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Contemporary approach meets
Gardanella Sport Village

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Abstract

In the last two decades there is a notable change in the delivery methods and work processes regarding project commissions. Using management tools, a passage from traditional to contemporary design and construction processes is being created. Moreover, a contemporary project lifecycle also includes external factors; market demand, environment, society and flexibility are all much more than just concepts.

The aim of this paper is to propose a design that includes both internal and external factors using Gardanella sport village as a case study.

Examining the definition of sustainability regarding a project, looking at the strategies used by other sport structures establishments, we were able to suggest a design strategy that will help in globe Gardanella in the contemporary market.

“Eventually everything connects; people, ideas, object. The quality of the connections is the key to quality per se.”

Charles and Ray Eames

Sintesi

Negli ultimi due decenni possiamo notare un cambiamento notevole nelle modalità di consegna e processi di lavoro per quanto riguarda progetti di carattere pubblico. Grazie all'Utilizzo di strumenti di management si è creato un passaggio dal design tradizionale al contemporaneo. Inoltre, un contemporary project, ciclo di vita, include anche fattori esterni, la domanda di mercato, l'ambiente, la società e la flessibilità: oggi sono tutti molto più che semplici concetti. Lo scopo di questo lavoro è di proporre un design che include sia gli aspetti interni che esterni usando Gardanella Sport Village come un caso studio. Eseminando le definizioni di sostenibilità riguardo ad un progetto e guardando le strategie usate da altri concorrenti potremmo proporre un design strategico che aiuti ad inglobare Gardanella nel mercato contemporaneo. Da questo lavoro si deduce che utilizzando maggiormente strumenti di analisi degli aspetti esterni si è in grado di fornire soluzioni architettoniche e concettuali che potrebbero funzionare in tanti livelli differenti, sia per l'aspetto architettonico, attraverso l'introduzione di spazi nuovi e flessibili, sia dal donare un concept che legghi Gardanella all'attività sportiva e al mercato di benessere proprio al livello di 'branding'. L'obiettivo di questo

lavoro è mostrare questo processo, eseminando passo dopo passo in ogni capitolo i vari metodi a disposizione, fino ad ottenere un prodotto 'custom-made' che porta appunto Gardanella al contemporaneo.

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Chapter 1 - Introduction

“If everyone is moving forward together, then success takes care of itself”.

Henry Ford

1.1 Working process and thinking methods in Architecture and construction projects.

In constructing a building or similar structure, the design is usually prepared by an architect, but the construction is usually performed by one or more contractors, who not always affiliated with the architect.

Historically, most construction was run by the same person who designed the structure. It was not until the twentieth century, primarily in America, that design professionals (architects and engineers) separated themselves from construction contractors and materials vendors, forming separate professional trade organizations, and popularizing methods of construction that promoted separating design from construction. Commonly referred to as the traditional tri-partite method of construction, in which an owner hires an architect to design a building and subsequently hires a construction contractor who is unaffiliated with the architect to construct the building. This method is known as the Traditional design–bid–build projects.

When the building owner hires an architect to design a building and provide a complete set of design and construction documents (drawings); a pool of general contractors bid to deliver the project's construction; the architect is hired by the building owner to aid in

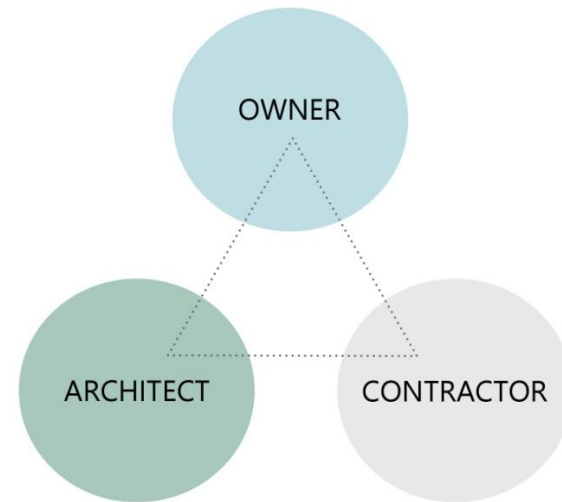
selecting a general contractor from those bidding on the job. This sequential process separates design and construction into independent tasks. Furthermore, the owner's two contracts – the first with the architect and the second with the general contractor – sets up discrete teams of specialists.

In traditional scenarios the design team is designing a project in somewhat of a vacuum, without the benefit of the contractor's perspective on the process. The contractor brings the heightened perspectives of construction feasibility, site access, scheduling sequence and value engineering to the design process. The owner is responsible for the designs their hired consultants produce, if the designs include errors or ambiguities it could lead to differences of interpretation, the owner may be exposed to change order costs to the contractor. While the owner has the right to go back to the designer for some recovery of these costs, the right is seldom exercised. The traditional scenario can often lead to adversarial roles between designer, contractor and owner with each entity acting first to secure its own interests. The designer attempts to maintain the integrity of the initial design and the designers' reputation, the contractor attempts to maintain its initial profits from time of bid, its initial interpretation of plans and specifications and uninterrupted sequence of work and the owner attempts to receive its project at a certain level of quality, on time and within budget. With each entity starting with a somewhat different motive,

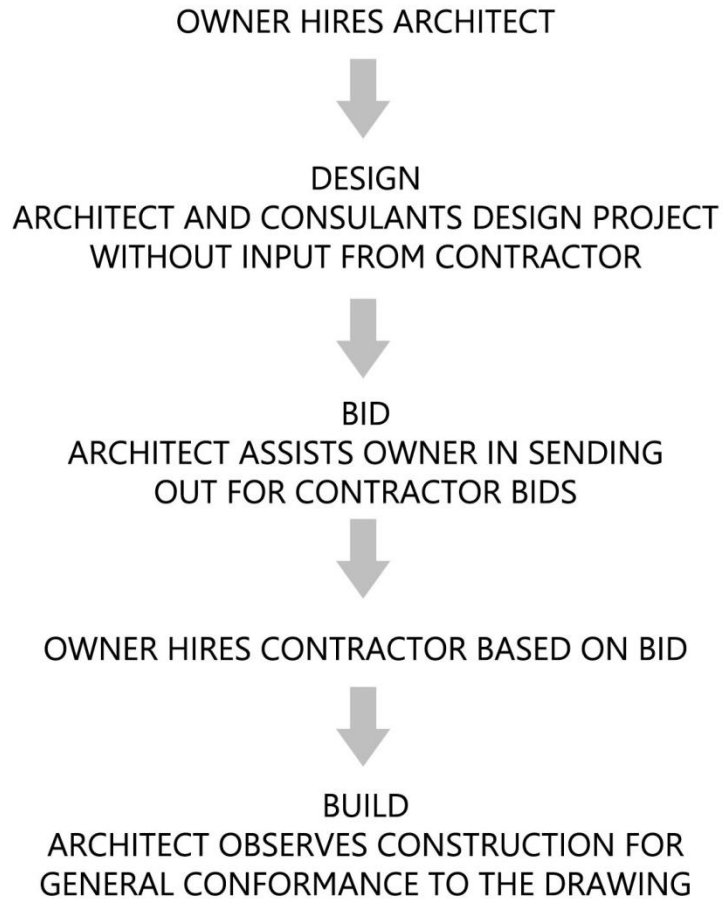
it is easy to see how relationships can deteriorate and focus can be lost. The Architect and Contractor; each has an array of technical consultants and sub-contractors. At this critical point the schism begins. A wall grows between the two entities; each charged with fulfilling their own role. This wall, over the last 40 or so years, has grown impenetrable.

Information sharing and strategic decision-making is impossible to obtain, communication is cumbersome because of the legal responsibility. When conflict occurs between stake holders, the owner becomes the arbiter-the judge in an arena where he or she has little experience or knowledge.

How the project will be designed and constructed, or the project delivery method, is one of the most important decisions made by every owner embarking on a construction project. With a variety of delivery methods in use today across the design and construction industry, it is possible to tailor a delivery method that best meets the unique needs of each owner and each project.



Drawing 1: The traditional design relationship triangle: a communication problem.



For example, a delivery method that became common in recent

years is when the designer and constructor are the same entity or are on the same team rather than being hired separately by the owner. Most of these projects were and are led by the contractor, who hires an architect to design its building, which the contractor then builds for its client, the owner. This integrated process allows for the communication, knowledge sharing and cultural integration necessary to produce great buildings. Thus, it's the design of the project that ultimately leads to its success

functionally, practically, artistically and ultimately responsibly to its community. For the owner, with a wealth of choices available, the ultimate decision can be both good and bad. The downside is that with the variety of delivery systems, along with the accompanying assurances of the superiority of one method over another, confusion is inevitable. However, it increased the number of alternatives offers that the owner or developers are more flexible to choose an appropriate and effective system for its particular project.

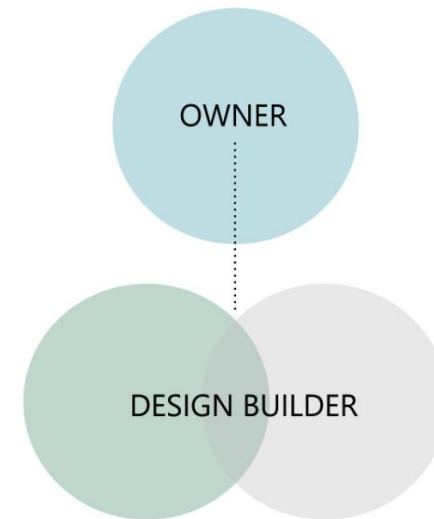
There are several delivery methods for the construction project and variations of those common, for example:

Design-Bid-Build (DBB) – The traditional U.S. project delivery method, which customarily involves three sequential project phases: design, procurement, and construction.

Construction Management At Risk (CMAR) – A project delivery method in which the Construction Manager acts as a consultant to the owner in the development and design phases, but assumes the risk for construction performance as the equivalent of a general contractor holding all trade subcontracts during the construction phase. This delivery method is also known as CM/GC.

Design-Build (DB) – A project delivery method that combines architectural and engineering design services with construction performance under one contract.

Integrated Project Delivery (IPD) – A project delivery method that contractually requires collaboration among the primary parties – owner, designer, and builder – so that the risk, responsibility and liability for project delivery are collectively managed and appropriately shared.¹



Drawing 2: Integrated project delivery: a better line of communication

¹ CMAA Owner's Guide to Project Delivery Methods- August 2012



An owner faced with choosing a project delivery method should consider several factors in making the decision, including:

- Project size
- Type of project
- Legislative and regulatory requirements
- Tolerance for risk
- Schedule
- Local market knowledge
- Desired level of involvement
- Owner's resources and capabilities

When these factors are properly evaluated, a good decision can be made on the selection of a project delivery method that best fits the goals and requirements of the owner and the project. Yet none of these delivery methods are right for every project. For each situation, there will be advantages and disadvantages in the use of any specific method. The owner needs to carefully assess its particular project requirements, goals, and potential challenges and find the delivery method which will be the most suitable to the planning, design, and construction process of projects.

Every construction project or program is unique, and for each, there is an optimum project delivery method. It requires expertise and experience to select the right delivery method for a particular situation.

The construction market, the number of different actors and the way that projects are procured today has however changed and developed.

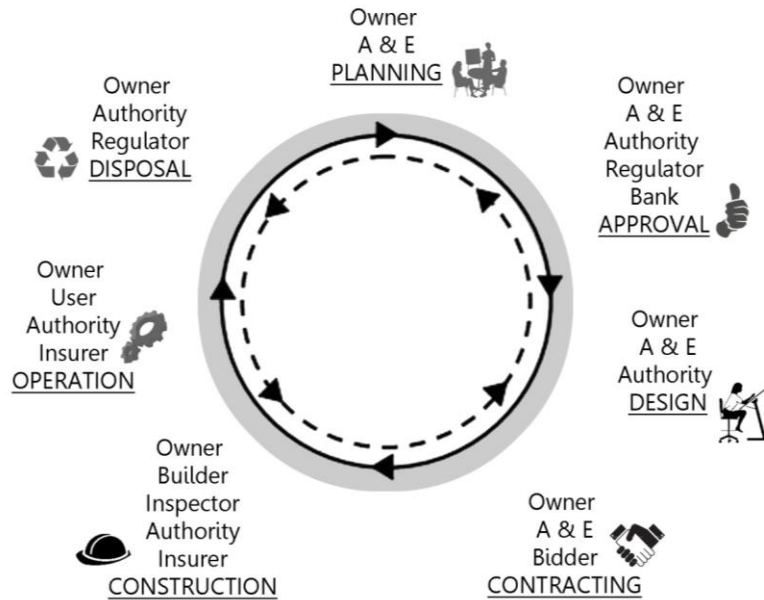
1.2 Design and construction process

Define or create a 'design and construction process' mean to cover the whole 'life' of a project from recognition of a need to the operation of the finished facility. All construction projects can be simply divided into two primary phases: the design (or architecture) phase and the construction phase. This classification can exist, however, on several levels depending on the size and complexity of a project. There is a close relationship between design and construction and the processes can best be viewed as an integrated system. Design is a process of creating the description of a new facility, usually represented by detailed plans and specifications; construction planning is a process of identifying activities and resources required to make the design a physical reality. The planning for both design and construction can proceed almost simultaneously, examining various alternatives which are desirable

from both viewpoints and thus eliminating the necessity of extensive revisions under the guise of value engineering. When a construction project is initiated, a Facilities Planning and Construction project manager is assigned to the project, and a building committee is formed to oversee the project development until completion. This approach ensures that all issues are considered from both a business and a technical point of view. This approach recognizes and emphasizes the inter-dependency of activities throughout the duration of a project. It also focuses at the activities whereby attention is paid to the identification, definition and evaluation of client requirements in order to identify suitable solutions.

The life cycle of a project:

1. Programming
2. Schematic Design
3. Design Development
4. Construction Documents
5. Bidding
6. Construction
7. Occupancy



Drawing 3: Project life cycle - Personal interpretation

These phases are common to all new construction and renovation projects; in smaller projects, the phases often become less formal, involve fewer individuals and may have a short schedule of only a few months. Large projects, on the other hand, may take years from the time they are envisioned to the time "move-in" takes place. In building projects customer requirements, constructive aspects and quality standards are defined during the design phase.

However, this important phase is usually carried out with little interaction between the construction and design teams causing many problems during construction such as: incomplete designs, change orders, rework, construction delays, etc.

While the conceptual design process may be formal or informal, it can be characterized by a series of actions: formulation, analysis, search, decision, specification, and modification. As the project moves from conceptual planning to detailed design, the design process becomes more formal and the series of actions now represent specific steps with less random interactions in detailed design.

There is a need for improvement to the conventional design and construction process in the construction industry due to the poor performance commonly associated with building projects. Typically, this performance is measured in terms of cost, time and/or quality. There is a 'process view' in the construction industry a development of an idea, need or client requirement to the final commercialization of the product that can be called new product development (NPD) and is done usually in several steps:

- The beginning of a project can be initiated internally or by direct and/or indirect contact with the customers
- The development of the product requires the participation of a number of specialists and functions such as: designers, surveyors, marketing, stress analysts etc.
- The successful construction or manufacture of a building or product can only be achieved if all external (suppliers and consultants) and internal resources are utilized and co-ordinate effectively
- The building is handed over to the customer/client and provisions are made for future support

However there are a number of distinct differences, the most important of which is that in the manufacturing industry all NPD activities are co-ordinate, managed and controlled using a common framework which is the NPD process. The construction industry mainly, uses ad-hoc methods for achieving the latter and therefore reducing repeatability of process execution, resulting in the same mistakes occurring time after time. This shift into the establishment of a consistent process for the construction industry requires a new way of thinking entailing a change of culture and working practices. Furthermore, it requires:

- A good understanding of current practices and future trends
- Effective communication mechanisms of such processes, such as modeling
- Agreement of participating parties

1.3 Construction and Architectural management

With time architectural practice and construction process became correspondingly more complex, because of a shift from standard traditional construction details, to innovation and experimentation and therefore more in need of a disciplined approach to support and enhance the process of creating architecture. For that since the 1960s the term '**Architectural Management**' and '**Construction Management**' has become common and an integral part in the process of the whole project.² It's a discipline uniquely tailored to the planning, design and construction process. It helps to ensure that a project is built according to plan. This includes not only completing the project in accordance with the building plans, but also getting it done on time and within the specified budget.

² Design management in architecture, engineering and construction: origins and trends, Stephen EMMITT Professor Loughborough University, UK

This discipline of project management can be defined as the art of directing and coordinating human and material resources throughout the life of a project by using management techniques to achieve predetermined objectives of scope, cost, time, quality and participation satisfaction.³

It is the application of knowledge, skills, tools, and techniques to a broad range of activities in order to meet the requirements of a particular project.

Project management is comprised of five phases –

1. Initiating
2. Planning
3. Executing
4. Controlling
5. Closing

It encompasses nine knowledge areas – Project integration, scope, time, cost, quality, human resources, communications, risk management, and procurement. The process of planning, organizing, staffing, directing, and controlling the production of a system.⁴

³ Project Management Institute

⁴ Mc e journal, are foxes watching the owner's hen house gary s. berman, pe, 2003

Development Management is responsible for creating and maintaining business focus throughout the project, which satisfies both relevant organizational and stakeholder objectives and constraints. Comprehensive project Management services are used to integrate the different facets of the construction process—planning, design procurement, construction and commissioning for the purpose of providing standardized technical and management expertise on each project.

Construction management and architectural design both play a significant role. But there is a difference between the two disciplines. Such as in the education, the training and the licensure. The architectural design deal with the pre-construction assessments to determine the feasibility of the project and any environmental impact the structure might have. When pre-construction assessment is complete, an architect will then develop the final construction plan, including construction details and building appearance. Architecture encompasses the design, construction, and project management of a creating a building. The construction manager in the other hand is responsible for coordinating the work of multiple prime construction contracts and for overseeing quality control. In construction project management the objectives depend a lot on resource constraints and the target should be accomplished with these in view. A main component of the whole process would be to investigate for better alternatives or making tradeoffs to

reduce the conflicts between stated objectives and resource constraints. The objectives of project management in construction can be stated as:

- Stating of objectives and plans: this should include the various factors like Budgeting, Scheduling, targets and participants.
- Maximization of Efficiency: this should be accomplished by proper utilization of various resources, labor, material and equipment.
- Coordination: A proper communication and coordination has to be maintained between various phases like planning, design, estimating and constructing.
- Conflicts and differences should be properly evaluated and resolved thus leading towards a common goal and objective

Construction management services may be handled by the architect of record or as a professional service by another architect. Architects and the services they provide are vital to a project's success. When the owner utilizes the services of a construction manager, the services of the architect are primarily limited to the design aspects of the project during the preconstruction phase. Architect will often work closely with the construction project manager in the office of the general contractor, and at the same time, coordinate the work of the design team and numerous

consultants who contribute to a construction project, and manage communication with the client. When the owner does not employ a construction management, the architect's role broadens greatly.

The traditional project management defines a set of techniques and tools that can be applied to an activity that seeks an end product, outcomes, or a service. Traditional project management is a project management approach that will work for most domains and environments. This approach uses orthodox tools and techniques for management and solving problems. These tools and techniques have been proven for decades, so their outcome can be accurately predicted. When it comes to special environments and conditions, one can move away from traditional project management approach and look into modern methods that have been specifically developed for such environments and conditions. The modern management develops in various tools and technologies along with detailed research into existing project management principles and trends lead into a new phase of management and are reflecting additional components such as:

- Management process approach: study the management functions in detail.
- Management science and decision support approach: assists managers in taking complex decisions by

approaching a given problem in mathematical and scientific manner.

- Behavioral science approach: involved more in interacting with people.
- Sustainable competitive advantage: an indication of a proper management strategy.

Modern management can be considered to be a combination of all the ingredients - general management, project management, special knowledge domains and supporting disciplines.

In the past, most owners relied on the experience of the designer to provide a complete and responsible set of contract documents. Recently, more and more owners have found the value in utilizing the advice and expertise of those with overall process, program and construction management knowledge during the design phase.

This approach is particularly helpful for owners who do not continuously maintain a construction management staff in numbers or qualifications necessary to deal with the complex responsibilities involved in the management of major projects.

The construction management should be engaged as early in the project as possible to guide and assist the owner through all phases of delivering the project. It can be an invaluable source of advice and counsel to the owner when choosing the optimum delivery

method for a project. Therefore, the construction management (CM) can begin with the program management that is the practice of professional construction management applied to a capital improvement program of one or more projects from inception to completion. The CM roll include verification of schedule, overall project cost tracking, quality control, administration of all contracts, and coordination with all owner stakeholders. The use of a qualified construction manager can greatly help in developing a project and in making the decision on project delivery methods, regardless of whether this expertise comes from internal staff or from a third-party provider.

One of the most important qualities of a project manager is a mature understanding of the way projects develop. This allows the nature of project activities to be better understood, problems to be seen in perspective, and needs to be assessed ahead of time.

PROJECT MANAGEMENT

CONCEPT PHASE

FEASIBILITY

OUTLINE DESIGN

PLANNING

CONSTRUCTION MANAGEMENT

DETAILED DESIGN

PROCUREMENT

CONSTRUCTION SUPERVISION

COST CONTROL

QUALITY CONTROL

OPERATION & MAINTENANCE

The main role of a construction manager in an agency relationship is to represent the best interests of its client, typically the owner. And focus on:

- Pre-Design
- Design process
- Procurement
- Construction
- Post Construction

Drawing 4: Project management processes description

Chapter 2 - The Contemporary approach: External factors / sustainability

“We have got to change our ethics and our financial system and our whole way of understanding the world. It has to be a world in which people live rather than die; a sustainable world. It could be great.”

Vivienne Westwood

2.1 Sustainability implementation in the sport sector

Sustainability is a comprehensive philosophy where a variety of environmentally-friendly materials and procedures are utilized to help reduce energy expenditures. Utilizing a variety of energy sources, remediating current problems, conserving natural resources and reducing the “carbon footprint” (the total sets of greenhouse gas (GHG) emissions caused by an organization, event, product or person) are all components related to sustainability.

The word sustainability comes from the word sustain, which means to cause little or no damage to the environment and therefore being able to continue for a long time. It has its origins in the Latin language and is derived from the word *sustinere*⁵ (*sus* = up and *tenere* = to hold). The word sustainability exists for hundreds of years, but only since the 1980s it is well-known in the common life, when people think more about their own future and the generations that will follow. The world began to realize that there was a heavy deterioration of the human environment and natural resources. The leaders of our world realized that we needed to create an organization whose sole purpose was to raise awareness of the need for sustainable development. In this time period, people in developed countries were starting to become more aware about environmental issues stemming from industrialization and

⁵ Dictionary.com, 2011

growth. Developed countries wanted to reduce the environmental impact of their growth.

The most popular and widely quoted definition of sustainability and sustainable development is that of the Brundtland Commission of the United Nation on the 20th March 1987: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”⁶

Sustainable development is “an enduring, balanced approach to economic activity, environmental responsibility and social progress.”⁷

Sustainability takes the approach of balancing the needs of today with those of the future. Much of the focus has been placed on the environment and the conservation of natural resources. But the environment is only one prong of the three-pronged approach to sustainability, the other two being economics and social (cultural) well-being.

⁶ World Commission Environment and Development [WCED], 1987, p. 43

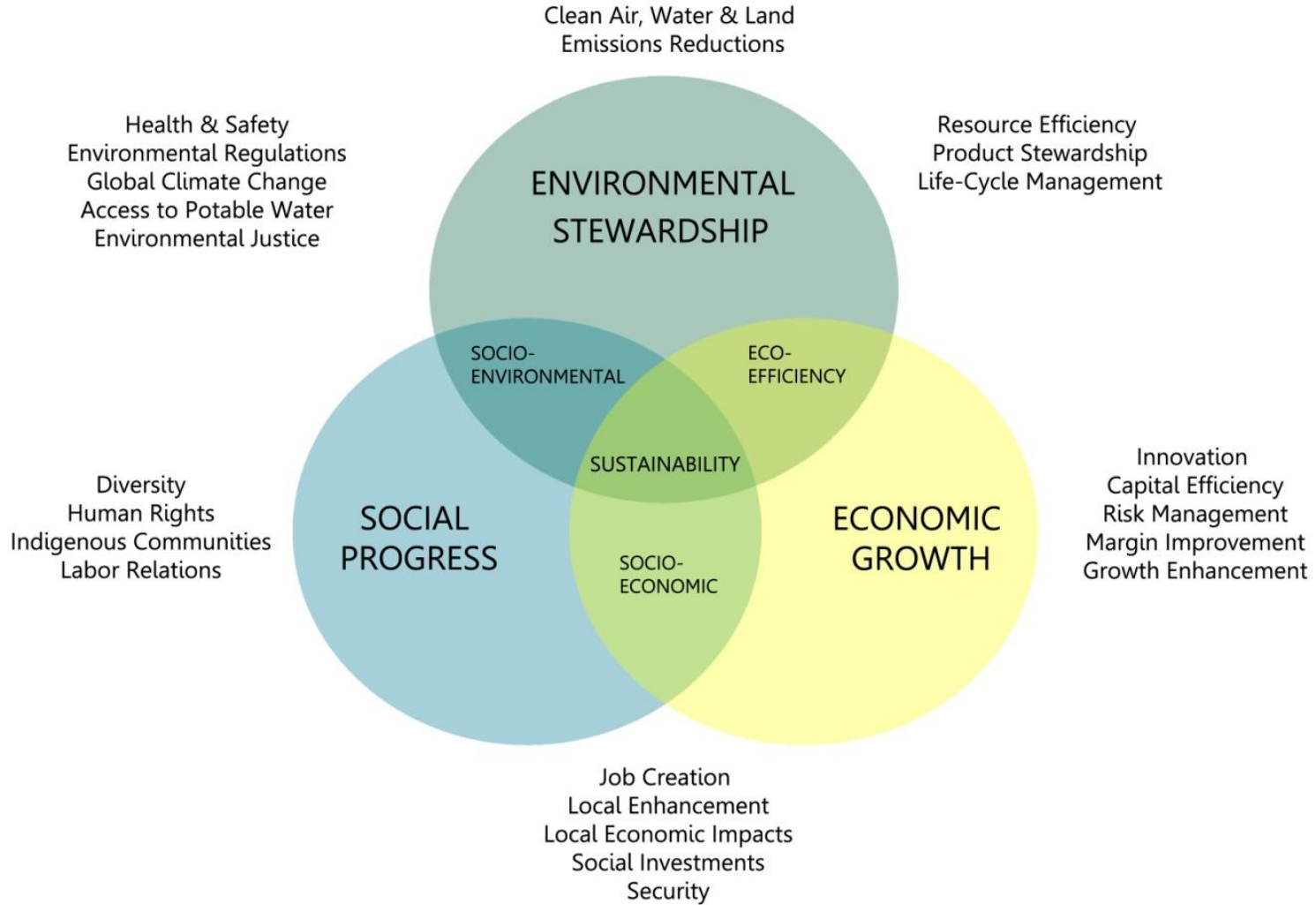
⁷ British Standards Institution 2006

Those three; Economic, Social and Environmental dimensions are elements that should be combined to create a sustainable development approach to managing in our case, the sports sector at all levels.

“Sport is sustainable when it meets the needs of today’s sporting community while contributing to the improvement of future sport opportunities for all and the improvement of the integrity of the natural and social environment on which it depends.”⁸

The sports movement has a responsibility to conduct their activities in such way to maximize positive impacts, minimize negative impacts and foster balanced, enduring growth in relation to society, the economy and the environment.

⁸ Green and Gold 2007



2.1.1 Sport and the Environmental dimensions of sustainability

Sport is defined in the European Sports Charter 1992 as “all forms of activity which, through casual or organized participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels.”⁹ Sport presents broad opportunities to promote environmental awareness, capacity building and far-reaching actions for environmental, social and economic development across society. The sport impacts the natural environment and it is emerging as a topic of concern

Environmental sustainability is a process of making sure that the initiated processes related directly with the environment and its protection are equal with the idea of keeping the environment as clean and natural as possible based on an ideal. The sphere of environmental sustainability is mainly focused on the usage of natural and regenerative resources as alternatives to not renewable ones, environmental management, which means the management of interaction with the human societies, and the reduction of waste and the prevention of pollution, including air, water and land.

The model of sustainable development consists in reconciling the improvement of economic and social living conditions with the long-

⁹ Sports Council of Great Britain 1993

term protection of the natural basis of life in order to also give future generations the opportunity to unfold. It not only addresses governments, but also business and industry, all social groups and each individual citizen.

The sports sector manages a vast range of venues ranging from professional that attract large numbers of spectators to participant-led venues such as village sports halls, local playing fields, neighborhood, swimming pools, and everything in between. In addition, many sports arrange events which use non-specific local facilities, green spaces, roads, and the urban environment on an occasional basis. These venues and events can have a significant environmental impact. In many countries Sport and the Environment is understood as a highly important subject. Scientists deal with this issue as well as authorities, sports associations and conservation groups. Above all, since the World Conference 1992 in Rio de Janeiro¹⁰ questions of lifestyle are on the agenda for the environmental debate. Sport represents a significant part of our different life styles and thus automatically becomes a subject of discussion. Many sports associations have built up professional and voluntary structures and include environmental issues in their public relations. Sport can be a considerable cause of damage to nature and the environment. Damage can occur directly as a result of the pursuit of sports activities or the building and operation of the requisite infrastructure, or it can be caused by indirect factors such as the use of cars to travel to and from sports activities.

¹⁰ Earth Summit - The United Nations Conference on Environment and Development (UNCED)

Since the 1970s'; higher income, more leisure, greater mobility and increasing individualization have formed the basis for major and continuing changes in sport. Consequently, these developments have led to wider and more intensive use of particularly attractive but, by nature, vulnerable areas as sport is claiming more territory. Sport can not only affect nature and landscapes, but can also give rise to other environmental damage. With regard to this problem, the use of non-renewable resources, the emission of harmful substances during the building and operation of sports facilities. Sports activities can cause critical damage to and endanger precious and vulnerable locations. In order to reduce the damage to vulnerable areas early on and at the same time fulfill the task of providing for recreation, nature conservation bodies and representatives of sport should be more involved in the planning of opportunities in resilient landscapes. And it is necessary to:

- promote and further develop forms of sport which are compatible with nature and the environment;
- make sports-related infrastructure more environmentally compatible;
- reduce damage to vulnerable areas;
- secure and improve opportunities for sport and physical activity outside vulnerable areas;

- Preserve and increase the recreational quality of countryside and its enjoyment value for those doing sport.

New approaches are required for resolving existing conflicts between sport and the environment in the long term. This means that orienting conservation and utilization concepts to the principle of sustainability in line with the agreements reached at the Conference on Environment and Development in Rio de Janeiro in 1992 according to the conference agenda. The aim should be for representatives of sport and those promoting the cause of nature conservation and environmental protection to join forces and draw up guidelines for sustainable development in sport.

In the past, some countries have developed promising approaches, above all in the planning and management of sports and leisure activities, Numerous regulations that have been put into practice and proved successful show that they can meet the demands of both sport and nature conservation. Integration of environmental performance into the management of sports events and sport facilities includes, among other things, consideration of energy use and carbon emissions, the local natural environment and promotion of biodiversity, efficient use of water and other resources and management of waste to maximize recycling and re-use. The venue's performance may be affected by both internal and external factors; for example, various activities stimulate energy use, and resulting greenhouse gas emissions, including heating indoor spaces and running televisions, floodlighting and other electronic equipment. Meanwhile, significant transport emissions come from

the travel of spectators, teams, officials, and food and drink to the venue. Management of environmental performance extends into issues of the supply chain and sustainable procurement for building and operating sport venues. Some of the benefits of sports activities can have secondary effects. The provision of green spaces is often an integral part of sports facilities. Such spaces can also be seen as key elements in urban design for a socially balanced and healthy community. These spaces not only serve a specific sporting function, but also encourage healthy lifestyles and social contact outside of the home, school, and workplace.

2.1.2 Sport and the Social dimensions of Sustainability

Social sustainability is the ability of a social system, such as a country, to function at a defined level of social well being indefinitely, to optimize quality of life for those living and their descendents. It reflects the relationship between development and current social norms. An activity is socially sustainable if it conforms to social norms or does not stretch them beyond the community's tolerance for change.

“The social preconditions for sustainable development or the need to sustain specific structures and customers in communities and societies”:¹¹

¹¹ Sachs, 1999

In our society sport fulfils important functions and is indeed indispensable. It offers opportunities for physical activity in a world where physical activity is increasingly diminishing; it promotes good health and well-being, and it provides a means of social contact and ample opportunity for intensive experiences. The way of living towards a socially sustainable way may not necessarily provide a promotion of luxury and wealth, but rather, the development of reverse-consumerism. The ideal sustainable life style is not to end consumption but understanding the minimalistic requirement of it. "Social sustainability occurs when the formal and informal processes; systems; structures; and relationships actively support the capacity of current and future generations to create healthy and livable communities. Socially sustainable communities are equitable, diverse, connected and democratic and provide a good quality of life."¹² As a result of the focus on sustainability one trend in facility and event management now involves “green” facilities. Unfortunately the variations of what is considered “sustainability” have plagued those sport facilities that have begun concentrating on social issues.¹³ Since the 1970s, higher income, more leisure, greater mobility and increasing individualization have formed the basis for major and continuing changes in sport. Changes such as;

¹² The Western Australia Council of Social Services (WACOSS)

¹³ “CSR and the green facility push” - sport and social issues

- A rise in the number of people who pursue sports activities.
- A higher degree of differentiation between types of sport and sports equipment as well as motives and reasons.
- The use of areas hitherto unused or seldom used and areas already in use being opened up for new purposes.
- Spread of activities to periods previously not or seldom made use of.
- Fewer ties with sports clubs and their traditions.
- Increase in individual, spontaneous activities without proper training.
- Increase in activities offered commercially and to a certain extent associated with aggressive advertising.

There are several strands of social sustainability. Recent literature on major sporting events identifies the ability of sports to create a range of positive social effects including: reinforcing collective identities; uniting people; improving self esteem; increasing civic pride; raising awareness of disability; inspiring children; providing experience of work; encouraging volunteering, increasing participation in sport; and promoting wellbeing and healthy living.

Greater involvement in sporting activities has a public health benefit.¹⁴ Greater physical activity can tackle obesity, avoid the incidence of a wide range of diseases and contribute to mental health. Active involvement in sports may also have an impact on academic achievement, through enhancing concentration, future employability and building skills and confidence. Sporting activity can contribute to social inclusion and ensure the widespread access to sporting facilities across communities.

The European Healthy Stadia Network actively promotes health policies and practices to sporting venues of all sizes, advocating smoke free environments, provision of healthier food options and active travel interventions for both spectators and workforces at stadia and venues of all sizes across Europe. At the level of local communities and society more broadly, sport can play a role in building relationships in local communities, especially amongst young people¹⁵ although care must always be taken to avoid creating competitive cleavages between sport supporters. With the appropriate planning and management, sporting activity can contribute to social inclusion and ensure the widespread access to sporting facilities across communities, including the most deprived communities.

¹⁴ Department of Health, 2009

¹⁵ Department for Culture Media and Sport 2004; Sport England, 2008

Some of the benefits of sports activities can be secondary effects. The provision of green spaces is often an integral part of sports facilities. Such spaces can also be seen as key elements in urban design for a socially balanced and healthy community. These spaces not only serve a specific sporting function, but they also encourage healthy lifestyles and social contact outside of the home, school, and workplace. Sports clubs can encourage physical activity and social interaction in and between these hard-to-reach groups by locating themselves within residential communities, and local planning authorities can facilitate this by ensuring that flexible provision for sport is available in every community.

The sport sector is central to economic, social and cultural life. Sport imparts many more indirect social benefits on the participants and spectators including improved physical health and psychological well-being and greater social connections and community cohesiveness.

2.1.3 Sports facilities

Sports facilities have undergone significant changes over time, especially over the past two centuries. Sports facilities developed through the years from functional stadium, adapted stadium, state-of-the-art stadium to center of business and regenerating area facilities. Sports facilities developments have been considered in recent years universally. This is due to increase in the amount of money being spent on sports facilities, as well as an increase in the number of sports facilities that have been built in the past two decades. However, due to its large investments, sustainability seems to be an important element on sports facilities development for the future and in recent years sustainability has assumed increasingly importance. How and to what extent sports facilities construction achieve sustainability over time. Sustainable development refers to maintaining development over time (Elliott, 1999), it directly depends on the sports facilities usage over years.

The sustainability of the impacts and longer-term effects are largely dependent upon future usage and the ability to affect the local community. It is a new approach to the planning and design which is expected to guide the physical planning system focusing on the concept of sustainable development.

Traditionally the sports facility was a modest facility with a capacity of perhaps a few hundred, serving a small local community and forming part of the social fabric along with the religious building, and town hall. In 1986 the modern Olympic movement was born in Athens. Since then the sports facility has evolved into one of the

great public building forms of the twentieth century, regarded, as its best, as an essential and positive element of civic life.

Sports facilities become part of the 'public infrastructure' that define the quality of life for a city to be successful in the 21st century. It is defined as any big enclosed facility for competitive sports where sports are played, can host sports events, requires public money for construction, maintenance and big enough to need ancillary construction.

In recent years developments of the sport facilities serve consumer needs. They accompany with residential, commercial, retail and leisure complex with efficient transportation system. Therefore, sustainability gains more initiative in new generation of sports facilities development. Sports facilities affect the environment in a variety of different ways. When describing and assessing them, a distinction can be made between indoor and outdoor facilities. Compared to sports halls, outdoor facilities require much more space. How this space is treated is of considerable significance to the environment. If environmental criteria are taken into account during the planning, building and maintenance of an outdoor sports facility, especially in conurbations, this can upgrade the area ecologically and thus increase the attractiveness of the residential environment. Sports halls require only about 5% of the area taken up by outdoor facilities. Excessive energy consumption and water use are the prime causes of environmental damage in the case of sports halls. Sports facilities produce millions of gallons of waste water emanating from concessions, playing field irrigation and sewage disposal. Due to the extensive kilowatt hours required for lighting, heating, ventilating and air conditioning. Today, reduction

of energy consumption in sports halls is mainly concentrated on heating/hot water supply systems, heat insulation and lighting. Practical examples show that there is considerable potential in sports facilities for saving energy and water. In order to exhaust this potential, modern, resource saving technology must be installed and user habits must be changed. Due to the large savings made as a result, investments in energy and water often pay off within relatively short periods. There are several environmental benefits to sustainable building. These benefits include reduced pollution and waste and the restoration or preservation of natural resources. Buildings built sustainably have better indoor air quality. Reduced level of pollutants and toxins in the indoor environment help people feel better. There is increased productivity and occupant well-being in the built environment. In addition, the use of sustainable materials compares in quality to their non sustainable counterparts, yet sustainable materials often offer more durable or healthier alternatives. Sustainable buildings are generally more energy efficient than traditional buildings (up to 40% or more). Better site and systems design, proper equipment sizing, and a tightly sealed envelope all contribute to a reduced need for heating and cooling. With constrained global energy resources, energy efficient buildings create value for the owner and provide grid relief for utilities. Building renovation, necessary in any case and new building plans provide ideal opportunities for installing environment-friendly technology. If environmental aspects are to be considered regularly and not just sporadically, operators of sports facilities need systematic environmental management. Essential elements of such management include the appointment of an environmental officer,

mandatory consideration of environmental aspects when any decision is made, the introduction of eco-controlling, as well as regular environmental training courses for staff. By saving valuable resources, sports facilities designed and run on an environmentally compatible basis can contribute enormously towards sustainable development and thus also to the implementation of Agenda 21. This applies in particular to climate protection through reduction of CO2 emissions.

For making sports facilities more ecological there is a need in:

- Initiating and supporting green consulting services for sports facility operators.
- Tying government and association funding for sports facilities (grants and loans) to the fulfillment of environmental standards.
- Considering to a greater extent the possibility of making use of existing areas and buildings for sports facilities.
- Incorporating environmental management into the work of sports administrations, clubs, associations and commercial sports operators.

Sports centers occur in many different sizes and configurations and offer different activities with differing intensity and durations of use. In particular indoor sport centers with swimming pools have a very high expected energy demand. Physical land use planning has a major role in achieving sustainable development. The location of sports facilities within the metropolitan areas seems to have direct relationship to their abilities for long-term benefits. There are a wide range of positive and negative impacts that sports facilities construction have on their surrounding areas and wider cities. They may have political, economical, social, physical, legal, environmental, and safety impacts. Generate new construction in the district, reuse of vacant building, changes in land use, and spin-off development are examples of physical impacts. Further, there are abilities to provide substantial social benefits. They might create community, improve interaction, provide recreation, intangible benefits, and alleviate deprivation. In addition, improve transportations lead to benefits for local communities. On the other hand, congestion, litter, traffic, vandalism, noise, and wrong kind of clientele are some kinds of negative impacts that sports facilities generate on their surrounding areas. For sustainability of benefits, it is necessary to concentrate on the long-term impacts which concern to legacy of facilities construction and infrastructure improvements.

2.1.4 Environmental education

Due to the speed at which our natural basis of life is changing, environmental education has become one of the major future tasks of mankind. As far back as 1977, UNESCO declared that environmental education should be an all embracing, life-long process which actively involves individuals in the solution of specific problems. In sport too, the importance of the "future task of environmental education" is now undisputed. Avoiding and reducing sports-related environmental damage requires the active involvement of those who pursue sports activities. Environmental education should both encourage environment-friendly attitudes and habits among people doing sports and ensure that planning and legal measures for the protection of the environment are widely accepted by generating understanding among people doing sport. Environmental issues have now become part of the curricula of numerous sports organizations. The purpose of environment-related basic and further training of, for example, instructors and coaches, is intended to lend more weight to environmental education, also as part of the normal work of clubs and associations. The same purpose is being pursued by producing and disseminating information material among club and association members. Although they represent only a certain proportion of the people pursuing sports activities, sports organizations carry special responsibility as far as environmental education is concerned.

For successful environmental education in sport there is a need in:

- Drawing up and implementing to a greater extent overall concepts for environmental education in which theory and practice are closely linked.
- Putting in place the necessary structures for ensuring adequate and high quality environmental education.
- Testing models for influencing the environmental behavior of non-organized sportsmen and sportswomen.
- Holding environment-related competitions in sports
- Developing and implementing models for sport compatible with nature and the environment.
- Anchoring environmental communication more firmly in the work of associations and clubs and in the dialogue with broad sections of the population.

It is the duty of sports organizations and commercial operators to encourage a considerate attitude to nature and the environment by providing information about ecological aspects. However, environmental education processes will only be effective if all those involved are willing to respect the

restrictions and acquire knowledge of nature conservation issues.

People who pursue recreational sports activities in nature and the countryside mainly come from the towns. Both recreational traffic and the activities themselves can cause considerable damage to the environment. If towns offer more suitable opportunities for games, sports and physical activities, it will be possible to ease the pressure on the countryside. In order to solve the growing problem of traffic in towns, the aim should be to set up residential structures that put less pressure on people to be mobile. A multifunctional approach to town planning gives rise to "towns with short distances". When it comes to providing residents with sports facilities, this means that adequate and attractive opportunities for sports, games and physical activities for all age groups must be created or preserved in the vicinity of their homes.

In the search for solutions all parties involved must cooperate. This concerns above all sports and nature conservation, commercial sports, politics and administration, trade and industry. Without the constructive collaboration of these groups, it will hardly be possible to find effective and generally accepted solutions. The active participation of each individual person pursuing sports activities is also necessary. Thus environment-related information campaigns among people doing sport should be continued and, where appropriate, expanded. Understanding the effect that sustainability has on the proverbial "bottom line", architects, and facility planners need to be aware that "the focus on energy depletion, energy costs,

the costs of operation and the impact on the environment that buildings bring is going to shape building design for quite awhile".¹⁶

2.1.5 Wellness sustainability

Wellness is a positive approach to living - an approach that emphasizes the whole person. It is a dynamic state of health in which an individual moves towards a higher level of functioning by balancing internal and external environments. Wellness encompasses the belief that everything you do, think, feel and believe has an impact on your state of health, and the health of your environment. It is a state of health which comprises an overall sense of wellbeing and sense a person as consisting body, mind and spirit. Lifestyle and self-responsibility for health see paramount in the quest for a better quality of the life. In the western world people have attempted to define wellness by understanding as the harmony of body, mind and spirit, self-responsibility, physical fitness, beauty care, healthy nutrition, relaxation, meditation, mental activity, education, environmental sensitivity, and social contacts as fundamental elements. The term has been defined by the Wisconsin-based National Wellness Institute as an active

¹⁶ Henricks, 2007

process of becoming aware of and making choices toward a more successful existence.

The concept of wellness was developed as a special state of health comprising an overall sense of wellbeing which sees human being as consisting of body, spirit and mind and being dependent on their environment. Sparking interest in how nutrition, exercise and lifestyle choices impact our awareness, our health, our quality of life, and our world.

It is now seen as central to redefining the National Health agenda. There is growing evidence that contact with nature and physical activity in nature that has considerable positive effects on human health. At the most basic level humanity is reliant on the natural world for resources such as air and water.

In our society sport and wellness fulfils important functions and is indeed indispensable. It offers opportunities for physical activity in a world where physical activity is increasingly diminishing; it promotes good health and well-being. Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability is important to making sure that we have and will continue to have,

the water, materials, and resources to protect human health and our environment.

Sport's unique and universal power to attract, motivate and inspire makes it a highly effective tool for engaging and empowering individuals, communities and even countries to take action to improve their health. Nowadays there is a great importance to the sustainable development also in the wellness sector which combines together with the sport sector that we can see especially among the sport facilities. A lot of the sports centers have also a part that relates to the body health and through also this sector theirs developing sustainable methods in all operations of the programs and the facilities. Health is inextricably linked to the health of our planet. Incorporating sustainability into the lifestyle involves becoming aware of the impact of your choices in food, products, and energy use.

2.2 *The Wellness market*

In general, the Wellness market is not more than 'just' a market; it is somehow also a process, and a rather active and complex one. This complexity is given by a large change in public opinion thanks to information flow and people becoming more aware and open for changes. There is no wonder why this market was not embraced easily at the beginning of the 1990's. In those days, this field of economy was perceived and often represented as a passing fad or niche market mostly made for people who consumed diet products in order to lose weight or others seeking for spirituality in an increasingly industrialized environment. However, with the passing of time, the speed in which communication has led social processes of self awareness; the will to become better achieving, better looking and in generally to feel at your best had led to greater and greater public interest. Terms like Yoga, Shiatsu, Slow food, Raw food, Kabbalah¹⁷ and others had taken a larger part in the public interest leading to a point that according to a major study conducted by SRO International (SRO), released at the 2010 Global Spa Summit (GSA) in Istanbul, Turkey, reveals that the yearly worldwide wellness industry is poised to cross the \$2 trillion mark. Moreover, what has once been defined as an amorphous market has become today, an integrated industry cluster with nine core segments with more than 289 million active wellness consumers¹⁸ in

the world top 30 industrialized nations alone. In this chapter, we will examine what are the main causes for this peculiar behavior, how can it be that this market keeps a steady growth even at a time of severe economical crisis.

¹⁷ A body of mystical teachings of rabbinical origin, often based on an esoteric interpretation of the Hebrew Scriptures.

¹⁸ Growing Wellness Market Offers Bright Future for Spas, June 2, 2010

2.2.1 *New growth prospects*

As mentioned before, one of the most peculiar aspects of this particular market is its growth prospects, even at a time of a significant economical crisis this market is in continuing growth, infact it seems like it expands over increasing number of fields with infinite number of possibilities for evolution - each creating a new market. This gives way to a growth process characterized by dynamicity and diversity. It is becoming more and more a way of life rather than just practice Yoga, consume sensibly or change one's diet. With an ever-easier access to information thanks to the Internet revolution people can inform themselves more and in consequence are becoming more aware to what they consume and use. The spotlight reveals new fields that were once unknown: for example, the coaching field; it was initially defined as 'training or development process via which an individual is supported' while achieving a specific personal or professional result or goal.¹⁹ The origin of coaching is in companies who wanted to increase their sails objectives and the relations between colleagues inside the organizations. Being efficient, it had penetrated the global market and became a product on its own marketed also for individuals who want to achieve more. Thus, constructing a whole new market based on the private sector where trained individuals could turn it into a profession. Vitamins that were initially introduced to the market by pills are long inserted into beverages, and fast food giants

¹⁹ Webster dictionary, 2011

such as McDonald's or Pizza Hut are losing popularity worldwide. These large changes are all tied together as a part of a new awareness that changes habits and it is involving and acting in a way that individuals are making significant changes on several fields in their lives contemporary.

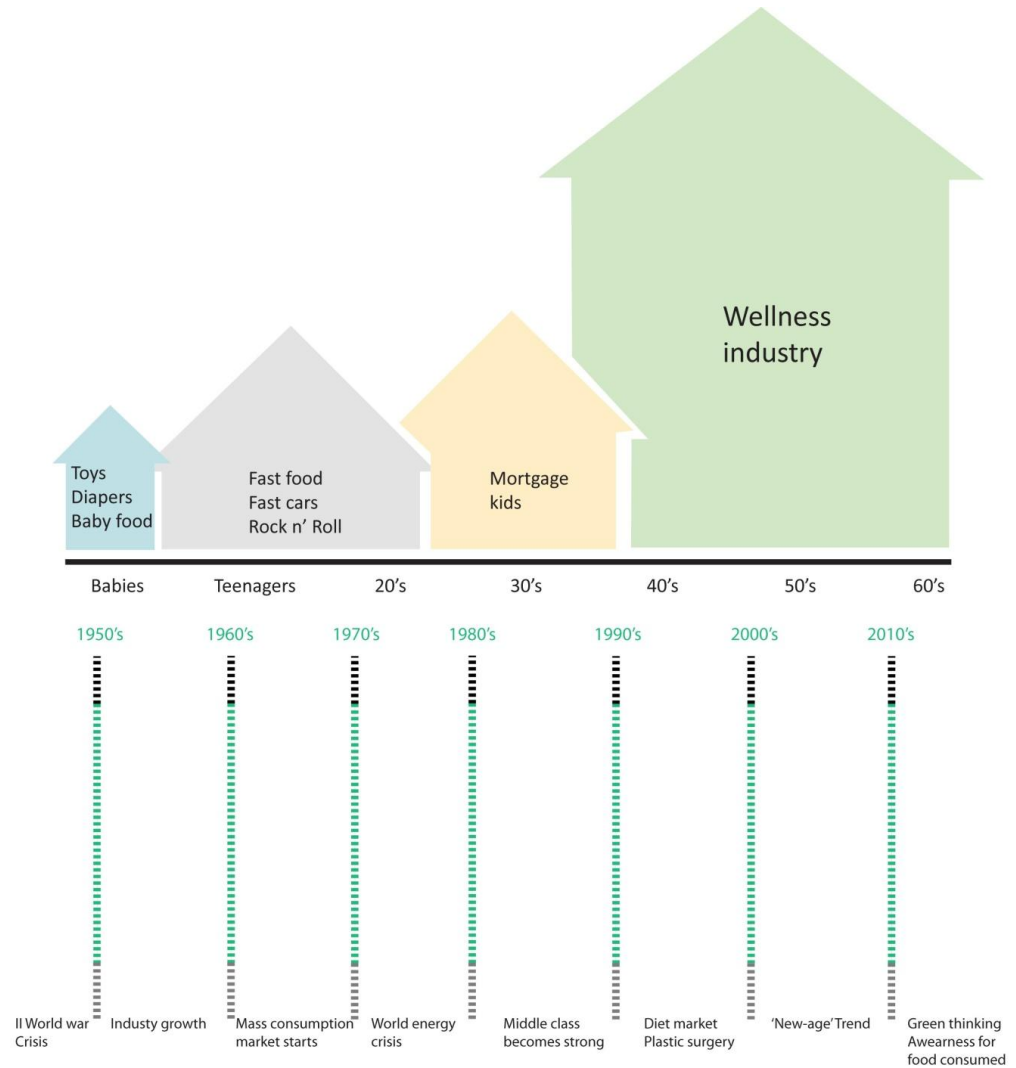
2.2.2 *Trends ensuring continuing growth*

According to SkinInc market review²⁰ there are three mega trends that will ensure continued growth in wellness: The first being an aging world population; This aspect was vastly covered also by Economist Paul Zane Pilzer In his book "The next millionaires" from 2002, Pilzer describes the main reasons for which in his opinion the biggest and fastest growing market in this period is the Wellness Market. Analyzing the market growth in the United States and based also on a severe market analysis regarding the consumption of goods in the U.S, Pilzer sustains that the "Baby boomers" generation²¹ acts as the engine that turns the world's economy wheels. As a group, the "baby boomers" were the wealthiest, most active, and most physically fit generation up to that time, growing up in the 1950's they were the origin for baby food industry growth as well as for toys and diapers in the 1960's and 70's they were direct responsible for a growing industry of fast food, fast cars, rock music and of course anti war movements throughout the world.

²⁰ Growing Wellness Market Offers Bright Future for Spas, June 2, 2010

²¹ The generation of new-born after the Second World War II

In the 1980's they formed a strong middle class to due high paying jobs thus creating a high rise in mortgage demand and, of course later as they grew old they were also the generation that received peak levels of income, therefore they could reap the benefits of abundant levels of food, apparel, and of course later retirement programs, and sometimes even "midlife crisis" products. Each of these periods as mention above was characterized by a large consumption wave reviving the economy once more.



Drawing 6: Top US census data, bottom: Personal interpretation

The second factor that ensures growing is the lately failing conventional medical systems, with consumers, health care providers and governments seeking more cost-effective, prevention-focused alternatives to a Western medical/sickness model focused on solving health problems rather than preventing them. According to a report released by the U.S. Centers for Disease Control and Prevention's National Center for Health Statistics: The U.S. life expectancy had slipped from 77.9 years to 77.8 years²². The report uncovered a surge of deaths from chronic lower respiratory diseases and reveals a disturbing disconnect between the increasing money being spent on health care in the United States versus the lack of positive results in return. The U.S. health care system is the most expensive in the world, and yet life expectancy is falling while U.S. citizens are nowhere near the healthiest in the world. One of the primary reasons for which life expectancy is falling is simply because the U.S health care system does not invest as much in disease prevention as it invests in treating disease symptoms. No significant resources are put in order to teach the local population to avoid disease through nutrition, foods and natural remedies. Being a question of cost versus profit; unfortunately long retirement payments cost more to governments whereas healthy people do not consume medicine. Increased globalization processes, with consumers more aware of other health approaches via the Internet there is no surprise why many people turn into "Alternative"

²² "US life expectancy falls as failure of conventional medicine becomes obvious", Mike Adams, 10 Dec, 2010

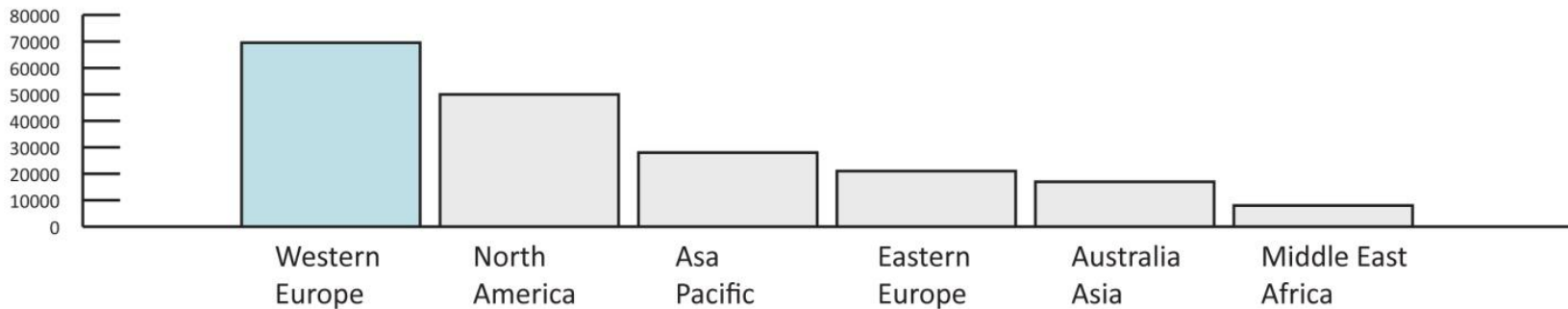
medicine, and seeking information on better nutrition and healthier life style.

Powerful celebrities advocating wellness such as Oprah Winfrey, Deepak Chopra and Jamie Oliver are reinforcing the last mentioned factors. Since Oliver's TV series "Jamie Oliver's Food Revolution" premiered in March 2010 on ABC, he has brought attention to the food industry's gross production techniques, and how these processes interfere with children's health. Using his series as a platform, Oliver has called McDonald's food "unfit for consumption"²³. He exposed the "pink-slime process," which involves grinding all of the unwanted trimmings and fat from the beef, washing it in ammonium hydroxide In a "purification" process where all bacteria are being destroyed proving the corporate uses meat parts that are usually saved for pet-food (especially dogs) industry, This helps lowering food-manufacturing prices but at the same time put people in real danger. These three elements put together show a clear picture of the current market trends and along with the change in awareness of potential customers brings us into a state where in general, the market is in counting growth but at the same time it is becoming more specific creating different 'niches' allowing different 'players' to fit in and operate-in.

²³ McDonald's Use Of Ammonium Hydroxide Anthony Rivas To 'Wash' Meat Angers Chef Jamie Oliver, Aug 6, 2013

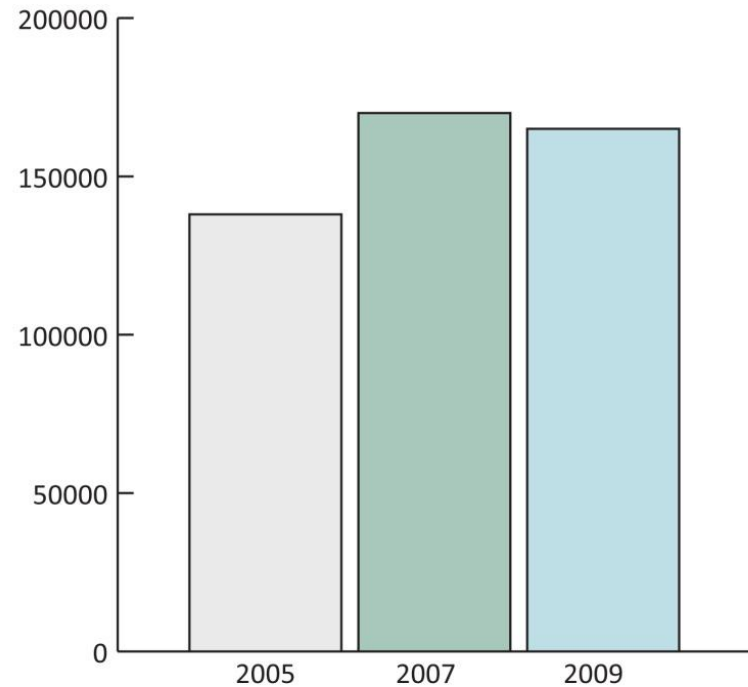
2.2.3 The Wellness Market in Europe

In general, Western Europe is considered to be a rather stable market with moderate growth and strong potential in its Health, Wellness and private label sectors. These characteristics are present mainly because of the conservative rather traditional approach of the local population (for example in Italy towards food). Moreover, the average European is not a 'risk taker' in general and prefers a saving mentality. Therefore, this gradual penetration and growth process is actually a sign to a positive reaction by the average European consumer. This is actually where opportunity lays, slow penetration means in this case also long and consistent stability and loyalty for products.



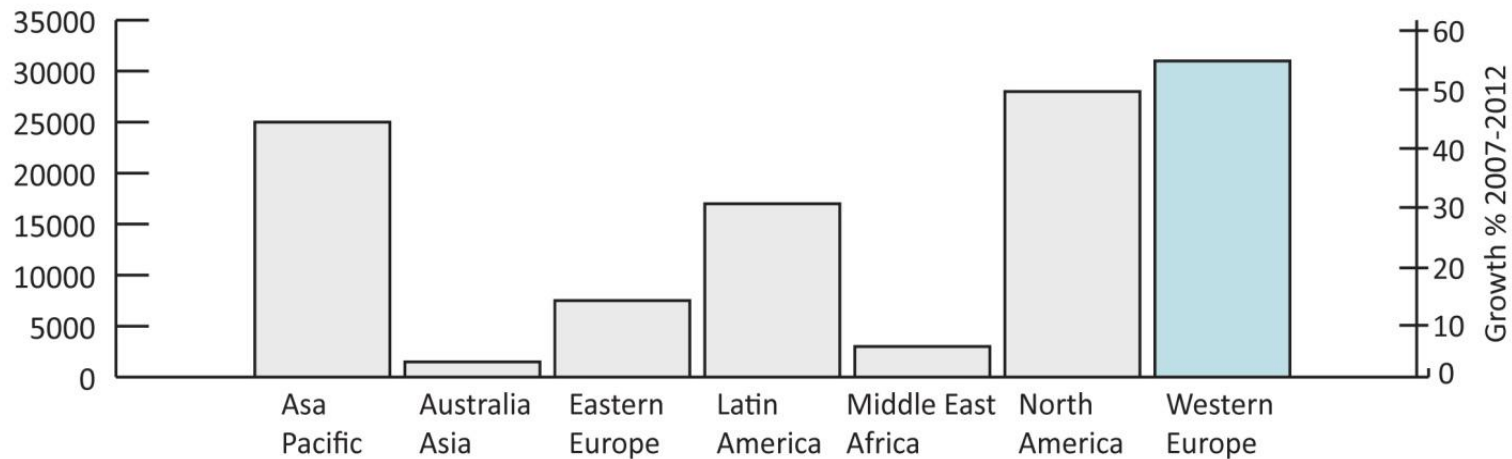
Graph 1: Leaders in Absolute growth Health and Wellness 2002-2007, Euromonitor international, 2010.

In the region's highly sophisticated health and wellness sector; Western Europe's aging population has led to a cohort of individuals for whom health has become a major concern. The health and wellness wave appears to have held up well against the global economic crisis that had hit Europe and has been ongoing since 2008. The crisis that considered by many economists the worst financial crisis since the great depression in the 1930's⁸ was resulted in the threat of total collapse of large financial institutions, The bailout of banks by national governments throughout Europe, major downturns in stock markets and of course the housing market leading to foreclosures, eviction orders and of course lost of employment.



Graph 2: Health and Wellness expenditures in Western Europe

Despite the severe financial crisis, the region's health and wellness sector has continued growing to a point that is it rather safe to say that today it is no longer considered a niche market, with products being widely available to consumers across various store formats, including discounters. The trend has been strongly incorporated into European culture and is expected to continue growing, being driven by wellness and convenience-oriented mainstream consumers seeking healthier food and beverages that support their faster-paced lifestyles.



Graph 3: Forecasted growth-Health and Wellness sector- Global (US millions%), Agriculture and Agri-food Canada Market Analysis report October, 2010

In the last decade, consumers have become increasingly aware of the health benefits of balanced diet and nutrition, following educational campaigns by state, private bodies launchings of innovative new product in a strategy more fit to the European mentality ended up in a result leading to an outcome in which the health and wellness sector is expected to see a greater diversity of products available even at a time of a crisis and moreover - in mainstream stores. This gradual penetration of products is crucial for suppliers as they are forced to pay attention to consumer tastes and preferences with regards to product types, packaging, labeling, etc to be competitive in this market means to know how to differentiate and that probably the most important key.

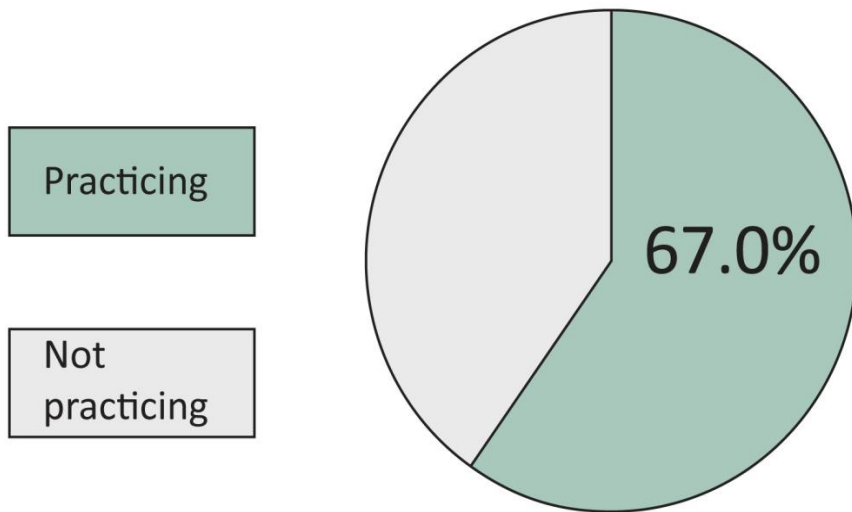
2.2.4 Wellness centers in Italy and Milan

The Americans are leading the number of the world's users of wellness centers, followed by Japan, United Kingdom, Germany, Italy and Spain. According to a press release made for the annual summit 'Rimini Wellness: fitness, benessere, sports on stage. On May 2013 the wellness market in Italy has an estimated annual turnover of more than 21 billion Euros. With over 30,000 enterprises divided into: wellness centers, body and beauty care facilities and fitness centers employing over 70,000 staff in various roles. Perhaps one of the most important figures is that there are 3,773 hospitality facilities in spa locations alone, with a total of 148,918 beds that makes 3.2% of the total number of beds in

accommodation facilities in Italy, Where the total amount of tourists reaches 15million a year in the whole country.

Around 40 million Italians practice sports activity more or less regularly. With 23% of Italians attending fitness centers regularly and 8.7% are attending different body care facilities (solarium and so on). All and all, almost 11 million Italians had stated spending or willing to spend at least 1,200 Euros a year for products and services regarding their physical aspect.²⁴

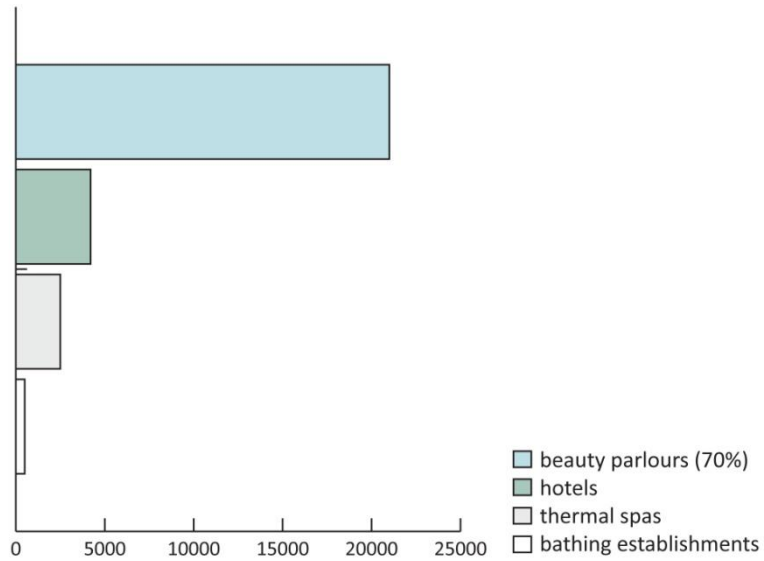
²⁴ The wellness market in Italy, Press release n. 13 of the 08/05/2013



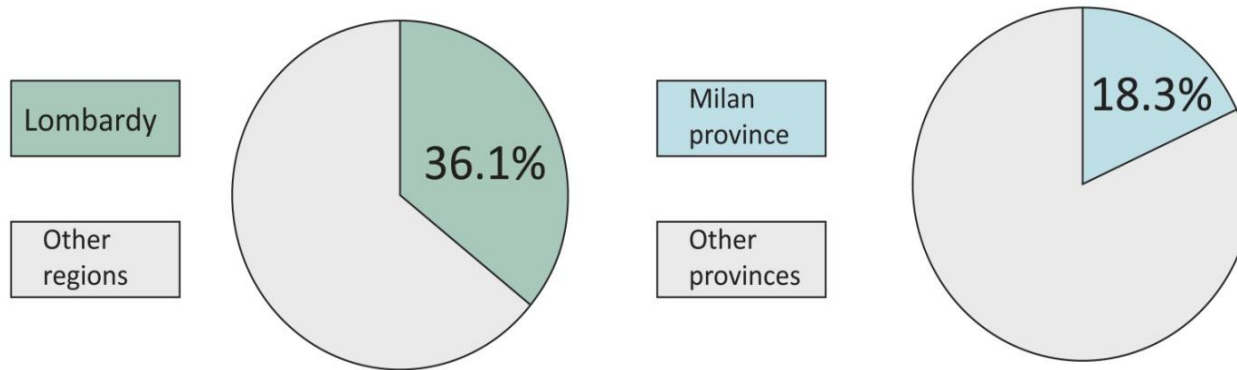
Graph 4: Italians practicing sport activities on a more or less regular basis. The wellness market in Italy, Press release n. 13 of the 08/05/2013

All and all in the state there are different types of wellness centers; the first type of wellness center is what defined as beauty parlors. With a total of 21,000 they are usually privately own businesses and represent approximately some 70% of the field's enterprises; The second type are hotels or holiday venues defined as 'Agriturismo' which are mostly farmhouse holidays which are around 4,200, Some 2,500 thermal spas and facilities for physical wellness, with approximately 7,000 swimming pools and fitness centers, as well as approximately 500 suitably equipped bathing establishments.

Lombardy region is the leading region with a total 36.1% of Out of the total enterprises dedicated to body care in Italy. In particular, Moreover, 18.13% almost one wellness centre out of five among those in business in is located the province of Milan.



Graph 5: Wellness center type distribution in Italy, The wellness market in Italy, Press release n. 13 of the 08/05/2013



Graph 6: Enterprises dedicated to body care in Lombardy region, Italy.

56% of Italian gym and fitness wellness centre clients live in the north, 25% in the centre and 19% in the south. In particular, the first places go to Lombardy (19%), Veneto (11%), Emilia Romagna and Latium (both with 10%) and Tuscany (8%); Campania (6%), Apulia and Sicily (both with 4%) stand out in the south. The largest age group engaged in physical activity is between 18 and 25 with some 32%, 27% are between 26-35 years of age, and 21% between 36 and 45, 14% between 46 and 55, and 6% in the remaining group (56-65).

41% of gym and wellness centre clients are single, 54% married or cohabitant and 5% divorced/separated.

It is highly important to point out that even though in this period Europe and Italy is definitely not excluded are facing an economical crisis this sectors enjoys certain stability. One of the factors ensuring it is the fact the services offered can diverse rather rapidly and the availability of multi-fictional wellness center is increasing. Of course, in general, Italians have increased their interest in wellness in general and in particular in their physical form.²⁵

²⁵ Health and Wellness the Trillion Dollar Industry in 2017, November 29, 2012

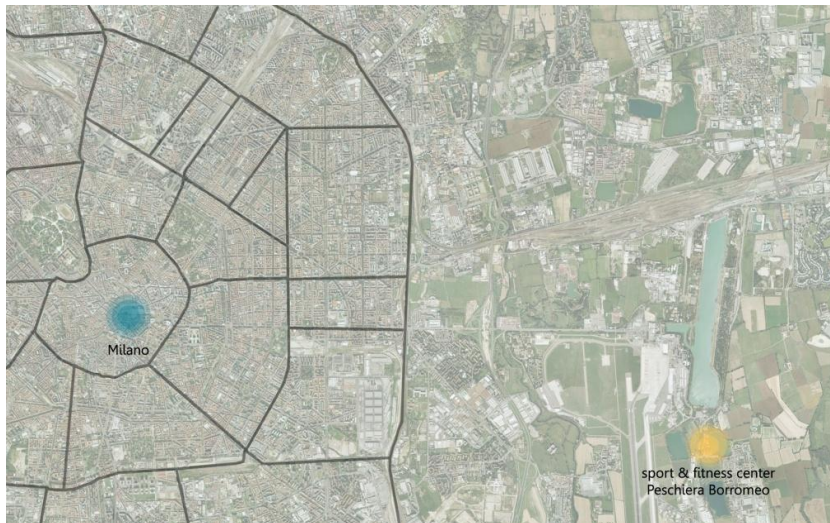
Chapter 3 - Study case analysis

“Get the habit of analysis – analysis will in time enable synthesis to become your habit of mind.”

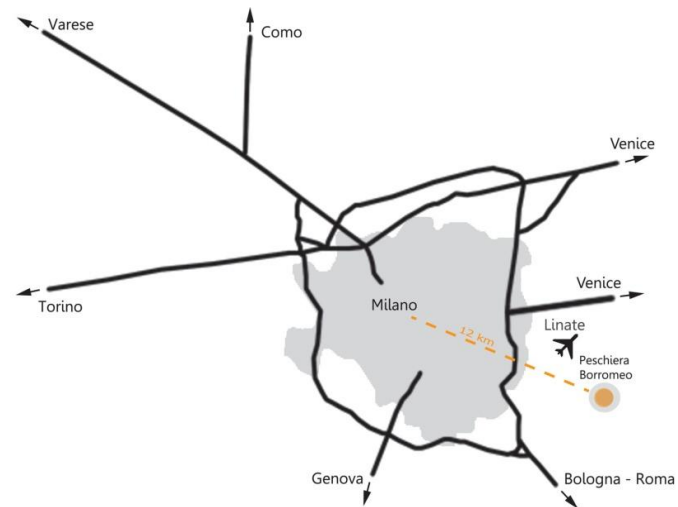
Frank Lloyd Wright

3.1 Case study: Gardanella village – main features

Gardanella village is a Sport and Wellness private members Club. With its location in Peschiera Borromeo, it is a part of the Milan municipality ('comune di Milano') the capitol of the Lombardy region in Italy. Milan can be considered as a business center of the entire northern part of Italy; it is the second largest city in Italy and city population is around 1,350,000 on an area of around 170 sqm²⁶.



²⁶ www.euroatlas.com



Drawing 7: Location map: Milan – Peschiera borromeo.



Figure 1: Gardanella Village, Sport Center bird view

3.1.1 Site 3.1.1 Location

Gardanella is located on the east side outside Milan, close to Linate airport and well connected with the main entrances and exits to the city. The village is a part of the municipality of “Peschiera Borromeo” of which the population is 21,000 on an area of 23.5 sqm.²⁷ Although it is a part of Peschiera Borromeo, It is still detached from the main built area located more in the margins of it along with some industrial constructions. It is a place where physical wellness, sport and nature come together. It has the advantage of being both “inside” and “outside” in the sense of offering a green environment and a sense of detachment though still easily reachable. The total area is 130,000 square meters from which 55,000 square meters are occupied by the Gardanella lake; a natural lake with a depth that reaches up to 28 meters. Most of the built area is confining with the lake from one side and rich vegetation from the other, hiding the road and the surrounding buildings. Around the lake there is a 400 meters long running course and different sport activities are practiced on the lake itself including driving range for golf (golf practice). Other facilities include: 6 tennis courts, padel court, gym and fitness room, spa and thermal plants. As mentioned before for the last decade the place has been

operating on a commercial basis as a private members club dedicated to several types of sports where the members play together or use the facilities as they wish. This stability ensuring system where members pay an annual fee allowed improvement of customer relation, reputation and integration in the local community. The Spa services however, can be accessed also by non-members. Gardanella village can also be defined as a health club for the reason that it combines several features of the wellness sector such as: spa, gym and a restaurant area.

3.1.2 Infrastructure and transportation

Infrastructure wise, it is situated close to both ‘Linate’ airport and the tangential road and it is well connected to the A4 highway leading to Venice and to roads connecting directly to Milan from the East. As far as the public transportation is concerned, currently there is just one bus line from Milan’s city center with a stop located around 1 km away from the village thus leaving it basically accessible only by car. The future yellow line ‘Linea Gialla’ however, predicts a metro stop by the name of “Pantigliato” by 2015 to be located pretty closely to the area.

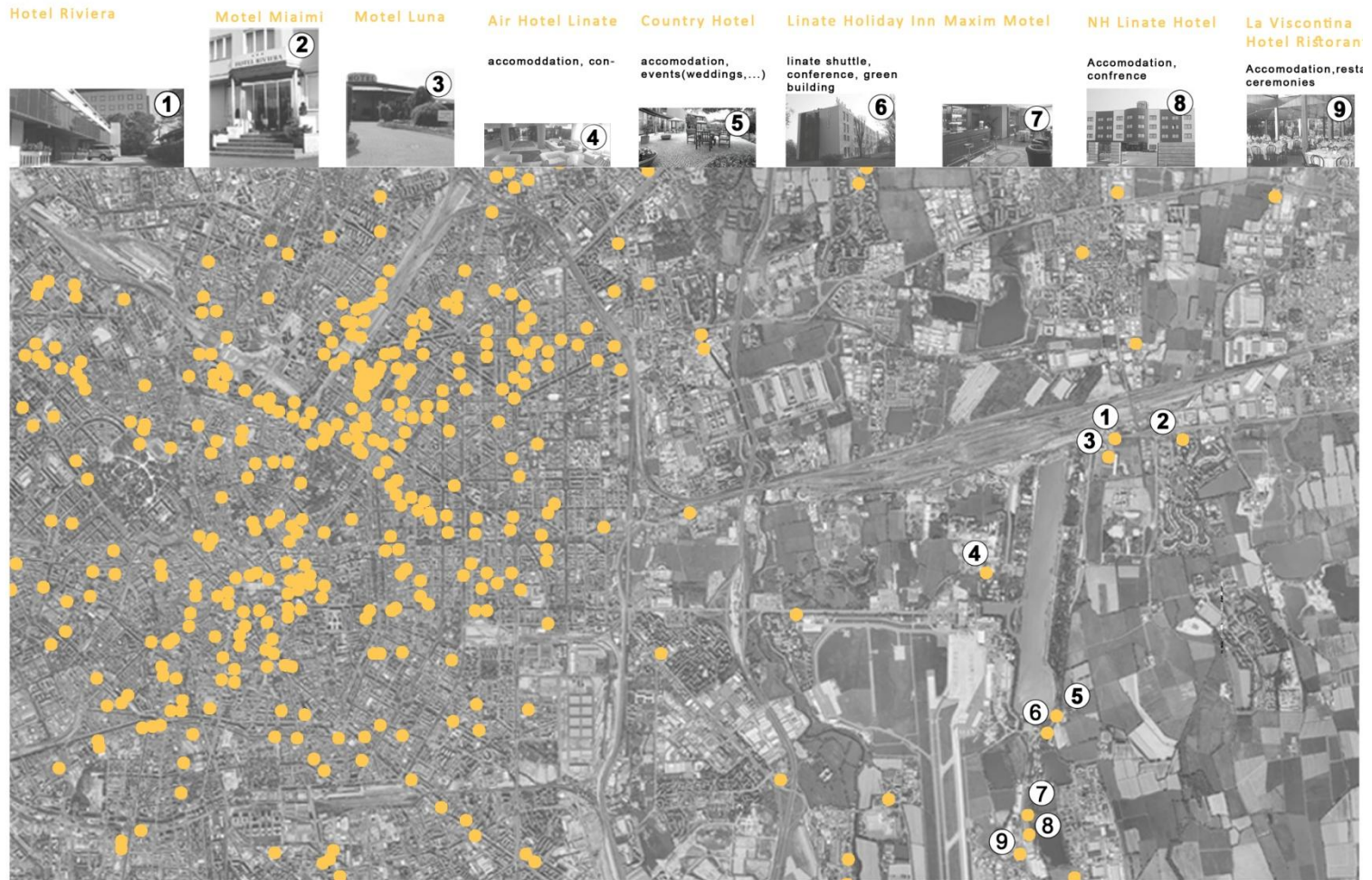
²⁷ www.euroatlas.com

3.1.3 Hotels density

This maps was created in order to examine the amount of hotels, bed and breakfasts and other such facilities in the Area of Milan focusing also on the East side of the city where Gardanella village is located. From this map we can learn that while in Milan most hotels are located in the center and near the main railways stations; there are no regulations regarding the outskirts of the city. Around 'Linate' airport we can find 3 hotels (numbered 1, 2 and 3) in a distance that does not exceed 1 km from the airport whereas the next hotel constellation (numbered 5 to 9) is located several kilometers from it. Being an important business destination, many of the guests in this area are short time travelers for business purposes. This map was made therefore, in order to examine a possibility of looking at Gardanella as place that could also offer short time staying for individuals who would like to 'keep fit' while traveling.

3.1.4 Competitors' location

This map was created in order to examine and specify potential competitors and their distance from Gardanella village. We can learn that up to a distance of 4 km there are no organized sport activity structures.



Drawing 9: Hotels density Milan and surrounding



Drawing 10: Hotels density Milan and surrounding

This table was made in order to assess more easily the activities offered by other establishments and in order to have a clear overview of their types.

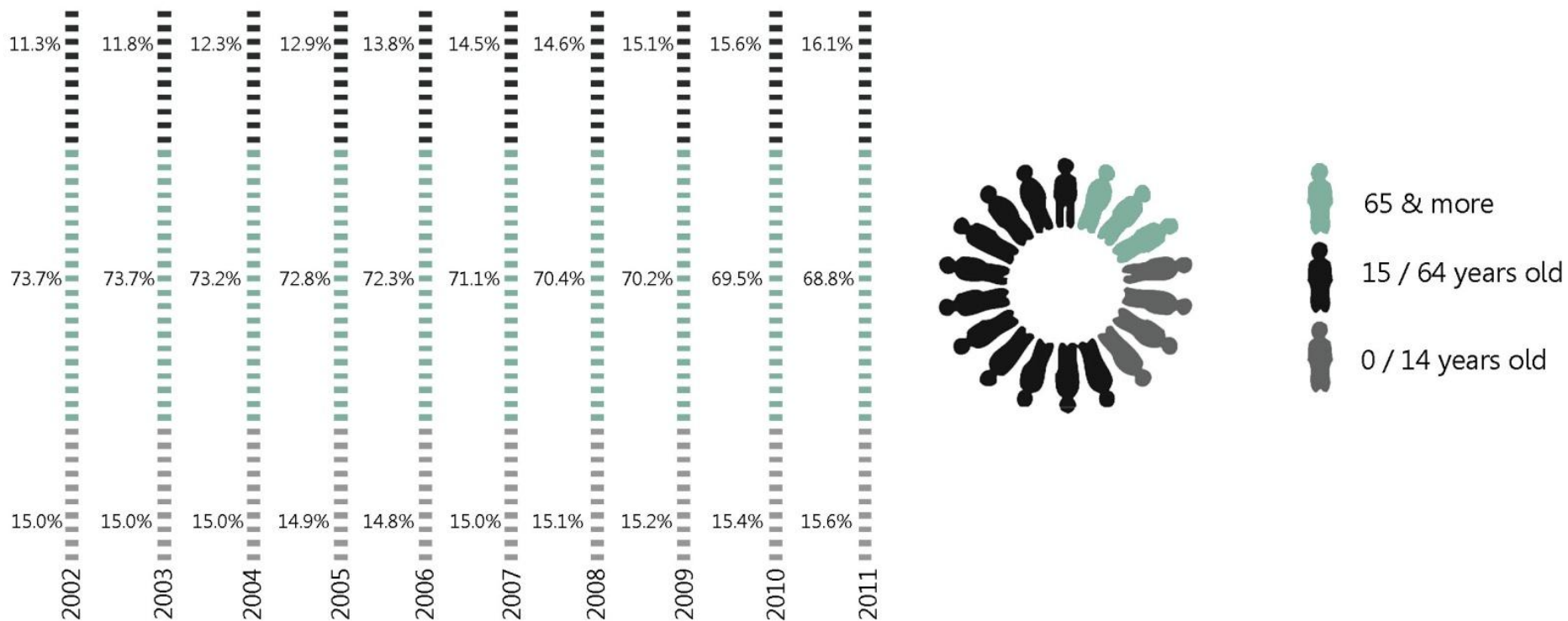
Facilities offered by sport structures in Peschiera Borromeo area

	Swimming Pool	Gym	Group classes	Spa	Tennis	Out-door sports	Football	Nutrition programs	Golf	Scuba diving	activities for disabled	Karate	Judo	Yoga	Dance	Shop	Bar	Restaurant	
1		✓			✓		✓			✓									Kick Off SRL
2																			Treforclub
3	✓				✓	✓	✓			✓	✓	✓	✓	✓	✓				Gestisport soc
4							✓												Accademia Sandonatese
5					✓		✓												Top Tennis Soc. Sport
6																			Società Sportiva Dilettantistica
7		✓																	Shadow Gym Di Contardi Sergio
8									✓								✓	✓	Lucchesi Golf Club Il Laghetto
9	✓	✓		✓	✓		✓	✓									✓	✓	Gardanella Sport Village

- 1/ Kick Off SLR, San Donato Milanese
- 2/ Treforclub, San Donato Milanese
- 3/ Gestisport Soc. Sport A R.L
- 4/ Accademia Sandonatese, San Donato
- 5/ Top Tennis Soc. Sport Dilettant A R.L, PB
- 6/ Socita Sportiva Dilettantistica, PB
- 7/ Shadow Gym di Contardi, PB
- 8/ Lucchesi Golf Club il Laghetto, PB Milanese
- 9/ Gardanella Sport Village, PB

Table 1: A closer look of the facilities each sport center offers

3.1.5 Population breakdown



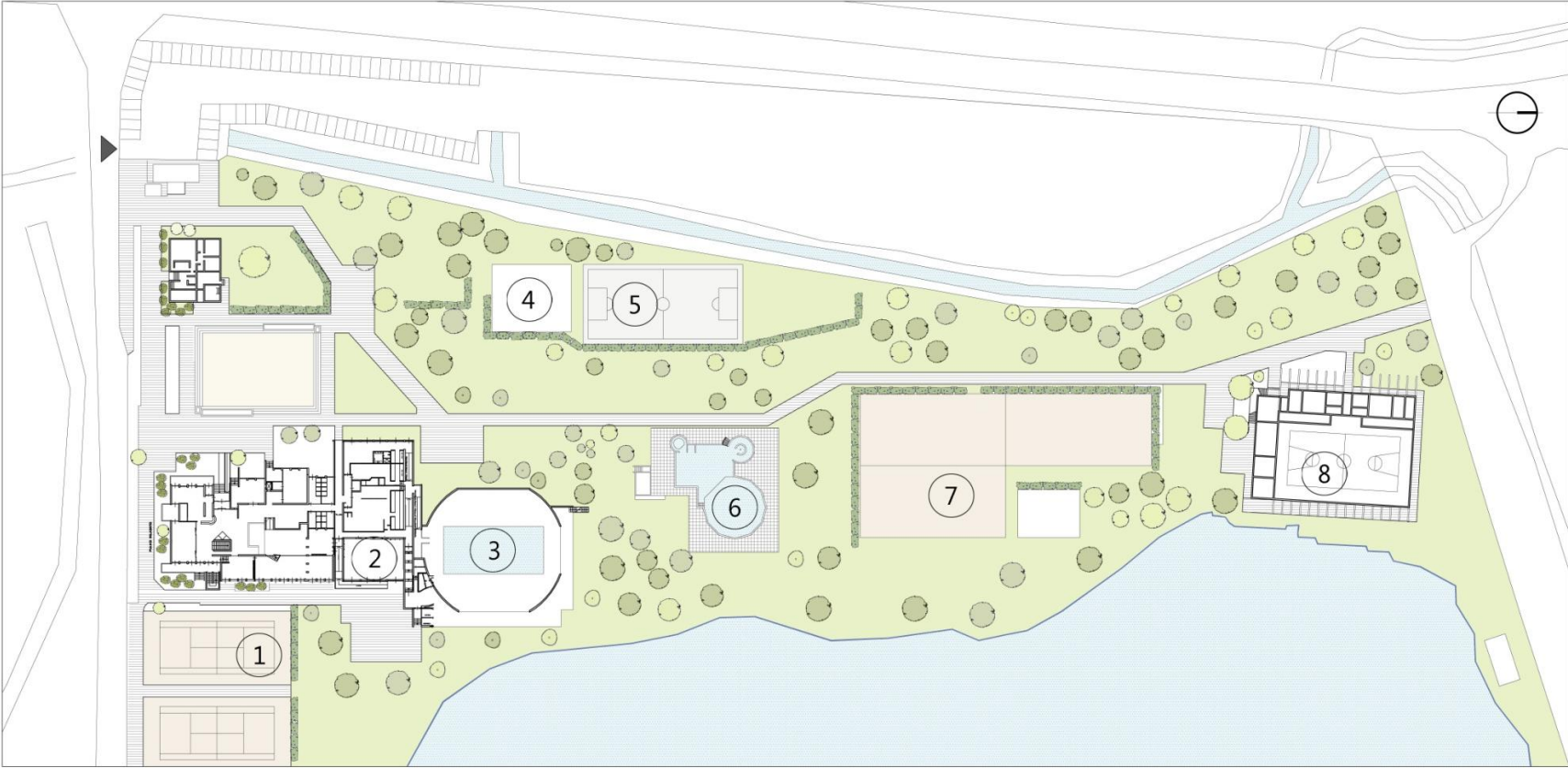
Graph 7: Population breakdown in Peschiera Borromeo and Milan, Interpretation, Data ISTAT 2011

3.1.6 Sport activities practiced in Italy

/ Sport's Name	/total activities practiced	/index per 100.000 inhab.	/ Sport's Name	/total activities practiced	/index per 100.000 inhab.	/ Sport's Name	/total activities practiced	/index per 100.000 inhab.	/ Sport's Name	/total activities practiced	/index per 100.000 inhab.
1. CALCIO / CALCETTO	4.363.000	7.548	4. SCI	2.060.000	3.563	10. BODY_BUILDING	555.000	960	19. ATTIVITA_SUBACQUEE	143.000	248
CALCIO			SCI_ALPINO			11. DANZA_SPORTIVA	333.000	575	PESCA_SUBACQUEA		
CALCETTO (calcio a cinque)			SCI_DI_FONDO			Altre attività di danza-ballo	175.000	304	NUOTO_PINNATO		
2. SPORT ACQUATICI / NUOTO	3.480.000	6.021	SCI_NORDICO			BALLO			ORIENTAMENTO_SUBACQUEO		
NUOTO			SNOWBOARD			DANZA_MODERNA			20. JUDO	136.000	236
NUOTO_SINCRONIZZATO			FREE_STILE			DANZA_CLASSICA			21. VELA	127.000	220
PALLANUOTO			CURVING			DANZA_FUNKY			WINDSURF		
TUFFI			5. CICLISMO	1.321.000	2.285	BALLO_LATINO_AMERICANO			22. MOTOCICLISMO	74.000	128
Altre attività acquatiche			MOUNTAIN_BIKE			BALLO_LISCIO			MOTOCROSS		
ACQUA_GYM	95.000	165	RAMPICHINO			DANZA_CLASSICA_MODERNA			MOTOTURISMO		
3. GINNASTICA	2.204.000	3.814	CICLOTURISMO	404.000	699	DANZA_ARTISTICA			ENDURO		
Ginnastica artistica e ritmica			Altre attività del pedale			DANZA_HIP_HOP			TRIAL		
Ginnastica artistica (corpo libero e attrezzi)			BICICLETTA			BALLO_DI_GRUPPO			23. GOLF	59.000	102
GINNASTICA_ARTISTICA			SPINNING			DANZA_JAZZ			24. TIRO	51.000	89
GINNASTICA_CORPO_LIBERO			CYCLETTE			BALLO_CLASSICO			TIRO_AL_PIATTELLO		
ATTREZZISTICA			6. TENNIS	1.298.000	2.245	DANZA_POPOLARE			TIRO_A_SEGNO		
GINNASTICA_RITMICA			7. ATLETICA_LEGGERA	995.000	1.721	DANZA_NON_SPORTIVA			TIRO_A_VOLO		
(p.m.) Trampolino elastico			Corse (velocità, mezzofondo, ostacoli, staffetta, campestre)			BIO_DANZA			(p.m.) Tiro con armi sportive da caccia		
Altre attività ginniche			CORSA			CAPOEIRA			Attività venatoria		
di fitness e cultura fisica,	1.405.000	2.431	MEZZO_FONDO			12. PESCA_SPORTIVA (con canna e lenza)	323.000	559	CACCIA	356.000	616
ATTIVITA_MOTORIA			CORSA_DI_FONDO			13. KARATE	244.000	421	25. TIRO_CON_L_ARCO	46.000	79
ATTIVITA_MOTORIA_DI_BASE			CORSA_AD_OSTACOLI			14. ALPINISMO E ARRAMPICATA	197.000	340	Totale per tutte le attività	23.506.000	40.668
EDUCAZIONE_FISICA			CORSA_CAMPESTRE			ALPINISMO			Altre attività	888.000	1.537
GINNASTICA_DOLCE			MARATONA			SCI_ALPINISMO			Totale complessivo	24.394.000	42.205
GINNASTICA_PER_3_ETÀ			MARCIA			ARRAMPICATA_SPORTIVA			per tutte le attività considerate		
GINNASTICA_CORRETTIVA			PODISMO			FREE_CLIMBING			"sportive" dai rispondenti		
GINNASTICA_PRESCIISTICA			Salti (alto, asta, lungo, triplo)			Escursionismo,					
GINNASTICA_CURATIVA			SALTO_IN_ALTO			trekking, altre attività di scalata	263.000	456			
GINNASTICA_POSTURALE			SALTO_LUNGO_TRIPLO			ESCURSIONISMO					
GINNASTICA_ANTALGICA			(p.m.) Lanci (disco, peso, martello, giavellotto)			TREKKING					
FITNESS			(p.m.) Prove multiple (esathlon, eptathlon, octathlon, decathlon)			SPELEOLOGIA					
CARDIO_FITNESS			Altre attività atletiche	510.000	882	TORRENTISMO (Canyoning)					
FITNESS_POSTURALE			(footing,jogging)			15. PESI / SOLLEVAMENTO_PESI	202.000	350			
AEROBICA			FOOTING			16. PALESTRA_PESI	171.000	296			
STEP			JOGGING			17. PATTINAGGIO_A_ROTELLE	166.000	288			
AIR_BOX			8. PALLAVOLO	988.000	1.709	HOCKEY_ROTELLE					
BODY_GYM			MINI_VOLLEY			HOCKEY_PISTA					
BODY_SCULPTURE			BEACH_VOLLEY			ROLLER_BLADE					
TOTAL_BODY			9. PALLACANESTRO	606.000	1.048	SKATE_BOARD					
PALESTRA						SKI_ROLL					
RACE						18. SPORT_EQUESTRI	156.000	270			
ROWING						EQUITAZIONE					

Table 2: Sport activities practiced in Italy. ISTAT 2011

3.1.7 Site plan



- 1. Tennis court
- 2. Gym
- 3. Closed swimming pool & spa center
- 4. Children's playground
- 5. Football pitch
- 6. Open pool
- 7. Tennis court
- 8. Sports hall



Drawing 11: Gardanella Village – Sport Center - Plan

3.2 Survey

As a sequence to all the physical analysis of the place and surrounding we decided to continue with a comprehensive survey that will give us another point of view from the inside and will help us to understand how the members see and experience the sport centre and its facilities. It was a way to have all information regarding the opening hours, usage, amount of visitors and their age and different requests they might have regarding the sport center. Our aim was to understand the duration, but we also wanted to see if there is a need for accommodation to host people over the weekend in order to increase income fluxes. We have also decided to present a direct question asking people if they would like to stay over for a weekend with their families, and if so, how much would they like to spend. The second part of the survey was related to the infrastructural connections, given the fact that the center is currently reachable only by car, we wanted to see if there is any reason to suggest an improvement in the connections system in order to obtain more visitors. The last part of the survey was referred to the events, by naming different events we tried to see if the users would find Gardanella suitable or not in conducting them.

Survey:

Visiting:

-Do you come here alone (if not specify: friends, family?)

-How often do you visit?

-What sport facilities do you use Basketball, Swimming pool, Spa, tennis, ADD. E poi

<i>Summer</i>	<i>Winter</i>
<i>Basket</i>	<i>Basket</i>
<i>Spa</i>	<i>Spa</i>

-How long do you usually stay here for?

-Would you stay here for longer if there other activities present?

-Would you stay here for longer if there were accommodation facilities present for example a weekend with friends or family?

*-How much would you pay for accommodation? **Or** what would be your budget?*

Connections:

-How do you get here? (Personal car/public transportation)

-Are there enough parking spaces?

-If there were a bicycle lane would you consider using it?

Events:

Do you think this place is suitable for events?

<i>Event</i>	<i>Not suitable</i>			<i>Very Suitable</i>
<i>Wedding</i>				
<i>Summer parties</i>				
<i>Kids Birthdays</i>				
<i>Adult Birthdays</i>				
<i>Office and company events</i>				

<i>Dancing</i>				
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The survey was a way to create some kind of guidelines in order to decide what would be the initial approach. Apart from the survey we also arranged a meeting of 2 hours with the manager and customer relation person that give us all the answers we wanted and provided us with some crucial information that was not covered by the survey itself. Since that person is in touch with the customers/club members it had all the information regarding the opening hours, usage, amount of visitors and their age and different requests they have regarding the sport center. It helped us gather the information we needed in order to base our working process and make sure we making a process that would be correct.

Conclusions:

- The sport center is first a member club, it means that even if they have different request from other users (not club members) of using different facilities, they are obliged to their members. This ensures a small number of visitors all yearlong (no queuing, space is always available).
 - The origin of Gardanella center was a vacation area for an Italian banking group; these people had steady jobs and high salaries. These days they are all retired and are all members of the club since they enjoy their services and it became a king of a “habit” and a meeting place for this group. They also enjoy large pensions (which is rare in Italy).
 - The members’ age range is diverse but mostly made of families.
 - They are the only center in an area of about 15 square km holding a golf practice area.
 - They also have clay Tennis courts (high cost of maintenance).
 - The Spa is the only service currently open for outside visitors.
 - The relationship between the staff and the clients is of “a family” as in; the staff knows the clients by name.
- The club is open all year long from 7:00 to 23:00 including Sundays and Holydays (it is closes only on Christmas time 23.12-25.12)
 - The heat in the Swimming pool is unbearable and the glazing always looks dirty, as there is dirt trapped between the two glass layers that cannot be cleaned.
 - Events are hard to manage as the restaurant is not prepared to receive a large amount of guests at the same time (lack of plates) also on the part of the clients, being a club, they cannot “close” certain areas.
 - The heating expenditure for the basketball building can rise up to 500 Euros a day (old heating system ‘gas olio). This is why they cannot rent out thus space.
 - The mini-golf area is used, but a bit neglected.
 - As for prospects for the future, they would like to keep it is a club but they are also aware of the high costs of maintenance and that the fact that their clients are aging.
 - The only way to get there is by car, On the other hand, parking is abundance.

3.3 SWOT Analysis -

Strength, Weakness, Opportunity, Threat.

The SWOT Analysis is the basis of all strategic work of a project. It is a simple and powerful strategic planning tool and a method to synthesize.

The **Strengths, Weaknesses, Opportunities** and **Threats** involved in a project in a way that can be used to develop ideas about what we should do. It is a structured approach that helps strategists to imagine systemically about strategic issues and it is commonly used in marketing and business in general as a method of identifying opposition for a new venture or strategy. The technique developed by Albert Humphrey an American business and management consultant, in the 1960s and 1970s while working for the Stanford Research Institute using data from the top companies in America at the time. He devised a tool that enables a subjective assessment of a given situation or subject in order to make critical decisions that are related to planning and management. It is a useful technique for understanding and for identifying both the Opportunities open to you and the Threats you face. Conducting a SWOT Analysis is required when delivering the project on time and on budget, it can provide you key inputs for creating the project plan. A SWOT analysis can offer helpful perspectives at any stage of an effort and it should be used to:

- Explore possibilities for new efforts or solutions to problems.
- Make decisions about the best path for your initiative. Identifying your opportunities for success in context of threats to success can clarify directions and choices.
- Determine where change is possible. If you are at a juncture or turning point, an inventory of your strengths and weaknesses can reveal priorities as well as possibilities.
- Adjust and refine plans mid-course. A new opportunity might open wider avenues, while a new threat could close a path that once existed.

SWOT also offers a simple way of communicating about your initiative or program and an excellent way to organize information you've gathered from studies or surveys. It involves specifying the objective of the project and identifying the **internal factor** (strengths and weaknesses and the **external factors** (opportunities and threats). Factors, those are favorable and unfavorable to achieving that objective. It is a way to examine what Strengths should match what Opportunities and Threats, and afterwards, what Weaknesses should match what Opportunities and Threats. From this matching, we will get an idea on what course

of action will get as at an advantageous position. The purpose of performing a SWOT is to reveal positive forces that work together and potential problems that need to be addressed or at least recognized.

Several factors that can be assessed in the **internal** situation analysis:

- Location
- Experience
- Service
- Quality products
- Marketing
- Reputation
- Funding

Several factors that can be assessed in the **external** situation analysis:

- Markets (customers)
- Competition
- Technology
- Supplier markets
- Labor markets
- The economy
- The regulatory environment

Strengths and weaknesses refer to the existing conditions of the site, which are either helpful or harmful to achieving the goals of the project. Strengths are favorable conditions that need to be built upon, whereas weaknesses are unfavorable conditions that need to be considered in the design and planning of the future station. Opportunities and threats refer to potential future conditions of the site. Opportunities are potential improvements and favorable conditions that the project will seek to achieve. Threats are the potential barriers that may impede the realization of project goals. Opportunities need to be prioritized and optimized whereas threats need to be countered or minimized.

- **Strengths:** are characteristics of the project that give it an advantage over others:

A good examine of the advanced project management skills, good knowledge and relationships with subcontractors and material providers, use of modern technology and machinery, and skilled employees. On the other side, a strong investor will have established relationships with contractors and subcontractors and have taken care of building permits and project documentation. The investor will understand the market demand in relation to the building project and have the financial capital needed for the project. If both major parties for a building project display the listed

strengths, the chances of success of the project are better.

- **Weaknesses:** are characteristics that place the team at a disadvantage relative to others:

The weakness is the resistance to new methods, lack of coordination and organization, inexperienced staff and weak relationships with subcontractors and material providers. Sometimes weaknesses may offset the strengths. In a building project, the contractor is not the only person to have possible weaknesses. An investor who does not have prospective buyers, who doesn't have the protection or support of a supervisory board, who does not want to use the allocated resources and who has hired an inflexible contractor is as likely to make a project fail. However, it is not because a building project's SWOT analysis shows weaknesses that the project is doomed to fail. It is simply an indicator of areas of concern that will need extra attention once the project is begun.

- **Opportunities:** elements that the project could exploit to its advantage:

A successful project will give the contractors and the investors a range of opportunities for future contracts because they will have understood how to work together and developed a well-

coordinated project team. Building projects also prove to offer opportunities to citizens by creating jobs, improving municipal services and encouraging economic development, as well as promoting housing and community development.

- **Threats:** elements in the environment that could cause trouble for the project:

Threats are challenges that can sometimes be overcome or avoided, but at other times they can seriously impact the building project. From a contractor's point of view, examples of threats include poor geographical location for the building, inadequate space for material storage and constant change of direction from the investor or project manager. An investor may find scheduling delay and reduced construction materials quality as serious threats to completion of the projects. Citizens may also be threatened by a new building project due to the disturbance created by construction and the possible loss of green space.

According to the American Management Association, "SWOT is perhaps most useful as a tool for organizing data and allowing you to distill them down to a few strategic priorities."

The primary goal of a SWOT analysis is to identify and assign all significant factors that could positively or negatively impact success to one of the four categories, providing an objective and in-depth

look at the project. It is meant to be used during the proposal stage of strategic planning. A SWOT analysis can be carried out for a product, place, industry or person. The most common users of a SWOT analysis are team members and project managers who are responsible for decision-making and strategic planning. Each person or group offers a different perspective on the strengths and weaknesses of the program and has different experiences of both. Each one may have information about an opportunity or threat that is essential to understanding the position and determining the future. A SWOT analysis is often created during a retreat or planning session that allows several hours for both brainstorming and more structured analysis. The best results usually come when participants are encouraged to have an open attitude about possibilities. When creating the analysis, all people involved are asked to pool their individual and shared knowledge and experiences. The more relaxed, friendly and constructive the setting and environment, the more truthful, comprehensive, insightful and useful the analysis will be. The main tangible output is a matrix that presenting the most important strengths, weaknesses, opportunities and threats for the area, sector, region, country examined and aiming at giving a reasonable overview of major issues that can be taken into account when subsequently drawing up strategic plans for a project. When drafting a SWOT analysis, individuals typically create a table split up into four columns so as to list each impacting element side-by-side for comparison. Strengths and weaknesses won't typically match listed opportunities and threats, though some correlation should

exist since they're tied together in some way. The success of this method is mainly owed to its simplicity and its flexibility. Its implementation does not require technical knowledge and skills. SWOT analysis allows the synthesis and integration of various types of information which are generally known but still makes it possible to organize and synthesize recent information as well. SWOT usually reflects the current position or situation, therefore one drawback is that it might not encourage openness to new possibilities. It can be used to justify a course that has already been decided upon, but if the goal is to grow or improve, it can be differently useful.

3.3.1 SWOT analysis in Gardanella village

The SWOT analysis for Gardanella village was commenced at the end of the information-gathering phase and is used as a summary of the situation; this tool in this case was used in order to establish the guidelines that needed to be followed in order to obtain ad-hoc sustainable design. And guarantee progression in the quality aspect and supplying ideas in order to better up the financial situation.

Gardanella sport village building complex was build during the 1960's and 1970's as a resort for bank workers. The technology existed in those times did not provide any manners for the energy saving methods or the future maintenance of such large structure regarding heating and cooling systems, insulation and so on. As a

result and with the combination of poor building materials such as concrete and glass, two of the main buildings need serious insulation and renovation works to the point that one of them (the gymnasium structure) cannot be used during the winter time as the expenses for heating are way too high and the heating method used (gasolio) is too expensive. The place was bought in the early 1990's and was turned into a private club with an annual membership. Members can enjoy all facilities present in the compound and have free access all year long. The only service left for 'outsiders' usage was the Spa located at the basement floor of the covered swimming pool building. Most of the club members are the ex bank workers now retired they are enjoying a special price made for them and a friendly and homey feeling Gardanella gives them.

As a start we had a meeting to hear and learn about the place from the point of view of the owners and to understand exactly what they wish to have and change in their place. What are their goals and how they would like to see the place developing in the future. We learned about them and about all the activities present at the site, how all the facilities are working, the opening hours and schedule, about the members that are using on a regular basis. The life cycle of the sport centre during the winter and during the summer time. After knowing these basis notions about the village we could start to examine the place from the basic information and from the site itself; a comprehensive survey from the clients to have

all information regarding the opening hours, usage, amount of visitors and their age and different requests they have regarding the sport center. All this was a way to create some kind of guidelines in order to decide what would be the initial approach. It helped to gather the information we needed in order to base our working process and make sure we making a process that would be correct and not just random juxtapositions of functions. The examination of the buildings, functions, activities and the materials being used, a tore site to look and understand in the best way what we have and how things can be improved. Looking for all external and internal factors of the place and surrounding that influence now and in the future the resistance and maintenance of the sport center.

The main things was to create a new layer to a potentially large place, improve the image of the sport center by introducing new elements and renew existing buildings and green area.

3.3.2 *Internal factors: Strength and Weaknesses*

Strength

- Customer loyalty and relationship - In origin Gardanella center was conceived as a closed vacation area for an Italian banking group; these people had steady jobs and high salaries. In a later phase it was opened to the public and became a private members club and the ex bank workers had turned into club members with special conditions. As customers they are loyal since Gardanella for them had become a 'second home' and a meeting place enjoying large retirement pensions they are the most stable member group of the club. The sport center is first a member club, it means that even if there are different request from other potential clients (not club members) to use different facilities, they are first obliged to their members. This ensures a small number of visitors all year long, even in busy months such as August for example, there is no queuing and space is always available. The members' age range is diverse but mostly made of families, the relationship between the staff and the clients are of 'a family' as in; the staff knows the clients by name
- Long Opening hours - open all year long from 7:00 to 23:00 including Sundays and Holydays (it closes only on Christmas 23.12-25.12).

- Experience – After years of dealing with customers, the knowledge gain of customer care is priceless and is definitely an important advantage.
- A good mixture of activities - A wide range of sports activities that can be used by everyone of all ages
- Golf practice - They are the only center in an area of about 15 square km holding a golf practice facility.
- Green area – All facilities are surrounded by vegetation and the natural lake that gives a quiet and relaxation environment.

Weaknesses

- Events area – It is hard to manage as the restaurant is not prepared to receive a large amount of guests at the same time (lack of plates) also on the part of the clients, being a club, they cannot "close" certain areas.
- High cost of maintenance - The heating expenditure for the basketball building can rise up to 500 Euros a day in winter (old heating system 'gas olio), the clay tennis courts are also expensive to maintain.
- A closed membership club limits the amount of users - in many cases requests for special private events, one time

entrances and such are being turned down as the loyalty is first to the club member what prevents the creations of other income sources.

- Low connection to public transportation - The only convenient way to get there is by car on the other hand, parking is abundance.

3.3.3 *External factors: Opportunities and Threats*

Opportunities

- Low connection to public Wellness market in rise - Based on a research further published in a book by the world famous economist Paul Zane Pilzer by 2020 the expenditures for wellness products and services is going to increase by 150% worldwide. Yoga, Pilates, Slow food and so on are much more than just a passing trend; they all became a way of life.
- Change in market taste - The term "health and wellness" has become a powerful tool for marketers in various industries. As people decide to change their habits and pursue healthier lifestyles, many different companies stand to benefit. Health food retailers, manufacturers of exercise equipment, could all see increased demand for their products as a result of the health and wellness trend. Wellness is defined as the overall process of maintaining a general state of good health. The combined phrase "health and wellness" has come to mean the pursuit of overall physical, mental, and emotional health. This term is used

frequently in various contexts, all aimed at promoting a better lifestyle. It is the fastest most growing industry nowadays.

- Soon to be open new metro stop – New metro stop should be opening in the future that will stop also in Gardanella Village. .

Threats

- World and European market crisis – The crisis starting at 2008 had hit services and left the market on a hold. The average family had reduced its expenses and in some extents leaving it to the minimum necessary. Club membership can be something that can be easily eliminated or downgraded to a simple gym subscription.
- Change in population age - Gardanella village has a stable increase from the ex bank workers though they get older and older, some of them are having difficulties driving and therefore are avoiding getting there.
- Tax increase



Drawing 12: Gardanella Village – Sport Center – Plan SWOT Analysis table

Chapter 4 – References for Project synthesis

*“A satisfied customer is the best business strategy
of all”*

Michael LeBoeuf

4.1 Well functioning sports centers

Once analyzing Gardanella sport village from different aspects, we were able to distinguish guidelines that could help us in the design process. We then thought it would be useful to further analyze already-working sport clubs more or less in the same scale. This way, we could learn what features can turn later into a reference worth to be taken in account.

In this chapter we will therefore analyze three sport facilities, the first one; *Wingate Institute* located in Israel and has more of a sport academy aspect to it. The others are both located in Milan area *Aspria* and *Mc²* both aim their marketing strategy strongly towards the wellness market with a high range of diversity.

We will look closely on the services offered, the subscription type and practices. In this way, we could have a clear view of the strategies each facility uses. Since the wellness market has quite a large range of fields, it is a good opportunity to examine the popularity and the operation methods used by well known experienced structures.

Gardanella enjoys a large area with a natural lake; It can host large variety of sport-oriented features. An essential part of the strategy is to narrow-down the numerous possibilities in order to establish a clear program.

4.1.1 *The Wingate Institute*

The Wingate Institute, Israel's National Centre for Physical Education and Sport, was inaugurated in 1957 and is named in honor of Major General Order Charles Wingate "The Friend".

The State of Israel concentrates at the Institute the educational, professional and scientific resources for the development of physical education, "sport for all", and elite sport and sport as a means of social and physical rehabilitation.

Some 5000 academics, coaches, athletes, students and the general public - both native-born Israeli and new immigrants - pass daily through Wingate's gates. The Institute serves as a training centre for national teams, the Olympic Squad and hosts international sport science conferences.

In recognition of extraordinary achievements in the field of education, sport medicine and research, the then President of the State of Israel - the late Mr. Haim Herzog - awarded the prestigious Israel Prize to the Wingate Institute in 1989

The Wingate Institute has 37 amenities and facilities on its 120 acre landscaped garden campus. It offers its services, including dining and accommodation facilities, 60 products to a wide variety of customers including students, teachers, academics, researchers, doctors, coaches, trainers, corporate bodies, amateur and elite athletes and the sport enthusiastic public. The atmosphere generated on its grounds, adjacent to the shore of the Mediterranean Sea and just minutes away from the seaside resort

town of Netanya, provides a unique environment that encourages physical activity. The Wingate Institute is situated on an autonomous College of Physical Education, a School for Coaches and Instructors, Professional Departments for Sports Medicine and Research, a Pedagogical Center (including a Library, Audio- Visual Department and The National Archives of Physical Education), Halls of Residence, Gymnasias, Catering and Dining services, Sport Amenities, and Sports hotel.



Figure 2: The Wingate Institute

Throughout the year Wingate conducts seminars, international scientific congresses, and corporate sport and fun days, offers training camps, and hosts dozens of local and overseas sport groups, in diverse sport fields such as soccer, volleyball, basketball, tennis, swimming, water polo, squash, rugby, martial arts, wrestling, gymnastics, spinning, table tennis, fitness gym, track and field and general sport and recreation activities.

Facilities

- Sport hotel
- Swimming pools
- Sport and Gymnastic Halls
- Fitness gymnasias
- Sport Fields
- Fitness and Recuperation Centre
- Track & Field Stadium
- Sport Recreation Centre
- International Jewish Sports Hall of Fame Exhibition
- Permanent Exhibition on Physical Education & Sport

Services

- Bookings and Facilities Department
- Sport Medicine Clinic

- Facilities Events Department
- Training camps for local and overseas sport groups
- Central Reference Library
- In-House Publishing
- Audio-Visual Department
- Archives on Sport and Physical Education
- Seminar and Congress Facilities, Corporate fun and sport days
- Dining Rooms
- Halls of Residence
- Cafeteria and Sport Goods Shop

All these facilities and services are at the disposal of the sportsmen - professional and amateur alike - coaches and instructors, physical education teachers and the sports-minded public at large.

Wingate aims to promote sports and an active lifestyle among the entire community.

Wingate conducts seminars, international scientific congresses, and corporate sport and fun days, offers training camps, and hosts dozens of local and overseas sport groups, in diverse sport fields.



1. Administration Building	13. Dining room	26. Tennis court
2. Norman Hall	14. Gymnasium	27. Golf Training Center
3. Synagogue	15. School coaches	27A. Golf Training Center
4. Olympic swimming pool	16. Gymnasium	28. Football Field
4A. New Olympic swimming pool	17. Center for Research and Medicine	29. Bowling courts
5. Swimming pool learning	18. Sports hall	30. Central Stadium
6. Hill Hanan recreation and sport	19. field	31. Playground
7. House of Representatives	20. Student dormitory	32. Tennis school
8. Hall Haya	21. Storage Equipment	33. Football Field
9. Gymnasium	22. Student House - Auditorium	
10. Sports building to achieve	23. Pedagogic Center	
11. Indoor Playground	24. auditorium	
12. Golf lit basketball	25. Amphitheater	

Drawing 13: Site Plan description

4.1.2 *Mc² Sport center*

Mc² Sport center is located in South-East Milan. It has different subscription programs allowing choosing practice type and personalizing training/recreation programs. One of their strong features is the ability to face families by offering a large age range of activities basically to everyone; from pregnant women to babies, children and adults. Special programs are offered for the whole family activity emphasizing bonding between parents and children, a n active kids club and summer camps. Collaborating with the Italian swimming federation, *Mc²* offers swimming lessons and has an active swimming team. They also host different professional teams such as Volleyball and rhythmic and artistic gymnastics. Thus serving both professional and semi-professionals.

Facilities

- Gym
- Swimming pool
- Beauty center
- Wellness treatments
- Relaxation Zone
- Summer camp
- Courses with children

- Swimming, football and judo school
- Volleyball & Beach volley
- Fitness room
- Fitness course



Figure 3: Bird view of *Mc²* sport center

4.1.3 *The Aspria club*

The *Aspria* club is a members club located at the North West (San Siro) area of Milan. It offers a large range of activities all in the wellness field. *Aspria Harbour Milan* club is a part of the world *Aspria* network. It is situated in a large area and therefore has a large range of activities.

There is an area dedicated to golf practice and more than 10 Tennis courts 8 of which are made of clay. A part from the club house they host events, both private and corporate based therefore addressing also business men and large companies. In fact benefits are granted to a list of exclusive companies. There is a restaurant working the area. As far as the children activities are regarded, here there is a different approach all together. Activities for the young's are held in a different ambient thus, leaving the parents free to engage in the activities offered by the Harbour club, Therefore, we can find a kindergarten and Tennis lessons especially for kids. Strategically speaking, the size in this case helps to segregate but also to create new activities for special audience, in this case, children.

Subscribed members can chose between programs based on the usage of the facilities based on time, therefore there are different subscriptions/prices for weekend usage, under 27 years old and so on.

Facilities

- Tennis courts
- golf practices area
- Football fields
- Indoor swimming pool
- Gym
- Spa
- Outdoor Olympic pool
- Playground
- Artificial lake
- Restaurant

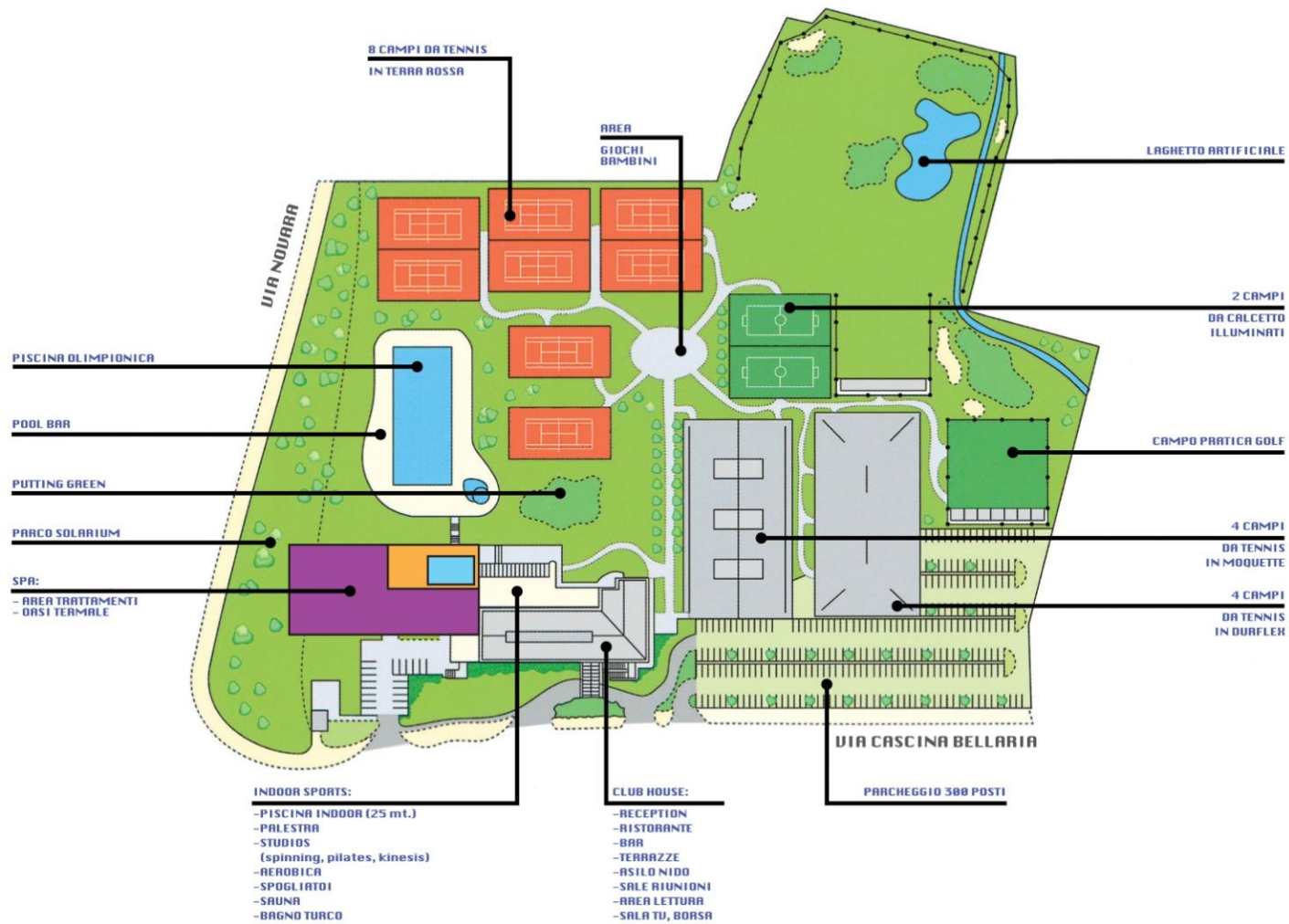


Figure 4: Master Plan Aspira Club

4.2.1 Conclusions

After carefully examining the different strategies used by those establishments. We have decided to divide them into six different fields. Each field was then examined in order to understand what strategy was better used and what has worked well in our opinion.

Academy: The *Wingate institute* works in a way that it had gained a good reputation of excellence and proficiency over the years. Lessons and courses open to everybody. The possibility to get a professional instructor certificate or specialize in certain field ensures a high number of students interested in becoming professionals.

Accommodation: *Wingate institute* has accommodations for students whereas *Aspria* offers accommodations in the branches located outside of Italy. By combining both of them we could use a flexibility principal that would both the Italian culture (students go back to their home towns over the weekends) and re-use the spaces left vacant over the weekends and rent them to families.

Strategy regarding children: *Aspria* club gives the possibility to leave children under care, the kids are being therefore segregated thus leaving the parents care-free to use the facilities present. *MC²* on the other hand, offers kids' club and summer camps activities.

Flexible types of subscriptions: In order to meet the changing market demands and household expenditure along with working hours that varies different centers became more flexible with their subscriptions programs.

Restaurant: *Aspria* club operates a restaurant on its ground, this way they can also hold events and increase customers' experience while relaxing the scenery.

	Wingate Institute	Mc ²	Aspria
Golf			✓
Tennis	✓	✓	✓
Gym	✓	✓	✓
Spa		✓	✓
Academy	✓		
Restaurant		✓	✓
Swimming pool	✓	✓	✓
Kids Club			✓
Volley ball		✓	✓
Events	✓		✓
Courses for professionals	✓		

Table 3: Activities Comparisons of the 3 sport centers

Chapter 5 - Project Proposal and Design Methods

“With a clever strategy, each action is self-reinforcing. Each action creates more options that are mutually beneficial. Each victory is not just for today but for tomorrow.”

Max McKeown, the Strategy Book

5.1 Conceptual Project proposal

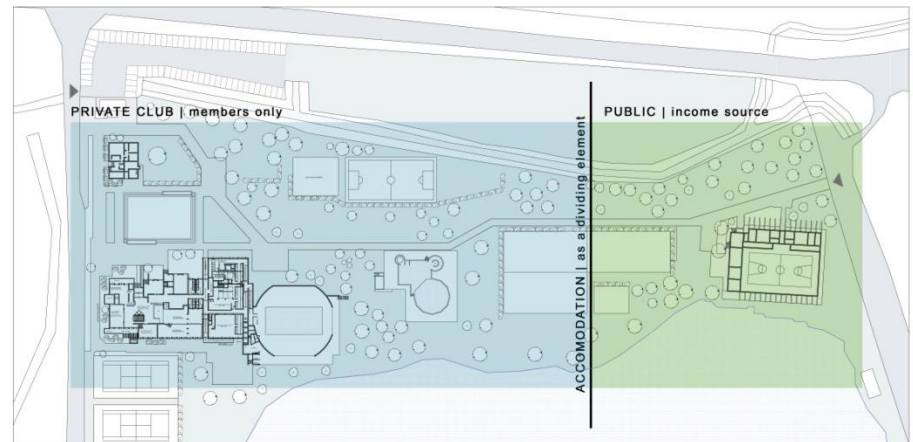
In recent years people decide to change their habits and pursue healthier lifestyles and the wellness market is in rise. It is the fastest most growing industry nowadays. Based on a research in a book further published by the world famous economist Paul Zane Pilzer; by 2020 the expenditures for wellness products and services are going to increase by 150% worldwide. Yoga, Pilates, Slow food and so on are much more than just a passing trend; they all became a way of life. The idea is to create a sustainable academy for sports, nutrition and a healthier life-style that can sustain such a life style. A school building that can accommodate both students, and out-side guests and serves also as a residence for the elderly; all are strictly involved in the numerous sport activities available in the center. The location is in a green environment with a natural lake, trees, and other features making it an ideal place to stay, both for families on a weekend 'home away from home' or for businessmen who prefer to stay away from the city on their free time. It is convenient also because the site is already operating for a decade on a commercial basis. This guarantees experience, customer relation and reputation and integration in the local community assuring stability.

Moreover, it comes with services already installed such as Spa, gym, clay Tennis courts, and recently renovated swimming pool and a basketball hall.

5.1.1 Design methods and principals

The proposal is an outcome of a several processes that have taken place at the same time. It is a result of brain storming, research, observation, careful planning, understanding and assimilating. The important thing for us was to find a concept that works and can be sold easily given the market conditions but would also work well with the existing income-making system. Once examining all aspects needed about the existing sport center, the surrounding, the environment and the market and all the data was put into a coherent system; we have decided our guidelines for the proposal. One of the most important things for us was to create a division between inside-income sources and outside-income sources. One of the first strategies we have decided to implement was to create a clear division between the localization of new functions concentration (in green) while blending in with the old functions used by members only (in blue). This division was created in order to ensure a delicate process of integration between new and old and to avoid overloading the existing system with the amount of new attractions and functions thus ensuring the 'homey' feeling Gardanella gives its customers. This imaginary line passes through the Tennis courts creating and distinguishes the two different income sources, to the south the club members and to the north different facilities to be used by either the academy itself or

different features by external visitors who are not necessarily related to neither the academy nor the club. We used the data collected before about the existing functions currently present at the "neighboring" sport centers. We have decided that in order to reach different targets we should use the fact that Gardanella is already equipped with everything that is necessary to contain large flows of people and in this case the only thing we have to do is carefully place new functions to ensure diversity thus attracting new and different crowds.



Drawing 14: division to internal and external income sources

Of course we have guaranteed a complete compatibility of the functions added with the spaces dedicated for them while adding some “attractions” that would bring some more outside users. New attractions such as: an area for wall-climbing, a protected lake shore area where kids and families can stay safely and a kid’s club; allowing parents to take classes at the nearby academy knowing that there is someone they can rely on guarding their young’s.

All that was left to do was to sew together the different functions into the life style we wanted to create. Firstly, it is important that the Sport will be evident in all fields; thus, it is the connecting element to all functions. It is the most important activity and the one that binds all other activities together.

	Swimming Pool	Gym	Group classes	Spa	Tennis	Out-door sports	Football	Nutrition programs	Golf	Scubadiving	activities for disabled	Karate	Judo	Yoga	Dance	Shop	Bar	Restaurant	
1		✓			✓		✓				✓								Kick Off SRL
2																			Treforclub
3	✓				✓	✓	✓				✓	✓	✓	✓	✓				Gestisport soc
4							✓												Accademia Sandonatese
5					✓		✓												Top Tennis Soc. Sport
6																			Società Sportiva Dilettantistica
7		✓																	Shadow Gym Di Contardi Sergio
8									✓							✓	✓	✓	Lucchesi Golf Club Il Laghetto
9	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Gardanella Sport Village,



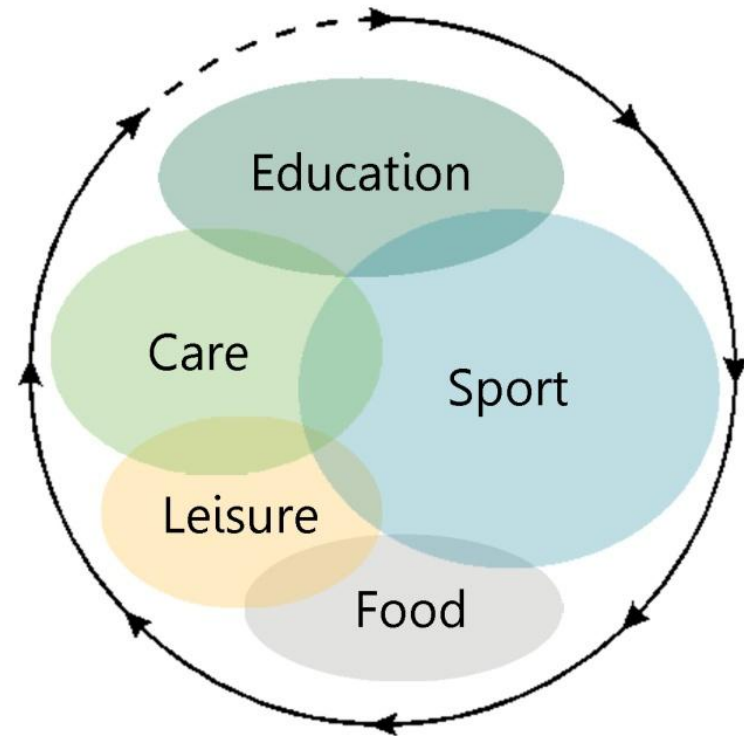
 Existing functions
 New functions

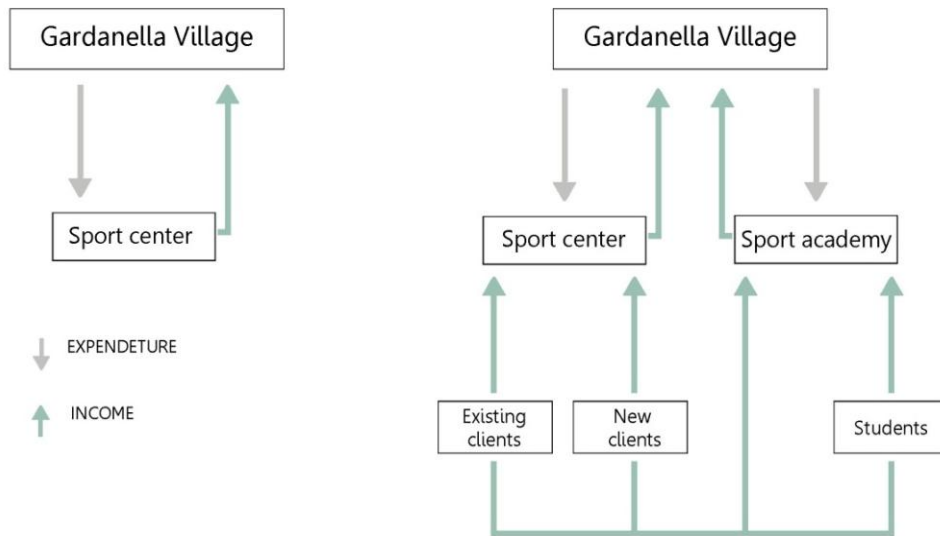
Table 4: New Functions to meet market demand

One of the most important features in this case was to have an all-year-long active center. Usually different fields such as leisure are seasonal, with new renovation programs for covered areas such as the gym for instance, sports activates can continue all year long. The most interesting feature is to see how different fields, all regarding wellness are interacting with one another. Since the emphasis is on sports in this case, we can see how it becomes the main theme that connects the different functions into one unified structure. Our intention in this case was to create an ever-active environment. Each specific field is independent in this system and has its own clear identity. However, locating them all together in one place allows us to ensure a structure that creates major clarity for the expression of each field and the whole system in general. This 'connectivism' allows for the users to enjoy a large selection of activities, but more important, mixing them as they please, Thus choosing the right doses of food or leisure or sport education as they please.



Drawing 15: All year long activities

5.1.2 Implementing the Concept



Drawing 16: Old system vs proposed system

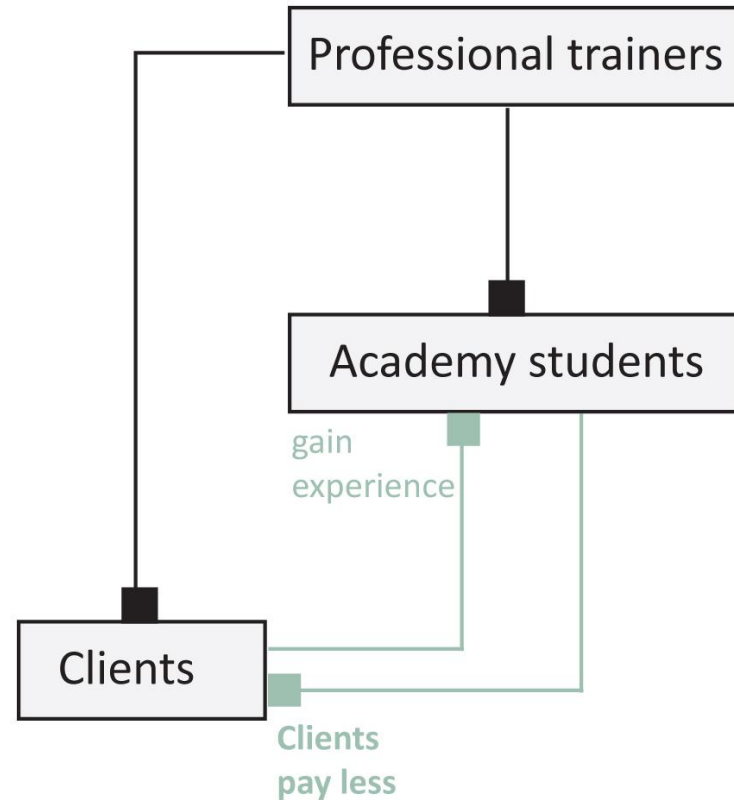
Our concept is called “**Total Health**” where Health is the key word. It is where all specialty fields meet. “Total Health” represents the attitude of the proposal, being first of all a way of life. Total because every aspect of it is dedicated to health and to a better and healthier life style.

This is where we have decided to create and add a whole new function, a new structure that will combine several elements that will promote and improve Gardanella Village; this is where the idea was conceived: a **Sport Academy** - a system that will combine sport, education, care, food and leisure in the same place. A system that will create numerous new possibilities for future developing and growing but on the other hand can still guarantee the following core keys:

- Stability – a valuable system that will offer clear division between different functions.
- Management – easy to handle and assign the right personal for the right task while decreasing work load on the existing staff.
- Creating new income source **and** adding another income source to the existing system.
- Renovation also for the existing clients.

- Loyalty of clients, new function enhances using the center more and more.
- Better relations between clients and local instructors keeping the “family” atmosphere Gardanella is based on right now.
- Better prospects for the future, given the system’s flexibility

The idea is that the clients are also the students. They are learning to become sport instructors offering their services to clients who seek better and more professional instruction. This mixture guarantees an ever-active space in which functions are mixed, overlapping and articulate allowing the users a sense of belonging enhancing new relationships and integration with the local communities where students, instructors, visitors and the elderly are all engaged in health. The academy becomes an attraction in itself, where you can find out all about sustainable living, cooking and the newest technologies for low impact construction and purification systems. These can guarantee a long lasting good reputation for the center.



Drawing 17: 'Win Win' situation

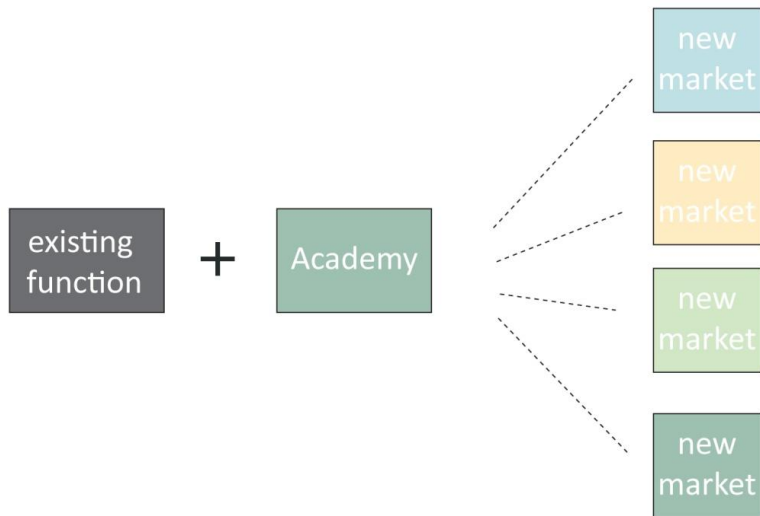
5.1.3 Final Product

The final product is a manifestation of elements put together all under the purpose of better and healthier lifestyle. The existing functions are all kept along with new functions introduced. In this way, it could be easily managed in order to satisfy larger market demands. Moreover, we have a state in which the additional functions can create more functions or enhance the existing ones creating an abundance of new market possibilities.

Existing functions	Tennis court	Gym	Kids' drawing room	Golf practice water court	Spa	Basketball courts (currently used only in summer time due to high heating costs)
New functions	Professional tutors	Outdoor sports	Kids club	Theoretical classes	Classes	Insulation, under floor heating
New Market crowd / New activities / New possible inco	Tennis lessons	Diet programs, Training Team building events, programs for disabled.	Working class parents, Special activities for kids (sport, education, summer camps)		Massage classes, Shiatsu, New age therapy/studies	Basketball little league, collaboration with the municipality of Peschiera Borromeo

Table 5: Combined functions grant new possible income

Bridge room						
	Climbing wall		Private beach Accommodation	Equipment shop	Urban gardens	Slow Food restaurant and market
Bridge classes for elderly people	Young	Vacation spot 'near home' (more people)	Residence for elderly people Units for the weekend. During the week, rooms for students	People from local area engaging in sport activities, clients of Gardanella	Enhances relation to the place.0km fresh fruit and vegetables.Ecological tours	Local residents of Peschiera Borromeo, targeted market crowd interested in the product,purchasing with ease while doing your daily/weekly routines.



Drawing 18: Academy creates markets

The school building accommodates classes and accommodations are also available for those who live far away. In the academy clients have the chance to peruse various courses from Tennis through Golf, scuba diving to massage and Shiatsu.

One of the greatest advantages of the academy is the possibility for students to gain experience on a 'real-life' clients, implementing what they have learned on willing audience while observed by their tutors

The academy would also include:

- Nutrition programs with professionals combined with exercises both in-door and out-door.
- Slow Food cooking and nutrition classes.
- Ecological tours for those who wish to get a glimpse of a special system for a more sustainable living.

Moreover, fresh fruits and vegetables cultivated in the village and sold there, a healthy restaurant serving "slow food" using home grown products. And to complete educational and nutrition courses all cooking classes can be held at the restaurant allowing people to see how they can change their lifestyle into a better and healthier one in their own private homes.

All these fields are co-existing all year long without contradicting one another, therefore completing the concept of sport, health, care and of course leisure.

5.1.4 Form Follows Function

The academy sport structure: We wanted the structure to build by using wooden frame that allows flexibility of the space and can be arranged differently in a way that the rooms can be adjusted for different purposes as there are no structural limitations and future changes can be easily made.

We have decided that we would like the architectural structure to follow the concept, therefore, it should be made from a biodegradable materials or at least a low-impact sustainable structure using a light material most likely wood. Constructing near the lake one must take in account the fact that the terrain may not sustain large punching forces. Therefore we have decided to use a frame structure. We thought that the structure can be made by a series of wooden arches where the inner division would be another system within the general structure thus creating a different ambiance. Wood is considered to be a renewable building material as it can be especially grown for building purpose and re-use once the structure is dismantled. Wood retains the characteristics of a living organism even after it is cut. It provides a pleasant, fresh scent while absorbing scents at the same time. Large porous wood surface can absorb harmful vapors and gases. The air passing through wood is filtered and cleaned. Unpleasant scenes disappear quickly if there is a large enough natural wood surface inside a certain space.

We have also researched for different pre-cast system structure in order to lower the costs of building. Another key element was

keeping the structure as sustainable as possible by lowering its energy consumption. We have kept insulation standard for “class A” and used a geothermal heat source connected to a heat pump for best results. The walls have air chamber in order to increase ventilation in hot summer time. Shafts are located near the ceiling in order to allow air to be exposed out or kept in during winter time when it is important to maintain the inside temperature. Another key aspect is the heating system, using water pipes that work especially with wooden frame structure as the joists punctured in order to allow water tubes with especially small diameter is fixed under the floor panels radiating the heat towards the ambiance.

We used new technologies in the plan that includes;

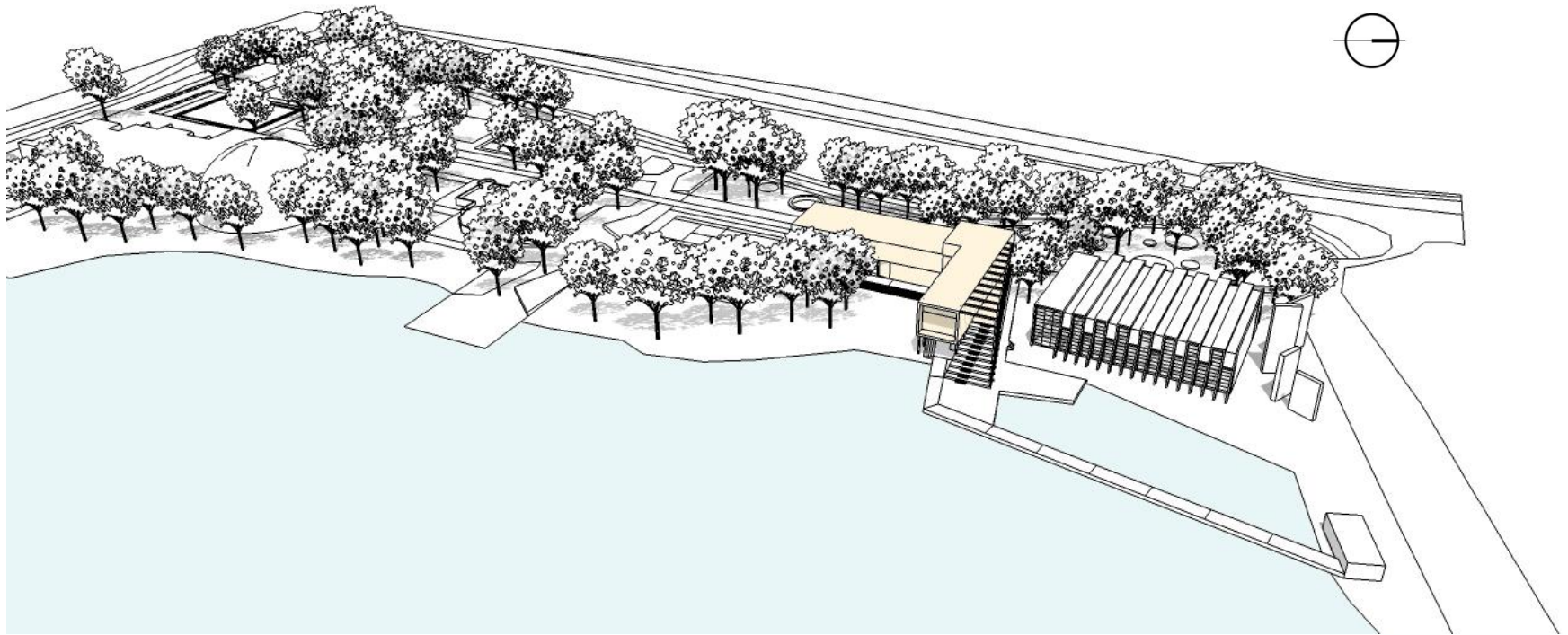
- ‘Wetland’ system to purify water allowing the reuse of it for irrigation and other services.
- ‘Bio-mass’ methane gas production used for cooking and bring down heating expanses.
- Solar panels.
- Urban gardens supplying fresh fruit and vegetables on a 0km based on the season.

Chapter 6 - Proposal

*“Design is not just what it looks like and feels like.
Design is how it works”.*

Steve Jobs

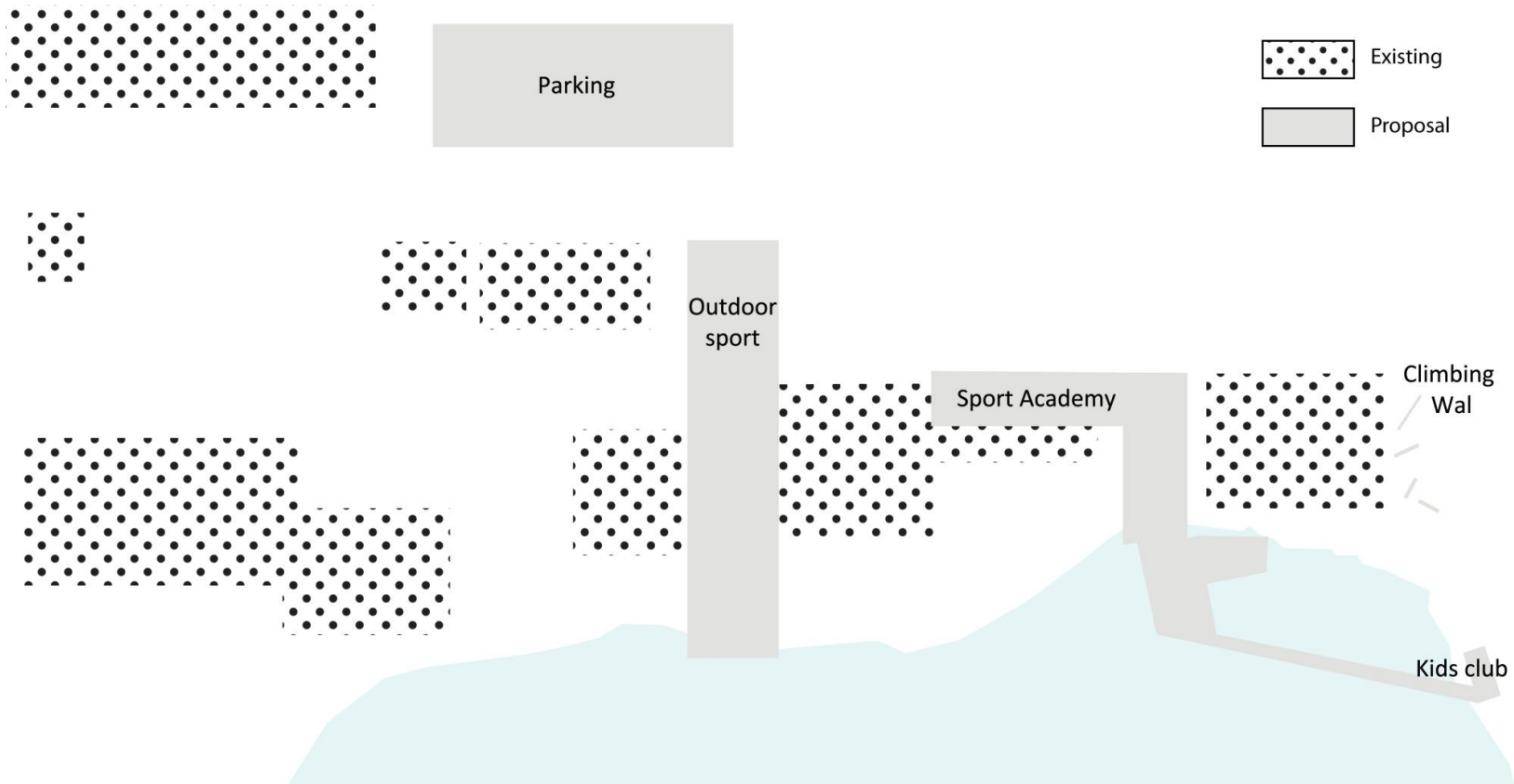
Part V 'Total Health' Project



Drawing 19: Site Bird view Rendering.



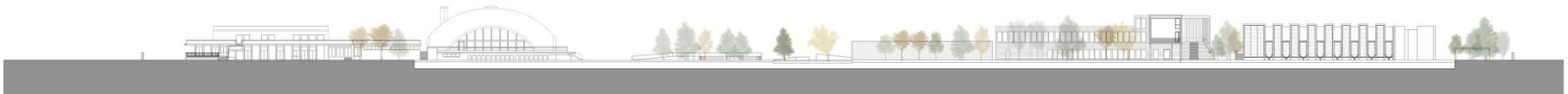
Drawing 20: Master Plan



Drawing 21: Schematic overview

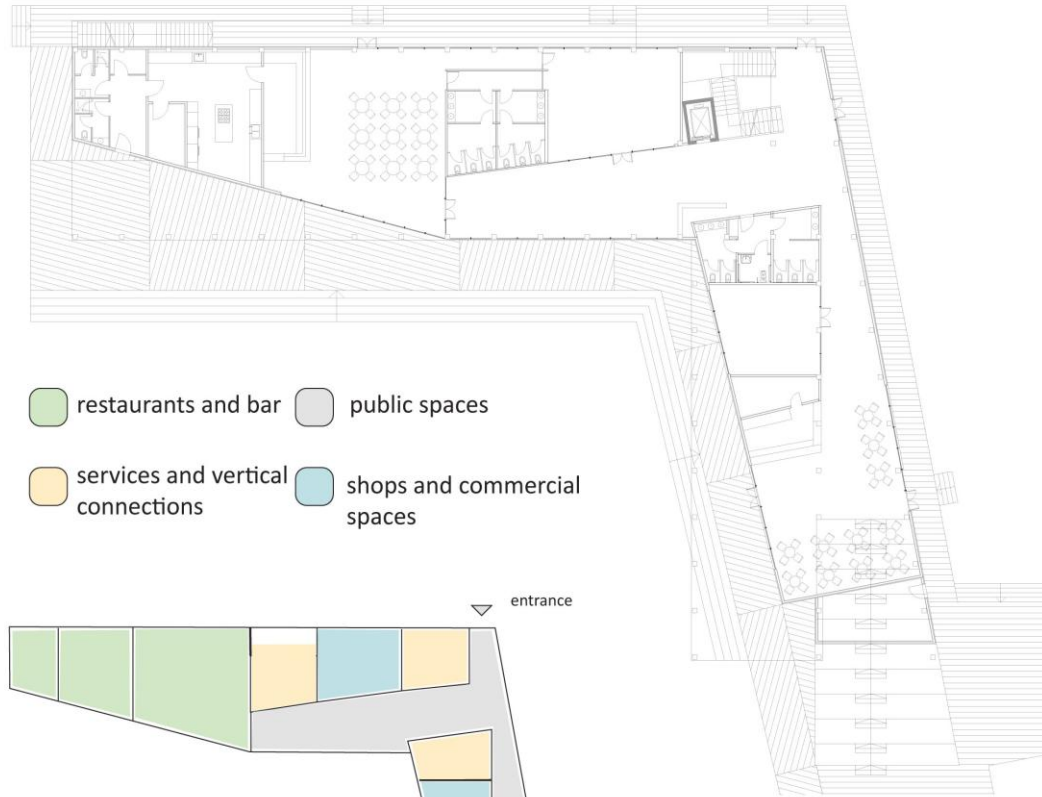
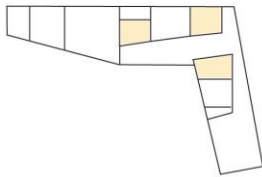
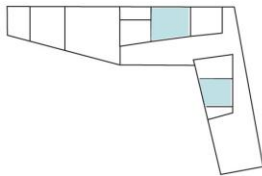
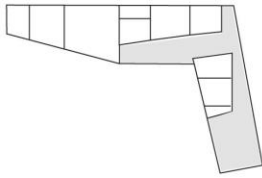


Drawing 22: Ground floor plan

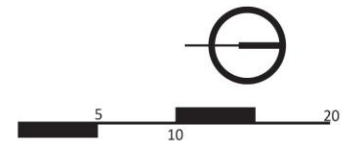
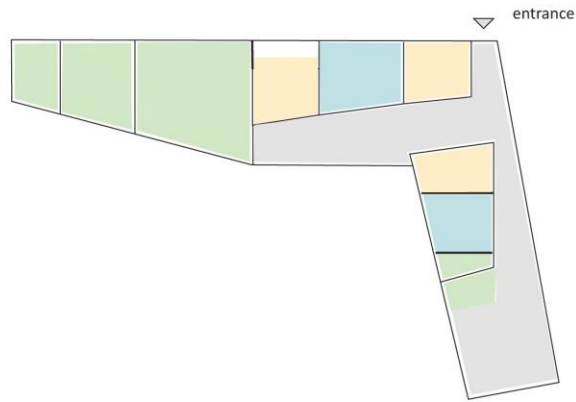


Drawing 23: General Section Site

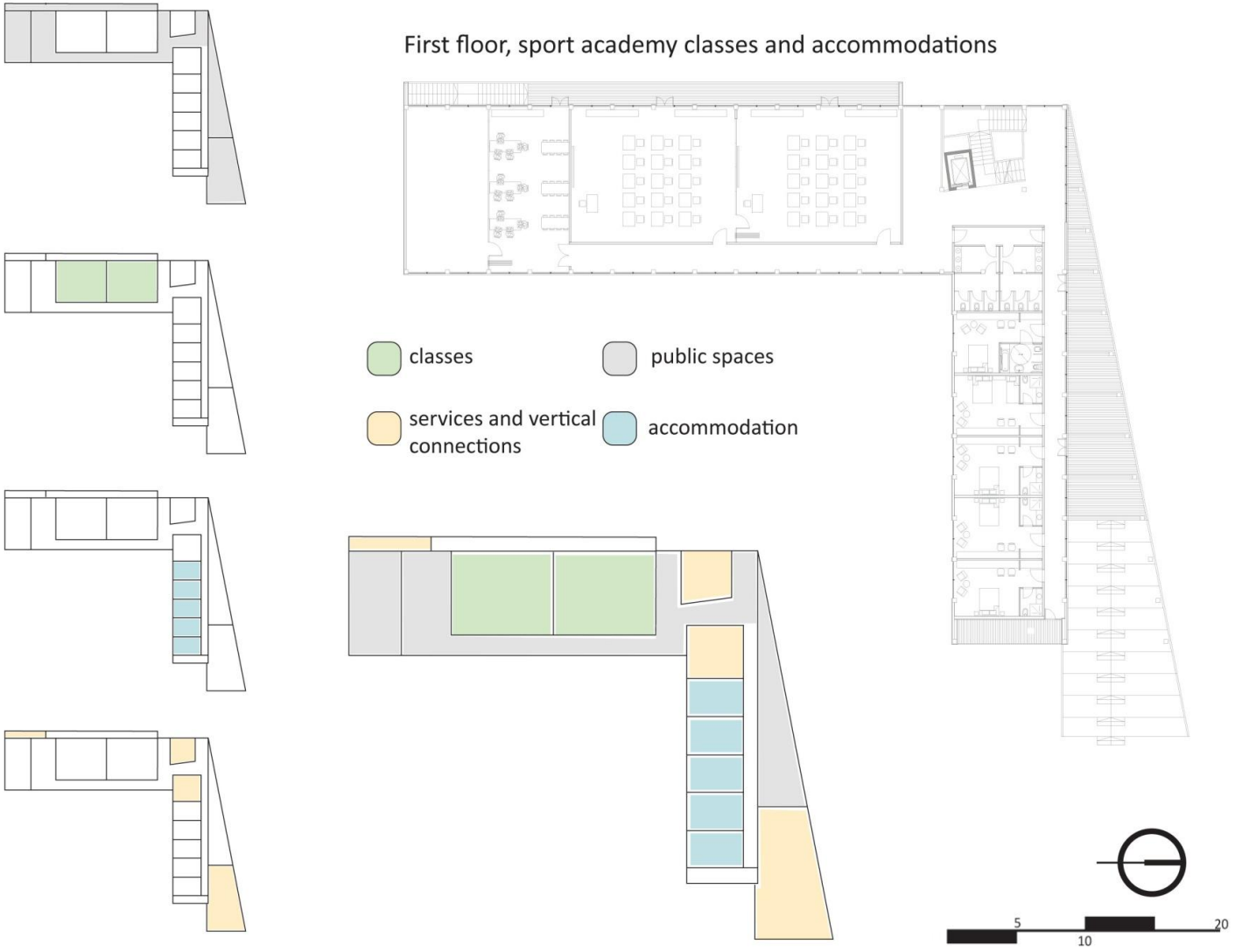
Ground floor, public character



- restaurants and bar
- public spaces
- services and vertical connections
- shops and commercial spaces



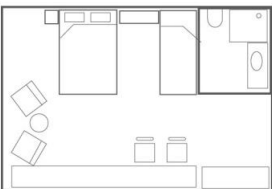
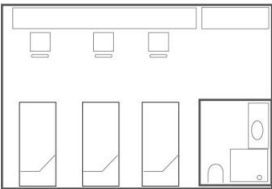
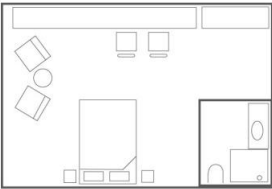
First floor, sport academy classes and accommodations



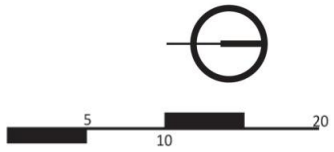
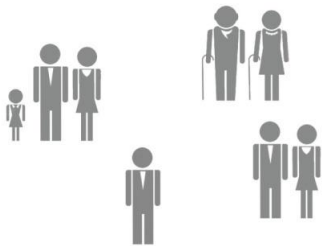
Drawing 25: First floor Total Health Sport Academy

Second floor, private character accommodation

Flexibe and diverse



- accommodation
- services and vertical connections
- public spaces





Drawing 27: Master Plan Landscape



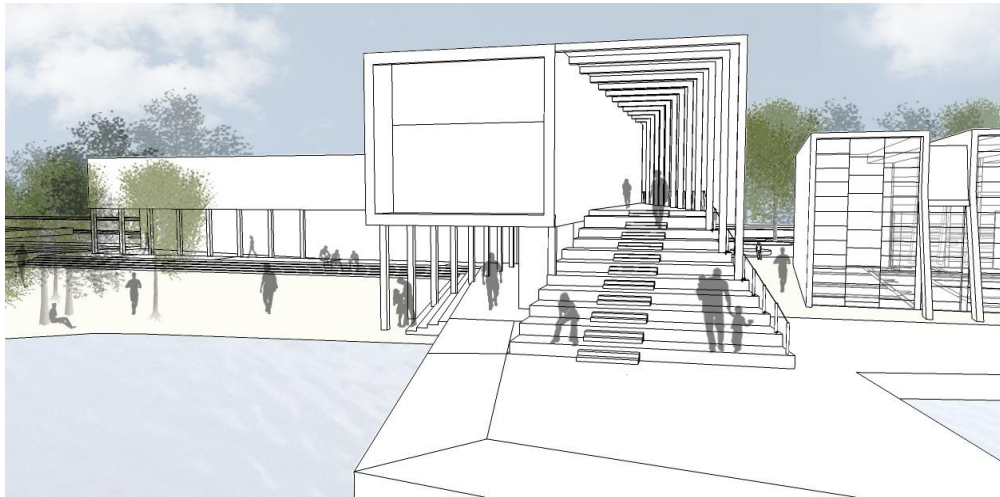
The concept behind the landscape design was that of support. Each element was carefully chosen and placed in order to support the entire system.

Lake area:

A walk way was added connecting the new structure with the added elements, providing also a safe palce to swim.

1. Kids club originally used as a storage building, it provides the parents with the freedom to use all facilities present without worrying for their young's, it also emphasizes the concept of 'place for families'.
2. Redesigning of the lakeshore in order to turn it into suitable place for recreation.
3. Staircase overlooking the lake providing access to classes and accommodation on the first floor.

4. Climbing walls in order to enrich the village with another sport activity with a high market demand.
5. Outdoor sport activities were added in an intention to stitch together the new functions with the existing ones.
6. Water purification system was placed in order to provide a sustainable solution to the high demand of water from the Spa facilities and irrigation. The system itself is based on phytodepuration technique (AKA 'wet lands') and it also gives an esthetical value.
7. Urban gardens location.
8. New entrance combined with a new parking area.



Drawing 28: Render

Conclusions

This paper was formed out of a need to locate somehow our position as future architects in a changing world. By studying the process of decision-making when it comes to a public Architectural project we know that our role has changed over the years.

This period gives much more importance to the external factors, it is not only just about the 'signature' one leaves, but also the impact it has on the environment. Feasibility studies are being held in order to verify if the project should be commenced to begin with, thus determining its destiny. The collaboration between the contractors to the Architect has on one side increased the communication and efficiency and simplified the execution process but on the other hand limit the Architect. Costs of maintenance and new standards are highly significant and in many cases determine the building's visual aspect. Flexibility issues require spaces that can be used in different ways fitting different purposes in an ever-changing market.

All these had led to a point where there are Architects involved not only in the building design per se, they take a more global view of

the entire project looking at aspects that were not an immediate part of their 'job definition'.

What we have learnt in the proposal construction process for Gardanella sport village was that using certain methods we were able to supply a solution that was working in many different levels.

Our goal in this work was to show this process step by step and examine each chapter a different aspect and how it can contribute to the general strategy used. Looking back, we can state that the analysis process had significantly shaped the outcome. Initially the owner intended to construct a residence for the elderly the research however, has shown that given the market conditions, the competitors and activities offered in other establishments we can come out with a proposal that could enhance the usage of the existing facilities while adding more functions without harming the 'homey' feeling Gardanells village is so famous of. Moreover the external factors taken in account; especially the market trends have helped us narrow down the possibilities we had for the intervention and give a 'custom-made' solution.

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