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# DEDALUS CHALLENGES AND Stories from WORKSHOPS

By Raffaella Lioce



#### **Project references and Credits**

#### **Project references**

Project title DEsign Driven innovation and sustAiability in grassroots sport cLUbS

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#### **Project Partners**

Municipality of LOUSADA (Portugal)

USMA PADOVA (Italy)

SPELL (Turkey)

#### **Deliverable**

D2.2 DEDALUS workshops stories

Description in the GA: The deliverable represent the collection of series of evidence and output of the design workshops. Lousada provides a template and partners contribute to provide stories from the LAB. The deliverable includes also elements for transferring the approach to other contexts. Format digital.

Task and Deliverable responsible: Municipality of Lousada

Level of dissemination: Public

#### **Credits**

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Images: by project partners, by workshop participants, and creative commons,

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#### Table of contents



- Credits
- Session 1 Project in a nutshell
- Session 2 Challenges
- Session 3 Process Key data
- Session 4 workshop outcomes in Portugal
- Session 4 workshop outcomes in Italy
- Session 4 workshop outcomes in Turkey

#### [DEDALUS] DEsign Driven innovation and sustAinability in grassroots sport cLUbS

#### **Project in a nutshall**

- Taking into the IOC "Sustainability Strategy" DEDALUS will increase the understanding of sport staff about sustainable challenges in the world of sport. We choose the title for this project not simply because DEDALUS is a great architect, sculptor and inventor from Greek mythology, but for the fact that Dedalus is best known for being the builder ofthe famous Minotaur labyrinth in Crete. ... and when you decide to face the challenges of making a basic sports club in the marginal neighbourhoods of cities (and beyond) more sustainable, inclusive, and attractive, you actually enter a labyrinth of norms, technologies and rules, but also of desires and constraints dictated by the scarcity of available resources. A labyrinth of thoughts that characterizes the co-creation process, in which the local sport community participates together with young architects and designers and sport managers. A labyrinth from which you can escape thanks to works and to open minds; thanks to the experimental DEDALUS DESIGN workshops that we intend to carry out in the project. A project, but with the great ability to impact on the sporting context and on people: sportsmen, mangers, but also young designers and volunteers
- Dedalus will stimulate grassroots clubs managers, trainers, and members to collaborate with young designers, architects and students (design workshops) to co-create solutions, inspired by the IOC for the Olympics sustainability framework, but tailored for small sport clubs and associations.
- The IOC objectives for sustainability will be considered as input of the DEDALUS DESIGN WORKSHOPS developed to
  - Reinvent and adapt the sport grounds for multiple sustainable sport and recreational uses
  - Design a step by step process to regenerate the wide context and to make existing sport facilities more sustainable
  - Define a finance plan and an overall economic framework
  - New approaches to communicate the regeneration sustainable strategy to get funds
- How sport can be part of the solution to counter climate change? This is the leading question of DEDALUS, which does not refer to big events, professional sport clubs, or Olympics infrastructures, but it faces small sport facilities in urban neighbourhoods. Sport and the environment are a brilliant and winning combination. However, sports facilities are not always there conceived according to sustainability criteria and sometimes we witness the creation of. giants with a devastating impact, sometimes built to accommodate other objectives, which are not always clear. In recent times, however, they multiply in world interesting examples of structures designed not only to live in harmony in the context in which they are located, but also to offer added value for the community

#### **Context and objectives**

Sustainability is a crucial aspect of sport building design and of sport facilities management, nowadays and the years to come. There are obvious challenges when it comes to redesigning and managing grassroots sport existing centres, more than to develop new huge sport centres, due to the different needs and features each sport context has and the available resources available in grassroots clubs. Approaches are different, when you are facing new constructions (easier challenge) to those necessary to adapt and make more sustainable existing centres (much more complex challenge).

To achieve a sustainable design for a sports centre, there are some specific areas which need to be considered. The first area which can significantly impact the sustainability and environmental impact of a sports centre is the transportation links to the centre. Water supply and use. Renewable power should be a key priority. Indeed, the amount of power sports centres require to operate means that renewable options could not only benefit the environment but also save money for the centre. And so on. But the real issue is not about technical option and technologies, they are there. Architects, designer, engineers, and other experts, know that. SO the issue, when you are managing neighbourhoods multisport club or sectoral facilities and you are a grassroots organization tithe few finance, or you are manage a facilities owned by a municipality dealing with different allocation of funds, ... the issue is to find creative solutions to attract resources, to design innovative sport services to decide how to spend resources the club has. How can designers, design thinking experts, architects and other creative young people help small sport clubs to undertake a path of renewal, restructuring and more sustainable management? Exploring alternative materials which can be used throughout the centre is an excellent way of improving sustainability. BUT It is not just a question of materials, insulation, systems, but it is an all-encompassing approach, capable of bringing innovation to grassroots sport clubs. Overall, there are a number of features which are becoming more popular in sports centres and changing the traditional designs. These changes are influencing the initial designs and also allowing sports centres to alter the way they can operate for users.

As a result, DEDALUS raises "sustainability skills and design driven innovation competences" of all the participants.

THE PROJECT SCOPE IS PROMOTING DESIGN DRIVEN INNOVATION AND SUSTAINABILITY IN GRASSROOTS SPORT CLUBS both facilities and acivities.

#### Project aims at:

- tackling the challenge of improving sustainability in grassroots sport clubs, by actuating an experimental open innovation environment at pilot sport clubs (In Italy, Portugal, and Turkey), where young designers, students of architecture meet sport managers and together co-create feasible solutions
- providing sport clubs managers and owners with design driven innovation approaches to face dail sustainable challenges, with very limited financial resources
- giving designers the opportunity to make themselves known by their community and potential future customers, demonstrating that civic and sporting participation also represents a lever for the growt of skills and work inclusion

To achieve the objectives the DEDALUS partners organized design workshops, (involving students, young designers' architects, sports staff and young sport players, who regularly attend sport club) in order to co-elaborate and assess feasible solution for the specific context to make it more sustainable and resilient:

# Challenges

#### The DEDALUS CHALLENGES

Many guidelines have been drawn up on how to carry out plans and projects, to create sustainable sports infrastructures to develop large sports infrastructures such as stadia, pools, large gyms, sports halls. In this prospect you are thinking about NEW large project or restoration of big facilities. You need finances enough to face this sort of investment. But are those tools and good rule for planning useful for those grassroots sport associations in the outskirts of the city that run small facilities, that have been often built decades ago by public funds, or even within parishes? Grassroots Sport associations that manage publicly owned sports facilities in concession, or the public owner itself (the Municipality for example) are facing, nowadays much more than ever, the problem of the scarcity of economic and financial resources.

The following challenges have been considered during the implementation of the DEDALUS workshop

- How to effectively train sport staff and raise their awareness and knowledge on sustainability in sport faculties management and events organization
- What can designers do to make sport clubs more sustainable, attractive and resilient to climate and societal changes?
- What can designers do to promote sport in post disaster context? How can sport restart when infrastructures and facilities are destroyed?
- How can this organizations attract finances to invest in facilities sustainable renovation, creative sport reuse and developing new recreational sport facilities?



#### Thinking outside the box

Thinking outside the box, is the first step.

Adopting design thinking approach the second, promoting participation of their communities in both planning and raise funds should be the third step. In such situations, the guidelines, and best practices of building new sustainable plants can represent more of an unattainable dream than a useful support for innovation. More than methods of building sustainable structures, grassroots organizations need a change of perspective and an improve of the ability to attract both capital and human resources., as well as creative approaches to use the few available resources in the best combination possible to improve their context

DEDALUS partners developed an experimental and design based responses to this challenge, by bringing together young designers, architects, grassroots sports manager, students, and sports instructors, encouraging their creative thinking, out of the box; to apply methods of design thinking, of service design, of finance planning thus to generate ideas and visions of concrete and practicable solutions useful to grassroots sports associations to make their activities and their facilities more sustainable and inclusive.

Workshops provide an experimental and design based responses to this challenge, by bringing together young designers, architects, grassroots sports manager, students, and sports instructors, encouraging their creative thinking, out of the box; to apply methods of design thinking, of service design, of finance planning thus to generate ideas and visions of concrete and practicable solutions useful to grassroots sports associations to make their activities and their facilities more sustainable and inclusive.

During the workshop we will exploit the IOC guidelines on sustainability.

Indeed, whether your organisation is just starting out, or is already actively engaged in sustainability, the "Sustainability Essentials" guidelines of IOC can provide valuable information to help our working groups and teams to navigate the complexities of this subject and develop effective sustainability programmes in their clubs, with the help of young designers, architects engineers, students and other young leader in their community. Some of the IOC guidelines outline "how the careful planning, location and design of new sports venues and facilities can help avoid potential negative impacts on nature - and even contribute to its conservation".

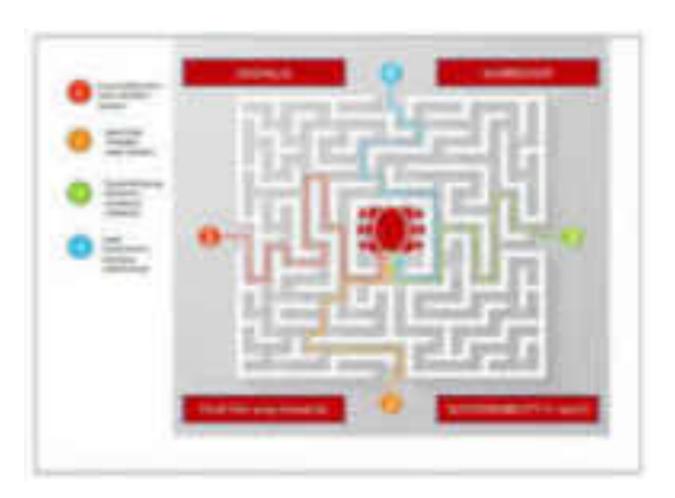
The most famous application of design thus understood, is Design Thinking, in which the expressed needs of consumers (in our case of sportsmen and the wider community of sport clubs) are satisfied through a user cantered approach. The innovative process is totally focused on the final recipients, who play an active role, participating in the cocreation of value. Design Thinking offers a package of analysis tools, in which observation, experimentation and the search for empathy with the recipient are enhanced: in Dedalus, sportspeople, owners of sports facilities, communities living near multisport, etc. and that today they all face the challenge of sustainability to improve the quality of life and the environment. Design-Driven Innovation is based on the observation that the usefulness and desirability of a project is not determined simply by technological refinement, but by the fact that people perceive it as an added value for their lives. People are satisfied by the experience they have with this product / service and in our case with the sport experience in the specific sport facilities. The emotional bonds that people create with a sport club must be understood to make them passionate about them, taking into account today more than event the demand of sustainability of quality of life and of health.

#### **DEDALUS: A labyrinth of thoughts**

We choose the title for this project not simply because DEDALUS is a great architect, sculptor and inventor from Greek mythology, but for the fact that Dedalus is best known for being the builder of the famous Minotaur labyrinth in Crete. ... and when you decide to face the challenges of making a basic sports club in the marginal neighbourhoods of cities (and beyond) more sustainable, inclusive, and attractive, you actually enter a labyrinth of norms, technologies and rules, but also of desires and constraints dictated

by the scarcity of available resources.

A labyrinth of thoughts that characterizes the co-creation process, in which the local sport community participates together with young architects and designers and sport managers. A labyrinth from which you can escape thanks to works and to open minds; thanks to the experimental DEDALUS DESIGN workshops that we intend to carry out in the project. A small project, but with the great ability to impact on the sporting context and on people: sportsmen, mangers, but also young designers and volunteers.



#### **Workshop Plan**

The Design Workshops are the core of the DEDALUS project.

Participants in the workshop (which have a total duration of 10 days distributed over a period of 6 months) are selected in collaboration with stakeholders, Universities, sport clubs, schools, municipalities. They:

- 1) meet to transfer technical and managerial knowledge
- 2) study the guidelines of the IOC and good practices, which they themselves will collect
- 3) analyse the concrete case studies in collaboration especially with the sports staff of those specific facilities
- 4) apply different co-design methodologies from design thinking to the world cafe, then they will experiment methodologies of design thinking and design driven innovation
- 5) elaborate the concept of intervention for the regeneration of structures and concepts for a mor sustainable management
- 6) verify technical and environmental feasibility, and develop an economic and financial plan, up to the identification of financing channels

# Process Key data

#### **Workshop Calendars**

#### From the launch of the innovation challenges, to the co-design workshop

- Workshop activities in Italy
- O Workshop activities in Portugal
- OWorkshop activities in Turkey
- Start of D 2.2 editing



#### **Series of workshop**

In each country a series of open workshop has been organized to:

- Launching the Challenge
- Training on Design Thinking methodology;
- Gathering and analysing good practices of sustainable solutions for sport clubs;
- Selecting pilot sport clubs and understanding related needs;
- Identifying the core problem and brainstorm solutions
- Design tailored solutions to make pilot clubs more sustainable attractive and resilient
- Sharing solutions
- Transferring workshop results to clubs and key stakeholders and Reflecting on follow up

The open workshops have been followed by a series of co-design workshop organized by the designers themselves.

#### **Participants**



Italy 10 sport club managers, 60 young designers and architects organized in 10 TEAMS



Portugal municipal technical staff, sports managers, young designers and architects.



Turkey 7 designers, sport managers and engineers in 1 TEAM

#### **Place**

@ Venice S. Marta; @USMA; @ Designers premises

@ Municipality of Lousada

@ SPELL, @Municipality of Malatya

#### In collaboration with

IUAV University of Architecture of Venice, 10 sport clubs

Academia de Ginástica de Lousada, Associação Desportiva de Lustosa, Associação Desportiva de Lousada, Associação de Patinagem Artística de Lousada, Associação de Hóquei de Lousada, Lousada Ténis Atlântico

Malatya Sports Club, Metropolitan Municipality, İnönü University, Doğanşehir Mountain and Nature Sports Club, Olympic Youth and Sports Club, Tiny Steps Swimming School

# Workshops outcomes in Portugal

TRAINING AND CAPACITY BUILDING

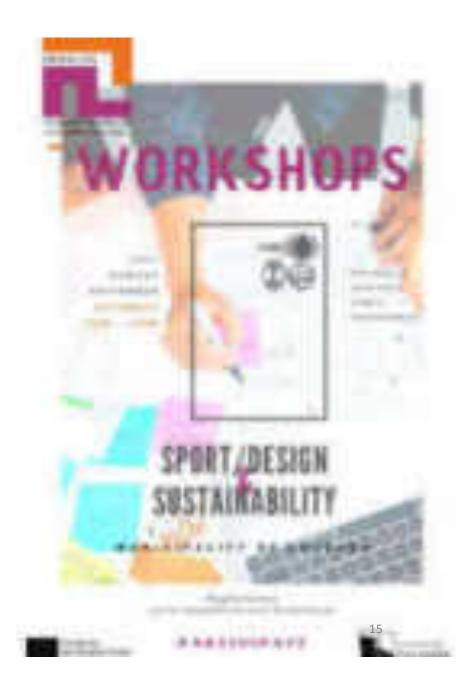
## **Workshop in Portugal**

The workshops held in the Municipality of Lousada sought, above all, to sensitise participants to the importance of making sports infrastructures more sustainable.

Lousada Municipality employees who work with these issues on a daily basis were invited to take part in the workshops:

- Councillor Nélson Oliveira,
- · Councillor for Urbanism and Spatial Planning;
- Joaquim Canudas, architect and Head of the Planning and Urban Management Division at Lousada Town Hall;
- João Costa, Architect at Lousada Town Hall
- Sílvia Carvalho, Rehabilitation Engineer at Lousada Town Hall.

Each person shared their knowledge on the different topics so that the participants could develop sustainable and useful solutions for physical activity.



# Scope of the Workshop in Portugal

Scope was to promote reflection and debate on specific sustainability issues that enable projects to be designed, developed and implemented on a local, regional and global scale, within the scope of the Sustainable Development Goals defined by the United Nations in 2015; and to develop design projects in a real-life context and in collaboration with public and private organisations, within the scope of environmental, social, economic and sporting sustainability.













# Workshop in Portugal - Process

In order for the participants to be able to develop sustainable design projects in sport, important themes were developed over the course of the 10 workshops. After discussion with the speakers, a training plan was defined with the following areas:

- Art History;
- Sustainability;
- Computer Tools;
- Technical Drawing;
- Materials;
- Landscape Analysis and Interpretation;
- · Light and Sound Architecture;
- Ecology.

Each speaker addressed the themes of his or her training and experience, endeavouring to translate theory into practical, real-life cases for better interpretation.

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# Workshop in Portugal

Digital presentations were used in the sessions, which were mostly expository. Each session devoted time to discussion and the transfer of knowledge to real cases, followed by a time for participants to get together and develop their projects.

The workshops were aimed at members of local sports associations, managers and coaches who work in sports centres on a daily basis and are therefore familiar with the reality of sports infrastructures and the difficulties in making them more sustainable.

However, young design and architecture students were also invited to take part.

### Workshop in Portugal target group and Venue

The target group for the workshops was in line with the project's objectives, focusing on sports managers, young designers, and architects. However, the organizers expressed a desire to have a higher participation of young designers and architects to enhance the quality of project development. As the majority of participants were sports professionals, the resulting projects were not as content-rich as those that could have been generated by design and architecture experts.

Feedback from the participants conveyed their enthusiasm for this type of initiative. It emphasized the importance of providing training and knowledge updates to sports agents and other stakeholders to increase the impact of their interventions. The goal extended beyond merely improving sports activities; it also aimed to address resource utilization, including the environmental impact.

The workshops were conducted at the premises of the Municipality of Lousada, chosen for its suitability. These facilities provided an ideal setting for delivering content and offered appropriate spaces for group discussions and collaborative work.

The workshops primarily targeted sports managers, young designers, and architects, although the desire was to have a greater representation of young design and architecture professionals. The feedback underlined the enthusiasm for knowledge updates among sports agents and the broader impact on resource utilization. The venue chosen at the Municipality of Lousada was well-suited to facilitate the workshop's activities.

#### **Workshop Impact**

The workshops organized by the municipality of Lousada aimed to create awareness among participants about the significance of enhancing the efficiency of sports facilities and reducing the environmental impact associated with resource consumption. The overarching goal was to promote sustainable practices, with a particular focus on the sports sector. The decision to involve individuals with experience in the field of sports in these workshops was driven by the recognition that they possess unique insights into the practical aspects of sports facilities and can play a pivotal role in implementing sustainability measures.

The participants in these workshops grasped the concept that the proposals presented were not just theoretical ideas but practical solutions that could be implemented in real-life sports facilities. While not all proposed changes might be immediately feasible or cost-effective, the fundamental takeaway was the transfer of knowledge. The workshops succeeded in imparting valuable information and strategies to each club or sports facility, enabling them to adapt and implement changes that suit their specific circumstances.

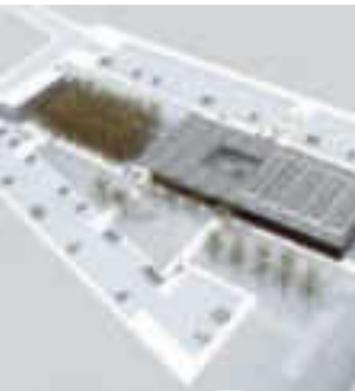
It's worth noting that even small changes, which may not incur significant costs, can collectively contribute to making sports facilities more sustainable. This recognition underscores the idea that sustainability is achievable through incremental improvements, and that such efforts can benefit the environment, society, and the long-term viability of sports infrastructure



Study case Guimarães Gymnastics Academy

 The Gymnastics Academy building, with a covered area of 3100m2, located on the eastern edge of the green park in the city of Guimarães, is intended for training and high-performance gymnastics. The aim is to apply all the technologies needed to transform it into an energy-independent structure with low CO2 emissions.







Study case Guimarães Gymnastics Academy

The building is located on the site between two existing streets that give access to it, one at the highest level, which forms a main road axis, and the other at the lowest level, which runs along the eastern edge of the park and serves only this infrastructure.

#### Study case Guimarães Gymnastics Academy

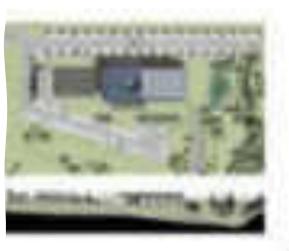




The exclusive program for gymnastics and high performance is made up of a pavilion, support gym, changing rooms, administrative services and common spaces that allow access to a grandstand above the pavilion.

The choice of materials used in the building, in addition to its own performance in terms of energy efficiency, is clearly intended to be educational in nature and shows an environmental concern in the design and development of the project, seeking a clear balance in technological and architectural terms. The exterior cladding in blocks of black cork agglomerate is the defining element of this idea, and the way in which it has been used is intended to constitute the project's image of reference, associated with the concern for environmental sustainability.







### Study case Guimarães Gymnastics Academy

The volumetric composition of the building is defined by the desire to involve the construction in the local landscape, without a concern for integration in the traditional sense of the term.

The building seeks out relationships of scale and references in its immediate surroundings, using its volume as another element that integrates the walking routes in the park, as is the case with the terrace accessing the building which, by connecting the two levels of the land, makes it possible to contemplate the green area of the park and the eastern slope of the city.

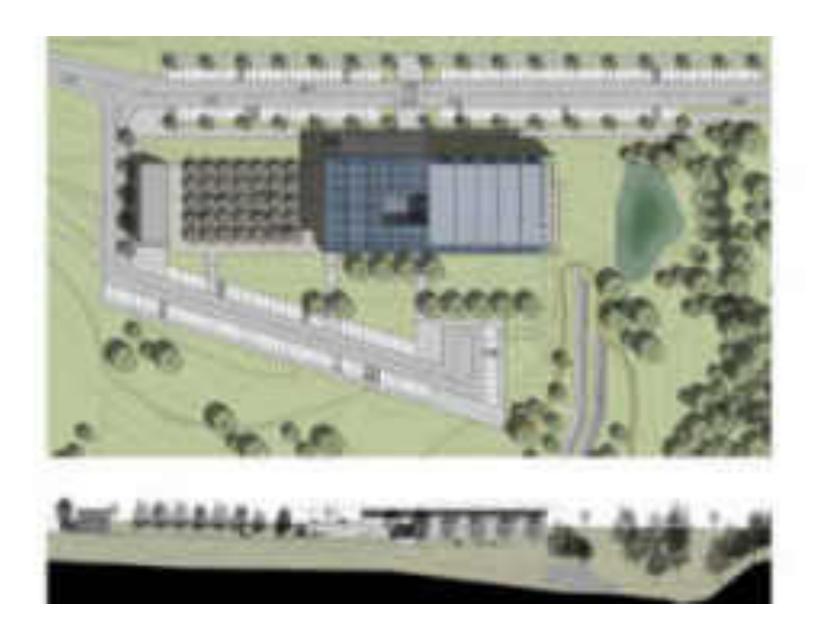




Guimarães Gymnastics Academy - Estimated Costs of intervention 3.5M euros









Study case Tennis Courts.

# Assessment and analysis of the situation LED floodlight solution

The pavilion is prepared for all kinds of tennis events;

- In 2017 it began to be used for training sessions for the national youth teams: U12 and U16;
- That same year, the Winter Cup (girls under 16) - the European Championship on indoor courts - began to be played in February;
- In 2018 it began to be used for a women's world ranking competition (WTA ranking), part of the international women's professional calendar, the Lousada Indoor Open (ITF World Tennis Tour event worth € 30,000);
- In 2019 was been used for national men's events (Vale do Sousa Cup) and also in support of the race men's event of the Porto Open (ITF World Tennis Tour event worth € 50,000), because of the weather conditions;

#### Study case Tennis Courts.

The level of tennis played in Lousada has evolved a lot, whether it's the teams or the players, and it already requires better lighting;

The events played in Lousada are getting better and better, whether international ornot;

Especially at international events, the current lighting is already below minimum levels, and it's

noticeable when the sun goes down;

 $\label{lem:continuous} Events with men's boards are practically impossible to organise, a sit's a much faster gamethan$ 

women's and therefore can't cope with poor lighting

During 2019 Lousada Indoor Open needed a temporary solution, which improved the lighting levels, but still fell short of the minimum;

b. The Municipality is coming under increasing pressure from the ITF to have the minimum lighting standards for international competitions;

c. The ITF, even with the collaboration of the FPT and the excellent performance in all other sectors of the Lousada Indoor Open, should not grant us any more moratoriums to resolve the issue;

d. Inshort, the quality of the practice-training and competition-carried outthroughout the year on the indoor courts (especially between October and April) already justifies upgrading the lighting to minimum quality levels and in accordance with international standards (ITF/ATP/WTA).





# Study case Tennis Courts. Indoor court lighting Calculated measures

#### Case A

- Very low and poorly distributed levels
- These levels have caused many problems with the official competitions we organise, especially the international ones: Winter Cup and Lousada Indoor Open

Total lux: 4,884

Average lux: 326

• ee file "light register 1"

#### Case B

- lighting on the court with the "led" floodlights installed this year on a trial basis
- high levels (above average) that will only have to be subjected to better guidance
- for example, the areas near the back of the courts have very high levels and just beyond, near the back of the court, there are levels below the minimum.

Total lux: 13,590

Average lux: 906

• see file "light register 2"

#### Case C

lighting on the court with the "led" floodlights and the initial floodlights very high levels (above average) and with bad distributed

The sum of the lighting levels does not improve light distribution

• Total lux: 18,598

Average lux: 1 240

see file "light register 3"

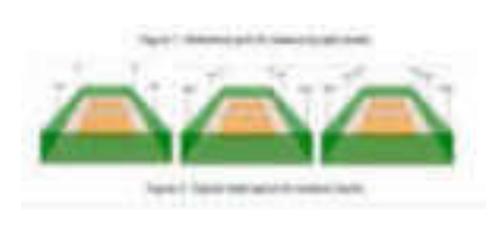
### Light assesment and sustainable distribution

- Because the tennis ball is very small compared to other indoor sports (e.g. basketball, volleyball, handball and futsal) and because it moves at a very high speed, especially during the service stroke (where professional men's tennis has an average speed of around 200 kilometres per hour), the accuracy and precision of the lighting distribution is very important
- Therefore, with the LED solution trialled it will practically be enough to reorient and/or redistribute
  the lighting applied On the one hand, because of the facts pointed out in al a) above and because
  the players are always looking at the other side of the court, the The floodlights should not be
  placed at the back of the court, but at the sides of the court, whether indoor or outdoor, because on
  high balls and when the serve is moving, the player has moments of " chaining"(see outdoor tennis
  courts at the complex)
- On the other hand, it's more complex and less effective to orient the floodlights at distances of around 20 metres (from the back to the middle of the court) than it is to orient the side floodlights at distances of around 10 metres (from the side to the middle of the court)
- Therefore, to achieve the same lighting result with less wastage and, perhaps, the use of less " the floodlights should be placed along the sides of the courts and orientated parallel to the net line (the width of the court) rather than diagonally
- A men's event (Maia Open ATP Challenger) is taking place on the five indoor courts, where you can see the floodlights on the sides of the courts
- Therefore, unless there is a better understanding, the "projector solution presented by SECOM
  Portugal and applied to court no 9 has the capacity to fulfil the technical requirements demanded
  and necessary for the indoor sports facility (with tennis courts to be used by the levels of practice of
  the sport that the Lousada Sports Complex already receives during the year, especially in the period
  from October to April





### Reccomendations



Tennis Courts - Estimated Costs of intervention 15,000 euros

- place the floodlights on the sides of the courts and orientated parallel to the net line (the line of the width of the court) rather than diagonally, a measure that will largely resolve the orientation and/or distribution of the lighting and avoid some chaining of the players;
- the creation of lateral supports to place the projectors, with ATPortowilling to collaborate with the technicians of the Municipality of Lousada to find a suitable and feasible solution
- distribute and/or orientate the lighting in a homogeneous and regular manner, without notable differences in lighting in the various "spots" indicated and recommended by the ITF for the final assessment of court lighting;
- fulfil the minimum technical criteria (ITF/ATP/WTA) for measuring the lighting of an indoor court: Total minimum lux: 11,250 Minimum spot (15) lux: 750

#### **Workshop in Portugal final reflection**

- As part of the DEDALUS project, funded by the European Commission, the Municipality of Lousada has
  undertaken a comprehensive initiative aimed at increasing awareness and understanding of sustainable
  challenges within the realm of sports. The municipality has developed and organized a series of ten
  workshops designed for professionals engaged in sports-related activities, as well as for designers and
  architects seeking to enhance their expertise in this field.
- This sustainability strategy, developed with active participation from the local sports community and
  professionals in the design and architecture sectors, is intended to address a wide array of objectives. These
  include identifying sustainable solutions, reimagining and adapting sports facilities for versatile and
  sustainable sports and recreational purposes, formulating a process for regenerating the broader context,
  improving the sustainability of existing sports infrastructure, establishing a financial plan and an overarching
  economic framework, and exploring innovative approaches to communicate the strategy for sustainable
  regeneration to secure funding.
- Professionals hailing from the Municipality of Lousada, spanning diverse disciplines such as sports, architecture, and engineering, collaborated to craft the workshop program and provided guidance during the workshop sessions. The workshops themselves covered a range of topics, including sports infrastructure, sustainability and ecology, urban management, and the utilization of technological tools.
- Throughout these workshop sessions, participants were encouraged to brainstorm and develop practical solutions that could be implemented in real-world scenarios. The culmination of each workshop included dedicated group work sessions during which proposals were discussed and presented.
- This initiative undeniably served as a platform for sharing knowledge and fostering a collective effort to uncover novel and more sustainable solutions within the realm of sports.
- By using practical, real-life examples, the participants were able to acquire strategies and tools to take the content they had learnt into the realities of their sports clubs.

#### **Workshop in Portugal final reflection**

- The workshops faced several challenges and obstacles, and through these design workshops, a capacity-building process was initiated. One notable challenge was the timing of the workshops, which were scheduled during the summer. This choice made it difficult to engage a broader audience, particularly university students majoring in design and architecture. The summer period coincided with school holidays, limiting the participation of these potential contributors.
- Another challenge was the selection of professional speakers exclusively from the Municipality of Lousada, a decision made to streamline the logistical aspects of planning and implementing the training program. While this choice may have facilitated the process, it could also potentially limit the diversity of perspectives and experiences brought to the workshops.
- Through these challenges, several important lessons were learned. One key takeaway is the importance of
  establishing strategic partnerships with organizations, whether local or external. These partnerships can
  enhance the outreach and effectiveness of initiatives like these workshops, broadening the pool of
  potential participants and stakeholders. Collaborating with external organizations can bring fresh insights
  and resources to the table, enriching the learning experience.
- Additionally, involving professionals from various fields with practical experience in real-world cases can significantly improve the delivery of content. Their firsthand experiences can make the workshop content more relatable and comprehensible, thereby enhancing the learning outcomes.
- Ultimately, these workshops have transformed the organization into one that is action-oriented, demonstrating a commitment to local organizations and their employees. The organization's perceived value has increased, as it is now recognized for its efforts to address real needs and foster growth within the local community. Moving forward, the plan is to continue organizing more training events to further empower and educate various local stakeholders

# Workshops outcomes in Italy

Design thinking

#### Workshop in Italy

- After a series of training workshop, young designers divided in groups, selected pilot clubs, interviewed sport managers, sport trainers, sport club's attendances, analysed the context and then analysed good practices to find inspiration, define moodboards, started brainstorm and identified suitable solutions, that have been designed and shared with the clubs, Videos to explain the desingm the problem addressed, the process implemented and the solution designed hvaev been realized, as well as pitches sessions have been organized.
- Two innovation challenges have been launched.
  - INNOVATION CHALLENGE 1: what can designers do to make sport clubs more sustainable, attractive and resilient to climate and societal changes?
  - INNOVATION CHALLENGE 2: what can designers do to promote sport in post disaster context? How can sport restart when infrastructures and facilities are destroyed?
- Pilot clubs selected by young designers are located in in north-east of Italy in the following municipalities: Rubano (PD), Vicenza (VI), Bassano del Grappa (VI), Vedelago (TV), Venice (VE), Follina (TV), Favaro Veneto (VE), Paese (TV), Turkey. region affected by earthquake.



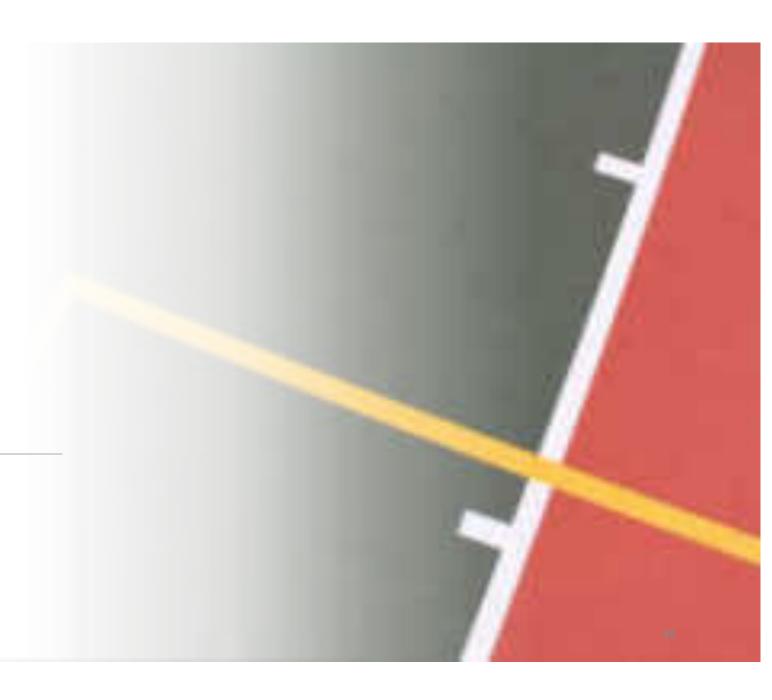








# Study Cases





#### **Context / problem**

Paese, located in the province of Treviso, is known for its rich diversity in environments and cultures, which allows it to stand out for its strong historical connections and geographical characteristics. The city boasts a diverse population, encompassing both its residents and a large number of tourists who frequent its historic center and suburbs. This demographic diversity also benefits the surrounding cities, as it sustains a constant flow of people and supports local businesses and leisure activities. Specifically, Paese is a municipality of around 20,000 inhabitants in the province of Treviso, which includes other towns such as Castagnole, Padernello, Postioma, and Porcellengo.

The city offers a wide range of activities, including those related to sports and entertainment. For example, there are sports clubs like Paese Calcio, US Castagnole Calcio, US Postioma Calcio, GS Padernello, Basket Paese, Volley Paese, and Rugby Paese. These sports organizations encourage young people to participate in group activities, giving their best in physical and dynamic pursuits.

Pallamano Paese was founded in 1975 within the Gruppo Sportivo Dinamis Paese. It emerged from the passion of a group of individuals for handball, a sport that had recently entered the Italian sports scene (the Italian Handball Federation, F.I.G.H., was established in 1969). The club currently competes in various categories, including Serie B, under 17, under 15, under 13, and under 9. The organization also hosts several events and tournaments, both within and beyond the local community.

Sponsors supporting Pallamano Paese include Tribe, Tim Impresa, Juego, Chilling Time, Egoist, Itagency, Ciao, Maikii, AM Laboratori, Exclama, Colusso, Non solo Giornali, Foto De Martin, Parolin Sergio Termoidraulica, and Pellizzari Sport



#### **Problem addressed**

- Material Organization: Due to a lack of dedicated storage space for sports equipment, there is a constant struggle to locate and organize the equipment efficiently. The gym is shared with multiple sports clubs, which leads to the mixing of jerseys and balls, resulting in the loss or improper use of these resources.
- Time Division: The scheduling of the gym among various clubs is not always coordinated effectively. To address this issue, a dedicated facility manager is needed to ensure that all clubs have fair and appropriate access to the gym.
- Limited Visibility: Despite the club's presence on social media and its website, public communication is insufficient. To improve this, it is advisable to hire a professional solely focused on managing the digital presence of the club.
- Energy Insufficiency: Installing photovoltaic panels could help to generate more energy and reduce unnecessary energy waste.
   Achieving energy self-sufficiency is a goal to manage energy use more autonomously and economically.

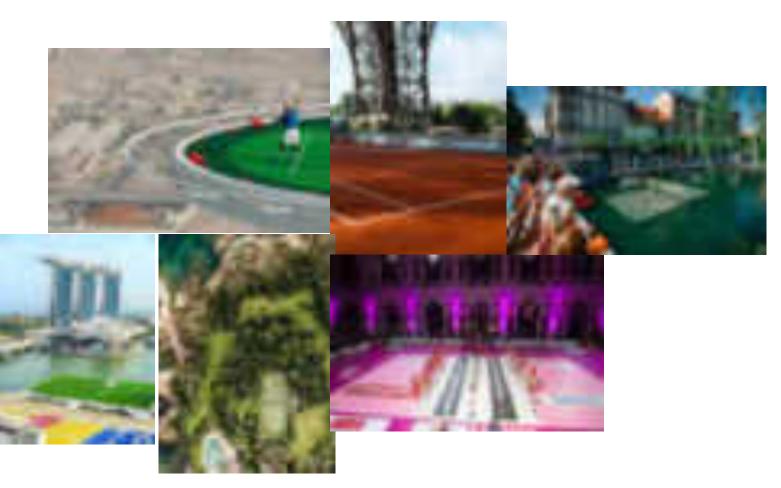
#### **Objecives**

- Well-being: Ensure that athletes receive proper attention to their nutrition and receive support in terms of injury recovery and overall physical health. This can be achieved by adding a health professional to the club's staff.
- Visibility: Enhance communication on social media and the website to engage the public in the club's activities. Building a community around Pallamano Paese can expand beyond the gym and training sessions. Additionally, collaborating with a local newspaper to publish general information, results, and interesting facts about matches and players can help in-depth understanding and outreach to the citizens and beyond.
- Space: Optimize the use of indoor and outdoor spaces by organizing outdoor activities in nearby areas. Establishing a refreshment area that can be used by athletes during training, by the public during matches, and by outsiders during club events can improve the overall functionality of the premises, potentially attracting more interest and participation in club activities.
- Target: Increase awareness and participation, particularly among young people, by implementing programs in local schools. This can provide children with an alternative choice in sports and nurture their passion for the sport throughout their lives.
- Community: Organize tournaments before and during the season to strengthen connections with other clubs, and host meal events to generate economic benefits, which can be reinvested in building a strong sense of community.

### **Brainstorm / moodboard**

## Refereces

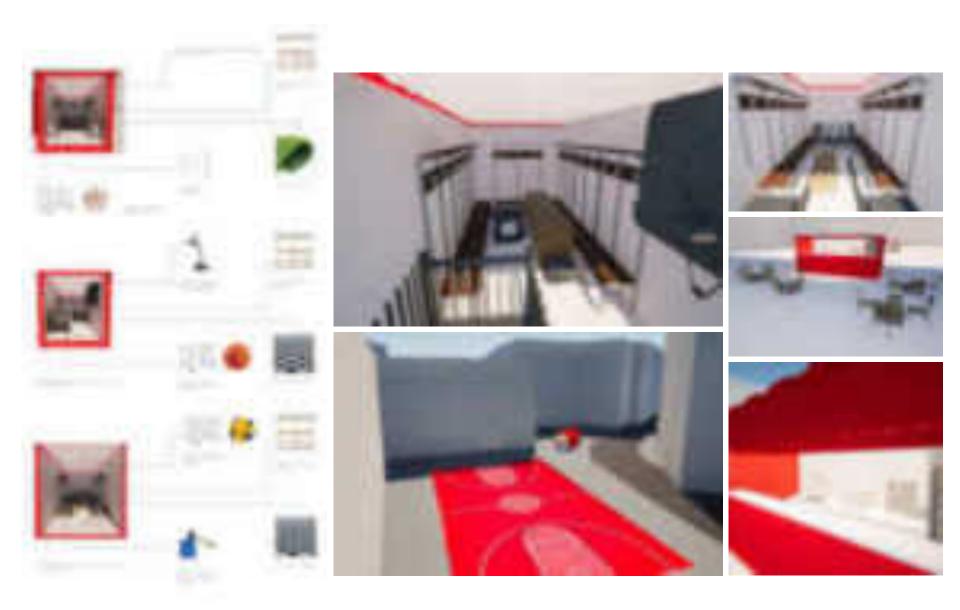




- The Concept arranged for the development of Pallamano Paese Sport Club is founded on the idea that sports can serve as a catalyst for integration and should be accessible in a variety of community settings, including festivities, events, and outdoor venues such as plazas and green spaces. The project places a strong emphasis on the widespread dissemination of sporting activities, with the goal of offering all-encompassing fun and enjoyment.
- To facilitate this vision, the project leverages the use of transportable containers, which are specifically designed for the storage of sports equipment, team changing rooms, and a bar. These containers are characterized by their adaptability, sustainability, and minimal environmental footprint, making them the ideal solution for making sports accessible in various locations.
- One of the core features of this concept is the transportability of sports. The use of these modular containers enables the easy and efficient relocation of sporting activities to cater to the needs of different communities. This approach is not confined to specific urban areas but extends to rural regions and coastal locations, effectively bringing sports directly to the public.
- Sustainability is a key principle of the project, with a focus on using recycled and eco-friendly materials. This approach not only supports environmental conservation but also allows for the allocation of resources and capital to other aspects of the project.
- The suggested solution envisions future expansion. While it initially concentrates on a select number of itinerant sports, the long-term goal is to diversify the sports offered. The initial focus is on infrastructure, such as the container structure, team changing rooms, and a bar, with sports like basketball, volleyball, and soccer. However, the plan is to include a wide array of sports, ranging from handball and water polo to tennis and beyond. This adaptability ensures that the project can cater to the specific needs and preferences of various communities.
- The solution proposed seeks to foster a strong and loyal community around the club. The widespread availability of itinerant sports does not only provide opportunities for enjoyment but also enhances the visibility of the club. Effective communication strategies, both online and offline, are vital for engaging the public and creating a sense of belonging among participants. This integrated approach is aimed at promoting sports as a unifying and accessible force that can enhance the quality of life in a multitude of settings



The use of containers ( $2.25 \times 2.30 \times 5.70$  meters) for material storage, team changing rooms, and specific item storage is a key feature of the project. These containers are designed for various sports, including basketball, volleyball (volley), soccer, a bar, and changing rooms. As mentioned earlier, one of the goals is to expand the selection of itinerant sports, reaching cities with more diverse and timeless alternatives. However, a solid foundation is essential, and that's why the initial focus is on the efficient management of equipment and effective communication with the public





#### **Context**

The mission of the Association is to nurture children, boys, and girls in the spirit of the game, respect for rules, in a wholesome, attentive, and inclusive environment. Their work is founded on the fundamental principles of rugby, emphasizing respect for rules and teammates, support, progression, and achievement. These values are intended to become a way of life for the players.

The association has access to several facilities, including two rugby fields (a main field and a subsidiary field), a covered grandstand with changing rooms, changing rooms for athletes and referees, a recreational room, public restrooms, a lighting system, a medical room, warehouses, and offices.

The club caters to various categories of rugby players, including those in basic rugby (Under 7 - Under 9 - Under 11 - Under 13), youth rugby (Under 15 - Under 17 - Under 19), the first team, and senior players. The survey conducted highlights various needs within the association. These include the improvement of field lighting (12.4%), enhancements to the gas plumbing system (16%), and the water system (36.8%). Furthermore, the association aims to enhance its attractiveness (8%) and redevelop its meeting room (6.5%). The playing field's surface is another crucial area that requires attention (20.3%).

The association faces several key issues related to the water system, gas plumbing system, field lighting, and playing field surface.

- Potential Areas of Intervention To address these issues, the association plans interventions such as optimizing water usage by utilizing rainwater for various activities, establishing an exclusive gas plumbing system, upgrading field lighting to energy-efficient LED technology, and improving the playing field surface to reduce maintenance costs and enhance athlete performance.
- Needs Analysis of the Registered Members The survey of registered members revealed specific needs, including the expansion of the clubhouse (13.6%), maintenance of playing fields (34%), and refurbishment of the gym (25%). Additional needs include the improvement of recreational areas (3%), the enhancement of the association's attractiveness (4%), and the renovation of changing rooms (20.4%).
- **Key Issues** Key issues faced by the registered members revolve around the maintenance of playing fields, gym refurbishment, changing room renovation, and the expansion of the clubhouse.
- Potential Interventions To address these issues, potential interventions include optimizing the maintenance of playing fields, creating a more spacious gym to accommodate all members simultaneously, enhancing the quality and efficiency of changing room facilities, and expanding the clubhouse to provide a larger space for post-match socializing.



#### **Problem addressed**

- 1st Issue to Address: Water System The sports association requires a significant amount of water for its daily activities, primarily for field irrigation. The fields have natural grass surfaces that demand frequent and expensive maintenance. Currently, the association relies solely on the municipal water supply for all its water needs, including those tasks that do not require potable water. Recently, a nearby groundwater source was discovered, and the association expressed interest in using it for non-potable water purposes. However, their attempt to create a well through the local water management company, Veritas, was unsuccessful. The association's leadership seeks innovative solutions for water management to add value and sustainability while addressing this issue ethically.
- 2nd Issue to Address: Playing Field Maintenance The association's two primary playing fields have natural grass surfaces, favored by most players over artificial alternatives. However, these surfaces present various maintenance challenges, as they are vulnerable to wear and tear from intense use, nutritional deficiencies, lighting issues, and diseases common to grass surfaces. These damages require significant maintenance, potentially including partial or complete reseeding. In addition to standard maintenance practices like mowing, fertilization, treatments, dethatching, and coring, the quality of the grass is significantly impacted by irrigation. Due to the high costs of water from the municipal supply, the association currently prioritizes the irrigation of the main field at the expense of the secondary field. The leadership's request is to explore solutions for quality field maintenance using more sustainable and cost-effective water sources.
- 3rd Issue to Address: Gym Refurbishment The association currently has two separate gyms: one dedicated to younger team training and the other equipped for older athletes. Initially, there was one spacious but inefficient gym with outdated equipment. Recently, a project separated indoor training spaces based on players' ages. The gym for younger players, located in the same area as the previous one, remains well-designed and meets their needs. However, the gym equipped for free-weight training, situated in the secondary structure of the association, is small and unable to accommodate all athletes during simultaneous training. The limited space between various equipment also poses potential safety risks during exercises. Furthermore, this gym is located in a high-traffic area between the entrance and changing rooms, making it unsuitable for its intended purpose. The leadership's request is to find practical solutions for the redesign of the equipped gym, making it an optimal training space and potentially introducing innovative elements for the athletes.







#### References



In the realm of rugby sports facilities, several new technologies have been introduced in recent years to enhance the gaming experience, athlete safety, and officiating. Some of the latest technologies used in rugby fields include:

- Eco-Friendly Stadiums: These are designed to reduce environmental impact by using renewable energy sources like solar and wind power.
- Synthetic Playing Fields: These fields, made of durable and draining materials, provide a consistent surface, reduce injury risk, allow for more intense use, and require less maintenance compared to natural grass.
- · LED Lighting: LED systems enhance visibility on the field by reducing shadows and improving light quality.
- Surveillance and Data Analysis Systems: They monitor player performance and aid in refining game strategies using high-definition cameras and smart algorithms.
- Al-Based Stadium Management Systems: These systems enhance spectator experiences, safety, and operational efficiency by analyzing real-time data and making informed decisions.
- Performance Analysis Systems: Wearable devices and sensors collect player performance data during training and matches, helping identify strengths and weaknesses and improving training and game strategies.
- Injury Alert Systems: Technologies like impact sensors can detect violent impacts or abnormal player movements, triggering alerts for possible injuries.



Given the increasing impact of climate change, the significance of water is growing. The current demographic trends in cities and the resulting strain on local water resources demand sustainable solutions.

Until recently, rainwater in cities was seen as a problem to be quickly disposed of, with little consideration for surface water retention, evapotranspiration through plants, and evaporative cooling.

Sustainable rainwater management allows us to view rain as a valuable resource. The concept of the "Sponge City" describes an urban planning approach that primarily seeks to restore the natural hydrological cycle in urban areas, focusing on infiltration, evapotranspiration, rainwater collection, and reuse.

The primary goal is to make cities more resilient to climate change, but the benefits are manifold:

- Local water retention: Sponge cities aim to reduce and slow peak runoff, thereby lightening the burden on sewage systems and significantly decreasing the risk of flooding during heavy rains.
- Improved water quality in cities, often jeopardized by rapid urbanization, thanks to rainwater filtration through the soil.
- Restoration of the natural hydrological cycle through evapotranspiration and local infiltration.
- Reduction in water demand and the frequency of water crises through various rainwater utilization methods.
- Enhancement of the urban microclimate through the evaporative cooling of various elements typical of Sponge Cities.

#### References



In many cities, alongside the gray infrastructure (sewer systems), blue and green infrastructures are gaining increasing importance as complementary methods for water supply management in urban areas. This is because, beyond their primary purpose of flood protection, these infrastructure types offer multiple advantages, such as improving air and water quality, enhancing local climate change resilience, preserving the natural hydrological cycle, increasing well-being, and enhancing biodiversity in urban areas. In Sponge Cities, blue and green infrastructures enable the sustainable collection, storage, and reuse of urban rainwater. Among the commonly used blue infrastructures for rainwater collection are:

- Surface reservoirs: large storage areas created by damming rivers or streams, capable of collecting rainwater from the surrounding watersheds, providing a constant water supply.
- Underground storage tanks: subterranean containers made of materials like concrete, plastic, or others, collecting rainwater through drainage or direct collection systems.
- Retention basins: large depressions or excavated areas designed to capture and temporarily store stormwater.
- Artificial lakes: purpose-built basins for rainwater collection, capable of holding significant volumes and ensuring a reliable water supply.
- Underground aquifers: natural subterranean reservoirs composed of layers of porous rock or gravel, capable of storing and transmitting water through well drilling or boreholes.
- Overall, blue and green infrastructures are pivotal in making urban areas more sustainable and resilient, addressing various water-related challenges.



Green infrastructures are a network of strategically planned natural and semi-natural areas integrated with other environmental elements, designed to promote environmental sustainability and reduce negative environmental impacts. While these infrastructures serve as tools for conserving and protecting ecosystems and biodiversity, they offer a wide range of additional benefits.

They safeguard and enhance the natural and landscape assets of the region, improve ecosystem functioning and ecosystem services, promote societal well-being and health, and support the development of a green economy and sustainable land and water management. This, in turn, fosters smart, sustainable, and inclusive growth.

Various types of green infrastructures include:

- Green roofs: roofs covered with vegetation that provide thermal insulation, reduce air pollution, and promote biodiversity.
- Green walls: building walls or facades covered with plants that enhance air quality, absorb heat, and reduce noise pollution.
- Sustainable drainage systems: aimed at managing rainwater sustainably, reducing flood impacts, and improving water quality.

  These systems include wetlands, catchment basins, rain gardens, and permeable pavements.
- Parks and green spaces: their creation encourages a connection with nature, increases biodiversity, enhances air quality, and provides places for physical activity and relaxation.

#### References



Maintenance of rugby fields

Irrigation of rugby fields is one of the most frequent and critical maintenance activities for proper sports facility upkeep. This process depends on several variables, including the amount of water required and the most suitable system for the specific field. The required amount of water can change based on the season, external temperatures, and the type of soil. Regarding the system, it's important to note that there are various products tailored to different needs within each sector. In general, irrigation systems can be categorized as manual, semi-automatic, or automatic.

Additionally, there are smart irrigation systems that utilize advanced technologies to optimize water usage, delivering it only when and where it's needed. These systems incorporate meteorological data, soil moisture sensors, and programmable controllers to automatically adjust irrigation programs. This ensures that the rugby field receives adequate moisture without excessive water wastage.

Some examples of these new technologies include:

- •Drip irrigation: Minimizes water losses due to evaporation and efficiently delivers water directly to plant roots.
- •Soil moisture sensors: Provide real-time data on soil moisture levels, helping optimize irrigation programs and prevent overwatering or underwatering.
- •Subsurface irrigation: Involves the installation of a network of perforated pipes beneath the surface of the turf, allowing water to be distributed directly to the roots and reducing losses through evaporation.
- •Modular turf systems: Pre-constructed turf sections with integrated irrigation channels, ensuring precise and efficient water distribution, reducing waste, and providing uniform field coverage.



After a workout, recovery exercises help slow down blood circulation, calm the nervous system, relax muscles, and initiate muscle regeneration. During this phase, the body rests, repairs structures that have been stressed by intense stimuli, and readies itself to return to its pre-workout condition.

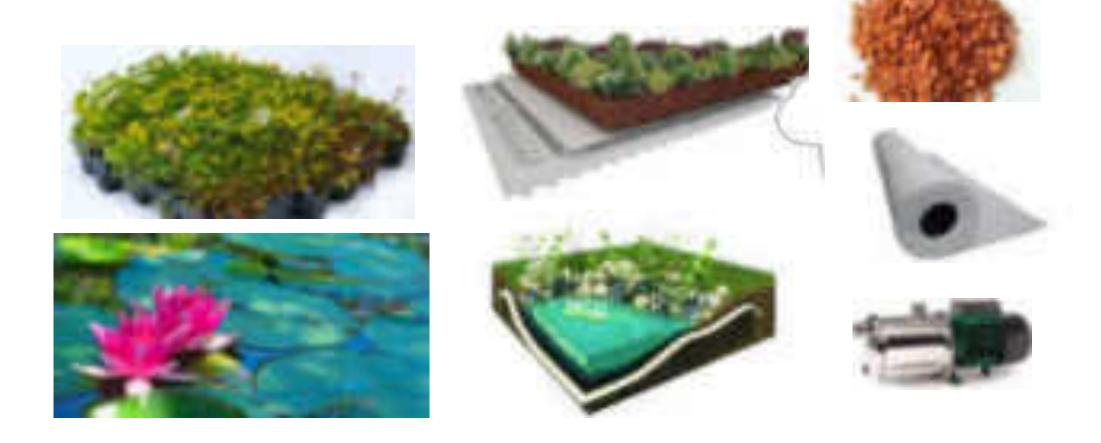
Muscle recovery can be divided into three distinct phases:

- 1.Immediate recovery, which occurs during physical activity. During this brief time frame, muscles relax tension, and the muscle partially restores its energy, depending on the activity's intensity.
- 2.Mid-term recovery, which happens between exercises during the training session. Muscles require more time to recover their energy in this phase.
- 3.Long-term recovery, occurring after the workout is completed. It is essential for injury prevention and enables the muscles to fully recover their energy.

Two of the most commonly used techniques for post-workout muscle regeneration in sports are:

- •Sauna, typically set between 80 and 105 degrees Celsius. It helps relax both muscles and the mind and is ideal during the cooldown. Increased blood flow can relax muscles and initiate the regenerative process. The enhanced blood flow also speeds up the delivery of essential nutrients to the organs.
- •Cryotherapy, ranging from -110 to -160 degrees Celsius and produced using liquid nitrogen, which cools and dries upon vaporization. After exercise, cryosauna helps eliminate lactic acid, expediting muscle recovery. Furthermore, it can assist in treating sports injuries such as strains.

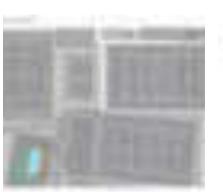
# **Moodboard of technologies**



# Concept

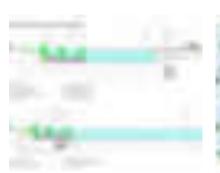


# Concept

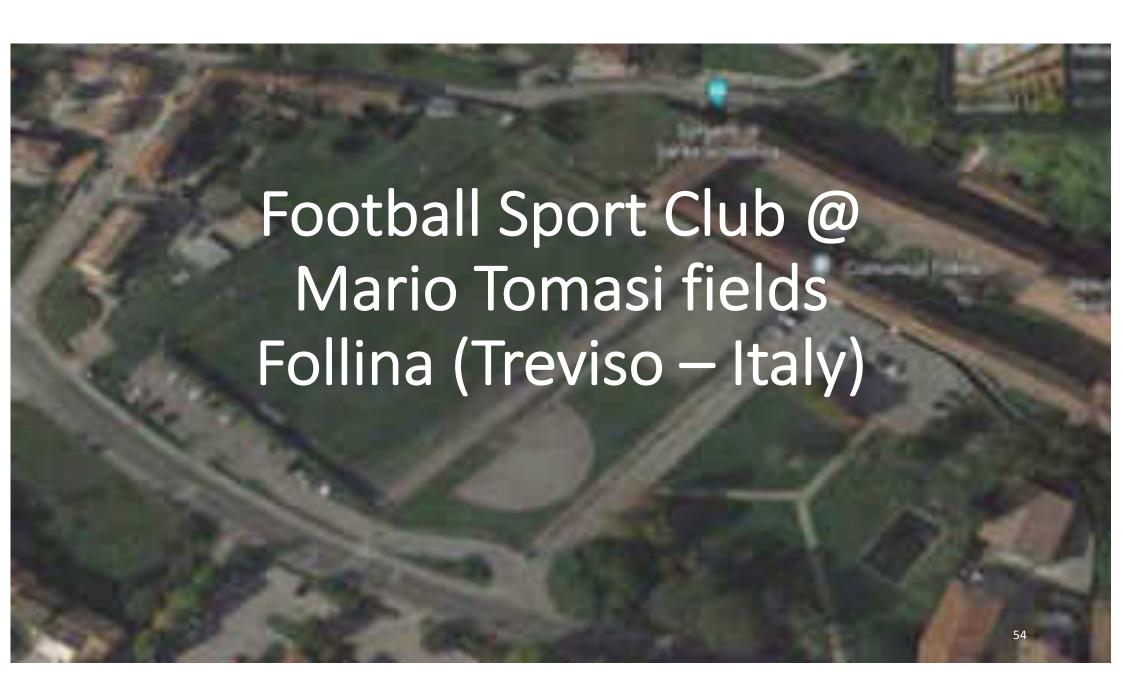












#### **Context / Vision**

Aspiring to become Italy's Premier Sustainable Sports Academy, in the small town of Follina, nestled in the heart of Italy, the Football Club Mario Tomasi is setting its sights on a remarkable transformation. This small sports club, with aspirations that far exceed its current status, envisions itself as Italy's leading sustainable sports academy. While this dream is within reach, there are various challenges and considerations the club must address as it charts its path to sustainability and excellence.

- The Football Club Mario Tomasi recognizes that in an era defined by environmental consciousness and ethical responsibility, sustainability is paramount. To fulfill this vision, they are focusing on:
- One of the pressing issues is ensuring the sustainability of synthetic football fields. While these fields provide year-round playability, they often involve the use of plastics, which have well-documented environmental concerns. Balancing the benefits of synthetic fields with their environmental impact is a complex challenge.
- To address this, the club aims to use innovative and sustainable materials for the underlay of synthetic fields, shifting away from non-recyclable components and exploring eco-friendly alternatives. This approach harmonizes the benefits of synthetic fields with a commitment to sustainability.
- Like any ambitious project, securing adequate funding and attracting investors are vital hurdles to overcome. Transforming into a premier academy involves significant investments in infrastructure, technology, and talent development. Attracting investors who share the club's vision is essential.
- : Another challenge lies in drawing talented athletes who can benefit from the academy's training programs. Connecting with sports federations to integrate the club into the broader sports ecosystem is equally critical.
- The club's unique approach to sustainability involves a circular economy model that repurposes waste materials
  from local businesses. While this is an innovative solution, it requires seamless coordination and cooperation with
  these enterprises.

The journey from a small-town sports club to Italy's premier sustainable sports academy is an ambitious undertaking. Football Club Mario Tomasi acknowledges the obstacles it faces, from environmental concerns over synthetic fields to financial challenges. Yet, its commitment to sustainability and inclusivity is unwavering. With strategic planning, innovation, and community involvement, the club aspires to lead by example and inspire similar transformations in the sporting world. The story of this small club with big dreams epitomizes the intersection of ambition, sustainability, and the enduring love for the game



#### **Brainstorm / ideas generation**

The Football Club Mario Tomasi in Follina aims to address various challenges, with a strong focus on sustainability and inclusivity. The primary goals include making basic sports facilities more sustainable, enhancing the appeal of grassroots sports associations, ensuring principles of inclusiveness and health for all, and maintaining economic feasibility. To realize this vision, New Academy seeks to implement a circular economy model in collaboration with local businesses.

The anticipated implementation process aims at

- 1. Reusing of Sponsor Materials: New Academy plans to utilize materials from one of the association's sponsors, Linea Tre SRL, for constructing new facilities. By using discarded materials, they reduce waste and contribute to sustainability.
- 2. Developing Insulation and Fertilization from Waste: The club intends to obtain insulation materials from Lanificio Paoletti, made from discarded wool, for the buildings. This repurposing of materials promotes sustainability while reducing waste.
- 3. Recycling Seating: The construction of stands will involve the use of recycled materials, such as seats, through a partnership with SAVNO and ARTISPORT. This not only provides sustainable infrastructure but also contributes to recycling efforts.

New Academy aims to bring an innovative model to the sector by introducing new facilities and adapting the functions of the existing sports complex. To achieve this, they are exploring opportunities to repurpose waste materials from local businesses. However, some challenges persist, including typical issues with synthetic football fields and environmental concerns regarding plastic usage. While recycling can be a step toward sustainability, it doesn't fully address environmental challenges related to plastics. Additionally, the Academy will need to secure funding, attract investors, draw athletes, and establish connections with sports federations to realize their vision effectively. Furthermore, addressing sustainability aspects, such as using environmentally friendly materials for the underlay of synthetic fields, is essential for a comprehensive approach.

New Academy seeks to create a model that not only revitalizes sports facilities but also contributes to a more sustainable and inclusive sporting environment.



### **Moodboard of good practices**











# Visiting | Explaining







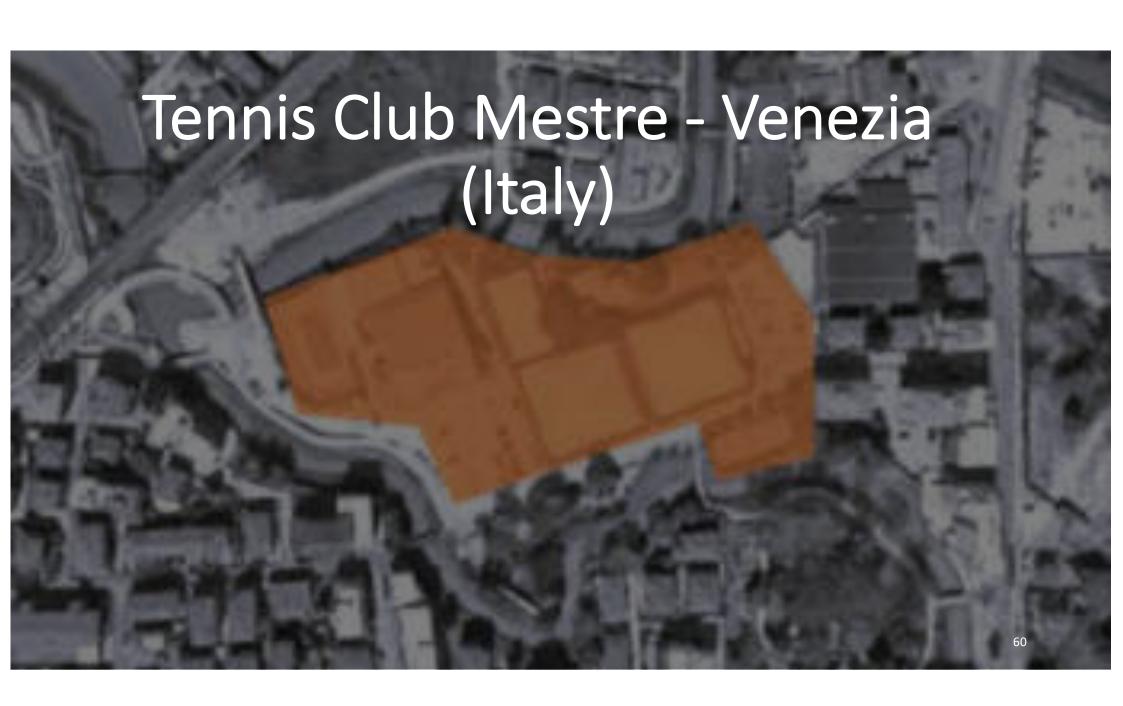












#### **Context / problem**

Venice Mestre Tennis Club, established in 1950 with a passion for promoting sports, especially tennis, has come a long way. Over the years, they've successfully organized prestigious tournaments like the Venice Challenge (now SAVE Cup) and earned a reputation in the ATP Challenger Tour. While the club boasts seven tennis courts, a padel court, a yoga gym, and more, it is not impervious to the winds of change. A recent inspection and conversation with the director has revealed areas where the club can further embrace sustainability and modernization.

#### Challenges and Opportunities:

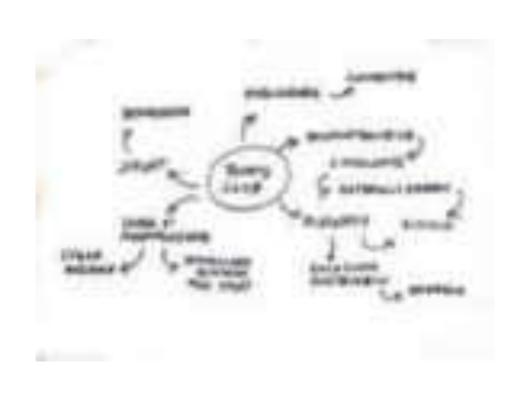
- The club's seven tennis courts, though well-maintained, present an opportunity to transition to a more sustainable model. Using eco-friendly and recycled materials for court surfaces, like recycled tire rubber or sustainable turf, can enhance their environmental footprint.
- The yoga gym, while functional, would greatly benefit from modernization to improve the experience for members. Upgrading equipment and revamping the space will enhance its appeal.
- The club's changing rooms, showing signs of wear and tear, should undergo a comprehensive renovation to create a fresh, comfortable, and sustainable environment.
- The clubhouse, including the reception area and the restaurant/bar, would gain a new lease on life through a comprehensive makeover. Implementing eco-friendly designs and expanding the restaurant by utilizing the terrace space can create a more vibrant atmosphere.
- The club's lack of an effective environmental graphics identity can be addressed by developing a consistent, eco-friendly visual language. This will not only enhance the aesthetic but also communicate their commitment to sustainability more effectively.
- The club's online presence is commendable but can be further leveraged to enhance communication and promote their eco-friendly initiatives. The club's website can be a hub for sharing their green efforts and building a community around sustainability.
- The existing sponsorships with ITAS Assicurazioni and PEUGEOT are well-established. They do not require changes, but leveraging these partnerships to promote sustainability is an option to explore.

Venice Mestre Tennis Club has an excellent foundation in sports, a well-known history, and an exciting future ahead. The transformation towards sustainability and modernization is not just an evolution but a conscious choice to align with global environmental concerns. By converting the courts, modernizing existing facilities, and amplifying the club's green identity, Venice Mestre Tennis Club can stride towards becoming a leading sustainable sports facility in the region. This transformation not only benefits the environment but also enhances the member experience and attracts a new generation of eco-conscious athletes



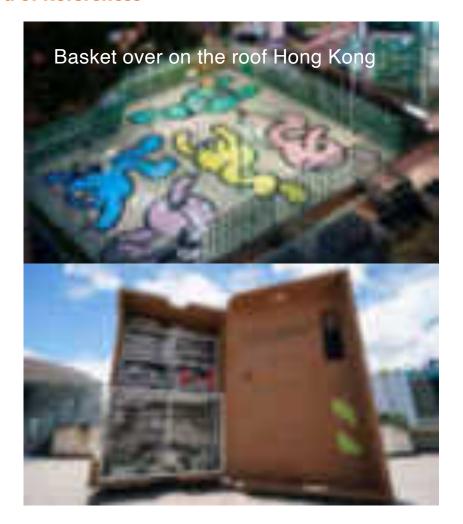


# Brainstorming





### **Moodboard of References**













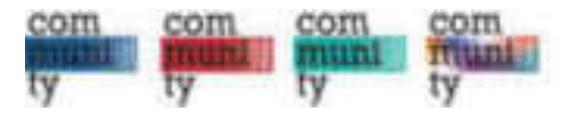


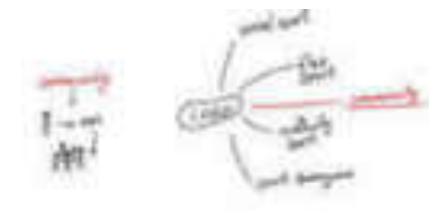
# Context and challenges

- The natural disaster that occurred in Turkey has brought numerous economic and social consequences to the population. After such
  a calamity, restoring the sports system can play a fundamental role in improving the health and quality of life of the people, especially
  children, during the reconstruction period.
- To address this emergency, it is necessary to revive the country through the power of sports, offering the population a place where they can rekindle social connections and experience a sense of community and belonging.
- After a natural or human-made disaster, the individuals affected experience a radical change in their lives: their daily routines vanish, and their living conditions worsen. The absence of a gathering point leads to the disappearance of a sense of community, which cannot exist without socialization.
- Our goal is to rebuild all of this, to restore that sense of community and socialization to the people who saw it vanish before their eyes. We are committed to improving their living conditions and enabling them to rebuild their future over time.
- Keywords:
  - Boosting morale
  - Restoration of daily life
  - Improved living conditions
  - Community needs
  - · Recreating social bonds and a gathering point

The main problem or challenge in this context is how to reintegrate the sports system into the daily lives of people after a natural disaster, as seen in the case of Turkey. This involves improving the health and quality of life of the population, with a particular focus on children during the reconstruction period. Additionally, there is the challenge of ensuring that the reconstruction efforts are sustainable. The solutions developed should be replicable in other contexts, such as those following disasters caused by human actions, providing a blueprint for post-disaster recovery and community rebuilding through sports.

- "Community" is a project born out of the desire to reinvigorate communities
  affected by natural disasters and, by extension, revitalize the country as a whole
  with a broader perspective. It is a project that can adapt to various scenarios, as
  its two fundamental elements are modular containers and locally-sourced
  materials, promoting a concept of the circular economy. The project's primary
  focus is to create a sort of blueprint for the construction of a space that each
  country can autonomously manage based on available resources.
- The space is organized into a series of containers, sourced locally, making sustainable choices in terms of transportation and costs that can be easily recovered through sponsorship and fundraising by various organizations. In addition to utilizing waste materials from local companies and repurposing containers, sustainability is also embedded in the space's operations. This is achieved through the incorporation of photovoltaic panels, a kinetic energy floor, and the lending of sports equipment to ensure self-sufficiency.
- The space offers a variety of inclusive sports activities and programs, aiming to engage a significantly wide audience, promoting social integration and equality while enhancing people's health and well-being. What results is an innovative, sustainable, self-sufficient space that serves the community, reviving a sense of belonging to a group and taking a step towards urban redevelopmen





Community" emerges from the fusion of sports and community. The project stems from the need to attempt to revive a community that has been struck by a natural disaster, primarily through the medium of sports. The container, our fundamental modular element, is deliberately depicted in a simplified, almost "condensed" form to convey the idea that something significant and effective can be created from a small starting point.

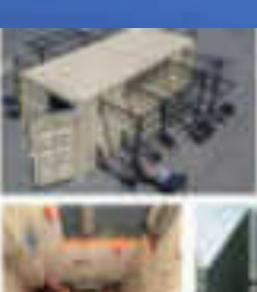
In essence, the project recognizes that, even in the aftermath of a devastating natural disaster, sports can serve as a powerful tool for rebuilding a sense of community and well-being. By using modular containers as the foundation, the project embodies the notion that starting with a compact and adaptable element, it is possible to create a transformative and impactful solution that promotes recovery and resilience within the community.



#### Skillstyne-



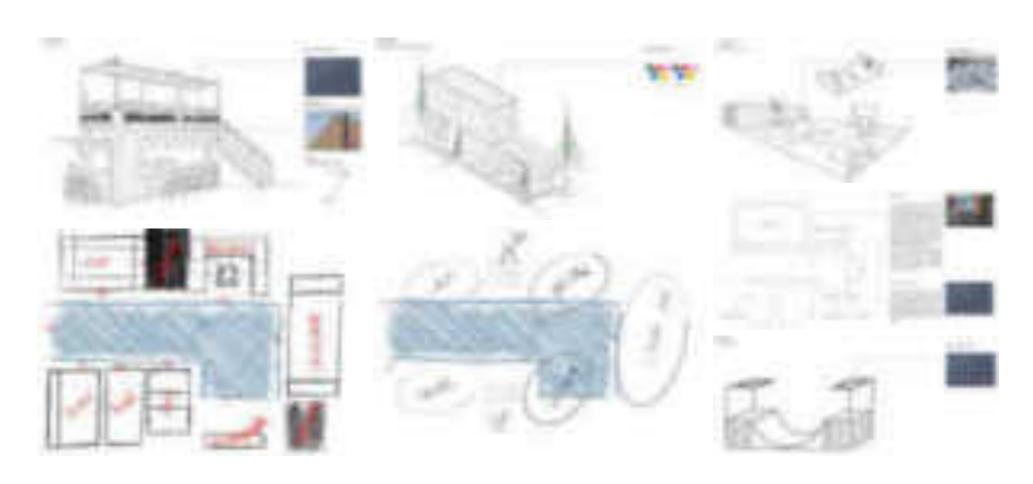












Design Solution 1









#### Refereces









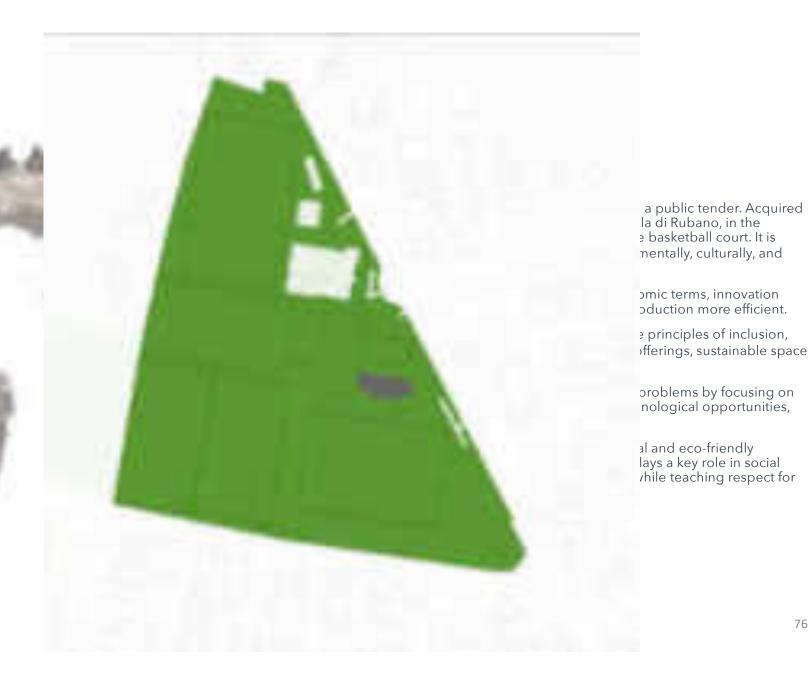






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### Need for regenerating

- The need for regenerating the soccer field is evident due to maintenance neglect. The grass is dry, with areas where it doesn't grow, causing seasonal issues: a heavy field in winter and hard terrain in summer. These conditions compromise the athletes' performance.
- Similarly, the rugby field requires similar interventions. Maintenance is also neglected here, with dry grass and uncultivated areas. Furthermore, the field's boundaries are only marked with paint on the grass, and its central location limits its full utilization.
- The intervention aims to create a facility that is accessible to both members and non-members, a place where the development of a more cohesive community is facilitated, an environment for personal growth, social integration, mediation, and sharing.
- It is intended to use various forms of circular economy to obtain the maximum amount of usable products within the planned interventions, with the assistance of the town's residents, society members, and participants in summer programs. Their support and collaboration will contribute to the maintenance of the facility and the creation of vitality, all in an eco-friendly and cost-effective manner.

#### Solution football field regeneration



#### References

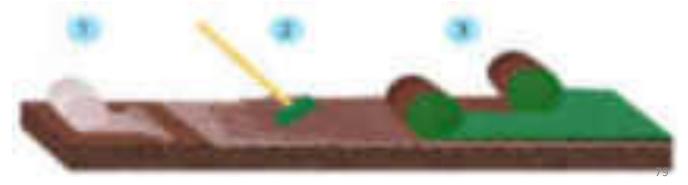
LITE-NET PP is used to store and gradually distribute water. It is a polypropylene net, and its convenience lies in its assembly. The system collects rainwater and stores it to release it when the soil needs it most, enabling irrigation even when weather conditions do not allow it.



#### Solution

For football Field B, which is frequently used by youth categories of U.S.M.A. and other clubs, it was essential to design an irrigation system that is effective yet sustainable. LITE-NET PP, produced by Lite Soil GmbH, seemed to be the most suitable solution for our project.

LITE-NET PP is a polypropylene net with a structure comprising open pores up to 90%. It is installed beneath the field and can store up to 44 liters of rainwater, releasing it when the soil requires it through self-regulation. Its unique shape allows it to expand up to 5 times its base width. Assembly is highly practical as the net is unrolled and spread over the field area. A layer of soil is then placed on top, and grass is planted on it. This way, field irrigation remains consistent, significantly improving the quality of the grass.



#### References for community area



During the Milan Design Week in September 2021, Heineken presented the "greener bar," based on the principles of the circular economy and created using new construction methods, materials, and technologies designed to minimize environmental impact. The bar hosted meetings with various guests to discuss sustainability and responsible consumption.

The concept was meticulously designed to have nearly zero environmental impact and ensure significant savings in CO2 emissions



OFF BAR Florence 2014 | ND Studio: The structure is designed using metal scaffolding tubes and wooden pallets originally intended for transporting goods. The solution is easy to assemble and has a simple form, making it versatile and customizable according to the client's needs.

The project is highly sustainable as it utilizes materials that are no longer suitable for their common use and are thus recovered instead of being wasted. This design model is based on the principles of the circular economy, as construction companies can contribute their waste material



#### Solution for the community area

The community and socializing area design solution in both bars of good practices .01 and .02 leverages the principles of the circular economy. They utilize environmentally sustainable materials, such as wooden pallets, recycled beer crates, and fabrics reclaimed from scraps.

The bar area designed as a social hub for the municipal sports facilities in Borromeo, Sarmeola di Rubano, embraces the themes of the circular economy and the reuse of eco-friendly materials. The bar counter is constructed using wooden pallets that can be assembled flexibly to suit space and organizational needs. In its center, there is a tree providing shade to the area without the need for additional drapery.

Furthermore, the furnishings are contributed by the citizens, who donate them because they are no longer needed. The crafting of these furnishings, at least in its simpler stages, is carried out during workshops in summer camps

## Solution for changing rooms

- To make the changing rooms more efficient and sustainable, the Gotto d'oro company has proposed an innovative project for thermal and acoustic insulation using cork recycling. This project involves recycling cork bottle stoppers, which are sorted and then crushed to create "granules." The granules are subsequently bound with natural resins.
- The fundamental idea is to engage the community that utilizes the sports facilities through the "Ethical Project," encouraging people to collect and recycle cork stoppers from the bar service. The recycled cork will be transformed into panels that will be installed inside the changing rooms, contributing to improved thermal and acoustic insulation. This intervention not only enhances the performance and comfort of the changing rooms but also promotes recycling and the sustainable use of resources











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#### Context



#### Solutions



The intervention on the facade and on the perimeter walls of the "Palazzetto dello sport" provides a structure with a dual value, both aesthetic and functional. The structure is composed of a plot of wood slats and "climbing" plants, expanding the green aspect brings benefits to both the individual citizen and the community, taking into account the proximity of sports areas. The roof is entirely covered by solar panels to make the building self-sufficient.









#### The design

The designed structure can be used in any building or context to be redeveloped.

We have hypothesized, as the illustration demonstrates, the insertion of the structure in adjacent buildings to the sports field.

Reasoning on a larger scale can be created between the sports field, athletics field "Rosmini" and the "Palazzetto", a connection not only concerning the activities carried out and services, but also aesthetic and identity. Giving a precise identity to the whole area, which in the future could be called a sports district

Prior to the entrance of the building there is currently a fountain in disuse, which seems to be almost abandoned.

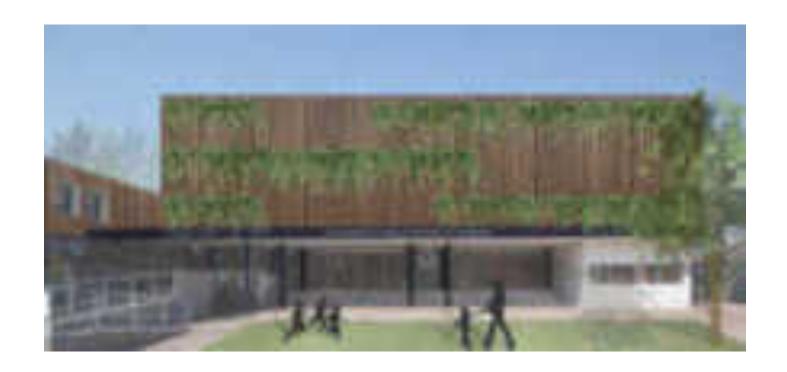
For this reason, we decided to develop a new idea of green area and at the same time of water collection, taking as a reference the Water Square in Rotterdam.

A large body of water that mitigates the temperature during the warmer months, surrounded by seats, shady areas and a new bike carrier that follows the biowall principle.

The fountain, unlike the previous one, has an organic shape that wants to recall the surrounding nature and the circular perimeter of the same has been chosen to remember the movement of water.

As for the materials, instead, reinforced concrete is used that is covered with wooden beams.



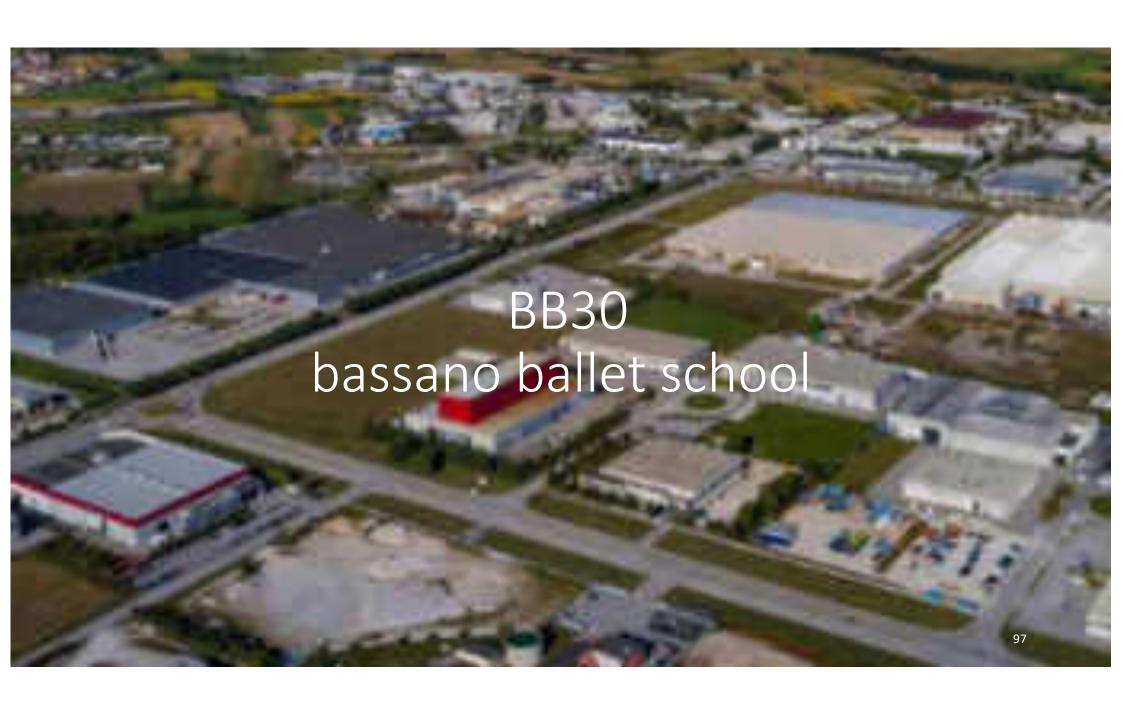




Thanks to artificial irrigation is possible to produce twice the agricultural quantity that would be obtained spontaneously with the rain: man has therefore learned over time to control the water through banks, dams and irrigation systems that provide the right amount of water to the plants to feed and protect them

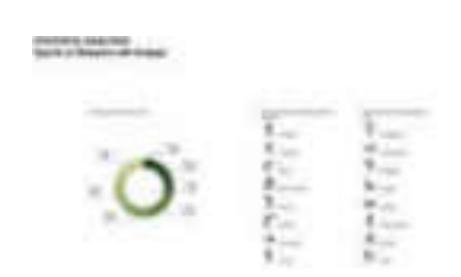








#### Context



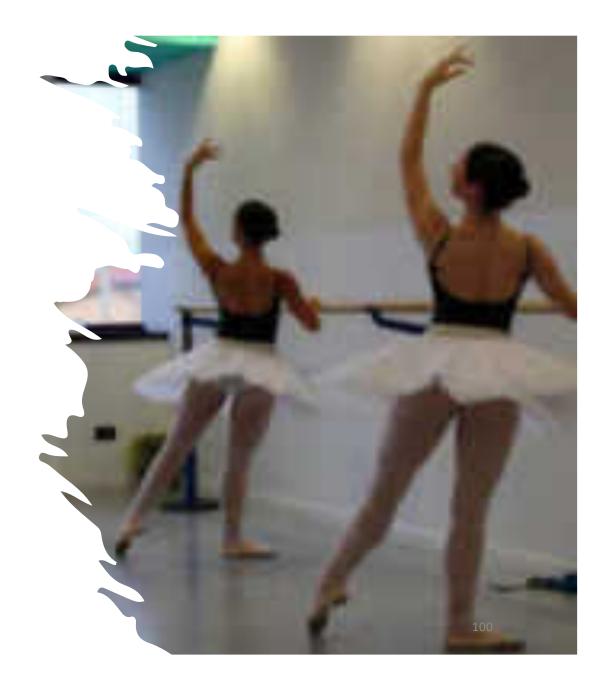


Thanks to its **breathtaking landscapes** and favorable conditions, Bassano del Grappa offers the ideal environment for a **variety of sports**. Activities such as hiking, cycling, rock climbing, water sports, and paragliding find their space in this dynamic region. The unique terrain, with its hillya nd montainous surroundings and favorable wind conditions, **attracts paragliders from all over**. This exhilarating sport not only enhances the adventurous spirit of the city but also serves as a **source of economic activity linked to tourism**.

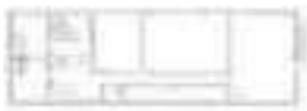
It is important to note that the province of Vicenza boasts the **highest number of sports facilities** in the Veneto region. However, these centers primarily focus on more traditional sports, **leaving little room for more adrenaline-fueled activities**. Nevertheless, the presence of paragliding demonstrates the city's commitment to providing exciting and adventurous experiences for both residents and visitors.

## The Bassano dance school

- In this context, the **Bassano Ballet dance school** plays a significant role in the social fabric of the community. The impact of the school goes beyond the field of dance, contributing to **social cohesion and cultural development of the city**. It serves as a creative center that brings people together, regardless of age or background, fostering a sense of unity and shared artistic expression.
- Through its diverse dance programs and performances, the Bassano Ballet school nurtures talent, self-confidence, and a passion for the arts among its students. The school's inclusive approach ensures that everyone, regardless of their socioeconomic status, has the opportunity to experience the joy of dance and participate in cultural activities. It acts as a catalyst for personal growth, promoting discipline, teamwork, and artistic exploration.
- Furthermore, the school's initiatives, such as collaborations with local artists and community engagement programs, contribute to the cultural enrichment of the city. By organizing events, workshops, and performances, the Bassano Ballet school creates platforms for artistic expression, fostering a vibrant artistic scene that benefits the entire community











#### The challenges

Bassano del Grappa represents a unique combination of its natural beauty, the age diversity of its population, and the appreciation for sports. The Bassano Ballet dance school significantly contributes to the social life of the community, promoting artistic expression, inclusivity, and cultural development. Together, these factors create a unique and dynamic community where residents and visitors can experience the beauty of nature, the thrill of adventure, and the transformative power of the arts.

Bassano Ballet dance school is located in an **unfavorable position**, in the outskirts of Bassano del Grappa, far from residential areas and surrounded by an **unattractive industrial zone**. One of the main disadvantages is the **lack of green areas** where students can gather and socialize. Its primary **challenge** is to **ensure accessibility and encourage student participation**, especially for young individuals.

Considering the location and accessibility is important when evaluating a dance school, particularly for young students and their families. The school may need to **adopt creative strategies** to incentivize participation and facilitate the arrival of its students

Bassano Ballet dance school may encounter difficulties in ensuring adequate inclusion for two specific groups: the **elderly and males**. In the case of the elderly, it is necessary to **create specific courses that cater to their needs**, which are currently lacking, and the number of adult enrollees is significantly lower than that of younger students. It is important, however, to recognize that creating tailor-made programs for this category requires additional resources and specific commitment.

Similarly, males may face **biases and social pressures** that discourage them from approaching dance or, even if involved in the early years, tend to abandon the discipline as it is more focused on female figures. It is crucial to encourage males not to disregard this art form and promote an environment that celebrates **inclusivity and gender equality**.

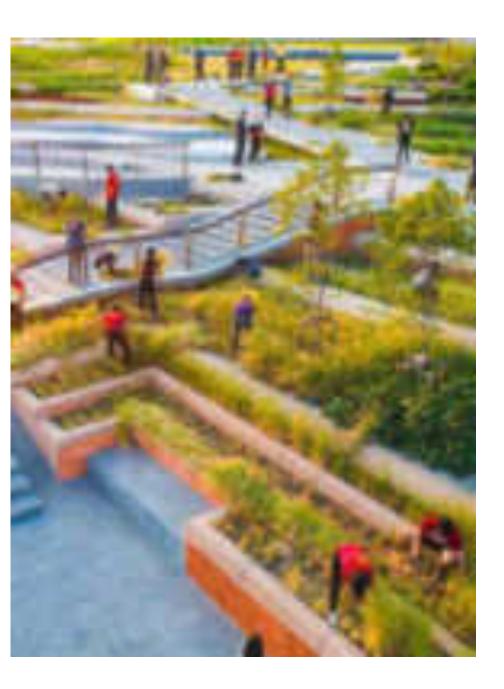
While Bassano Ballet may face specific challenges in offering courses for the elderly and addressing gender biases, it requires collective effort to **overcome these barriers and create dance opportunities that are accessible to all ages and genders** 



#### The challenges

Another challenge for the dance school is finding ways to **increase its revenue** in order to undertake eco-friendly **initiatives that involve** not only the **students** but also the **local community**. The school is aware of the importance of adopting sustainable practices to preserve the environment and raise awareness about safeguarding the planet. However, additional funding is required to realize such projects.

Currently, the school relies mainly on membership fees and dance lessons to generate income, but this is not sufficient to support the projects they wish to promote. Innovative activities are needed to increase revenue, such as organizing **charity performances**, **special events**, **or collaborations with local businesses**. These strategies would not only generate additional funds but also involve the community in the process, creating a sense of belonging and collective responsibility



### Solutions for sustainability and attractiveness

- Create inviting green spaces that cater to all age groups, providing areas for recreation, relaxation, and play, accommodating the diverse needs of children and the elderly.
- Enhance the **visual appeal of the building** structure, ensuring the school dance stands out prominently from the street, overcoming the overshadowing effect of surrounding structures.
- Establish collaborative agreements with the local municipality to ensure convenient and accessible public transportation options for students to reach the school.
- Organize a dedicated private shuttle service to facilitate transportation for students who are unable to commute independently to the school.
- Develop engaging initiatives that entice both local residents and tourists to explore the outskirts of Bassano, including dance shows, charity events, and lively parties, among other activities.
- Foster partnerships with the municipality and other local associations to showcase the talented dancers from Bassano Ballet during significant city events, thereby promoting the esteemed reputation of Bassano Ballet.

# Solution for inclusivity

- Introduce specialized dance and yoga classes tailored to the needs of elderly individuals, providing them with a safe and enjoyable physical activity.
- Rebrand the school to promote inclusivity, modernize the logo, uniforms, merchandise, and performances to appeal to a broader audience, including male students.
- Offer morning classes to accommodate retired seniors and individuals with non-traditional work schedules, ensuring accessibility for all.
- Organize extracurricular activities to educate and inspire students, particularly younger
  ones, about embracing male dancers and recognizing dance as a sport on par with others,
  working towards breaking down stereotypes.
- Create communal spaces where students of all ages and other local people can interact and build relationships, fostering a strong sense of community within the school.
- Develop a dedicated play area where children can socialize and make new friends while waiting for their lessons or their parents to pick them up.



Solution for economic sustainability

Expand the **school's offerings** and increase enrollment by introducing a diverse range of **new courses**, catering to various interests and preferences. Extend the school's operating hours to accommodate more students.

Foster partnerships with local sports organizations and introduce **activities, courses, and facilities** that cater to a broad audience, including niche sports such as paragliding or hang gliding, which are underrepresented in the area.

Utilize additional spaces adjacent to the dance school, such as the warehouse roof, to **host community activities and events**, encouraging engagement and participation from the local community.

Create a welcoming refreshment area that offers locally sourced and sustainable products, promoting a sense occumunity and supporting local businesses.

Enhance student development and confidence by increasing the frequency of **performances**, providing valuable opportunities for students to showcase their talents and artistic growth.

Collaborate with local institutions to establish a **modern and environmentally-friendly facility**, aligning with European sustainability initiatives and setting an example for other organizations in the community.

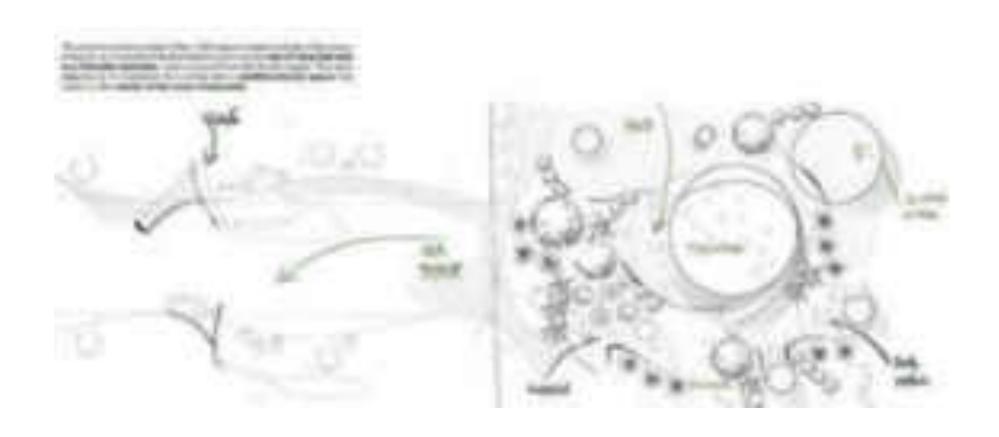






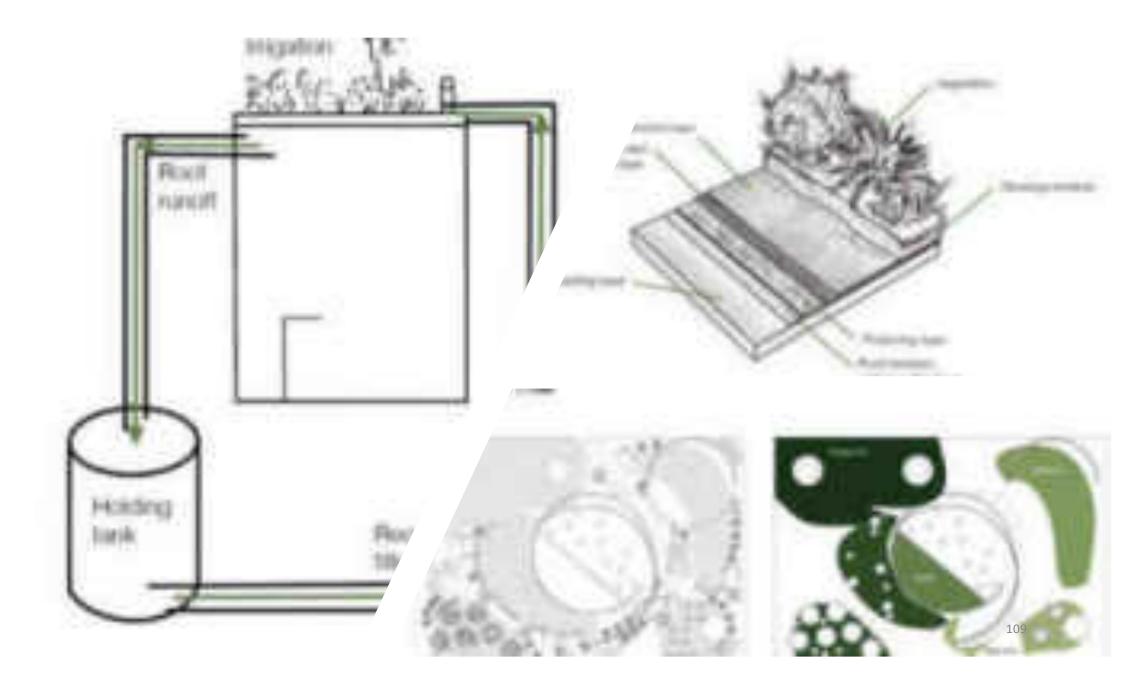
#### Co-Designed Concept

- The "BB30" project is a transformative initiative that aims to turn the roof of Bassano Ballet, a dance school in the outskirts of Bassano del Grappa, into a multifunctional, eco-friendly, and exciting space. The project's primary objective is to efficiently utilize urban spaces and provide the local community with a creative and regenerative environment that promotes dance, sports, and sustainability.
- Through the installation of gardens, solar panels, and rainwater collection, the roof will become a **green oasis** that improves air quality and reduces carbon emissions.
- Additionally, it will host a paragliding landing strip, providing a safe space for enthusiasts of this sport.
- The renovated roof will also serve as a venue for dance performances and other artistic activities, promoting culture and art within the local community.
- This project represents a replicable model for reevaluating industrial urban spaces into sustainable and adventurous locations, enabling businesses to provide employees with open areas to enhance their well-being and promote an active lifestyle in harmony with the surrounding environment



#### The project aims to enhance the sustainability and attractiveness of Bassano Ballet dance school, ensuring principles of inclusion, health for all, and economic feasibility.

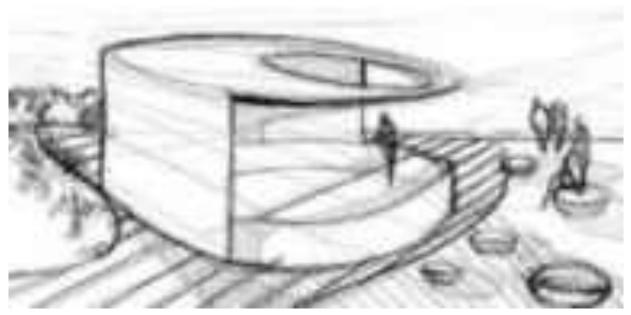
The project aims to enhance the sustainability and attractiveness of Bassano Ballet dance school by the year 2030.; Transform the roof of the school into a multifunctional space, as a venue for dance performances and artistic activities. Utilize urban spaces efficiently and create a regenerative environment for the local community. Install gardens, solar panels, and rainwater collection systems to create a green oasis. Provide a paragliding landing strip for enthusiasts.; Repurpose industrial urban spaces into sustainable and adventurous locations. Promote well-being and an active lifestyle for employees. Serve as a replicable model for similar projects.



# The theatre on the roof

At the heart of the renovated area, there will be a small theater equipped with seating and a stage, which will be used for **dance performances and other community events**. This space will provide an intimate and welcoming environment, encouraging **interaction and active participation** from the audience.



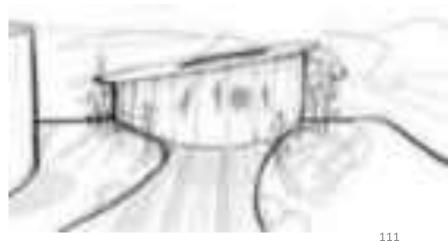




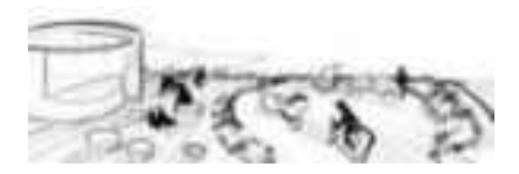


## Physical activity for all

Adjacent to the theater, there will be a wooden pavilion with large windows, offering a **bright and tranquil space for senior gymnastics and yoga classes**. This natural setting will promote the physical and mental well-being of participants, providing a unique experience.



## playground

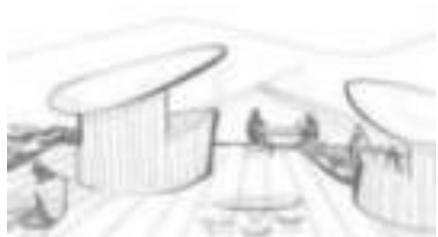














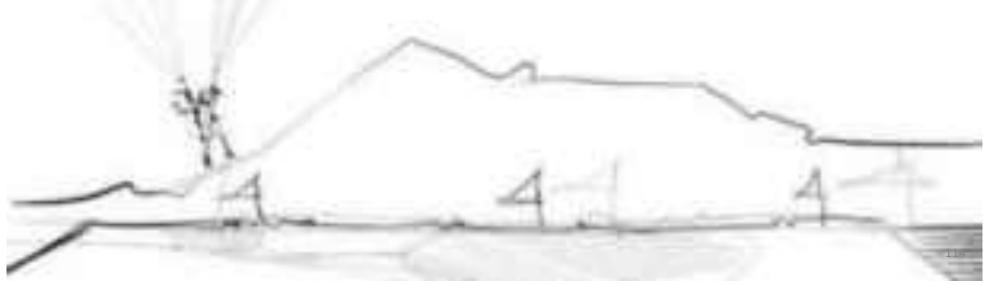
Relax





#### Paragliding

The western part of the rooftop, a surface of 4000 square meters, will be designated as a garden serving as a **paragliding landing strip**. This landing strip, compliant with legal regulations, will address the lack of secure landing zones previously present in the area. It will be used only during daylight hours on weekends for paragliding landings, while the rest of the time, it will be available to everyone for **picnics and other outdoor activities**, providing a space for leisure and relaxation for the entire community.



#### A MODEL FOR EVERY SOLUTION

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## Workshops outcomes in Turkey

Co design and experiment







## Workshop in Turkey

The significant damage inflicted upon our project partner, SPELL, during the earthquake that struck its city on February 6, 2023, underscores the critical importance of organizations and facilities dedicated to disaster management. The aftermath of the disaster necessitated the immediate physical utilization of sports facilities and spaces to address the pressing needs of the affected population.

Highlighting the essential role of these venues and subsequently assessing their potential for sports-related initiatives, the restoration and revitalization of damaged sports fields become pivotal endeavors. In the broader context of disaster preparedness and planning, several key factors require meticulous consideration. These factors encompass urban and regional planning, infrastructure assessment, population and economic activity distribution, land usage, disaster preparedness, and architectural urban planning.

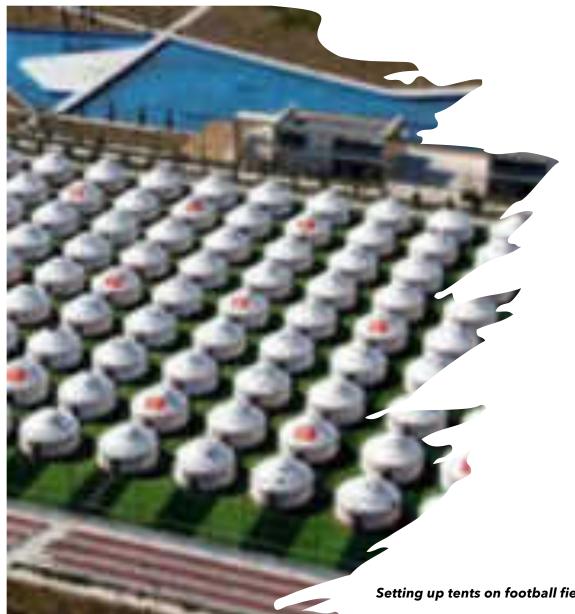


## Workshop in Turkey

Within the context of the Daedalus project, the scope of the workshop held in Turkey was extensive and aimed at fulfilling several objectives. The workshops, conducted in Malatya during the months of May, June, and July, brought together representatives from sports clubs, municipalities, and universities to address various aspects related to the project's mission. These workshops covered the following key topics:

- Introduction of Project Goals: The workshops served to familiarize participants with the aims and objectives of the Daedalus project, providing a clear understanding of its overarching mission.
- Compensation for Earthquake Damages: Discussions included strategies for compensating damages incurred as a result of the earthquake and preparing for potential future earthquake-related challenges.
- Collection of Sustainable Solutions: The workshops aimed to gather a repository of good practices related to sustainable solutions for sports clubs, emphasizing eco-friendly and resilient approaches.
- Identification of Collaboration Opportunities: Participants identified potential sports clubs for collaboration and conducted needs analysis to ensure that partnerships would be beneficial and well-aligned.
- Problem Identification and Solution Brainstorming: The workshops encouraged the identification of primary challenges within the context of the project and fostered brainstorming sessions to generate innovative solutions.
- Innovative Sports Field Development: An important aspect of the workshops involved exploring innovative approaches to restore sports fields and facilities for clubs that had suffered significant ecological damage.

The target audience for these workshops included sports club managers and coaches, representatives from municipalities, universities, sports associations, and sports schools. Furthermore, architects from municipal departments were also actively involved, contributing their expertise to the discussions and initiatives outlined in the workshop.



#### Experiements

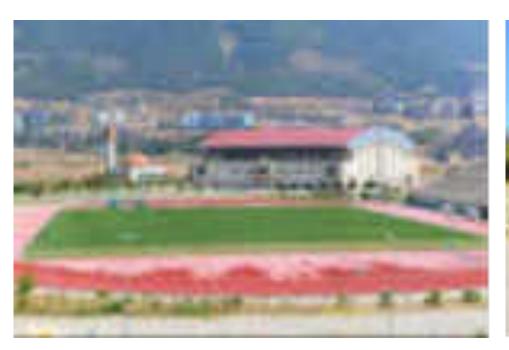
- Following an earthquake of significant magnitude, one of the most pressing challenges is to establish an environment that aligns with hygiene standards and promptly satisfies both the physiological and biological needs of the affected population in a safe and healthy manner. Additionally, it's essential to address the psychological distress experienced by individuals in the aftermath of the earthquake. To effectively address these issues, there is an urgent need to provide sports facilities and fields as a priority.
- In the wake of such disasters, new needs emerge. These include an increased demand for sports venues and facilities to meet the immediate and long-term requirements of the community. These expanded sports capacities aim to facilitate more sustainable and resilient activities that can contribute to the physical and mental well-being of the affected population during the post-disaster recovery period



Earthquake victims staying in gyms during the earthquake

Hockey field and people living on the earthquake field.

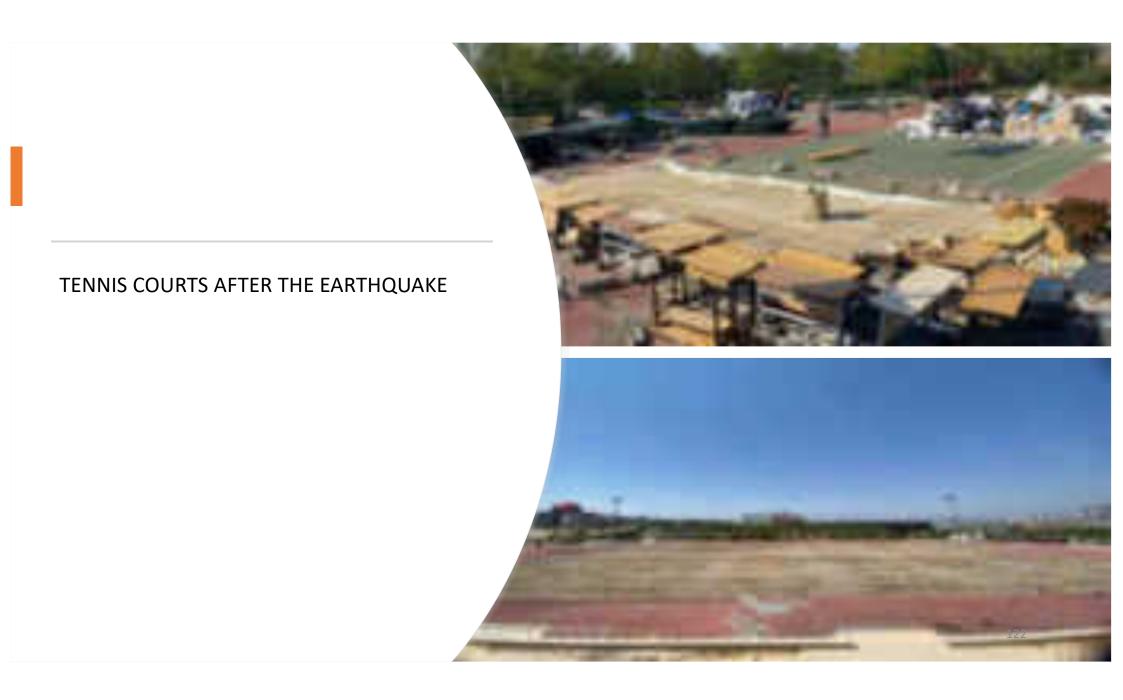






Athletics field before the earthquake.

Athletics field after the earthquake





Workshops

Currently, sports facilities are not open to the public. It is crucial that sports activities resume during the city's normalization process to aid in the rehabilitation of individuals.

- Focusing on tailoring sports activities and their content to reach the general public through designated sports clubs in the aftermath of the earthquake.
- Providing guidance to clubs regarding the methods and activities to be implemented within the tent cities post-earthquake.
- Compiling a repository of best practices to achieve sustainability goals in the aftermath of a disaster.
- Enhancing the capabilities of sports clubs to implement preventive measures and offer sports activities that support the psychological wellbeing of individuals in the post-disaster scenario

Prior to gathering best practices in alignment with the objectives of the Dedalus project, a comprehensive workshop took place in Malatya between April and June of 2023. The workshop brought together key stakeholders from the sports sector, municipalities, and universities. Its primary aim was to establish the methodology that would guide the forthcoming pilot applications, with a central focus on promoting sustainability. During this workshop, the existing conditions and potential challenges within this context were identified, and concrete objectives were defined.

The workshop introduced a well-defined inquiry that was accessible to all participants. It employed brainstorming techniques to elicit the diverse perspectives and insights of those in attendance. Participants shared their viewpoints, which were then organized into thematic groupings. At this juncture, a visual mind map was generated to synthesize the collective insights. The workshop's conclusions and participants' ideas were captured in a comprehensive joint report, providing a foundation for further action and the pursuit of sustainability objectives.

The workshops were designed to target a diverse audience, including managers and coaches from sports clubs, representatives from municipalities, universities, sports associations, and sports schools. Additionally, the participation of municipal architects enriched the workshops with their valuable insights and expertise.

# Post-earthquake challenges and potential solutions

The post-earthquake challenges and potential solutions were thoroughly examined over three comprehensive workshop sessions. These sessions delved into a multifaceted discussion, encompassing several critical aspects. The following provides a more scientific and narrative perspective on the workshop's content and objectives:

The workshop was thoughtfully structured, comprising three distinct sessions, each delving into various aspects of post-earthquake recovery and reconstruction. These sessions served as a platform for addressing vital concerns and proposing innovative solutions.

In the first session, the focus was on highlighting the significance of sustainable sports practices, with a particular emphasis on the creation of enduring sports facilities. The objective was to explore how sports fields and recreational areas could be designed and utilized in a manner that harmonizes with the ecological environment. It aimed to underscore the intrinsic connection between sports and ecological elements.





# Post-earthquake challenges and potential solutions

The second session aimed to understand the precise needs of sports clubs within the post-earthquake landscape. It sought to ensure the continuity of sports activities, even in challenging circumstances, and address the physical and psychological needs of the affected population. This session aspired to generate effective strategies to support sports clubs in their mission.

The third session revolved around innovative planning, incorporating ecological elements into the reconfiguration of sports facilities. It sought to design structures that are not only resilient but also ecologically responsible. This session served as a platform for municipalities, universities, and sports organizations to collaborate under the leadership of SPELL, pooling their expertise to plan and implement more sustainable sports facilities.

In total, four workshops were conducted in conjunction with sports clubs, facilitating a holistic exploration of post-earthquake challenges and innovative solutions. These workshops aimed to catalyze the transformation of sports facilities into sustainable, ecologically friendly, and resilient spaces, all while fostering the physical and mental well-being of the affected communities.

### Expected impact from the workshop

The co-design workshop, developed through the application of the design thinking methodology and leading to tangible experiments, is expected to have a significant impact on multiple fronts.

- Creation of Sustainable Information: The workshop has generated substantial and enduring knowledge for its participants. This knowledge is structured around ecological, social, and economic sustainability, aiming to benefit all forms of life. It shifts the focus from non-renewable energy sources to an emphasis on renewable energy in various aspects of daily life, such as nutrition, hydration, clothing, and materials used in different activities.
- Awareness and Responsible Resource Utilization: Participants have been sensitized to the critical importance of resource utilization with a clear
  focus on fostering a cleaner environment, an improved society, and an enhanced quality of life. They've recognized the significance of shifting
  towards sustainable practices that contribute to ecological and social betterment.
- **Economic and Financial Considerations:** The workshop also addressed issues related to economic financing, highlighting the financial aspects of sustainable practices, further emphasizing the viability and economic benefits of adopting eco-friendly approaches.

In this context, workshop participants are now poised to develop environmentally conscious design models within the realm of sports. They have learned that any activities conducted within these models must align with principles of environmental sustainability. Each material employed in sports activities, within the model, should be selected with a keen awareness of energy consumption, suitability to local climates, the recycling process, and minimal environmental impact. The need for transformations and considering sociocultural factors has been recognized as fundamental components of these design considerations.

The co-design workshop serves as a catalyst for fostering sustainability, responsible resource management, and holistic environmental consciousness, particularly within the domain of sports and its associated activities. Its impact extends beyond ecological concerns, encompassing social and economic dimensions for a more prosperous and sustainable future.

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#### Reccomendations

Designers, alongside sports managers and trainers, have collectively put forward a series of recommendations aimed at addressing various environmental concerns and fostering sustainability within the realm of sports facilities. These recommendations underscore the importance of aligning sports activities with ecological harmony and minimizing negative environmental impacts.

- Water Conservation: Mitigating excessive water consumption is a priority, reflecting an awareness of the need to preserve this vital resource. Measures to optimize water usage and reduce waste should be implemented.
- Pollution Mitigation: Addressing water and soil pollution resulting from pesticide usage is imperative. The sharing of best practices in this regard can contribute to more responsible and sustainable environmental practices.
- Reducing Chemical Usage: Efforts to curb pollution linked to fuels and the chemical use of floor care vehicles are recommended. Minimizing the environmental impact of such practices is crucial.
- Energy Efficiency: Combatting high energy usage for lighting is vital for reducing the environmental footprint of sports facilities. Employing energy-efficient lighting solutions should be considered.
- Noise Pollution Control: The management of noise pollution stemming from tracking vehicles is vital to limit air pollution. Implementing measures to minimize noise and its associated environmental impact is essential.
- Fossil Fuel Reduction: Mitigating environmental pollution attributed to the use of fossil fuels is imperative. Transitioning to cleaner and more sustainable energy sources can contribute to a greener sports environment.
- Waste Management: Effectively managing waste generated on match days is critical to reducing environmental pollution. Implementing recycling and waste reduction practices can be highly effective.
- Detachable Installations: For infrequently used sports facilities, designers and managers should consider the use of detachable installations. This flexible approach can help optimize resource usage and minimize environmental impact.



#### Reccomendations

The recommendations emphasize the central goal of sustainability practices: to safeguard areas, especially those within absolute protection zones. The long-term aim is to ensure that sports and recreational activities, with their numerous economic, health-related, and cultural benefits, exist in harmony with the environment. This entails the responsible use of resources, eco-friendly materials, and the construction of sports facilities and spaces that are environmentally conscious. These practices are not only essential for preserving our resource values but also for passing them down to future generations in their pristine form. The emphasis is on creating sports environments that are not only resilient but also environmentally friendly, ensuring that the positive effects of sports and recreation activities persist for years to come

#### Experiments

• After the earthquakes that took place in Turkey on February 6, some sports fields were damaged. New sports fields were built in tents and container cities that were set up to help people get over the earthquake shock. Handball fields were created in these places by the Turkish Handball Federation, enabling children to overcome the negative effects of the earthquake through sports









## experiements

We designed mini goal posts from waste water pipes



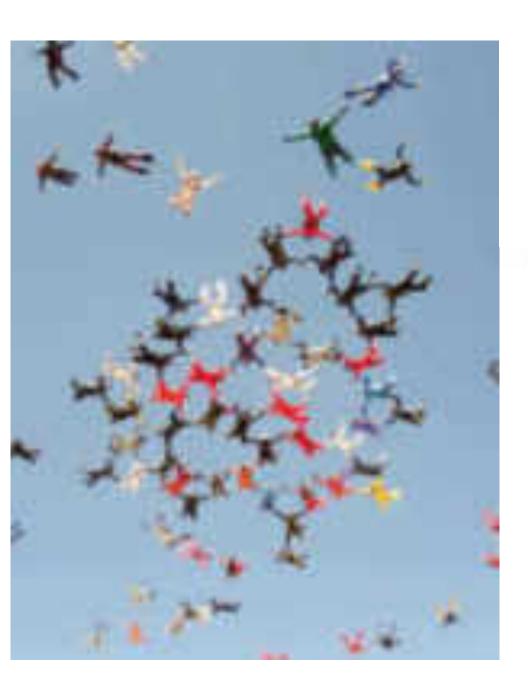






## Experiements





#### Reflections

- The concept of sustainable areas in the aftermath of natural disasters was not initially a central focus during the project's inception. However, a pivotal event altered the trajectory significantly: a powerful earthquake struck the city where our project partner SPELL is based. This seismic event prompted a fundamental shift in the project's direction, with post-disaster sustainability emerging as a paramount concern.
- In the wake of the earthquake, the affected city found itself grappling with the arduous task of recovery. Despite a reduced population and the presence of less available space, reaching pertinent stakeholders proved to be a challenging endeavor. Furthermore, the earthquake's impact reverberated in various ways. Universities, for instance, transitioned to online education due to the disruption caused by the disaster. Municipalities were preoccupied with the formidable task of debris removal, constraining the number of participants that could be engaged in the project's activities.
- In this context, the project sought refuge in single-story, earthquake-resistant structures that remained unscathed by the seismic event. A collaborative effort ensued, involving sports clubs, university professors, and municipal officials, all dedicated to exploring the dimensions of sustainability in sports facilities. Notably, while the project initially targeted designers and young architects as its primary audience, the active participation of sports club personnel took precedence. This phenomenon was influenced by the limited number of architects in the city, as well as the heightened focus of architects and designers on the broader urban redesign efforts necessitated by the earthquake.

#### Feedbacks

- Upon the conclusion of each workshop, participants shared their feedback, providing
  valuable insights into the effectiveness of the sessions. The majority of attendees expressed
  their satisfaction, noting that these workshops offered them their first tangible encounter
  with the concept of sustainability. Engaging in the activities and discussions during the
  workshops significantly heightened their awareness of the critical actions required to
  address environmental and ecological concerns. For many, it marked their first
  engagement in a study of this nature, effectively promoting fundamental improvements in
  their quality of life and advocating for sustainable development through responsible
  resource utilization and management.
- Participants conveyed their belief that broader outreach is imperative for disseminating knowledge about sustainability. They emphasized the necessity of involving additional stakeholders and fostering collaborative efforts. In alignment with these objectives, they underscored the significance of establishing an ambitious sustainability agenda to address critical global issues, including climate change, plastic pollution, and social inequality—topics of paramount importance to the stakeholders. Furthermore, they emphasized the importance of maintaining ongoing collaboration with stakeholders to ensure a lasting and positive global impact, particularly within the realm of sports. They also highlighted the need to engage with a wider range of institutions, taking into account the value of local meetings, social events, and media organizations in driving these messages to the broader public.
- The recognition of the significance of sustainability in the realm of sports and sports activities is a crucial realization, as these activities are integral to human life. Moving forward, it is imperative to ensure that sustainability remains a constant consideration and not merely a temporary project focus. In this regard, it is evident that sustainability-related issues must be an ongoing part of the discourse and activities associated with sports.
- As an association, our commitment is unwavering, and we pledge to consistently engage in activities and initiatives that promote sustainability within the sports sector. These activities should persist beyond the confines of specific projects, reflecting an enduring dedication to sustainability in sports. The implications for the future underscore the need for a sustained effort to incorporate ecological and social responsibility into the core fabric of sports, creating a lasting impact on the well-being of individuals and the environment.

## PARTICIPANTS

#### **Workshop Participants**

Young designers in Italy, in Teams (T):

T1) Barchigiacomo, Boscolo Chioasja, Darsièmartinanicu, Dana Alessandra

T2) Chiusoalice, Franzò Camilla, Fusaro Beatrice, Manara Benedetta, Simionato Cristina

T3) Barbongiacomo, Besa Giacomo, Dicati Sara, Rizzato Carlotta, Val Enrico

T4) Brunato Maria Rachele, Castelli Giada, Guarinelli Arianna, Teston Luana, Vezzaroangelo

T5) Archetti Arianna, Favaro Annamaria, Hamba Imane, Pellizzer Filippo, Timbur TINA

T6) Citton Paola, Fabbian Reginato Valentina, Fistarol Beatrice. Molinari Francesco, Moro Maddalena, Sedrak Youssef Anton Eshak

T7) Albanese Marika, Brighenti Asia, Capuano Alessia, Dissegna Giuditta, Modolo Beatrice

T8) Kapelanska Wiktoria, Marzaro Aurora, Pedrotta Giorgia, Rompato Emma, Stevanovic Teodora

T9) Busato Chiara, Gaicher Giulia, Montevecchi Martina, Moro Giacomo, Stocco Filippo

T10) Angeli Elettra, La Barbera Miriam, Pelliccioli Alessandra, Robin Elisa, Piccini Basile Carolina

Expert Facilitator: Arch. R. Lioce, Prof. M. Volpe, Sport Manager: G,Peccolo, A.Vagaggini (USMA)

Experts in Portugal

- Nélson Oliveira (Town and Country Planning Councillor)
- Joaquim Canudas (Head of the Urban Planning and Management Division of the Municipality of Lousada)
- João Costa (Architect at the Municipality of Lousada)
- Sílvia Carvalho (Rehabilitation Engineer at Município de Lousada)

Facilitor: Carla Magalhães

Sport organisations involved

- Malatya Sports Club
- Metropolitan Municipality
- İnönü Üniversity
- Doğanşehir Mountain and Nature Sports Club
- Olympic Youth and Sports Club
- Tiny Steps Swimming School
- Malatya Sports Center
- Malatya Yeşiltepe Sports Complex

• Facilitor: Ahmed Dalci







Project Partners





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