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The Business Development of an AI Startup and the Market Study for an Innovative Software

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Contents

List of Figures.....	III
List of Acronyms	IV
Abstract.....	V
Chapter 1: Introduction and Context	1
1.1 Introduction	1
1.2 The Relevance of Artificial Intelligence in the Contemporary Context.....	2
1.3 Essential Glossary for Conducting Business Activities in Artificial Intelligence Sector.....	4
1.4 Entrepreneurship, Organizations, and Startup Ecosystems.....	10
1.4.1 Entrepreneurship.....	10
1.4.2 Organizations.....	11
1.4.3 Startup Ecosystem and Fundamentals	12
Chapter 2: DataVision Italia	17
2.1 DataVision’s Foreign Direct Investment.....	17
2.2 DataVision Italia.....	19
2.3 DataVision Italia Products and Services	19
2.3.1 3D Reconstruction	20
2.3.2 AI Pre-trained Models	22
2.3.3 BeeYard	24
2.3.4 Software Engineering	26
2.3.5 Consultancy	27
Chapter 3: Working Context and Activities	28
3.1 DataVision Italia: Evolution and Challenges of a Startup in the AI Market	28
3.2 Onboarding Phase	29
3.3 Early Assessments	30
3.4 The Lean Startup Business Plan.....	37
3.5 Market Research and Market Trends	38
3.6 Competitor Analysis.....	44
3.7 Side Operations	50

Chapter 4: AutoCrash Case Study	56
4.1 Starting Idea	57
4.2 Field Study	58
4.3 AutoCrash Presentation	60
4.4 Innovative AI Features	65
4.5 3D Reconstruction Model	68
Chapter 5: AutoCrash Case Study, Go To Market Strategy	70
5.1 Opportunities for Implementing a GTM Strategy	70
5.2 Benefits of a Go To Market Strategy	71
5.3 Steps to Building a Go To Market Strategy	73
Chapter 6: AutoCrash Case Study, Business Analysis	82
6.1 Market Research.....	82
6.2 Business Model Canvas	84
6.3 Value Proposition	89
6.4 Pricing Strategy	91
6.5: Product Launch	93
Chapter 7: Conclusion and Future Works	96
Conclusion.....	96
Future Works	97
Appendix.....	99
Generative Pre-trained Transformer.....	99
Thesis' GPT:.....	102
Examples	103
References.....	104
Bibliography.....	104
Webography	108

List of Figures

Figure 1 - Overview of the NeRF Model.....	20
Figure 2 – Anomaly Detection Model. Example from BeeYard.....	22
Figure 3 - Object Detection Model. Example from BeeYard.	23
Figure 4 – Semantic Segmentation Model. Example from BeeYard.....	23
Figure 5 - OCR Model. Example from BeeYard	24
Figure 6 - AutoCrash, Home Page.	61
Figure 7 - AutoCrash, Accident Registration.....	62
Figure 8 - AutoCrash, Accident Register	63
Figure 9 - AutoCrash, Community Features.	64
Figure 10 - AutoCrash AI Models. Automatic Recognition of Damaged Area.	65
Figure 11 - AutoCrash AI Models. Technical Recognition of Damaged Components...	66
Figure 12 - AutoCrash AI Models. Evaluation of EES Value.....	67
Figure 13 - AutoCrash 3D Reconstruction. Example 1.	69
Figure 14 - AutoCrash 3D Reconstruction. Example 2.	69
Figure 15 - DataVision Italia's BMC for AutoCrash.....	88
Figure 16 - AutoCrash Presentation. Invitation Brochure.	93
Figure 17 - AutoCrash Presentation at Mugello Circuit.	94
Figure 18 - Example of AutoCrash's Product Launch Marketing Material.	95
Figure 19 – Seminar Invitation.	97

List of Tables

Table 1 – AI Italian Market. Anitec Assinform (2023).	39
Table 2 – Industry Sectors of U.S. Most Promising AI Companies. Forbes (2019).	41

List of Acronyms

AI:	Artificial Intelligence
ANN:	Artificial Neural Network
API:	Application Programming Interface
BMC:	Business Model Canvas
DL:	Deep Learning
EES:	Energy Equivalent Speed
FDI:	Foreign Direct Investment
GPT:	Generative Pre-training Transformer
GPU:	Graphics Processing Units
GTM:	Go To Market
ICP:	Ideal Customer Profile
KPI:	Key Performance Indicator
ML:	Machine Learning
MVP:	Minimum Viable Product
NLP:	Natural Language Processing
OCR:	Optical Character Recognition
OKR:	Objectives and Key Results
ROI:	Return On Investment
SAAS:	Software as a Service
SEO:	Search Engine Optimization
SME:	Small and Medium-sized Enterprises
USP:	Unique Selling Proposition

Abstract

This thesis represents the culmination of practical experience acquired at *DataVision Italia*, an AI startup, through the lens of academic theory from Global Development and Entrepreneurship Master's program. The primary objective is to provide an authentic perspective on the advancement of startups within the AI landscape, thereby illustrating the practical relevance of theoretical knowledge and furnishing an effective framework for business development activities in small-scale enterprises.

The initial section delineates theoretical constructs pertinent to AI technologies, valuable for commercial applications, alongside an examination of startup ecosystem. Subsequently, the Case Study elucidates the development journey of the "AutoCrash" software. It tracks the progression from market research and business strategy formulation to the final phases of development and commercialization, encompassing the implementation of go-to-market strategies and the structuring of marketing plans. Ultimately, an innovative GPT designed specifically for the thesis has been developed, enabling comparisons and inquiries on any pertinent topic addressed in the paper, encompassing both theoretical and personal dimensions.

Keywords: Artificial Intelligence, Computer Vision, Startup, Business Development, Go-To-Market strategy.

«La nuova rivoluzione tecnologica, quella digitale, ha qualcosa di diverso rispetto alle precedenti: è arrivata molto velocemente e richiede un adeguamento rapido. Le innovazioni che in continuazione stanno nascendo richiedono una altrettanto veloce capacità di apprendimento e di adattamento.

Anche perché, per funzionare, le nuove tecnologie hanno sempre bisogno di uomini e di donne che le sappiamo non solo utilizzare ma anche inventare e gestire».

Piero Angela

Chapter 1: Introduction and Context

1.1 Introduction

This master's thesis is the culmination of the practical experience gained by the candidate during their employment at *DataVision Italia*¹, a start-up company in the field of Artificial Intelligence (AI). This academic work is founded on a robust empirical basis, stemming from the main activities undertaken during the working period.

The purpose of the following structure is to demonstrate the practical application of theoretical concepts studied during the master's course in *Global Development and Entrepreneurship*² at *Ca' Foscari University of Venice*³. Numerous notional insights gained throughout the academic journey have proven essential for the effective execution of work activities. Therefore, this paper is continually integrated and supported by theoretical components learned during various courses of study, with reference to the specific subject matter. What has just been described takes place in the background while explaining the other primary objective of this paper, that is to illustrate the path that has led to the creation of the innovative software "AutoCrash", developed entirely by the *DataVision Italia* team. Indeed, the discussion includes a detailed market research, business strategies adopted, and the description of the phases of development and commercialization of the software. The candidate has been involved in the development of AutoCrash from its initial conception, allowing for a comprehensive and in-depth perspective on the product's market launch process.

¹ DataVision. (2016). *DataVision*. Available at: <https://www.datavision.software/>

² Università Ca' Foscari Venezia. (2016). *Home:(em12) Global Development and Entrepreneurship*. Available at: <https://www.unive.it/pag/24754>

³ Università Ca' Foscari Venezia. (2023). *Home:Università Ca' Foscari Venezia*. Available at: <https://www.unive.it/>

The analysis and discussion presented in this thesis adopt methodologies and perspectives peculiar to the economic sector associated with AI, with a specific focus on understanding the general characteristics of AI, presented in accessible and not overly technical terms. To facilitate the reader's understanding and provide an appropriate context, the thesis begins with a glossary of fundamental terms related to AI. This is followed by a detailed description of the company *DataVision Italia*, which serves to contextualize the work experience and provide a clear picture of the environment in which the candidate operated. The third chapter acts as a bridge between the academic world and the work environment, highlighting the interaction and mutual influence between theory and practice. The last three chapters are exclusively dedicated to the analysis of AutoCrash⁴, diving into the specific and distinctive aspects of this software. These sections also include a detailed analysis of the Go To Market strategy, whose effectiveness has been demonstrated and supported by relevant studies in the field. The thesis concludes with an appendix that introduces a Generative Pre-training Transformer, a tool designed for further analysis of the understanding of the work. This technology, although still in an experimental phase, represents a significant innovation and has the potential to enrich the thesis by offering a deeper and more personal view of the work done.

1.2 The Relevance of Artificial Intelligence in the Contemporary Context

In an academic context, analyzing market trends is a fundamental element in guiding the educational and professional choices of students, especially in the field of economics. The decision to pursue a study and career path in AI can be motivated by several considerations. Firstly, the sustained growth of the AI market promises vast professional opportunities and the chance to operate in a revolutionary and constantly evolving sector. On the other hand, the appeal of AI is not limited to its economic relevance. Its innovative nature stimulates deep intellectual curiosity and offers the chance to contribute to the development of technologies that can significantly impact present and future society. This convergence of economic and intellectual factors can make AI an especially attractive

⁴ AutoCrash. (2016). *Home | AutoCrash*. Available at: <https://www.autocrash.ai/>

field for university students, who are uniquely positioned to combine academic interests with promising career prospects.

In today's digital environment, AI has taken a central role, emerging as «the most influential and innovative technology of the 21st century» (Russell & Norvig, 2016). Its importance is reflected not only in the growing curiosity and interest it stimulates in the public but also in its rapid adoption across various industrial sectors, its impact on government policies, and its ability to reshape the fabric of work and society. The curiosity towards AI primarily stems from its versatile nature and its ability to surpass the traditional boundaries of computing and problem-solving. This technology is no longer confined to research labs or niche technological fields; it has become an integral part of everyday life. This widespread adoption has sparked a public debate about its potential and risks, stimulating curiosity and interest in an increasingly broader audience.

The rise of AI as a rapidly growing sector is attributable to several factors. Firstly, advancements in the field of Machine Learning, especially in Deep Learning, have enabled significant progress in tasks that were previously considered exclusively human. These capabilities have opened new frontiers for automation and optimization in various sectors, making AI an essential technology for maintaining competitiveness in the global market. Additionally, the increase in computing power and the availability of large quantities of data have accelerated the development and implementation of AI-based solutions. These purely technical themes will be explained and delved into further during the paper. In the workplace, AI guarantees to make work more efficient and productive. Through the automation of repetitive tasks and the provision of advanced analytics, AI can free human resources from burdensome tasks, allowing them to focus on more creative and strategic activities (Ford, 2015). This transition leads to a redefinition of job roles and requires a new vision of skills and professional training. Indeed, the potential of AI to change the world is undeniable. From improving healthcare with more accurate diagnoses and personalized treatments, to creating smart cities with more efficient transportation and resource management systems, AI has the power to solve some of humanity's most pressing challenges.

It is crucial to specify that this disruptive nature of AI requires an approach that balances innovation and regulation. AI regulation must be guided by ethical principles, ensuring that its development and use are oriented towards the common good and the protection of individual rights (Floridi & Taddeo, 2018). This includes creating regulations that address issues of transparency, accountability, and fairness, ensuring that AI is used in a way that benefits society. Governments' attention to AI is explainable both by its strategic importance for national security and its potential to drive economic growth and innovation. Governments around the world are investing significantly in AI-related research and development, establishing regulatory frameworks for its ethical and responsible use, and integrating AI into public policy initiatives. Such actions reflect the awareness of AI's transformative impact on societies and economies.

In conclusion, the importance of AI in our times is indisputable. Like any major technological revolution, it presents significant challenges but also extraordinary opportunities for human progress. The key to making the most of AI's potential lies in collaboration among researchers, practitioners, policymakers, and the public, to forge a future in which AI is a positive force for the betterment of society.

1.3 Essential Glossary for Conducting Business Activities in Artificial Intelligence Sector

In this paragraph, a series of fundamental terms in the field of AI are presented, selected based on the work experience at *DataVision Italia*. The aim is to provide the reader with a solid foundation on the essential terminologies of AI, excluding purely technical or engineering terms less relevant to the commercial context. It is important to note that this list represents only the foundations of the AI sector; continuous study and deepening are crucial to expand one's knowledge. This terminology is essential for anyone intending to enter the AI industry, offering an overview that allows for contextualizing the content of the thesis and understanding the concepts without the need for additional references.

The selection of terms is the result of a draft completed in collaboration with Data Scientists and Software Engineers at *DataVision Italia*, mostly graduates in Artificial Intelligence from the University of Bologna. It follows a logical order from the most essential concepts to the more specific ones. This approach aims to provide a basic knowledge that facilitates communication with programmers and allows a superficial understanding of their discussions, avoiding the feeling of exclusion in such a technical and specialized field. In the context of a young and rapidly evolving sector like AI, many of these terms may not be familiar to the public. However, as has happened with internet terminology, these will become commonplace within a few years.

Artificial Intelligence (AI):

Artificial Intelligence is a branch of Computer Science that aims to develop systems capable of performing tasks that typically require human intelligence. Examples include pattern recognition, learning from data, logical reasoning, and interpreting natural language. These systems can range from performing simple and specific tasks to those that mimic more complex aspects of human thought. The functioning of AI can be divided into various approaches, but one of the main ones is machine learning.

Machine Learning (ML):

Machine Learning is a subset of AI that allows computers to learn directly from data without being explicitly programmed for each specific task. This discipline uses neural networks that analyze and interpret large volumes of data, learning autonomously from them. The learning process includes data collection and preparation, model selection and training, evaluation of its performance, and, if necessary, optimization of its parameters to improve accuracy. Once trained, the model can be used to make predictions or decisions based on the new data it receives.

Deep Learning (DL):

Deep Learning represents an advanced evolution in the field of Artificial Intelligence and Machine Learning. Characterized by the use of deep Artificial Neural Networks, which emulate the functioning of the human brain, Deep Learning allows the computer to

process and learn from large amounts of data, recognizing complex patterns and performing sophisticated tasks. Among its applications, can be found Computer Vision, which allows systems to recognize objects, people, and actions in images and videos, a fundamental technology for autonomous vehicles. It is also used in Natural Language Processing, enabling the creation of chatbots, automatic translators, and advanced voice recognition systems, and in the fields of gaming and robotics, where it is used to develop intelligent agents in gaming environments and to control robots in complex contexts. This approach requires significant computing power and a large volume of data to be effective, and thanks to advancements in hardware, such as the use of Graphics Processing Units, Deep Learning has become more accessible and faster.

Artificial Neural Networks (ANNs):

Artificial Neural Networks are computational models inspired by the structure of the human brain, used to process information similarly to how the brain processes signals. They are fundamental in machine learning and deep learning for pattern recognition and learning from data.

Natural Language Processing (NLP):

Natural Language Processing is a field of study at the intersection of AI, Computer Science, and linguistics, dealing with the ability of computers to understand, interpret, and manipulate human language. NLP enables computers to read, decipher, understand, and make meaningful interpretations of human language in a useful way. This discipline involves a range of techniques and algorithms ranging from understanding written or spoken text to language generation and automatic translation. NLP applications include question-answering systems, virtual assistants, automatic translators, sentiment analysis, and information extraction.

Reinforcement Learning:

Reinforcement Learning is a machine learning technique where an agent learns to make decisions by optimizing its actions based on feedback received in the form of rewards or penalties. This approach is inspired by the way humans and animals learn through the

consequences of their actions. In this model, the agent interacts with an environment, performing actions and receiving feedback in the form of rewards. The agent's goal is to maximize the overall gain of these rewards over time. Decisions are made based on a policy, which the agent refines progressively through trial-and-error experiences.

Supervised Learning:

A type of machine learning where a model is trained on a labeled dataset. This training involves providing the model with input data along with the correct output. The model learns by comparing its predictions to the actual labels and adjusts to improve accuracy. The model's performance is evaluated based on its accuracy in predicting new, unseen data.

Hardware and Software:

Hardware refers to all the physical components of a computer system. This includes devices such as the Central Processing Unit (CPU), Random Access Memory (RAM), Graphics Processing Unit (GPU), hard disk, motherboard, and all other physical elements necessary for the operation of a computer or electronic device. Hardware is essential for running any software, as it provides the physical infrastructure necessary for data processing and program execution. Software, on the other hand, is the collection of programs and operating systems used to direct the hardware. Software is crucial for transforming hardware into a usable and functional system, enabling users to perform specific activities through the computer or other electronic devices.

Graphics Processing Units (GPUs):

The GPU, commonly known as the Graphics Processing Unit, is a specialized hardware component capable of processing large amounts of data quickly and efficiently, especially for graphic operations and image rendering. In the context of Deep Learning, GPUs are particularly valuable for their ability to handle multiple operations simultaneously. This feature makes them ideal for training and running artificial neural networks, which require intense parallel computing activity. Thanks to their efficiency in processing large

data sets and performing complex calculations at high speeds, GPUs have significantly accelerated progress in the field of AI.

API (Application Programming Interface):

An Application Programming Interface (API) is a set of rules, protocols, and tools that facilitate the integration and interaction between different software applications. These interfaces act as intermediaries, allowing two software applications to communicate and exchange data without the sender and receiver coming into direct contact. Instead, they interact solely through the API that connects them.

Algorithm:

An algorithm is a series of detailed instructions used to solve a specific problem or perform a task. In the computing context, algorithms are used to process data and make decisions based on these.

Big Data:

The term Big Data refers to extremely large and complex data sets that cannot be efficiently processed with traditional data processing methods. Big Data is used to reveal patterns, trends, and associations, especially in relation to human behavior and interactions.

Data Mining:

The process of discovering hidden patterns and relationships in large data sets using methods of mathematics, statistics, and AI.

Classification:

In machine learning, classification is the process of identifying which category or class a new data point belongs to, based on learning from a previous data set.

Regression:

A statistical and machine learning method used to predict a continuous numerical value based on previous variables.

Predictive Analysis:

The use of data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data.

In addition to fundamental AI terms, exploring specific concepts commonly used in the language of programmers and AI specialists proves useful for enriching the general understanding of the field and facilitating interactions with technical colleagues, even though these terms may not be essential in a commercial context. Knowledge of such concepts enables professionals in the commercial sector to follow and engage in technical discussions, creating a bridge between different professional domains and enhancing internal collaboration. Masking, for example, refers to a technique used to selectively hide or omit information during data processing, applicable in various ways depending on the context and application. Scraping, or web scraping, is another technique aimed at extracting data from websites through automated programs that navigate the internet to collect specific information from web pages for analysis or other uses, commonly used in market research and online data monitoring. Fine tuning, meanwhile, is the process of refining a Pre-trained Model on a new dataset or for a new specific task, often utilized to adapt complex models already trained on large datasets to more specific tasks or smaller datasets, thus optimizing the model's performance for that application. Data preprocessing, which includes the preparation and cleaning of data for analysis through normalization, handling missing data, and encoding categories, prepares the data for analysis. Lastly, model training involves configuring and teaching AI models, such as neural networks, using training datasets, a critical process for developing models capable of performing a wide range of tasks, from simple classification to complex decision-making, thereby offering an accessible interpretation of these technical terminologies for non-specialists and fostering a comprehensive understanding across professional spectrums.

1.4 Entrepreneurship, Organizations, and Startup Ecosystems.

1.4.1 Entrepreneurship

The master's degree study program in Entrepreneurship and Strategy offers a comprehensive view of entrepreneurship, innovation, and startup ecosystem. Entrepreneurship is characterized as the act of identifying and capitalizing on entrepreneurial opportunities by individuals or groups. This multifaceted phenomenon requires an interdisciplinary approach, incorporating insights from psychology, sociology, business, and particularly economics (Shane, 2003). Focusing on the economic dimension, it is evident that the coursework has been pivotal in shaping an understanding of the entrepreneurial system. Entrepreneurship encompasses the identification, assessment, and exploitation of opportunities, as well as the roles of those who undertake these tasks. It involves recognizing situations where new products, services, or methods can be introduced and marketed profitably, surpassing their production costs.

Entrepreneurial opportunities can be categorized into three types (Drucker, 1985):

1. The generation of new information, typically through technological innovations.
2. The capitalization on market inefficiencies caused by informational asymmetries, which may vary across time and geographies.
3. Responses to changes in the cost-benefit analysis of resource utilization, driven by political, regulatory, social, demographic, technological, or other shifts.

The case of *DataVision Italia* exemplifies the utilization of new technology to enhance market operations, fitting within the scope of these identified types of opportunities. This aligns with the global trend where technological advancements are increasingly pivotal in driving operational changes, as previously discussed. In an economic context, entrepreneurship is closely linked to the concept of creative destruction (Schumpeter, 1942). It refers to the process by which new innovations disrupt existing markets and business models, leading to the obsolescence of older products and services. This cycle of innovation and destruction is crucial for economic dynamism and long-term growth.

Moreover, the entrepreneurial ecosystem is a critical factor. This ecosystem includes not only the entrepreneurs themselves, but also a range of other actors and factors: investors, mentors, government policies, educational institutions, and cultural attitudes toward risk and innovation. A healthy ecosystem supports the growth of startups and the diffusion of innovations (Isenberg, 2010). Finally, the global landscape of entrepreneurship is continually evolving. Trends such as digitalization, globalization, and sustainability are reshaping the opportunities and challenges faced by entrepreneurs. For instance, the rise of digital platforms has lowered barriers to entry in many markets, while also creating new competitive dynamics. In summary, entrepreneurship is a complex, dynamic field that intersects with various disciplines and has far-reaching economic and societal impacts. Understanding its multifaceted nature is essential for anyone looking to engage with the entrepreneurial world, whether as a practitioner, policymaker, or academic.

1.4.2 Organizations

Entrepreneurship, while often associated with starting new organizations, does not exclusively entail this. It can also take place within established organizations. Additionally, entrepreneurial opportunities can be transferred or sold to other individuals or existing organizations. When addressing organizations, it is convenient to refer to the fundamentals of the course on Organizational Design for International Companies. An organization serves as a strategic instrument utilized by individuals to coordinate their efforts towards achieving shared aspirations or values, thereby realizing their objectives. The genesis of new organizations frequently coincides with the advent of novel technologies and the identification of emerging needs. The process of value creation within an organization transpires across three critical stages: input, transformation, and output. Each of these stages is influenced by the external environment in which the organization functions. This environmental context comprises a variety of forces and conditions external to the organization's boundaries, yet pivotal in shaping its capacity to procure and utilize resources for value generation.

The efficacy with which an organization employs human resources and technology in the transformation of inputs into outputs is central to the magnitude of value generated during the conversion stage. The value created by an organization is intrinsically linked to the caliber of its competencies, encompassing its aptitude for learning from and adapting to environmental dynamics (Teece, Pisano, & Shuen, 1997). Furthermore, the production of goods and services is predominantly conducted within organizational frameworks. This is underpinned by the principle that collaborative efforts in production typically yield greater value than isolated endeavors. Key objectives of organizational structures include enhancing specialization and the division of labor, leveraging large-scale technological capabilities, managing the organizational environment, minimizing transaction costs, and exercising power and control.

1.4.3 Startup Ecosystem and Fundamentals

A startup is an entrepreneurial entity established to explore a scalable and repeatable business model. Unlike established organizations that operate on known business models, startups embark on a journey to discover models yet unknown. A critical challenge for startups is distinguishing between the search for a viable business model and the execution of an established one. This distinction necessitates unique tools tailored for startups, diverging from those used in existing organizations. Central to this approach is the adoption of the lean methodology, a paradigm aimed at minimizing risk (Ries, 2011). This method is covered in detail during the study course of Business Strategy.

The lean methodology is underpinned by three fundamental principles. First, it involves summarizing untested hypotheses within a framework known as the Business Model Canvas (Osterwalder & Pigneur, 2010). Second, it emphasizes the practice of customer development, often referred to as the "get out of the building" approach, which actively seeks customer feedback to validate these hypotheses. Third, it incorporates agile development, a methodology that complements customer development through iterative and incremental product creation. This approach requires startups to move beyond the confines of a laboratory setting. By actively engaging with potential customers, startups

gather invaluable feedback on all aspects of the business model canvas. This process involves developing prototypes, soliciting customer feedback, and then iterating or pivoting based on this feedback. The lean startup method efficiently eliminates wasted time and resources by fostering the development of products through short, repetitive cycles (e.g., software versions 0.1, 0.2, 0.3). Once the Business Model Canvas is validated, the startup transitions from exploration to execution, evolving into a formal organization. This approach has been applied in the case study of this thesis. The attitude of lean startups is characterized by agility and speed, relying on adequate rather than perfect data. This approach mirrors Galileo's scientific method—formulating hypotheses, testing them, and then affirming or revising them based on empirical evidence. Open communication and a willingness to share ideas for feedback are vital, as the business model is not an end but a dynamic tool for continuous adjustment, reevaluation, and recalibration of the value proposition. At the core of any business plan, the business model is paramount; the business plan, though essential, is a subsequent consideration.

Concretely, within the startup ecosystem, there are crucial actors who enable their inception and development. Business incubators and accelerators serve as pivotal catalysts in the entrepreneurial ecosystem, each playing a distinct role in nurturing startup growth. Incubators primarily focus on incubating disruptive ideas, laying the groundwork for the emergence of new startups. This process can be likened to carefully matching quality seeds with the most fertile soil, ensuring optimal conditions for germination and growth. The essence of incubator programs lies in their pursuit of searching and innovating. Notably, these programs are characterized by a flexible timeframe, accommodating the varied developmental needs of nascent ventures. On the other hand, accelerators are designed to expedite the growth of existing startups. The accelerator model can be compared to a greenhouse, where young, already sprouted plants find the ideal conditions to flourish rapidly. The primary goal of accelerator programs is to foster growth and scaling of these startups. Unlike incubators, accelerator programs typically operate within a predefined, set timeframe. Recent research underscores the efficacy of these accelerator programs. Startups that have gone through an accelerator program demonstrate a significantly higher capacity for raising funds—almost eight times more—compared to those that have not undergone such acceleration. This statistic highlights the

substantial impact that structured, time-bound support and resources provided by accelerator programs can have on the development and success of emerging startups.

The following terms are part of a fundamental glossary for comprehending the practical actions made within the startup ecosystem:

Pitch:

A pitch is a concise and persuasive presentation delivered by entrepreneurs to potential investors. Its primary purpose is to succinctly outline a business idea, highlighting its unique value proposition and market potential, with the aim of captivating the investors' interest and securing financial backing.

Demo Day:

This event is a combination of a pitch session and a networking opportunity. It is typically organized for startups, particularly those in accelerator or incubator programs, to present their business ideas and progress to a select audience, including investors, industry experts, and peers.

Business Validation:

Business validation is the process through which a startup or entrepreneur confirms the viability of their business idea. It involves testing the product or service in the market to gauge customer response, demand, and the overall feasibility of the business model. This process is crucial for determining whether an idea can be successfully transformed into a sustainable business.

Exit:

In the context of startups and venture capital, an exit refers to the process wherein the founders and investors sell their shares in the company. This can occur through various means, such as an acquisition by another company, a merger, or an Initial Public Offering

(IPO). Exits are significant events as they typically provide a return on investment for the shareholders.

Angel Investor:

An angel investor is an affluent individual who provides capital to startups, often in the early stages. While financial investment is a key aspect, angel investors are also valued for their mentorship, expertise, and network connections, which can be instrumental in guiding the growth and development of the startup.

Venture Capital:

Venture capital is a type of private equity financing that is provided by venture capital firms or funds to startups and small businesses that are believed to have long-term growth potential. Venture capitalists not only offer financial resources but also bring in strategic assistance, mentoring, and access to their business networks.

Pre-Seed Funding:

This term refers to the initial stage of funding for a new startup. Pre-seed funding is often sourced from angel investors, friends, family members, and the founders themselves. It is primarily used to cover preliminary expenses and to support the early development phase of the startup, prior to formal seed funding.

Seed Funding:

Seed funding represents the first official equity funding stage. It is the capital raised to help a startup grow and scale its operations, following the initial pre-seed investment. Seed funding is typically used for market research, product development, and early-stage business operations.

Series A, B, C Funding:

These terms refer to subsequent rounds of funding after the initial seed stage. Each series (A, B, C, and beyond) represents a progressively advanced stage of funding, typically sought by startups that have already demonstrated market traction and are looking to further scale their operations, develop new products, expand into new markets, or increase their market share. These funding rounds involve larger amounts of capital and often include a mix of venture capital firms, private equity investors, and other institutional investors.

Chapter 2: DataVision Italia

2.1 DataVision's Foreign Direct Investment

DataVision, founded in 2004 in Prague, is a leading company in the field of Machine Vision, AI, and Autonomous Robotics, primarily focused on the industrial and manufacturing sector. The company offers a wide range of services, including consultancy, custom software development, and outsourcing in the field of Machine Learning. The company's AI/ML solutions are designed to optimize production, speed up manufacturing processes, automate manual labor, and increase visibility along the entire supply chain. *DataVision's* clients include companies operating in various sectors, such as the automotive industry, tire manufacturing, pharmaceuticals, production plants, electronics, logistics, and fintech. The company is actively dedicated to the digitalization and automation of industries and boasts over 100 installations globally. It also manages datasets of over 35TB, achieving typical performance of its models at 99.9%. This commitment to innovation and technological efficiency positions *DataVision* as a leading player in its field of activity.

What has been accomplished by the owner of *DataVision*, Jindrich Hasek, can be considered a form of Foreign Direct Investment (FDI). This topic has been frequently addressed and discussed in the master's degree Global Development and Entrepreneurship, as it represents a key mechanism in the process of internationalization. Indeed, FDI plays a pivotal role in the global economic landscape, offering a bridge for the transfer of capital, technology, and expertise across borders (Dunning & Lundan, 2008). It is an investment made by a firm or individual in one country into business interests located in another country. FDI takes place when an investor establishes foreign business operations or acquires foreign business assets, including establishing ownership or controlling interest in a foreign company. The impact on the host country's economy can be profoundly transformative. It often leads to the creation of jobs, enhancement of technology, and can contribute significantly to the growth of local industries (Moran, Graham, & Blomstrom, 2005). FDI is not merely a financial transaction; it entails a long-

term relationship and the transfer of more than just capital. There is a transfer of skills, innovative technologies, and organizational and managerial practices, which can be a catalyst for the economic development of the host country. The nature and extent of FDI's impact, however, can vary significantly based on the host country's economic structure, regulatory environment, and socio-political stability. Countries with stable political environments, robust legal frameworks, and favorable economic policies tend to attract more FDI (Buckley & Casson, 2009). This investment is seen as a vote of confidence in the local economy, often leading to more investments and business ventures. Conversely, countries with volatile political landscapes, restrictive policies, or underdeveloped legal systems often struggle to attract and retain foreign investors.

In this case, Italy has been identified as a market possessing considerable potential, a perspective notably endorsed by *DataVision*'s CEO. This evaluation is grounded in a comprehensive analysis of Italy's unique market attributes, encompassing aspects such as consumer behavior, economic stability, and sector-specific opportunities. The strategic decision by *DataVision*'s owner to focus on the Italian market underscores the country's emerging significance in the advanced-technological landscape, having ambitions he felt were beyond what the Czech market could sustain. Indeed, the industrial sector of the Czech Republic is characterized by a notably conservative approach, in stark contrast to its Italian counterpart. Within the broader European context, Italy distinguishes itself as one of the foremost nations in adopting technological innovations, showcasing a more progressive stance in the realm of industrial advancement.

For a company like *DataVision*, FDI represented an opportunity to gain a foothold in new markets and access new customer bases. It also reflects a commitment to a long-term presence in the Italian market, which can be crucial for brand development and market penetration strategies. It is indeed intriguing to witness the practical manifestations of entrepreneurship transcending national boundaries, especially after studying it at a theoretical level at the University.

2.2 DataVision Italia

DataVision Italia was established by the *DataVision Group* and has been operational since 2022. This innovative startup was created with the aim of specializing in the field of AI, offering its services primarily in the Italian industrial context. The key services offered by *DataVision Italia* include AI applications and software development. Specifically, its current offerings and activities are focused on five main projects, which will be presented in paragraph 2.3. The company is actively engaged in recruiting local talents in the field of AI and benefits from a close collaboration with the *DataVision Group*, ensuring continuous support based on two decades of experience and expertise. The operational headquarters of the company is in Bologna, while the legal headquarters is situated in Bolzano. In its first year of operation, *DataVision Italia* has established strategic collaborations with important public institutions, including the *University of Bologna*⁵, the *University of Bolzano*⁶, the *University of Florence*⁷, and the *NOI Techpark*⁸. To adequately contextualize the drafting of the thesis and the activities carried out by the candidate, it is essential to present the organizational chart and structure of the startup: this includes two data scientists, two software developers, a graphic and web designer, a commercial officer, a team leader, and the CEO.

2.3 DataVision Italia Products and Services

DataVision Italia offers a comprehensive suite of services that harnesses the power of AI to revolutionize various sectors. The offerings include specific services such as:

1. AI Pre-trained Models, which provide ready-to-use AI solutions for anomaly detection, object recognition, and more, ensuring quick integration into business processes.

⁵ Unibo.it. (2024). *Università di Bologna*. Available at: <https://www.unibo.it/it>

⁶ Unibz.it. (2024). *La Libera Università di Bolzano*. Available at: <https://www.unibz.it/it/>

⁷ www.unifi.it. (2024). *Università degli Studi di Firenze | UniFI*. Available at: <https://www.unifi.it/>

⁸ NOI Spa. (2022). *NOI Spa*. Available at: <https://noi.bz.it/it>

2. BeeYard⁹, a platform that facilitates advanced data management, optimizing data storage and retrieval.
3. 3D Reconstruction, state-of-the-art technologies used for creating precise digital models, applicable in numerous fields.

DataVision Italia also specializes in custom software engineering, developing AI-enhanced software tailored to specific business needs. Additionally, consultancy services are provided to help businesses harness AI for process optimization and innovation. An in-depth examination of these services is deemed necessary to contextualize the primary commercial activities undertaken by the candidate.

2.3.1 3D Reconstruction

DataVision Italia, specializing in the fields of Computer Vision and Image Processing, has embarked on the development of cutting-edge technologies for 3D reconstruction. This process utilizes AI and ML models to transform two-dimensional multimedia material into three-dimensional digital models. It is based on the autonomous extraction of geometric information, such as depth, shape, and texture of objects. The technologies used in this area include NeRF - Neural Radiance Fields (Mildenhall et al., 2020) - and Gaussian's Platting (Kerbl et al., 2023), integrated with proprietary models. Some images of an object, with the corresponding camera poses, are used to train a NeRF implicit representation of the 3d scene. Then, this optimized model can be used for rendering novel views of the object.

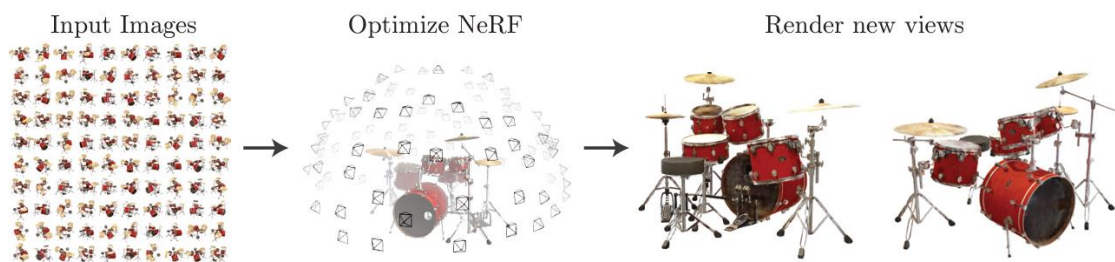


Figure 1 - Overview of the NeRF Model

⁹ BeeYard. (2016). *Home / BeeYard*. Available at: <https://www.beeyard.ai/>

Although this project is still in its early stages, it represents the main focus of *DataVision Italia*. The goal is to develop software that allows for fully automated 3D modeling, making these technologies easily accessible on a large scale. 3D reconstruction emerges as the fastest, most efficient, and cost-effective methodology in 3D programming, with the potential to replace traditional methods thanks to its ability to convert almost any object into its digital model counterpart in near real-time. The 3D reconstruction technology market is projected to grow annually by 8.1% until 2030 (Mordor Intelligence, 2023). Its main advantage lies in the automation of 3D model creation, a process that traditionally requires a considerable expenditure of time, financial resources, and specific technical skills. 3D reconstruction is already a viable alternative to photogrammetry, offering superior quality models and the ability to replicate every type of surface, including reflective, transparent, or semi-transparent materials, and functioning effectively with any type of lighting.

3D reconstruction's potential applications are vast and exciting, extending from practical uses in industry and design to entertainment and gaming (Straits Research, 2023). It could streamline the process of creating 3D models for video games or animations, reducing time and resource expenditure. In industrial design, the model could expedite prototyping by creating accurate 3D models from photos and videos. In Virtual Reality it could enhance user experiences by generating detailed 3D environments from 2D images in real-time. Moreover, the technology's ability to work with "in-the-wild" captures opens possibilities for user-generated content and democratization of 3D modelling. Users could potentially create high-quality 3D models from photographs taken with their smartphones, opening a world of creative and commercial opportunities (Hong et al., 2023).

2.3.2 AI Pre-trained Models

Pre-trained AI models are Deep Learning systems that have already been trained on vast datasets, enabling them to be used for specific tasks. Training these models requires access to large volumes of data and significant computational resources, allowing them to learn a wide range of patterns and features (Goodfellow, Bengio, & Courville, 2016). Once trained, these models can be adapted or "fine-tuned" to perform specific tasks across a variety of domains. Examples of AI models include these four developed by *DataVision Italia*:

Anomaly Detection:



*Figure 2 – Anomaly Detection Model.
Example from BeeYard.*

Identification of anomalous or irregular patterns in data. These models are trained to recognize objects, behaviors, or events that deviate from a predefined standard, using either a supervised or unsupervised learning approach. Anomaly Detection finds application in various sectors, including cybersecurity, where it is used to detect intrusions or attacks, and in the detection of fraud in financial transactions. Specifically, at *DataVision Italia*, the models have been fine-tuned to operate in the manufacturing industrial sector, thus being applied to production lines.

Object Detection:

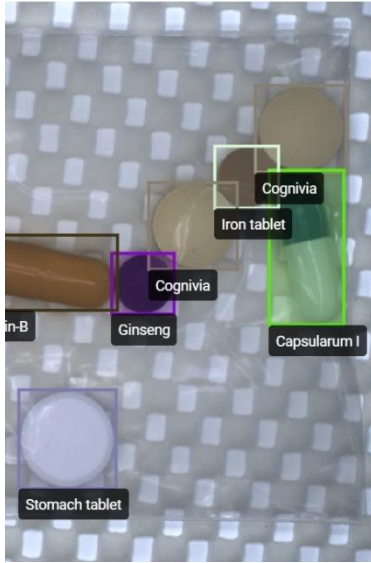


Figure 3 - Object Detection Model. Example from BeeYard.

Detection of the presence and determination of the position of objects within images or videos. These systems use deep learning techniques to identify and classify specific objects, such as people, vehicles, or everyday items, in a visual environment (Girshick et al., 2014). The ability of these models to recognize objects in various and complex contexts makes them essential in applications like video surveillance, industrial automation, and autonomous driving.

Semantic Segmentation:

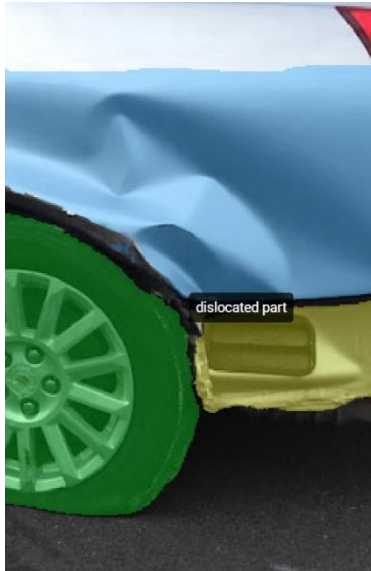


Figure 4 – Semantic Segmentation Model. Example from BeeYard.

This allows for a detailed and precise interpretation of the image, which is crucial in applications such as vision systems for autonomous vehicles, where it is necessary to understand the surrounding environment in detail, and in medical image analysis for the identification of pathologies or surgical planning. *DataVision Italia* applies it to quantify measurements of objects on the production line with greater accuracy. It is also applied in the AutoCrash software (Chapter 4).

Optical Character Recognition (OCR):

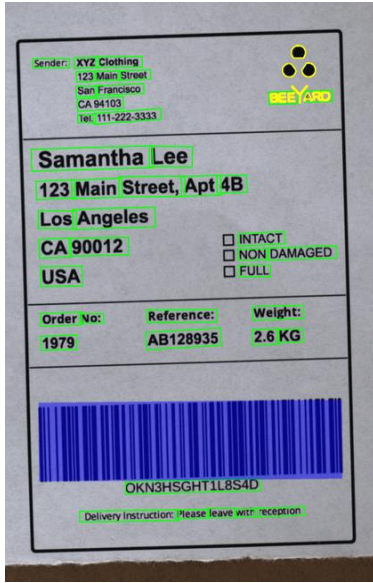


Figure 5 - OCR Model. Example from BeeYard

Conversion of text from images or scanned documents into editable and searchable text format. These advanced systems not only recognize printed text but are also capable of interpreting handwriting and texts on complex backgrounds. OCR is widely used to digitize codes, texts, articles, receipts, etc. Subsequently, if integrated with NLP models, the machine can also understand the text and give it meaning. *DataVision Italia* applied it in a project for large Italian company manufacturing tires.

2.3.3 BeeYard

BeeYard is an innovative data management platform specializing in AI and Computer Vision. Developed since 2012, the platform has established itself in the field of image analysis for production lines, offering advanced solutions for various industrial sectors. Its main functionalities include Semantic Segmentation, Object Detection, Object Classification, OCR, and anomaly detection. BeeYard integrates effectively with industrial sensors and databases, providing customized solutions. Its automated pipelines for data preparation and advanced security measures ensure effective management of sensitive data. The platform is designed to be scalable and versatile, adapting to different industrial needs. It provides detailed insights through graphical and statistical analysis, significantly contributing to the optimization of production processes. BeeYard's ability to adapt to different industrial contexts, combined with its robust security architecture, makes it an ideal solution for companies looking to improve efficiency and effectiveness through data analysis. BeeYard represents a significant step forward in industrial data management, combining cutting-edge technologies to provide tangible added value to its users.

The dissemination of BeeYard by *DataVision Italia* exemplifies a paradigmatic example of distribution agreements (Schaffer, Agusti, & Dhooge, 2019). Within the purview of International Business Law, such agreements constitute a pivotal mechanism for corporate internationalization, frequently employed in global commerce to augment market presence and regulate product distribution across diverse territories. A distribution agreement is a contractual arrangement wherein two entities collaborate consistently to commercialize a product within a specified market. This agreement delineates the roles of the supplier and the distributor, with the latter responsible for acquiring goods for subsequent resale, either independently or to retail entities. The distributor typically aspires to secure either an exclusive (possessing sole rights to market the products within the agreement's geographical scope) or a sole (wherein the supplier retains the right to independently sell its products) distribution status. BeeYard represents the latter scenario, wherein sales and promotional activities are undertaken by both entities involved.

In situations where a supplier opts for a distribution agreement, it is often due to a lack of requisite resources for independent market entry, as observed in the case of a Czech enterprise venturing into the Italian manufacturing sector. The distributor, conversely, brings to the table an intricate understanding of the market, inclusive of business connections and organizational methodologies essential for the effective dissemination of goods within the target market. Distributors are typically more attuned to local market nuances, consumer behaviors, and regulatory frameworks, all of which are critical for successful market ingress. The supplier's obligation under such an agreement encompasses the provision of goods as stipulated by the distributor's purchase orders. Meanwhile, the distributor is tasked with promoting and vending the supplier's products within the target market, in alignment with a mutually devised annual business strategy. A distinctive aspect of distribution contracts, as opposed to supply contracts, is the implication of a shared strategy for product promotion and sales in the target market, potentially including clauses on distributor training and intellectual property protection. In contrast, a supply contract is characteristically a recurrent transaction pertaining to a specific sale.

For *DataVision Italia*, the adoption of distribution contracts for BeeYard's proliferation might represent a strategic ingress into novel markets, capitalizing on the competencies of local distributors while maintaining a focus on its foundational expertise in AI and software development. This tactic is congruent with the dynamic nature of the technology sector, where swift market shifts necessitate flexible and responsive strategies for international expansion.

2.3.4 Software Engineering

The software engineering service is a key component of *DataVision Italia*'s offerings, aimed at supporting companies in adopting advanced software solutions enhanced with AI technologies. The software engineering experts at *DataVision Italia* work closely with clients to deeply understand their specific needs and business objectives. The process begins with defining the software architecture, followed by the design of the user interface and the programming of the code. During this journey, the specialists develop custom algorithms and machine learning models, which are then integrated into the software applications (Sommerville, 2015). This approach allows companies to fully exploit the potential of AI, such as process automation, advanced data analysis, and the generation of accurate forecasts. Once the software is developed, it undergoes a series of tests, including unit tests, integration tests, and system tests, to ensure its quality and reliability. The software engineering service offered by *DataVision Italia* presents numerous advantages for client companies. Indeed, the software is custom designed to precisely meet the specific needs of each enterprise, offering the possibility of gaining a significant competitive advantage through the use of these custom software solutions and the implementation of AI technologies.

2.3.5 Consultancy

DataVision Italia stands out in the technological sector by offering specialized consultancy in AI. With a team of highly qualified and competent experts, the company positions itself as a technological partner, aimed at meeting the diverse needs of businesses in the sphere of technological innovation. This service focuses on the design and implementation of customized strategic plans for the integration of AI into business operations. Through these solutions, *DataVision Italia* assists companies in maximizing their value and improving their competitive position in the market by leveraging the efficiency and potential offered by AI technologies. This approach not only enhances the operational capabilities of the businesses but also empowers them to stay ahead in the rapidly evolving landscape. By tapping into the expertise of *DataVision Italia*, companies can unlock new opportunities, streamline processes, and create innovative products and services that resonate with the modern market's demands.

Chapter 3: Working Context and Activities

This chapter aims to succinctly and non-exhaustively document the professional activities undertaken by the candidate throughout their employment journey at *DataVision Italia*. The description is concise, serving as a bridging segment between the theoretical framework of the thesis and its practical application. The purpose of this piece is to convey a preliminary overview of the principal business development activities to be conducted within a startup environment. These tasks diverge from those typically associated with a large-scale enterprise, as they encompass a broader variety of responsibilities, although approached in a more cursory manner.

3.1 DataVision Italia: Evolution and Challenges of a Startup in the AI Market

DataVision Italia was established in September 2022 and initially the startup played a supporting role for *DataVision*. This initial phase was characterized by providing technical assistance, specifically through the development of AI models that integrated with *DataVision*'s robotics and vision systems. During this period, *DataVision Italia*'s activities were primarily supportive, lacking its own operational autonomy. However, the transition to an autonomous operational phase occurred in the summer of 2023, marked by the acquisition of physical offices and the formation of a dedicated team for internal projects. This change represented a significant turning point in the startup's history, signifying its actual entry into the landscape of businesses operating in the AI sector. Therefore, it is relevant to consider the year 2023 as the true beginning of *DataVision Italia*'s operations. Prior to that date, the entity functioned more as an extension of the parent company rather than an independent enterprise, while from this point onwards, it gained its own operational and organizational identity.

The decision to analyze the financial and organizational status at the time of the candidate's hiring is justified by the fact that the startup was in a critical transition phase. In this context, strategic and operational decisions could substantially differ from those adopted in an already established organization. Initially, the startup had neither established commercial contacts nor ongoing projects, facing the need to establish itself in the market. During this period, *DataVision Italia's* financial situation was characterized by a lack of income and limited current expenses, with the significant expense being the salaries of six employees. This condition highlights the typical challenges of early-stage startups, where revenue generation is still an objective to be achieved. The strategy adopted during this initial phase was exploratory in nature, focused on finding the most appropriate and potentially profitable market segment. The goal was to identify projects with a high return on investment (ROI) and scalable products. This search proved to be particularly complex in the field of AI, given its cross-applicability to multiple industrial sectors. Indeed, while this versatility represented a competitive advantage, it also necessitated careful market analysis to identify the most promising niches and effective entry strategies.

3.2 Onboarding Phase

The onboarding process is crucial for the effective integration of a new employee into a work context. It holds particular importance despite its limited coverage in the academic university path. Knowledge of the key phases of this process proves extremely useful for proper integration into the company environment and for a full understanding of the assigned responsibilities. Although the specific nature of onboarding varies according to the individual company, it is possible to identify a basic structure that characterizes it in most cases.

In the typical onboarding phase of a startup, the first day of the new team member is dedicated to welcoming, with the goal of fostering a quick and effective adaptation. This includes the introduction of the team, an overview of the company and its core values, as well as an introduction to the business processes and procedures (Bauer & Erdogan,

2011). This moment is essential for transmitting the entity culture and for strengthening a sense of belonging, a crucial aspect in a dynamic environment such as that of startups. This is followed by a targeted training phase, during which the new employee receives specific instructions related to their role and the tasks they are expected to perform. In startups, due to the need for adaptability and versatility, this training tends to extend beyond technical skills, including elements of problem-solving, change management, and innovation. Monitoring and constant feedback are vital aspects of onboarding, aiming to provide new hires with regular and constructive evaluations, as well as opportunities to discuss progress and challenges encountered.

In the specific context of this experience, it was fundamental to acquire a detailed knowledge of the characteristics and functioning of BeeYard product and 3D reconstruction technology. However, before this, it was necessary to delve into the principles and applications of AI. Working within the company implies close collaboration with technical teams. Therefore, even in a business-focused role, it is essential to establish effective communication with engineers and data scientists. Subsequently, the identification of the first necessary operational steps was initiated. The nascent development phase of the startup offered the opportunity to explore a wide range of activities, as none of these had yet been previously undertaken. In this framework, a list of tasks to be performed was drafted, constantly updated month after month.

3.3 Early Assessments

In this section, the analyses and evaluations carried out by the candidate in the period immediately following the onboarding phase will be detailed. This crucial moment provided a clear understanding of the operational conditions of *DataVision Italia* and highlighted any areas of weakness. Indeed, a concentrated effort has been directed towards identifying and addressing the less effective aspects of *DataVision Italia's* operations, with the ultimate goal of fostering improvements and facilitating business growth.

A critical area of focus has been the clarification of the challenges faced in client acquisition. It has been hypothesized that these challenges may be rooted in perceived unreliability from the customer's perspective. An initial investigation into the company's online presence revealed a significant issue: the search for "DataVision Italia" on Google yields results that are, at best, confusing and, at worst, misleading. The top search results include an unrelated IT security systems company located in Rome bearing the same name, followed by the LinkedIn page of that company. Consequently, the first impression potential clients receive is one of anonymity, inactivity, or even non-existence. This situation is aggravated by the lack of readily available information specific to *DataVision Italia*, as most online content pertains to *DataVision*.

This observation leads to the second identified challenge: the need to delineate the distinct identities and functions of *DataVision* and *DataVision Italia*. They were perceived as a single entity, despite having different operational roles. It was imperative to clearly articulate the unique contributions and objectives of each entity, particularly emphasizing *DataVision Italia*'s focus on the Italian market. The structural ambiguity between these two entities not only hindered client acquisition but also muddled the company's market positioning. Addressing these issues necessitated a strategic overhaul of the company's digital presence, marketing strategies, and brand differentiation tactics. By refining the online image and clearly delineating the roles and markets of *DataVision* and *DataVision Italia*, the company significantly improved its visibility and reliability in the eyes of potential clients, thereby improving its capacity for growth and market penetration.

Starting from these basic considerations, solutions have been proposed that are capable of increasing the business opportunities of the startup.

Strategic rebranding:

To effectively delineate the distinction between *DataVision* and *DataVision Italia* and ensure that external stakeholders understand the separate nature of these two entities,

particularly in their distinct service offerings in the Italian market, a strategic approach was necessary. *DataVision*, specializing in system integration, logistics, and robotics within the automotive industry mainly in the Czech Republic and Germany, contrasted with *DataVision Italia's* focus on AI, Image Processing, and 3D technologies, directed to operate within the fashion, packaging, and insurance industries in Italy. For this reason, rebranding activities for *DataVision Italia* were started, aimed at making it appear more independent to external observers, while still maintaining the trust that the privileged relationship with *DataVision* afforded to stakeholders.

DataVision Italia website:

In the endeavour to delineate the identity of *DataVision Italia* within the perceptions of its clientele, the establishment of a website has been contemplated. This proposed digital platform was designed to facilitate a seamless linkage to the principal *DataVision* entity, while concurrently elucidating the distinctiveness of *DataVision Italia*. Insights derived from digital marketing competencies underscored the necessity of engaging company storytelling, complemented by narratives detailing the organization's identity, activities, and origins (Kotler, Keller, 2015). Furthermore, the significance of disclosing accomplished outcomes, alongside a dedicated segment for the dissemination of 3D models and renderings, has been underscored. It is evidenced that the demonstration of tangible results substantially augments customer trust in the organization's offerings.

Subsequent to these considerations, a newsletter targeting existing clientele and contacts has been inaugurated, in conjunction with a section devoted to academic articles that canvas the latest developments in AI globally. This initiative was acted to underscore the organization's professionalism, industry acumen, and commitment to pioneering research. Moreover, the strategy of disseminating these articles on a weekly basis via social media channels is aimed at sustaining an active and informative online presence. The website for *DataVision Italia* is envisioned to function as a showcase, affirming the organization's reliability and competencies, thereby clarifying its identity to stakeholders. This approach aims to fortify the trust and confidence of its clientele and to delineate a clear and distinct identity for *DataVision Italia* in the competitive landscape.

DataVision Italia social media:

At the present time, social networks are accorded parity with websites, serving as essential instruments for organizational branding and outreach (Chaffey & Smith, 2017). Among these platforms, LinkedIn emerges as a protagonist for strategic expansion, necessitating the development of a curated, comprehensive, and dynamic page. This profile should encapsulate a concise yet compelling overview of the organization's mission, operations, and genesis, effectively communicating its value proposition within the constrained timeframe, typical of initial engagements with large corporations. The strategic utilization of a LinkedIn page facilitates the broad diffusion of the organization's brand within its industry. The multifaceted utility of this social media extends to facilitating networking opportunities with entrepreneurs and potential business collaborators. These activities hold the potential to significantly impact the organization's growth trajectory, even if it results in the acquisition of just a single additional client. Additionally, it serves as a channel for talent acquisition since the distribution of content encourages the creation of a community aligned with the organization's spirit.

Alongside, the proposition to inaugurate an Instagram presence targets a demographic range broader and less formal than the one of LinkedIn, aiming to engage more common people. Instagram's capacity to expose complex concepts such as AI through accessible and engaging content positions this social network as a formidable vehicle for achieving virality and enhancing brand recognition, particularly within the Italian market. The aspiration is for the community at large to perceive the startup as an assembly of young specialists applying AI solutions within the Bologna province and broader Italian contexts. Engagement with communities on LinkedIn or Instagram has brightened the existence of numerous innovative startups, which, absent these platforms, might have remained anonyms. The prioritization of digital marketing initiatives is unequivocally recognized, with an appreciation for their instrumental role in customer acquisition and the construction of a durable brand identity. A modern company cannot afford to not adopt these strategies.

Pitch and presentations:

The creation of high-quality, custom presentation materials for *DataVision Italia* is a crucial element for establishing credibility and professionalism, effectively bridging the gap in communicating the startup's value proposition to potential clients. The absence of such tailored presentations has been a noticeable deficit in conveying the degree of expertise of the offerings. The goal was to upgrade from the quickly put-together materials previously used by *DataVision Italia*, which, while useful, did not fully showcase the entity's capabilities and innovative approach. By creating well-designed and carefully crafted presentations, the intention is to improve *DataVision Italia*'s image and present a clearer, more compelling story of its mission and services. These improved presentations will be useful both as attachments in introductory emails and during face-to-face or virtual meetings, allowing the company's dedication and innovation to be fully showcased. Additionally, the use of graphics, images, and videos help keep the audience engaged. The effort to develop these presentations goes beyond just making them look better; it is a strategic approach to strengthen *DataVision Italia*'s market presence, making every client interaction an opportunity to impress and engage.

Team structure:

The impact of cultivating a well-defined, organized, and intrinsically motivated team is underscored by extensive research in Organizational Behaviour. Establishing a startup mentality where each individual perceives themselves as a fundamental element of the project and is invested in its success is critical for driving growth. Empirical studies suggest that the implementation of regular team meetings for updates on progresses and strategic directions enhances transparency and collective responsibility, subsequently leading to improved team performance (Edmondson, 1999; Hackman, 2002). These meetings serve as a platform for setting shared objectives, thus reinforcing cohesion and collaborative efforts among team members. Moreover, the physical consolidation of team members within a single workspace is advocated by research highlighting the positive impact of co-location on team dynamics. Such arrangements have been shown to boost teamwork and creative problem-solving through enhanced communication and spontaneous brainstorming sessions (Allen & Henn, 2007). The proximity facilitates

informal interactions and rapid exchange of ideas, which are crucial for the agile development processes typical of successful startups.

Additionally, the strategic assessment and integration of essential roles within the startup, especially those related to commercial activities, is vital. A study by Markman and Baron (2003) emphasizes the importance of role specificity and clarity in startups for achieving commercial success and operational efficiency. Identifying gaps within the team structure and promptly addressing these needs through targeted recruitment or internal development can significantly contribute to the startup's adaptability and competitiveness in the marketplace. In conclusion, the deliberate cultivation of a cohesive, motivated team, combined with strategic structural adjustments and the development of a conducive physical and psychological work environment, is foundational to the realization of a startup's objectives.

Focus on business strategies:

At this stage, prioritizing the commercial aspect of *DataVision Italia* emerged as the most critical short-term objective. Despite having a structured and efficient technical segment, the enterprise faced considerable challenges within its commercial sector. A startup's equilibrium hinges on a triad: product innovation, financial stewardship, and the integration of marketing and sales strategies. It becomes evident that the majority of the obstacles encountered thus far are established in the business dimension, delineating it as the area requiring immediate and focused intervention. The intrinsic value of the products offered by *DataVision Italia* provides a solid foundation for potential growth and success. However, the absence of a fundamental framework to showcase these capabilities significantly impedes the company's ability to leverage opportunities. The formulation of a comprehensive Go To Market strategy, underpinned by a Lean Startup Business Plan, is imperative for establishing a healthy foundation for the startup. Key components of this strategic plan should include: Conducting thorough market research and analysis to gain a deep understanding of the target audience, their needs, and operational dynamics. A comprehensive examination of both direct and indirect competitors. A detailed risk analysis to anticipate and mitigate potential challenges. The development of marketing

and sales strategies that addresses distribution channels and pricing models. The absence of such strategic initiatives, involving market research, competitor analysis, risk assessment, and the structuring of marketing and sales tactics, will undoubtedly complicate the startup's market entry and customer acquisition efforts. Hence, the immediate focus on fortifying the commercial infrastructure is not only strategic but also necessary to navigate the complexities of market penetration and to secure a competitive stance in the industry.

Financial management:

The establishment of a robust, precise, and comprehensive financial management framework stands as a foundational element for the long-term growth and viability of startups. This obligation stems from the critical role financial management plays in clarifying the dynamics of expense allocation and revenue generation, essential for strategic decision-making. Within the context of *DataVision Italia*, the extant financial accounting exhibited significant deficiencies and a lack of transparency, signaling an urgent need for systematic organization and diligent oversight. This necessitated the integration of a dedicated role tasked with the continuous management of financial operations, aligned with the broader business strategy. This strategy should incorporate the formulation of detailed financial plans that articulate both immediate and future financial objectives, underpinning the startup's strategic roadmap. A critical examination of company expenditures is required, identifying areas of non-essential spending that can be curtailed or eliminated, thereby optimizing operational efficiency. This fiscal discipline requires the maintenance of precise records of all financial transactions, ensuring an authentic and unvarnished portrayal of the company's fiscal health. As taught during the Accounting master's course, the execution of a dual analysis encompassing both fixed and variable costs, alongside a revenue analysis, will provide actionable understandings into the most lucrative products or services.

The equilibrium between product innovation, marketing initiatives, and financial stewardship is quintessential for the continuous operation and progressive development of a startup. The imbalance within *DataVision Italia*, while understandable given its

nascent phase, underscored the necessity for a complete recalibration of its financial management practices.

3.4 The Lean Startup Business Plan

The adoption of the Lean Startup methodology and business plan by *DataVision Italia* embodies a transformative shift in the approach to new venture development and management; fundamentally reorienting the organization towards flexibility, continuous innovation, and customer-centric product development. Originating from Eric Ries's pioneering work, "The Lean Startup," this methodology draws inspiration from lean manufacturing principles, focusing on minimizing waste and maximizing value through rapid iteration, customer feedback, and agile product development (Ries, 2011). Central to this approach is the development of a Minimum Viable Product (MVP), designed to gather maximum validated learning about customer preferences and behaviors with minimal effort. This process, characterized by the build-measure-learn feedback loop, can enable *DataVision Italia* to quickly prototype, launch, and refine its offerings based on direct customer feedback, effectively integrating the principles of agile development from software engineering into its broader business strategy and operations.

Economically, the Lean Startup approach offers *DataVision Italia* a strategic framework to efficiently allocate resources, thereby reducing the sunk cost fallacy and optimizing capital and human resources to explore and validate business hypotheses in real market conditions. This methodology aligns with the theory of creative destruction advocating for continuous innovation that disrupts existing market structures, while also addressing the high levels of uncertainty inherent in launching new ventures (Schumpeter, 1942). By emphasizing customer feedback and iterative design, *DataVision Italia* can align its operations with the market orientation theory, which suggests that organizational performance is enhanced when responsive to market needs (Kohli & Jaworski, 1990). The Lean Startup business plan diverges from traditional planning methodologies by prioritizing a dynamic, iterative learning process over extensive upfront planning. Rather than a static document, it represents a fluid, adaptable process that acknowledges the rapid

pace of technological advancements and market dynamics. For *DataVision Italia*, this means embracing a business plan that is not fixed but evolves through continuous hypothesis testing, customer feedback loops, and the readiness to pivot based on new insights. This approach not only mitigates risk but also positions the startup for long-term success in the competitive and ever-evolving marketplace. By applying economic principles such as opportunity cost, risk management, and market orientation, *DataVision Italia* is better equipped to navigate the complexities of new venture creation, ensuring a streamlined product development process, and aligning closely with contemporary economic theories on innovation and entrepreneurship.

3.5 Market Research and Market Trends

Market Research:

The initiation of any business development endeavor hinges on comprehensive market analysis and strategy development. This strategic evaluation includes examining industry trends, identifying target customer segments, and analyzing the competitive landscape. This analytical approach helps understand market dynamics, forming the basis for strategic planning. With this insight, the business developer crafts a coherent strategy outlining market positioning, value proposition, and growth roadmap. Strategy development involves anticipating future trends, opportunities, and threats, enabling agile navigation of the AI industry complexities. A concise overview of the market research conducted is hereby publicized for informational purposes.

Initial research has been used to demonstrate that the AI market in Italy is growing. According to *Anitec-Assinform*, the AI Italian Market reached a value of 422M€ in 2022, and it is expected to reach 700M€ in 2025. The average annual growth rate of the sector is +22%. It is also worth foreseeing that the current market value (422M€) has doubled in 2 years and that 76% of the value is commissioned by Italian Companies. However, it is worth noting that, as a study done by the *Osservatorio Digital Innovation - Politecnico di Milano* showcases, the most significant market-share AI-wise is related with Intelligent Data Processing (35%), followed by Natural Language Processing (17,5%),

recommendation systems (16%) and just then, Computer Vision (11%). From this data, it could be concluded that the market value for Computer Vision in Italy was around 42M€ in 2021 and has reached a value around 46M€ in 2022. Computer Vision is the primary branch that *DataVision Italia* focuses on. Further disclosure on the special applications per sector/application has not been done. Therefore, estimating the market share of Computer Vision solutions per sector is an almost impossible task. However, if we analyze other variables such as region and sectors market share and their relation to AI solutions, some estimations (more or less accurate) could be done. As such, when it comes to geographical location, the cited study estimated that 43% of the companies have their Headquarters in the Northwest of Italy, 25% in the Northeast, 24% in the center, and just 8% in the South or the Islands. The study divided the different products/platforms offered by each of the 1,347 companies between 2 categories:

1. General platforms: 52% of the companies.
2. Platforms for a particular sector: 48% of the companies.

From the specialized ones, the sectors on which they specialize are the following:

Sector	Specialized companies	Number of companies (aprox.)
Services	21%	136
Banking & Insurances	13%	84
Health	10%	65
Public Administration	10%	65
Manufacturing	8%	52
Wholesale & Retail	6%	39
Transportation	5%	32
Utilities	4%	26
Education	4%	26
Hotels	3%	19
Pharmaceutic	3%	19
Others	11%	71

Table 1 – AI Italian Market. Anitec Assinform (2023).

Others includes: Media (3%), Construction (2%), Agriculture (2%), Fashion & Luxury (2%), Waste Management (2%).

This data should be useful as a global picture. However, let's not forget other relevant variables: There are more companies delivering generic solutions in those fields, so that does not mean that in the pharma field there are just 19 competitors of *DataVision Italia*, it might have an unknown larger amount. Furthermore, there are also not considered IT companies delivering AI solutions. Nevertheless, what can be concluded from this data is that there exist a large number of companies that are delivering both generic and specific solutions for the mentioned sectors, which might suggest that delivering both types of solutions is feasible. Studying the solutions *DataVision Italia* is able to provide, understanding where those solutions might be applied, and relating these both variables to Italian demands, might be the first step toward smart client approaching. This study has been done and can be downloaded on the Thesis' GPT that is presented in the Appendix.

Market Trends:

In this section, a brief overview of the study on trends in the American AI market and the business opportunities it could offer is provided. Understanding AI trends in the United States is really crucial for understanding future market opportunities in Italy for several reasons, which intertwine the dynamics of technological innovation, market leadership, and global economic interconnectedness.

Firstly, the U.S. has long been a pioneering force in the development and application of AI technologies. Its robust ecosystem of tech giants, startups, research institutions, and venture capital has propelled it to the lead of AI innovation. This leadership position means that trends and breakthroughs emerging from the U.S. usually set the pace and direction for the global AI landscape. By observing these trends, stakeholders in Italy can gain insights into the future trajectory of AI development, including emerging technologies, business models, regulatory frameworks, and ethical considerations.

Market opportunities in AI are not confined within geographical borders, the global nature of the digital economy allows AI solutions developed in one country to be deployed worldwide with relatively minor adjustments. Therefore, innovations and successful business models that gain traction in the U.S. can serve as blueprints for similar ventures in Italy. Italian entrepreneurs and companies can learn from the successes and failures of their U.S. counterparts. Moreover, collaboration and competition between U.S. and Italian companies in the AI space can foster innovation and market growth. By keeping an eye on U.S. trends, Italian businesses can identify partnership and investment opportunities, as well as potential competitive threats.

The diffusion of AI technologies follows a pattern where initial innovations are refined, democratized, and made more accessible over time. As AI tools and platforms mature in the U.S., they become more readily available for international adoption. Italian companies and researchers can thus anticipate which technologies will become commoditized and plan their investments and educational programs accordingly to build local expertise and competitive advantages in those areas. In summary, examining AI trends in the U.S. offers a window into the future of technology and business.

Upon analyzing the diverse solutions provided by leading IT and AI corporations in the U.S., it has been deduced by *DataVision Italia* that investments are predominantly oriented towards six distinct directions, as enumerated in this Sum-Up Table internally made, based on “America’s most promising Artificial Intelligence companies” (Forbes, 2019).

Sector	Valuation
Transportation	8.27B\$
Data Science	1.6B\$
Robotics	1.6B\$
Cybersecurity	1.5B\$
Organization	1.5B\$
Health	841M\$

Table 2 – Industry Sectors of U.S. Most Promising AI Companies. Forbes (2019).

This section will proceed to examine each sector to elucidate the potential challenges that may arise during the development of solutions within these areas. The transportation sector is undergoing significant transformation due to the integration of AI. The incorporation of AI in automotive functions is now a well-recognized reality. Notably, the three leading AI companies in the U.S. (*Nuro*¹⁰, *Aurora Innovation*¹¹, *Uptake*¹²), in terms of economic valuation, are involved in transportation, with the foremost two specializing in self-driving technologies. Although autonomous vehicles are legally tested on public roads in certain U.S. states, their operations are not entirely unrestricted. Currently, their primary function is anticipated to be in the realm of goods transportation, a future prospect that, while not yet fully realized, is the focus of substantial investment in research and development.

Data science is inherently a discipline within AI, and its association with sectors such as transportation or health may initially appear incongruous. The rationale for this classification is the prevalence of companies offering services across various sectors, albeit with a foundational basis in data science. This indicates the applicability of data management across all industries and underscores the lucrative nature of developing such services. The substantial investments in this field suggest that engaging in Data science is a strategic decision.

Robotics represents another significant area of AI application. The majority of robotics applications are found in manufacturing and factory settings. Despite the legal constraints faced by driverless vehicles on public roads, such restrictions are less burdensome for driverless robots in private industrial contexts. Consequently, the use of robots for transporting goods, stocking shelves, and managing warehouse inventories has emerged as a major trend in the U.S.

¹⁰ Nuro. (2022). *Nuro—On a mission to better everyday life through robotics*. Available at: <https://www.nuro.ai/>

¹¹ Aurora Innovation Inc (2024). *Moving us Towards a Self-Driving Future*. Aurora.tech. Available at: <https://aurora.tech/>

¹² Uptake. (2024). *Predictive Maintenance*. Available at: <https://www.uptake.com/>

The growing importance of data science in the business sector is undeniable. However, the value of data is compromised when exposed to security threats. Consequently, the field of cybersecurity is expanding in parallel with data science, evidenced by comparable investments in both areas (1.5 billion USD versus 1.6 billion USD, respectively). The critical need for cybersecurity services is highlighted by the imperative to secure digital assets.

The implementation of AI within organizational contexts is also noteworthy. Solutions that enhance company asset management, such as scheduling, shelf organization, resource optimization, and email management, are highly valued. The feasibility and broad applicability of these solutions, as well as their relatively straightforward technical requirements compared to computer vision or machine vision solutions, make investment in this sector particularly attractive. These solutions are also characterized by high business value and return on investment for both providers and customers.

The application of AI in healthcare is a prominent trend in the U.S., marked by a unique healthcare system with a prevalence of privatized clinics and outsourced services. This incentivizes healthcare providers to reduce costs, increase revenue, and optimize resources through AI. While the European market may present different challenges, such as bureaucratic obstacles, the potential for AI in telemedicine, medical research, and health-monitoring wearable devices remains substantial and worthy of exploration. The emergence of low-code/no-code platforms as powerful tools for integrating AI into everyday business and personal tasks is also significant. These platforms address the demand for AI functionality without the need for specialized AI development services. Finally, special attention must be given to the field of real-time video processing, with online streaming and videoconferencing experiencing rapid growth. The development of AI solutions for video-conferencing platforms, such as background alteration and AI-powered video analytics, is recognized as a prudent strategic move, especially considering the projected expansion of the video-conferencing market.

3.6 Competitor Analysis

Understanding the competitive environment is a necessity for any enterprise aiming to carve out a sustainable niche. From an economic perspective, the significance of competitor analysis is underscored by the work of Michael E. Porter, particularly his Five Forces Framework, which emphasizes the importance of understanding the competitive rivalry, the bargaining power of suppliers and customers, the threat of new entrants, and the threat of substitute products or services (Porter, 1979).

This analysis provides insights into the competitive dynamics that shape the industry's landscape, highlighting areas where strategic adjustments can yield substantial competitive advantage. Moreover, competitor analysis is essential for aligning business strategies with the realities of the market environment. It facilitates a deeper understanding of market trends, customer preferences, and technological advancements, enabling businesses to adapt and innovate in response to the shifting contours of competition. This analysis is also grounded in the concept of comparative advantage, allowing firms to identify and leverage their unique strengths in a crowded marketplace (Ricardo, 1817).

By understanding the competitive landscape, businesses can strategically allocate resources to areas where they hold a competitive edge, optimizing their market position and maximizing economic returns. This paragraph is dedicated to reporting the analysis of *DataVision Italia* competitors within the Italian market.

First of all, *Vedrai*¹³ stands as the most prominent and renowned company in offering AI services, and it serves as an excellent benchmark for an innovative AI company, so it deserves more space for a deeper overview in this paper. *Vedrai* provides AI solutions aimed at supporting small and medium-sized enterprises (SMEs). Established in 2020, the company experienced rapid growth, expanding its workforce from 3 to 150 employees

¹³ Vedrai.com. (2024). *Vedrai: il supporto nelle tue decisioni di business*. Available at: <https://vedrai.com/it>

within two years. During this period, it successfully raised capital amounting to 45 million euros and has been instrumental in fostering an AI hub. In 2021, *Vedrai* made a significant acquisition by purchasing *Premoneo*¹⁴, a leading company in Italy that had dedicated five years to developing AI software for dynamic pricing, corporate forecasting, and segmentation. This move underscores *Vedrai*'s strategic expansion and its commitment to enhancing its service offerings. Furthermore, *Vedrai* is actively involved in several joint ventures, illustrating its collaborative approach and its endeavor to innovate within the AI sector. One such partnership is with *Fermai*¹⁵, focusing on predictive maintenance for the manufacturing industry. Additionally, *Vedrai* has joined forces with *Vedrai Data Intelligence* to assist SMEs in data organization, highlighting its dedication to leveraging AI for practical and accessible business solutions.

Another collaboration is with *Indigo.ai*¹⁶, which aims to democratize the creation of chatbots for users lacking technical skills, thereby cementing its position as a leader in the AI and computational linguistics market in Italy. *Indigo.ai* is a company specializing in AI for conversational chatbots. Founded in 2016, the company has recently secured €2.5 million in funding to accelerate its growth and embrace market opportunities. This investment comes as *Indigo.ai* continues to innovate in the field of virtual assistants, aiming to enhance sales, improve customer relations, and gain valuable insights. The funding round was led by the *Vedrai group*, which has held a 60% stake in *Indigo.ai* since 2022. This strategic partnership with *Vedrai Group* supports *Indigo.ai*'s development and collaborative innovation efforts. The company's focus for 2024 includes consolidating its market position in Italy, expanding its technological solutions, refining its sales model, and strengthening its partnership network.

¹⁴ Premoneo. (2022). *Premoneo Price Optimization Software*. Available at: <https://premoneo.com>

¹⁵ Fermai. (2021). *Manutenzione predittiva*. Fermai.it. Available at: <https://fermai.it/>

¹⁶ Indigo.ai. (2023). *indigo.ai | Chat Intelligenza Artificiale Conversazionale*. Available at: <https://indigo.ai/it/>

In the following section, it is presented a list of competitors operating in the Italian market, categorized alphabetically, with the aim of providing a preliminary overview of the competitive landscape and some final considerations. It is important to emphasize that a more in-depth and comprehensive analysis has been conducted as part of market research efforts. However, for the purposes of synthesis and clarity, this section provides just a concise list of competitors:

*Algor*¹⁷: Has developed a platform to support students and teachers in creating conceptual maps and diagrams from texts and documents.

*Allelica*¹⁸: Utilizes Machine Learning models for DNA analysis, with an investment round of 1.8 million euros.

*Altilia*¹⁹: Founded in 2010, received funding rounds of 2.6 million euros in 2012 and 3 million euros in 2021. Specialized in extracting knowledge from web page data.

*Aiko*²⁰: Engages in space mission automation and secured funding of 1.7 million euros. Has forged a partnership with the European Space Agency.

*Aindo*²¹: Located in the Area Science Park, Trieste, founded in 2018. Specializes in corporate data analysis and has developed and patented a technology for generating synthetic data. This addresses the data scarcity issue required for AI training. In 2020, it ranked first out of 500 in the European Data Incubator Program and recently received a 6 million euro investment from United Ventures.

¹⁷ Algoreducation.com. (2023). *Algor Education* Available at: <https://www.algoreducation.com/it>

¹⁸ Allelica.com. (2023). *Allelica*. Available at: <https://eu.allelica.com/>

¹⁹ Altilia. (2023). *Intelligent document processing | Altilia*. Available at: <https://altilia.ai/>

²⁰ Aikospace.com. (2024). *Aiko Space | Aiko*. Available at: <https://aikospace.com/>

²¹ Aindo.com. (2024). *Your AI partner*. Available at: <https://www.aindo.com/>

*Aisent*²²: Founded in 2018 in Bergamo, develops AI systems to enhance corporate production processes, including quality control, digital twins for process simulation, production parameter optimization, object tracking, and anomaly detection.

*Alba*²³: Founded at I3P (the Politecnico di Torino incubator) in 2019, focuses on transporting mobility-impaired passengers using fleets of autonomous vehicles. Has gathered over 4 million euros in funding.

*Algaware*²⁴: A consulting company specialized in designing and developing AI systems, with particular expertise in NLP systems.

*Asc27*²⁵: Founded in Rome in 2020, specializes in real-time content creation, generating text based on keywords, topics, and data. Has won several awards and recognitions and, in 2021, ranked among the top 10 globally at the World Artificial Intelligence Conference in Shanghai.

*Clearbox*²⁶: Founded in 2019 in Turin, is dedicated to creating synthetic data, competing with *Aindo* in this sector.

*Contents*²⁷: A startup founded in Milan in 2021 that assists companies in generating AI-based content, including product descriptions for e-commerce, blog articles, marketing materials, and social media promotions. Received a 5 million euro investment in 2021.

²² AISent - Driven By Data. (2023). *AI Sent - Driven By Data*. Available at: <https://aisent.io/it/>

²³ ALBA Robot. (2016). *Autonomous Micro Mobility | Torino*. Available at: <https://www.alba-robot.com/it>

²⁴ Algaware (2022). *Natural Language Processing & consulenza AI*. Available at: <https://www.algaware.com/>

²⁵ Asc27 S.r.l (2024). *ASC27 S.r.l*. Available at: <https://www.asc27.com/index.html>

²⁶ Clearbox.ai. (2024). *Synthetic Data Provider - Clearbox AI*.

²⁷ Contents.com. (2023). *Generazione Contenuti con AI - Contents.com*.

*It's Prodigy*²⁸: Founded in Milan in 2017, specializes in Big Data and AI, offering tailored digital services to businesses. In 2023, it received the America Innovation Award as the most innovative startup in Italy.

*iGenius*²⁹: A startup founded in Milan in 2016, applies AI to Business Intelligence for companies. In July 2023, it secured a 10 million euro investment, bringing the total to 30 million euros since 2016.

*OpenMall*³⁰: Founded in Milan in 2021, is a social commerce platform fully managed by AI. It provides a personalized experience through an integrated metaverse with blockchain and NFTs.

*Patchai*³¹: Provides a virtual assistant that helps patients remember to take their medications and monitors their health, collecting data on treatment effectiveness.

*Pixies*³²: Founded in Rome in 2020, has developed a solar-powered robot capable of collecting and differentiating urban waste using AI technologies. In 2021, it was awarded as the best innovative young startup by Confindustria.

*Soccerment*³³: An innovative SME founded in Milan in 2017, specializes in analyzing soccer player data, including intelligent shin guards. The data is subsequently processed using AI.

²⁸ It's Prodigy. (2024). *It's Prodigy: servizi digitali per imprese*. Available at: <https://www.itsprodigy.com/it/>

²⁹ Igenius.ai. (2015). *iGenius | Rendere umani i dati*. Available at: <https://it.igenius.ai/>

³⁰ OpenMall. (2023). *Home - OpenMall*. Available at: <https://openmall.ai/>

³¹ Patchai.io. (2024). *Improve the patient engagement in your clinical trials*. Available at: <https://www.patchai.io/>

³² Pixies Urban Lab. (2016). *Pixies | Robotics | AI*. Available at: <https://www.pixiesurbanlab.com/>

³³ Soccerment. (2024). *Soccerment*.

*Storykube*³⁴: Founded in Rome in 2022, offers AI solutions for real-time text content creation, primarily catering to freelance copywriters. Unlike ChatGPT, the technology supports human intervention in text creation.

*UltraAi*³⁵: Founded in Trento in 2021, utilizes AI to support the diagnosis of lung diseases by analyzing ultrasound data and evaluating it based on a severity index associated with lung damage.

The Italian AI market presents a rich and diverse landscape of startups, each with its unique focus and value proposition. Several notable observations emerge from this analysis:

The range of specializations encompassed by these startups underscores the breadth of AI applications in the market, from marketing solutions to DNA analysis, space automation, and content generation. Investment and funding activities have played a pivotal role in sustaining these ventures. With investments ranging from hundreds of thousands to millions of euros, it is evident that investors hold a very positive outlook on the prospects of AI in Italy. This has resulted in intensified competition for financial support, emphasizing the attractiveness of the AI market. Moreover, the presence of startups originating from esteemed incubators such as *I3P*³⁶ and *Area Science Park*³⁷ highlights the importance of academic collaboration in nurturing AI innovation. Collaborative partnerships with entities like the *European Space Agency*³⁸ further underscore the commitment to leveraging resources and fostering innovation through cooperative attempts. Addressing the challenge of data scarcity, companies like *Aindo* and *Clearbox* have embarked on the development of synthetic data generation technologies. This innovation is pivotal for advancing AI capabilities, particularly in scenarios where access to real data is limited. A notable aspect is the customer-centric orientation of startups like

³⁴ Storykube.com. (2023). *AI for Professional Business Needs*. Available at: <https://www.storykube.com/>

³⁵ UltraAI. (2022). *Home Ufficiale - ITA - UltraAI*. Available at: <https://ultraai.eu/it/home/>

³⁶ I3P. (2019). *I3P - Incubatore di Imprese Innovative del Politecnico di Torino*. Available at: <https://www.i3p.it/>

³⁷ Area Science Park. (2024). *AREA Science Park*. Available at: <https://www.areasciencepark.it/>

³⁸ Esa.int. (2024). *European Space Agency*. Available at: <https://www.esa.int/>

Alba and *Patchai*, which focus on solving real-world problems and enhancing the quality of life for specific target groups. This highlights AI's potential to address societal needs and challenges. The remarkable growth rate experienced by startups like *Contents*, with a +400% increase in a short period, signifies the dynamic nature of the Italian AI market. This rapid growth is indicative of robust market demand and adaptability. *Pixies'* commitment to sustainability, with its solar-powered waste-collecting robot, exemplifies how AI can contribute to environmental objectives while advancing technological frontiers. Lastly, startups like *Storykube* exemplify the importance of human-AI collaboration, offering AI tools that complement human creativity rather than supplanting it. This approach can recognize the symbiotic relationship between AI and human expertise. In conclusion, the Italian AI market exhibits diversity, great innovation, and substantial growth potential. These considerations underscore the significance of analysis and strategic planning for businesses aiming to enter or expand within this competitive landscape. As the number of AI startups continues to grow, the competition becomes more pronounced. To excel in this environment, companies must focus on differentiation and innovation to secure a competitive edge.

3.7 Side Operations

The aim of this section is to superficially explore all the various activities surrounding the business development process, which cannot be excluded from the company's expansion efforts. Although it has already been examined crucial aspects such as market research, competitor analysis, and trend studies, the landscape of activities in the realm of business development is much broader and diversified. These activities encompass various aspects of company operations, from lead generation and sales strategy to the creation of marketing materials and event management. Strategic partnership building with clients, business trips, and on-site visits to maintain collaborative relationships, as well as talent recruitment that aligns with the company's vision and goals, are all elements contributing to the fabric of a company's success. Furthermore, continuous market updates and internal collaboration among colleagues are pillars for adaptability and continuous innovation. This portion aims to outline how these activities, although they may seem peripheral, are

actually central to the business development ecosystem of a startup, providing invaluable contributions.

Lead generation:

Following the strategic foundation laid by market and competitor analysis, the subsequent necessity for an early stage company's business development is lead generation. This phase is characterized by the deployment of a diversified strategy aimed at identifying and attracting potential customers through a combination of digital and traditional channels. By engaging in digital marketing campaigns, leveraging the power of social media, participating in industry events, and utilizing networking opportunities, the startup casts a wide net to capture the attention of prospective clients. This stage demands understanding of customer behavior and preferences, enabling the tailoring of marketing messages and sales pitches to meet the unique demands of the target market. The ultimate goal of lead generation and customer acquisition is to funnel potential clients through the sales pipeline, transforming initial interest into committed customers, thereby laying a robust foundation for revenue growth and market expansion. At *DataVision Italia*, lead generation activities have been conducted continuously. As a B2B (Business-to-Business) company, the primary clientele engaged with comprises firms located in the province of Bologna and across the Italian territory. Each company that has been contacted has been incorporated into a dataset that enables us to gather and categorize the outcomes obtained. Client companies are assessed based on various criteria, including size, revenue, industry sector, and the products and services they offer. It is always crucial to ascertain whether they already possess Computer Vision departments, and to understand their technological level and the extent of their Research and Development (R&D) investments. It has also been explored whether they have any IT partners or what the technological standing of their competitors is. Understanding their willingness to adopt AI systems is essential and has enabled *DataVision Italia* to identify the most common characteristics among companies predisposed to this.

Sales strategy:

Building upon the momentum generated by lead generation, sales strategy and execution become the linchpin in the conversion of leads into revenue. Central to this plan is the development of a sales funnel that efficiently guides potential customers from initial awareness to purchase decision, underpinned by persuasive sales tactics and compelling value propositions that highlight the unique benefits of the AI products and services offered. Effective sales execution typically is marked by a keen ability to close deals, achieved through a combination of negotiation skills, product knowledge, and customer engagement strategies. *DataVision Italia* employs a distinctive sales strategy characterized by a methodical and client-centric approach. The strategy initiates with tailored messaging that specifically addresses the challenges and requirements of potential clients, highlighting *DataVision Italia's* deep industry insights and unique value offerings. This approach prioritizes establishing a connection through continuous, personalized engagement to foster trust and gain a full understanding of the client's needs. Key phases include determining optimal communication methods, customizing materials to align with client expectations, and demonstrating the product's effectiveness through detailed presentations and demonstrations.

The strategy progresses towards discussing proposals, pricing, and the potential for a non-disclosure agreement, culminating in a decisive meeting aimed at consolidating the client's requirements, the solutions offered, and the distinctive benefits of the product. At *DataVision Italia*, a Proof of Concept (PoC) is typically offered and conducted. This involves a research process where the method of solving the specific problem faced by the company is explained. Data is received on which experiments are conducted. The quantity of data is always very limited but substantial enough to propose preliminary results that can demonstrate the effectiveness of the applied AI model. This serves the purpose of demonstrating that our offering is effective and capable of addressing the client's needs. A technical report is prepared, explaining the technologies utilized, the method through which the problem would be solved, presenting the obtained results, and specifying how these preliminary results could be improved. Subsequently, if the client is satisfied, discussions regarding the complete solution ensue.

Customer support and partnership development:

Post-sale, *DataVision Italia* continues to support the client through a streamlined onboarding process and ongoing relationship management, aimed at evaluating the success of the engagement through key performance metrics. The commercial activities following the sales phase represent a crucial component in the growth strategy of a startup. These actions, far from being mere post-sales formalities, are instead essential for cementing relationships with customers, fostering loyalty and opening the door to future collaborations and business opportunities (Kumar & Reinartz, 2016). This is particularly important for a recently established company with few clients. Physical proximity, business trips, and consistency in maintaining customer relations have proven to be appropriate strategies for the establishment of strategic collaborations aimed at R&D of new solutions. An emblematic example of such an approach is the partnership with *Atena Ingegneria*, which will be analyzed in detail within the thesis Case Study (Chapter 4). Another significant example is the collaboration with *Kentstrapper*³⁹, a company specializing in 3D printing. Through this synergy, models generated by *DataVision Italia* using 3D reconstruction technology find tangible application, being transformed into prototypes and finished pieces printed in 3D by the partner company *Kentstrapper*. This interaction permits to open new horizons in terms of market and product innovation. These activities, therefore, go beyond mere maintenance of commercial relationships; they represent a strategic lever for expanding the innovative ecosystem of the startup, promoting a value exchange that benefits both the company and its partners.

Recruiting process:

The recruitment process represents is clearly significant for the growth and sustainable development of a startup, as highlighted by the experience of *DataVision Italia*. Hiring staff goes beyond just finding people with the right technical skills; it also includes looking for important personal qualities that help them fit into the workplace. *DataVision Italia* usually focuses on traits like teamwork, ambition, and the ability to work well with others because it is known that a startup's success heavily relies on how well its team works together. That is because where human resources are limited and each individual can make a difference, recruitment becomes a strategic activity that is an investment in

³⁹ *Kentstrapper - Stampanti 3D Professionali Professionali Made in Italy*. Available at: <https://kentstrapper.com/>

the company's future. *DataVision Italia* has implemented a continuous selection process, leveraging platforms like LinkedIn to reach a wide range of potentially suitable candidates. Furthermore, collaboration with prestigious academic institutions, such as the *University of Bologna* and the *Bologna Business School*⁴⁰, has significantly expanded the talent pool, allowing access to highly qualified students and graduates. The strategic relationships established with the faculty of these institutions facilitated access to emerging talents possessing both technical and soft skills desired. These trusted relationships have so proven essential for attracting high-quality candidates and for building a cohesive work environment where new recruits can fully express their potential.

Event management and marketing:

Awareness that business success is built not only within but also outside the company's boundaries lead *DataVision Italia* to active participation in trade fairs, industry events and startup days. This is done to increase brand visibility, networking and creating a cohesive and collaborative environment. In a country like Italy, where the value of personal contacts and networks has historically played a key role in business development, these occasions become fertile ground for forging meaningful relationships, discovering business opportunities, forging strategic partnerships, and staying updated on emerging trends. Especially in the dynamic and rapidly evolving field of AI, continuous education and ongoing learning represent indispensable pillars for those operating in this sector. AI, with its unprecedented pace of development, demands a constant dedication to studying and learning to keep up with innovations, understand new trends, and leverage emerging technologies. The speed at which discoveries unfold necessitates professionals to adopt a proactive approach to professional development, extending beyond participation in industry fairs and events. Social networks, specialized newsletters, and online training courses emerge as fundamental tools to maintain a high level of knowledge and expertise. These channels provide direct and timely access to the latest research, case studies, in-depth articles, and discussions on cutting-edge topics, enabling professionals to integrate new skills and refine existing ones. Moreover, the flexibility and wide availability of online educational resources allow for the customization of the learning journey based on

⁴⁰ BBS. (2024). *Bologna Business School: Master universitari | BBS*. Available at: <https://www.bbs.unibo.it/>

individual needs and interests, fostering continuous learning that can be easily reconciled with work commitments. In addition to the relational aspect, events also serve as a showcase for the company's marketing content. The creation of promotional materials, presentations, demos, and case studies becomes essential for effectively communicating the value and potential of the solutions offered. These targeted contents allow capturing the audience's attention, conveying the company's vision and expertise, and creating a lasting impression in the minds of the participants.

Chapter 4: AutoCrash Case Study

Chapters four, five and six of the present thesis explore a practical case study involving a market analysis executed by the team of *DataVision Italia* in preparation for the market launch of AutoCrash. AutoCrash emerges as a pioneering platform designed to streamline the management of road accidents, aiding a more cohesive and efficient approach. Observing its primary functionalities, the software enables accident documentation, the creation of an exhaustive database, and the provision of community tools fostering professional interaction. Additionally, it incorporates AI technologies to support users in accident analysis. AutoCrash is a product of collaboration between *DataVision Italia* and *Atena Ingegneria*⁴¹ and it is officially available for use through subscription registration.

The successive sections delineate the platform's overview and chart the research trajectory from its conceptual genesis to the final market introduction. The procedural stages defined may serve as a prototypical model for emerging enterprises aiming to debut their inaugural products. The employed Go To Market strategy is particularly suited for embryonic entities requiring foundational development. The formulation and introduction of AutoCrash underscore *DataVision Italia*'s dedication to innovation and its adeptness in navigating demanding challenges through technological advanced solutions. The progression from ideation to commercial availability encapsulates the essence of entrepreneurial vigor and technological progression. By assimilating AI technologies, AutoCrash not only renews the accident management methodology but also establishes a novel benchmark within the sector for operational efficiency and user interaction. The partnership with *Atena Ingegneria* accentuates the multi-disciplinary strategy necessary for the triumphant development of contemporary technological products.

⁴¹ *Atenaingegneria.it*. (2018). *Infortunistica stradale e progettazione meccanica - Atena S.r.l. Società ingegneria Firenze*. Available at: <http://www.atenaingegneria.it/>

Accordingly, this case study furnishes critical insights into the methodology of transitioning a technological innovation from a nascent concept to a product ready for market entry, offering a pattern for other startups. It accentuates the necessity of a clear market analysis, strategic collaborations, and the exploitation of innovative technologies to address unfulfilled market demands in particular domains (Teece, 2010). Through AutoCrash's exemplification, this thesis elucidates the capacity of startups to effectuate substantial industry impacts, introducing novel remedies to age-old dilemmas.

4.1 Starting Idea

As previously indicated, AutoCrash is a software developed through a collaboration with *Atena Ingegneria*. The idea to create this software emerged naturally over the course of numerous meetings held to discuss how to meet some of *Atena Ingegneria*'s specific needs in the road accident administration. After the initial projects were realized, the idea to integrate AI solutions into a single marketable software was conceived.

Although the conception of AutoCrash was a natural process, all subsequent market studies were conducted with the goal of evaluating its potential commercial value. Having an already established point of contact in the market of interest, obtained through collaboration with *Atena Ingegneria*, played a significant role in facilitating the analysis. Indeed, collaborating with a company that resides in and is well-acquainted with the market has proven to be a fundamental strategy to ensure the product's success. A local partner brings a deep understanding of market dynamics, including potential obstacles, which is crucial for the development of a product that effectively meets these needs. Moreover, collaborating with an entity well-embedded in the market can serve as a valid tool for verifying market demand, allowing the product to be tested in real scenarios and gain valuable feedback before the official launch. Furthermore, associating with a company that is known in the market can also significantly improve the product's perception by potential customers. This is the case with *Atena Ingegneria*, Italian leader in the road accident administration sector. The credibility and trust transferred through this partnership can break down initial barriers and build a trusting relationship with the

brand. A local partner can also offer access to an already established sales network, allowing to reach end customers more quickly. In this case, significant advantage was taken of this benefit, by directly entering *Atena Ingegneria's* distribution network and integrating their new software with theirs, which already boasted several users acquired over the years.

The first contacts with *Atena Ingegneria* were held on September 2023, and the first version of AutoCrash was launched on January 26, 2024. The candidate actively participated in the software's development from start to finish, and for this reason, it was judged appropriate to present this specific case study. The target is to provide a ample overview of the process, offering a guide for startups intending to launch a product, sharing crucial information and an approach that has proven effective. To contextualize the origin of the idea, it is necessary to emphasize that the collaboration with the company began from *Atena Ingegneria's* need to receive three specific services: the automatic calculation of accident impact values, the creation of 3D models of the cars involved in accidents, and the development of an AI model capable of identifying insurance fraud.

4.2 Field Study

Before investigating into the detailed exploration of AutoCrash, it is useful to provide a clear framework of the mechanisms governing the market in which the software will be applied. To attain a profound understanding of this context, a meticulous approach was undertaken, based on market research and direct interactions with the various stakeholders involved. A fundamental part of this preliminary analysis included the study of the administrative procedure followed in Italy after a road accident. Although each road accident case may have unique characteristics and require different management, there is a standardized administrative path that tends to be adopted in most situations. This process offers a foundation upon which AutoCrash can intervene, providing suitable digital solutions to simplify and optimize accidents management. This analysis has enabled the identification of specific areas of intervention where AutoCrash, with its

advanced functionalities, can make significant improvements, facilitating the work of industry operators.

In the event of a road accident, the first step involves telephonically contacting the law enforcement authorities and waiting for their arrival without moving the vehicles from their post-collision position. The promptness in contacting law enforcement is essential to initiate the official documentation process of the accident. On-site, law enforcement is tasked with objectively documenting the incident, collecting information, and drafting a report that avoids subjective assessments, such as the reconstruction of the accident dynamics. This report becomes a crucial official document in insurance and criminal procedures. It is important to note that for minor incidents, for instance rear-end collisions, law enforcement may not intervene. However, the completion of the CID (“Constatazione Amichevole d’Incidente stradale”) by the involved parties is always required, collecting essential information such as location, date, time, and data related to the vehicles and insured parties. As of today, it is vital to gather multimedia photographic and video material documenting the accident scene, including details like vehicle license plates, the position of the vehicles, specific damages, and any atmospheric or structural conditions that might have contributed to the incident.

Subsequently, the insurance company of the involved vehicle must be contacted to initiate the claim opening procedure, preferably within three days from the accident. The company will request documentation and evidence, including the CID, photos, videos, and statements from participants and witnesses, to conduct the necessary assessments. In the insurance appraisal phase, a damage claim leads the insurance company to commission an external appraiser to evaluate the damages to the insured vehicle and, if deemed necessary, also to the second vehicle involved. This evaluation determines the repair costs and the depreciation of the vehicle, information that is then provided to the insurance company through an assessment report. In cases requiring a more in-depth analysis of the accident dynamics, the intervention of a reconstruction appraiser may be requested, either by the judicial authority or by insurance companies or private parties. This expert provides a technical report that helps understand the accident dynamics to

establish responsibilities, directly inspecting the involved cars if necessary. If the accident involves serious violations of the road code or, in extreme cases, results in a fatal accident, a criminal proceeding is initiated that can lead to criminal sanctions, determined by the court. In these circumstances, the involved vehicles are impounded and cannot be examined until the Public Prosecutor takes charge.

In the final phase, after collecting all necessary information, including testimonies, the official report, and damage appraisal, the damage settlement proceeds. If the repair costs exceed the value of the car, the vehicle's value is reimbursed, closing, and archiving the case. This complex process requires careful management of multiple aspects, from initial documentation to the final resolution of the claim, highlighting the importance of a correct procedure in every phase of the post-incident process.

4.3 AutoCrash Presentation

AutoCrash is a data management platform aimed at unifying and facilitating communication among stakeholders involved in managing and reconstructing road accidents. Its distinctive element lies in the unification of registration and the integration of AI functionalities. Thus, its use is targeted at various user profiles, from Public Administration to insurance companies, including both insurance and reconstruction appraisers. Its main functions include accident registration, the creation of personal and national databases, and the enhancement of a support community for personal's assessments. Moreover, the platform is integrated with Pre-trained AI models on similar situations, which assist the user in evaluating accidents, offering substantial support in the evaluative phase of dynamics and damages. Additional features include mapping and geolocation dedicated to accident prevention. The platform facilitates statistical research related to road accidents nationwide, promotes transparency, collaboration, and communication, facilitate tasks and aim to reduce fraud and enhance more adequate controls.

AutoCrash arises from the need to standardize communication among stakeholders involved at various stages of road accident management. It consists of a shared space where those entities can interact and operate. Its functionalities cover every action taken from the opening of the claim to the closure of the case, assisting every actor involved. The platform aims to standardize the forms of accident registration, thus creating a uniform and common language among the involved players, enhancing collaboration and mutual consultation, and encapsulating all this in a single space.

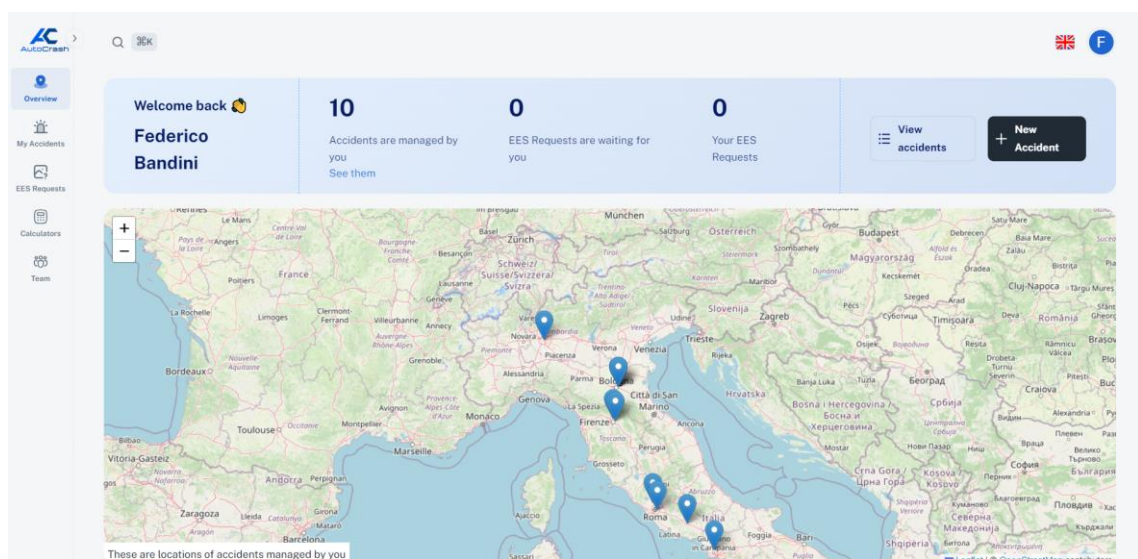


Figure 6 - AutoCrash, Home Page.

Accident Registration:

The first step within AutoCrash is to register the accident on the platform. This can be a direct step between authorities, assessors, and companies, facilitating and standardizing communication among them. The upload of photos related to the accident is accompanied by the insertion of criteria, parameters, and general information useful for identifying and defining the claim. The registration will be user-friendly and will facilitate the modes currently employed. Extraction of the main information from the report.

When registering the accident, all fundamental information related to the claim is included. Thus: Location, date, time, and textual descriptive information of the accident, including causes and dynamics. Subsequently, data of the involved vehicles: License plate, type, and characteristics of the vehicle, make and model, position of the damage, and EES value. Finally, the upload of any photographs of the surveys and the report drafted by the police is possible. The platform will produce an ID code with which the claim can be identified from that moment onwards. The registration must allow for the data to be reported and the incident to be represented in its entirety.

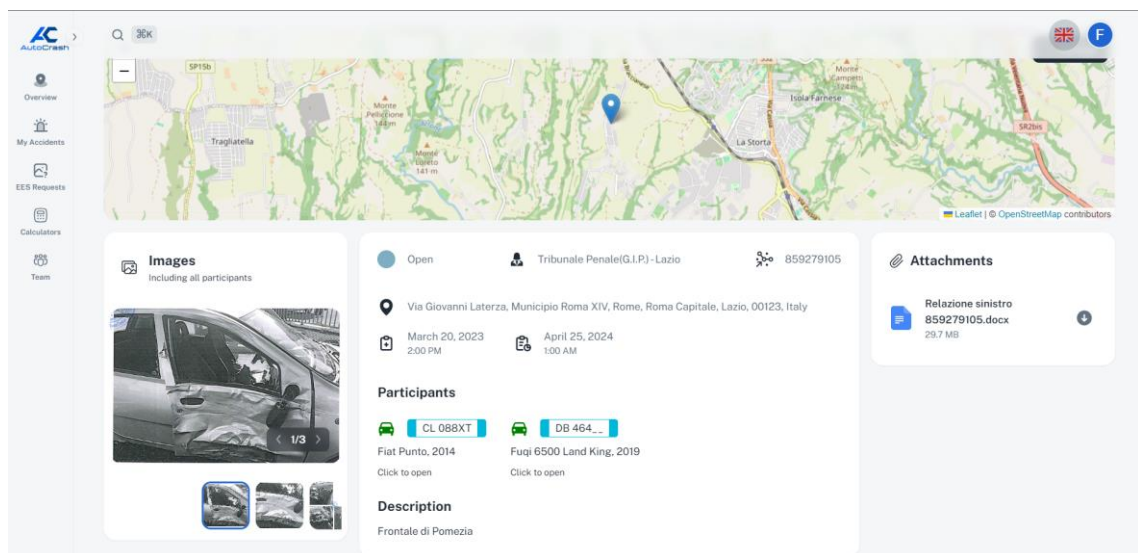


Figure 7 - AutoCrash, Accident Registration.

Database:

The collection of all registered events will constitute a database comprising every previously registered incident. Each user will have access to the database for which they have access credentials. The search bar will allow you to filter desired parameters to conduct specific searches. The database can be customized according to one's needs, and viewing modes are varied. The advantage of this database is that it unifies the registration of road accidents under the same modalities, allowing to connect all entities that need to view and assess the claim. Those who have access to the dataset can make modifications by integrating the incident report. Every modification is recorded and traceable. An alert

system notifies you when a case is completed, and the event can be closed and archived in the database. The registration of accidents allows for the localization of areas with a higher frequency of occurrence. This geolocation tool can then be used to prevent the happening of new accidents. The registration of causes and dynamics of the event also makes it possible to understand the factors of higher risk within each area. The goal of this functionality is to record the totality of accidents that occur on national territory, thus benefiting statistical investigations for prevention purposes.

The screenshot shows the 'Accident Register' interface in the AutoCrash system. It features a sidebar with navigation options: Overview, My Accidents (selected), EES Requests, Calculators, and Team. The main area has a search bar with filters for brand, plate, name, and reference number, along with 'Min. EES' and 'Max. EES' fields. A '+ New Accident' button is in the top right. The table below lists several accidents with their details.

Incidente	Veicoli coinvolti	Range EES	Data ↓	Stato
<input type="checkbox"/> Frontale Pomezia CG03RV93 2 Vehicles involved	CL 088XT DB 464... Fiat Punto Fuji 6500 Land King	18 - 39	March 20, 2023 3:00 PM	Open
<input type="checkbox"/> Frontale Tagliacozzo JNHBIZSY 3 Vehicles involved	FM 279BE BE 844XJ + 1 more Fiat 500X Fiat 600	12 - 18	December 9, 2022 7:10 AM	In Progress
<input type="checkbox"/> Incidente SS Flaminia EJ4N5RA4 2 Vehicles involved	DN 203FF XP 27... Toyota Hilux Smart Fortwo	34 - 46	November 17, 2022 4:30 PM	delivered
<input type="checkbox"/> Scooter - Mini Milano 6SGIPW0P 2 Vehicles involved	XJ 52... FJ 000YX Bugatti Chiron Mini Cooper	35 - 67	July 13, 2022 2:10 PM	Paid
<input type="checkbox"/> Relazione sinistro 2653854 JQ2F6UE5 1 Vehicle involved	EH 161NY Opel Agila	26 - 26	September 24, 2017 1:50 PM	Open

Figure 8 - AutoCrash, Accident Register

4.4 Innovative AI Features

The AutoCrash software has been designed to seamlessly integrate with Pre-trained AI Models on a broad collection of data related to road accidents, in order to effectively support the user during the delicate phase of claims management. These AI models, which will be continuously refined through the addition of new images and data provided by users (with their explicit consent), aim to progressively increase the precision and reliability of the software. The provision of such advanced functionalities represents the main distinguishing factor of AutoCrash in the landscape of road accident management software, underscoring its profoundly innovative nature. The main AI functionalities incorporated into the software are described below:

Automatic Recognition of the Damaged Area:



This AI function identifies and graphically illustrates the damages present on the vehicle directly on the uploaded photographs, classifying them based on the type and offering the possibility to export the processed images. It facilitates the identification of damages and the understanding of their extent.

Figure 10 - AutoCrash AI Models. Automatic Recognition of Damaged Area.

Technical Recognition of Damaged Components:

The software lists all the damaged parts of the vehicle, specifying the nature of the damage and its percentage extension on the surface of the affected component, providing an immediate and comprehensive overview of the malfunctions.

Finito! Immagine dei danni rilevati disponibile [qui](#)

Rileva se la tua auto ha danni

Carica una foto dell'auto

Choose File No file chosen

Invia

Parte	Danno	Percentuale (%)
Pannello posteriore	Ammaccatura	71.02
Sottoporta	Ammaccatura	13.75

Figure 11 - AutoCrash AI Models. Technical Recognition of Damaged Components.

Estimation of Damage Value:

It performs an economic evaluation of the damages, including labor costs and the expenses necessary for the repair or replacement of the damaged parts, supporting the user in the preparation of the estimate.

Recognition of Similar Events in the Archive:

Identifies recurring patterns by comparing the claim under examination with similar accidents previously recorded in the database, facilitating the reconstruction of the event through comparative analysis of analogous cases.

Evaluation of Impact Values:

It automatically calculates the energetic forces involved, such as the EES (Equivalent Energy Speed), relative speeds, and accelerations, to analyze the dynamics of the accident in depth. The ability to automatically determine the EES value, traditionally estimated manually based on experience and various factors such as the vehicle model and the extent of the damage, represents a significant assistance service especially for reconstruction experts and automotive assessors.

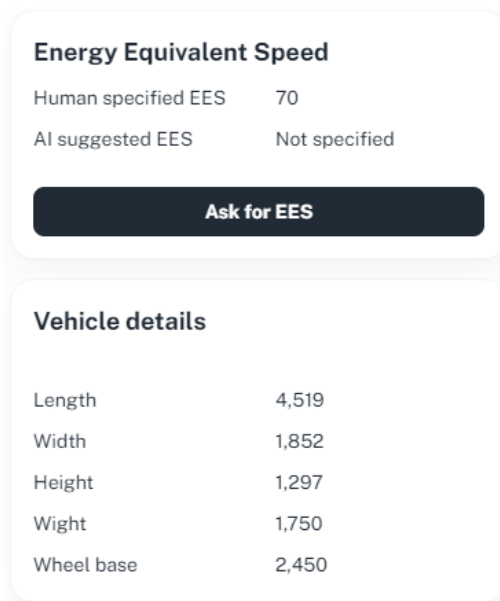


Figure 12 - AutoCrash AI Models. Evaluation of EES Value.

Energy, Morphological, and Geometric Compatibility of the Damage:

Automatically verifies whether the extent and characteristics of the damage are consistent with the dynamics of the accident, considering energetic, morphological, and geometric aspects, providing an additional verification tool for analyses performed.

These innovations, integrated into AutoCrash, not only elevate the level of assistance provided to users in the management of road accidents but also represent a significant technological advancement in the sector, aiming to optimize the accuracy of evaluations and to simplify and speed up the complex procedures associated with claims management.

4.5 3D Reconstruction Model

In the context of AutoCrash's development, the opportunity was seized to integrate the 3D reconstruction technology currently being processed by *DataVision Italia*, with an in-depth exploration of such innovation available in Chapter 2.3.1. This advanced functionality distinguishes the AI model in question as the most revolutionary among those implemented in the software, placing it at the forefront of technological solutions for road accident claims management. The application of 3D reconstruction technology allows for reproducing the accident in three dimensions with a high degree of quality, offering an extremely detailed and immersive visual representation. To perform such reconstruction, it is necessary to capture a 360-degree video of the vehicles involved in the accident and proceed with the upload of such media to the software. In the initial version 1.0 of AutoCrash, this functionality is available on demand, but there are plans to automate it and make it completely autonomous in future versions, further facilitating the process for users.

The main advantage offered by 3D reconstruction lies in its ability to provide a highly detailed view of the accident, surpassing the limitations imposed by the mere viewing of two-dimensional photographs or videos. This technology allows users to explore the three-dimensional model of the accident from any angle and perspective, faithfully replicating the visual experience one would have by observing the real scene. This degree of interactivity ensures a precise analysis of the claim, based on detailed evaluations that could prove crucial for proper management and resolution of the case. In summary, the integration of 3D reconstruction technology into AutoCrash not only elevates the software to an unprecedented tool for the analysis of road accidents for accuracy of analysis but

also opens new frontiers in the interpretation and understanding of accidents, willing to revolutionize the way accidents are managed and assessed in the insurance sector and beyond.



Figure 13 - AutoCrash 3D Reconstruction. Example 1.



Figure 14 - AutoCrash 3D Reconstruction. Example 2.

Chapter 5: AutoCrash Case Study, Go To Market Strategy

A Go To Market (GTM) strategy constitutes a comprehensive plan for introducing a new product to the marketplace. It is crucial to undertake meticulous planning to mitigate the risks associated with launching a product without thorough market analysis. The introduction of a product represents a significant investment. Regardless of the product's innovativeness, the effectiveness of its market entry strategy is pivotal to its success. A well-crafted GTM minimizes the likelihood of expensive errors such as targeting an inappropriate audience or entering an overly saturated market. The ultimate aim is to not only introduce the product but also to captivate the intended audience to the extent that they are willing to invest in it. Effective GTM strategies are designed to navigate the complexities of a competitive landscape by accurately defining the target market, clarifying the product's unique value proposition, formulating an inclusive marketing approach, and establishing strategies for sales and distribution channels. The formulation of an optimal GTM strategy is influenced by a synergy of elements, including the nature of the product, the profile of the target consumer, the scale of the target market, and the intensity of competition within that market.

5.1 Opportunities for Implementing a GTM Strategy

As addressed during Entrepreneurship and Strategy master's course, a GTM strategy becomes particularly relevant under three distinct scenarios:

When venturing into an established market with a new product, it is essential to articulate your communication strategy towards the target demographic to persuade them to choose your offering over that of competitors. This involves a deep understanding of the target audience's preferences, values, and motivations. Analyzing the competitive landscape and the marketing strategies employed by competitors is crucial. Differentiating your product or service in a market populated with similar offerings demands highly innovative approaches to stand out (Kim & Mauborgne, 2004).

AutoCrash's market entry strategy aligns with the following scenario. As *DataVision Italia* enters the well-established market of data management platforms for road accident management, it confronts the challenge of differentiating itself amidst existing solutions. The strategy for AutoCrash revolves around clearly communicating its unique value proposition to the target audience. Understanding the motivations and values of the various stakeholders is crucial, as is a thorough analysis of the competitive landscape to identify how competitors are positioning their similar offerings. AutoCrash must articulate its distinct advantages, for example the creation of unified personal and national databases, support for community assessments, and features like mapping and geolocation for accident prevention. Through these efforts, AutoCrash aims to significantly impact the existing market by offering a solution that enhances transparency, collaboration, and efficiency in road accident management.

The last scenario involves extending the reach of an existing product into a new, potentially foreign market where it has not been previously available. The strategy here focuses on introducing the product effectively and convincing the new target market of its value. Understanding that the new market's audience will have different needs and preferences from the original market is fundamental. This requires comprehensive market research, including surveys, focus groups, or interviews, to adapt the product's value proposition accordingly.

5.2 Benefits of a Go To Market Strategy

The implementation of a GTM strategy yields a wide number of benefits. One of the most significant advantages of a GTM strategy lies in its ability to significantly enhance revenue streams. By meticulously aligning the product's features and benefits with the specific needs and preferences of the target customer base, businesses are able to drive higher value and, consequently, increase their revenue. This alignment ensures that the product is not just another addition to the market, but a solution that addresses a real need, thereby enhancing its market appeal and sales potential.

Operational efficiency stands out as another guarantee of effective GTM planning. By establishing clear goals and mapping out the steps required to achieve them, teams can work in a more coordinated and focused manner. This streamlines the process of bringing a product to market, optimizes resource utilization, enhances customer service, and reduces the time it takes for a product to go from concept to market presence. The resultant operational efficiency is a key driver of profitability and market competitiveness. Regular checkpoints within the GTM process allow for the assessment of progress and the making of necessary adjustments, ensuring that the product launch is conducted with the highest level of readiness and strategic insight.

A GTM strategy significantly boosts brand visibility and recognition in the marketplace. By employing targeted marketing efforts, companies can increase their visibility, making it easier for potential customers to identify and trust their products or services. This increased brand recognition is instrumental in building a strong market presence and can be a decisive factor in the success of the product launch.

Improving the customer experience is another key benefit derived from a well-crafted GTM strategy. By focusing on the entire customer journey, from initial engagement through to long-term usage, companies can ensure that interactions with the product are consistently positive. This focus on customer satisfaction is essential for fostering loyalty and achieving long-term success in the market. Customer loyalty itself is further fostered by the trust and understanding established between the business and its customers. This loyalty is not just beneficial for sustained revenue but also for the word-of-mouth marketing that comes from satisfied customers.

Adaptability to market changes is yet another advantage offered by a robust GTM strategy. In today's fast-paced and ever-evolving market landscape, the ability to quickly and effectively respond to economic shifts, technological advancements, or the emergence of new competitors is very important (Teece, 2010). A GTM strategy equips businesses with the prevision and flexibility to navigate these changes, ensuring that they remain competitive and resilient in the face of uncertainty.

Lastly, the simplification of regulatory compliance and protection of intellectual property are critical aspects of GTM strategies, particularly for industries driven by innovation and technological advancements as in this case. Ensuring that products and services comply with relevant laws and regulations from the outset mitigates legal and operational risks but also secures the company's competitive advantage.

5.3 Steps to Building a Go To Market Strategy

In constructing the framework for a GTM strategy, it is necessary to specify that the sequence of steps presented herein is specifically developed by *DataVision Italia*. This tailored strategy combines insights drawn from a variety of GTM methodologies, selected and refined to suit the unique contours of market engagement and product deployment. This fitted strategy is an assertion of *DataVision Italia*'s commitment to strategic innovation and should not be construed as the definitive or generic framework applicable to all GTM endeavors.

1) Identification of the problem to be solved:

The initial phase in the formulation of a GTM strategy involves the identification of the core problem that the product intends to solve. This opening step is significant, as the essence of a remarkable product lies in its capacity to address a specific issue, thereby offering a unique value proposition to its target audience. It necessitates a clear understanding of the customer's pain points, aligning the product's offerings with the market's demands, a concept encapsulated in the principle of product-market fit (Blank, 2013). Product-market fit signifies the extent to which a product fulfills a robust demand within the market. Notably, the most successful product launches have historically occurred in contexts lacking competition, where the market was ripe with demand for novel solutions. Although pinpointing the exact problem may present challenges, it is an indispensable component of a successful product launch strategy. In the case of AutoCrash, this entails recognizing the fragmented communication and management processes prevalent among stakeholders and offering an integrated, AI-enhanced platform that significantly mitigates these inefficiencies during their analysis. Hence, the platform's

introduction to the market can be seen as a direct response to the absence of a cohesive and standardized method of communication among the various entities involved in road accident management.

2) Preliminary competitors' analysis:

The second step in devising an effective GTM strategy is the execution of a preliminary competitor's analysis, alongside a thorough market evaluation. This stage is instrumental in understanding the current landscape in which the product or service will be launched, thereby identifying its unique position within the market (Porter, 1980). An analysis of competitors reveals the offerings and value propositions of rival products and also aids in discerning the preferences and dissatisfactions of potential customers regarding existing platforms. These considerations are crucial for aligning the product with the needs and expectations of the Ideal Customer Profile (ICP). Before proceeding with the market introduction of a new product or service, it is very useful to address the fundamental question of market demand: "Is anyone actually going to buy this?". Many entrepreneurs are driven by the enthusiasm of their innovative ideas, yet this alone does not guarantee market success. A common consequence is the launch of a product without adequate validation of market demand, leading to investments in solutions that either address non-existent problems or face overwhelming competition (Harvard Business Review, 2011). To mitigate the described risks, a market research is required to validate sufficient demand and assess the competitive landscape. Understanding the level of demand, the intensity of competition, and the market's capacity to welcome the new product or service is crucial for making informed decisions about market entry.

In the case of AutoCrash, this step involved analyzing the existing solutions for road accident management and communication among stakeholders, identifying gaps and inefficiencies that the software could address. It also required assessing the demand for a unified platform that integrates AI functionalities for accident evaluation and prevention, as well as estimating the platform's potential market share in the face of existing alternatives. Through this analysis, AutoCrash positioned itself as a novel solution that encountered a currently unmet need.

3) Specific competitor's analysis:

A more focused analysis of specific competitors within the road accident management sector is needed. It implies the selection of a few key players who constitute the direct competitive landscape for AutoCrash. A more specialized competitive analysis is conducted by addressing several critical questions about each competitor: Who are they? What aspects of their solution excel? Where do they fall short? How does their offering compare to AutoCrash in terms of strengths and weaknesses? This evaluation highlights areas for improvement and differentiation.

Incorporating a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis into this stage enhances the understanding of AutoCrash's position relative to its competitors (Helms & Nixon, 2010). This analytical framework assists in systematically evaluating the internal capabilities and external market conditions affecting AutoCrash. It differentiates from general market research by focusing specifically on the strategies and performance of competitors, rather than on broader market needs and trends. Key to this analysis is identifying the unique aspects of AutoCrash that set it apart from competitors. Questions such as who currently offers similar road accident management solutions, the audiences and geographic regions targeted by these competitors, and how AutoCrash's AI-enhanced platform differs from existing offerings are central to this investigation.

4) Definition of the target audience:

As previously mentioned, the next step is to understand the target audience. It necessitates a dive into key questions that uncover the specific challenges customers face that the product can solve, the demographic segments most likely to invest in the product, and the price point that reflects the value the target audience places on solving their problem. Additionally, recognizing potential customers who may show interest but are not yet ready to commit to a purchase is important. These individuals, typically further along in the decision-making process, require targeted marketing strategies designed to persuade and convert. The process of identifying a business's target market generally involves two main strategies: the development of an ICP and the creation of buyer personas (Revella, 2015). The ICP is instrumental in identifying the target customer and their needs. It

focuses on the ideal customer who experiences the problems the product addresses and is actively seeking a solution. This requires consideration of plural factors as the industries targeted; demographic details that help in crafting a profile based on gender, age, and income level; geographical location that dictates marketing strategies; the size of target businesses for B2B companies; and understanding the spending capacity of the target market to influence pricing and marketing strategies.

Similarly, creating buyer personas enables a deeper understanding of the target market by constructing detailed profiles that reflect the diverse needs, values, and goals of potential customers. This approach facilitates a more personalized connection with the audience, influencing the effectiveness of marketing efforts. By identifying the particular issues these groups encounter, along with their budgetary constraints and factors influencing their decision-making, AutoCrash can develop targeted ICPs and buyer personas. These evaluations have been extensively elaborated upon in Chapter 6.2.

5) Deciding on messages:

This phase involves tailoring the message to address the distinct needs, values, and frustrations of each buyer persona, ensuring that the communication strategy is as personalized and effective as possible. To achieve this, it is recommended to construct a value matrix for each buyer persona. This analytical tool delineates the specific pain points of the persona, the unique value the product offers to alleviate these issues, and a key message that succinctly conveys how the product resolves the persona's unique challenges. Moreover, analyzing competitors' messaging and product positioning allows for the identification of a unique selling proposition (USP) that differentiates the product from others in the market. The USP should highlight what makes the product or service superior and how it offers a better solution to the customer's problems. In the context of AutoCrash, for example, distinct messaging strategies could be developed for various stakeholders such as public administrations and police authorities concerned with road safety and efficiency, insurance companies focused on fraud reduction and claim processing speed, and appraisers looking for accuracy in accident reconstruction.

6) Mapping the buyer's journey:

Mapping out the buyer's journey is an integral aspect of developing a GTM strategy, following the identification of buyer personas and the crafting of targeted messaging. This journey delineates the path potential customers embark upon from the initial recognition of their need or problem to the ultimate decision to purchase your solution. Understanding this journey is pivotal for content marketing, enabling the delivery of messages that are both relevant and timely. The buyer's journey can typically be visualized as a funnel, segmented into three primary phases:

Top of the Funnel (Awareness Stage): This initial stage is focused on attracting prospective customers. Strategies may encompass advertising through various channels such as social media, search engines, or direct email communications to individuals who have shown interest by subscribing to newsletters. The aim here is to raise awareness of your product as a potential solution to the customers' identified problems.

Middle of the Funnel (Consideration Stage): At this juncture, potential customers are actively engaging with your brand, possibly through customer surveys, content upgrades, or other interactive means that serve to deepen their interest and investment in your offering. The objective is to nurture these leads, fostering a perception of your brand as a leading authority in your field and encouraging conversations about your product among potential buyers.

Bottom of the Funnel (Decision Stage): This final phase is where conversion takes place, transforming warm leads into actual customers. Tactics might include offering incentives such as discount codes or free shipping to encourage immediate purchases. Throughout these stages, the objective shifts from garnering attention to nurturing interest and, ultimately, facilitating decision-making.

7) Selection of appropriate marketing channels:

Choosing the right marketing channels is functional to generate demand for your product and guide potential customers through the marketing funnel. The effectiveness of these channels varies significantly depending on the target audience's content consumption habits. To optimize the impact of marketing efforts, it is crucial to align chosen channels with the target audience's preferences and behaviors, ensuring that the content is delivered where the audience is most active and receptive. The marketing strategy should be dynamic, with different channels employed for different phases of the buyer's journey. For instance, social media, blogs, SEO content, and email marketing serve varying purposes, from raising awareness among top-of-funnel customers to facilitating decision-making at the bottom of the funnel. Tailoring content to these channels, such as leveraging YouTube ads for audiences that prefer video content or providing detailed case studies and webinars for those in the consideration phase, can significantly enhance engagement and conversion rates.

Content marketing emerges as a powerful tool in attracting inbound leads, who are generally more informed and closer to making a purchase decision. By creating keyword-rich content that addresses the needs and questions of the target audience, businesses can improve their visibility on search engines, driving traffic to their website and ultimately, increasing sales. Furthermore, forming partnerships with companies that share a similar ICP but possess greater brand recognition can be a strategic move, especially for businesses looking to enter new markets or enhance their visibility. That's exactly what has been done by *DataVision Italia* with *Atena Ingegneria* and *Nira Dynamics*⁴². Co-marketing initiatives, such as presentations and conferences, joint webinars, virtual events, and content sharing, serve as powerful tools to introduce the business to a broader audience, fostering awareness and demand. This approach was exemplified when *DataVision Italia* and *Atena Ingegneria* jointly presented the software *AutoCrash* during a conference on the 26th of January 2024. For *AutoCrash*, leveraging a mix of tailored marketing channels and content strategies is very important since it has to reach diverse target audience. Given the specific needs and technological engagement levels of these stakeholders, *AutoCrash* must utilize a combination of digital marketing channels like

⁴² Niradynamics.se. (2024). *NIRA Dynamics AB*. Available at: <https://niradynamics.se/>

professional social media platforms, industry-specific blogs, and targeted email campaigns to effectively communicate its value proposition. Incorporating SEO content that highlights the efficiency (Ryan, 2016), transparency, and innovation AutoCrash brings to road accident management can attract top-of-the-funnel customers. Meanwhile, detailed case studies, webinars, live demos, and free trial offers can be pivotal for those in the consideration and decision phases.

8) Crafting of sales plan:

Crafting a sales plan aims at converting prospective customers into actual buyers. This involves a nuanced approach to selecting and integrating sales strategies that resonate with the product's characteristics, the business model, and the preferences of the target audience. Among the diverse sales strategies available, four stand out for their widespread applicability and potential for customization to fit specific needs. The self-service model facilitates customer independence by enabling them to purchase products directly online, an approach particularly suited to offerings that are straightforward and easily understood without direct sales intervention. For a solution like AutoCrash, this model might appeal to smaller entities or independent professionals who value simplicity and efficiency in adoption. Despite the reduced need for a sales force, this approach necessitates robust marketing efforts to drive significant traffic to the sales platform. An inside sales model, on the other hand, relies on a dedicated sales team to actively engage and nurture potential customers, guiding them towards making a purchase. This model is well-matched with products that possess a moderate level of complexity and require some degree of explanation or customization, making it a strategic choice for AutoCrash when targeting mid-sized organizations that can benefit from a detailed understanding of the platform's features and benefits. For securing large enterprise deals, the field sales model is most appropriate, demanding a higher investment in sales resources and accommodating a lengthier sales cycle in exchange for potentially substantial rewards. Employing this strategy, AutoCrash can offer customized solutions to large corporations or governmental bodies, necessitating a nuanced sales approach that can address complex needs and integrate seamlessly with existing systems. Lastly, the channel model leverages external partnerships to sell the product, offering a cost-effective way to broaden market reach without directly overseeing the sales process. AutoCrash could find value in collaborating

with established entities within the automotive, insurance, or technology sectors, using these partnerships to introduce its innovative solutions to a broader audience.

9) Setting clear targets and concrete goals:

Providing a roadmap for what you aim to achieve, within a specific timeframe, and offering a means to estimate progress is very important since the absence of well-defined goals can render it challenging to assess the efficacy of your GTM strategy. To establish measurable objectives tailored to the unique requirements of your business, various goal-setting frameworks are available, each capable of being utilized independently or in conjunction with others based on the strategic needs. The SMART Goals framework is instrumental in formulating goals that are Specific, Measurable, Achievable, Realistic, and Time-bound. It ensures that each goal has a clear target, a method for measurement, is possible within the given resources, is realistic considering the current market and organizational capabilities, and has a defined deadline (Doran, 1981). Alongside, Key Performance Indicators (KPIs) serve as quantifiable metrics to monitor progress towards achieving business objectives, offering a concrete means to track the success of a GTM strategy, and their effectiveness is enhanced when incorporating the SMART criteria. Additionally, the Objectives and Key Results (OKRs) framework combines specific objectives with measurable key results to track progress, providing a direct link between what you aim to achieve and how you plan to measure success, thus facilitating a comprehensive approach to goal setting and performance tracking in alignment with strategic business needs (Doerr, 2018).

10) Providing feedback:

Establishing a robust feedback loop among the marketing, sales, and product development teams allows for the seamless integration of insights across different domains, ensuring the GTM strategy is continuously improved and adapted based on real-world performance and customer feedback (Kaplan & Norton, 1996). Assigning specific responsibilities to individuals within these teams is key to monitoring progress, identifying challenges, and capturing actionable insights. Regular meetings where these team members share their findings and progress facilitate a collaborative approach to

overcoming any hurdles, fostering an environment of continuous learning and development. In addition, it is also crucial to implement mechanisms for capturing and analyzing feedback from external stakeholders. This external feedback is precious for validating the effectiveness of the GTM strategy and identifying areas for refinement. Leveraging tools and platforms that enable real-time feedback collection can significantly enhance the agility of the feedback process, allowing teams to quickly respond to market changes or customer needs. Furthermore, integrating customer feedback into product development not only ensures that the product evolves in line with customer expectations but also promotes customer engagement and loyalty.

Incorporating the practice of prioritizing customer feedback has been always used by AutoCrash, particularly given the technical nature of its field where user insights are indispensable. Recognizing the critical role that customer feedback plays in refining and advancing its offerings, AutoCrash has dedicated significant effort to ensure that customer perspectives are not just heard but are integral to the product development process; without them, it would not have been possible to create a viable platform.

Chapter 6: AutoCrash Case Study, Business Analysis

6.1 Market Research

Market research is a very fundamental component in the strategic planning and decision-making processes of businesses, providing invaluable insights into consumer behavior, market trends, competitive landscapes, and potential growth opportunities. At its core, market research encompasses a broad range of methodologies and practices aimed at gathering, analyzing, and interpreting data about a market, including the identification of target customers, their preferences, needs, and purchasing behaviors. The significance of market research lies in its ability to offer a detailed understanding of the market dynamics that influence business outcomes, enabling companies to tailor their products, services, and marketing strategies to meet the demands of their target audience effectively (Cooper, 2019).

This research is conducted through various qualitative and quantitative methods, including surveys, interviews, focus groups, and observation, as well as the analysis of secondary data sources, such as industry reports and market statistics. In recent years, the advent of digital technologies and big data analytics has transformed market research practices, allowing for more sophisticated data collection and analysis techniques that can provide deeper insights into consumer behavior and market trends. These advancements have enabled businesses to leverage predictive analytics, social media monitoring, and consumer sentiment analysis, thereby enhancing the accuracy and relevance of market research findings.

Moreover, market research permits to identify new market opportunities, assessing the viability of new products or services, understanding competitive threats, and evaluating marketing campaigns' effectiveness. The continuous evolution of market research methodologies, driven by technological innovation and changing consumer expectations, underscores the importance of staying abreast of the latest trends and techniques in market research to ensure that businesses can adapt and thrive in the face of ongoing market challenges.

The GTM strategy, while primarily recognized as a comprehensive plan for launching products, embodies elements of market research at its core, acting as a specialized, action-oriented form of research aimed at maximizing commercial success. Unlike traditional market research, which focuses on gathering and analyzing data to understand market conditions, customer needs, and competitive landscapes, the applied GTM strategy utilizes these insights as a starting point and extends them into actionable plans that directly influence market entry and product positioning decisions. In essence, the development of GTM strategy is a form of market research, where the emphasis shifts from understanding the market to actively shaping how the product will be introduced and accepted by the target audience (McCarthy & Hillege, 2019).

For these reasons, a significant portion of the market research for AutoCrash involved reports and comparisons with professionals in the target markets. This was necessary to better understand the characteristics of their working activities and how to address their needs. Engaging directly with potential users and stakeholders provided information about the practical challenges and requirements faced in the field of road accident management. This method of conducting market research underscores the importance of a customer-oriented approach in product development, especially in sectors where professional practices and requirements can vary widely.

6.2 Business Model Canvas

The Business Model Canvas (BMC) is a strategic management tool that offers a visual chart with elements describing a firm's or product's value proposition, infrastructure, customers, and finances. Developed by Alexander Osterwalder and Yves Pigneur, it assists firms in aligning their activities by illustrating potential trade-offs. The BMC's simplicity and practicality have made it a popular choice among entrepreneurs, managers, and academics for business model innovation and validation. The BMC is divided into nine basic building blocks that show the logic of how a company intends to make money. These blocks cover the four main areas of a business: customers, offer, infrastructure, and financial viability.

The concept of a value proposition is central to understanding how a business creates value for its customers. It encompasses the mix of products and services offered to meet the specific needs and solve the problems of a particular customer segment. The essence of a value proposition lies in answering critical questions: What consumer problems are we addressing? What consumer needs are we fulfilling? Value propositions can vary widely, including innovation, enhanced performance, customization to user specifications, practicality, distinctive design, brand prestige, status, competitive pricing, cost savings, reduced risk, convenience, better accessibility, and improved usability (Chesbrough, 2010).

Moving to customer relationships, this aspect defines the nature of the interaction a business seeks to establish and maintain with its customer base. The types of customer relationships a business can develop range from personal assistance to dedicated personal assistance, self-service options, automated services, community engagement, and co-creation initiatives, each tailored to the specific requirements and preferences of the customer segment.

Channels represent the methods through which a business communicates with its customers and delivers its value proposition. The effectiveness and cost-efficiency of these channels are paramount, encompassing various phases such as raising awareness, facilitating evaluation, managing purchases, handling delivery, and providing after-sales support.

Customer segments are the distinct groups of people or organizations a business aims to reach and serve, categorized by characteristics such as age, gender, socioeconomic status, occupation, location, lifestyle, or values. These segments can range from the mass market, where no distinction is made between different customer groups, to niche markets, segmented and diversified markets, and multi-sided platforms, each with its own strategy and focus.

Key partners are essential to a business model, encompassing the network of partners and suppliers that contribute to its success. Partnerships might be driven by the need for optimization, risk reduction, or the acquisition of essential resources and activities. Key activities are the critical tasks a business undertakes to deliver its value proposition, which can include production, problem-solving, and platform or network management. Key resources are the assets required for a business to operate, including physical, intellectual, human, and financial resources.

The cost structure outlines all expenses involved in operating a business model, which can vary from cost-driven approaches focusing on efficiency and low prices to value-driven models emphasizing premium offerings.

Revenue streams represent how a business generates cash from each customer segment, reflecting the value customers are willing to pay for. These can include asset sales, usage fees, subscription fees, and various other mechanisms like lending, renting, leasing, licensing, brokerage, and advertising fees.

In the automotive and insurance industries, where efficiency, transparency, and customer satisfaction are considered, the BMC emerges as a crucial tool for strategic management and innovation. Applied to AutoCrash the BMC provides a structured approach to understanding and refining the business model. This is the BMC that was created during the development studies of AutoCrash, designed to outline the business strategy in a clear and concise manner. Its primary purpose is to provide a comprehensive and impactful overview of the key components that define the business model.

In the "Key Partners" section, entities, software, and means essential for the project's realization are identified. Among these, *Atena Ingegneria* stands out as the main partner, having significantly contributed to the development of the AutoCrash software with its sector-specific knowledge, technical skills, and extensive networking base. Other partners include *Wix*⁴³, an online platform for website creation, and providers of Infrastructure as a Service (IaaS) and Platform as a Service (PaaS), offering essential infrastructures and platforms to support the software.

"Key activities" represent the principal activities undertaken to create value through the use of key resources. These include continuous development of technology and research, software programming, the creation of AI models tailored to the automotive and insurance sectors, the development of DevOps pipelines, the collection and categorization of images and data, as well as sales and marketing activities, including targeted sector-specific market studies.

The "Key resources" section highlights the essential resources employed to generate value, such as developers and employees, computers and GPUs, data sets and codebases, as well as scientific publications. These resources are indispensable for supporting the main activities and the realization of the software.

⁴³ IT - Wix HP current. (2020). *Wix.com*. Available at: <https://it.wix.com/>

The "Value proposition" outlines the benefits offered by the AutoCrash software, which includes a comprehensive range of features, assistance, and consulting to simplify and facilitate incident management processes. Offerings include incident registration, management of a personal database, a community for industry professionals, innovative and exclusive AI models, integration of *Atena Ingegneria's* ProImpact software, in addition to free trial periods and contractual flexibility accompanied by high privacy standards.

Regarding "Customer relations," direct contact with customers is anticipated through networking networks, lead generation, and market research, supported by assistance services available on the platform or via AutoCrash email, advertising strategies such as Google Ads, SEO, newsletters, and collaborations with industry newspapers and magazines, as well as participation in conferences and presentations.

"Channels" describe the channels through which the product will be delivered to customers, favoring the Software as a Service (SaaS) model, both locally and in the cloud, supported by a sales team and, in the future, by APIs.

"Customer segments" aim to define the categories of customers of interest, initially focused on reconstruction experts, insurance assessors, judicial authorities, and law enforcement agencies, with the intention to extend the offer to insurance companies, public administration, and potentially, citizens, body shops, and statistical entities.

The "Cost structure" outlines the incurred costs, including salaries, maintenance of the DevOps pipeline, amortization of equipment and infrastructures, operating costs of GPUs, expenses for partnerships, and advertising.

Finally, "Revenue streams" identify the income sources that will ensure the project's sustainability and scalability, with revenues primarily derived from subscriptions, requests for 3D reconstruction, and the sale of the anti-fraud AI model through permanent ownership offers to interested insurance agencies.

The use of BMC in AutoCrash's development highlights the importance of structured business planning in launching a technologically advanced product. It ensures that all aspects of the business model contribute towards creating value for users and maintaining the software's competitiveness. As AutoCrash evolves, the insights from the BMC will continue to guide its strategic direction, fostering innovation and securing its market leadership (Osterwalder & Pigneur, 2010).

<p>Key Partners</p> <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <ul style="list-style-type: none"> - Atena s.k.l. for networking, knowledge and competencies. - Wix.com, for the website. - IaaS, PaaS providers. 	<p>Key Activities</p> <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <ul style="list-style-type: none"> - Technology R&D - Software programming - Creation of AI models - DevOps pipeline - Collection and categorization of images and data - Sales and marketing activities - Market studies of the sector <p>Key Resources</p> <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</p> <ul style="list-style-type: none"> - SaaS (local or on cloud) - Sales team - API in the future version 	<p>Value Propositions</p> <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <ul style="list-style-type: none"> - AutoCrash software complete with all features. - Uniformity, assistance, consultancy, and facilitation of processes. - Incident registration. - Database - Community - Innovative and exclusive AI models. - Integration of Prolmpact. - Integrations with partnerships. - 14 days free trial and contract closure and reopening at any time - High privacy levels 	<p>Customer Relationships</p> <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p> <ul style="list-style-type: none"> - Direct contacts - Assistance services - Word of mouth - Google - SEO strategy. - Newsletter - Newspapers and magazines - Customer conferences and presentations <p>Channels</p> <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <ul style="list-style-type: none"> - Developers and employees - Computers and GPUs. - Datasets and codebase - Scientific papers. 	<p>Customer Segments</p> <p>For whom are we creating value? Who are our most important customers?</p> <ul style="list-style-type: none"> - Insurance assessors - Reconstruction experts - Insurance companies - Judicial authorities - Law enforcement - Citizens - Public administration - Statistical entities
<p>Cost Structure</p> <p>What are the most important costs inherent in our business model? Which Key Resources are most expensive? Which Key Activities are most expensive?</p> <ul style="list-style-type: none"> - Salaries for programmers - DevOps pipeline maintenance - Partnerships costs - Computers, GPUs, infrastructures - Advertising costs 		<p>Revenue Streams</p> <p>For what value are our customers really willing to pay? For what do they currently pay? How are they currently paying? How would they prefer to pay? How much does each Revenue Stream contribute to overall revenue?</p> <ul style="list-style-type: none"> - Subscription (monthly, yearly) + customized pricing for enterprise customers - 3D reconstruction requests - Anti-fraud AI model (permanent ownership offer) 		

Figure 15 - DataVision Italia's BMC for AutoCrash.

6.3 Value Proposition

A value proposition is a statement that summarizes why a customer should buy a product or service and how it solves the customer's problem or fulfills their needs better than other alternatives. It highlights the unique benefits and advantages that a product or service offers to its target audience. A strong value proposition communicates the value a customer will receive, addresses their pain points, and differentiates the offering from competitors. It is a key component of marketing and sales strategies, helping businesses attract and retain customers by clearly articulating the benefits of their offerings.

This platform is specifically designed to address the intricate challenges faced by various stakeholders involved in road accidents, ranging from individuals and law enforcement agencies to insurance companies and judicial bodies. By digitizing and automating the accident file management process, AutoCrash enhances efficiency and brings a new level of transparency and accuracy to the entire ecosystem.

For individuals, the primary beneficiaries of AutoCrash, the platform offers unparalleled access to information. By providing real-time updates and direct communication channels with insurance assessors, AutoCrash empowers citizens with informational autonomy. This direct engagement mechanism eliminates the need for intermediaries, thereby streamlining the claims process and enhancing customer satisfaction. The economic implications here include reduced administrative costs for insurance companies and a more expedient claims resolution process, leading to higher customer retention rates and potentially lower insurance premiums as operational efficiencies translate into cost savings.

Law enforcement agencies, on the other hand, benefit from the automation and standardization of accident reporting. The use of license plate recognition technology not only cuts down on the time required to compile reports at the scene but also ensures a uniform reporting format across different agencies. This standardization can significantly decrease the time spent on paperwork, allowing officers to allocate more time to critical tasks. Moreover, the instant sharing of information with judicial authorities can streamline legal processes, ultimately contributing to a reduction in the backlog of court cases related to road accidents.

For insurance companies, AutoCrash represents an opportunity to significantly enhance operational efficiencies. The platform facilitates swift communication with assessment agencies and provides a mechanism for clients to monitor the progress of their claims independently. This autonomy can lead to a decrease in the volume of inquiries that insurance companies have to manage, thereby lowering operational costs. Additionally, the integration of AI for fraud detection can result in substantial savings by identifying fraudulent claims early in the process, thus protecting revenue and enhancing profitability.

Assessment agencies and reconstructors gain access to cutting-edge tools for accident analysis, including AI-assisted three-dimensional reconstructions and detailed mappings of damaged parts. These technological advancements can lead to more accurate damage assessments and valuations, reducing disputes and the time spent on negotiations between insurance companies and claimants. The economic benefits here include lower litigation costs and more efficient resource allocation.

For judicial bodies, complete and accurate access to accident data and expert opinions can expedite the adjudication process, reducing the time and resources required to resolve disputes. This efficiency not only has direct economic benefits in terms of reduced court operational costs but also contributes to a sense of justice being served promptly.

Statistical bodies and public entities are provided with a wealth of data for analysis, enabling the identification of high-risk areas and the formulation of targeted interventions to improve road safety. This proactive approach to accident prevention can lead to a long-term reduction in the number of accidents, with significant economic benefits related to healthcare costs, property damage, and loss of productivity.

In conclusion, AutoCrash's value proposition extends beyond the mere digitization of accident files. It represents a comprehensive solution that addresses the needs of all stakeholders involved in road accidents. By leveraging technology to improve efficiency, accuracy, and transparency, AutoCrash not only enhances the customer experience but also provides substantial economic benefits across the ecosystem.

6.4 Pricing Strategy

The formation of an effective pricing strategy is fundamental for the successful market introduction and sustained competitiveness of AutoCrash software. This paragraph endeavors to explore the application of the five most common pricing strategies. It integrates these strategies with the overarching goal of aligning AutoCrash's pricing model with its value proposition, target market, and business objectives (Nagle, Hogan, & Zale, 2016). The landscape of pricing strategies presents a variety of approaches, each with its merits and considerations. These strategies include cost-plus pricing, competitor-based pricing, value-based pricing, penetration pricing, and premium pricing. The selection of an appropriate strategy, or a combination thereof, requires a deep understanding of AutoCrash's market positioning, cost structure, customer value perception, and the competitive environment.

Cost-Plus Pricing: This strategy involves determining the cost of providing AutoCrash to the market and adding a markup to ensure profitability. This approach may not fully capture the perceived value of AutoCrash's innovative AI features, which could justify a higher price point.

Penetration Pricing: To quickly establish market share and encourage the adoption of the product, a penetration pricing strategy could be employed initially. Setting a lower price point can attract a broad user base, which is crucial for gathering feedback and fostering a community around the software. As the market presence grows, pricing can be adjusted to reflect the accruing value. In this case this methodology is not advisable for the same reasons just explained.

Competitor-Based Pricing: Adopting a competitor-based pricing strategy necessitates a thorough analysis of the pricing models of existing road accident management solutions. This strategy requires continuous market surveillance to adapt to pricing changes among competitors and moreover, it is not a suitable model for AutoCrash, as direct competitors do not offer the same functionalities provided by it.

Value-Based Pricing: Retained as the most fitting for AutoCrash, value-based pricing focuses on the unique benefits and efficiencies the software provides to its users (Hinterhuber, 2008). Given AutoCrash's potential to significantly streamline accident management processes, pricing can be aligned with the value perceived by stakeholders.

Premium Pricing: Alternatively, AutoCrash could adopt a premium pricing strategy if its offerings are significantly superior to existing solutions, targeting users who prioritize quality, innovation, and comprehensive features. This approach aligns with positioning AutoCrash as a high-end solution in road accident management, justifying the premium through unmatched capabilities and benefits.

In selecting the optimal pricing strategy for AutoCrash, several strategic considerations have been accounted for, including cost analysis and the elasticity of demand within the target sectors. This is a critical determinant of its market success and financial sustainability. The pricing structure for AutoCrash software has been meticulously

developed based on market studies, analysis of competitors, and an evaluation of the cost structure inherent to SaaS development and maintenance. This approach ensures that the pricing not only reflects the intrinsic value of AutoCrash's offerings but also secures a superior stance within the competitive landscape and take in consideration costs unique to the SaaS model. AutoCrash's pricing flexibility extends to its subscription model, offering both monthly and annual subscription options. To incentivize longer-term commitments, customers opting for the yearly subscription benefit from two months discounted. This option reflects again AutoCrash's commitment to building long-term relationships with its users.

To better meet the needs of different types of organizations and their budgets, AutoCrash offers a customized pricing plan for teams. This special option is made to fit the specific needs of team-based work, making it easier for various parts of an organization to use and improving teamwork on the platform. *DataVision Italia*'s team decided to introduce a 14-day free trial, providing prospective customers an opportunity to experience the full range of functionalities and benefits the platform offers without initial financial commitment. This trial period is pivotal in demonstrating AutoCrash's value proposition directly to users, fostering trust and encouraging adoption.

6.5: Product Launch

The launch of AutoCrash software represents the most remarkable moment in the product's lifecycle, marking its transition from development to market presence. The strategic planning phase involves setting clear objectives for the product launch, including sales targets, market penetration goals, and brand awareness metrics. This phase also requires the selection of the appropriate launch strategy, be it a soft launch to gather initial feedback or a full-scale launch aimed at capturing significant market share from the outset.

Figure 16 - AutoCrash Presentation. Invitation Brochure.



The marketing mix, that is product, price, place, and promotion, must be carefully designed to support the launch of AutoCrash. Indeed, promotional strategies provide high value in generating awareness and interest among the target audience. The launch event of AutoCrash took place on January 26, 2024, at the *Mugello International Circuit*⁴⁴. The event, marked by the attendance of a large and qualified audience, provided the opportunity to assess the software's potential in a highly professional environment. The choice of this environment for the launch, coinciding with a training and updating course for insurance and reconstruction appraisers, reflects a targeted strategy to optimize the product's impact among key stakeholders in the sector.



Figure 17 - AutoCrash Presentation at Mugello Circuit.

The presence of a diversified audience, which also included representatives of law enforcement agencies, insurance companies, public entities, and lawyers, expanded the potential for networking and the creation of interprofessional synergies. This methodological choice facilitated a deep understanding of the specific needs of various actors involved and allowed for a concrete demonstration of the software's capabilities

⁴⁴ Mugellocircuit.com. (2021). *Mugello Circuit - L'autodromo del Mugello*. Available at: <https://www.mugellocircuit.com/it/>

and applications, through a live demo that constituted the event's centerpiece. This interactive approach proved particularly effective in the context of a sector with high technical specialization, as evidenced by the decision to offer participants a code to benefit from a 30% discount on subscription to the service. This initiative not only encouraged immediate product adoption but also contributed to building a solid initial customer base; that clearly is a crucial element for commercial success in the medium and long term.



Figure 18 - Example of AutoCrash's Product Launch Marketing Material.

This event can be configured as an exemplary case of experiential marketing, whose success is based on direct interaction with a selected audience and on the integration of practical demonstrations and training opportunities. For these reasons the ability to effectively respond to the needs and doubts of sector professionals, together with the creation of incentives for product adoption, represents a replicable model for launching technological solutions in specialized contexts. After the launch, it is essential to establish mechanisms for monitoring performance against the set objectives. This includes tracking sales data, customer feedback, and market response.

Chapter 7: Conclusion and Future Works

Conclusion

The objective of this thesis was to delineate an effective business development trajectory for a newly established startup, specifically within the realm of AI. The discussions put onward, in conjunction with theoretical insights and empirical outcomes garnered, furnish a potent pattern for developing a startup's growth. This is strengthened by the proficiency the candidate has cultivated through the academic journey and the occupation at *DataVision Italia*.

At the beginning of the thesis, a general and theoretical perspective on the AI domain is introduced, serving both an educational purpose and aiding the reader in navigating the more technical segments of the dissertation. Subsequently, an exposition of the startup and its business operations is proposed. This overview proves invaluable for readers yet to board into the professional sphere, as it presents a pragmatic and firsthand perspective from the candidate, who is similarly embarking on their career. In the second part of the thesis, the case study of AutoCrash provides a tangible insight into the steps from conception to the market launch of the software.

Throughout this work, a comparative analysis with university studies is undertaken, aiming to highlight the Global Development and Entrepreneurship's master course's applicability and value in the professional realm. In conclusion, a GPT based on the thesis is provided, with the primary objective of conveying a more personal and comprehensive view of the candidate's insights regarding this scholarly work.

Future Works

A non-exhaustive list of potential future works is hereby proposed:

1. Fraud detection: This project is conceived to aid insurance companies in the fraud detection phase. The AI can be capable of identifying vehicles that have previously been subject to damage claims and are being used to file new claims. The candidate is actively engaged in establishing business relationships with various insurance companies to secure extensive datasets, with the objective of developing tailored AI models for them.
2. Automatic license plate recognition: This involves the automatic reading of license plates to facilitate the drafting of an almost automatic and uniform report for various law enforcement agencies. The goal is to develop a standardized format with fillable fields, achievable through automatic license plate recognition. Once the plate is entered, it instantly provides every detail of the vehicle: make and model, owner, maintenance, insurance, vehicle tax, etc. To accomplish this, access to motor vehicle department data is necessary. Therefore, the structuring of agreements is in progress.
3. Subsequent versions of AutoCrash with various integrations: This involves the continuous improvement and enhancement of the AutoCrash software, incorporating new features and integrations to meet detected needs and challenges.
4. Seminar activities: A comprehensive schedule of conferences and seminars has been arranged for the forthcoming months. Seminar series are designed to elucidate the capabilities of AutoCrash and the advantages of incorporating AI. Esteemed university professors will contribute by presenting foundational lectures. These sessions underscore the critical importance of staying abreast with technological advancements.



Figure 19 – Seminar Invitation.

In conclusion, countless work activities will be undertaken within *DataVision Italia*, aimed at the continuous and growing development of the startup within the Italian industrial ecosystem. This ambitious agenda underscores the commitment to leveraging technology for innovative solutions, driving forward the fields of AI, automation, and data analysis in service of societal and industrial advancement.

Appendix

Generative Pre-trained Transformer

The Generative Pre-trained Transformer (GPT) literally represents a highpoint in the evolution of AI models. It is specifically engineered for the processing and generation of natural language text. This capability ensures a coherent output that is also contextually appropriate, mirroring the complexity and distinction of typical human language. Such models have gained acclaim for their proficiency in producing text that flows with a naturalistic ease, often blurring the lines between machine-generated content and that crafted by human intellect. As of today, it is untenable to pretend that these models are not available and to forego their benefits. Their potential is immense and can significantly augment human capabilities.

At the heart of GPT's nomenclature lies its foundational principles:

Generative: Signifying its principal functionality, the generative aspect of GPT is central. It denotes the model's capability to produce text autonomously. Given a set of initial parameters, such as a question or a prompt, the model employs its learned linguistic patterns to construct a sequence of words, thereby formulating a coherent response. This generative capacity is instrumental in a wide range of applications, from content creation to conversational agents.

Pre-trained: Before being tailored to specific tasks, a GPT model undergoes extensive training on a broad corpus of text. This phase allows the model to internalize a vast collection of linguistic structures, vocabulary, and concepts, enabling it to grasp the subtleties of language and text patterns. Such a comprehensive training regimen equips the model with a robust foundation, facilitating its adaptability and accuracy.

Transformer: The transformative aspect of GPT technology lies in its innovative approach to text analysis and generation. Utilizing the Transformer architecture, the model can evaluate the entirety of a text passage, allowing for a nuanced understanding of context. This capability ensures that the generated text is not only relevant but also coherent, reflecting, as said before, the complexities of human language.

The attempt to create a customized GPT model stems from both ambition and a deep-seated interest in the frontiers of AI. The lack of specialized computing skills did not deter the exploration of OpenAI⁴⁵'s GPT offerings, which present a more user-friendly and guided approach to leveraging this sophisticated technology. OpenAI is a distinguished leader in the realm of generative AI and unveiled an innovative feature for customizing GPT models during the OpenAI Dev Day on November 6, 2023. Although still in beta version, this development is seen as a significant jump forward, proclaiming a new era in generative AI capabilities.

The journey to develop a personalized GPT model involves several steps:

1. In-depth understanding: The foundational step involves gaining a broad understanding of GPT models' operational mechanics. These models, rooted in ML and Neural Network technologies, harness these principles to generate text. A thorough exploration of ML, DL, and, more specifically, Transformer Neural Networks, is essential to understand the intricate workings of GPT models fully.
2. Data collection and curation: Highly essential to the training of a GPT model is the accumulation of a vast and relevant dataset. For a model to be tailored to specific needs, it necessitates the collection and organization of a wide range of textual materials, including but not limited to, research reports, books, scholarly articles, and professional documents. This step ensures that the model has access to a rich source of information, enabling it to learn and replicate the desired linguistic patterns effectively.
3. Base model selection and customization: Opting for a base model from OpenAI's pre-trained selections, such as GPT-4, provides a solid foundation upon which further customization can be built. This approach, favoring fine-tuning over constructing a model from scratch, allows for the integration of specific datasets, thereby tailoring the model more closely to the intended application. Such a strategy economizes on time and resources but especially leverages the advanced

⁴⁵ Openai.com. (2024). *OpenAI*. Available at: <https://openai.com/>

capabilities of the existing model, ensuring a high degree of relevance and efficiency.

4. Rigorous training: The model's training phase is critical, involving the systematic feeding of the curated dataset to the model. This process enables the model to learn from the specific context provided, adapting its generative capabilities to the nuances of the targeted application.

5. Evaluation and refinement: Post-training, a thorough evaluation of the model's performance is necessary. This assessment phase involves testing the model against various metrics to determine its accuracy, coherence, and overall effectiveness. Based on these evaluations, adjustments and refinements are made, ensuring the model meets the desired standards.

6. Documentation: Documenting the development process in detail is effective for transparency and usability. This documentation should cover the rationale behind model choices, the specific aims of the customization, and a comprehensive overview of the process, enabling users to understand and effectively utilize the custom GPT model.

7. Deployment: With the completion of testing and final adjustments, the customized GPT model is ready for deployment. This stage marks the culmination of the development process.

This elaborate labor to create a customized GPT model demonstrates the accessibility and adaptability of contemporary AI technologies. Through a detailed and methodical approach, it is possible to leverage the advanced capabilities of GPT models, opening new avenues for innovation and exploration in the realm of AI.

Thesis' GPT:

In the development of this master's thesis, a beta version of a GPT model was created, specifically pre-trained on a corpus of texts closely related to the subject matter of the thesis. This model, by its very nature, emerges as a more evolved and comprehensive entity compared to the thesis text itself, having benefited from training on a significantly broader range of textual content than that directly explored within the academic document. This methodological approach entailed the inclusion, in the pre-training process of the GPT, of a series of information and details not immediately relevant or marginally pertinent to the core subject of the thesis, thus excluded from it. Despite such exclusions, the integration of these elements into the GPT model has enhanced it, endowing it with the ability to offer an even more exhaustive and detailed perspective on the discussed topic. The primary objective pursued through the use of this GPT model is to facilitate the user in posing specific questions, ensuring precise and contextually appropriate responses. It is hoped that, thanks to its advanced interaction and information processing capabilities, the GPT may prove to be a highly useful tool for all those wishing to examine deeper into the aspects covered in the thesis. The future perspective sees GPTs increasingly integrated into daily life, becoming indispensable tools in supporting professional and academic activities.

To access and interact with the GPT model, users are invited to use the following link: https://docs.google.com/document/d/1m2txjvFkzF71vf9cw5VDhUvVCItZIUCITD_ZaZDzsqq/edit?usp=sharing

Through this platform, users will have the opportunity to explore a wide range of issues related to the professional experiences of the candidate, the startup *DataVision Italia*, and its innovative products, such as AutoCrash and 3D Reconstruction, receiving immediate and well-informed responses. Furthermore, it can be utilized to examine various personal opinions of the candidate, offering an invaluable perception into their perspective. Through this interaction, users are afforded a unique opportunity to evaluate the candidate's thought processes, values, and innovative approaches to challenges within their field.

Examples

Some randomly selected examples, encompassing both technical and personal aspects, are presented for demonstrative purposes:

- *What are the practical applications related to the master's course in Entrepreneurship and Strategy?*
- *What soft skills were adopted by the candidate during their work experience in a startup?*
- *What are the candidate's opinions regarding the startup environment?*
- *What pricing strategy was adopted for the AutoCrash software?*

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