

Dipartimento
di Economia e Finanza

Chair of Marketing

***PocketDoctor, a revolutionary App in the
Healthcare world***

Prof. Carmela Donato

RELATORE

Riccardo Arrigoni, Matr.223771

CANDIDATO

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p**cketdoctor**

1. CHAPTER 1

1.1 Introduction

Throughout history, we have noticed how man has done nothing but improve and make himself more effective, trying to survive the many adversities of the universe. Recently, however, we can say that with the advent of the internet and subsequent discoveries related to the latter, humanity has been able to accelerate the processes of innovation and efficiency exponentially.

Human health has always been one of the most captivating and important focuses on which humanity questions itself, but only recently, after the global pandemic of COVID19, has the real importance of digital identity in union with the health system been understood.

In this thesis, the methods used in corporate marketing will be discussed to ensure that an effective marketing plan is structured for the success of a start-up in the Italian healthcare world.

Step by step, we will list the problems that this app wants to solve and the methods with which the needs of the future will be changed and supported.

1.2 Corporate Mission

PocketDoctor wants to be a point of reference in the healthcare world, effectively and continuously bringing added value to people's health all over the world. Our motto is "No patient should be left alone" and from this phrase, we start as many ways as possible to ensure that no one finds himself with health problems without knowing how to act efficiently. People's health is complex, subjective and full of variables, but there is a solution to everything, and we at PocketDoctor make sure that the whole world is in full health.

1.3 Corporate Vision

Our company wants to exploit the new technologies on the market to ensure that they are implemented clearly and adequately in the healthcare sector. By creating a digital identity of patients and doctors, we will try to better understand and manage the resources to be implemented in health systems, first of all the Italian one and then the world one. Within five years, we want to settle in the entire Italian health system and within twenty years, we want to expand to the whole planet. Health will no longer be a problem. There is a solution to everything!

1.4 Quick description of the app

PocketDoctor aims to become the world's leading platform in healthcare connections and health info. Before and during the COVID-19 pandemic, our health system nearly collapsed. In many countries around the world, underprivileged people were unable to get healthcare services because of cost. Misinformation was everywhere, delaying community response and delivery of scientific advice. The COVID-19 pandemic was the trigger that exposed the long-existed problems in our health system.

We heavily relied on public healthcare, especially tertiary hospital care. We did not have efficient community primary healthcare supported by general practitioners. We did not have a system to help patients with basic screening. We did not have a system that connects patients to service providers that suit them. We ignored other healthcare workers and placed tremendous pressure on doctors. We did not have an organized platform for accurate health information.

PocketDoctor will be the solution. Our team would create a new platform that is a truly integrated patient-centered system. Potential patients can have daily simple health checks that help to detect early health problems. If they feel unwell, the system can recommend suitable services from general practitioners, specialists, pharmacists, nutritionists, clinical psychologists, physiotherapists, to name but a few. Most importantly, patients own their medical records, which can be shared to new health workers upon authentication for effective follow-ups and review of medical history.

PocketDoctor will incorporate an info platform that provided health info from authenticated professionals, preventing delayed treatment due to misinformation online. The App will cooperate with insurance providers to provide protection schemes to the general public and it will provide assistance to people with disability and living far away from medical facilities to seek medical help.

In the future, PocketDoctor will be a multifunctional platform that provide low cost patient-centered healthcare and preventive information for the general public.

1.5 Sections

As it has been understood, the app will be divided into two sections. The most structured section will be the one dedicated to patients, and in fact, it will be the section that will have the working focus. Nevertheless, there will be a section for healthcare professions (doctors and healthcare structures), which will be combined in such a way as to offer revolutionary services that can put the two sections in contact in a safe, innovative and functional way.

1.5.1 For Patients



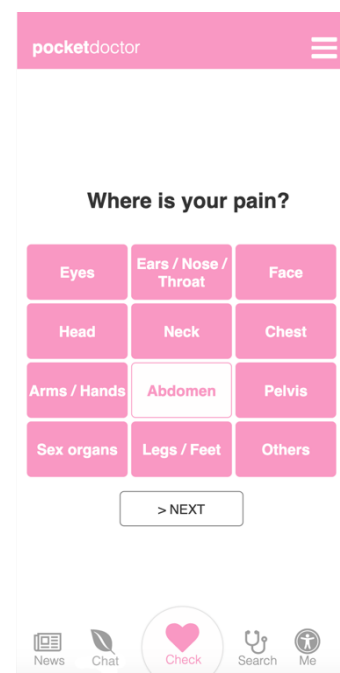
Through the app, patients will be able to manage their own health and that of their family, changing profiles in the same application. This will make family monitoring easier and secure. Numerous features will be available in the PocketDoctor app, which aims to simplify the health path as much as possible and improve the critical issues that have been encountered in previous years.

Remote connection with the best specialists

PocketDoctor allows patients to book consultations online and receive assistance from the comfort of their home without having to go to the office or call.

Online video consultation booking

Through the search engine on the site, patients can find the ideal specialist who offers online advice. Choose the date and time and book the visit with a click.



Layout Check

Receive instructions for the visit

Patients will receive a link via e-mail to access online counseling. They can use private messaging to interact with the doctor.

Make the visit

The patient can connect with the specialist required for the consultation once the link has been received at the set time and date.

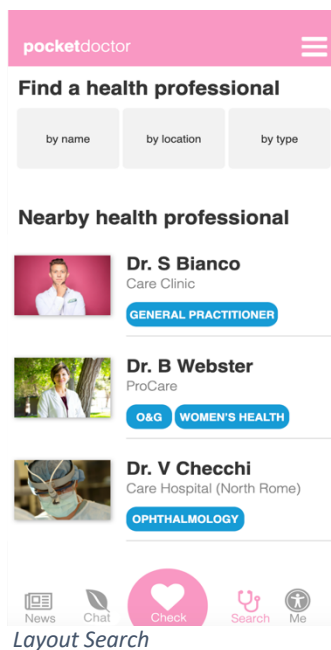
Simplified booking process

PocketDoctor allows users to register for the platform for free and manage their health online.

Possibility to choose the most suitable doctor for your needs thanks to our research based on specialization, performance and pathology.

Book specialist visits, diagnostic tests or other services on your preferred days and times 24 hours a day, 7 days a week.

Never miss an appointment thanks to our reminder service.



Search for a doctor in the immediate vicinity

Patients can consult doctors and medical centers by the name of the doctor, name of the medical center, reason for the visit, pathology (headache, toothache), or specialty (dentists, general practitioners, orthopedists) in any place or by locating themselves.

Selection of the most suitable doctor for patient needs

Each doctor has a complete and updated online profile where patients can view the CV with professional

experiences, academic background and specialties treated. In addition, details such as the address of the office, payment methods, access for the disabled, etc. are indicated.

Online appointment booking

Make an appointment online 24/7 in real-time, choose the date and time from any device and book the visit with a click.

Health management

Manage patient appointments independently from their account, save favorite doctors, receive appointment reminders by e-mail and SMS, ask for advice on any specific problems, access previous appointments, release reviews for the service provided and receive reminders for medicines to be to hire.

Private medical records via Medical blockchain

“Patients own their records” is our aim. Doctors will input necessary medical records into the system so that our patients will know what diseases they are having.

The medical record system we designed will be simplified for patients to understand their diagnosis, test results and given treatment. Since the patients own these records, they are able to authenticate their medical records to other healthcare workers, providing a more comprehensive medical history for a more accurate diagnosis. Only when the “key” of healthcare workers is accepted by the “locks” of patients, they can view their medical history and update newer findings and progress upon the authentication process. All medical records will be encrypted. Only biometric or password authentication by the patient himself/herself or their designated family members can access through the app.

Medical algorithms

The preliminary health check would require a sophisticated algorithm that processes the probabilities of patients having certain conditions based on their health records, existing medical studies and experiencing symptoms. The algorithm would

determine the diagnostic results from a list of common conditions and arrange them according to this algorithm.

Big data & artificial intelligence

Eventually, **PocketDoctor** would become an extensive system with a large number of voluntary users reporting their symptoms and conditions. These data help epidemiologists and researchers carry out population-level studies and improve the general public's health outcomes. We also would apply machine learning and artificial intelligence at a later stage to increase the dynamics of the algorithms., furthering improving the accuracy of diagnosis.

1.5.2 For Doctors



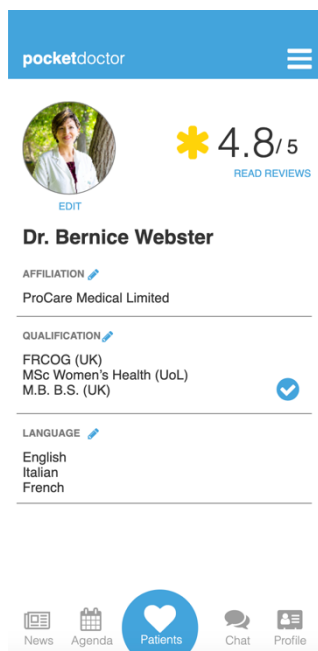
For doctors, the PocketDoctor app will become a worthy replacement for the secretary, will give the doctor the opportunity to be visible to more patients and to organize his work with more efficiency and awareness. Our service allows doctors to optimize their online visibility and to manage the booking flow simply and intuitively.

PocketDoctor

- Increase the visibility of doctors through our dedicated landing page, so as to allow patients to find them easily.
- Reduces booking management costs and increases productivity. Reduced no-show through automatic messages sent to patients with confirmation e-mail or SMS
- Handles booking requests and retrieves missed calls. Reduction of missed appointments.
- Acquire new patients online through our dedicated marketing campaigns

Verified profiles

PocketDoctor certifies with a dedicated badge doctor with recognized



Layout Profile

requirements of certified professionalism and specialist doctors regularly enrolled in the Register. A choice aimed at consolidating and maintaining a high quality of service for doctors, medical centers and patients. To ensure total transparency, doctors' CVs are published and easily accessible online.

For professionals, remote visits and consultations

The online consultancy service allows doctors to follow patients remotely in complete safety and to guarantee performance and interviews from afar.

Benefits online advice

Increase visibility and presence on the territory (online penetration).

Offer a competent, quality and reliable service remotely

Increase the network with other doctors, share experiences, cases and contribute to the continuous medical training of specialists.

Reach the patient more easily, without architectural or communicative barriers while maintaining a high level of flexibility.

Protect relationship continuity with patients.

Ensure maximum data security according to the privacy regulations in force.

SEO and SEM campaigns on Google

Present doctor business at best with a personal page complete with all the information patients need to book : CVs, photos, scientific publications, the places where doctors receive and the services they perform with the relative costs. Increase online doctor presence on PocketDoctor, Google my Business and Maps.



Appointment agenda

An intuitive system for managing booked visits.

Accessible from any device, PC and smartphone iOS and Android through the dedicated app and also synchronizable with the doctor's calendar.

Reduction of appointment management costs

Patients plan and update their appointments independently. The reminder service guarantees a significant decrease in No-Shows.

Complete cloud management of business

Cloud management to securely access data anywhere, anytime and through any connected smartphone, tablet and PC device. Better access to health services.

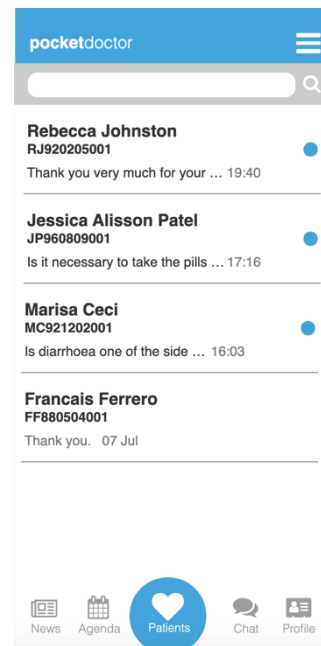
Dedicated assistance

A dedicated team of consultants will be at doctor disposal.

Virtual secretary

Tool to recover the missed calls of patients, which will give the possibility to convert the missed appointments into new reservations.

With the PocketDoctor App, doctors can consult the commitments and details of individual appointments, receive booking requests from PocketDoctor 24 hours a day, confirm requests with a click, insert new appointments, move already scheduled appointments, synchronize appointments with the iOS calendar, automatically send reminders of visits to patients and have the total patient records at hand.



Layout Chat

2. CHAPTER 2

2.1 Structure of the Italian healthcare system

The NHS¹ is structured on three different levels: the first concerns the central government, the second the twenty regional governments and finally the third the local companies (ASL) together with the independent hospitals (IHS). Obviously, like all systems, it is based on rules, principles and rights that should always be respected. The founding principle is that everyone has the right to be treated free of charge, regardless of income and origin, therefore relying on solidarity, fairness and universality. However, often these healthy principles are not respected.

We know from the Report of the Court of Auditors on public, private and intermediated health that in 2015 the expenditure was 147.295 billion euros, of which 23.7% private and 87% of this is out-of-pocket (paid out of your own pocket, supported directly by the families).

Of course, families and all citizens have the freedom to turn to both types of facilities for treatment, but the public service is no longer guaranteed in the ways and times required by the user, partly because of cuts in funds and staff, with endless waiting lists, a bit for inefficiency and waste. This pushes people who can afford it to turn to the private sector, while others give up treatment (the VII RBM-Censis Health Report tells us that in 2016 12.2 million people have given up or postponed at least one health service for economic reasons). Certainly, a thorny issue that goes against the historical principles of the system that makes access to care more difficult. Our Constitution in Article 32 states: the Republic protects health as a fundamental right of the individual and interest of the community, and guarantees free treatment for the poor. Under no circumstances can the law violate the limits imposed by respect for the human person.

Therefore, laws must protect physical and mental health with respect for the dignity and freedom of all, without distinction and discrimination, through a principle of equality.

¹ <https://www.slideshare.net/dbiselli/organizzazione-del-sistema-sanitario-italiano-dino-biselli-febbraio-2013>

The Italian state has the task of guaranteeing health policy planning, establishing the LEA (essential levels of assistance), and financing the NHS national health system.

The regions have the task of redistributing funds from the central government among the local health authorities on their territory. By identifying the health needs to be met, they define service levels and investment policy. The regions, therefore, in turn, control the local health companies and hospital facilities, which provide the final services necessary for citizens. The difference between the latter two, lies in the activities they carry out since the ASL is given the task of delivery, while the hospital units that of specialized production, although in most cases, the ASL also play the role of hospitals. In fact, it must be said that three institutional models vary this fraction of structure in the following ways: In the integrated model, the ASL are the only companies in the area. There are no hospital companies and the hospitals are all principals controlled by the ASL. In the separate model, the ASL are purchasing and financing structures for services, while hospital companies have the function of producing services. In the mixed model, on the other hand, there are both hospital facilities controlled by the local health authorities and independent hospital companies. In the pyramidal line and alongside the hospital unit, there is also the socio-sanitary district. The latter is the technical-functional structure, which ensures the provision of primary care within its territory through a high level of integration between the different services that provide health, socio-health and social services in order to allow a coordinated and continuous response to the needs of the population. As regards national general health, it must be said that over the years, private and affiliated structures have also been established, which aim to provide specialized services (e.g., dental offices) that cover most of the national health demand. The affiliated structures are private institutions that, through contracts, are placed side by side with public ones to guarantee mainly chronic and rehabilitative care services. On the other hand, private ones are set up to mostly cover aesthetic (non-plastic surgery) and non-functional needs, which is why the costs are charged to the patient and not to the state.

In conclusion, to make ends meet, it is necessary to reiterate that the national health system is supported by all citizens who periodically pay taxes and duties to the Italian government.

2.2 Italian Health Shortcomings

2.2.1 Waiting times and costs

A research carried out by the C.G.I.L. Public Function and conducted by the C.R.E.A. Healthcare found that the wait for a visit to public health is on average 65 days, against 7 days in the private sector and 6 in intramoenia.

It is the first survey to compare times and costs over three years (2014-2017) and on a sample of over 26 million citizens (44% of the population) in Lombardia, Veneto, Lazio and Campania. According to the study, things have gotten worse over time. Waiting times for a specialist visit or exam in public health have increased, on average, between 20 and 27 days in 3 years.

It emerges, for example, that from 2014 to today, the wait for an eye examination in the public has increased from 61 days to 88 and that for an orthopedic visit from 36 days to 56.

Finally, for a colonoscopy in the public sector in 2014, we would have had to wait 69 days, today 96. Looking at last year, for the same service in private payment, the waiting was of 10 days, in intramoenia 7 and in the accredited 46. The waiting days of public health are incredibly long: from 22.6 days for an Rx articulate at 96.2 for a Colonoscopy. The same services, on the other hand, expect in the intramoenia of 4.4 days (joint x-ray) and 6.7 (colonoscopy), in the private agreement of 8.6 and 46.5 respectively; finally, in the private payment of 3.3 and 10.2.

2.2.2 The private is sometimes more convenient

The study clearly shows how the private sector drastically reduces the waiting times for medical services and how the private partner also guarantees a significantly faster service than that of the public system in recent years. As for the costs incurred by patients, recorded only for intramoenia and private payment, the C.G.I.L. Public Function study shows that they are, on average, quite substantial but, in many cases, not very far from the cost of the ticket paid in accredited public and private structures. An

interesting aspect to note is that the private sector costs are sometimes even lower than those of intramoenia.

For an eye examination in private health, the study finds that in 2017 about 97 euros were spent compared to 98 euros for intramoenia. The same applies to the orthopedic visit, which in private costs € 103 compared to € 106 for intramoenia.

2.2.3 Concurrence

Private healthcare refers to the public offer to calibrate its own and make itself competitive, focusing on the quality/price ratio and therefore significantly shortening waiting times with prices slightly higher than the ticket. As for services with the National Health Service, these have very long waiting times and an increase over the years, whereas for paid services, access times are on the contrary very short; while costs, on the contrary, are very close between public and private. Finally, timely access seems to be a condition guaranteed by the National Health System only for urgent services, while it is paid in the remaining cases.

2.2.4 Internet and doctors

A study by dottori.it has confirmed that about half of the population admits that they often use the internet as a real health oracle. If this figure clashes with the notes noted earlier, from the point of view of white coats, it seems that at least one advantage there can be: in facilitating the relationship with customers. According to a new survey by Dottori.it, which on the other hand makes the web its business, for Italian medical specialists, the "doctor Web" is not a problem, indeed for 52% of Italian medical specialists with the spread of the internet the relationship with patients has improved.

From the answers obtained by a panel of 2,000 professionals registered on the site, only 9% of the interviewees accused the web of having worsened the relationship with the sick compared to the past, while for 39%, there were no changes. Looking at the geographical area in which the specialists who responded to the survey operate, those who have seen their relationship with patients improve, after the spread of the internet, are the doctors who work in the South and in the Islands: among them the

percentage rises 56%. The specialist-patient relationship with the internet has become more interactive for 52% of specialists, while it is more personalized for 15%. 8% said they had a more in-depth relationship with those they are treating.

According to 45% of doctors, those who request their advice are more active in finding a doctor who specializes in the treatment of his pathology. 39% of professionals say they receive patients more alarmed by what they have read on the web about their symptoms. The trust placed in what is found on the internet leads 38% of the specialists interviewed to notice that there are more and more people led to self-diagnosis and more susceptible and influenced by the stories read on the net. The survey confirmed that the web has a crucial role in prevention, so much so that for 34% of specialists, Italian patients have become more attentive to these issues thanks to the internet.

2.2.5 Stress

All stress hormones act in various ways on the immune level. To begin with, in fact, they promote wound healing and defend the body from external pathogens. On the other hand, chronic stress inhibits the function of specific immune cells, reducing the ability to recover and facilitate the spread of infections.

Stress is associated with ailments, such as acne, hair loss, sexual dysfunction, headache, muscle tension, difficulty concentrating, mood swings and irritability.

Short-term stress can also be positive as it creates an inner force that releases energy, but in the long term, it causes the creation of cortisol, a hormone that lowers the immune system.

Being linked to the reduction of telomeres, i.e., the terminal region of a chromosome composed of D.N.A., which protects the end of the chromosome itself from damage, stress directly affects the ability of a cell to be copied. When telomeres are damaged, cells can no longer reproduce and die. That is why stress is said to age prematurely. This adverse action against telomeres, in fact, promotes cellular aging.

Stress is a crucial factor to keep an eye on since, as we have seen, it has a significant influence on the patient's physical and mental health. Reducing patients' stress during their course of treatment could be optimal to safeguard general health and minimize the danger of psychological collapse.

2.3 New Priorities In A Rapidly Changing Context

The context in which service is delivered and experienced has, in many respects, fundamentally changed. For instance, advances in technology, especially information technology, are leading to a proliferation of revolutionary services and changing how customers serve themselves before, during, and after purchase. Over time, we have been able to notice changes in the priorities that every citizen in civilized countries is requesting, and which has led to a radical change also in the perspective of those who want to offer efficient and up-to-date service. In this paragraph, I would like to dwell on these priority concepts on which many companies are dwelling:

- stimulating service innovation;
- Assisting servitization, service infusion, and solutions;
- Comprehending organization and employee issues relevant to successful service;
- Use of big data to advance service;
- understanding value creation;
- Ameliorate well-being through transformative service;
- Support technology to advance service.

Moreover, interest in service research is spreading globally, with an increasing number of affiliated service centers and academic networks being established around the world (e.g., California Center for Service Science, Centre for Service Management at Loughborough University).

Increased attention is also coming from practitioners. Recently, the International Society of Service Innovation Professionals was formed, with the goal of promoting education; professional development; and practice, research, and policy centered on service innovation.

The intricacy and rapidly changing nature of the service domain suggests a substantial opportunity and necessity to continue identifying important service topics worthy of research.

2.3.1 Stimulating service innovation

Competing based on service relies on innovation and creativity. The rapidly progressing context of service presents a significant challenge for service innovation as it becomes increasingly complicated. This research identified three critical factors leading to the following important directions for future research in service innovation:

- Innovating within elaborate service systems and value networks;
- Identifying drivers of sustained service innovation;
- Managing customers' and partners' collaboration throughout the service innovation process;
- Innovating services through crowdsourcing and open innovation; and
- Understanding the interrelationships among service-product, service-process, and business-model innovation.

The first factor is that service innovation is increasingly taking place within ecosystems². There is much to learn regarding the complexity of innovation in ecosystems as opposed to traditional research and development settings. Especially noteworthy is understanding how service innovation takes place in complex service systems and networks

The second factor is the rapidly changing technological context in which innovation now often takes place. The omnipresence of technology and its implications for service innovation call for new research perspectives. The connection between technology, networks, and innovation is illustrated by their use in redesigning a U.K. organization's headquarters. Body sensors were employed to track face-to-face interactions between individuals, and the data were used in designing the building's layout to foster encounters that could lead to innovative ideas. Digital technology is one of the key opportunities related to service innovation.

The third rapidly changing factor is that of involving external entities in the focal organization's service innovation process through open innovation and crowdsourcing, which several researchers noted as a critical area for future research. The customer's

² Lusch, 2011

role in innovation has long been recognized. However, in today's context, the research agenda needs to broaden to address issues about how to manage customers' and partners' collaboration throughout the service innovation process. Researches should also address service innovation that involves newly developed roles of service firms, customers, and employees, such as when traditional employee roles are delegated to customers. Such a research agenda should also include employee-customer co-innovation issues as to whether and how the objectives might diverge across stages of the innovation processes and the consequent implications for co-innovation performance.

Traditionally, service innovation has focused on the service itself or the service process. We need to have a greater understanding of innovation in the service, manufacturing, and digital domains and how various types of innovation in these areas interact to inform value creation and address new markets. In particular, it is crucial to investigate the interrelationships among service-product, service-process, and business-model innovation to capitalize on the potential for new value creation. For instance, nearly half of the leading service innovations at the world's largest cellphone company used more than one of these types of innovation and 17% used all three.

Service innovation is intertwined with several other research-priority areas. For example, what is the role of design in driving and facilitating service innovation? How can big and deep data be leveraged to generate more effective service innovation? How can the potential of technology be harnessed to bring about meaningful service innovation? Clearly, useful service innovation research and practice require expert inputs from multiple areas and disciplines. The challenge for service researchers is to move away from their traditional disciplinary silos and design and conduct research involving multidisciplinary partnership.

2.3.2 Assisting servitization, service infusion, and solutions

This priority erects on two converging streams of research. The first is the marketing work on "service infusion," defined as "the process of adding customer-centered services to a product-centric business model". This work has centered on

fields such as developing new valued propositions for goods-services offerings and the evolution of manufacturing firms into service enterprises. The second stream is the operations and systems work on ‘servitization’³, which focuses on the evolution of new business models, the organizational and structural transformation processes required, and the technologies to support them. Five specific topics about this broad priority emerged from the research:

- Recognizing business models for growth based on servitization and solutions;
- Designing integrated goods-services solutions;
- Comprehending the impact of servitization and solutions on companies, industries, and service systems;
- Evolving goods-based organizations into service-oriented enterprises;
- Identifying best practices for servitized businesses.

Companies, both service and product, are increasingly seeking service growth⁴ and ‘there is the necessity for nontraditional service companies (product, distribution, etc.) to build value-added services and solutions business’. Faced with low cost competition, many companies are struggling to look for solutions for survival to compete for both locally and globally, underlining the need for research. Many high-level profile examples of companies are transforming themselves through servitization exist. For example, Rolls- Royce has moved from the selling of aero engines to a service business that brings power by the hour to many of its customers. The customer buys the power delivered by the engine, and Rolls-Royce provides all the necessary support. This strategy has been reciprocally beneficial for Rolls-Royce and its customers.

A key challenge is successfully advancing from a goods-based organization to a service-oriented enterprise and doing so profitably. This calls for further research on numerous issues covering dissimilar aspects of such a transformation, including organizational adaptation, design of integrated goods and services solutions, the nature

³ Kastalli and Van Looy 2013

⁴ Zeithaml et al. 2014

of supplier-customer contracts, and the transfer of mind-sets from manufacturing to service.

The second most important challenge, and an area requiring much supplemental research, is developing mutually favorable business models for expansion based on servitization and solutions. Such business models are challenging to improve, and even when there is a clear, win value model, convincing customers to perpetrate to the often necessary long-term contracts may be a challenge. Questions such as what factors affect customers' willingness to pay for bundled services and products, particularly in the circumstances of a rapidly changing technology, require new research concentration. Smart technologies are helping organizations in changing their business models from product-centric to solution-based⁵.

Identifying the most successful ways to leverage such technologies to develop and refine new business models is a prolific area for further research. The development of manufacturing-services hybrids is still at an emerging stage and holds promise for evolving new business models and services, such as original personalization and incomplete product capability, in which products or services develop through their lifetime and customers self-create new capabilities by, for instance, downloading apps on a smartphone. Areas such as the Internet are not yet fully understood in a service context, nor are their implications for servitization and solution-oriented offerings.

Overall, there is a necessity to move on from mere rhetoric that service infusion and servitization are the basis of service growth and focus more on investigating how to make this happen successfully.

2.3.3 Comprehending organization and employee issues relevant to successful service

The relevance of employees in successful service appears to be less compelling as the context of how service is delivered and experienced has progressed. In practice, for instance, technology can increasingly substitute for employees. Our open-ended

⁵ Brax and Jonsson 2009

survey responses included the “dehumanization of services” as one of the most dramatic changes that will continue in the next 9-10 years. Theoretically, there has been a shift from a provider to a consumer perspective on value creation⁶.

In short, organization and employee issues pertinent to successful service are relatively less important than other priorities. Yet, within this changing context, I identified some topics related to organization and employee issues for successful service that are important to address:

- Coordinating the independent roles of employees and customers in co-creation;
- Generating employee engagement to improve service outcomes;
- Recognizing the effects of technology on service employees;
- Changing organizational cultures to support servitization;
- Identifying the leadership competencies that are critical for managing services;
- Designing service-oriented human resource management practices that yield positive employee and customer outcomes;
- Comprehending how consumer behavior affects employee job performance, gratification, and overall well-being;
- Incorporating the “voice of the employee” in service innovation.

Coordinating the independent roles of employees and customers in co-creation is the most essential sub-topic for this priority and this is why it had the most substantial research gap. Co-creation of value has gained importance over the years and has made noteworthy the need to determine how to coordinate the implanted interdependencies between customers and employees. Health care and, especially, cases of chronic illness are dramatic examples of where coordination of provider and patient roles in therapy is crucial (e.g., Holman and Lorig 2000). Thus, additional research on the coordination mechanisms appropriate for managing different forms of interdependencies among employees and customers in co-creation is necessary.

Another important subtopic involved “fitting together service strategies” with internal organization arrangements to drive positive customer experiences. The “interaction between strategy and service science” is one of the most important topics

⁶ Lusch and Vargo 2014

for the next five years. The connection between climates and customer outcomes has been addressed considerably ⁷, so the “research gap” is likely more about the much less studied service strategy and how organizational and customer components must be shaped with it. Six years ago, marketing strategy in service had been addressed⁸, detailing marketing’s role in achieving strategic advantage by helping customers fulfill their goals and also with a particular issue of Journal of Service Management⁹ on marketing as an organization’s core strategy.

For corporate strategy, an interdisciplinary (marketing and management) correspondence of the focus of strategy as customer value creation is emerging. In marketing, for instance, “From a service-dominant logic perspective, a strategy is about making choices about how best to facilitate and enhance value co-creation with network partners such as customers for mutual and long-term betterment”¹⁰.

There is a need to rethink how companies are internally structured and align it with how companies show themselves to the outside world; to broaden the service concept to include both outward-looking phenomenon and inward-looking phenomenon and other beneficiaries than the final customer.

2.3.4 Use of big data to make service progress

Technology has allowed the collection of large and multiple assortments of data from sales, customer messages, social network posts, sensor signals, etc. Big data can be designated by huge volume, high velocity of real-time information generation, and a wide variety of data sources and types. The use of big data is a priority, with the widest gap between the importance and the knowledge ratings. The following areas were identified as the subtopics in most need of further research:

- Using big data to dynamically manage customer value over time;

⁷ Bowen and Schneider 2014

⁸ Bettencourt, Lusch, and Vargo 2014

⁹ Klaus and Edvardsson 2014

¹⁰ Karpen, Bove, and Lukas 2012, p. 22

- Comprehending conflicts between customers' desire for privacy and their desire for personalized service;
- Using big data to enhance customer experience and customer-firm relationships;
- Developing analytic models for dynamic and real-time service personalization;
- Investigating big data to uncover opportunities for service innovation and creating new service offerings;
- Identifying the organizational drivers of efficacious collection and use of big data in service environments.

Many organizations that have acquired access to massive amounts of data are faced with serious data overload. In this context, research should scrutinize questions like the following: What service system changes are essential to develop service organizations to collect and use big data effectively? How can organizations capture and analyze the continuous flow of service-oriented information to support real-time decision making so that they can respond quickly to market changes?

Through a continual flow of data from multiple sources, organizations know their clientele as never before, not only from what they buy but also from what they explore on the Internet, from their geolocalization through sensors, and from their social network movement. In this context, data-driven services are becoming progressively relevant. For instance, Walmart's analysis, machine learning, and synonym mining have been used to improve search results and increase the percentage of online shoppers concluding a purchase¹¹. Research is necessary for a more systematic comprehension of the potential of big data and how to make it successful. Research questions arise, such as how can organizations most effectively develop analytic models for dynamic and contextualized service personalization? What new analytics are needed to create value for the service organization and to enlarge service offerings customers recognize as valuable? How will this more sophisticated personalization influence the relationship between customers and service providers?

¹¹ Laskowski 2013

Another arising area is the investigation of big data to capture customer insights, discover opportunities for service innovation, and develop new service offerings. For instance, Zynga, the game maker of FarmVille, analyzes 25 terabytes a day from its games to conceive new traits for the next generation of games. Then, instead of conventional test marketing, game designers test dissimilar versions of new traits by putting them in the game to judge which one is more favored¹². Big data provides prolific ground for discovering innovative service ideas, but service research needs to investigate questions like the following: How can methods such as text mining uncover customers' service-related needs and preferences that traditional methods cannot reveal? And how can these new methods be combined with existing service modern approaches?

Finally, it is crucial to understand what are the conflicts between customers' desire for privacy and their desire for personalized service? What strategies can be conceived by service organizations for establishing the right balance between the two, so privacy concerns do not hamper big data's potential for value co-creation? Interdisciplinary approaches integrating information technology and service point of view can produce valuable help to leverage the potential of big data for constructing value in this new service context.

2.3.5 Understanding value creation

The prevailing perspective is that the value of service is perceived by consumers but often created from input from numerous actors. Although value creation is an elementary goal of service, it is characterized by substantial complexity involving the integration of roles and resources. As such, improving knowledge of value creation continues to be a critical research area, with the following specific issues worthy of further investigation:

- Integrating the roles of consumers, employees, and technology for value creation;

¹² Rosenbush and Totty 2013

- Comprehending and coordinating value creation in multi-actor, network, and collaborative contexts;
- Understanding the negative consequences of value co-creation;
- Understanding the customer as a resource integrator;
- Further identifying the concept and operationalization of value co-creation;
- Communicating value to consumers and in every part of the firm.

There is a lot to learn about the process of value creation; when it starts, what it includes, and when it ends¹³. Of particular interest is how to successfully merge the roles of consumers, employees, and technology to create value.

Explanatory of specific issues that deserve research attention are the following: How should the roles of employees and technology be designed in correlation to the roles consumers are willing and able to undertake in the value-creation process? What factors are crucial in determining the nature and extent of each of the entities' roles? And how do alterations in the size and scope of roles lead to dissimilar value outcomes?

Companies are continuously facing decisions about the nature and functional integration of these roles. For instance, to help customers take more control and better care of their health, Walgreen has considered changing the role of its pharmacists, giving them iPads and differentiating how they interact with customers, thereby creating a new sort of community pharmacy that “seamlessly integrates new roles, digital tools and spaces to assist people to live healthier quotidian lives”¹⁴.

The complexity of value co-creation stems not only from the necessity to integrate employee, technology and customer roles but also from the important coordination effort needed by the nature of the co-creation context, which is increasingly characterized by multiactors, networks and settings, with substantial collaboration among the various parties.

¹³ Grönroos 2011, p. 282

¹⁴ IDEO 2010

2.3.6 Ameliorate well-being through transformative service

The service area has been very strong at delivering company value, even if we need to be more pertinent to society. Interest has substantially raised in examining the relationship between service and well-being. The label “transformative service research” is the global term for all service research, despite of discipline, that has a central goal of looking over the well-being implications of service. It has been more formally described as service research that aims to “create uplifting changes and development” in the well-being of individuals (as consumers and as employees), collectives (e.g., families and communities), and ecosystems¹⁵. Although any service sector could be investigated in relation to its impact on well-being related metrics (e.g., quality of life, discrimination, and security), the subtopic areas highlight eight of the most pressing issues requiring research attention.

- Designing and sustainably delivering services;
- Developing technology-enabled services to improve well-being;
- Investigating services as a driver of societal change to improve well-being for both individuals and collectives.
- Designing services for weak consumers (e.g., poor and aging);
- Exploring service innovation at the base of the pyramid (largest but poorest segment of the world’s population);
- Improving access to critical services (e.g., health care and education);
- Improving government/public services to improve well-being;
- Investigating how service systems affect societal well-being.

Improving well-being through service research will require, in many cases, shifting efforts to focus on divergent segments of society. One of the most important is analyzing service issues relevant to the base of the pyramid, which has been defined as “the low-income socioeconomic segment that lives primarily in the informal sector”¹⁶.

¹⁵ Anderson 2010, p. 9

¹⁶ London, Anupindi, and Sheth 2010, p. 583

“Weak consumers are a central focus of transformative consumer research”¹⁷. However, inadequate attention has been given to investigating how service, in particular, can reduce or enhance vulnerability, though some work focuses on the role of health care¹⁸. One example of a new health-related service that can improve well-being especially for vulnerable consumers is PillPack, a home-delivery service that provides presorts of prescription and over-the-counter medications and vitamins into individual packets with the day and time they should be taken, helping patients take the right pills at the right time¹⁹. Research can tackle questions such as the following: What characteristics of service and cocreation activities enhance well-being, especially for vulnerable consumers? And which ones reduce health and other disparities that exist across consumer groups?

It is not just the design of services but also the issue of service availability that remains a challenge and deserves research attention, as billions of people around the world lack access to needed medical care, financial services, and other relevant well-being services.

Increasing productivity of services is fundamental to ensure that the one billion people becoming middle class in the next 20 years have adequate provision of services, including health, education, transportation, and government.

Issues of service access are complex and require research that examines the nature of service systems that may limit access or lead to restricted choice as well as community, family, and individual characteristics and resources that may affect service access.

Given the significance of technology in the lives of consumers, on one hand, ICT (information and communications technology) can be used to enhance the efficiency of current services provided. On the other hand, ICT offers possibilities for totally new types of services.” Important questions for research in this area include the following: How can ICT and technology advances in e-medicine, remote health monitoring, and smart devices that track and analyze health information positively affect well-being? And under what conditions might the use of these technology-based services reduce well-being?

¹⁷ Mick et al. 2012

¹⁸ Rosenbaum and Smallwood 2013

¹⁹ IDEO 2014

Service contexts not often examined in traditional service research, but ones that have a profound impact on the well-being of individuals, communities, and societies globally are government and publicly provided services. Understanding how these services are delivered, cocreated, and experienced by consumers in both developed and emerging economies is a crucial area for service research.

This includes a focus on issues such as how services can be designed so that they protect the environment and how customers and employees can be influenced or incentivized to take on roles that reduce a service's negative environmental impact.

2.3.7 Support technology to advance service

Given the growth of a variety of rapidly advancing technologies that can potentially affect all aspects of service provision and consumption, I docket this topic as a transversal research priority. Providing research guidance for effectively employing service technologies for the mutual benefit of both customers and organizations surfaced is a critical issue.

The broad priority of “Support Technology to Advance Service” comprises the following specific issues worth exploring:

- Exploring how social media permits new forms of value creation for customers and service providers;
- Examining how the Internet and smart services can enhance the customer experience and influence relationships between customers and service providers;
- Building business models for new service technologies
- Examining how mobile technologies can enable the creation of new ubiquitous services to enhance the customer experience;
- Understanding the impact of high-tech service delivery on customers and employees;
- Improving customer-firm relationships in technology service;

- Escalate adoption and usage of emergent technology services by customers and employees;

It can be said that managers do not have much science behind their technology investments; they spend a lot of money, but they do not know why they are doing that. They are just doing it because they see that everyone else is doing it.

In what types of service contexts are social media recovery efforts more effective than company recovery efforts? What are the crucial drivers of social media members' motivation to form and participate in self-help groups? And what are the most efficient ways for companies to monitor customers' social media postings/conversations and generate appropriate responses when warranted?

The omnipresence of the Internet and the increasing number of technologies devices and services connected with it, call for organized research on a series of issues about service consumption and customer-company relationships.

For example, “wearable technologies” are now being explored by insurance companies as a means for improvement insurance premiums by accurately evaluating the health risk of each customer and adjusting their insurance premiums accordingly ²⁰. The wearable technology context is the virtually uncharted territory from an erudite research standpoint and raises several questions worth investigating: What are the key contributors to and inhibitors of customer adoption of potentially invasive technologies such as wearable devices? Although extant research has studied factors influencing readiness to adopt technologies in general (e.g., Parasura and Colby 2015), the shocking nature of some of the latest service technologies calls for a more understanding of their adoption.

In particular, research is needed on the privacy and public-policy implications of such technologies.

The rapid emergence of technologies is creating exciting opportunities for companies to enhance their service offerings. Services as Google Wallet have struggled to take off after launching with a limited number of accordant banks, credit card issuers and retailers. Customers have been distrustful of trusting their banking information to the omnipresent cloud in an era of endless data breaches, particularly when credit cards

²⁰ Olson 2014

work just fine’’²¹. As in the context of wearable technology, basic consumer research geared toward gaining an in-depth comprehending of inhibitors and motivators concerning to adoption and usage of mobile payment systems is necessary for determining appropriate target markets, pricing schemes, and “business models” for launching such services.

Moreover, the victorious introduction and eventual profitability of mobile payments (and other similar technology-based services) require the creation and concise operation of a network of business partners.

²¹ Luckerson 2014, p. 14

3. CHAPTER 3

3.1 Market Analysis

As we have seen in Italy, healthcare is not as good as it really could be. Although public health is a right for all citizens, the latter still prefer to go to private specialists. The incorrect and not well-controlled management of public structures causes a sense of abandonment in the minds of citizens, who in turn prefer to go to private structures. Health is the primary need for every citizen and as we can see from the statistical data, over 50% of Italians preferred not to go where it was economically convenient but instead preferred to feel like a person and not a number.

The desire and concern that is created in the soul of the citizen when he wants to solve a health problem or simply perform an annual checkup lead the latter to not even want to wait for waiting days due to high health demand.

In the healthcare market, we can clearly outline two significant assumptions:

The consumer demands the best for his health and that of his loved ones;

The consumer/patient wants to feel "embraced and supported" in the path of health.

In most cases, not being a doctor and aware of the problems that a lack of health can cause, the average citizen goes to the internet to find answers to their questions, but in most cases, he ends up only confusing ideas and worries more.

When you go to any type of doctor, you often also need to bring with you the right documentation (Orthopantomogram, CTs, resonances) and the knowledge and memory of all that has previously been your health care path. Knowing with certainty all the patient's history greatly helps the doctor to make decisions in the path of help to the patient. In fact, very often doctors, in the uncertainty of what the patient tells him/her, decide to take the broader pathways, subjecting the latter to general, expensive and not targeted treatments for the specific problem.

Doctors also cannot remember and act in the best way if they are not provided with the appropriate information and, in fact ask patients to go previously to other specialist doctors so that they can report the right directives.

In this system, citizens are placed in a vicious circle, which in addition to making them spend money and precious time, causes them mental stress. In fact, it must be said that the "stress" factor is deleterious for the patient's mental and physical health since, over time it causes worsening due to cortisol, a hormone that lowers the immune system.

Competitors

As for the connection between doctor and client, the market offers us three possible competitors: Dottori.it, Idoctors and Miodottore.

Idoctors

Analyzing all three we can say that Idoctors²² is the company with the least force on the market since it does not offer any service more than the others and in the data available online, we can see that it is the one with the least visibility.

Dottori.it

Dottori.it²³, on the other hand, is a very strong company as it is flanked by another very strong company in the market, such as Immobiliare.it. The strength of this company lies in the immense economic availability and presence in the health sector for about 12 years.

This company offers a paid service for doctors, which gives them visibility on their software. In addition to visibility, it offers the doctor the opportunity to have an online agenda where every citizen can book for a visit and in recent times, they have also implemented advertising services that aim to increase the notoriety of doctors.

The cost of the service for the doctor is € 100 per month.

²² <https://www.idoctors.it/>

²³ <https://www.dottori.it/>

Miodottore

Miodottore²⁴, on the other hand, the latest arrival in the world of health, has surpassed the visibility of the previous competitor by offering an even more innovative and helpful service for the doctor. The latter in fact, in addition to offering the services of dottori.it, has improved the online agenda service through a "management system" which aims to simplify the booking process for visits. In fact, by registering with Miodottore, doctors could do without the secretarial service within the doctor's office since he himself tries to automatically conduct everything related to information and monitoring between patients and doctors.

In this case, the cost of the service for the doctor is € 129 per month.

While it is true, however, that danger must be recognized lately, given that the competition has increased significantly in recent times. To date, the competition is very high, thanks to the great ease of finding the raw materials to enlarge any start-up quickly. To date, leadership is the most excellent resource that can be had in a company and commitment must be focused on that.

3.1.1 Macro environment and PESTEL

Macro environment plays a significant role in the business environment because it consists of external and uncontrollable forces that can affect its performance and strategy. In order to reduce the possible threats to the company, it's important to understand and analyze the macro environment.

In order to investigate on the macro environment and analyze deeply the market, it is wise to focus on the PESTEL analysis, an acronym for a tool used to identify and monitor the facing external factors that have an impact on our organization.

The letters stand for Political, Economic, Social, Technological, Environmental and Legal factors.

²⁴ <https://www.miodottore.it/>

Political factors

First of all, the political factors demonstrate how the government intervenes in the economy. Its actions include: government policy, environmental law, trade restrictions etc... Therefore, it is pivotal for the company to anticipate any political policy in order to adjust to the market. Before entering a new market to introduce a product, the company should know everything about the political environment. In this scenario, PocketDoctor can be helpful related to the political factor because it will allow to facilitate various situations and will contribute on people health.

In fact, our society remains in agreement with the government's choices to not attribute costs regarding public health, and in fact we do not charge anything even for those who choose private health. We will help the government for mass sustainability in a crucial issue, such as health. If the government understands the clear benefits of the service in everyday life and is willing to promotes it, this could become a great opportunity for us.

Economic factors

Additionally, we have economic factors that play a fundamental role in the market. This factor shows how the company does business because it affects consumer purchasing and spending trends. For example, economic growth, inflation, interest rates, etc.. affect companies.

The intrinsic value that there is in our services is to direct the patient to choose the best healthcare path and at the same time the one most suitable for his economic needs. In this way, we know that we are making a substantial contribution to the exchange of money within the nation and help to make costs more uniform with needs.

Having a platform that directs consumers in their best choice, can also show them the doctors who apply the lowest cost in their geographical area, and we hope to make the healthcare market a more competitive sector in the long term.

By describing this market as a more competitive market, we want to say that, by raising the supply and leaving the demand stable, the market will be characterized by doctors who will increasingly want to find the best way to treat patients by offering their services at a lower price or in accordance with their expenses. The structure of the App is centered on the patient's needs!

Social factors

Furthermore, we analyze social factors. This factor focuses on social environment and find trends. This will help to understand what customers desire and also demonstrates how it affect society's values, preferences and behaviors. The factors include population growth, age, health.

In this scenario, we would like to recall the general idea of the real reason why we are doing all this, which is to help the population in the self-management of their resources for health purposes. Our motto is in fact "no sick person should be left alone". With this premise, we want to remember that most of the income will be re-invested for the construction of private clinics, laboratories and possibly medical universities.

PocketDoctor wants to be the voice of the people and meet everyone's health needs. This application will have a massive impact on the social environment because, thanks to machine learning, it aims to simplify the daily life of the individual citizen (of all ages, gender and races).

Technological factors

Moreover, we examine technological factors. These factors are related according to the rate of technological innovation.

PocketDoctor starts with a service (online medical record) that we have never had in Italy so far and aims to ensure that it is not the only innovation in the coming years. A 3D scanner has recently been designed that would create the hologram of real people in an Italian platform and precisely this could be implemented in the application to make the User Interface revolutionary and avant-garde. Whenever the medical blockchain became a major part of current business, we would make this system also applicable to our app. We are bringing the current mentality of many people to migrate towards a modern and technological solution.

Environmental factors

Additionally, we have environmental factors. These factors are significant because it allows us to be aware of the increasing scarcity of raw materials and pollution, causing concern and awareness to the company. This leads to contribute to

support the environment and make product as sustainable as possible. More and more consumers are demanding that the products they buy are sourced ethically, and if possible, from a sustainable source.

Our company is not related to any of this problem because is not providing any physical goods but despite that, we know how environment can affect people health and it's our promise to sensitize people regarding the importance of the sustainability of our world, through banner and publicity.

Not in a short time, but when we have the opportunity to be established in all respects in the Italian market, we want to ensure that "healthy life" structures are promoted, such as healthy food restaurants, bio supermarkets etc...

Legal factors

Finally, we have legal factors. These factors include: health, safety, equality, rights and etc.. This is important because companies should be aware of any changes in legislation which can lead to changes it might have in the market. The main difference is that political factors are led by the government, which legal factors must be complied with.

There could be problems regarding patient privacy, doctor's data, and the exchange between the two since we talk about sensitive data. In this regard, we will provide contracts that we will have signed as soon as PocketDoctor has been downloaded, which will be in accordance with the general data protection regulation (GDPR) of UE.

We still don't know what the Italian Government wants to decide about the use of the Blockchain to eliminate the risk of intrusion of privacy into patient information, but we know that in the last days the government has been promoting far away what concerns healthcare innovation and Apps of the latest generation, which is a point in our favor.

Overall, by using the PESTEL analysis to analyse thoroughly the macro environment, we are able to foresee and prevent outside influences, therefore allowing the company to keep ahead in the competition. Therefore, in order to perform and expand our business, it is fundamental to study the macro environments and its factors beforehand.

3.1.3 World Healthcare and Blockchain

As for the healthcare industry, half of the world's countries have already announced that they want to spend more than 20% of their GDP on innovations that will bring enormous improvements in the healthcare system.

Blockchain may help alleviate the pain with its ability to deflate the current spending bubble, protect patient data and improve the overall health care experience. The technology is already being applied to do everything from securely encrypting patient data to handling harmful disease outbreaks. And at least one country is big on blockchain healthcare potential: Estonia.

In 2012, Estonia began using blockchain technology to secure data and process transactions concerning healthcare. Now all healthcare billing in the country is handled on a blockchain, 95% of health information is based on ledgers and 99 % of all prescription information is digital.

Keeping our crucial and important medical data safe and secure, is currently the most prevalent healthcare blockchain application, which is not surprising at all. In the healthcare industry, security is a major issue. Between 2009 and 2017, the data attacks revealed more than 176 million patient records. The perpetrators stole credit cards and banking informations, as well as records of health and genomic tests.

The ability of Blockchain to maintain an incorruptible, decentralized, and transparent log of all patient data makes it a technology rife for security applications. Additionally, although Blockchain is open, it is also secret, concealing any individual's identity with complicated and protected codes that can preserve medical data sensitivity. The open aspect of the system often helps patients , physicians, and healthcare professionals to easily and safely access the same information. An example of a company, leader in the cybersecurity and blockchain sector, like "Guardtime," is helping healthcare companies and governments implement Blockchain into their cybersecurity methods. The company has been vital in implementing Blockchain in Estonia's healthcare systems, and it has recently signed an agreement with a private healthcare provider in the UAE to bring Blockchain to its data privacy systems.

Miscommunication between medical practitioners, costs nearly \$11 billion a year for the healthcare industry. The time-consuming method of getting access to the medical records of a patient exhausts human resources and delays health treatment. Medical records based on Blockchain offer a cure for those ills. The technology's unified existence provides one network of medical details that can be accessed easily and securely by physicians, clinics, pharmacists, and everyone interested in care. The Blockchain can thus lead to quicker diagnoses and personalized care plans.

3.2 Corporate Analysis

To achieve our goals, it is good to better understand the characteristics that characterize our company's internal and external factors, and to do this, we will use a matrix for strategic planning called the SWOT analysis. SWOT analysis is an anagram of the words Strengths, Weaknesses, Opportunities and Threats.

3.2.1 Swot Analysis

Strenghts <ul style="list-style-type: none">• Stanford mentor• Leadership team• Geographically located in Rome• Young, motivated and focused on innovation• Medical blockchain	Weaknesses <ul style="list-style-type: none">• No private resources• No company building/just a house• Not known yet• We don't have still enough employers
Opportunities <ul style="list-style-type: none">• Insurance companies• Taxi-Uber• Pharmaceutical companies• Doctor and patients will want to work for us• Healthy places(gym, shops, restaurants)	Threats <ul style="list-style-type: none">• Possibility of new big entrants• Dottori.it and Miodottore have more economic resources than us• Dottori.it and Miodottore have already strong connections• People's lack of knowledge about privacy on Internet

Strength

The idea of the App was designed and structured with the help of a large team of Stanford professors. A two-month full immersion resulted in a great connection with numerous researchers and collaborators from all over the world and who today more than ever are ready to support revolutionary ideas aimed at world well-being.

The PocketDoctor team is mainly composed of young minds who are no older than thirty years of age but who specialize in the innovation sector and who, over time, have assimilated excellent leadership skills. We have collaborators from Bangalore, Hong Kong, San Francisco, Rome and Milan who, in total, form a large group of IT engineers, web-designers, economists, digital marketing experts and recent graduate doctors.

Geographically we are located in Rome and this plays in our favor because, as regards the start of the business, it can be of great help to embrace a civilized and avant-garde geographical area such as the capital of Italy. Finally, our majority force is to be young students/workers with a lot of time available; time that we dedicate in the creation and research of what are the current needs and of a future designated by innovation and sustainability. In fact, our collaborators have dedicated their studies to a revolutionary vision based on problems that can be solved with the help of new technologies.

In our PocketDoctor App, we want to implement a new data transmission system, the blockchain. In this way, we could be sure to offer non-hackable and much more important online services, never previously used in the healthcare sector of the Italian market.

Weakness

One of the biggest problems we have is the lack of initial funds to be able to bear the start-up costs. In order to start, in fact, we must turn to potential state funds (through calls for youth of non-repayable loans) or to potential private companies that want to invest in our idea.

Having not yet started invoicing and earning from the services we offer, we still have no way of being on the market with a fixed basis of authority. For now, in fact, we have a house on the outskirts of Rome that we are using as an operations center and

headquarters, but which cannot be presented as a place where we can welcome customers or workers.

Once we are on the market, we must find ways to make ourselves reliable in the eyes of the entire Italian population because a vital factor for the success of this start-up lies precisely in the reliability that the people attribute to us. In addition to being known, in fact, we must aim to take strong and substantial reliability.

Once the market launch has started, we have to find numerous collaborators willing to work in the following sectors: production, marketing, sales and research. Having no possibility to put them up to speed we should ask these collaborators to have to work for free for an indefinite period of time, making them firmly and warmly understand that their efforts will be recognized in due course.

Opportunities

In the possible scenario of a successful company, we could in fact glimpse numerous partnerships with companies of the same or different sectors. Thanks to these collaborations, we could consequently improve our service and at the same time making ourselves increasingly powerful and firm in a market of aid to the people.

We have hypothesized partnerships with insurance companies to ensure that in some scenarios, the patient can conveniently choose which health-economic plan to choose for their needs.

Collaborations with Mytaxi or Uber, to make the service efficient even for those who do not have the opportunity to move independently.

Collaborations with pharmaceutical companies, which can directly advertise their specific drugs or with "healthy" places (healthy shops, gyms, healthy restaurants) that can be a solution for the health of the citizen registered with PocketDoctor.

Threats

There are two possible obstacles that we must take into account in the course of our business.

One is the possible entry of large companies that are able to offer a better service than ours in a short time, while the second is the prevailing thinking of the population

regarding the lack of trust in privacy rights. As for the first problem, a fear we have is that our competitors in the healthcare world can expand their services and decentralize their goals from doctors to patients, as we are doing, and implement all the innovative technologies of their services we are taking charge. The risk is there, but not so imminent because to actually become our competitors, they should dismantle their previous priorities and focus attention on the patient and no longer on the doctor.

The second major obstacle that we must, unfortunately, take into account is the common idea that there is among the population about the efficiency and safety of new technologies and innovations, such as those of the blockchain. At the same time as the marketing of our activities, we must also raise awareness and inform our client about the IT security of the new technology.

3.2.2 STP process

Segmentation

First of all, we look into market segmentation. The main objective is that it divides customers into groups of people with their own characteristics and needs. This allows us to tackle each group effectively.

DEMOGRAPHIC Families with children Families with disabled people People from 30 to 60 Healthcare professionals People from 30 to 55	GEOGRAPHIC People living in metropolis People living in metropolis
PSYCHOGRAPHIC Hypochondriacs Chronically ill people Sporty people Immigrants Technological people Tecnological doctors	BEHAVIORAL Always willing to upgrade Health-conscious people In need of help Ordained and precise doctors Looking for notoriety Looking for authoritativeness Looking for patients

A way to divide the groups is by demographics, geographic, psychographic, and behavioral.

1. Demographic: personal attributes like age, marital status, gender, ethnicity, education and etc...
2. Geographic: country, region, state, city and etc...
3. Psychographic: personality, lifestyle and etc..

4. Behavioral: frequency of use, customer status, brand loyalty

By dividing customers into groups, it allows the company to understand who to deal with and also make comparisons with competitors. By doing such, it will allow to introduce a product to the market that will stand out, which will help to gain competitive advantage.

This division will be made for two sectors, that of the *patients* and that of the *doctors*:

Targeting

Market targeting focuses on specific groups in order to promote its product and therefore increasing sales and expanding its business. The scope of market targeting is that it facilitates and make more effective distribution of the product. In this scenario, we focus on concentrated/niche targeting strategy due to the fact that there are few market segments, which lets firms to have limited resources to fund their marketing strategies. In this process, it's fundamental to assess segment attractiveness because it narrows which group to focus on. Furthermore, when a firm focuses on a single segment, the business is using a concentrated strategy because it's not willing spend its resources who are not interested in this kind of product. The main reason of market attractiveness is that it allows clients and targeted audience to identify various opportunities in the market.

In this scenario, we will focus on group segments that may be the first to show interest and want to solve their problems through PocketDoctor. The segment of patients will, in fact, be that of families with children or the disabled, who live in the large Italian metropolises (Rome, Milan, Florence, Naples, etc.) and who want to reorganize and monitor their health nucleus through technology on their smartphone. At the same time, in the healthcare professions sector, we want to focus on the segment that includes the age of 30 to 55 who lives in the large Italian metropolises and who at the same time want to acquire notoriety, authority and increase their patient network. By targeting this segment of people, it will arouse interest and curiosity among people and therefore creating a bigger customer base.

Positioning

Position is the main objective as to why a customer needs to buy this product because it enables to differentiate one product from another. The main elements that should be studied are:

- Attributes, functionality and capacity offered by the brand
- How the brand is perceived by the customers and how it is communicated.

Market positions refers to the process of establishing the image of a product so that consumers can distinguish it in a different way. In order to make it stand out, we need to differentiate it, which is the process in which there's the necessity to choose the correct competitive advantage and how to deliver the best customer value. The differentiation is based on product, channel, image, services and people (4P).

Product

PocketDoctor is not just an application to download on smartphones, but it is also a company of collaborators whose priority is to promote people's health. To date, the product and service we sell are limited to making an indirect and supportive contribution to doctors, but in the future, it wants to make substantial contributions through the construction of private clinics and universities. Our motto is "we only live once, we must do the best we can."

The service we offer aims to change the perspective with which the consumer serves himself, helping him having the right equipment for the long process of physical and mental health. As already mentioned, our product is focused on helping the patient, and precisely around the needs of the latter, we run the platform.

As a first objective, we have to provide the patient with a private platform where him/her can store all personal health information (medical history), only subsequently to create a personalized path that will aim to direct the patient in his/her best health path.

Secondly, we offer a very efficient service for doctors. Just them driven by the awareness that patients prefer to be on PocketDoctor will want to be increasingly part of the community. The Agenda function will be implanted in the platform, which will free the doctors from wanting to have a physical secretarial service within the office and move on to a less expensive and very efficient technology such as ours. One of the pros

that we believe will be highly appreciated by the health professions will be precisely that of being able to have specific and detailed information from the patient (updatable medical history), thus going to carry out their work with greater awareness.

The product, as already mentioned, will be downloadable on smartphones and will be divided into two sections, one for the patient and one for the doctor. For the patient, we thought of an intuitive and functional layout that will be characterized by a light pink color (since it is a color that brings serenity and releases a sense of peace and tranquility), and for the health professions, we instead thought of a blue tending towards green (to recall the color of medical and hospital uniforms).

Over time we also want to be able to embrace other services such as that of health insurance (partnership with Allianz, Sara, UnipolSai, etc ..), rest homes, rehabilitation facilities, healthy restaurants, organic supermarkets and services that are aimed at helping patients in situations of possible depression psychology.

Through "machine learning" we want to be able to slowly create a specific and narrow path for each physical and mental discomfort, going increasingly to cover what is our primary purpose .. to safeguard the health of the population.

Finally, through experts in the UX (user experience), we will try to make the application as intuitive and straightforward as possible to make it accessible to everyone.

Place

The real value of our service is convenience. Once the app has been downloaded to the mobile phone, there will be no reason to move or search for any store. All our services are provided directly through the Application or the portal on the internet. Our product has foundations in comfort, and if you want to speak to an operator, just text or call the toll-free number of the PocketDoctor company. We will solve consumer problems directly by phone and help consumers with possible difficulties and doubts.

However, we know we have to find a real and physical operational headquarters to ensure that there is a point of reference where you can welcome new collaborators or company meetings.

Over time, we do not rule out investing part of the earnings in the construction of private clinics and specialized studies, which aim to introduce new services.

We are also trying to find out how this platform is advertised directly by healthcare professionals, acting as promoters of the app and teaching patients how to use it.

Doctors have an interest in having patients download the app as it would make it easier for them to work.

Price

Our value also lies in the price, and this is what gives us competitive advantages in the digital healthcare market. Indeed, it should be reiterated that our application aims to provide services to both patients and doctors. We want to focus attention on the patient since it is the one who needs it.

Our aim is to simplify the life of patients during the treatment period, and for this reason, we have decided to offer them a completely free service that can facilitate them in their health.

On the contrary, we believe that doctors have to pay for the service. Doctors right now are paying Miodottore or Dottori.it a corresponding amount of € 100 and € 129, which offers the doctor the possibility of having the "online agenda" service and advertising for his/her person.

The cost of our service will instead be 1/5 of that of our competitors or € 20 per month; a cost that for the doctor will be fully deductible for tax purposes since it is a software license.

In addition, we thought of a strategic promotion, in fact, the doctors will have a free month in the app for each recommended doctor who will enter the community. In this way, we will also try to spread the word of the application through word of mouth.

Promotion

Promotion refers to any type of marketing communication used to inform or persuade our targeted audience of the relative merits of our PocketDoctor service. The

aim of our promotion is to increase awareness, create interest, generate sales and create brand loyalty. We would like to create these values using a promotional mix.

The first step of promotion is to identify the target audience which in this case are technological early adaptors.

The main goal of our advertising strategy to reduce costs is to use the Pareto Principle - stating that, for many events, roughly 80% of the effects come from 20% of the causes. In the sense that 80% of sales come from 20% of clients. We think that by strongly promoting our product only to the ones who showed earlier interests in this market, through word of mouth generate a wider customer base.

Technological early adopters are people who generally use in their everyday lives social mass media to communicate (e.g. Instagram), and therefore we think that by generating interest and awareness in them will certainly help us create a bigger customer base.

An effective way to get to doctors will be to set up small stands in doctor's conventions since we know that at least once a year, every health specialist brings together their doctors and meets in one of the great Italian metropolises to show new inventions in the health field.

In the first phase our promotion strategy will be through direct marketing (mobile messaging, email, interactive consumer websites, online display ads) and digital marketing (using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium). Our aim is to enlarge and engage a greater customer base to then in a second place use more common and expensive promotion strategy only after grabbing the attention of different channels.

We will then subsequently use public relations/publicity strategy. This includes free publicity as well as paid efforts to stimulate discussion and interest. It can be accomplished by planting a significant news story indirectly in the media. In this way earlier adaptors will recognize that their acquired product exists, and it is expanding to reach the whole market...

Last but not least, once hopefully we will start seeing some results by getting some sales revenue, we will use more conventional and expensive methods like advertising in order to try to make a significant boom.

Advertising is the paid promotion of PocketDoctor through sponsors in the mass media. We will always focus on technological fields like mobile apps, web pages, banner ads, to then subsequently move on to television, print ads, in-store displays, radio, and brochures.

The competitive advantage of our product is that it is innovative, new and very differentiated from the others. In this way we do not have (for the moment) direct competitors.

Therefore, our final aim is to try to reach the whole market as fast as possible through promotional strategies. In the first place, however, we have to create a small strong customer base on which build upon a larger one as we are trying to do. In this way once competitors will come up with something similar, we will already have gained loyal customers being difficult for competitors to enter the market.

3.3 Detailed Action Plan

Initial found

We will need the first funds to build the prototype and to ensure that the first features of the startup take shape. In this phase, we will need IT engineers, programmers and designers to make the beta as accurate as possible.

Beta test

Once the programming and realization of the beta product is finished, we will ensure that a small circle of selected people test the product in order to improve and improve the critical issues. We will ensure that 50 doctors (including doctors of various types and dentists) become part of the project to direct us in their requests, while at the same time we will ask 100 patients of different extraction and demographic to redirect the possible critical issues also from the point of view of citizens.

Second found

We will need the second funds to be able to implement the previous possible changes in the PocketDoctor App and to prepare us for subsequent strategies for final positioning.

Long-term relationship with collaborators

At this stage, we want to expand the number of collaborators to continue testing with different types of medical categories. We will include in this phase other types of doctors, such as psychologists, physiotherapists, dieticians, podiatrists, etc ... to ensure that they too can become part of our system.

Third found and product launch

Once we have assimilated the necessary information and made sure that the system is 100% defined, we want to move from the website to the real application, compatible with both IOS and Android, and at this stage, we will use the third and last funds. Once ready for the effective launch on the market of the App, we will, in fact,

start our marketing strategies to ensure that the latter is used in the shortest possible time by the entire Italian population.

Revenues

From this moment on, we will have to analyze and monitor the company's performance to ensure that, through new marketing strategies, we can trace the most significant number of people. From rough calculations based on the number of Italian healthcare professionals (462,707)²⁵ and the monthly cost of our product (€20), we can imagine an annual turnover of around € 110,000,000.

However, if we want to calculate, in the first year, only 20% of the potential market, the annual figures would be around a turnover of € 22,000,000.

Feedback from patients and doctors

One of the strengths we want to focus on is the continuous feedback from our consumers to make sure that the product we sell and the services we offer both to doctors and patients gradually become the best option, thus retaining consumers' loyalty to a concept of brand loyalty.

Machine learning and new collaborators

As we move forward with the improvements in the service and the product, we want to make the latter become a self-supporting platform over time. Through machine learning, which also large multinationals like Facebook and Google use, we want to ensure that our users, in this case patients, can increasingly find a system that guides them in their best healthcare path, offering various types of solutions, which also include wellness programs. In this period, we will include new collaborators, such as personal trainers, masseurs, beauty centers, gyms and healthy restaurants, to ensure that various fields of the physical and mental well-being of patients can be part of the health priorities. Machine learning will understand individual patients and will slowly propose specific ad hoc treatments for any eventuality.

²⁵ <http://www.pkegroup.it/html/cnt/le-professionisti-sanitarie-in-numeri.asp>

Expansion to new services

We also want to include in the App the possibility of creating a platform that is more relevant in the field of information. Too often, we see general misinformation in the health sector, given by confusion caused by too specific and general terms that lead patients to higher stress in cases of serious diseases or chronic pathologies. Our aim is, in fact, to create an accurate and simplified "medical dictionary", where only graduates in the health field can write, which aims to inform patients through videos and simple explanations. Doctors will have the opportunity to open their own personal blog on the PocketDoctor platform so that they can talk conscientiously about their health knowledge. Everything will then be possible to share on other social platforms, such as Facebook, Instagram, or LinkedIn, and this will also allow the doctor to increase his reputation and authority online.

Fisical investment

Once stabilized on the online markets, we would like to use part of the revenue for physical investments and direct patient help. We want to become part of investments that produce private clinics, universities of health faculties and chemical laboratories for R&D.

Exploration and expansion to new markets

Finally, when we have become leaders in the sector, we want to take hold in other world countries, going to sanitize and bring improvements in other health systems. First in our objectives arrived at this point, is to land in Hong Kong and launch PocketDoctor also in Eastern countries. We aim to contribute to world health!

4 CHAPTER 4

4.1 FINAL CONSIDERATION

4.1.1 Prevision of what is going to change

One of the factors that I would like to take into consideration is precisely the fact that humanity, since the dawn of time, has been characterized by constant innovation, fomented by the fact that man wanted to be increasingly efficient. We have always moved to raise the level of global sustainability and improve each citizen's life as much as possible. With the advent of the internet and subsequent communities created, the level of innovation has increased exponentially, an unprecedented advent!

This company and this application aim to move today's healthcare market more and more, taking it, step by step, to higher levels. One of the technologies that will surely bring today's healthcare to a huge step forward will be the Blockchain, thanks to the compelling method with which it makes the data that is entered inside it safe and thanks to the multiple uses that world companies are implementing. Digital identity will significantly help manage many services.

As we have seen in this thesis, if everything goes according to the plan, we could lay important foundations in Italian healthcare, which will lead to exceptional results in the long run. Allowing people to be sure of their health has effects both on the life of the individual citizen and on that of the entire community.

Health will no longer be a problem, but instead, it will become a continuous and secure path. Monitoring will be optimal and information will be readily available to both patients and doctors.

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