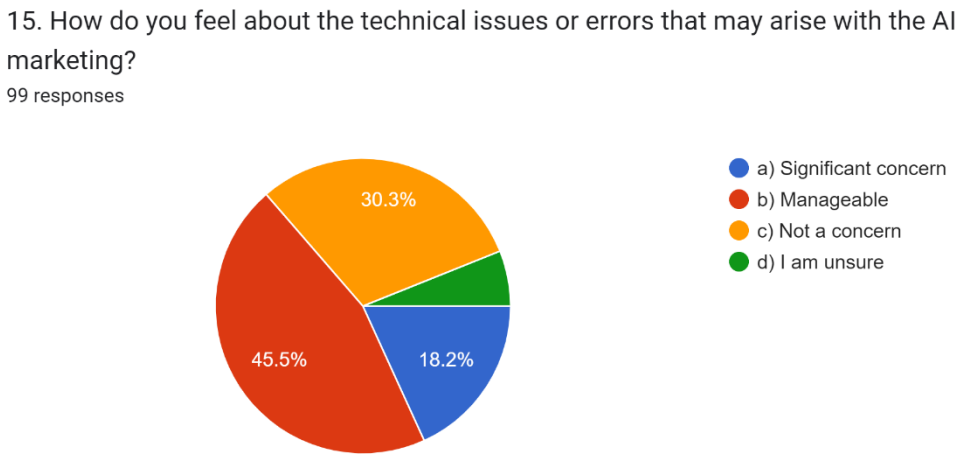
The data thus provide evidence for in oscience trend among the answered as far as their willingness to delegate AI-driven decision-making to human specialists in a wider range of marketing operations. A substantial absolute majority (56,1%) ask for a kind of the AI that is not entirely self-reliant but is controlled by humans and operates only under their supervision, if it is needed. Here, it is implied that there is the level of trust in the AI capabilities and recognition of the opposite – its constraints, including ethical considerations.

However, a population subgroup (21.4%) that tends to favor autonomy of AI tools undertakes traditional human judgement for recommendations showcasing a comprehensive approach that settles AI against human judgement. Such a conclusion could be the result of anxieties, be it data truthfulness and reliability, or the ethical and moral compliance of AI in the field of marketing.

The evolved but still remarkable percentage of respondents (13.3%) was for giving AI systems full freedom; this displays a more progressive focus that anticipates the AI systems to facilitate and optimize marketing tasks with little or no human intervention. Nevertheless, the minority group, which contains only the 9.2%, expresses that autonomy for AI is not feasible, showing how they believe that human weight is not substitutable in marketing.

Table 3.17 depicting technical issue that may arise from AI adoption.

Technical issue that may arise from AI adoption	**Frequency**	**Percentage (%)**
a) Significant concern	18	18.2
b) Manageable	45	45.5
c) Not a concern	30	30.3
d) I am unsure	6	6.1
Total	**99**	**100**



Analysis:

Majority of respondents (45.5%) perceive technical issues or errors with AI tools in marketing as manageable. This suggests that while these individuals recognize the potential for technical challenges, they also believe that these issues can be addressed and controlled effectively. While, 30.3% of the respondents do not consider technical issues or errors with AI tools in marketing to be a concern at all. This indicates a level of confidence among this group in the reliability and robustness of AI technologies in marketing applications. Interestingly, 18.2% of

the respondents express significant concern about technical issues or errors with AI tools in marketing. This segment of respondents appears to be more apprehensive about the potential risks and challenges associated with implementing AI in marketing activities.

Lastly, a small percentage (6.1%) of respondents are unsure about their feelings regarding technical issues or errors with AI tools in marketing, indicating a level of uncertainty or lack of knowledge about the topic among this group.

Interpretation:

It seems reasonable that most of those who took part in the survey have easy scatter or not care about AI marketing instrument problems. Yet, there will be some among them who feel really anxious about possible faults that can prove to be quite destructive. Such observations emphasize the critical role of rigorous testing, quality assurance, and periodic technical assistance towards the proliferation of AI applications for marketing that will achieve maximum benefits for all the users.

Table 3.18 depicting mechanisms for smooth facilitation of AI tools.

Mechanisms for smooth facilitation of AI tools.	**Frequency**	**Percentage (%)**
a) Additional training and education programs	15	15.5
b) Access to technical support and troubleshooting services	34	34
c) Clear communication of goals and benefits	37	37.1
d) Incentives for successful adoption	12	12.4
Total	**99**	**100**

16. What support mechanisms or resources do you believe would facilitate a smoother adoption process of AI tools in marketing?

97 responses

Analysis and Interpretation:

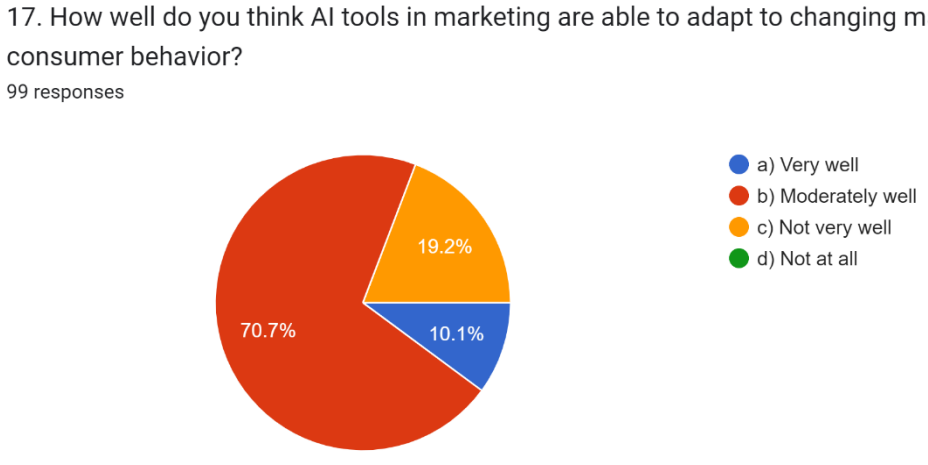
The table below shows the percentage of the respondents who cited their knowledge and views on various support mechanisms or resources that aimed to make an AI tools' integration into marketing an easier process. Number 15.5% of the people have a similar opinion which is that new trainings and educations programs are required to them. That implies some people see training as an important asset, but others don't think it's the thing intended to provide a boost to AI adoption.

Our survey shows (34%) of the respondents, which indicates that availability of troubleshooting and technical support services is a very important factor to them. This reflects that there is an urgent demand of trustworthy technical advice which would cater to the challenges and issues that usually come along with the adoption and use of AI tools in marketing. The biggest percent of the respondents (37.1%) ninety percent responded that clear communication of the goals and benefits are fundamental support mechanisms. This point out the criticality of the'openness and the effective communication of ideas' in portraying benefits and objective to stakeholders that are being embarked on the implementation of AI tools into marketing strategies. Only 1.2% of responders support the notion that the non-governmental organizations (NGO) or incentives for implementing the strategy of AI would accelerate the AI

adoption process. Such figure indicates that although the firms take incentives into account, they still do not regard them as the primary factor shaping the AI uptake in the marketing.Hence, we can infer that the data indicates that clear communication of goals and benefits is perceived as the most critical support mechanism for facilitating the adoption of AI tools in marketing, followed by access to technical support and troubleshooting services. On the other hand, additional training and education programs and incentives for successful adoption are considered less influential by the respondents.

Table 3.19 depicting AI tools adapting to changing marketing trends

AI tools adapting to changing marketing trends	**Frequency**	**Percentage (%)**
a) Very well	10	10.1
b) Moderately well	70	70.7
c) Not very well	19	19.2
d) Not at all	1	1.1
Total	**99**	**100**



Analysis:

The survey results indicate varying levels of confidence in the adaptability of AI tools to changing market trends and consumer behavior among the respondents:A modest percentage of the respondents (10.1%) has viewed that AI (Artificial Intelligence) as a part of marketing is excellent at managing emerging market trends, or customers' behaviour. This probability implies that there is a certain division of trust that involves consumers who hold high confidence in AI to accurately navigate and provide appropriate response in the unstable market landscape. Among majority of the respondents (70.7%), an average answer in terms of AI tools in marketing being able to "moderately well" adapt to changing trends and consumers' behavior was noticed. This suggests a good degree of AI systems adjustment capability with the dynamic nature of the market. However, this does not imply a 100% perfect but slightly adjustment.

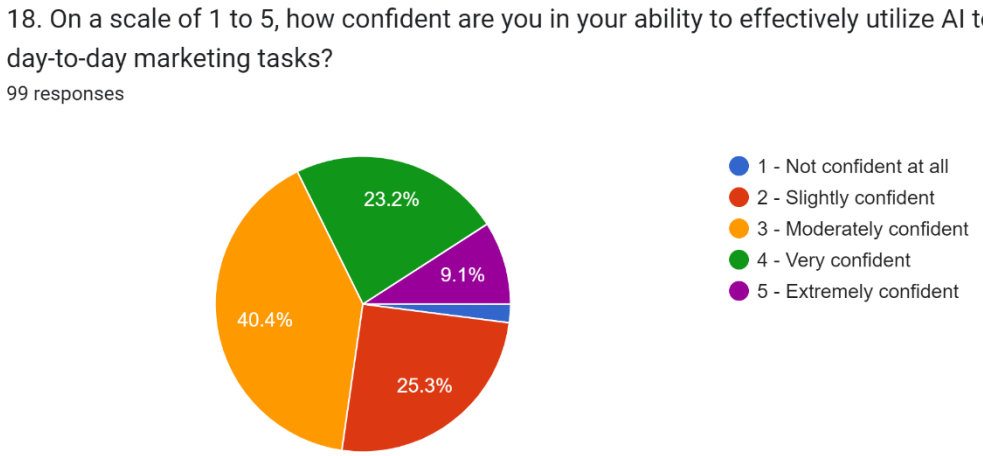
One of the key portions of the comments (19.2% of the participants) made is whether the introduced AI tools can be duly adapted for marketing. This part claims that AI tools face difficulties in carrying out suitable adjustments to ever-changing market tendances and consumers' desires. Such attitude or opinion may come from a lot of reasons which include things such as past experience, insufficiency of current AI technologies or the difficulty and doubts surrounding the accuracy and relevance of AI generated insights.

Interpretation:

It can be concluded that in general marketers are quite open with the capabilities of AI but there is some part of the respondents which remains doubtful about the AI's potential in marketing. Applying AI in a way that takes into account the opportunities it can give and the risks it carries will make the companies that successfully find this balance be the ones that will take advantage of AI in coping with the challenges that changing market trends and consumer behavior pose.

Table 3.20 depicting confidence in the ability to use AI tools

Confidence in the ability to use AI tools	**Frequency**	**Percentage (%)**
1 - Not confident at all	2	2
2 - Slightly confident	25	25.3
3-Moderately confident	40	40.4
4 - Very confident	23	23.2
5 -Extremely confident	9	9.1
Total	**99**	**100**



Analysis:

Respondents were asked to specify their confidence on a grading scale, from which 1 implies "Not confident at all", and 5 indicates "Extremely confident". "As many as 98% of the polled individuals revealed their positive attitude towards employing AI tools for marketing-related assignments: 38% were strongly confident about it, 41% of the respondents were fairly confident and a small group of 8% of the participants were somewhat confident, however, only a minor share of the group , 2% of the ones polled said they just weren't confident at Thereby

these findings could suggest that the majority of participants have at least some level of trust in case of using AI technology for their marketing tasks.

2 out of 5 (25.3%) indicates a level of confidence " Somewhat confident" in the ability to utilize AI tools within their daily marketing activities. This group has almost this certainty about using AI in marketing, but it also requires some training and additional support for a complete and well-functioning AI-enabled marketing campaigns.

Among the largest part of respondencials,40.4%, identified themselves as "Moderately confident" in marketing AI-Tools useage. It proves to be a good measure of his understanding, because in itself indicates a considerable degree of confidence among the respondents and they feel well enough with AI incorporation but just have a room for improvement.

23.Only 2% of the consumers gave the highest grade of their "Very confident" level of using AI for marketing tools in the option offered. The latter group provides evidence of expertise and familiarity with AI technology, which indicates that it is possibly the only group that could use AI appropriately in its marketing related activities. Moreover, 9.1% of the participants feel "Highly confident" about using AI tools to accomplish their marketing tasks. It means that this sub-group of respondents has an excellent level of expertise and confidence in using AI as a tool for the marketing purposes, implying that they are the most skilled in adopting AI for doing their jobs even better on this stage.

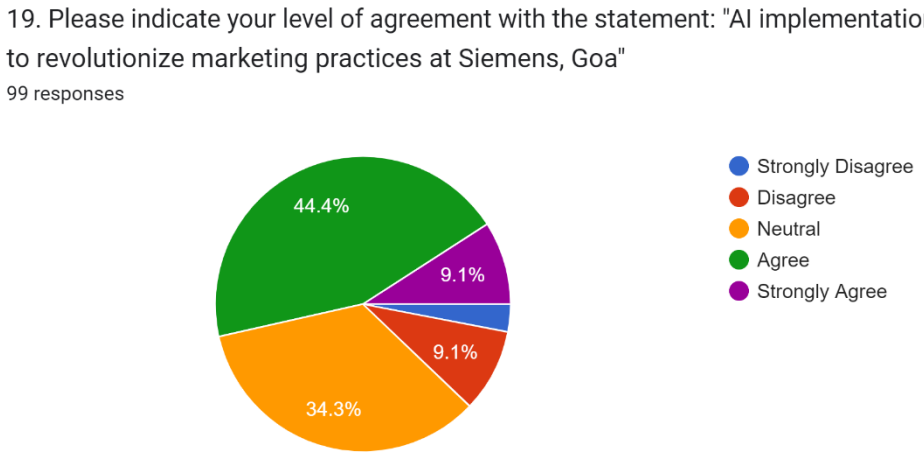
Interpretation:

Upon conclusion, the results demonstrate that the most users have favorable feelings about their capacity to engage AI in routine marketing competencies. While a small percentage of respondents express lower confidence levels, the majority appear to be moderately to very confident in leveraging AI technology for marketing purposes. This highlights the growing acceptance and adoption of AI in the marketing industry, although ongoing training and support

may still be beneficial for some individuals to fully maximize the potential of AI tools in their marketing strategies.

Table 3.20 depicting level of agreement AI implementation has the potential to revolutionize marketing practices at Siemens, Goa.

Level of agreement	Frequency	Percentage (%)
a) Strongly Disagree	6	6.1
b) Disagree	9	9.1
c) Neutral	34	34.3
d) Agree	44	44.4
e) Strongly agree	9	9.1
Total	**99**	**100**



Analysis & Interpretation:

The majority of those who were surveyed (53.5% of them) either "Strongly Agree" or "Agree" in the perspective that it is AI business cases implementation that might modernize marketing processes at Siemens, Goa. This emphasizes that the staff in this company have a positive attitude towards AI impact in marketing both in the present and in the future.

Jointly, 53.5 % of those who took the survey said they were hopeful that the AI marketing at Siemens, Goa would have a revolusionary influence. This indicates that at least 50% of citizens

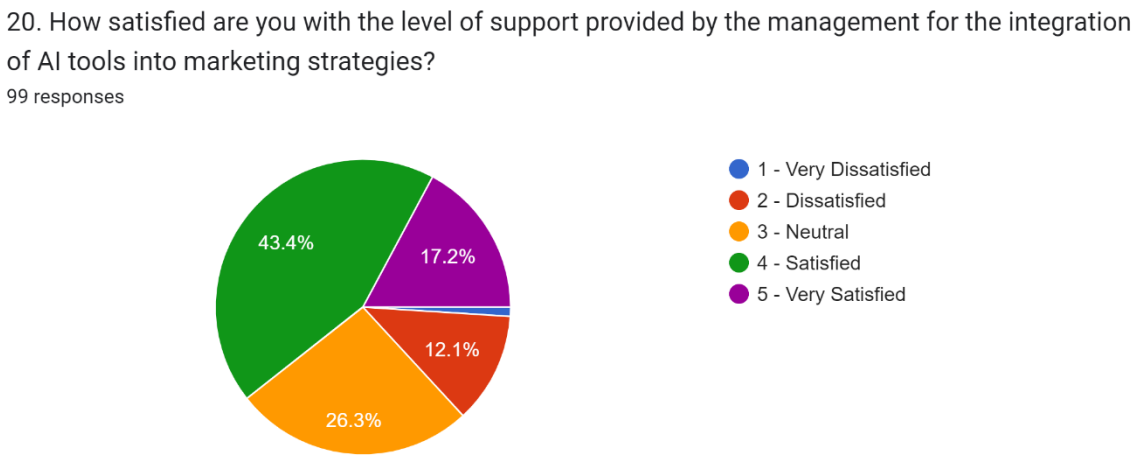
foresee the transformative power of AI being used to have an impact on the way business marketing is done, with these changes leading to success for companies. The largest portion of respondents chose for neutral jargon, which shows reluctance understand neither do they agree nor disagree. The implication from this is there could be a cloud of doubt, lack of information or just a wait and see attitude as far as the future prospects of AI in marketing from Siemens, Goa. However, to a certain extent, a 10.2% of respondents showed skepticism or disagreed arguing that AI could not bring a revolution in the marketing systems. This way implying that there are some minor views which see no use or just the impact of AI would be no significant.

Interpretation:

The findings indicate that majority of the surveyed, at Siemans Goa have taken positive stance on how AI could revolutionize the marketering practices in breakthrough technologies at Siemans, Goa, with more than 50% of them expressing agreement. Interestingly, a considerable number of the employees at all levels of the hierarchy are still undecided about AI. This gap points towards the need for more education, awareness and/or showcasing the AI capacities in relation to marketing within the organization. Clarifying and giving an indication of what opponents think could lead to more approval and more enthusiasm of AI-based marketing strategy among Siemens users. It should help Siemens achieve its goals in Goa..

Table 3.21 depicting satisfaction level of employees towards the support for AI implementation.

Depicting satisfaction level of employees towards the support	**Frequency**	**Percentage (%)**
1 - Very Dissatisfied	3	3.2
2 - Dissatisfied	12	12.1
c) Neutral	26	26.3%
4 - Satisfied	43	43.4
5 - Very Satisfied	17	17.2
Total	**99**	**100**



Analysis:

Only few discernment by the respondents are dissatisfied with the level of support given by management. Such as that, there are just a few people that think that management's project to bring AI tools into the marketing strategy is not enough or insufficient. The percentage of the dissatisfied people is roughly 12.1%. At the same time, however, this is a relatively small share of the employees but it demonstrates the fact that there is still a part of the workforce that believes the management should do more regarding the integration support of AI technologies.

The largest group is the ones that occupies 26.3 percent among the surveyed people, who holds the neutral position. Suchber result is that a good number of respondents don't make any emotional evaluation of the management’s approval of AI integration. This might mean that these people just don't care much or they could be fervent observers and not yet committed to one side.

It is also thirteen percent (13%) worth mentioning that the management has been able to get by with a considerable 43.4% customer satisfaction. This implies that the Management’s initiatives in enabling the workforce to adopt AI instruments at marketing is viewed by most of the workers as effective and helpful.

Furthermore, an extremely optimistic category of 17.2% of the answered indicate that they are very impressed and this further reiterate the good perception people have towards the management's support to AI integration.

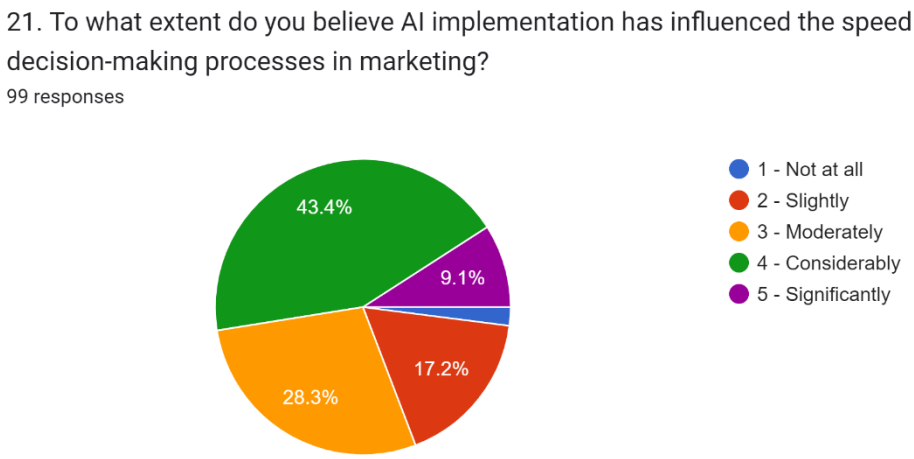
Interpretation:

Overall, the data indicates that decision-makers for marketing activities tend to have a rather positive view of the company's management's ability to integrate AI tools into marketing. An overwhelming majority of the respondents (43.4%+17.2% who are satisfied or very super satisfied=60.6%) give satisfaction or high satisfaction levels.

Nevertheless, it should here be remarked that in spite of the fact that 13.2% (1.1% very dissatisfied + 12.1% dissatisfied) of them were not satisfied on that level, there is certainly space for development. Such responses mimic the fact that management must consider dealing with issues from certain minority groups in an effort to boost anticipation and allow the AI-based marketing strategies to be easily carried out.

Table 3.21 depicting AI implementation will influence the decision-making speed and efficiency in marketing.

AI implementation will influence the decision-making	**Frequency**	**Percentage (%)**
1 – Not at all	3	3.2
2 - Slightly	17	17.2
3 - Moderately	28	28.3%
4 - Considerably	43	43.4
5 - Significantly	17	17.2
Total	**99**	**100**



Analysis:

The data presents a breakdown of respondents' perceptions regarding the impact of AI implementation on the speed and efficiency of decision-making processes in marketing. The responses are categorized on a scale from "Not at all" (1) to "Significantly" (5).

Only 2% of the respondents believe that AI implementation has not influenced decision-making speed and efficiency in marketing. A small fraction, 17.2% of the respondents, feel that AI has had a slight impact on decision-making processes.28.3% of the respondents perceive a moderate influence of AI on decision-making efficiency in marketing. A significant majority, 43.4% of the respondents, believe that AI implementation has considerably improved the speed and efficiency of decision-making in marketing.9.1% of the respondents feel that AI has significantly transformed decision-making processes in marketing.

Interpretation:

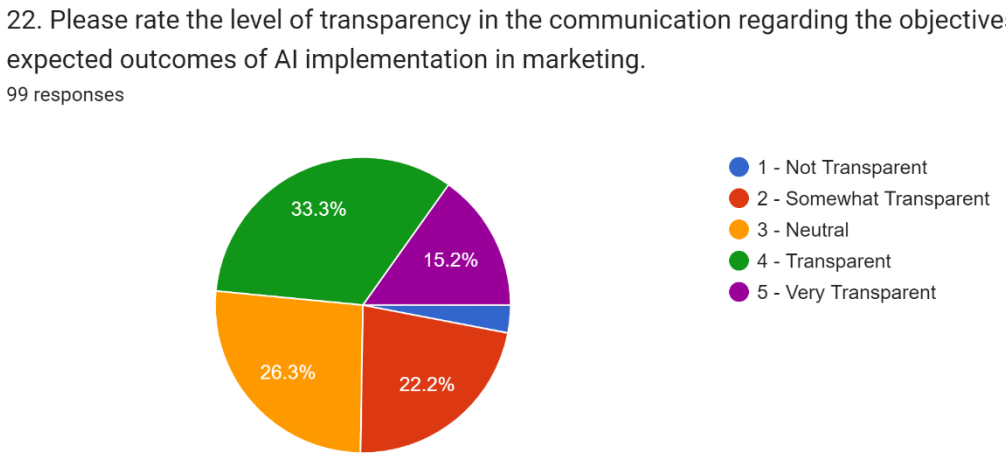
The data suggests that a considerable number of respondents perceive AI implementation as having a positive impact on the speed and efficiency of decision-making processes in marketing. A combined 52.5% of the respondents (considerably and significantly categories)

believe that AI has had a substantial or transformative effect on decision-making in marketing. An additional 28.3% of respondents feel that AI has had a moderate impact, indicating a generally positive sentiment towards the influence of AI on marketing decision-making.Only a minority of 19.2% (slightly and not at all categories combined) are less convinced of AI's impact on decision-making efficiency in marketing.

Hence most respondents perceive AI implementation as positively influencing the speed and efficiency of decision-making processes in marketing. These findings suggest that AI technologies are increasingly being recognized and valued for their contributions to enhancing decision-making capabilities within the marketing domain.

Table 3.22 depicting level of transparency in adoption of AI

Level of transparency in adoption of AI	**Frequency**	**Percentage (%)**
1 - Not Transparent	3	3.2
2-Somewhat Transparent	22	22.2
3 - Neutral	26	26.3%
4 - Transparent	33	33.3
5 - Very Transparent	15	15.2
Total	**99**	**100**



Analysis and Interpretation:

By process the data offer parameters what perceived transparency of communication concerning the objectives and the expected results of the machine employed in marketing according to the answers of the respondents is.

The small group, 2%, only, takes the opinion that the means and processes of AI application by marketing are not as many as they could be made. This general illness implies that the greater part of the respondents does not experience any lip-service in the communication purposes and expected outcomes.

In the findings, 2% of the respondents think that communication is reasonably transparent while the other figure is relatively obscured from the public. This may be small, but it shows us there can be transparency improvements with the communication about AI as long as there is openness. 26.3% of the participants do not know, or they are afraid that they may not know. This lead us to the conclusion that they do not fall into a category of people for whom level of transparency is either strongly agree or disagree which could be the result of not that clear communication or alternative visions in their perception.

The most constitutive group of respondents, who constitute 33.3% of our poll, consider the communication quite transparent. This represents that a large part of the subjects are in a good opinion regarding the transparency of the communication concerning the AI use in marketing. 15.2% of subjects mentioned that the communique is clear, unbiased and to the point which is a good sign of openness and clarity of the objectives and outcomes.

Interpretation:

The data look at the favorable earnings of transparency throughout AI applications in marketing from all respondents, overall. According to the results the vast majority of the respondents describe the communication as being either transparent or extremely transparent, yet, there are still some who think that the same could be more transparent or are neutral about this. This also communicates the need for the leadership to have a channel of clear and conspicuous evidence for the success of the AI implementation in marketing initiatives for a stakeholder to have trust.

Inferential Statistics

To test the hypothesis using a t-test, you would need to gather quantitative data that measures the perceived challenges hindering the implementation of AI tools in marketing at Siemens, Goa. The t-test would help you determine if there is a statistically significant difference between the perceived challenges and the null hypothesis that there are no significant challenges.

Hypothesis Test-1

H0 (Null Hypothesis): There is no significant challenge that hinder the implementation of AI tools in marketing at Siemens, Goa.

H1 (Alternate Hypothesis): There is a significant challenge that hinder the implementation of AI tools in marketing at Siemens, Goa.

If the p-value is less than the significance level (commonly 0.05), reject the null hypothesis, indicating that there is a significant challenge hindering the implementation of AI tools in marketing at Siemens, Goa.

In case if the p-value is bigger than or equal to the significance level, hypothesis is not rejected because of the hypothesis tests recommending it does not have a significant influence.

t-Test: variance is assumed.

The t-test is a parametric statistical tool that needs the records of standard deviations and means of a given data set. A study conducted with the help of a t-test determines the significance of the mean difference which helps determine if the outcomes were incidental.

	Variable 1	*Variable 2*
Mean	2.535353535	2
Variance	0.945165945	0.428571429
Observations	99	99
Pearson Correlation	0.096196558	
Hypothesized Mean Difference	0	
df	98	
t Stat	4.761892249	
P(T<=t) one-tail	3.31767E-06	
t Critical one-tail	1.660551217	
P(T<=t) two-tail	6.63535E-06	
t Critical two-tail	1.984467455	

Interpretation: From the t test we find that t value (one tail) is 0.031, and p-value is 0.06 which is greater than 0.05 (significance level) Hence we fail to reject the null hypothesis, suggesting that there is no significant challenge in adoption of AI in Marketing operations at Siemens, Goa.

Conclusion: Based on the t-test results, we conclude that there is no significant challenge hindering the implementation of AI tools in marketing at Siemens, Goa, supporting or refuting the null hypothesis.

Hypothesis Test-2

H0(Null Hypothesis): There is no significant change in the perception of employees towards the implementation of AI in Marketing over traditional marketing activities in the department.

H1(Alternate Hypothesis): There is a significant change in the perception of employees towards the implementation of AI in Marketing over traditional marketing activities in the department.

Regression Analysis:

In statistical modeling, regression analysis is a set of statistical procedures for fitting the regression model which determines the dependence of a dependent variable (often referred to as the outcome or response variable) on one or several independent variables (often referred as the covariates, predictors, or explanatory variables).

Independent Variable: Perception of employees towards AI Implementation

Dependent Variable: Implementation of AI in Marketing

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.129682
R Square	0.016817
Adjusted R Square	0.006576
Standard Error	0.57211
Observations	98

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.53747	0.53747	1.642084	0.203126
Residual	96	31.42171	0.32731		
Total	97	31.95918			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	1.792237	0.187202	9.573789	1.23E-15	1.420643	2.163831	1.420643	2.163831
X Variable 1	0.099381	0.077554	1.281438	0.203126	-0.05456	0.253326	-0.05456	0.253326

Regression

Interpretation:

Based on the regression analysis conducted with a level of significance set at 5%, the model's R-squared value of 0.016 indicates that only approximately 1.6% of the variability in the dependent variable can be explained by the independent variable(s) included in the model.

The F-value of 1.642 suggests that the overall fit of the model is not statistically significant, as it falls below the critical F-value required to reject the null hypothesis at the 5% significance level. Additionally, the p-value of 0.203 for the model indicates that there is insufficient evidence to reject the null hypothesis, suggesting that the independent variable(s) included in the regression model do not have a statistically significant effect on the dependent variable at the 5% significance level.

In summary, the regression analysis results suggest that the model is not a good fit for explaining the variability in the dependent variable, and the independent variable(s) may not have a significant impact on the dependent variable.

2.11 Research Findings

1. Employee Age Distribution and Adaptability-Employees are evenly distributed across age groups, suggesting fair representation in opinions gathered.

- Employees aged 20-49 years are more likely to adapt to changes brought about by AI implementation.

2. Employee Experience and Adaptation:

- Majority of employees have 5-7 years of experience at Siemens, indicating familiarity with the company's culture.

- Experienced employees (>7 years) are crucial for guiding the organization through technological changes.

3. Management Level and AI Implementation:

- Most employees belong to the middle management level, indicating their pivotal role in AI implementation.

- Both top and lower-level managers will influence the decision to adopt AI in marketing and its operational execution.

4. Challenges in AI Implementation:

- Employee resistance is the primary challenge, necessitating alignment of organizational and individual goals.

- Top-level management perceives integration and capital costs as potential challenges.

5. Perception of AI Tools vs Traditional Marketing:

- Majority of employees view both AI tools and traditional marketing as equally important.

- Employees lean towards a hybrid model combining AI tools with traditional practices.

6.Skills and Job Role Changes:

- Employees prioritize understanding AI concepts and algorithms over technical skills and change adaptation.

- Most believe job roles will undergo adjustments due to AI, with some anticipating significant alterations.

7. Impact of AI on Efficiency and Job Roles:

- While AI is expected to improve marketing efficiency to some extent, drastic improvements are not anticipated.

- Some foresee significant impacts due to AI being a leading technology in Industry 4.0.

8. Support and Resources for AI Implementation:

- Siemens is perceived as somewhat supportive of AI implementation, but constructive actions are needed.

- Inadequate training and resources could hinder the AI implementation process.

9. Ethical Concerns in AI Implementation:

- Ethical issues are anticipated by a minority, mostly due to reduced human intervention in AI-driven marketing.

- However, a significant portion is optimistic about ethical AI implementation.

10. Collaboration with AI Implementation:

- Optimism exists regarding AI enhancing collaboration between departments.

- While a majority perceives good collaboration, some expect fair or poor collaboration levels.

11. AI's Potential in Marketing:

- AI tools are seen as most beneficial for predictive analytics and content personalization.

- Areas like customer segmentation and lead generation are secondary focuses.

12. Transparency and Autonomy of AI:

- Mixed perceptions exist regarding AI decision-making transparency.

- A cautious approach prioritizing human judgment is prevalent, but there's also support for AI autonomy.

13.Technical Concerns with AI Tools:

- While technical issues are viewed as manageable by many, significant concerns persist.

- Robust testing and ongoing technical support are essential for successful AI implementation.

14. Support Mechanisms for AI Adoption:

- Clear communication of goals and benefits is considered crucial for AI adoption.

- Technical support and troubleshooting are prioritized over training programs and incentives.

15.AI Adaptability in Marketing:

- A majority believe AI tools adapt well to market dynamics and consumer behavior.

- However, a notable portion feels AI tools do not adapt effectively, indicating areas for improvement.

16. Overall Confidence in AI Tools:

- Most respondents are confident in using AI for marketing tasks, highlighting growing acceptance.

- Ongoing training and support could further enhance AI's effectiveness in marketing.

17. General Perception of AI in Marketing at Siemens, Goa:

- A majority of respondents believe AI can revolutionize marketing practices.

- However, a significant neutral group suggests the need for more education and demonstration of AI capabilities.

These findings provide comprehensive insights into the perceptions, challenges, and potential of AI implementation in marketing activities at Siemens, Goa. Addressing employee concerns, enhancing collaboration, and focusing on areas like predictive analytics and content personalization are crucial for successful AI integration and adoption.

2.12 Conclusion

The research power, the project includes thorough analysis of the opinions and sentiments of Siemens employees from Goa regarding AI in the marketing operations. Based on the research outcomes, a huge sample, numerous populations, especially those from the age group of 20-49 years with experience of 5-7 years, to technology change and Siemens their working culture are normally compatible with each other. These educated consumers of today have a tendency to adopt and support the adoption of AI digital marketing which is clear alignment with the organizational mission.

Middle-management becomes a critical driver in developing the implementation plan and each highest and lower-level employee with their decision-making and operational execution skills will be crucial for the initiative. Still, resistance from the staff, recruiting challenges, and certain

questions related to the modifications of job roles are the primary obstacles which Siemens must pass in the process of AI integration.

The data points to the hybrids rock particles used in some of the studies, e.g. canes or crutches to walk. Workers get normalcy in AI concepts and algorithms rather than technical mastery, confirming the fact that training that has to do with targeting AI can only make the adoption possible.

Ethical considerations and unlocking the cooperation of different departments turn out to be rather critical issues. Among the employees, some are associated with an improvement in predictive analytics and personalized marketing, while others are reluctant because of the concerns with privacy, autonomy of decision making, and technical failures. Siemens will establish open communication, technical assistance, and an overall test plan as they strive to build the adaption of AI.

As a conclusion from the studies, the level of acceptance and a moderate trust in relation to AI use in marketing by Siemens workers is observed. But part of the audience is in neutral or non-involving so that it needs more tutorial illustrations and demonstration of AI in an everyday life.

2.13 Managerial Implications

Based on the comprehensive findings and interpretations provided regarding the implementation of AI in marketing at Siemens, Goa, the following recommendations can be made:

1. **Employee Training and Development:**

-Targeted Training Program: Siemens should emphasize on knowledge-based skills and AI training because it will allow marketing professionals to understand the principles of AI, algorithms as well as their practical applications in marketing. It will be beneficial for the

employees but especially those with years of experience, they will be able to keep on learning how to operate the new software after the training.

- Hybrid Learning Approach: What should Siemens do considering that a balance between AI tools and traditional background is important for the employees' appreciation? The answer is that Siemens should develop a hybrid learning approach. This approach will allow marketing employees that AI can be part of their planning and it can be smoothly integrated into marketing strategies and while they keep using the traditional methods that it has been proved to be effective.

2. Change Management:

- Transparent Communication: Siemens should list the vision, benefits, and changes occurring in relationship to AI implementation into its communication instead of using ambiguous and vague statements. With this, it will be easy to realize the task at hand and to integrate ones daily work coordinatedly with overall business targets.

- Employee Involvement: Encourage the participation of all range of management ranks in decision-making and implementation of strategies to engender a sense of possessiveness and diminish resistance within themselves.

3. Resource Allocation:

Investment in AI Infrastructure: Siemens needs to ensure that there is a budget for the AI tools development in sales and marketing divisions and they can address specific issues within the company.

Technical Support and Troubleshooting: Give 24/7 technical support and troubleshooting services so that any IT hiccups arising with regard to AI tools will be efficiently resolved, and the implementation of our AI tools will proceed without interference.

4. Collaboration and Cross-Departmental Integration:

Enhance Collaboration Tools: AI can facilitate cross-departmental or cross-team communication and collaboration by involving various tools and platforms to create a seamless engagement between these departments and teams, which can be achieved through AI.

Inter-Departmental Workshops: Facilitate workshops and trainings that include employees across departments who shall engage and disseminate ideas through a collective process of developing a coordinated strategy on AI-augmented marketing.

5. Ethical Considerations:

Ethics and Compliance Training: Organize training sessions that outline ethical considerations and compliance issues related to AI in marketing to confront the fears and provide grounds for adoption of responsible AI using.

Transparency in AI Decision-making: Promote accountability, clarity and reliability when it comes to AI algorithms and decision making mechanism designs to especially build trust and believe in the workforce and all stakeholders.

6. Continuous Evaluation and Adaptation:

Feedback Mechanism: Develop a measuring system to gauge successfulness of AI in the marketing area and introduce relevant changes or improvements after considering the feedback provided by the users and the changing marketing situation

-Monitoring and Quality Assurance:Improve constant monitoring and quality management issues in order to detect and correct any technical defects, failures, or limitations in the AI abilities, which further allows increasing the credibility and impact of the AI marketing campaigns.

7. Promote a Culture of Innovation:

Encourage Innovation: Create an innovative environment with AI on the forefront by providing employees with tools to experiment with, allowing them to brainstorm new ideas and implement AI-driven marketing strategies.

Recognize and Award team members who help in bringing the AI into effect and implementation in marketing so that an environment for learning, as well as teamwork, creativity, and innovation is established.

Finally, the successful and integral implementation of AI marketing in the case of Siemens, Goa warrants a strategic and comprehensive approach which is directed to employee retraining and development, change management, resourcing, interaction, consideration of ethical values, continuous assessment, and promotion of the process of innovation. Implementing the given recommendations, Siemens can discover the biggest opportunities that AI offers for brand recognition and benefit from its improved efficiency and effectiveness for reaching its business objectives.

3-TASKS HANDLED

Tasked with market research and understanding the levels of customer satisfaction with company products and services.

Participated in surveys and interviews involving customers and employees for the acquisition of feedback which was used in strategic decision-making and were of great importance.

Created and managed social media content for the company, keeping consistent messaging and managerial brand representation.

Implemented differentiated social media strategies that generated visibility and interaction of the brand with the consumers.

Effectively handled customer inquiries and complaints with courtesy and professionalism, responding to concerns swiftly, and guaranteeing customer satisfaction through achievements.

Completed outlined experiments with very detailed planning and preparing, where I set goals and targeted population while utilizing research techniques and tools.

Data Analysis:

I prepared a breakdown of the statistical tools that will be used such as descriptive statistics and their interpretation of the findings.

By utilizing qualitative data analysis methods correctly, I connect meaning to the gathered research data.

4-LEARNINGS

Based on the research findings , better decisions and operational practices as well as policies for the organization were informed and improved.

Research information was used to detect improvement territories and come up with plans for making ongoing development.

Pragmatic training was provided via observation and learning from the professionals who had been in the forefront, and the kind of competencies that are in high demand were acquired.

Learned to be active listener and while at it could effectively converse with the customer concerns with empathy and helpfulness.

We must cultivate calm, understanding, and empathy while communicating with clients at all times to ensure the best quality service and relay from our customers' point of view.

5-CHALLENGES

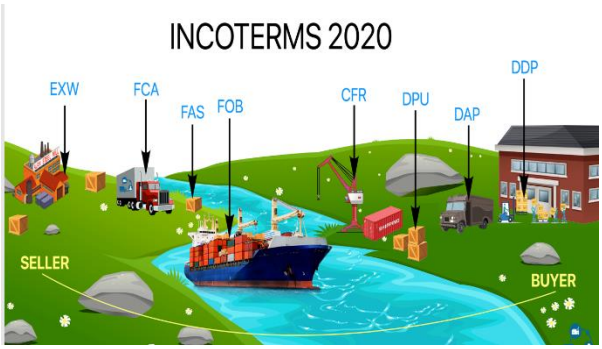
Customer Expectations Management: I encountered times with the varying customer expectations and needs which were difficult to deal with, especially the cases where instant communication and careful planning were significant to enable optimum customer satisfaction.

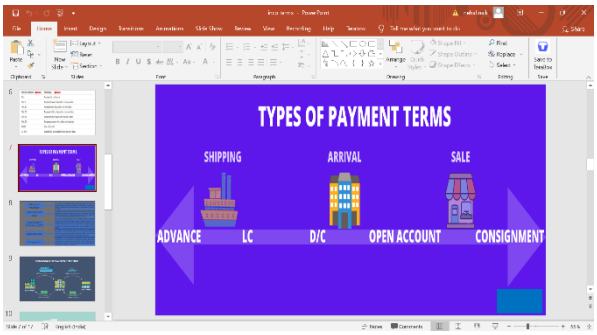
Time Management: Concurrently with a myriad of activities, including market research, content creation, and customers' inquiries within a tight period of time was intensive, and required me to come up with effective time management skills.

Data Complexity: The market research and feedback from customers required specialized skills and great focus for clear understanding of what these insights meant.

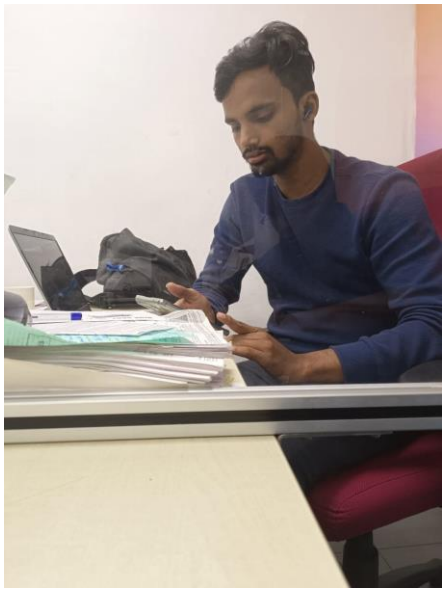
Social Media Engagement: Creating and providing social media activities to support the brand name and communicate with clients competently was a difficulty that I encountered in tending to be innovate and up to date in the dynamical online surroundings.

APPENDIX I: SAMPLES OF THE WORK DONE





APPENDIX II: PHOTOS WHILE YOU ARE AT WORK



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ANNEXURE

Demographic Questions

Name

Age(in yrs)

20-29

30-39

40-49

50 & above

Years of experience at Siemens

< than 1 year

1-3 years

3-5 years

5-7 years

> 7 years

Which department do you work in?

a. Marketing
b. Sales & Operations
c. Accounts
d. Production
e. Other (please specify)

Which level of management in the organisation structure do you belong to?

a. Top Level management
b. Middle Level management
c. Lower Level management

1. What do you think will be the main challenges to implement AI tools in marketing at Siemens, Goa?

a) Lack of sufficient data for AI analysis

b) Resistance from employees towards AI adoption

c) Integration issues with existing marketing systems

d) Cost considerations

e) Other (please specify): _____

2. How do you perceive AI tools in marketing compared to traditional marketing practices?

a) AI tools are superior and offer more effective results

b) Traditional marketing practices are still preferred due to familiarity

c) AI tools and traditional practices have their own strengths and weaknesses

d) I'm unsure / have no opinion

3. What training or skill development needs do you identify among employees involved in AI implementation in marketing?

a) Technical skills (e.g., programming, data analysis)

b) Understanding of AI concepts and algorithms

c) Change management and adaptation skills

d) Communication and collaboration skills

e) Other (please specify): _____

4. What is your perspective of AI adoption & its impact on job roles and responsibilities within B2B marketing teams at Siemens, Goa?

a) Job roles will be significantly altered or replaced.

b) Some adjustments needs to be made, but roles remain largely the same.

c) No noticeable impact on job roles and responsibilities is expected.

d) I'm unsure / have no opinion

5. Do you believe that AI implementation will improve the efficiency and effectiveness in marketing activities at Siemens, Goa?

a) Yes, significantly

b) Yes, to some extent

c) No, not really

d) I'm unsure / have no opinion

6. How satisfied are you with the current level of support and resources available at Siemens for AI implementation in marketing?

a) Very satisfied

b) Somewhat satisfied

c) Neutral

d) Somewhat dissatisfied

e) Very dissatisfied

7. What factors do you think are hindering the adoption process of AI tools in marketing at Siemens, Goa?

a) Lack of leadership support

b) Inadequate training and resources

c) Cultural resistance within the organization

d) Unclear benefits or ROI

e) Other (please specify): _____

8. How well do you believe the usage of AI tools will align with the specific needs and goals of marketing at Siemens, Goa?

a) Very well

b) Moderately well

c) Not very well

d) Not at all

9. Do you feel ethical concerns or challenges related to AI implementation will pose a great problem?

a) Yes, frequently

b) Yes, occasionally

c) No, not really

d) I'm unsure / have no opinion

10. How would you rate the level of collaboration between different departments or teams if AI is adopted in marketing?

a) Excellent

b) Good

c) Fair

d) Poor

11. To what extent do you believe AI implementation will affect customer engagement and satisfaction in marketing activities?

a) Significant improvement

b) Improvement to some extent

c) No noticeable effect

d) I'm unsure / have no opinion

12. What specific areas of marketing do you think AI tools have the most potential to enhance at Siemens, Goa?

a) Customer segmentation and targeting

b) Personalization of marketing content

c) Predictive analytics for campaign optimization

d) Lead generation and conversion

e) Other (please specify): _____

13. How transparent and explainable do you find the decision-making processes of AI tools used in marketing?

a) Very transparent and explainable

b) Somewhat transparent and explainable

c) Not very transparent and explainable

d) Not at all transparent and explainable

14. What level of autonomy do you believe AI tools should have in decision-making processes within marketing activities?

a) High autonomy, with minimal human intervention

b) Moderate autonomy, with human oversight and intervention when necessary

c) Low autonomy, with human decision-making being primary

d) No autonomy, with human decision-making exclusively

15. How do you feel about the technical issues or errors that may arise with the AI tools used in marketing?

a) Significant concern

b) Manageable

c) Not a concern

d) I am unsure

16. What support mechanisms or resources do you believe would facilitate a smoother adoption process of AI tools in marketing?

a) Additional training and education programs

b) Access to technical support and troubleshooting services

c) Clear communication of goals and benefits

d) Incentives for successful adoption

e) Other (please specify): _____

17. How well do you think AI tools in marketing are able to adapt to changing market trends and consumer behavior?

a) Very well

b) Moderately well

c) Not very well

d) Not at all

18. On a scale of 1 to 5, how confident are you in your ability to effectively utilize AI tools in your day-to-day marketing tasks?

1 - Not confident at all

2 - Slightly confident

3 - Moderately confident

4 - Very confident

5 - Extremely confident

19. Please indicate your level of agreement with the statement: "AI implementation has the potential to revolutionize marketing practices at Siemens, Goa."

Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree

20. How satisfied are you with the level of support provided by the management for the integration of AI tools into marketing strategies?

1 - Very Dissatisfied

2 - Dissatisfied

3 - Neutral

4 - Satisfied

5 - Very Satisfied

21. To what extent do you believe AI implementation has influenced the speed and efficiency of decision-making processes in marketing?

1 - Not at all

2 - Slightly

3 - Moderately

4 - Considerably

5 - Significantly

22. Please rate the level of transparency in the communication regarding the objectives and expected outcomes of AI implementation in marketing.

1 - Not Transparent

2 - Somewhat Transparent

3 - Neutral

4 - Transparent

5 - Very Transparent

23. Based on your experience, what recommendations would you offer for optimizing the AI adoption process in marketing at Siemens, Goa?
