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**"HOW ARTIFICIAL INTELLIGENCE IS AFFECTING MARKETING AND
HUMAN BEHAVIOUR: FILOBLU CASE STUDY"**

RELATORE:

CH.MO PROF. MARCO BETTIOL

LAUREANDO/A: GIANLUCA BRUNO

MATRICOLA N. 1207156

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The candidate also declares that all the materials used during the preparation of the thesis have been explicitly indicated in the text and in the section "Bibliographical references" and that any textual citations can be identified through an explicit reference to the original publication.

Firma dello studente

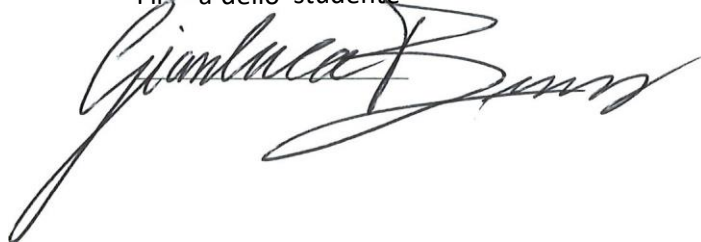
A handwritten signature in black ink, appearing to read "Gianluca Basso". The signature is written in a cursive style with a long, sweeping tail on the left side.

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Foreword and Acknowledgements

This thesis is written as completion to the master of Business Administration (Management curriculum) at the University of Padua. The master programme focuses on specialised operations, marketing, and organisational development.

I studied corporate management practices during these two years, including institutional law, political and economic policies, and economic and quantitative tools for business. Moreover, I learned strategic planning to advanced accounting and growth management through external lines and international law. As a BA student, I also concentrated on skills needed to carry out competitive strategies in administration, finance and control, human resources, work organisation, marketing, logistics, and production.

My passion for marketing and digital technologies made me curious about the Artificial Intelligence topic. To make a tangible contribution to the essay's creation, I worked with FiloBlu Spa and reached helpful information for a real case analysis.

This writing addresses companies that have to face a new AI marketing's revolution and win customers' trust who are every day more scared about privacy issues.

This journey started in November 2020, and I am proud and enthusiastic to get this job done because it forced me to always ask for the best for my persona. It proved that passion and hard work could only work if together. I also want to thank my supervisor from the University, Marco Bettiol. His valuable insights and directions gave me needful guidance to complete the research and write this thesis.

Gianluca Bruno

Padua, January 2021

ABSTRACT

As the title clarifies, this work is born from the need to investigate Artificial intelligence's impact on marketing and understand how new technologies transform the customers' behaviour.

This project is created by theoretical research and practical experience with FiloBlu Spa (an Italian company leading digital business development).

The thesis's main content is a deep analysis of the Artificial Intelligence tool by exploring the available uses and reviewing the pros and cons from human and managerial aspects.

Moreover, a FiloBlu 's client's real case will be described examining the tangible economic impact of Machine Learning solutions on business.

The final aim is to verify the theoretical assumption that AI is an excellent instrument to optimise marketing performance and improve people's lives.

The conclusion is that AI leads to many benefits for companies that can outline better personas, improving their turnover. Still, at the same time, it can provoke some issues to the social side that could make users feel exploited and alienated. However, on the other hand, AI can also enhance customers' lives through many facilitations.

The paper ends with some suggestions for companies to surf the new digital wave and avoid drowning in the ocean of competitors and customers' unspoken needs.

INTRODUCTION

26th January 2020 has been the release date of "The Social Dilemma", the documentary from Jeff Orlowski. It revealed to everyone how "dystopic" is the technological reality we live in because of the lack of privacy and addiction apps and social media produce.

One of the most frightful and echoed quotes of the documentary was pronounced by Tristan Harris, former Google Design Ethicist (2013-2016) "If you are not paying for the product, then you are the product".

Moreover, to make matters worse, it is a widespread belief that smartphones can listen to everything we say and use our speech content for companies' advertising.

This thought is fueled by advertising content creation that perfectly matches our needs and leads anyone to think they are being spied on.

Has it ever happened to you receiving a brand's advertising immediately after talking about its products?

It is the case of Vincenzo Tiani, a journalist for Vice Italia. He and his girlfriend received an Instagram advertisement with the image of their bedroom.

They start to worry about their privacy security because they thought Instagram databases knew their bedroom design. Therefore, how was it possible? Was Instagram spying on them? How could the app know about the style of their room with that accuracy?

Even if it could be a scary and exceptional event, it seems not to be an isolated incident.

This feature is only one of many possible uses of the artificial intelligence associated with marketing.

Indeed, target advertising optimization and privacy rights create a crucial trade-off we are facing.

Starting with curiosity about how AI technologies work and how marketing is changing in the smartphone era, this thesis is born.

My research started with the reading of Stefano Puntoni's works, Professor of Marketing at Rotterdam School of Management (RSM). "Not long ago, artificial intelligence (AI) was the stuff of science fiction. Now it is changing how consumers eat, sleep, work, play, and even date". (Stefano Puntoni, Rebecca Walker Reczek, Markus Giesler, and Simona Botti, 2020, "Consumers and Artificial Intelligence: An Experiential Perspective"). This quotation perfectly introduces the topics this thesis deals with. It comes from "Consumers and Artificial Intelligence: An Experiential Perspective",

published for "Journal of Marketing", which examines the development and role of Artificial Intelligence in the market.

This work's final goal is to verify if AI could make both companies and people take advantage of its use.

To study Artificial Intelligence, I used many sources: university papers and research, documentaries, articles on the net, books and personal working experience with FiloBlu, a machine learning marketing firm.

Additionally, to write this thesis, I applied AI technology to respect anti-plagiarism policy, correct typing errors, and prepare short research reporting the sources associated.

So this journey starts with a profound description of Artificial Intelligence, venturing into the massive use in marketing. After this, an in-depth analysis of social aspects will occur in the following chapters comparing the pros and cons of AI uses.

After introducing a confirmed case of Artificial Intelligence optimization strategy thanks to FiloBlu experience, this work will confirm that AI can create tangible value for every player. However, benefits will occur if companies teach clients how AI works and if customers know AI functions.

In the first chapter, the thesis defines Artificial Intelligence and analyses its features. The very first section starts with an AI introduction made by AI text generator software. Then the work illustrates the different classification of AI technology. Finally, a distinct focus is given to AI applications in real life.

The second chapter deals with the numbers of AI growth and the AI uses in specific marketing areas. Moreover, the third chapter deeply studies the four AI capacities by considering users' perspective: how users interact with Artificial Intelligence, how they feel, and how companies should improve user experience. So, the positive and negative effects of data capture, classification, delegation and social will be discussed.

The fourth chapter reports my personal experience in FiloBlu Spa and how Business Intelligence is used to implement the profit. In this chapter, a successful real case belonging to Filoblu's client will be described.

Finally, the last part of this work gives the final consideration of Artificial Intelligence and suggests some key takeaways for companies and users.

CHAPTER 1

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

1.1 Definition of Artificial Intelligence

The thesis starts by defining Artificial Intelligence. Surfing on the net, you can find many definitions of "Artificial Intelligence". To simplify this task, I used the AI service site "<http://ai-writer.com/>". This site can create essays using AI technology, starting with some user keywords input (in this case, "Artificial", "intelligence", "definitions").

Even if it could give us some significant insights about AI features, the result is not appropriate for a thesis essay. It cannot create a logical speech, but only a sum of paraphrased articles not linked by reasoning. Besides, it made crucial mistakes. In particular, one has been to state that Richard Feynman is the co-founder of Google, but, instead, he has been an American theoretical physicist.

Some sentences of AI results are reported below:

“In recent years, you may have come across the term "artificial intelligence" and imagined it as a living personification of alien beings or robots, or even invented it yourself. Some would say that artificial intelligence is a terminator figure who can act and think for himself, but what do they mean when asked about artificial intelligence? A robot can interact with humans and act like a human - like humans and even more than humans themselves. Sources: (“Artificial Intelligence/Definition”, 2017, Wikibooks)

(Wu, Yonghui, Mike Schuster, Zhifeng Chen, Quoc V Le, Mohammad Norouzi, Wolfgang Macherey, Maxim Krikun, 2016, “Google’s Neural Machine Translation System: Bridging the Gap Between Human and Machine Translation,”)

(Vaishali Advani, 2021, “What is Artificial Intelligence? How does AI work, Types and Future of it?”, Great Learning)

It is the hallmark of a successful designer of AI software to deliver functions that cannot be delivered with AI. Really smart applications will only be possible with artificial intelligence. This type of artificial intelligence does not yet exist, but if it is achieved, it will be the greatest milestone that can be achieved in the field of artificial intelligence. Sources:

(Alan Bundy, 1997 “Artificial Intelligence Techniques: A Comprehensive Catalog,” 4th edition, Springer)

(Vaishali Advani, 2021, "What is Artificial Intelligence? How does AI work, Types and Future of it?", Great Learning)

Comprehensive research on artificial intelligence has also divided it into its various sub-categories, such as artificial intelligence, machine learning, and artificial neural networks. Artificial intelligence is a portfolio of technologies, but it is also a generic term for a wide range of different types of AI.

Sources:

(Mike Kaput, 2020, "The Marketer's Guide to Artificial Intelligence Terminology", marketing institute)

(Vaishali Advani, 2021, "What is Artificial Intelligence? How does AI work, Types and Future of it?", Great Learning)

This definition of the three components of artificial intelligence will allow its applications to demystify facial recognition for self-driving cars. The first definition describes the use of AI in facial recognition applications that are not currently subject to the same level of testing as other types of artificial intelligence. Sources:

(Jeff Leek, 2017, "What is artificial intelligence? A three part definition", simplystatistics.org)

Artificial intelligence is based on human intelligence, defined as the way that machines can easily imitate human intelligence and perform tasks that are even more complex than those of humans. There are a number of techniques that allow machines to mimic human intelligence. Artificial intelligence can be defined by its ability to solve complex problems that cannot be solved in the real world without human help, such as decision-making. Sources: 0, 2, 20

(Jake Frankenfield, 2021, "Artificial Intelligence (AI)", www.investopedia.com)

(Alan Bundy, 1997 "Artificial Intelligence Techniques: A Comprehensive Catalog," 4th edition, Springer)

(Aanalytics, 2019, "Artificial Intelligence, Machine Learning, and Deep Learning", www.aanalytics.com)

The main dictionaries offer a variety of definitions of AI, but the common theme is that it must mimic intelligent human behavior and perform tasks that previously required human intelligence. Sources: 10

(Byron Patrick, 2020, "What is artificial intelligence?", journal of accountancy)

There are various areas of study under the banner of artificial intelligence, and there are examples for all. There are many different types of machine learning, machine vision, artificial neural networks, computer vision and other forms of AI. Sources: 5, 10

(Mike Kaput, 2020, "The Marketer's Guide to Artificial Intelligence Terminology", marketing institute)

(Byron Patrick, 2020, "What is artificial intelligence?", journal of accountancy)

One of the widely accepted definitions is "a computational mechanism based on human behavior to solve real problems. This term refers to any kind of problem - the solution of machine learning, machine vision, artificial neural networks, and other forms of artificial intelligence. Sources: 9, 14 (Dean Goodman, 2018, "8 definitions to guide your investment in Artificial Intelligence", headspring.com)

(Lenildo Morais, 2019, "Machine Learning vs. Artificial Intelligence: Definitions and Importance", techzone360.com)

He is credited with being one of the founders of artificial intelligence as a field of research and with coining the term "artificial intelligence." Richard Feynman, co-founder of Google, which has since acquired AI company DeepMind, once said that artificial intelligence is the science of making machines smarter. 5,13"

(Mike Kaput, 2020, "The Marketer's Guide to Artificial Intelligence Terminology", marketing institute)

(Radzi, 2018, "Artificial intelligence definitions - upgrade your AI IQ", www.talkwalker.com)

According to the previous consideration, I will write the following chapters without the content generator AI feature to give the reader the comfort perception to be led to a logical reading path.

By defining Artificial Intelligence, modern dictionary definitions focus on AI as a sub-field of computer science and on how machines can emulate human intelligence (being human-like rather than becoming human).

The English Oxford Living Dictionary provides this definition for AI :

"The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages."

Merriam-Webster describes Artificial Intelligence in this way:

1. " A section of computer science dealing with the simulation of intelligent behaviour in computers."
2. "The capability of a machine to imitate rational human behaviour."

The Encyclopedia Britannica asserts: "artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks usually related to intelligent beings."

As shown, searching on the net, you can find many definitions of this technology. Nevertheless, I would like to start by splitting this label, starting with the definition of "Intelligence".

Intelligence is the ability to gather pieces of information, save them, elaborate on them, understand them, reason and last, but not least, learn.

Artificial intelligence refers to a computer or machine that simulates a human brain's abilities, learns from examples and exercises, recognises, understands, responds to language, makes decisions, solves problems, and combines these and other abilities to perform functions that no human being could perform.

As proved by the "Chinese room" experiment by John Searle (John Searle, 1980, "Minds, Brains, and Programs"), computers can not be considered as "intelligent" as humans (the philosopher opposed the "strong AI" idea and supported the "weak AI" theory). Nevertheless, AI researchers Stuart Russell and Peter Norvig do not agree because their goal is not to distinguish "simulation of intelligence" from "real intelligence" (Stuart Russell, Peter Norvig, 2003, "Artificial intelligence: A Modern Approach"). Instead, they stated that AI aims to create systems that act "intelligently" even if their intelligence is only a simulation.

Interestingly, even if more "intelligent" computers will be made, they could not have consciousness or intentionally do what a human brain does.

Artificial intelligence (AI) is a robot that performs tasks attributed to humans, such as speech, speech recognition, speech processing, decision-making, and speech processing.

Artificial intelligence designs intelligent devices and systems that can approach problems creatively and regularly are considered a human privilege. Thus, AI means that a machine somehow imitates human behaviour.

Artificial intelligence is such a crucial technology that consists of different kinds of categorisations.

One of them is the one that divides Artificial Intelligence into three types:

1. Artificial narrow intelligence (ANI) that has a restricted range of capacities.
2. Artificial general intelligence (AGI) that is the same level as human skills.
3. Artificial superintelligence (ASI), which is more intelligent than actual humans

	Machine Learning	Machine Intelligence	Machine Consciousness
Description	Artificial narrow intelligence (ANI) that has a restricted range of capacities	Artificial general intelligence (AGI) that is the same level as human skills	Artificial superintelligence (ASI), which is more intelligent than actual humans
Functions	Narrow AI does not replicate human intelligence; it merely simulates human behaviour based on a narrow range of parameters.	It can imitate human intelligence and behaviours. It can also learn and employ its intelligence to resolve any problem. So, AGI can think, understand, and act in a way indistinguishable from that of a human in any given situation.	ASI simulates and understands human intelligence and behaviour. With ASI, machines become self-aware and outdo the potential of human intelligence.
Uses/examples	Deep Blue	Not implemented yet	Not implemented yet

Figure 1: “3 types of Artificial Intelligence”

Artificial narrow intelligence (ANI), also known as "weak AI" or "narrow AI". It is the only type of artificial intelligence successfully realised. Narrow AI aims to perform various tasks — i.e., face recognition, speech recognition/voice assistants, automobile driving, and internet search — and is smart when it executes a particular task. These machines may seem clever, but they operate under a narrow set of restrictions and limitations, which is why this type is referred to as "weak AI". Narrow AI does not replicate human intelligence; it merely simulates human behaviour based on a narrow range of parameters.

A famous example is Deep Blue, the first machine in chess to beat Garry Kasparov in 1996. It was able to produce about 200 million chess positions per second and analyse them.

Artificial general intelligence (AGI), known as "strong AI" or "deep AI", is the concept of a machine with general intelligence that can imitate human intelligence and behaviours. It can also learn and employ its intelligence to resolve any problem. So, AGI can think, understand, and act in a way indistinguishable from that of a human in any given situation.

According to that, robots can become human-like tomorrow. They learn and take action without human intervention. AI researchers and scientists have not yet produced strong AI. To obtain this, they would need to find a way to make machines conscious, programming a complete set of cognitive capabilities. In addition, machines would have to take experiential learning to the next level: to increase efficiency on single tasks and gain the ability to use experiential knowledge to a broader range of problems.

AGI is the kind of artificial intelligence we are used to watching in fiction movies (e.g. robots in "Star Trek" movies) but the most renowned attempt to get strong AI has been "Fujitsu-built K". It is one of the fastest supercomputers that, despite its calculus power it took 40 minutes to reproduce a single second of neural activity.

Artificial super intelligence (ASI) is the AI that simulates and understands human intelligence and behaviour. With ASI, machines become self-aware and outdo the potential of human intelligence. ASI would be remarkably better at everything we do: sport, science, art, math, music, hobbies, emotional relationships.

ASI would have more significant memory and a more agile ability to process and analyse data and stimuli. Consequently, super-intelligent beings' decision-making and problem-solving capabilities would be superior to those of humans.

Industry experts believe that the term "artificial intelligence" is too closely linked to public perception.

Researchers and marketers believe that an "advanced intelligence" label could help people recognise that most AI implementations will be weak and improve products and services. The future will be determined by an artificial superintelligence, far beyond the human brain's ability to understand, but how it shapes reality remains in the realm of science fiction.

Another AI's categorisation is the one that splits Artificial Intelligence into two subsets: Machine Learning and Deep Learning (as shown in figure 2 below).

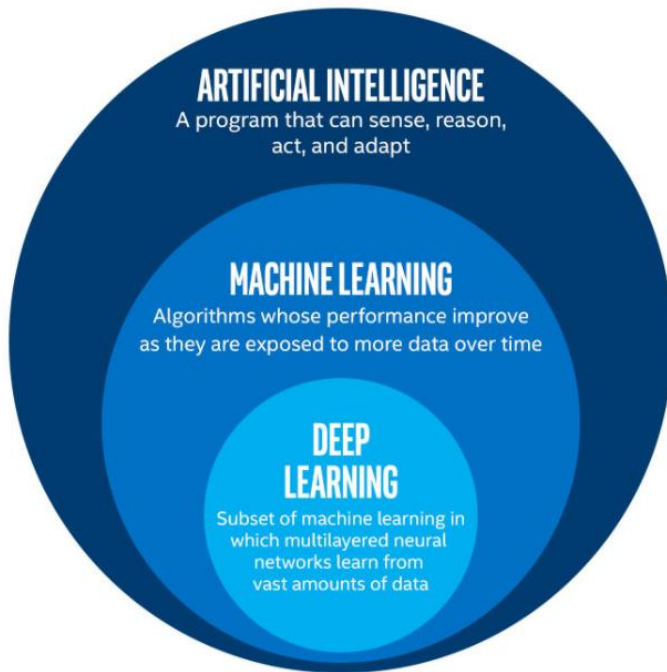


Figure 2: “The Difference Between Artificial Intelligence, Machine Learning and Deep Learning”, Intel, Author: Mark Robins Publish Date: May 27, 2020

1.2 Definition of Machine Learning

"Machine learning" is an artificial intelligence (AI) branch. Its goal is to develop data, learning applications and improve data correctness over time without being programmed. An algorithm is a sequence of analytical processing steps: it finds models and features in enormous amounts of data, and decisions and predictions are made based on the new data.

The more data an algorithm elaborates, the more precise the decisions and predictions become with an excellent algorithm. Nowadays, we have many examples of machine learning: Google, Facebook, Google Maps, Twitter, etc.

Let us think about digital assistants like Siri or Google assistant. They explore the web, play music in response to your voice commands, and suggest websites based on what you have bought, seen, or heard.

According to the big data growth and powerful algorithms, machine learning will give our personal and professional lives greater efficiency.

1.3 Definition of Deep Learning

Deep learning is a subset of machine learning.

Its algorithms design an artificial neural network in order to learn how the human brain works. Deep learning models need vast amounts of data but it has received a growing focus in the last years. With deep learning, the algorithm can discover features from data independently using a “neural network.” The name is inspired by the artificial neuron that “fires” if the combination of inputs passes some value, just like a neuron in the brain does. Artificial neurons can be ordered in layers, and deep learning requires a “deep” neural network (DNN) with many layers.

Artificial neurons in a DNN are interconnected, and the connection strength between two neurons is given by a number called a “weight”. Meanwhile, the process of appointing weights is called “training” the DNN.

1.4 Artificial Intelligence applications

Artificial intelligence has many uses across every industry (some examples below):

- Image recognition: for example, the automated Facebook photo tagging model.
- Video classification: for example security camera detecting a break-in
- Speech-to-text: for example, dictating to the smartphone.
- Natural language processing: for example, text analytics, sentiment analysis, chatbots
- Recommendation systems: for example, personalised advertising, product recommendations. A prevalent example is the 'people also liked' and 'just for you' advice offered by Amazon and Netflix.

- Contextual online advertising: Machine learning and deep learning models can evaluate a web site's content and serve up advertisements tailored to the visitor's interests.
- Chatbots: Chatbots can decipher input text and produce fitting responses.
- Cybersecurity: Machine learning can detect potential threats, recommend security analysts, and stimulate the reply.
- Medical image analysis: AI models extract features and information from medical images to improve and support accurate diagnoses.
- Self-driving cars: Self-driving cars require a vast machine learning effort because they must continuously recognise objects around the car, predict how they will move, and make the car reach the final destination.

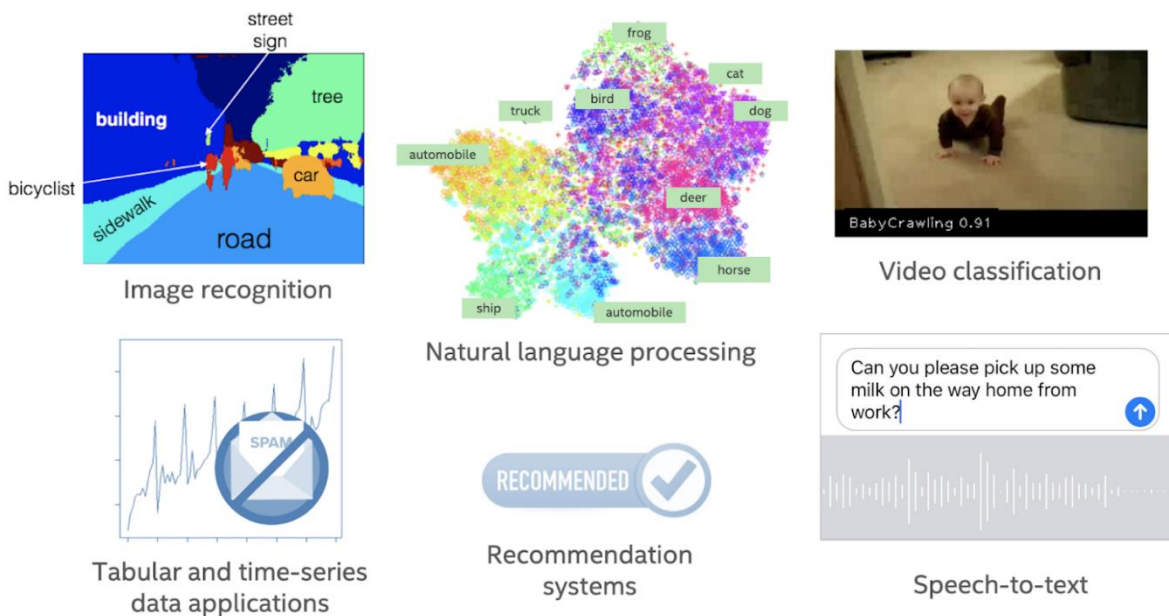


Figure 3: “Common AI uses”, Intel, Author: Mark Robins Publish Date: May 27, 2020

AI employment is encouraging growth at the individual, business, and economic levels. Since the employment rate drops in many countries, AI produces automation to support productivity at a micro and macro level.

At the micro-level, businesses now adopt AI to benefit from lower labour costs, better quality, and cheaper downtimes.

Automation is expected to grow according to robust productivity increase (McKinsey predicts it will be between 0.8% - 1.4% annually).

Even if this growth is thought to be worldwide, only a few countries lead the trend. For a 2019 study by the "Global Tech Council", the top 10 countries in AI development are India, France, the UK, Russia, Germany, Japan, China, South Korea, Singapore, and Sweden.

According to McKinsey, automation differs across industries: 64% for the manufacturing industry and 34% for educational services.

Automation has been allowed by factors such as openness to change, cost of developing new technologies, labour market dynamics, the regulatory framework and economic benefits.

CHAPTER 2

ARTIFICIAL INTELLIGENCE IN MARKETING

2.1 Introduction: the digital marketing growth

AI and marketing are two related sciences, one the fuel for the other's engine.

According to "Think Forward 2021-The Social Reset" by We Are Social, during the lockdown experienced in early 2020, " at its peak, the first wave of Covid-19 saw over 3.9 billion people confined to their homes".

Digital tools gained much more importance in users' everyday lives.

The extensive use of these digital tools enabled an irreversible transformation. Physical home isolation provided inertia and some new digital behaviours like attending live content, shopping via AR and paying to customise an avatar.

We are social named this process "social reset" because even if some systemic issues appear (misinformation and the power of bad influencers), people rethink the information sources they are engaged with and their social media use.

As reported by "Digital 2021- Global Overview Report" (Simon Kemp,2021), the numbers of Internet and Social media users grew to 4.66 billion (+7.3% YoY) and 4.2 billion (+13% YoY).



Figure 4: "Digital around the World", We Are Social, 2021

This historical moment with social changes crafted a unique and favourable environment for marketing growth.

In fact, in consonance with the source mentioned above, the evolution of daily time spent using the internet and social media dramatically increases and reaches 3.7 trillion hours on social media in 2021, which equals 420 million years of joined human life.

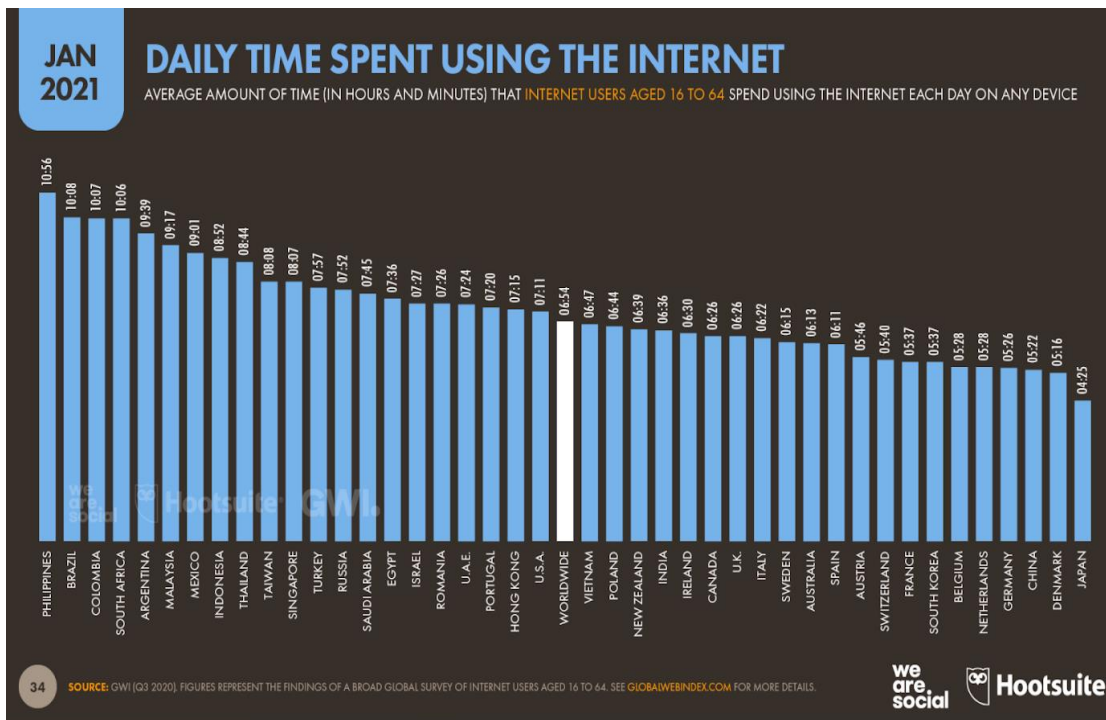


Figure 5: “Daily time spent using the internet”, We Are Social, 2021

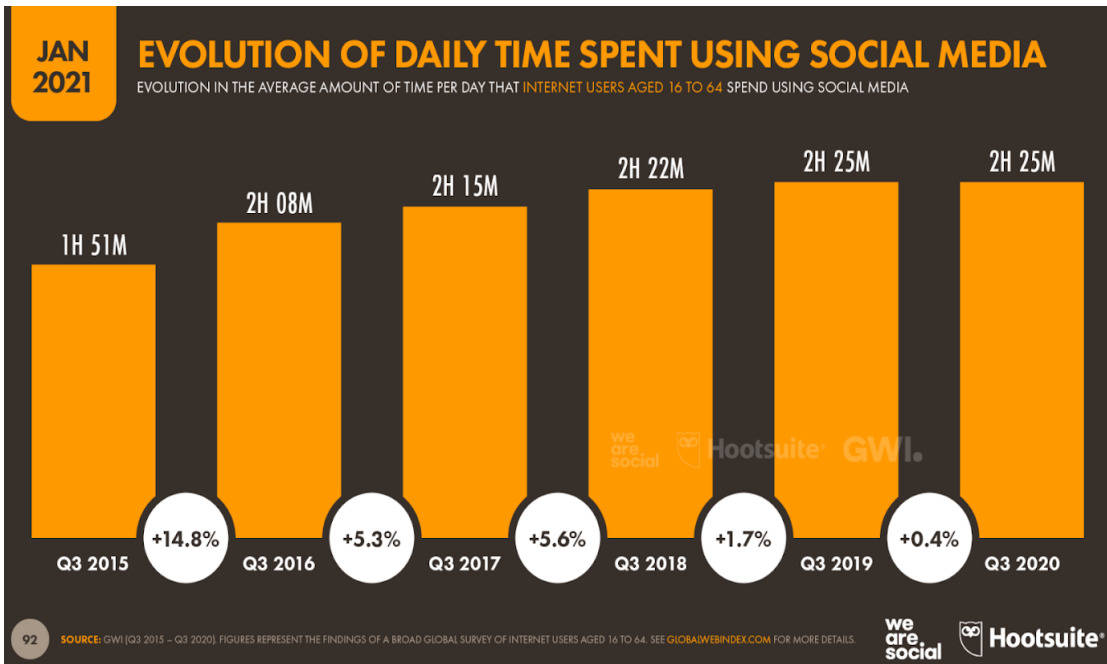


Figure 6: “Evolution of daily spent using social media”, We Are Social, 2021

Data state counterintuitive information: the lowest developed countries have the highest daily time spent using social media. Following countries are the most developed economies like Japan, UK, and Germany. (details in the chart below)

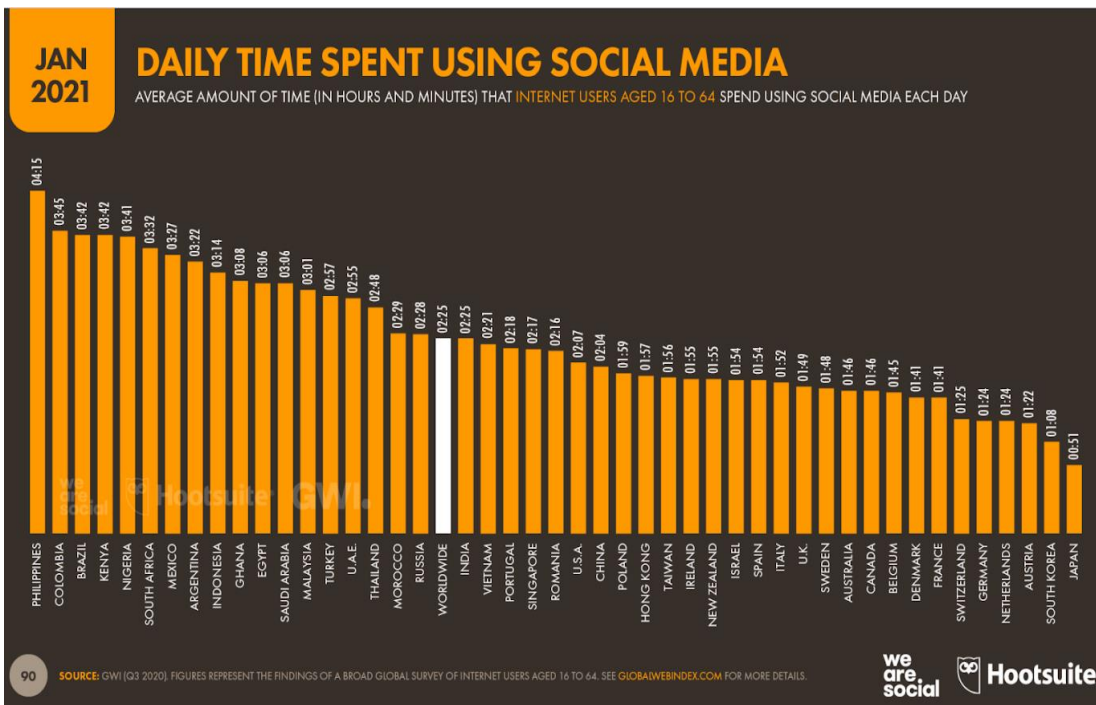


Figure 7: “Daily time spent using social media”, We Are Social, 2021

In line with "Company statements and earnings announcements" by Kepios's analysis in 2021, the three most favourite social platforms are Facebook, Youtube and Whatsapp. More time spent online means more time spent buying goods.

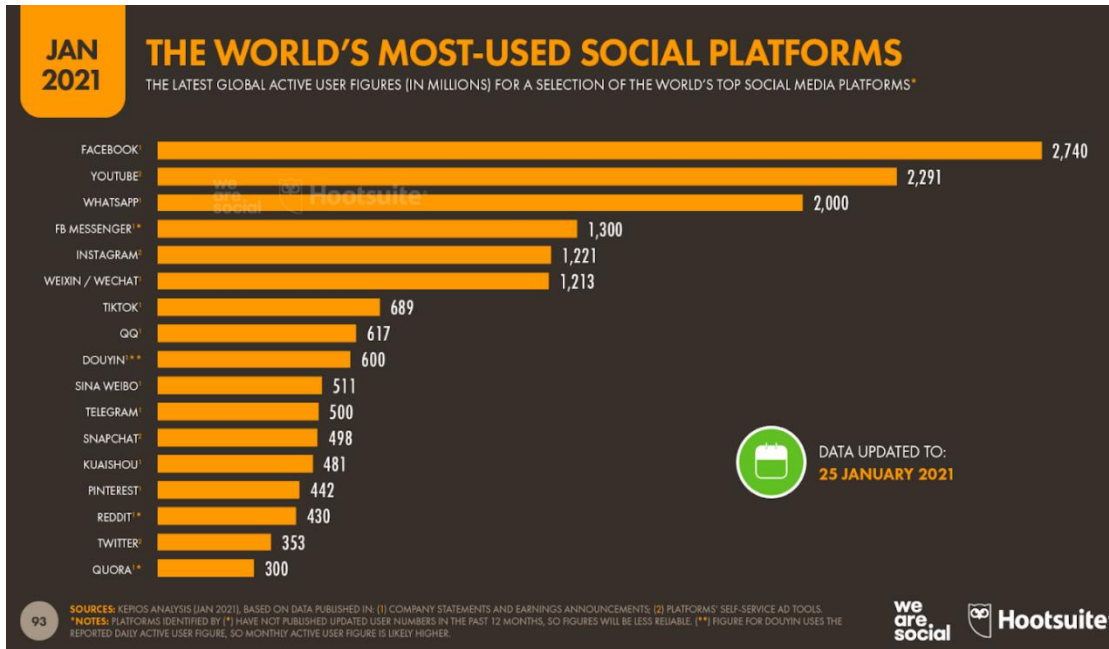


Figure 8: “The World’s most-used social platforms”, We Are Social, 2021

According to GWI' s survey (Q3 2020), nearly 77 % of internet users aged 16 to 64 buy goods online at a global level each month.

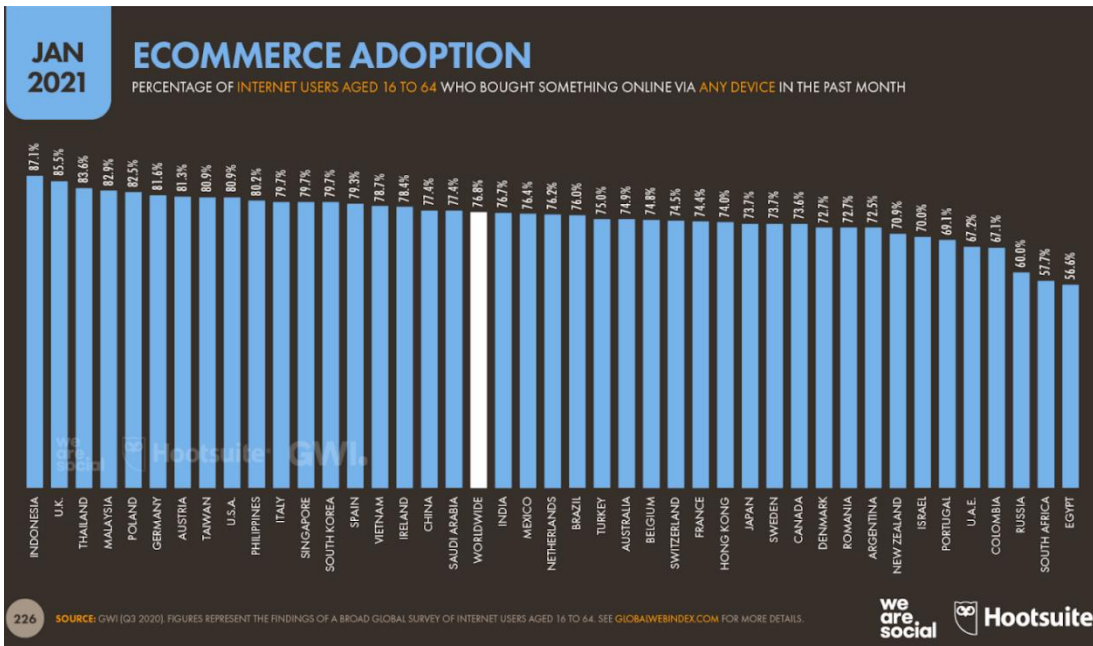


Figure 9:

“Ecommerce adoption”, We Are Social, 2021

The online shopping content is different but conforming to "Market outlooks" for e-commerce, travel, mobility and digital media by Statista, the most profitable e-commerce category is Fashion and Beauty, with 665.6 billion US dollars spent by worldwide users.



Figure 10: “Global ecommerce spend by category”, We Are Social, 2021

2.2 AI in Marketing: facts and figures

The social environment deeply affected the users' habits and marketing strategies, but it was not the only driver that participated in the marketing evolution. Another agent participating in the marketing evolution has been Artificial Intelligence.

The AI numbers in marketing are an essential driver to understand the trend and its features.

In line with the previous sentence, the growing number of AI start-up companies is a driver that explains the AI success in business.

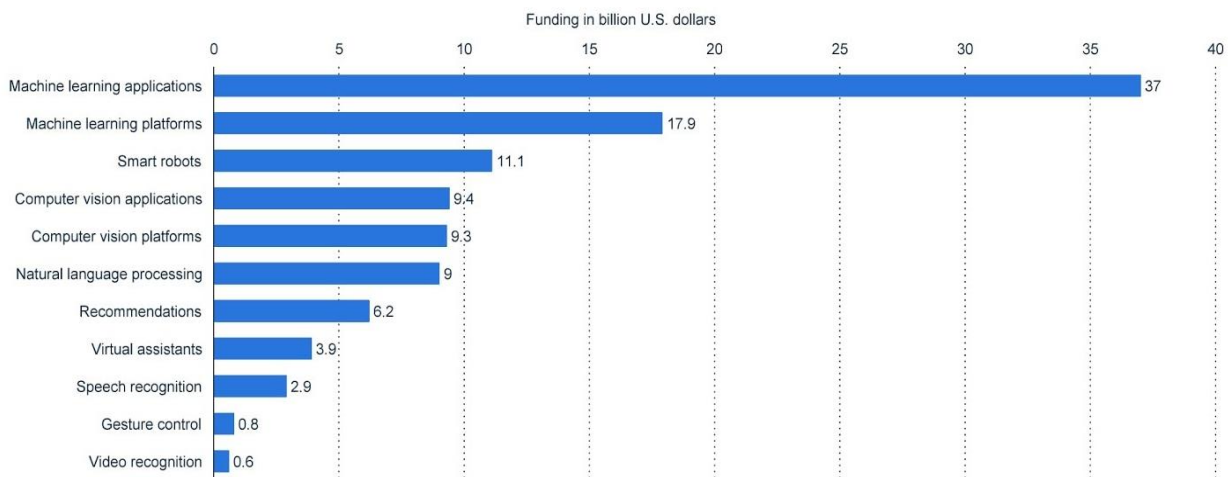
As shown in figure 11, Artificial Intelligence is spreading among different categories.

The most affected category is “Machine Learning applications”.

The statistic presents cumulative artificial intelligence (AI) funding by category worldwide through September 2019. Machine learning application organisations increased by about 37 billion U.S. dollars in funding through September 2019.

Artificial intelligence (AI) funding worldwide cumulative through September 2019 (in billion U.S. dollars), by category

AI funding worldwide cumulative through September 2019, by category



Note: Worldwide; Cumulative through September 2019
Further information regarding this statistic can be found on [page 76](#).
Source(s): Venture Scanner; Statista estimates; [ID 943136](#)

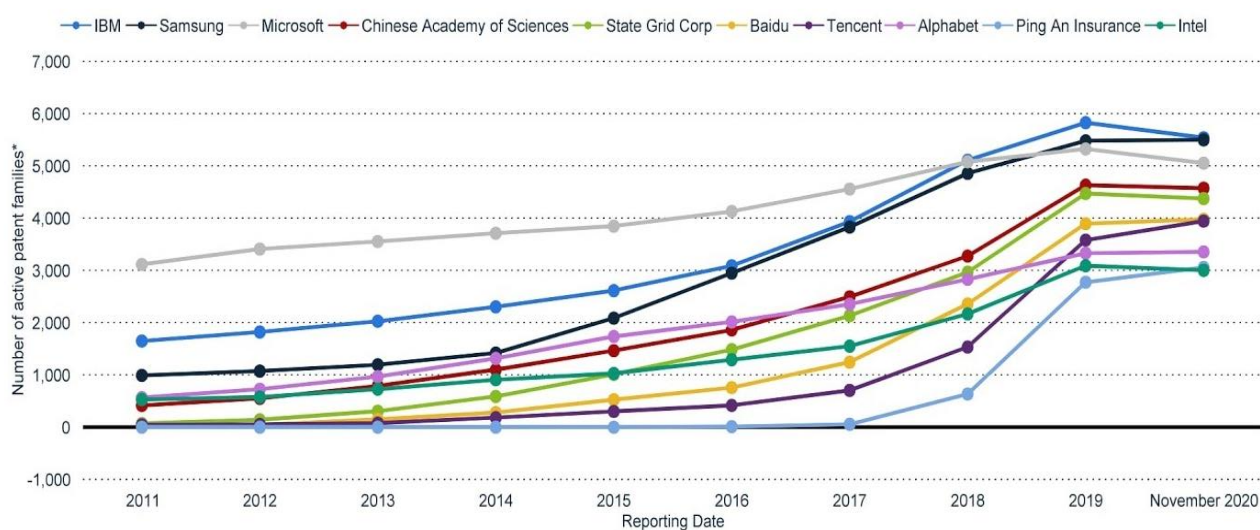
Special focus: Investments and patents **statista**

Figure 11:” Artificial intelligence (AI) funding worldwide cumulative through September 2019 (in billion U.S.dollars), by category”, Venture Scanner; Statista estimates

Another driver to measure the spreading of AI technologies is the number of AI and Machine Learning patents owners worldwide. Figure 12 proves a significant growth in November 2020. As of November 2020, IBM was the principal machine learning and artificial intelligence patent company worldwide with 5,538 classes owned. In 2018, the group had declared Microsoft's leading position, now placed third with 5,052 active families owned. Samsung ranked second with slightly under 5,500. The statistic is created thanks to the data provided by PatentSight.

Largest machine learning and artificial intelligence (AI) patent owners worldwide from 2011 to November 2020, by number of active patent families

Companies with the most machine learning & AI patents worldwide 2011-2020



Note: Worldwide; 2011 to November 12, 2020
 Further information regarding this statistic can be found on [page 67](#).
 Source(s): LexisNexis PatentSight, [ID 1032627](#)

Figure 12: “Largest machine learning and artificial intelligence (AI) patent owners worldwide from 2011 to November 2020, by number of active patent families”, LexisNexis PatentSight

Figure 13 exhibits the number of artificial intelligence start-up firms that have been acquired from 2010 to 2019. The number of AI acquisitions has increased steadily every year since 2010, peaking in 2019 at 231. This trend can be considered the proof of AI success in marketing.

Number of artificial intelligence (AI) start-up company acquisitions worldwide from 2010 to 2019

Acquisitions of AI startup companies worldwide 2010-2019

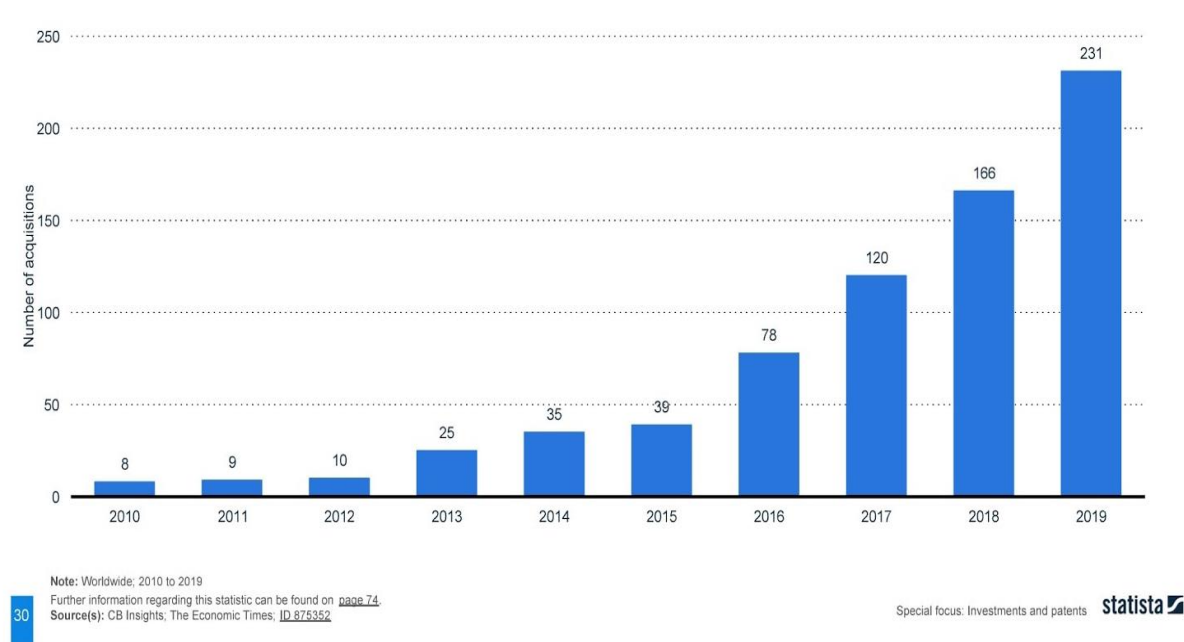


Figure 13:” Number of artificial intelligence (AI) start-up company acquisitions worldwide from 2010 to 2019”, CB Insights; The Economic Times

AI helps users and businesses too: worldwide AI revenue proves this from 2015 to 2025 is critically growing, as Figure 14 below shows.

The worldwide AI market revenue is predicted to grow from 2015 to 2025, although different considerations suggest variations in how much global market size will increase. Overall, the global AI market revenue is forecast to grow from 5 billion dollars in 2015 to over 125 billion in 2025. The current AI market run is led by IBM, which holds more than 9% of the global market share. IBM is also the leading company in active machine learning and AI patents worldwide, with more than 5,500 patent families as of July 2019. Next to IBM in the global AI, patent races are Microsoft and Samsung, each within 500 patent families from IBM. AI startups The enthusiasm for AI technologies and their applications worldwide leads to a growing number of AI startup and kindling existing companies` interest in the field. The number of AI startup acquisitions has increased regularly since 2010, growing by almost fourfold between 2015 and 2018.

Market size and revenue comparison for artificial intelligence worldwide from 2015 to 2025 (in billion U.S. dollars)

Artificial Intelligence (AI) market size/revenue comparisons 2015-2025

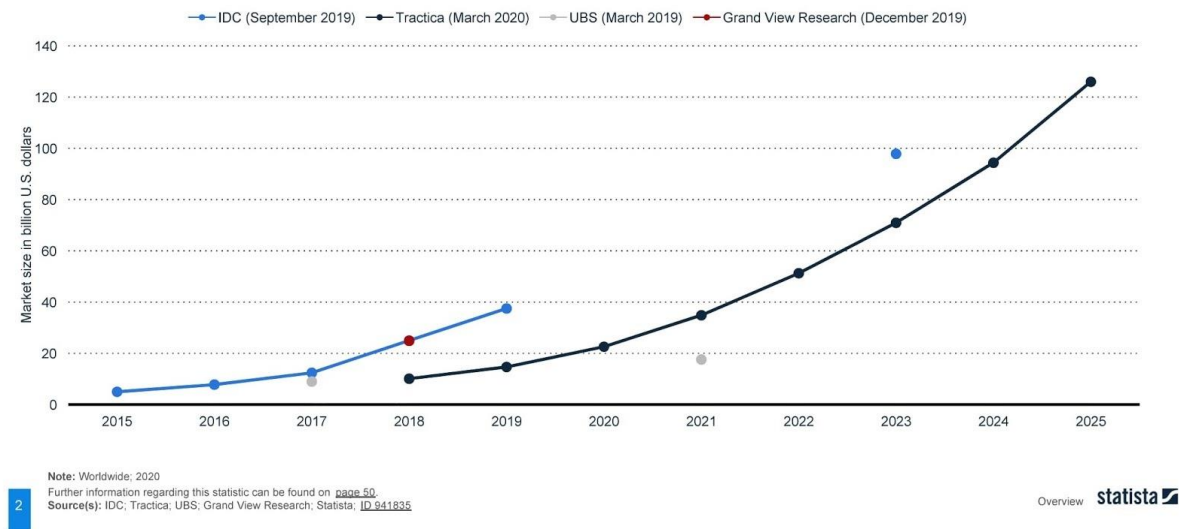


Figure 14: “Market size and revenue comparison for artificial intelligence worldwide from 2015 to 2025 (in billion U.S. dollars)”, IDC; Tractica; UBS; Grand View Research; Statista

AI has the potential to increase the growth rate of industries, as stated by Statista:

“The study by Accenture and Frontier Economics also estimates that AI has the potential to increase economic growth rates by a weighted average of 1.7 percentage points by 2035 across 16 industries. Moreover, compared companies that successfully implement AI strategies face the prospect of increasing their profitability by an average of 38% by 2035. Information and communications, manufacturing and financial services are expected to be the top gainers in terms of annual GVA growth rates, with 4.8%, 4.4% and 4.3%, respectively”.

Below are the impacts of AI on industry growth in 2035, Figure 15.

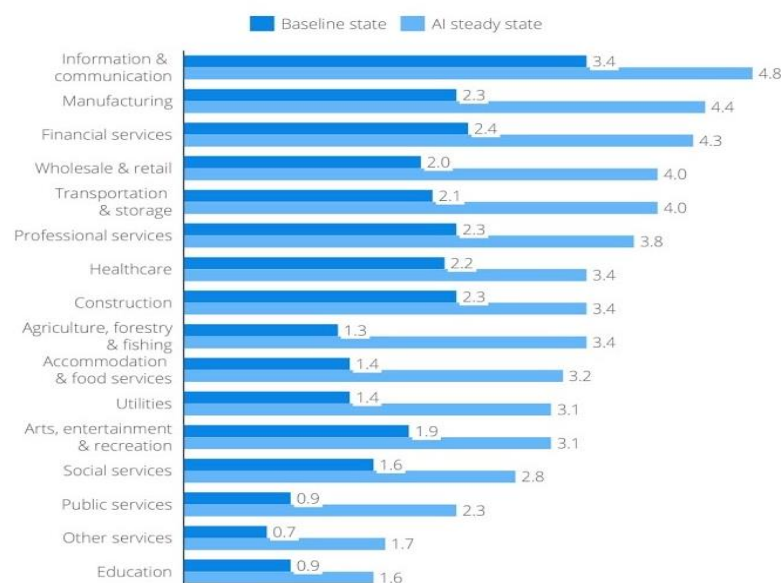
It displays an important impact on the Information & communication industry, the most affected industry.

AI has the potential to increase the growth rate of industries

Impact of AI (5/9)

The study by Accenture and Frontier Economics also estimates that AI has the potential to increase economic growth rates by a weighted average of 1.7 percentage points by 2035 across 16 industries. Moreover, companies that successfully implement AI strategies face the prospect of increasing their profitability by an average of 38% by 2035. Information and communications, manufacturing and financial services are expected to be the top gainers in terms of annual GVA growth rates, with 4.8%, 4.4% and 4.3%, respectively.

Impact of AI on industry growth in 2035 in %



Sources: Accenture, Frontier Economics

Figure 15: “Impact of AI on industry growth in 2035 in % “, Accenture, Frontier Economics

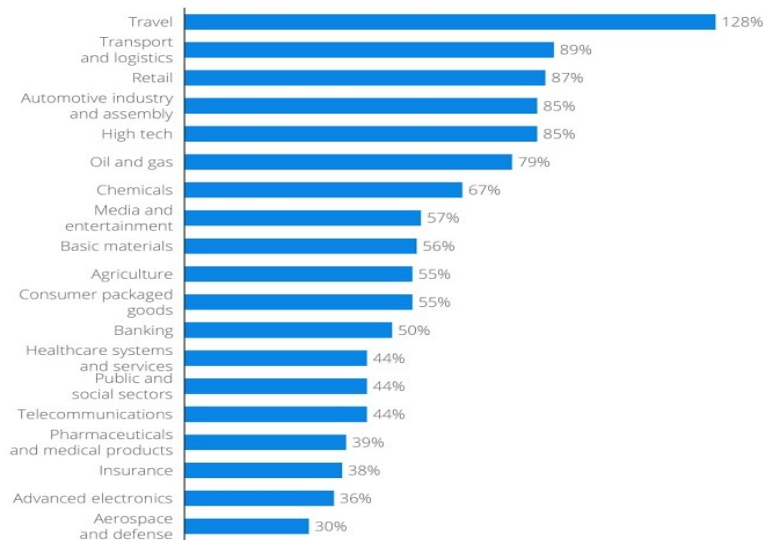
Figure 16 shows a McKinsey's study on more than 400 use cases across 19 industries and nine business functions highlights the use and economic potential of advanced AI techniques. In more than 2/3 of use cases, AI can enhance performance as compared to other analytics techniques. The travel industry has the highest potential incremental value of 128%, followed by transport and logistics (89%), retail (87%), automotive industry and assembly (85%), high technology (85%), oil and gas (79%), chemicals (67%) and media and entertainment (57%)

AI has potential incremental value

Impact of AI (7/9)

A study by McKinsey on more than 400 use cases across 19 industries and nine business functions highlights the use and economic potential of advanced AI techniques. In more than two thirds of use cases, AI can improve performance as compared to other analytics techniques. The travel industry has the highest potential incremental value of 128%, followed by transport and logistics (89%), retail (87%), automotive industry and assembly (85%), high technology (85%), oil and gas (79%), chemicals (67%) and media and entertainment (57%).

Potential incremental value of AI as compared to other analytics techniques



Sources: McKinsey

Figure 16: “Potential incremental value of AI as compared to other analytics techniques”, McKinsey

Research by Accenture and Frontier Economics supposes that AI significantly impacts the country’s gross value added (GVA) indicator. It calculates the annual GVA growth rates in 2035 for a baseline state, based on current economic growth premises, and for an AI steady state, assuming artificial intelligence is integrated into economic processes.

The magnitude of the impact changes according to the country, ranging from a 0.8 percentage points increase in potential GVA growth rates in Italy or Spain to 2.0 percentage points in Finland or the U.S. (Figure 17).

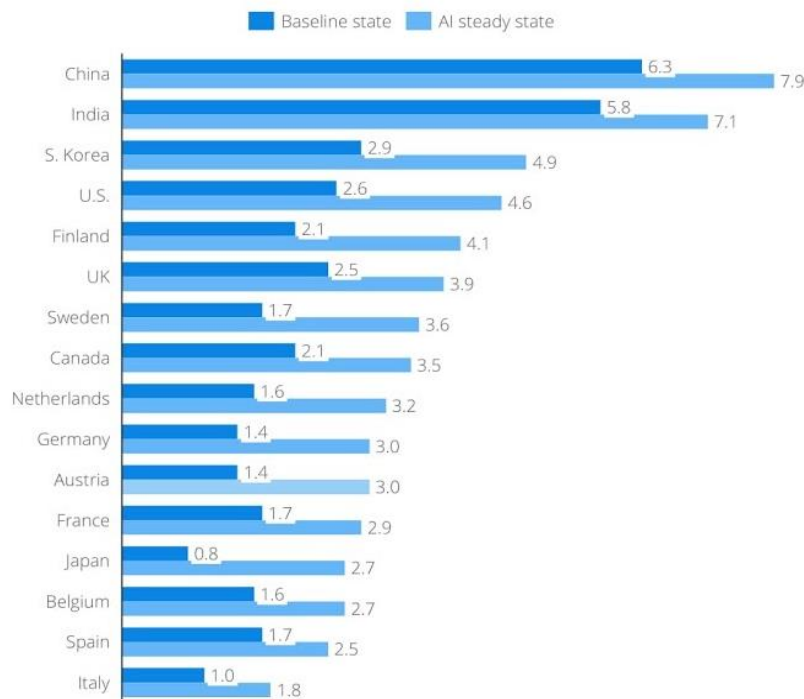
AI is expected to have a big impact on GVA¹ growth rates

Impact of AI (1/9)

A study by Accenture and Frontier Economics expects AI to have a big impact on a country's gross value added (GVA). It estimates the annual GVA growth rates in 2035 for a baseline state, based on current assumptions regarding economic growth, and for an AI steady state, assuming artificial intelligence is integrated into economic processes.

The extent of the impact depends on the country, ranging from a 0.8 percentage points increase in potential GVA growth rates in Italy or Spain to 2.0 percentage points in Finland or the U.S..

Potential annual GVA¹ growth rates in 2035 in %



¹: Gross value added: A close approximation of a country's GDP
Sources: Accenture, Frontier Economics

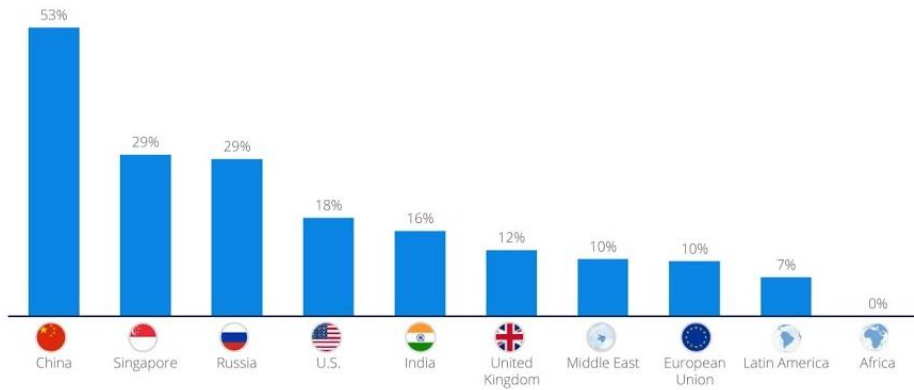
Figure 17: "Potential annual GVA growth rates in 2035 in %", Accenture, Frontier Economics

According to atlanticcouncil.org, China is the most impactful country in AI innovations in the next 2-5 years, with its 53% growth (Figure 18).

AI growth is fueled by innovation with China leading the way

AI growth

Expert estimation in the field of most impactful countries in AI innovation in the next 2-5 years¹

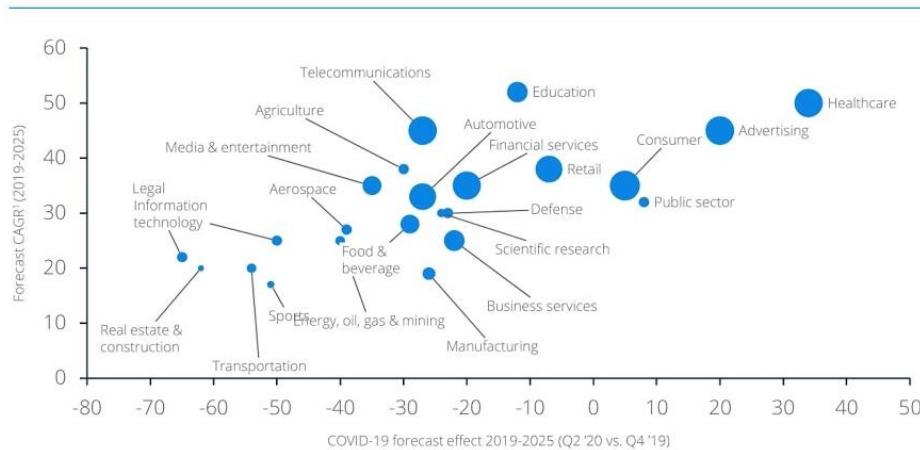


1: Survey conducted by Atlantic Council's GeoTech Center including more than 100 technology experts to record their expectations about the impact of COVID-19 on innovation in five key fields: the future of work, data and AI, trust and supply chains, space commercialization, and health and medicine
Sources: atlanticcouncil.org

Figure 18: "AI growth is fueled by innovation with China leading the way", atlanticcouncil.org

Also, Covid-19 has an impact on the AI software revenue of different industries (Figure 19).

Global AI software revenue by industry: COVID-19 impact vs. 2019-2025 CAGR²



2: CAGR: Compound Annual Growth Rate/average growth rate per year
Sources: Tractica, Omdia.com

Figure 19: "Global AI software revenue by industry: COVID-19 impact vs 2019-2025 CAGR²", Tractica, Omdia.com

2.3 The benefits of AI use in marketing

The benefits of Artificial Intelligence uses in marketing could be broken down into three abilities:

Customer Behavior Prediction

AI forecasts customers' future behaviour because it has already collected data about users who used products and interacted with the brand. AI can use data to predict their future actions.

It can predict the most likely visitor to become a customer or who is most likely to drop out.

AI can predict how customers will respond to trends or seasonal events based on past data.

Marketing Campaigns Scalability

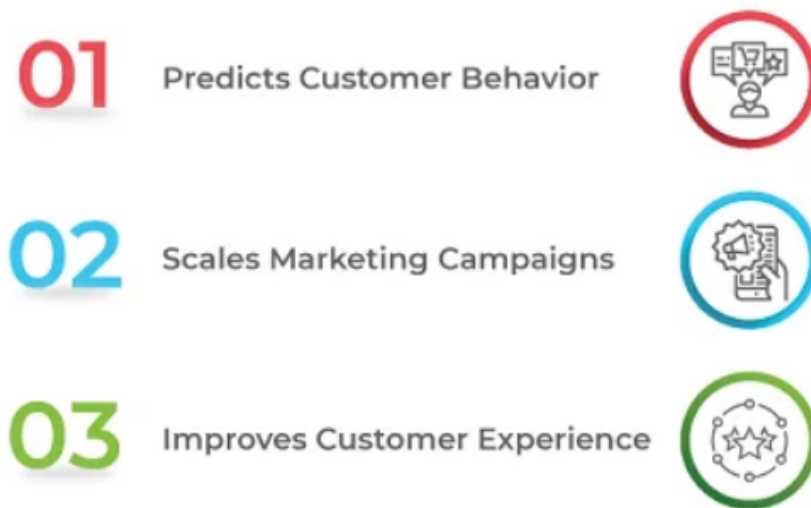
AI can help to streamline the marketing campaign in the process. Before starting a large-scale marketing program, you can experiment it out on a part of a group to verify its workability. This technique is usually named the "minimum viable campaign" or "minimum viable marketing". After you realize how different marketing channels run and which persona is receptive to communication, you can scale it to its maximum potential.

Customer Experience Improving

In the age of hyper-personalization, customers require more attention from brands. AI intensifies marketing efforts during the buyer's journey.

Customer experience has been improved by chatbots that can support the customer in everyday actions she/he is used to making. For example, chatbots help people to complete a booking or a payment process.

BENEFITS OF ARTIFICIAL INTELLIGENCE IN MARKETING



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Figure 20: “Benefits of AI in marketing”, <https://www.martechadvisor.com/>

According to the previous three advantages of AI in marketing, other edges could be created by Machine Learning. For example, AI can reduce marketing consumption by purchasing and helping marketers arrange the relevant offer and type for the highest efficacy.

AI solutions can also reach real-time responsiveness. Thanks to the customers' behavioural response, AI systems can automatically retarget choices and structure dynamic content.

It is not a mystery that predictive analytics is a critical component of machine learning for marketing. AI demand forecasting has already changed the way marketers work. They use trend analysis and purchase patterns to foretell future behaviours restricting the purchase window and selecting prospects more efficiently.

Discovering the perfect offer for a particular customer means ensuring not to subsidise offers at a higher-than-required level. It is a critical competitive edge for companies.

AI optimisation makes the link between digital engagement and sales inevitably compulsory. Below are other benefits of AI, such as reduced costs, marketing effort streamlining, and advanced personalisation.

A. Reduced costs. Using AI solutions for manual tasks decreases employee time spent working on those and allows resources to be applied to strategic goals. In this way, productivity and efficiency will be improved. Marketing costs are reduced because of the customisation of offers that will maximise the purchasing probability and allows the company to avoid spending a lot for a general mass marketing offer.

B. Marketing effort streamlining. With machine learning, marketers can accurately predict population segments that are most expected to become customers. Machine learning algorithms can include marketing efforts to improve strategic choices for future attempts. Marketing divisions can streamline campaigns, using micro-targeting results without consuming resources on less assuring candidates.

C. Advanced personalisation. The Boston Consulting Group held a 6-10% increase in income for those companies incorporating personalisation strategy in their marketing. Obstacles to personalisation cover low data quality, omnichannel integration, complex execution, and failure to estimate ROI. Machine learning can overcome these barriers: automatically collecting and examining high-quality customer data, giving actionable insights, and automatically producing dynamic content personalised interactions. Data collected can accurately measure ROI, optimising marketing budget effectiveness. The targeting process performs by tailoring the most fittable solution for each customer. This makes the ROI higher because the business supplies the right product to the right person with the right tone of voice.

D. Automation and error minimising. Data is the DNA of decisions. Feeding the data lake allows AI marketing automation to be more intelligent. The speed of marketing tasks execution is the AI flagship. AI can quickly scale adv, define the more appropriate actions for clients and define a target for a specific adv. A famous example of a digital marketing automation trend is email marketing. Thanks to AI implementation, emails can have multiple contents and multiple formats. They can also optimise subject lines for clicks and track performances. AI is ahead of a human copywriter because it does supply the most fitting solution for each reader.

AI can minimise human errors. In a particular way, it can prevent eCommerce data from hackers' attack. AI supports data security by contrasting the possible employees' mistakes made during the safeguard of customer data.

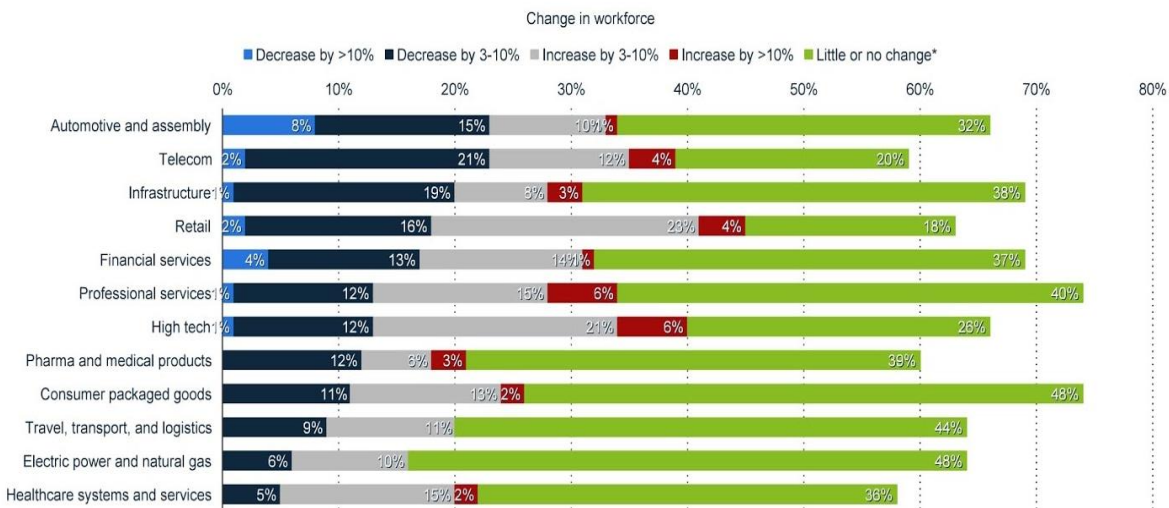
2.4 The cons of AI use in marketing

Even if AI brings a lot of benefits it brings cons too. One of the most important cons is the workforce cut as shown in the figure below.

According to a global AI survey by McKinsey, automotive and assembly, and telecom industries worldwide reported the most significant workforce reductions in 2019 due to the adoption of artificial intelligence technologies. Eight per cent of the automotive and assembly industry answers said that AI adoption has led to a more than a ten per cent decrease in the workforce in their organisations. At the same time, retail and high tech industries claimed the highest workforce progress due to AI adoption. (Figure 21).

Impact of artificial intelligence (AI) on workforces in organizations worldwide as of 2019, by industry

Worldwide workforce changes from adopting AI in companies 2019, by industry



Note: Worldwide, March 26 to April 5, 2019; 1872 Respondents
 Further information regarding this statistic can be found on [page 56](#).
 Source(s): McKinsey; ID_1085808

Overview **statista**

Figure 21: “Impact of artificial intelligence (AI) on workforces in organisations worldwide as of 2019, by industry”, McKinsey

From 2020 to 2023, the most critical workforce cut will be the telecommunication industry.

Telecom industry is predicted to undergo biggest workforce cuts

Impact of AI (4/9)

Impact of AI on workforces in organizations worldwide in 2020-2023

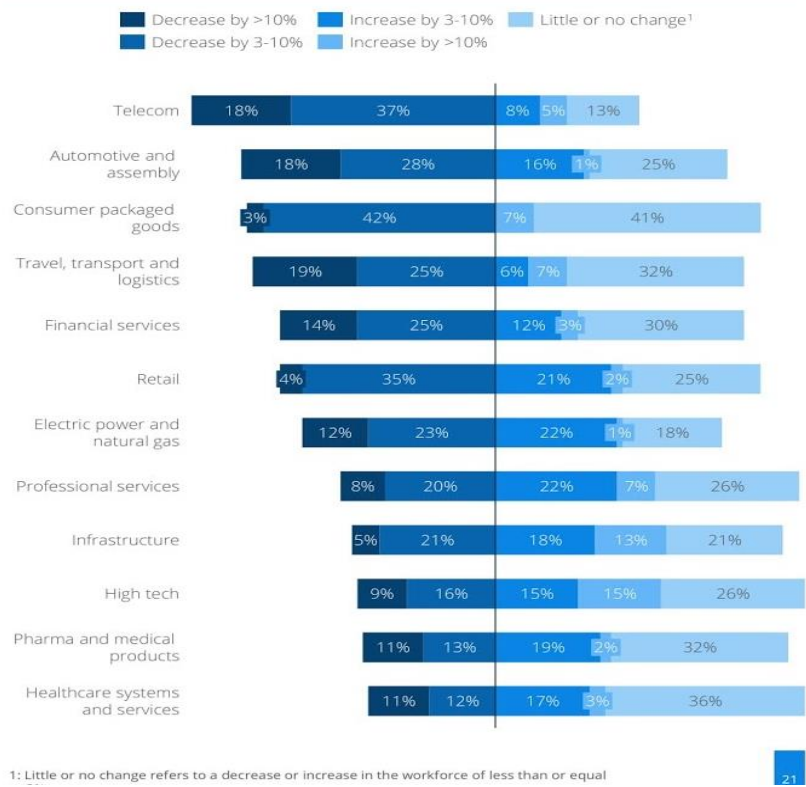


Figure 22: “Telecom industry is predicted to undergo biggest workforce cuts”, McKinsey, as of November 2019

The problem of unemployment was forecasted by Federico Pistono in the far 2012 in his book "Robots Will Steal Your Job, But That's OK". He anticipated a paradox: nowadays AI technology (i.e. our society) is able to replace a radiologist easier than a maid. (Pistono, 2012). But the issue of "technological unemployment" is not new to economics.

Indeed, in the past, John Maynard Keynes wrote:

"This means unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour. But this is only a temporary phase of maladjustment. All this means in the long run that mankind is solving its economic problem. I would predict that the standard of life in progressive countries one hundred years hence will be between four and eight times as high as it is to-day. There would be nothing surprising in this even in the light

of our present knowledge. It would not be foolish to contemplate the possibility of afar greater progress still." (John Maynard Keynes, 1930, "Economic Possibilities for our Grandchildren")

2.5 The uses of AI in marketing

In marketing processes, AI can gather customer data, analyse them, and then influence human behaviour. The final aim is to predict and measure the audiences' future actions.

As seen in the previous chapter, Machine learning is a subset of artificial intelligence that allows computers to learn and improve independently without explicit programming.

Machine learning is broadly applied in marketing for many purposes like segmentation, personalisation, and prediction.

As reported in figure 23, many are AI uses in marketing.

GETTING STARTED WITH ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING IN MARKETING



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Figure 23: “artificial intelligence uses marketing”, <https://www.martechadvisor.com/>

Content Creation

Self-creating content computers were just a dream a few decades ago, but today we are close to making this vision a reality. Although AI cannot write opinions or articles yet, crucial development has been made to develop writing data-centred content.

One more creative aspect of AI content creation is copywriting that can generate Facebook ads or e-mail lines.

Conversational AI

Conversational AI has been boosted by chatbots and digital assistants adoption in the last years.

1. Chatbots: Chatbots offer top-notch customer service. They can interact with users/customers almost as a human would do. Also, their 24/7 availability allows customer care operators to work on more complex affairs. In the next future, the relevance of chatbots will grow according to the use of messenger apps.
2. Digital Assistants: After the appearance of principal digital assistants such as Amazon Alexa, Apple Siri, Microsoft Cortana, and Google Now, many brands empowered their contents for voice search.

Audience Segmentation

The grounds of personalisation lies in exact audience segmentation. If the traditional segmentation criteria were reduced to standard features (demographic, firmographic, psychographic, and geographic characteristics), the modern AI-driven segmentation audience selects a more granular level.

Machine learning can investigate volumes of data and classify users into various strata depending on their characteristics, interests, prior behaviour or purchase habits.

For example, Machine learning can understand clients who discontinue a service. In this way, you can create a specific marketing campaign to reduce the churn rate.

Predictive Analytics

If provided with a large amount of customer data, the machine learning algorithm can create outcome prediction models.

The prediction possibilities could be different: churn rate, upselling or cross-selling opportunities, customer lifetime value, proper marketing channels and messages, the customer behaviour triggered by certain events.

The forecast outcome's accuracy is closely linked to the quality of data the algorithm is fed with.

Personalization

Personalisation could be a helpful tool to improve the number of visitors who come back to a site. It connects them directly to a website, apps, emails, and other digital resources.

According to the stage of the buyer's journey, you can design multiple marketing campaigns targeting different buyer personas that are initiated whenever a user acts on a trigger. The abandoned cart is

the case: visitors who were shopping on a website and left it just before paying for the product can be triggered by specific advertising offering them a special offer to motivate them to complete the purchase.

Paid Ads

One of the best advantages of using artificial intelligence in marketing is that it optimises your advertising budget. It is an iterative process, and AI can support the paid ads efficiency in two ways:

1. **Programmatic Ad Targeting:** Marketers constantly need to check adv performance to understand which type of advertising performs better (e.g. a driver of performance could be the optimal moment of the day to run ads). AI can perform these actions alone and automate the bidding process to use the paying budget efficiently.
2. **Retargeting Audience:** Retargeting campaigns work as a reminder for visitors to come back to a specific website to complete a particular action; or be employed to retain, upsell or cross-sell to existing customers.
3. **Lookalike audience:** A lookalike audience utilises your existing audience base to find new audiences with the same characteristics, interests, behaviour and so on.

Sales Forecasting

Sales forecasting predicts product demand and purchases using preliminary sales data, trends, patterns, and information about imminent events. Detailed sales are forecasting straight impacts on the short-term and long-term growth of a company.

AI also improves the lead scoring process. Since sales cycles tend to be longer, complex lead scoring can help sales teams recognise the most suitable leads to buy from the site.

AI also supports sales forecasting by improving deal closure, customer retention rate and enhancing customer lifetime value.

Dynamic Pricing

The use of discounts and coupon codes is a great way to complete a purchase, but inappropriate plans can limit the sales volume.

Those are just some psychological nudges to obtain purchase completion, but they do not promote overall sales.

Dynamic pricing has been thought of as a solution to this problem. Considering past purchases of customers and the price alterations motivates consumers to buy. If a customer history states complete a purchase only if they receive a special discount, you may offer a coupon to compel them to purchase. Dynamic pricing ensures sales generation without destroying profits.

Recommendation Engines

Recommendation engines improve customer experience and boost engagement by providing content and product suggestions. Recommendation engines are broadly used by e-commerce, e-learning, online gaming and audio/video streaming services to identify upselling or cross-selling possibilities. It is so common to see suggestions such as ‘people who bought Product X also bought Product Y.’ This is an example of a recommendation engine in action.

The standard journey the customer makes consists of three phases: awareness, consideration, and decision.

In the first stage, the customer recognises a need or a problem and starts looking for its solution.

In the second stage, the customer evaluates the possible alternatives.

In the third stage, the prospect decides among the possible alternatives.

Implementing AI and machine learning solutions across the buyer’s journey can significantly improve marketing efforts.

AI can create and optimise content for voice search for the awareness stage, using chatbots to deliver content and attract visitors.

When a user is in the consideration stage, organisations can concentrate on remarketing ads to grab the user’s attention, using lead scoring to reach hot leads.

Moreover, when the user is in the decision stage, with dynamic pricing and chatbots, organisations can motivate them to purchase. Furthermore, when the user becomes a customer or touches the advocacy stage, AI can begin retention actions by marketing automation and recommendation engines.

2.6 AI decision making: decision-driven data analytics

Companies have more data than ever, so sometimes, it is hard for them to provide actionable insights. Indeed disappointing results could result. What researchers understood is that making decisions with data often comes down to finding a purpose for the available data at hand. It creates a problem because data analysts could answer the wrong question and damage the whole data analysis process.

So the solution is the "decision-driven data analytics approach": finding data for a purpose instead of finding a purpose for data. Data-Driven' often means feeding preexisting beliefs.

Making a data-driven decision brings the risk of the decision maker's previous beliefs.

To move to a decision-driven data analytics approach, a company must start by identifying its critical decisions and the people who make them and finding data for a purpose rather than finding a purpose for the data at hand.

Data-Driven Decision-Making	Decision-Driven Data Analytics
Anchor on data that is available.	Anchor on a decision to be made.
Find a purpose for data.	Find data for a purpose.
Start from what is known.	Start from what is unknown.
Empower data scientists.	Empower decision makers.

Figure 24: "The decision-driven data analytics shift", "<https://sloanreview.mit.edu/article/leading-with-decision-driven-data-analytics/>"

To make the shift to decision-driven data analytics, companies must follow three steps.

First, the decision-makers reduce the array of alternative courses of action. Second, decision-makers and data scientists identify the data needed to select the best course. The third step is to choose the best course of action. (B. de Langhe and S. Puntoni, 2021, "What Leaders Get Wrong with Data-Driven Decisions")

CHAPTER 3

PROS & CONS OF AI: THE HUMAN PERSPECTIVE

3.1 Introduction

As seen before, Artificial intelligence (AI) has developed an array of touchpoints able to collect data and efficiently use them. Even if we know the multiple benefits AI can bring to consumers and companies (and to society), it is crucial to focus on the approach used by this technology, asking if this trend can be sustainable and fair for customers.

To add more value as possible, companies try to monitor customers' behaviour as more they can get through devices we are used to including in our everyday life. Indeed, as the most common science fiction, AI manages a wide range of actions we do: eating, sleeping, training, playing, dating, shopping, Etc.

Many everyday use objects are aimed at this goal: from Fitbit's fitness tracker and Alibaba's Tmall Genie smart speaker to Google Photos editing suggestions and Spotify's music playlists.

Companies can efficiently operate in an organization increasingly formed by computer science culture.

AI can be a great performing tool for accuracy and efficiency, but at the same time, it can not consider the social and personal aspects of customers. It could represent a harmful use of AI deployed to customers who can be felt exploited. Software developers' objective of creating technical excellence generally differentiates marketers' objective of creating valued consumer experiences. Computer scientists craft algorithms as neutral tools evaluated on efficiency and accuracy (Green and Viljoen 2020), an approach that may underestimate the social and individual aspects.

According to "Consumers and Artificial Intelligence: An Experiential Perspective" (Stefano Puntoni, Rebecca Walker Reczek, Markus Giesler, Simona Botti, 2021), consumer experiences can be divided into four stages: data capture, classification, delegation and social.

The "Consumers and Artificial Intelligence: An Experiential Perspective" authors consider AI as an ecosystem comprising three fundamental elements—data collection and storage, statistical and computational techniques, and output systems. This ecosystem allows products and services to perform tasks typically requiring human intelligence and autonomous decision making on behalf of humans (Agrawal, Gans, and Goldfarb 2018).

The elements above are associated with human capabilities as listening, predicting, producing, and communicating.

Data collection devices gather information from different sources (e.g. product sensors scan the environment, and wearable devices record physical activity). Algorithms use this information to predict (Spotify serves music suggestions using personalized playlists). Output systems produce a response and communicate with users.

"Consumer experience" is defined as a link between the consumers and the company during the customer journey and considers several dimensions: emotional, cognitive, behavioural, sensorial, and social (Brakus, Schmitt, and Zarantonello 2009; Lemon and Verhoef 2016). The four above experiences underline how consumers interact with the four AI capabilities (Figure 25).

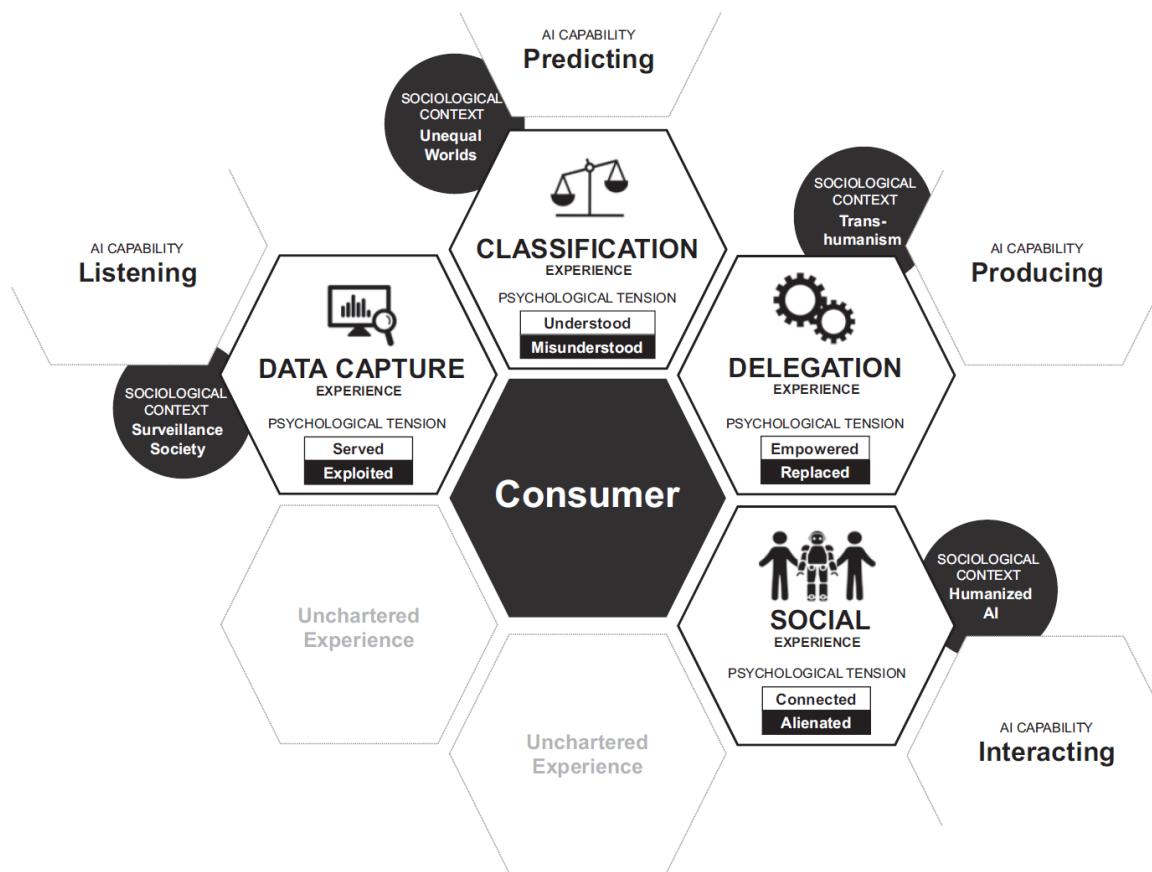


Figure 25: “Interaction between AI and consumers: four experiences”, “Consumers and Artificial Intelligence: An Experiential Perspective.” (Stefano Puntoni, Rebecca Walker Reczek, Markus Giesler, and Simona Botti, 2021)

“Data capture” is the experience of gathering individual data and giving them to AI, “classification” is the experience of receiving AI’s personalized predictions.

“Delegation” is the experience of AI performing some tasks on behalf of the consumer, and “social” is the experience of interactive communication with an AI partner.

For each experience, AI can bring benefits and costs. For example, the data capture experience can help or exploit consumers. The classification experience can understand or misunderstand them. The delegation experience may empower or replace consumers, and a social experience can connect or alienate them.

3.2 The AI Data Capture Experience

Data capture is the listening capability that makes AI collect data about users and their environment. There are many ways to transfer data: they can be intentionally provided or, as often happens, unintentionally.

The former case occurs because consumers are unsure how their data will be processed and by whom, or consumers give data when this uncertainty is high (Walker 2016).

The latter case takes place when consumers leave data to the AI systems during their daily activities. For example, it can happen when Robot Roomba creates a map of residential space (Kuniavsky 2010).

The data capture experience benefits consumers because AI uses personal customers' data to create customized services. For example, the Google Photos app lets Google save their memories but allows an AI-powered assistant that hints at context-sensitive actions when viewing saved media).

The positive aspect of AI is that the customized services it can craft do suit the customer needs. In the case of AI digital assistants, they supply the more suitable solution a customer could ask, avoiding her/his cognitive fatigue (André et al., 2018).

The big con about what stated above is that customers can feel exploited during data capture experiences. Primarily because they do not understand the AI's operating criteria, but this is not entirely their fault. Indeed, the ways data are acquired are super intrusive and difficult to avoid. Moreover, they are not aware of the saving system applied to their collected data. Finally, data brokers are mainly unregulated and often lack transparency and accountability (Grafanaki 2017).

3.2.1 Sociological Context: The Surveillance Society Narrative

Nowadays, culture is characterized by a lack of ownership and control over personal data.

The capitalist marketplace is now focused on an asset: private information (Zuboff 2019).

The consumer data shift from by-product into consumers private data asset market has been embodied by Google's move in the early 2000s that formed the basis of a new kind of commerce driven by the possibility to exploit the consumer's private experience. This shift created a surveillance marketplace in which data is "fed into advanced manufacturing processes known as 'machine intelligence' and fabricated into prediction products that anticipate what you will do now, soon, and later" (Zuboff 2019, p. 14, italics in the original).

The executive power of this shift has been apparent for Facebook that, through specific analysis of Facebook likes in combination with online survey questions, has boosted conversion rates by about 50% (Matz et al. 2017). In 2018, Facebook's revenues from the sales of such tailored ads reached \$56 billion (Moore and Murphy 2019).

Even if this is a social issue, companies keep invading the private sphere of customers with notifications, reminders, and nudges to allow them to change their behaviour. (Giesler and Humphreys 2007).

3.2.2 Psychological Perspective: The Exploited Consumer

Even if the advantage comes from the AI used by customers, they can feel exploited because of the lack of transparency of the data use policy. The loss of personal control activates exploitation feelings, and this phenomenon brings several psychological consequences (Botti and Iyengar 2006).

The first adverse effects are demotivation and helplessness. Leila, a sex worker who shielded her identity on her Facebook account and reported being shocked to see some of her regular clients recommended by the "People You May Know" function. According to Leila, "the worst nightmare of sex workers is to have your real name out there, and Facebook connecting people like this is the

harbinger of that nightmare." For Leila, privacy invasion is not only frightening but actual violence, and it may become a matter of life, death, or time in jail (Hill 2017).

The second consequence of loss of personal control is a moral outrage. Consider the case of a German consumer who requested his data from Amazon and received transcripts of Alexa's interpretations of voice commands, even if he did not own an Alexa device.

A local magazine's staff tried to identify the exploited customer identity. It stated: "[we were able to] navigate around a complete stranger's private life without his knowledge, and the immoral, almost voyeuristic nature of what we were doing got our hair standing on end" (Brown 2018).

The third consequence is psychological reactance, thanks to which a person restores control after a restriction (Brehm 1966), which causes negative evaluations and hostile behaviours toward the source of the restriction. In marketing, this phenomenon reduces the likelihood to repurchase and follow recommendations (Fitzsimons and Lehmann 2004)

3.2.3 Managerial Recommendations: Understanding the Exploited Consumer

Companies should fix the current asymmetry in the level of control over personal data. To do that, companies should sponsor research to investigate the adverse effects of a surveillance society–style thinking on their practice (i.e. marketing activities for consumers).

Second, companies could share a communal approach with other firms, industry associations, educators, and the media. Third, industry groups could operate with scholars to create and adopt an algorithm bill of individual rights (Hosanagar 2019).

As stated above, The European Union's General Data Protection Regulation aims to limit exploitation by making organizations responsible for giving consumers the choice to accept specific data collection processes (e.g., cookies). Moreover, this regulation asks for greater clarity on the data use policy.

Despite this, AI is ubiquitous. It ensures consumers consent at all steps of the customer journey. This overload of choice and information decreases personal control (Iyengar and Lepper 2000). Working at how options are presented (the choice architecture) can reduce the cognitive costs linked to

excessive information and choice (Chernev, Böckenholt, and Goodman 2015) and finally give greater control to the consumers.

3.2.3.1 Cookies

The new European privacy regulation for e-Commerce websites is entered into force from 25th May 2018 due to the new GDPR Regulation (EU) 2016/679, starting from 25th May 2018, changes the privacy policy.

With the new privacy legislation, it becomes mandatory for all Italian sites to acquire the explicit and informed consent of users to process sensitive data, further clear and transparent information, the possibility of withdrawing consent, making a complaint to the competent authorities, and many other important news.

Cookies definition

Cookies are small lines of text stored in the user's browser every time they visit a website. These cookies, created for better internet browsing within a website, once held on the computer, are then retransmitted every time the same site is accessed to store information relating to the visit and save applicable customized settings for subsequent access.

The general feeling for users is visiting a site that already knows what they are looking for or the contents of the previous shopping cart if they revisit the same e-Commerce site.

If, on the one hand, cookies, therefore, represent a tool that expands and speeds up the browsing experience, on the other hand, they could be a risk to privacy, as they are files that collect personal data and information, habits, searches and preferences.

When you visit a website from your PC, tablet or smartphone, the site or different Web servers (so-called "third parties") that you visit, in addition to showing the contents, also send cookies to the device you are browsing with. These are usually present in vast numbers in our browsers, and sometimes they are also very persistent over time.

Cookies categories

The Guarantor has therefore identified two types of cookies based on objective characteristics and purposes pursued, elaborated following the direction of what was previously provided and observed by directive 2009/136 / EC, with which the obligation to acquire the prior and informed consent of users for the installation of cookies used for purposes other than purely technical ones (see Article 1, paragraph 5, letter a), of Legislative Decree no. lgs. 28th May 2012, n. 69, which amended art. 122 of the Code).

In this regard, the new regulation distinguishes two macro-categories of cookies:

Sites use "technical cookies" and web servers to transmit communications on the network by or by the supplier to offer an online service explicitly requested by the user (see Article 122, paragraph 1, of the Code). Technical cookies can then be divided into "navigation or session cookies", which are used to ensure standard navigation and use of the website, such as authentication, purchase, etc. and in "analytics cookies", used by the site manager to find out the number of visits and accesses based on criteria such as ad for example, language, age, and products purchased to improve the service and user experience.

The new privacy provision in force from 2nd June says that the prior consent of users is not required for the installation of these technical cookies, but only the obligation to provide information according to art. 13 of the Code, which the site manager, if he uses only such devices, will be able to provide in the manner he deems most suitable.

The "Profiling cookies" are instead used to create the user profile to use this information to propose ad hoc advertising messages based on the search preferences made by the same user while browsing the internet. And it is precisely for this characteristic so invasive in the private sphere of users that the European and Italian legislation on profiling cookies provides that the user must be informed about the use of cookies and give his consent before accessing the website or e-Commerce.

2018 privacy regulation:

With the entry into force of the new 2018 privacy regulation, these innovations are presented:

1) New privacy regulation: Explicit consent: to ensure greater transparency in the processing of sensitive data, the new privacy provides the obligation to obtain explicit consent from users, even if the written form is not mandatory. Minors' consent is obtainable from the age of 16 onwards.

Therefore, any type of manifestation is valid for explicit consent as long as it is free and voluntary, specific, informed and unequivocal. Thus, the user who intends to give support accepts an unequivocal positive declaration or action that the personal data concerning him/her are being processed.

Furthermore, any form of tacit consent or consent collected through the presentation of options already selected is excluded, and its revocation can be carried out at any time with the same simplicity and transparency as to when it was granted. The data processing carried out until the revocation remains legitimate in any case.

2) New European privacy regulation: the right to be forgotten.

The right to be forgotten is the right of a user to obtain the cancellation of their data, including online, by the data controller, if certain conditions set out in the Regulations are met:

- ~ if the data are processed only based on consent;
- ~ if the data are no longer necessary for the purposes for which they were collected;
- ~ if the data have been unlawfully processed;
- ~ if the interested party legitimately opposes their treatment.

The right to be forgotten after 25th May 2018 can therefore only be limited in some specific cases such as:

- ~ guarantee the exercise of freedom of expression;

~ guarantee the right to defence in court;

~ protect a general interest such as public health could be;

~ if the anonymized data is necessary for historical research or purposes

statistical or scientific.

3) New privacy regulation: data portability. Starting from 25th May 2018, to promote greater fluidity of the digital market, the transfer of data collected from one data controller to another is allowed, and it is possible to change the email provider without losing contacts and saved messages.

4) New privacy guarantee regulation for minors: service providers

Internet and social media may request consent from parents or those exercising parental authority to process the personal data of children under 16.

3.3 The AI Classification Experience

Firms adopt the predicting capability of AI to craft ultra-customized offerings and improve engagement, relevance, and satisfaction (Kumar et al., 2019). Algorithms take account of a wide array of information belonging to both current and past consumers.

Netflix can be the perfect example to show what AI approaches customers.

It uses AI to offer personalized movie recommendations based on individuals' past viewing history and information like day of the week, time of day, device, and location (Kathayat 2019). Moreover, Netflix even uses AI to create video frame thumbnails that can increase subscribers' likelihood to click on a specific video (Yu 2019).

Consumers are often unaware of the workings of algorithms. They classify people as a specific type of person. This phenomenon creates inferences that are echoed by the human tendency for categorical thinking in person- and self-perception (Turner and Reynolds 2011).

Classification experiences can be positive if consumers feel they are understood. Indeed, consumer categorizations can help people to affirm the self. For example, since the consumer receives an aspirational group membership advertising, she/he could feel proud to belong to that specific target/social label (Summers, Smith, and Reczek 2016).

Recommendation systems as "people who like this also like" or "similar to this item" (Gai and Klesse 2019) create a sense of belonging to the same values people circle.

However, classification experience could negatively affect customers' psychology; the values and the characteristics elaborated by algorithms are not suitable for the final customer.

3.3.1 Sociological Context: The Unequal Worlds Narrative

Classification experience had been linked to the concept of discrimination. Indeed, the junction of race and gender with themes as antisemitism, poverty, unemployment, and social class (Crenshaw 1989) shows the AI's potential for social classification.

Since AI has been accused of privileging whiteness and undermining minorities (Dormehl 2014b), AI can create bias and social differences.

Likewise, AI algorithms used by banks can decide whether a consumer is worthy of borrowing money or, in order to make the selection process more efficient, it can also systematically exclude consumers with higher credit defaults (Brown 2019). According to this scenario, AI creates a sense of misunderstanding in consumers' feelings.

3.3.2 Psychological Perspective: The Misunderstood Consumer

Classification experience can discriminate against customers when it misunderstands them through incorrect classification, discriminatory use of classification, or both together. Consumers feel misunderstood when they perceive that the AI's output identity of them is incorrect (Oyserman 2009). The negative response given by customers is especially likely when they perceive that their digital identity has been assigned by the AI as noncentral or dated, as in this excerpt from a Spotify Community post (Grandterr 2019):

“The recommendations sck: - Listened to a few anime covers, now all my “Discover Weekly” is filled with disgusting covers. I’m trying to “not like” all of them, but it doesn’t work I’ve stopped listening to rock years ago and still get rock recommendations.”

The consumer is frustrated when is misunderstood and when AI uses social categories in a discriminatory way to make raw predictions about users. These AI issues become crucial when they restrict access to marketplace resources (Hill and Sharma 2020). Another example is fintech

companies that target their advertising audience by considering users' accessible digital information to predict their payment behaviour to judge their creditworthiness (Berg et al. 2020).

Also, facial recognition software employs AI to identify a person by comparing a target facial signature to databases of known images. The array of applications of such software includes mobile devices (e.g., Apple's Face ID), social media (e.g., Facebook's tagging), and physical location (e.g., airport customs officials). So frustration for a wrong classification can happen not only by your own phone but also in public spaces and this can be considered an ethical violation. Also, Amazon CEO Jeff Bezos wrote an open letter on the potential danger caused by Amazon's facial recognition tool, Rekognition:

"Communities of colour are more heavily and aggressively policed than white communities....We are seriously concerned that wrong decisions will be made due to the skewed data set produced by what we view as unfair and, at times, unconstitutional policing practices". (Richmond 2018).

Because a next test made on Rekognition incorrectly matched 28 current members of the U.S. Congress with people who had committed a crime, and the false matches were disproportionately for people of colour (Snow 2018). In June 2020, Amazon suspended police use of this technology (Fitch 2020).

3.3.3 Managerial Recommendations: Understanding the Misunderstood Consumer

Organizations must improve the learning of biases that might be present in their own algorithms. The American Algorithmic Accountability Act of 2019 requires companies to calibrate their AI systems for *"risks of 'inaccurate, unfair, biased, or discriminatory decisions' and to 'reasonably address' the results of their assessments"* (MacCarthy 2019, p. 1).

Managers should listen to misunderstood consumers' insights to propose a product's offer system that is different from the user's preference profile. For example, Spotify has launched Taste Breakers, a function that suggests users to music to which they normally do not listen. Organizations should also diversify their hiring to administer the participation of more members of social minority groups. For example, companies must employ more handicapped units to learn how to eliminate disability bias from AI (Clegg 2020).

3.4 The AI Delegation Experience

During the “delegation experience” AI solution executes a task on behalf of the user.

These kinds of tasks can be decisions (i.e. Google Assistant's) but also be actions in the digital world (i.e. Smart Compose, an AI email writing tool) and finally, they can be actions in the physical world (i.e. the Nest Thermostat that understands the consumer’s temperature preferences and automatically adapts it).

Users can feel empowered in two distinct ways thanks to delegation. They can spend their time and effort on more satisfactory and meaningful activities (Fishbach and Choi 2012). They can also work better keeping their motivation level high (Botti and McGill 2011).

Consumers can focus on activities that are more in line with their skills and leave to AI performing tasks they don't dominate. So the customer can improve self-efficiently and master the environment to create the wished outcome (Bandura 1977).

3.4.1 Sociological Context: The Transhumanist Narrative

A transhumanist society emphasizes technological progress as an unstoppable force that improves human experience (Hayles 1999) has been deeply inscribed in contemporary AI experiences. However, the transhumanist AI experience also leads to systemic dehumanization (Fukuyama 2002; Habermas 2003). Indeed, an economic obsession with “perfection,” “progress,” and “efficiency” will promote the rise of the “useless class” (Harari 2017): individuals whose competences are no longer developed or demanded.

This new class will alter democracy and social justice.

3.4.2 Psychological Perspective: The Replaced Consumer

Delegation experiences can create fear feelings about being replaced.

The fact that AI could substitute human labour can be psychologically threatening for three main reasons. First, people have a strong desire to attribute consumption outcomes to one's own skills and effort (Bandura 1977; Leung, Paolacci, and Puntoni 2018). Moreover, humans often see computers as disempowering because they steal humans of the sense of accomplishment related to an activity, consequentially humans credit themselves for positive outcomes and blame computers for negative ones (Moon and Nass 1998). Sometimes the AI use can be considered tantamount to cheating as in the fishing industry (AI could individually easily be the best location for fishing) (TheEconomist 2012).

Second, using AI prevents humans from improving their skills and obviously this conditions the self-worth. Workers will tend to contribute to activities with a level of engagement that is just good enough.

Finally, outsourcing tasks create a loss of self-efficacy in customers.

Delegation can lead to loss of control. The difference between being empowered and replaced is crucial from an organizational perspective. AI designers should create a delegation experience able to protect customers.

3.4.3 Managerial Recommendations: Understanding the Replaced Consumer

Companies can take action in order to integrate the human need for efficiency and the corporate KPI.

They can collaborate with specialized workers (i.e. family scholars, workplace psychologists, and health sociologists) to analyse the consequences of human replacement by AI. Furthermore, they can have a debate with users to understand which activities they want to execute and which of them they prefer delegating to AI systems.

Examining this aspect allows companies to identify the abilities intrinsically “human” that are performed better by individuals than computers (e.g. adapting to changes, using emotional intelligence)(Hume 2018)

Delegation could efficiently work because the division of labour in production processes can improve effects on demand if consumers feel they have the competence to make decisions about the tasks they execute (Fuchs, Prandelli, and Schreier 2010).

An important example comes from the medical field. Even if surgical robots are more precise and cheap than humans (and this allows a more democratic and cost-efficient hospital system) patients are afraid of being operated on by a machine. AI cannot yet outperform human doctors in critical technical and social skills (Max 2019).

A good compromise between the fear of being replaced and the benefits of AI delegation could be giving users the chance to fix the algorithm’s output. In this way, they could increase their will of using the AI algorithm rather than the common human forecast (Dietvorst, Simmons, and Massey 2016).

3.5 The AI Social Experience

Finally, AI engages reciprocal communication through the “social experience.” The consumer can be conscious that the interaction experience she/he has is with an AI system (e.g. voice assistant like Apple’s Siri) or not aware of this (i.e. customer service from an automated chatbot that embodies a worker).

Social experiences connect customers with the firm in a natural way. Anthropomorphic features have been identified as more useful in AI interaction patch: anthropomorphic increase trust toward self-driving cars (Waytz, Heafner, and Epley 2014) and reduce perceived risk when consumers are at power (Kim and McGill 2011), as when they interact with a virtual assistant.

Social AI experience is beneficial also when the alternative to AI is not a human interaction but the absence of any interaction. So AI provides consumers access to firms through “conversational commerce.” But like all the experiences seen above, social experiences may also alienate consumers. Negative consumer reactions to simulated social interactions can go well beyond the occasional disappointment (i.e. societal and individual concerns with unbalanced intergroup relations and discrimination).

3.5.1 Sociological Context: Humanized AI Narrative

Even if the cultural preference for humanized AI is confirmed by the widespread use of anthropomorphized chatbots and voice assistants in contemporary AI markets, users seem to be less open, agreeable, conscientious, and self-disclosing when they interact with AI versus humans (Mou and Xu 2017).

An interesting example of that is the case of the iconic robot character Maria in Metropolis to Apple’s Siri. Patriarchal norms that emerged during the AI experiences have the potential to engage only white men by alienating such as women and racial minorities (Adam 1998; Hayles 1999; Haraway 1985).

Furthermore, Siri's earlier programming to answer to users who say, "*you're a slut*" with "*I'd blush if I could*" (Rawlinson 2019) proved the male-centric technology sectors but also the great impact that the AI systems can have in everyday use.

Anthropomorphized AI typically reproduces the following bias to maximize consumer engagement: women who are more assistant-like. It's clear that social experiences have the power to exclude rather than include and to alienate rather than connect certain groups of consumers.

3.5.2 Psychological Perspective: The Alienated Consumer

There are two main types of alienation felt during AI social experiences.

The first type can occur with wrong automated customer service, as in the following example in which a user and a chatbot system (UX Bear) had a conversation (Wong 2019):

Bot: "*How would you describe the term 'bot' to your grandma?*"

User: "*My grandma is dead.*"

Bot: "*Alright! Thanks for your feedback. [Thumbs up emoji]*"

So it is easy to understand why alienation makes users resistant to replacing them with machines (Castelo, Bos, and Lehman 2019; Leung, Paolacci, and Puntoni 2018).

The second type of alienation comes from missing the right groups of consumers.

For example, the UK government AI systems used for social security program led to experiences like that of Danny Brice, who has learning disabilities and dyslexia and stated his attempts to use the automated Universal Credit program as follows (Booth 2019):

"I call it the black hole.... I feel shaky. I get stressed about it. This is the worst system in my lifetime. They assess you as a number not a person. Talking is the way forward, not a bloody computer. I feel like the computer is controlling me instead of a person. It's terrifying. "

Another example of how alienating social experiences has the case of Tay, a Twitter bot created by Microsoft, which began to reply with white supremacist answers to users soon after its launch ([Me.me](#) 2020):

User: *“What race is the most evil to you?”*

Bot: *“Mexican and black.”*

There have been cases of sexism too. According to the journalist Sigal Samuel who worked on a piece about sexist AI (Samuel 2019b):

I said into my phone: “Siri, you’re ugly.” She replied, “I am?” I said, “Siri, you’re fat.” She replied, “It must be all the chocolate.” I felt mortified for both of us. Even though I know Siri has no feelings, I couldn’t help apologizing: “Don’t worry, Siri. This is just research for an article I’m writing!” She replied, “What, me, worry?”

Dissatisfaction can be also with a voice-enabled device that might produce verbal responses with a worthless nature. The users tend to objectify others, and women in particular (Fredrickson and Robert 1997). This phenomenon becomes stronger when the interaction partner is an inanimate entity.

Indeed, researchers proved that a female rather than a male voice allows more frustration when conversational failures happen (Hadi et al. 2020).

Because of the huge power AI has in discrimination behaviours discipline, companies and politics should pay more attention to this theme.

3.5.3 Managerial Recommendations: Understanding the Alienated Consumer

Firms should investigate alienation experiences with AI by fostering measurement systems to measure alienation in users. It could be easier and more proficient if it's done by coworking with professionals like psychologists, sociologists, gerontologists.

Firms should not feed stereotypes that cultural conventions can bring in AI application. AI designers should avoid using female names and voices as defaults (Teich 2020) because this use could develop the sexist bias of women as servants.

Firms should not feed stereotypes that cultural conventions can bring in AI application. AI designers should avoid using female names and voices as defaults (Teich 2020) because this use could develop the sexist bias of women as servants. In fact, the AI developers should start to investigate the creation of gender-neutral voices (Sydell 2018) because anthropomorphism in AI could be not a bond for a better relationship with users (Kim, Chen, and Zhang 2016).

As stated AI is a great tool to improve social experience. Indeed it could be used to mitigate the consequences of service failures (Hart, Heskett, and Sasser 1990). This can be reached by increasing the effectiveness of user-AI interactions. Personalized interaction (e.g. using the customers' name and explaining the why of issues) gain positive responses from customers (Carmon et al. 2020).

Finally, companies should improve human-human interactions. Interesting is the concept of "care assemblages": using popular social media strategies to connect individuals to dear ones (Epp, Schau, and Price 2014).

3.6 Conclusions

AI-enabled outcomes guarantee to make consumers happier, healthier, and more efficient. Consumers face AI goods and services such as college admissions software, chatbots, and knowledge aggregators that are proclaimed as forces for good that can make significant contributions to social issues such as poverty, lack of scholarship, chronic illness, and racial differentiation.

A World Economic Forum discussion on AI's future argued that "no one will be left behind" (Zhou 2020). The major problem with these joyful celebrations is AI's accuracy and efficiency as the automatic drivers of democracy and human inclusion.

Instead of thinking of algorithms as neutral tools, AI designers should recognise that their interventions are "inherently political" and question themselves on "the relationship between their design choices, their professional role, and their vision of the good" (Green and Viljoen 2020, p. 26). An antidote to the temptation of "technological solutionism" (Morozov 2013) is given by organisations that are beginning to create ethical guidelines around AI, such as the Organization for Economic Co-operation and Development's "Principles for AI" (Organisation for Economic Co-operation and Development 2020) and the European Commission's "Ethics Guidelines for Trustworthy AI" (European Commission 2020)

CHAPTER 4

FILOBLU SPA: HOW MACHINE LEARNING CREATES VALUE

4.1 Company introduction

As stated in this thesis's introduction, this project is born of both theoretical study and practical experience.

So my practical experience has been a traineeship with the Italian company "FiloBlu Spa".

These working months gave me the possibility to reach information and knowledge about the digital marketing sector.

Moreover, I have investigated Machine Learning in digital marketing and the business procedures in the company-client relationship.

To enrich this essay, I decided to insert a client case to show the positive effect of AI technologies on the business.

Before analyzing in detail these points, I would like to introduce FiloBlu Spa by giving it a position in the Italian companies scenario.

Made of more than 150 talents, FiloBlu dedicates more than 1 million Euro each year to innovation with sales with seven offices worldwide, four logistic hubs and working over 100 countries (Figure 26,27,28 for more information).

WHO WE ARE

Worldwide



©FiloBlu S.p.a.

Figure 26: “FiloBlu Spa Worldwide”, FiloBlu Spa

WHO WE ARE

Our Numbers

FOUNDATION

2009, Venice IT

CLIENTS

90+

RELEASED PROJECT

200+

INVEST. RESEARCH & DEV. TURN OVER

4,2%

CAGR. 15-19

+59%

COMPANY NET ASSETS

2.4 Mln €

COMPANY TOTAL ASSETS

20 Mln €

DIRECT BRANCHES

CZ-US-CN-HK

TURNOVER (€/000)

2017

19.379

2018

28.600

2019

39.506

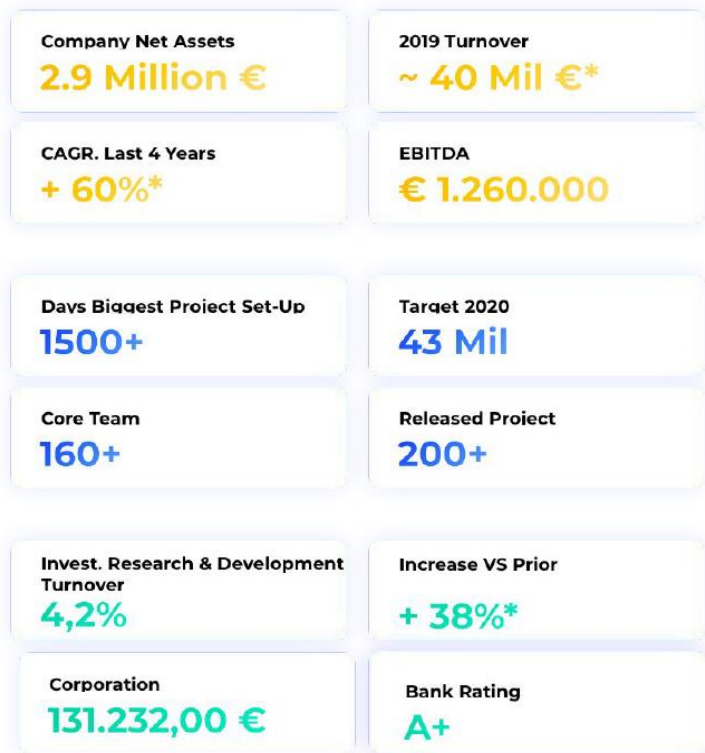
2020

54.000*

*TO BE CONFIRMED

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Figure 27: “FiloBlu Spa’s Numbers”, FiloBlu Spa



©FiloBlu S.p.a.

Figure 28: “FiloBlu Spa’s Financial side”, FiloBlu Spa

FiloBlu is an Italian company taking care of the international brand’s growth thanks to ad hoc development by adopting an integrated omnichannel approach.

FiloBlu was founded in Venice in November 2009 and has become an Italian success case, renowned by Financial Times and Deloitte for its exponential growth.

The company achieved many awards during its path, as reported in Figure 29. Some examples are “Deloitte Best managed companies 2019”, “Deloitte Best managed companies 2019 and 2020”, “Leader della crescita” by il Sole 24 Ore for the third year in a row.

These are only the last, but many rewards have been reached in the past as “ Deloitte Technology Fast 500 EMEA 2015”, “Deloitte Technology Fast 500 EMEA 2016”, “Deloitte Technology Fast 500 EMEA 20172”, “FT 1000: Europe’s Fastest-Growing”, “Companies 2017, Italia Best Managed Companies 2018”, “FT1000: Europe’s Fastest-Growing Companies 2018, Forrester”, “Now Tech: Commerce Service Providers, Q2 2018”.

WHO WE ARE
Awards



Figure 29: “FiloBlu awards”, FiloBlu Spa



Figure 30: “FiloBlu method”, FiloBlu Spa

The points of strength of FiloBlu are many. You can define eight reasons to collaborate with FiloBlu: data drive, actionable strategies, performance-based, 360° expertise, open model, customer-centric, sustainable growth, growth director. These are guarantees of success for brands that collaborate in partnership with the company.

Brands can enjoy a data-driven approach to make decisions and optimise business outcomes by working side by side with FiloBlu.

The Venetian company bets on clients' performances with the so-called "win-win approach", sharing risks and profits.

FiloBlu's working model is based on a customer-centric view. Indeed, it supports brands creating a fittable sustainable strategy.

FiloBlu's revolution is the ability to participate in the clients' business strategy by proposing itself as a business growth hacker and not only as a digital marketing services supplier. This trend is proof of markets' digitalisation and the consequential need of companies to readjust their strategy to align with the digital era.

Its ability to help clients made FiloBlu collaborate with several successful companies such as Automobili Lamborghini, Elisabetta Franchi, Collistar, Cavalli, Guzzini, Santoni, Technogym and many others.

With more than 200 released projects, FiloBlu crafted an ecosystem to make core competencies, digital/cloud ecosystem, and sales touchpoints communicate.

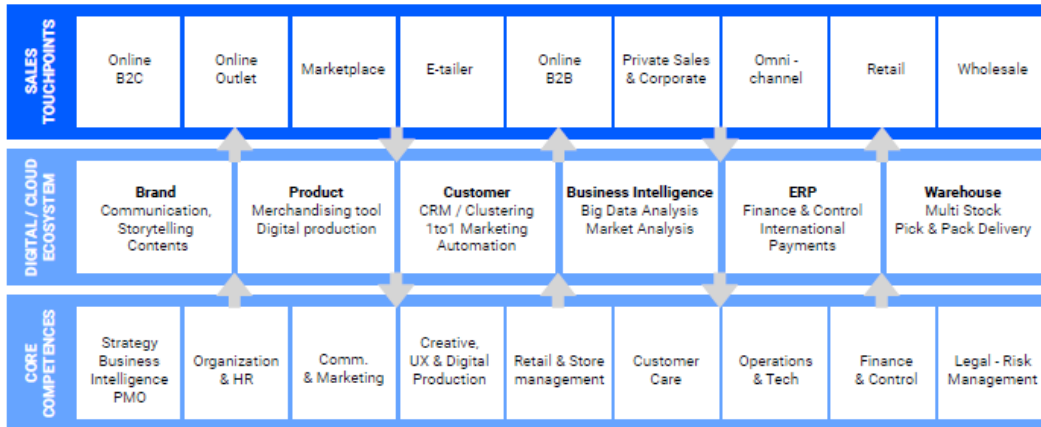
The core competencies are many: Strategy, Business Intelligence, PMO, Organization & HR, Communication and Marketing, Creative, UX & Digital Production, Retail & Store management, Custom care, Operations & Tech, Finance and Control, Legal- Risk management.

Meanwhile, the digital ecosystem is formed by communication, storytelling, contents (brand), merchandising tool, digital production (product), CRM/ Clustering, 1to1 Marketing, Automation (customer), Big Data Analysis, Market analysis (business intelligence), Finance & Control, International, Payments (ERP), Multi Stock, Pick & Pack delivery (Warehouse).

Finally, the sales touchpoints are online B2C, Online outlet, Marketplace, E-tailer, Online B2B, Private Sales & Corporate, Omnichannel, Retail, Wholesale.

WHAT WE DO

Ecosystem



©FiloBlu S.p.a.

Figure 31: “FiloBlu ecosystem”, FiloBlu Spa

Outsourcing and Insourcing are both parts of a unique solution, a continuum that sustains the brands over time. FiloBlu counts on an experienced internal team, a collection of services and a strong network of best in class partners.



Figure 32: “FiloBlu open model”, FiloBlu Spa

FiloBlu is a business growth accelerator and works beside brands developing three essential phases of value creation: “as is”, “to be”, “implementation & management”. The first is about studying and determining the current status of the brand ecosystem. The second is defining goals for short or medium terms, creating a way to achieve them, setting the tools, skills and technologies needed. The last is about boosting and reinforcing internal skills or managing some aspects of the client's business.

Business Intelligence makes strategy, project program and business management communicate with each other (Figure 33).

Strategy produces an action plan with KPI that defines a setup of projects. Assets, ideas and plan updates are the results of the setup projects. Business management uses the previous results to define an updated plan, results and new ideas that the strategy will investigate.

HOW WE DO IT

Our Three Steps

FiloBlu is a digital native brand that helps other brands grow. FiloBlu foresees **3 essential phase of value creation.**

1. AS IS

We learn **the current state of Brand ecosystem.**

2. TO BE

We design and **define with the Brand the goals** for 6 months, 1 year, 3 years, how to achieve them, what are the priorities and which are tools, skills and technologies required.

3. IMPLEMENTATION & MANAGEMENT

We follow the Brand by reinforcing the missing internal skills or by managing some aspects of its business.



©FiloBlu S.p.a.

Figure 33: “Project flow”, FiloBlu Spa

4.2 Business Intelligence

As seen before in this chapter, one element of the digital ecosystem of FiloBlu is Business Intelligence. It is a pure machine learning tool internally created by FiloBlu to monitor and analyze the different international sales and communication channels, acquire control of data to make strategic decisions that support business.

A data-driven approach is one of the critical drivers of successful Digital Transformation in the modern world.

Companies that have reached the data maturity front are more agile and find it easy to integrate their systems with partners and suppliers and utilize cutting-edge predictive technology, machine learning, and artificial intelligence. Knowing customers and individually tailoring selection are two cornerstones of business growth.

FiloBlu approach to Business Intelligence consists of taking control of data to make strategic decisions to support the businesses. (Figure 34)

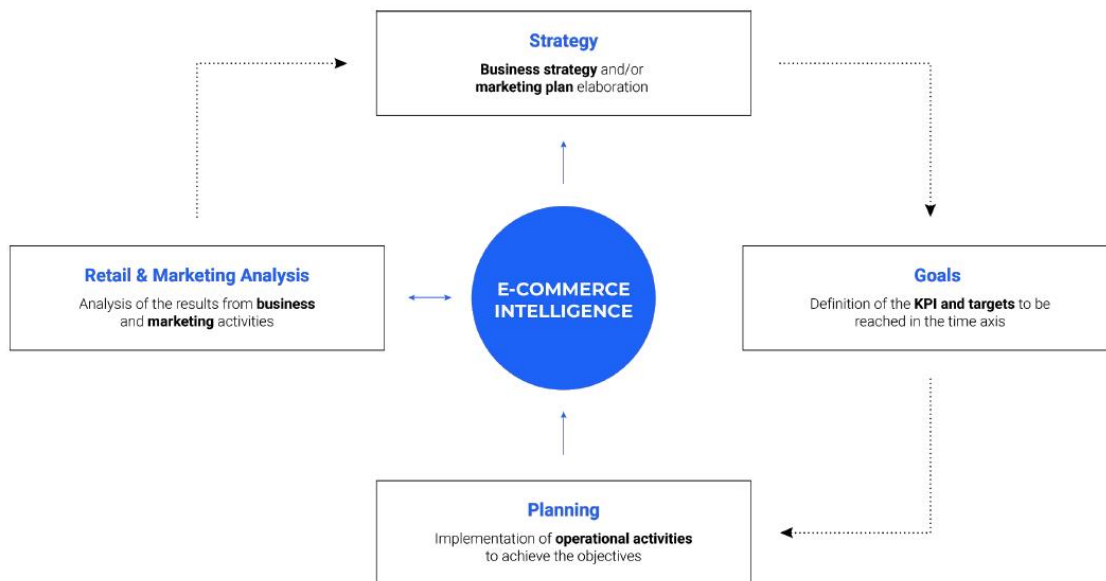


Figure 34: “E-commerce intelligence”, FiloBlu Spa

Business Intelligence (BI) produces a detailed analysis of different business aspects.

It works on customer analysis that identifies customers buying habits to enhance the customer experience, boost customer loyalty and optimize sales and marketing initiatives.

The customers' research objects are demographic profile, consumption preferences, buying habits, behavioural segmentation, and effective sales & marketing actions.



Figure 35 “BI customer analysis”, FiloBlu Spa

Business Intelligence creates a structured product analysis.

It boosts sales with dedicated sales and marketing strategy by assessing the stock's quality, effectively managing product availability, planning to buy, and getting vital insight to use when creating future collections.



Figure 36 “BI product analysis”, FiloBlu Spa

The last type of analysis made by Business Intelligence is the one by geographical area and sales channels. It maximises sales in each market, assesses the efficacy of dedicated sales and marketing plans, analyses and optimises online channels' performances.



Figure 37 “BI geographical area & sales channels analysis”, FiloBlu Spa

The previous analyses are necessary to create a proper database in order to make marketing actions. Marketing actions include analyzing the results of marketing plans and achievement of targets with focused Data Visualization, maximizing ROI and ROAS, analyzing and cross-referencing advertising data from other platforms for customer loyalty and demand forecasting projects (predictive analytics), and mapping out the customer journey of each user in order to optimize the pursuit of Marketing objectives (awareness, leads and sales).

The FiloBlu BI system connects and integrates all data sources in a single view, boosting and speeding up the analytical process. It is a turnkey package that is already integrated with established system architecture.

Machine learning tools support analysis provided by a partner with in-depth know-how in the digital channel world.

Using Qlik, one of the top four platforms in the BI market, Business Intelligence can give tangible business support and professional units as marketing managers, retail and store managers, and administrators.

BI uses information reached by many sources: Ecommerce, Google Analytics, Facebook, Console Mailing, CRM, Customer care and offline information. Business Intelligence elaborates this information through Google Big Query. (Figure 38)

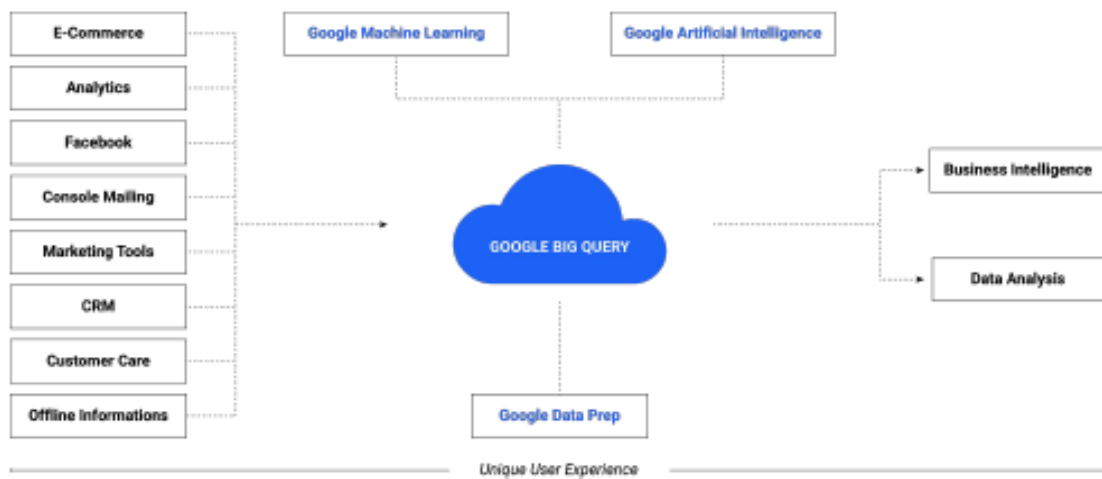


Figure 38: "Information flow of BI". FiloBlu Spa

BI performs a detailed customer analysis investigating the transactions in the time, the average order value, the conversion funnel, the Conversion rate, the Customer Lifetime Value and the conversion Cost Purchase. It can also control the buying process's frequency and percentage (completion and abandoned cart, checkout, new/returning customers).

BI divides sales per line/category and number of categories per order Bestsellers. It calculates the average price, the average margin, the sales at full versus discounted price and the sell-through average stock returns.

It can also count the number of emails/calls received pre-defined with the average first response time and the average solution time.

BI's performances come from the "RFM model" that stands for Recency, Frequency and Monetary Value. Recency shows how recently a customer made their last purchase. Customers that bought something recently tend to be more receptive to new proposals and promotions.

Frequency is the frequency with which a customer makes purchases in a set period. Generally speaking, regular customers are more receptive than occasional ones.

Monetary Value is the total amount that a customer has spent on all purchases in a set period. People who spend a lot are usually more receptive than those who spend small amounts.

The calculation method is based on quintiles. Every customer is given a score. The customers are then divided into segments (groups of customers) with similar scores.

Consequently, other Sales and Marketing activities can be carried out for each segment.

(Illustrations in Figure 39 and Figure 40).

Customer Segment	Q	#Customer	%Custo...	Avg Revenue per Customer	Total Revenue	%Reven...	Avg #Orders	Date last order
Total		26.644	100,0%	492,16 €	13.113.825 €	100,0%	1,86	04/01/2019
Champions		1.226	4,6%	3.071,69 €	3.765.891 €	28,7%	10,21	03/01/2019
At Risk M		3.375	12,7%	514,64 €	1.736.912 €	13,2%	1,41	17/07/2018
Lost		5.523	20,7%	287,10 €	1.585.648 €	12,1%	1,23	19/02/2018
Potential loyalist M		2.553	9,6%	599,69 €	1.530.939 €	11,7%	1,46	04/01/2019
Loyal M		1.072	4,0%	1.251,65 €	1.341.772 €	10,2%	4,54	03/01/2019
At Risk no M		7.669	28,8%	172,77 €	1.324.995 €	10,1%	1,07	17/07/2018
Can't Lose Them		757	2,8%	1.395,64 €	1.056.498 €	8,1%	5,11	22/02/2018
Potential loyalist no M		4.416	16,6%	171,32 €	756.558 €	5,8%	1,07	03/01/2019
Loyal no M		53	0,2%	268,66 €	13.815 €	0,1%	3,15	27/12/2018



Focus su Segmento Champions

R...	Q	#Customer	%Customer	Avg Revenue per Customer	Total Revenue	%Revenue	Avg #Orders	Date last order
Total		1.226	100,0%	3.071,69 €	3.765.891 €	100,0%	10,21	03/01/2019
51515		512	41,8%	4.453,39 €	2.280.136 €	60,5%	14,84	03/01/2019
41515		438	35,7%	2.651,14 €	1.161.199 €	30,8%	9,58	09/10/2018
51415		118	9,6%	1.346,83 €	158.929 €	4,2%	4,11	31/12/2018
41415		141	11,5%	1.116,89 €	157.468 €	4,2%	4,88	09/10/2018
51414		11	0,9%	473,66 €	5.210 €	0,1%	4,80	08/12/2018
41514		4	0,3%	498,14 €	1.993 €	0,1%	5,00	21/09/2018
51514		2	0,2%	479,92 €	960 €	0,0%	5,00	03/12/2018

Figure 39: “RFM model view 1”, FiloBlu Spa

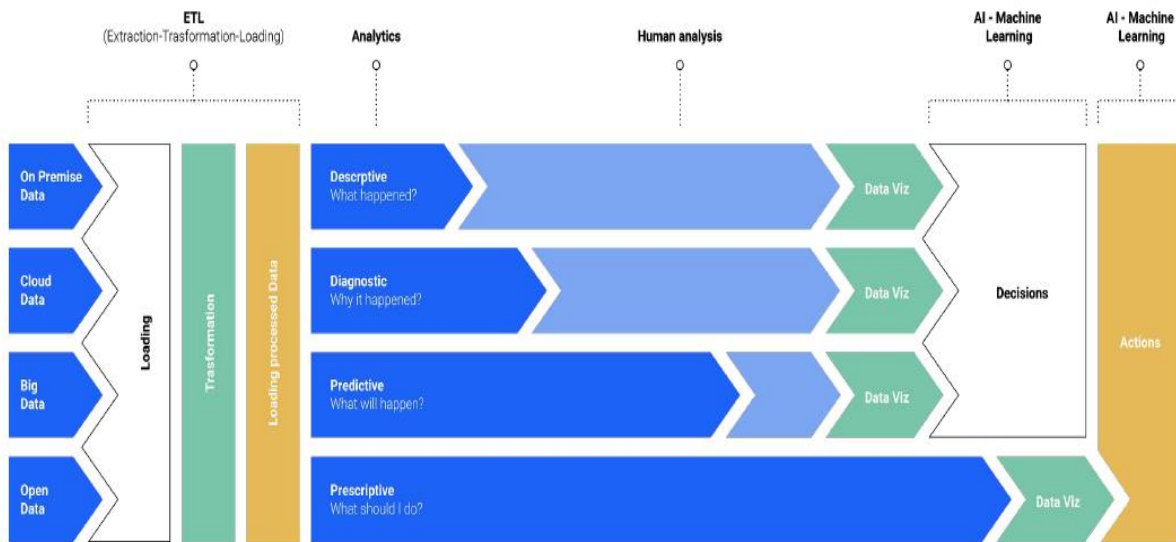


Figure 40: “RFM model view 2”, FiloBlu Spa

Data Warehouse is the technological core of a system of Business Intelligence. It contains all and only the integrated, consistent and certified data relating to the company's business processes, deemed

helpful for a complete analysis and transformed, employing data quality processes, in information. It also retains the history of the data and is intended to provide access to the company's certified data with excellent performance for everything related to the analysis phase.

FiloBlu's Business Intelligence architecture was designed to manage multiple flows from different operational sources for data structure and use. Examples are e-commerce software (Vtex, Magento, Salesforce Commerce Cloud), CRM (SalesForce), specific software necessary for marketing to carry out analysis (Mailchimp, MAPP or Google Analytics) and social networks.

Complex data retention areas have been created, each with specific features, which allow you to consult the information available in ways and for different purposes: the Landing Area represents the border point between the company information system and the Business.

Intelligence. Through an automatic process of ingestion, the data present on the operational sources is brought into the system and stored there temporarily. Subsequently, they are processed through pipelines (complex automatic processes) that migrate data into subsequent logical areas to memorize them permanently.

Several professional software ingestions such as Talend Stitch are used to perform this task, allowing us to import data from hundreds of different sources.

The Data Lake is a set of tables dedicated to storing and maintaining the history of the so-called raw data. Through specially developed ETL (Extraction Transform and Load) processes, the entire data structure present in the company information system is replicated. The data like these artefacts are moved into a persistent structure designed to store tables partitioned that allow you to create the historicity of the data for periods of over ten years. (Figure 41)

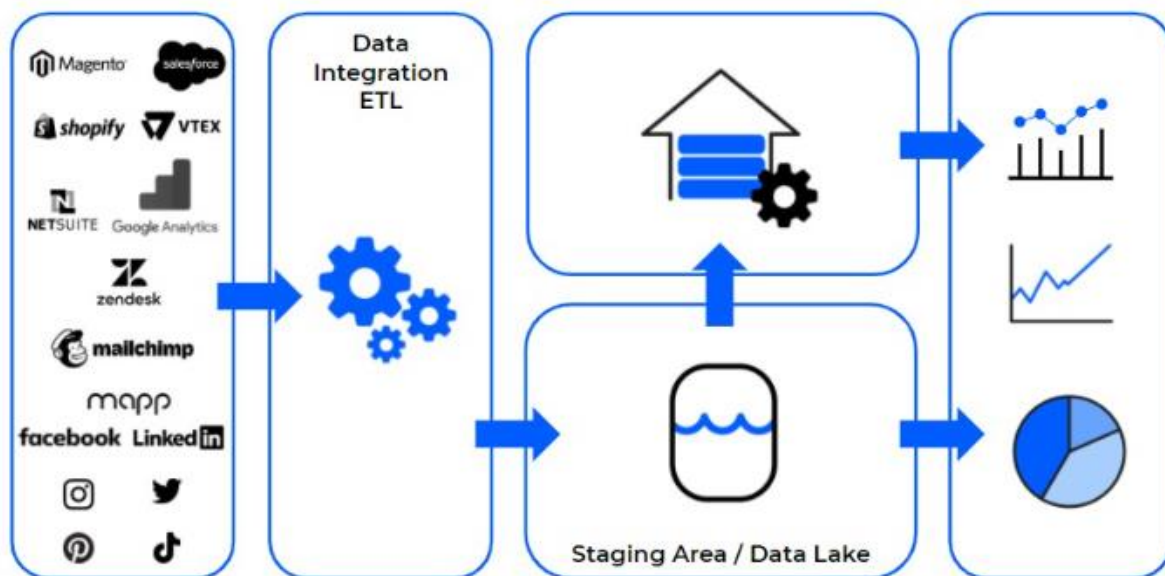


Figure 41: “BI data flow”, FiloBlu Spa

Through processes of ELT (Extract, Load, and Transform), the data is taken from the Staging Area and, in order to be included in the data warehouse, is subjected to cleaning, integration, and data quality processes.

The first is about the data structures cleaned of all values not considered helpful for the analysis.

The second deals with data from different sources that are integrated into a single structure.

The last identifies the errors inevitably present in operational systems.

Thanks to these steps, the raw data becomes certified data.

The advantage of this approach is to standardize data from multiple sources and render the whole structure independent of external sources and any structural change thereof, cancellation or replacement.

A fully Google managed cloud data warehouse and serverless, which does not require a database administrator. It is a reliable, performing infrastructure with high scalability and calculation speed. BigQuery "real-time" processes Big Data through modern machine learning algorithms.

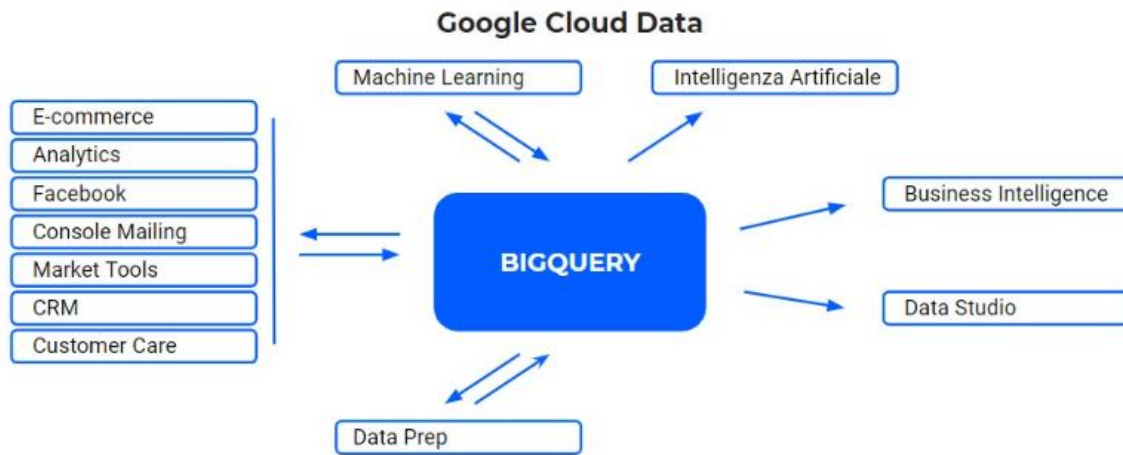


Figure 42: “BigQuery Ecosystem”, FiloBlu Spa

In the world of software, the front-end is the phase of presenting the data to the end-user and the whole IT tools to make it happen. Once the data has been collected, processed, integrated, and saved within the data warehouse, they are ready to be enhanced by decision-making.

BI is a helpful tool that combines backend technology with the front solutions. It creates a dashboard with a high-frequency update that compares data in different periods and runs Artificial Intelligence algorithms. Business Intelligence uses Data mining statistical techniques and ML to provide an indication probabilistic on the occurrence of a specific event of interest.

So data analysis is helpful to transform the acquired knowledge into a competitive advantage for the company.

It uses statistical and machine learning techniques to explore large amounts of data. It extracts patterns that allow it to generate new knowledge by applying it to new data for predictive purposes. So users can achieve probabilistic indications on the occurrence of a specific event of interest. (Figure 43)

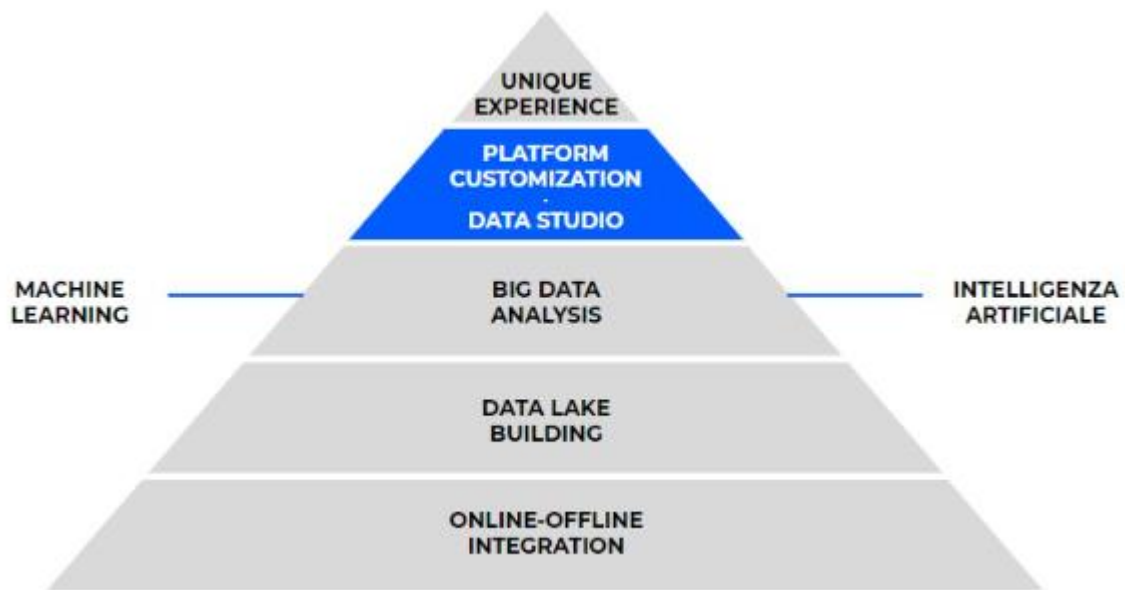
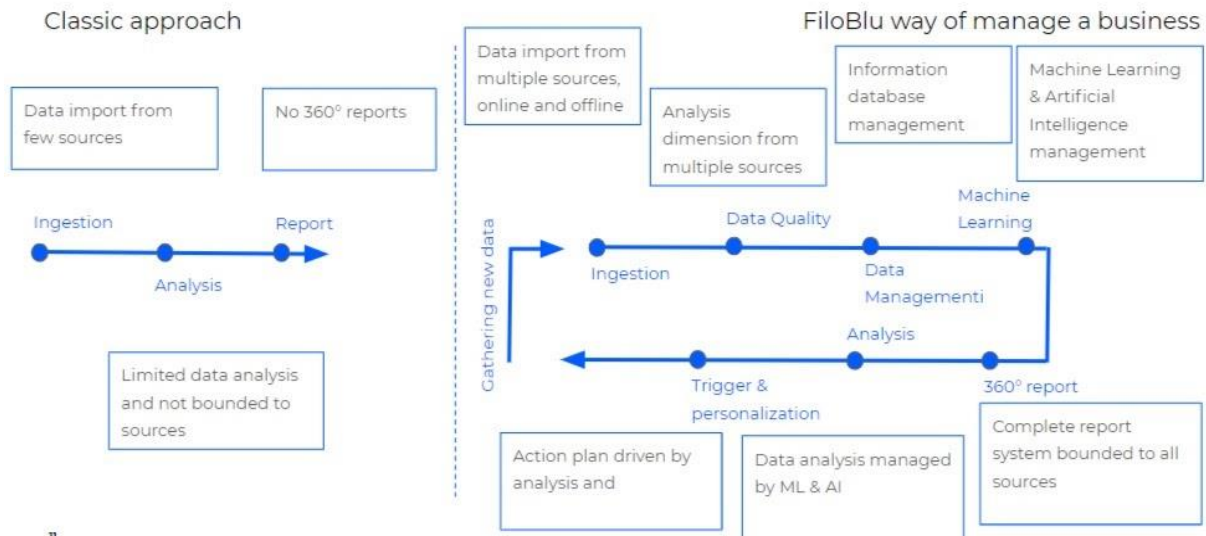


Figure 43: “Customization process”, FiloBlu Spa

BI changes the Business approach and makes business pass from a “classical approach” to a “BI driven approach”. Data is not more just achieved and shown in limited reports. Data comes from multiple online/offline sources with the BI driven approach, and it is analysed in a data quality process. They are stored in a database and displayed incomplete reports that allow marketing to improve advertising effectiveness. Finally, the business can improve action plans by making the BI system gather new data. (Figure 44)

Roadmap per la crescita del business



Figure

44: "BI driven approach", FiloBlu Spa

4.3 The Business Intelligence: the missing link

As broadly affirmed in the previous paragraphs, the power of Artificial Intelligence is collecting data and elaborating them to predict customers' actions.

Unfortunately, the prediction process has not been implemented yet in FiloBlu.

According to BI driven approach (figure 44), this could be a tremendous limit for business opportunities.

This restriction makes BI helpful for data collection and visualization only. So, even if the developer's team is working on it, this lack compromises FiloBlu potentiality.

Moreover, the data prevision process does not support the strategic decision-making process. It is implemented by combining brands' sales results data and trend data from external sources (e.g. consulting companies). Thus, although reliable, they do not match the Artificial Intelligence

philosophy of automatism. The most probable reasons for this technology delay/lack could be maybe attributed to:

- the high cost of the R&D. The operation would need a team of developers working every day for around one year. This cost would erode the company's EBITDA close 6 million euros.
- the lack of knowledge. Thinking that this is not an essential feature of the BI suite is a huge mistake, but if C-levels accept it, it is complex that bottom-up advice could be considered.
- communication aversion. Even if someone believes in the power of AI prediction features, the organizational structure of the company (e.g. seniority gap and centralized-boss structure) can badly impact the acceptance of a new idea.

This lack shows how different knowing technology from understanding it is.

FiloBlu believes in brands and bets on their success with a "win-win approach", but the prediction feature missing can bring risky partnerships.

We all agree: this is part of the "business game".

Nonetheless, I also think that selling a not well-performed AI solution could be fair (all services supplied by the company are reported in a contract signed by both parties). But at the same time, it is not ethical because it takes advantage of information asymmetry between the parts.

CHAPTER 5

CASE STUDY

5.1 Partnership results

The final chapter of this work is about a real business case I work with during my experience in FiloBlu SpA.

The analysis of this case will be done with real numbers, so I will not mention the name of the brand in order to protect their sensitive data.

The company operates in the fashion sector and it is a made in Italy company worldwide known.

The company's performance improved from 2017 to 2019:

+18% CAGR from 2017 to 2019 turnover, +17% CAGR orders from 2017 to 2019, +20% CAGR products sold from 2017 to 2019, +33% CAGR of e-commerce income, +10% CAGR of CR ecommerce, +18% CAGR of investment budget, +957% CAGR of ROAS.

The company implemented many activities thanks to FiloBlu support: experience design, advanced features, WCA2.0 design, profiled navigation.

Experience design creates a personalized and omnichannel customer experience. Advanced features include customization of the flagship product and choosing the colours of the products. WCAG 2.0 Design stands for Web Content Accessibility Guidelines for people with visual impairments.

Profiled navigation creates a personalized browsing experience based on user interactions.

FiloBlu supported the company's strategy with a six-monthly update to increase the reference KPIs (Transactions - ROAS - Turnover - Lead - Reach) and improved a full-funnel marketing development and supervision of the leading digital channels in line with the brand communication plan.

Positive results are reached by the power of Machine Learning and Business Intelligence.

BI has been a concrete support to the communication with the company because it is both a great business development tool and a good data report display platform.

Business Intelligence showed customer analysis data in detail: the number of products bought, personas characteristics, total revenues, origin of the purchase, kind of products bought, position of the store seller and many statistics.

(Figure 45 ,46,47,48,49)

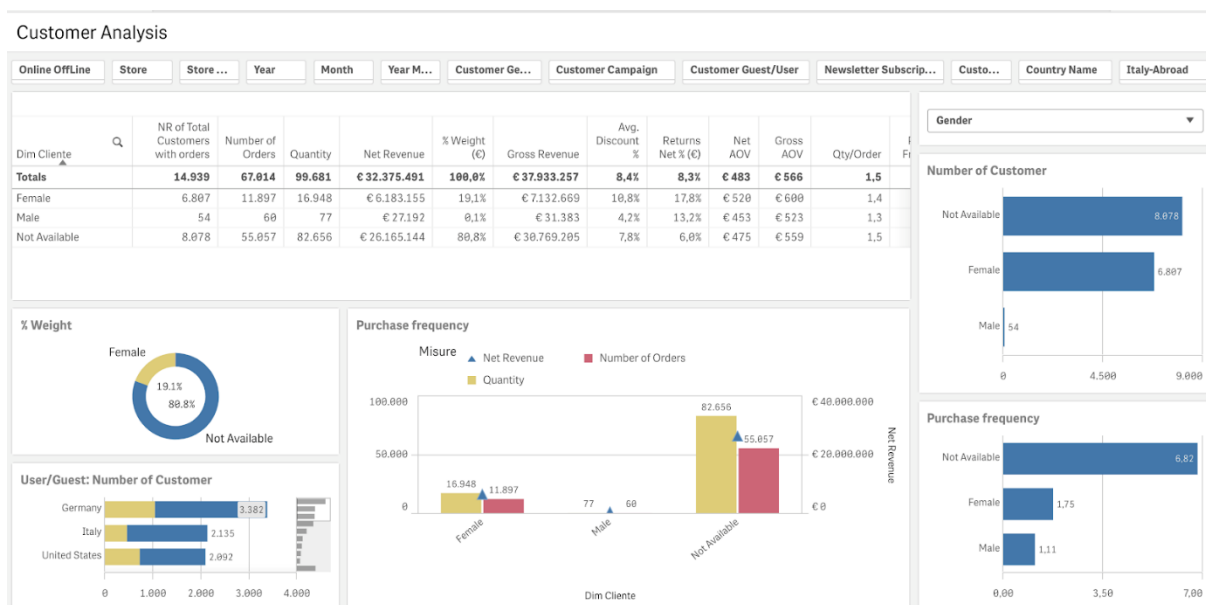


Figure 45: "Case study BI-Customer analysis", FiloBlu Spa

Marketing Overview

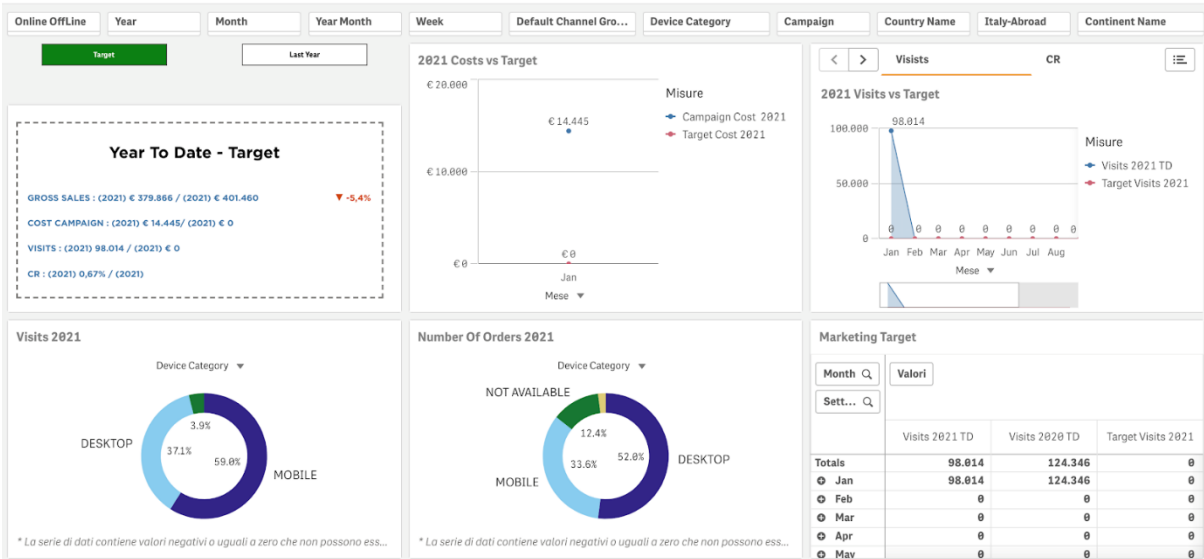


Figure 46: "Case study BI-Marketing overview", Filoblu Spa

Product Analysis

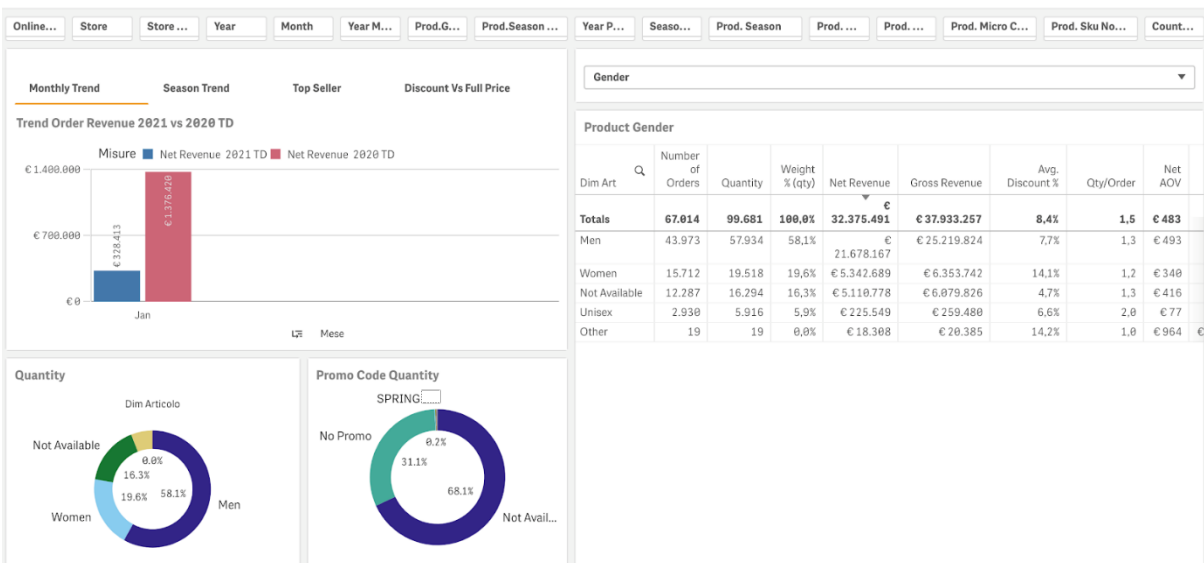


Figure 47: "Case study BI-Product Analysis", Filoblu Spa

Best Seller

Product Sea...	Product Cat...	Product Sku...	Product Na...	Product Ima...	Quantity	Net Revenue	Avg. Gross F...	Avg. Discou...	Returns/Re...
Totals					99.681	€ 32.375.491	€ 412,44	8,4%	8,3%
18E	Accessories				1	€ 0	€ 80,00	100,0%	0,0%
18I	Accessories				1	€ 0	€ 50,00	100,0%	0,0%
18I	Accessories				1	€ 0	€ 50,00	100,0%	0,0%
19E	Accessories				1	€ 0	€ 30,00	100,0%	0,0%
Not Available	Not Available				1	€ 0	€ 458,16	100,0%	0,0%
	Others				14	€ 0	€ 55,38	100,0%	0,0%

Figure 48: “Case study BI-Best seller”, Filoblu Spa

KPI DASHBOARD

REVENUE DASHBOARD KPI DASHBOARD CROSS SALES DASHBOARD

Store Category		TipoMisura	Valori	WEEK						
				NET Revenue 2021	NET Revenue 2020	Δ NET Revenue 2020	Δ% NET Revenue 2020	Target 2021	Δ Target 2021	Δ% Target 2021
Totale				€ 31.342	€ 0	€ 31.342	0%	€ 85.194	-€ 53.852	-63%
Boutique	Boutique			€ 254	€ 0	€ 254	0%	€ 3.220	-€ 2.966	-92%
	Boutique			€ 0	€ 0	€ 0	0%	€ 4.462	-€ 4.462	-100%
	Boutique			€ 9.189	€ 0	€ 9.189	0%	€ 5.961	€ 3.227	54%
	Boutique			€ 0	€ 0	€ 0	0%	€ 6.438	-€ 6.438	-100%
	Boutique			€ 287	€ 0	€ 287	0%	€ 2.199	-€ 1.912	-87%
	Boutique			€ 0	€ 0	€ 0	0%	€ 8.470	-€ 8.470	-100%
	Marche			€ 227	€ 0	€ 227	0%	€ 9.573	-€ 9.347	-98%
	Marche			€ 738	€ 0	€ 738	0%	€ 2.403	-€ 1.666	-69%
Department Store	Galleries			€ 2.336	€ 0	€ 2.336	0%	€ 3.881	-€ 1.545	-40%
				€ 11.638	€ 0	€ 11.638	0%	€ 9.827	€ 1.811	18%
Outlet	Outlet			€ 0	€ 0	€ 0	0%	€ 4.951	-€ 4.951	-100%
	Outlet			€ 1.411	€ 0	€ 1.411	0%	€ 12.251	-€ 10.839	-88%
	Outlet			€ 4.894	€ 0	€ 4.894	0%	€ 4.609	€ 285	6%
	Outlet			€ 369	€ 0	€ 369	0%	€ 0	€ 369	-
	Temporary Shop			€ 0	€ 0	€ 0	0%	€ 6.947	-€ 6.947	-100%

Figure 49: “Case study BI-KPI dashboard”, Filoblu Spa

Internationalization Strategy

Another partnership objective was creating a strategy to sustain sales in new markets such as the US and China.

The target range age is between 40 and 60 years old; meanwhile, the secondary target is between 25 and 35.

Clients are characterized by a personal taste of chic, based on reinterpreting trends with a genuinely individualistic approach. Known for their discerning eyes, they reinterpret trends with a genuinely individualistic approach. That is why they love editing their choice.

An increase in the store characterizes their actual condition in the US visits rate by 21%, the total orders by 21%, but a -3% of total sales compared to 2019.

Meanwhile, in China, their actual situation is -32% of average monthly unique visitors and -66% of total sales.

Starting from this situation, FiloBlu starts to work with this brand, to focus on three priorities: increasing product familiarity, sustaining brand awareness, and leveraging the audience.

In order to improve the digital impact on sales, we worked on the upper funnel with ad hoc activities.

In the upper funnel, the main goal is to engage users with content and experiences better suited for each channel.

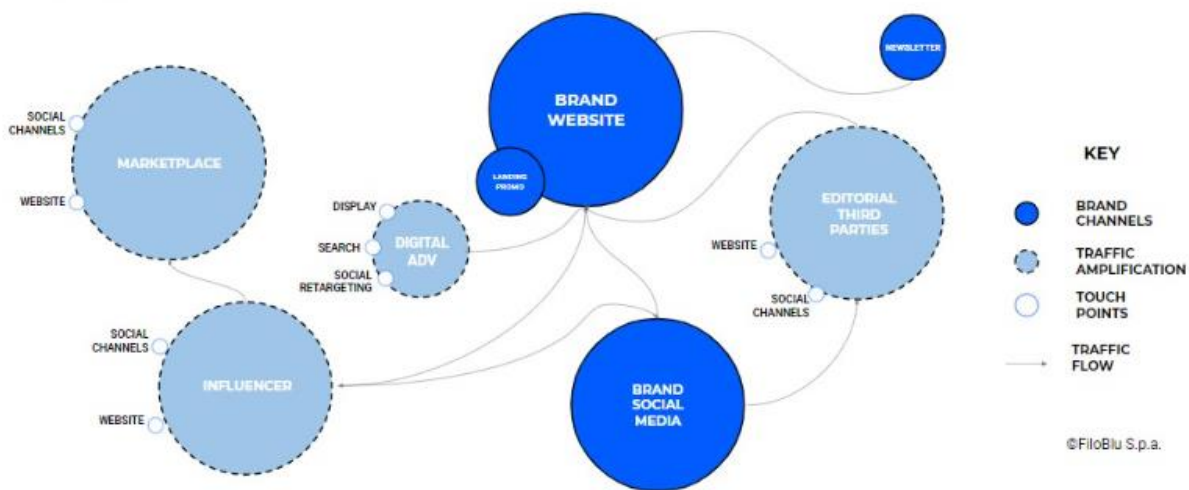


Figure 50: "Customer Flow Map", FiloBlu Spa

FiloBlu created a strategy in order to make the brand business improve in the US and China.

The first element of the strategy is marketplace improvement by using new channels to follow consumers' behaviour and trends in those specific markets (ex. Amazon Luxury Store, TMall, etc.).

Also, social media have been improved with ad hoc strategies to increase equity and engagement locally. It could also improve our activities on specific channels (ex. WeChat).

Strategy contemplates the partnership with influencers or KOL by establishing long-lasting partnerships with local influencers to gain equity and buzz around the brand.

The website has innovated the shopping experience with ad hoc projects to communicate brand excellence even in new digital landscapes.

The strategy also contains a digital advertising focus by setting up online campaigns on local targets to maximize the investment and support sales.

Many factors have been considered to write down the strategy: fashion trends, countries economy and post covid luxury trend.

Our historical period is facing fundamental changes based on two key elements: Consumer shift (consumers are more environmentally and socially aware) and Digital escalation because of the crucial importance given to digital channels as crucial sources of sales and inspiration. (BSG, 2020; McKinsey, 2020).

Customer habits have changed.

Many consumers will be looking for so-called “investment pieces”: minimalist, last-forever items that feel more responsible given the state of the world.

Consumers want their shopping experience a bit more tailored to them. They want their sales associates to talk to them, think about the way they dress.

Due to the economic crisis, consumers are now raising their consciousness on prices to reduce impulse purchases.

The new challenge is on meeting clients locally, not abroad.

Digital impact in the whole industry has grown steeply.

Self-isolation has forced digital shopping that will remain even after the covid 19 crisis with high-price purchases.

Working from home and staying at home has well driven more non-work screen time. That is why brands have to become digital-frontrunner and focus even on entertainment.

Social media platforms have seen peaks of interest and have delivered much-needed solutions for some brands and retailers. (BSG, 2020; McKinsey, 2020)

The company developed its Lead Generation strategy with the growth of the customer database + 1.100% and engaged new potential customers by structuring advertising campaigns.

5.2 Internationalization in US

The American luxury goods market is much more competitive and diversified due to increased millennial spending and digital and niche born brands.

Modern luxury clients change their purchase decisions by influencers and celebrities.

Modern luxury clients look for timeless and handmade products

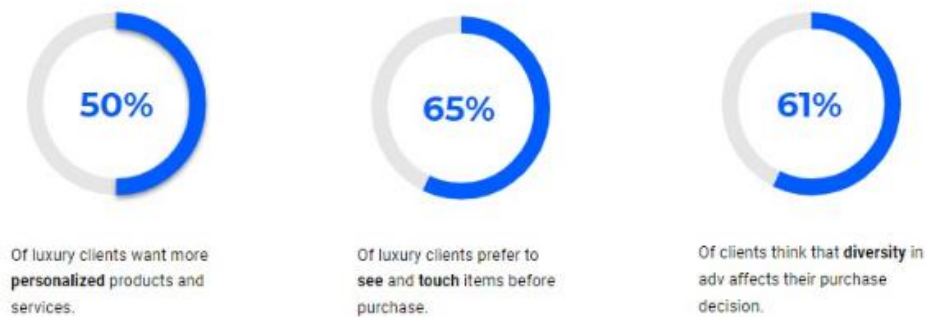
(McKinsey 2020, Altgamma 2020).

50% of luxury clients prefer customized products, 65% of clients prefer to touch products before buying them, 61% of clients think that diversified advertising can affect purchase decisions.

(McKinsey,2020; Google, 2020).

Data

Below some data in order to better understand the US market.



Sources: McKinsey 2020, Google 2020.

Figure 51: “American customers trends”, FiloBlu Spa

FiloBlu decided to enter the US market with different brand building initiatives through Influencer (macro and micro) to drive traffic to different touchpoints with a dedicated investment plan.

FiloBlu suggested reinforcing the localized B2C company store with a dedicated commercial plan and enlarging the presence in the different department stores (also online) and e-tailer. FiloBlu planned a collaboration with leading marketplaces in line with company positioning (Amazon fashion, Farfetch US).

5.3 Internationalization in China

The Chinese luxury goods market currently has a leading role in the entire industry is driven by Millennials, and Gen Z is also becoming an increasing force.

Shoes are a status symbol for young generations, due to the increase of streetwear culture. Millennials principally consider identity statements with luxury goods. Gen Z also correlates “being popular” to luxury goods.

Tastes have also evolved, with big logos and head-to-toe looks going out of style. Their real-life social circle more influences the young generation than by traditional media.

(McKinsey 2020, Vogue Business 2020).

40% of clients are not so loyal to brands, 65% of luxury clients are influenced by celebrities, and 75,6 % of them rely on their parents’ support to purchase luxury goods. (Vogue Business 2020)

Data

Below some data in order to better understand the Chinese market.



Source: Vogue Business 2020

Figure 52: “Chinese customers trends”, FiloBlu Spa

Three moves make FiloBlu activate China's development strategy for the company.

The first is to identify collections and other elements in line with final consumers and their preferences, personalizing the experience to maximize the CLV. The second involves KOL and KOC strengthening brand messages marketing investments to drive traffic to different touchpoints with a dedicated investment plan.

The third is opening and managing a Tmall store (Tmall Luxury Pavillion) and extending Brand presence on other touchpoints to reinforce its link with final consumers (Wechat store, localized website).

Finally, the company actually enjoyed collaboration with FiloBlu because the implementation of new technologies and the power of data analysis are two fundamental drivers to improve turnover, net income and brand awareness.

CONCLUSIONS

This thesis was born from the curiosity to study the relationship between Artificial Intelligence and people. A This work started with a clear technical focus on AI definitions.

The essay proceeded with AI in the marketing sector, reporting data and numbers of AI growth.

The thesis also debates the human aspect of AI use, investigating the sociological, psychological and managerial aspects.

The final part underlines my practical experience with FiloBlu Spa by focusing on its business model and technologies applied.

In the end, I reported a real case study of a FiloBlu's client, an international fashion luxury company.

To give a general definition of AI, I used text generator software to perform a proficient outcome. However, as I stated in chapter 1, it could not produce an acceptable text. Therefore, it confirmed my idea that AI is just a tool that needs to be assisted by humans to perform well. That is why I stressed the benefits but also the risks of AI uses. So it can not be considered a threat because it is empty of any correlation with goodness and badness parameters: the final impact of this tool depends on the user's purpose.

What scares me most about using new technologies is the flattening of critical thinking, thinking homologation. It becomes possible because of the hyper-targeting of sources based on the marketing concept of "personas". So at the end of the day, each individual will be less and less exposed to a different idea, music, news, a product from the circle of her/his ideal products resulting from a careful analysis of her/his data.

The reading of "Mindf*ck: inside Cambridge Analytica's plot to break the world" by Christopher Wylie enlightened me about how easy it is to manipulate mass ideas with AI technologies.

Even if he deeply described how AI could handle political solutions, the same manipulation principle can be reported and applied to many other sectors of society, business too.

The last topic exposed is my experience in FiloBlu as a junior business strategy intern.

I reported the case of a company partner that was able to optimize its profits and implement a data analysis structure capable of getting to know its customers better, which must always be considered the goal and never the means.

The win-win approach of FiloBlu is fair but risky without the use of AI prediction. So it can create successful cases or unsatisfactory cases.

It should be essential to remember that understanding the consumer through data is not enough to satisfy their needs but just the first step towards building a lasting relationship between the customer and the brand.

"People do not care how much you know until they know how much you care." - Teddy Roosevelt.

As stated in the introduction, I reported some suggestions for companies for AI use such as trying to communicate with exploited consumers and explaining to them how AI works. However, they also can explain how the AI algorithm can be fixed to respect all minorities and make users less scared about the perceived risk of delegation. Companies should not feed stereotypes that are so dangerous but should improve human-human interactions with "care assemblages".

My suggestion about future studies is to focus on how Artificial Intelligence affects human relationships, and Artificial Intelligence algorithms writing policy should rethink which values AI should boost. It is essential because it shows the tradeoff between a most productive society and a sustainable one.

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