



DEDALUS TOOLIKIT A GUIDELINE FOR DEVELOPING DEDALUS INNOVATION CHALLENGES

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Project references

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Deliverable: D2.1 DEDALUS toolkit for workshops

The toolkit is edited in the prospect of organizing facilitator training and to ensure a coordinated approach to the design workshop. They will be user friendly tools adaptable to diverse contexts where pilot workshops will take place.

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History of changes

Version n.	date	Version / Changes
0.1	20/02/2023	First draft for partners sharing
1.0	09/03/2023	Complete draft – ready for review
2.0	29(03/2023	Integration of the executive summary
2.1	31/03/2023	Version Validated by Consortium







Project summary

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 of the famous Minotaur labyrinth in Crete. ... and when you decide to face the challenges of making a grassroots sports club in the 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. A small project, but with the capacity to impact on the sport club, people, and community, including, sportsmen, managers, young designers and volunteers.

A labyrinth from which we certainly want to get out but not without first having reached its heart, the center, or the goal to be achieved.







We intend to carry out in the project thanks to the experimental **DEDALUS DESIGN workshops**. 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.
- Establish new alliances and new skills.







Executive summary

This report represents the deliverable D2.1 of the project DEDALUS "Design driven Innovation and sustainability in sport club" Cofounded by the European Union. GA ERASMUS-SPORT-2022-SCP. The scope of the report is to provide DEDALUS facilitators with a guideline to organize and coordinate the DEDALUS workshops and related innovation challenge.

The document is structured to introduce the project, its background, and related objectives and to offer some methodological elements, hints and tips to implement system thinking, design thinking and goal-oriented project planning.

The last part of the report provides a sourcebook to access diverse sources to integrate knowledge and improve the capacities to develop innovation challenge in the prospect of the Dedalus Project.





Organize an innovation challenge

The DEDALUS workshop are planned and implemented as innovation challenge.

Understanding the potential of an Innovation Challenge

An innovation challenge is a structured competition or contest designed to generate new ideas, solutions, and technologies that address a specific problem or challenge. Innovation challenges can be organized by governments, corporations, non-profit organizations, or other entities seeking to tap into the creativity and expertise of a diverse range of individuals and organizations.

Innovation challenges typically have a **specific theme or focus area**, such as sustainability, healthcare, education, or technology. Participants are invited to submit their ideas or proposals, which are evaluated based on their potential impact, feasibility, and originality. Winning submissions may be awarded prizes, funding, or other forms of support to help bring their ideas to fruition.

Innovation challenges are often used to **tackle complex problems** that require novel approaches and interdisciplinary collaboration. By engaging a broad community of innovators and problem solvers, innovation challenges can generate a wide range of ideas and solutions and help to build networks and partnerships across sectors.

Innovation challenges can take many **different forms**, including hackathons, design sprints, ideation workshops, and open innovation platforms. They can be structured as one-time events or ongoing programs, and may involve collaboration with experts, mentors, and investors to help participants develop and refine their ideas.

Innovation challenges are a **powerful tool for stimulating creativity** and driving progress and have the potential to generate transformative solutions to some of the world's most pressing problems.

An Innovation Challenge is a "**competition**" launched with the aim of generating the creation, or improvement, of products, services, processes. In our case: sport facilities and programs. The need to bring innovation to the sport sector is today stronger than ever, and an Innovation Challenge allows you to do all of this in an engaging way, in collaboration with designer, architects, volunteers, sport managers, sport staff, sport facilities owners, civic society ...

The participants in the challenge, from among whom one or more winners are ultimately selected, have the **opportunity** to contribute personally to the progress of the sport ecosystem through a proactive and dynamic approach, becoming themselves actor of a change.



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To organize and implement an Innovation Challenge, you must first choose the type and the scope, and this depends on your specific needs and expected changes.

An Innovation Challenge can be of two types: **Internal** or **Open**, and the difference lies in the type of participants it is aimed at. In the case of the Internal Innovation Challenge, these are the human resources within the organization: sport staff, managers, volunteers active in the sport club ecosystem addressed. Culture of innovation is encouraged within the sport club itself, involving staff and giving value to their ideas. By doing so, everyone feels an integral part of the club's progress. Indeed, the people involved have a more in-depth knowledge of the organization reality. An Open Innovation Challenge, on the other hand, allows you to get new ideas from both inside and outside the organization, and thus also have an outsider's point of view. In this way, a larger pool of innovative and technological solutions could be available, as well as the opportunity to increase the sport ecosystem and the club's network with possible future members and practitioners.

The ideas proposed by the participants are often the seed of significant innovative solutions that solve certain specific problems. Furthermore, since the ideas are many and come from people with different characteristics and backgrounds, the organization can achieve a broader vision of the problem and of possible solutions.







How to structure an Innovation Challenge

DEFINE THE GOALS OF THE INNOVATION CHALLENGE

Sometimes the challenge consists of a precise problem to be solved; others, however, require a more general innovative solution. What is certain is that, regardless of the peculiarities of the initiative, you **must have in mind what you want to achieve**, and therefore what the goals of the challenge are. Only after having fixed and shared them with the board of the organization, in fact, will you be able to communicate to the participants what the challenge on which they will have to work consists of.

DECIDE THE TYPE OF CHALLENGE AND PARTICIPANTS

Depending on whether you want to involve external people or not, you will have to select the target you want to address.

For example, will any type of organization or experts be able to participate? Is it a challenge open only to students? Will only certain people from your organizations be included? Are there specific criteria to be met to participate? In other terms it is necessary to fix the targets to address with the call to innovation challenge workshop.



In the DEDALUS Project, partners are expected to organize open innovation challenge engaging students, (design, architecture, engineering, but also economics, management, sport science) and/or young professionals in design, architecture and engineers, together with sport staff and managers.

SELECT THE PLACE FOR THE CHALLENGE TO BE CARRIED OUT AND ESTABLISH THE TIMELINE

Where do you think is best to hold the challenge, **online or in person?** In the first case, you will have to choose a platform, in the second case, a suitable physical location, that could be the sport club premise or another place.

It is also important to define a precise outline of what the structure of the challenge will be, also in terms of timing.

DEFINING A FINAL REWARD

The Innovation Challenge is a challenge, and as such includes **a prize for the winners**. The presence of a final reward represents an extra motivation to participate, and therefore it is something to think about.



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Many times, it is the implementation of the solution within the organizations itself, with consequent expansion of the network and professional growth. Other times, however, it is a cash prize, or access to an acceleration course. The choice is up to you.



In the DEDALUS project, as we are engaging students or young professionals, we can select best ideas and award them by a course or a publication. Indeed, we can publish best ideas in the Compendium, in the project website and in the EU commission results platform. This could be a plus for a student or a young professional seeing their proposal, ideas published in such important channel.

COMMUNICATE THE CHALLENGE TO THE PUBLIC, SELECT THE PARTICIPANTS AND START IT

Only after defining all these things and having the structure of the challenge in mind, you will be able to communicate its launch with the related details. Also, in this phase you will have to make choices, which concern the most effective communication channels to use. Generally, criteria are entered to be able to participate in the challenge, and then there is a process of analysing the applications. In this case, you will have to select the candidates who are most suitable and consistent with the characteristics requested.

Then the real challenge can start.

Here the main work is done by the participants who bring their ideas to life. However, the role of the organization in managing this moment is also fundamental, monitoring the progress of the challenge, facilitating, and promoting a climate of innovation.

EVALUATE ALL THE SOLUTIONS AND CHOOSE A WINNER

Here we are at the end of the challenge in which you, together with your team and the board (jury could involve external stakeholders and senior experts), will have to examine the ideas proposed by the participants and choose the one that best satisfies the initially established goals of the challenge, to which you will assign the reward.







Methodologies and tools for innovation workshop



System thinking

A term used to describe a perspective and **a set of methods and tools** that make it possible to look at the full extent of a system, rather than at fragments or parts. Taking a systems approach, it becomes clear that messy, longstanding problems are created by the systems in which they exist. To innovate on these problems, it's necessary to find ways to see, understand and use the system itself.¹

Systems thinking is an approach to problem-solving that involves understanding how different components of a system interact with each other to create the behaviour of the system as a whole. It is a way of thinking about the world that emphasizes the interconnectedness and interdependence of various parts of a system, and how those parts work together to produce the system's behaviour and outcomes.

Systems thinking involves identifying and mapping out the various components of a system, such as people, processes, policies, and technology, and analysing how they interact with each other to create the system's behaviour. It also involves understanding how changes to one part of the system can affect other parts of the system and the system.

Systems thinking can be applied to a wide range of fields, including business, economics, healthcare, education, and the environment, among others. It is a powerful tool for understanding complex systems, identifying potential problems and opportunities, and developing effective solutions that consider the various factors that contribute to the behaviour of the system.

How to use system thinking to help a sport club manager develop a green sport club, you can follow these steps:

¹ https://www.absiconnect.ca/systems-thinking





Define the system: Start by defining the boundaries of the system. In this case, the system is the sport club and its environment, including the physical facilities, the club's operations, the comm. unity it serves, and the broader ecological systems that are impacted by the club's activities.

Identify the interdependencies: Use a system thinking approach to identify the interdependencies within the system. For example, the club's energy use may impact the local environment and the community's perception of the club.

Gather data: Collect data on the club's current environmental impact and gather feedback from stakeholders, including staff, players, and fans. This data can help you understand the current state of the system and identify areas for improvement.

Analyse the data: Use systems thinking tools, such as causal loop diagrams or systems maps, to analyse the data and identify feedback loops, reinforcing feedback loops, and balancing feedback loops that influence the system's behaviour.

Develop strategies: Use the insights from your analysis to develop strategies for making the sport club more environmentally sustainable. For example, you might focus on reducing the club's energy use, minimizing waste, or promoting sustainable transportation options for fans.

Test and refine: Implement the strategies and monitor their impact on the system. Use feedback from stakeholders to refine the strategies and improve their effectiveness over time.

Communicate the results: Communicate the results of your efforts to stakeholders, including staff, players, fans, and the broader community. Highlight the positive impact of the club's environmental sustainability initiatives and encourage others to adopt similar practices.



By using system thinking to develop a green sport club, you can create a more sustainable and environmentally responsible organization that benefits the club, its stakeholders, and the broader community.





Here are some contents to be included in slides to explain system thinking.

Title: Introduction to Systems Thinking Slide 1: Title Slide

Slide 2: What is Systems Thinking?

Systems thinking is an approach to problem-solving that emphasizes understanding how different components of a system interact with each other to produce the behaviour of the system as a whole.

It involves understanding the interconnections and interdependencies of the various parts of a system and how they work together to produce the system's outcomes.

Slide 3: Why is Systems Thinking Important?

Many of the problems we face in the world today are complex and interconnected and cannot be solved by simply addressing individual components of the system.

Systems thinking can help us to understand the root causes of these problems and develop effective solutions that address them holistically.

Slide 4: Key Concepts of Systems Thinking

Feedback Loops: The relationships between different parts of a system can create feedback loops, where the output of one part of the system affects the input of another part, and vice versa. Emergence: Systems can exhibit emergent properties, which are behaviours or characteristics that arise from the interactions between the system's components, rather than from the components themselves.

Boundaries: Systems are defined by boundaries that separate them from their environment. These boundaries can be physical, conceptual, or temporal.

Slide 5: Applying Systems Thinking

Systems thinking can be applied to a wide range of fields, including business, healthcare, education, and the environment.

It involves identifying the key components of a system, analysing their interactions, and developing solutions that take into account the entire system and its environment.

Slide 6: Examples of Systems Thinking in Action

Healthcare: Systems thinking can be used to improve patient outcomes by analysing the interactions between patients, healthcare providers, and the healthcare system as a whole. Business: Systems thinking can be used to optimize supply chains by analysing the interactions between suppliers, manufacturers, and distributors.

Environment: Systems thinking can be used to address climate change by analysing the interactions between human activity, the atmosphere, and the biosphere.





Slide 7: Conclusion

Systems thinking is an essential tool for understanding complex systems and developing effective solutions that take into account the interconnections and interdependencies of their various parts.

By applying systems thinking, we can address the root causes of problems and create a more sustainable and equitable world.





Design thinking

Design thinking is an approach to problem-solving that **emphasizes empathy for users**, **creativity**, **and experimentation**. It is a human-centred approach to design and innovation that is often used in fields such as product design, software development, and service design.

The process of design thinking typically involves several stages:

- **Empathize**: Understanding the needs, wants, and behaviours of the people who will use the product or service being designed.
- **Define**: Identifying the problem or challenge to be addressed and clearly defining the scope of the project.
- **Ideate**: Generating a wide range of possible solutions through brainstorming and other creative techniques.
- **Prototype**: Creating tangible examples of the ideas generated in the ideation stage, to test and refine them.
- **Test**: Evaluating the prototypes with users to get feedback and identify areas for improvement.
- **Throughout** the process, design thinkers aim to remain flexible and open to new ideas, and to iterate on their designs based on feedback from users. This iterative approach can lead to more innovative, user-centred solutions to complex problems.

Design thinking can be applied to support a sport club to become more sustainable by following these steps:

Empathize: Develop a deep understanding of the needs and behaviours of stakeholders, including staff, players, and fans, as well as the broader community and ecosystem impacted by the club's activities. This might involve conducting interviews, surveys, and observational research to gather insights and feedback.

Example: Conduct interviews with staff and players to understand their daily routines and identify areas where sustainability practices could be integrated into their work.

Define: Use the insights gathered during the empathy stage to define the problem or challenge that the club is facing. This might involve synthesizing data and identifying key themes and patterns to create a clear problem statement.

Example: Define the problem as "How might we reduce the club's carbon footprint and promote sustainable practices among staff, players, and fans?"

Ideate: Brainstorm and generate a wide range of ideas and potential solutions for addressing the problem or challenge defined in the previous stage. This might involve using brainstorming techniques or other ideation tools to generate and refine ideas.



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Example: Generate ideas such as using renewable energy sources, reducing waste, encouraging carpooling or public transportation for fans, or integrating sustainability education into the club's training programs.

Prototype: Create rough prototypes or mock-ups of potential solutions to test and refine them. This might involve creating physical prototypes, sketches, or digital models to visualize and communicate ideas.

Example: Create a prototype of a sustainability education program that can be integrated into the club's training and development programs for players and staff.

Test: Test the prototypes and gather feedback from stakeholders to refine and improve the solutions. This might involve conducting user testing, focus groups, or other forms of feedback collection to gather insights and identify areas for improvement.

Example: Test the sustainability education program with a small group of players and gather feedback on its effectiveness and relevance.

Implement: Implement the solutions and integrate them into the club's operations and culture. This might involve training staff and players, communicating the benefits of sustainability to fans, and integrating sustainability metrics into the club's performance evaluation processes. Example: Implement the sustainability education program and promote it among players, staff, and fans. Use metrics such as energy usage, waste reduction, and fan feedback to track the impact of the program and continuously improve it over time.

By applying design thinking to support a sport club to become more sustainable, you can create innovative and effective solutions that promote sustainability and improve the club's overall performance and impact.







Slides Contents for a general introduction to design thinking

Slide 1: Title slide Title: Introduction to Design Thinking

Slide 2: What is Design Thinking?

Design thinking is a problem-solving methodology that emphasizes empathy, creativity, and experimentation.

It is a human-centred approach that seeks to understand the needs and behaviours of the people who will use the product or service being designed.

Design thinking is often used in product design, but it can be applied to any area where creative problem-solving is needed.

Slide 3: The Five Stages of Design Thinking

Empathize: Understand the user's needs and perspectives through observation, conversation, and research.

Define: Clearly define the problem or challenge to be solved.

Ideate: Generate a wide range of possible solutions without judgment or criticism.

Prototype: Build a tangible representation of the best ideas for testing and feedback.

Test: Test the prototype with users to gather feedback and refine the design.

Slide 4: Empathy Stage

In the empathy stage, designers seek to understand the user's needs and experiences.

Techniques used in the empathy stage include observation, interviews, surveys, and other forms of research.

The goal is to gain a deep understanding of the user's context and identify any pain points or unmet needs.

Slide 5: Define Stage

In the define stage, designers use the insights gained in the empathy stage to define the problem or challenge.

This involves synthesizing the research to create a clear problem statement that captures the user's needs and motivations.

The goal is to create a shared understanding of the problem among the design team and stakeholders.

Slide 6: Ideate Stage

In the ideate stage, designers generate a wide range of possible solutions.

This involves brainstorming, sketching, and other techniques to explore different approaches. The goal is to create many potential solutions without judgment or criticism.



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Slide 7: Prototype Stage

In the prototype stage, designers create tangible representations of the best ideas. This can be a low-fidelity prototype, such as a sketch or paper model, or a high-fidelity prototype, such as a working model.

The goal is to create a physical representation of the design that can be tested and refined.

Slide 8: Test Stage

In the test stage, designers gather feedback on the prototype from users. This can involve usability testing, surveys, or other methods of gathering feedback. The goal is to use the feedback to refine the design and ensure that it meets the user's needs.

Slide 9: Benefits of Design Thinking

Design thinking can lead to more innovative solutions that better meet the needs of users. It can help teams work collaboratively and with a shared understanding of the problem. Design thinking can also help teams iterate quickly and adapt to changing requirements.

Slide 10: Conclusion

Design thinking is a powerful problem-solving methodology that emphasizes empathy, creativity, and experimentation.

By using the five stages of design thinking, designers can create innovative solutions that meet the needs of users.







Differences between system thinking and design thinking

While both systems thinking and design thinking are problem-solving approaches, they have different focuses and methods. Here are some key differences between the two:

- **Focus**: Systems thinking focuses on understanding and analysing complex systems and their interdependencies, while design thinking focuses on identifying and solving specific user problems or needs.
- **Scope**: Systems thinking takes a broader, holistic approach to problem-solving, considering the entire system and its environment, while design thinking focuses on a specific aspect or element of the system.
- **Methodology**: Systems thinking relies on analytical and modelling tools to understand and analyse systems and their interactions, while design thinking uses creative and iterative methods to develop and test solutions.
- **Goals**: The goal of systems thinking is to understand and improve the overall behaviour and outcomes of a system, while the goal of design thinking is to create innovative and user-centred solutions to specific problems.
- **Outputs**: Systems thinking outputs tend to be analytical models, diagrams, or reports that describe the behaviour of the system, while design thinking outputs include prototypes, user testing results, and other tangible artifacts that demonstrate potential solutions.

In summary, while both systems thinking and design thinking are valuable approaches to problem-solving, they have different focuses and methods. Systems thinking takes a broader, holistic approach to understanding and improving complex systems, while design thinking focuses on creating user-centered solutions to specific problems or needs.





Human - Centered Design

Human-centred design is a creative approach to problem solving and the backbone of our work at IDEO.org. It's a process that starts with the people you're designing for and ends with new solutions that are tailor made to suit their needs. Human-centred design is all about building a deep empathy with the people you're designing for; generating tons of ideas; building a bunch of prototypes; sharing what you've made with the people you're designing for; and eventually putting your innovative new solution out in the world. Human-centred design consists of three phases.

- 1. In the **Inspiration Phase** you'll learn directly from the people you're designing for as you immerse yourself in their lives and come to deeply understand their needs.
- 2. In the **Ideation Phase** you'll make sense of what you learned, identify opportunities for design, and prototype possible solutions.
- 3. In the **Implementation Phase** you'll bring your solution to life, and eventually, to market. And you'll know that your solution will be a success because you've kept the very people you're looking to serve at the heart of the process.²



² https://www.designkit.org/human-centered-design





Here's an example of a slide deck to introduce Human-Centered Design

Slide 1: Title slide - Human-Centred Design: An Introduction

Slide 2: What is Human-Centred Design?

Human-Centred Design (HCD) is an approach to problem-solving that focuses on understanding and designing for the needs and behaviours of people.

HCD involves gathering insights from users, stakeholders, and other sources to inform the design process and ensure that the resulting solutions are effective and relevant.

Slide 3: Key Principles of Human-Centred Design

Empathy: HCD involves developing a deep understanding of the people who will use or be affected by the solution.

Iteration: HCD is an iterative process that involves prototyping and testing solutions to refine them over time.

Collaboration: HCD involves working closely with stakeholders, users, and other designers to develop solutions that meet everyone's needs.

Bias toward action: HCD encourages designers to move quickly and act, rather than getting bogged down in analysis and planning.

Slide 4: The Human-Centred Design Process

Discover: This phase involves gathering insights from users, stakeholders, and other sources to understand the problem space and identify opportunities for design.

Define: This phase involves synthesizing the insights gathered in the Discover phase to define the problem and create a design brief.

Develop: This phase involves generating and iterating on ideas for solutions to the problem, using the design brief as a guide.

Deliver: This phase involves prototyping and testing the solutions developed in the Develop phase, refining them based on feedback from users and stakeholders.

Slide 5: Examples of Human-Centred Design in Action

Healthcare: HCD can be used to design medical devices and equipment that are easier and more comfortable for patients to use.

Education: HCD can be used to design learning experiences that are engaging and effective for students of all ages.

Transportation: HCD can be used to design public transit systems that are accessible and convenient for riders.





Slide 6: Benefits of Human-Centred Design

Improved outcomes: HCD can lead to solutions that are more effective, efficient, and relevant to the needs of users and stakeholders.

Greater user satisfaction: HCD can create solutions that are more enjoyable and engaging for users, improving their overall experience.

Increased collaboration: HCD encourages collaboration and communication among designers, stakeholders, and users, leading to more innovative and effective solutions.

Slide 7: Conclusion

Human-Centred Design is a powerful approach to problem-solving that emphasizes understanding and designing for the needs and behaviours of people.

By focusing on empathy, collaboration, iteration, and bias toward action, designers can create solutions that are more effective, efficient, and enjoyable for users and stakeholders.







Goal-Oriented Project Planning (GOPP)

Goal-Oriented Project Planning (GOPP) is a method used to plan and manage complex projects. It is based on the idea that projects should be designed around specific goals or outcomes, rather than specific tasks or activities. The GOPP method involves a series of workshops and phases to help project managers and stakeholders identify, prioritize, and achieve their goals.

The GOPP method involves the following phases:

Initiating: The first phase involves identifying the project objectives and stakeholders and creating a project charter. This phase is critical in ensuring that everyone involved in the project is aligned and understands the goals and scope of the project.

Analysis: In this phase, the project team conducts a detailed analysis of the project objectives, requirements, and constraints. This involves identifying the key stakeholders, analysing their needs and interests, and assessing the risks and opportunities associated with the project.

Synthesis: The synthesis phase involves developing a set of possible project solutions that meet the project objectives and requirements. This involves brainstorming and evaluating different options and selecting the most appropriate solution based on the criteria established in the analysis phase.

Planning: The planning phase involves developing a detailed project plan that outlines the specific activities, resources, and timelines required to achieve the project goals. This includes developing a work breakdown structure, scheduling activities, and identifying resource requirements.

Execution: The execution phase involves implementing the project plan, monitoring progress, and adjusting as necessary. This phase requires effective communication, collaboration, and project management skills to ensure that the project is delivered on time and within budget.

Closure: The closure phase involves wrapping up the project, evaluating the project outcomes, and preparing for future projects. This involves conducting a post-project review to identify lessons learned and best practices and closing out any outstanding project activities.





GOPP series of workshops

Each of the GOPP phases involves a series of workshops that bring together project stakeholders to collaborate and make decisions. The workshops involve a structured process that includes facilitated discussions, brainstorming sessions, and decision-making activities.

Some of the key workshops used in the GOPP method include:

Project charter workshop: This workshop involves defining the project goals, objectives, scope, and stakeholders.

Stakeholder analysis workshop: This workshop involves identifying and analysing the project stakeholders, their needs, and interests.

Goal analysis workshop: This workshop involves identifying and prioritizing the project goals, and developing a hierarchy of goals that support the project objectives.

Option generation workshop: This workshop involves brainstorming and evaluating different project solutions that meet the project goals and requirements.

Option evaluation workshop: This workshop involves evaluating and selecting the most appropriate project solution based on established criteria.

Work breakdown structure workshop: This workshop involves developing a detailed work breakdown structure that defines the specific activities, resources, and timelines required to achieve the project goals.

Risk analysis workshop: This workshop involves identifying and analysing the project risks and developing a risk management plan to mitigate them.

By using the GOPP method and its associated workshops and phases, project managers and stakeholders can collaboratively identify and prioritize project goals, develop a realistic project plan, and effectively manage complex projects to achieve successful outcomes.





How can GOPP be used in an innovation challenge to find solution for sport club sustainability?

The GOPP method can be applied to an innovation challenge to find sustainable solutions for sports clubs. Here is a step-by-step guide on how to use the GOPP method for an innovation challenge:

Define the project goals: The first step is to define the project goals for the innovation challenge. In this case, the goal is to find sustainable solutions for sports clubs to improve their sustainability and reduce their environmental impact.

Identify stakeholders: The next step is to identify the stakeholders who will be involved in the innovation challenge. This could include sports clubs, fans, sponsors, and other stakeholders who have an interest in promoting sustainability in sports.

Conduct a stakeholder analysis: Once the stakeholders have been identified, the next step is to conduct a stakeholder analysis to understand their needs, interests, and concerns related to sustainability in sports.

Analyse the problem: After conducting the stakeholder analysis, the next step is to analyse the problem of sustainability in sports clubs. This could involve conducting research on current sustainability practices in sports clubs, identifying the key environmental impacts of sports clubs, and assessing the barriers to implementing sustainable solutions in sports clubs.

Develop a hierarchy of goals: Based on the stakeholder analysis and problem analysis, the next step is to develop a hierarchy of goals that support the project objectives. For example, the goals could include reducing energy consumption, increasing the use of renewable energy, reducing waste, and promoting sustainable transportation.

Brainstorm solutions: Once the hierarchy of goals has been established, the next step is to brainstorm solutions to achieve these goals. This could involve conducting idea generation workshops or crowdsourcing ideas from stakeholders.

Evaluate solutions: After generating a list of potential solutions, the next step is to evaluate each solution based on its feasibility, effectiveness, and impact on sustainability. This could involve conducting a solution evaluation workshop or using a scoring matrix to rank the solutions.



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Develop a project plan: Once a solution has been selected, the next step is to develop a detailed project plan that outlines the specific activities, resources, and timelines required to implement the solution.

Implement the solution: After the project plan has been developed, the next step is to implement the solution. This could involve piloting the solution in a small group of sports clubs and evaluating its effectiveness.

Monitor and evaluate progress: The final step is to monitor and evaluate the progress of the project to ensure that the solution is achieving the desired outcomes. This could involve conducting a post-project review to identify lessons learned and best practices.

The GOPP method provides a structured approach to planning and managing an innovation challenge to find sustainable solutions for sports clubs. By involving stakeholders in the process, the method can help to ensure that the solutions identified are feasible, effective, and have a positive impact on sustainability in sports.





Project background

The IOC sustainability framework

The International Olympic Committee (IOC) has developed a sustainability framework called "Olympic Agenda 2020", which outlines a series of sustainability objectives and initiatives for the Olympic Games and the Olympic Movement as a whole. Here's an overview of the framework:

- Pillar 1: Sport for Sustainable Development This pillar focuses on using sport as a tool for promoting sustainable development and social inclusion. The IOC aims to promote access to sport for all, particularly for marginalized communities, and to use sport to address social and environmental issues.
- Pillar 2: Climate Action This pillar focuses on reducing the carbon footprint of the Olympic Games and the Olympic Movement as a whole. The IOC aims to achieve climate neutrality for the Olympic Games by 2030 and to promote sustainable mobility, energy, and waste management practices.
- Pillar 3: Resource Management This pillar focuses on reducing the use of natural resources and promoting circular economy principles. The IOC aims to minimize the environmental impact of the Olympic Games by reducing waste, promoting sustainable sourcing, and increasing recycling and reuse.
- Pillar 4: Natural and Cultural Heritage This pillar focuses on protecting and promoting natural and cultural heritage. The IOC aims to minimize the impact of the Olympic Games on natural and cultural heritage sites, to promote the use of sustainable materials in Olympic venues, and to promote the protection and preservation of biodiversity.
- Pillar 5: Social Development This pillar focuses on promoting social development and inclusive societies. The IOC aims to promote gender equality, diversity, and social inclusion through the Olympic Games and the Olympic Movement as a whole.

Sustainability is one of the most pressing challenges of our time across a wide spectrum of social, environmental, and economic matters. Major issues such as climate change, economic inequality and social injustice are affecting people throughout the world.





The International Olympic Committee (IOC) Sustainability Strategy

The International Olympic Committee (IOC) Sustainability Strategy is a set of guidelines and principles that were launched in January 2017 to guide the Olympic Movement towards sustainability. The strategy provides a framework for the IOC, Olympic Games Organizing Committees, and Olympic stakeholders to embed sustainability in their decision-making processes and operations.

The IOC Sustainability Strategy is based on three main pillars:

- "Minimize": to reduce the environmental impact of the Olympic Games and operations, by taking measures to reduce carbon emissions, waste, and water consumption, among others.
- "Optimize": to ensure the positive impact of the Olympic Games and operations, by maximizing the social and economic benefits, and promoting transparency and accountability.
- "Innovate": to drive innovation in sustainability, by exploring new technologies and solutions, and sharing knowledge and best practices.

The strategy includes a set of specific targets and initiatives, such as sourcing renewable energy, promoting sustainable transport, reducing waste and emissions, and engaging stakeholders in sustainability initiatives. The IOC Sustainability Strategy also highlights the importance of partnerships and collaboration and calls on all stakeholders to work together towards a more sustainable future.

Overall, the IOC Sustainability Strategy represents a significant commitment by the Olympic Movement towards sustainability and provides a roadmap for future Olympic Games and operations to be more environmentally, socially, and economically sustainable.

Sport for climate action

The Sport for Climate Action Initiative is a United Nations Framework Convention on Climate Change (UNFCCC) initiative that aims to bring together the sports community to take actions to address climate change. The initiative was launched in December 2018 and is now led by a Steering Committee made up of a range of sports organizations, including International Olympic Committee (IOC), FIFA, and World Rugby, among others.





The initiative provides a framework for sports organizations to take climate action by committing to five key principles:

- Undertake systematic efforts to promote greater environmental responsibility.
- Reduce overall climate impact.
- Educate for climate action.
- Promote sustainable and responsible consumption.
- Advocate for climate action through communication.

By committing to these principles, sports organizations can take concrete steps to reduce their carbon footprint, promote sustainable practices, and engage fans and stakeholders on climate action. The initiative also provides tools and resources to help sports organizations develop and implement climate action plans, including a Sports for Climate Action Guide and a Carbon Calculator.

The Sport for Climate Action Initiative highlights the power of sports to drive social change and contribute to global efforts to address climate change. It provides a unique platform for sports organizations to showcase their commitment to sustainability and climate action, and to inspire fans and communities to act.







DEDALUS PROJECT SCOPE

DEDALUS is a small cooperation small project co funded by the EU in the framework of Erasmus+ Sport action. Partners cooperate to increase the understanding of sport staff about the IOC Sustainability Strategy and contribute to both facilities and management interventions.

Partners 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 following are the 9 IOC objectives for sustainability will be considered as input of the DEDALUS DESIGN WORKSHOPS.



O1: Design and construction of future Olympic House to be certified according to nationally and internationally recognised sustainability standards*

02: Increase energy efficiency of our buildings



TOP partners and official licensees* 04: Achieve a



05: Reduce the IOC's travel impact (business travel for IOC staff. Members and quests: vehicle fleet; staff commuting; freight)*

measurable reduction in waste quantities

DEDALUS design workshops will be activated to:



06: Further increase staff diversity, in particular with regard to gender and geographical diversity

07: As part of IOC@work2020, further develop a wellness programme to promote healthy and active lifestyles at the IOC

CROSS-CUT

09: Include sustainability in corporate ev

08: Achieve carbon

neutrality by reducing

GHG emissions, and

direct and indirect

by compensating

emissions as

a last resort*

- co-designing concepts and plans for grassroots sport clubs' buildings sustainable regeneration.
- improving sport clubs' policies for purchase, waste management.
- imagining way to improve neighbourhoods' mobility and transport in the context where grassroots club is located.

In other terms, the DEDALUS project, taking into account the 2030 strategic intents of IOC will engage grassroots sport communities and young designers to share thoughts and co-design innovative feasible solutions to maximize the use of existing infrastructures, to regenerate sport clubs' facilities to ensure that sport built environment is viable and has a minimal impact on the environment, to co-define purchases sustainable regulations and more over. Workshops are open to people with fewer opportunities and participants are selected with a gender balance perspective.



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Strategic intents for 2030 per focus area



Design of new venues, or refurbishing old **sport** sites, should always factor in climate adaptation measures, including ventilation, orientation of buildings, choice of materials and natural landscaping – vegetation has an important cooling effect, as well as aesthetic and ecological benefits.

Location of new venues should also assess potential risks from flooding, forest fires, landslips, and coastal erosion. Existing venues may benefit from new or modified heating, ventilation, or air-conditioning (HVAC) systems and changes to management practices in order to save water resources. Water storage, rainwater harvesting, and sustainable drainage systems are other important considerations. Additional structures to provide shade, or establishing areas of natural vegetation may also be sensible....²

Good examples of sustainable sport facilities can be easily found:



BUT they refer to big plants, huge stadia, large sport complex, swimming pools, sports halls, tennis courts, realized and built with huge financial capitals. Several sport infrastructures built in the recent years have obtained LEED and WELL certifications. These are indeed great works and large investments!

So, > *when* we refer to the sports infrastructures, built in the past as secondary urbanization works, in the neighbourhoods of cities, often without a strategic vision for sport; > *when* we observe these structures, run by the many multi-sport grassroots associations, which today more





than never, face the problem of the scarcity of financial resources, > How can we think that it could be possible to use guidelines defined for Olympics' and for new great works, into innovative real processes of co design for the regeneration of small grassroots clubs?

- Is it possible to find out unconventional designs approach for neighbourhood Sport ٠ Facilities?
- Is it possible to renovate sport clubs' facilities, by rethinking also new sustainable way to • practice sport?
- Is it possible to adapt facilities and other recreational activities places, with a step-by-step • approach considering the current problem of lack of financial resources?

Many architecture and design projects have already proposed new ways to empower the social value of sports and innovative solutions to realize them to promote a healthy lifestyle. With similar creative attitude participants in DEDALUS DESIGN WORKSHOPS are called to design artifact, merging considerable programmatic innovation and valuable planning tools, within a framework of technical and economic constraints. Despite good practice of sustainable stadia and multi-sport facilities, lots remains to do and to test at a grassroots level!

At that level where most grassroots sports clubs are located.

In this perspective, the DEDALUS project will launch EXPERIMENTAL DESIGN WORKSHOPs engaging young architects, designers, engineers, students, sport staff and managers, and representative of the sport local community in an unconventional process for co-creating solutions, that considers different layers of feasibility and sustainability renovation works, hybrid sport functions, sustainable sport management, fund raising and communication for sponsorships. The workshops will be developed assuming the perspective of Municipalities, owners and grassroots sport clubs' managers and users.





DEDALUS innovation challenges

- 1) Finding solutions to make grassroots sports facilities more sustainable and inclusive and attractive taking into consideration lack of finances.
- co-create solutions, inspired by the IOC for the Olympics sustainability framework, but tailored for small sport clubs and associations.
 <u>IOC resources links</u>:

https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Factsheets-Reference-Documents/Sustainability/2017-03-21-IOC-Sustainability-Strategy-English-01.pdf https://olympics.com/ioc/sustainability/ioc-as-leader-of-the-olympic-movement/case-studies https://olympics.com/ioc/sustainability

With a creative attitude, participants in DEDALUS DESIGN WORKSHOPS are called to design artifact, merging considerable programmatic innovation and valuable planning tools, within a framework of technical and economic constraints. Despite good practice of sustainable stadia and multi-sport facilities, lots remains to do and to test at a grassroots level! At that level where most grassroots sports clubs are operating for the health of the communities.

The **challenge of the workshop** is not simply to design new sustainable sport facilities, but finding out and design solutions 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 and restore sport facilities.

Workshops won't be theoretical, but they will consider real cases selected by the parterres in collaboration with grassroots sport associations and local municipalities and participants themselves.

DEDALUS workshop **provides an experimental and design based responses to the sport facilities 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 feasibility studies of concrete and practicable solutions useful to grassroots sports associations to make their activities and their facilities more sustainable and inclusive.




How to apply design thinking to DEDALUS

Some examples of how you could apply design thinking to support a sport club in becoming more sustainable:

• Empathize:

Conduct research to understand the current sustainability practices of the club, such as waste reduction, energy efficiency, and water conservation.

Interview members of the club to gain insights into their attitudes and behaviours towards sustainability.

Observe how the club interacts with the environment, such as its use of resources and waste management practices.

• Define:

Create a clear problem statement that captures the club's sustainability challenges and goals, such as reducing its carbon footprint, reducing waste, or increasing renewable energy usage.

Identify the stakeholders who will be affected by the sustainability initiatives, such as club members, fans, and the local community.

• Ideate:

Brainstorm ideas for sustainable initiatives that align with the club's goals and address the identified challenges, such as recycling programs, energy-efficient lighting, or green transportation options.

Consider the impact of these initiatives on the stakeholders and prioritize those that are feasible and impactful.

• Prototype:

Create tangible prototypes of the proposed initiatives, such as a recycling program or a green transportation plan.

Test the prototypes with a small group of stakeholders to gather feedback and refine the initiatives.

• Test:

Implement the sustainable initiatives on a small scale and gather feedback from stakeholders.

Monitor the impact of the initiatives on the environment and the club's operations. Refine and scale up the initiatives as needed.

Examples of sustainable initiatives that a sport club could implement include:

Installing solar panels to generate renewable energy.

Promoting the use of public transportation or bicycles to reduce carbon emissions. Implementing a recycling program to reduce waste.

Using energy-efficient lighting and appliances to reduce energy consumption.

Encouraging fans to bring their own reusable cups and bottles to reduce single-use plastic waste.





Partnering with local sustainability organizations to educate fans and club members on sustainable practices.

By applying design thinking, a sport club can identify tailored sustainable initiatives.

How to apply design thinking to DEDALUS Challenges

Tips to apply design thinking to DEDALUS Challenge (example1)

Design thinking can be applied to make a grassroots sports club in the neighbourhoods of cities more sustainable, inclusive, and attractive by following these steps:

- **Empathize**: The first step is to understand the needs and challenges of the community and the sports club. This involves conducting research, interviews, and surveys to understand the needs, desires, and challenges of the community and the sports club members.
- **Define**: Based on the research and insights gathered, define the problem or opportunity that the sports club wants to address. This could be related to sustainability, inclusivity, or attractiveness.
- **Ideate**: Generate ideas to address the defined problem or opportunity. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions.
- **Prototype**: Create prototypes of the most promising ideas. This involves building low-cost and low-fidelity prototypes to test and refine the ideas.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from the community.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the sports club facilities, programs, or policies to make it more sustainable, inclusive, and attractive.

To apply design thinking to make a grassroots sports club more sustainable, inclusive, and attractive, it is important to involve stakeholders, including sports club members, community members, and local organizations. This approach will ensure that the solutions developed are tailored to the needs of the community and are more likely to be successful. Additionally, it is important to focus on low-cost and low-fidelity prototypes to test and refine ideas before



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investing significant resources into implementation. This will help ensure that the solutions developed are effective and feasible. Finally, it is important to continuously iterate and improve the solutions developed based on feedback from stakeholders and the community.

Tips to apply design thinking to DEDALUS Challenge (example2)

Design thinking can be applied to finding solutions to make grassroots sports facilities more sustainable and inclusive, taking into consideration the lack of finances by following these steps:

- **Empathize**: The first step is to understand the needs and challenges of the community and the sports facilities. This involves conducting research, interviews, and surveys to understand the needs, desires, and challenges of the community and the sports facility users. It is important to pay attention to the financial constraints and limitations of the sports facility.
- **Define**: Based on the research and insights gathered, define the problem or opportunity that the sports facility wants to address. This could be related to sustainability, inclusivity, or lack of finances.
- Ideate: Generate ideas to address the defined problem or opportunity, while taking into consideration the financial constraints. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions that are cost-effective and sustainable.
- **Prototype**: Create prototypes of the most promising ideas that are cost-effective and sustainable. This involves building low-cost and low-fidelity prototypes to test and refine the ideas.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from the community and facility users.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the sports facility facilities, programs, or policies to make it more sustainable, inclusive, and cost-effective.

To apply design thinking to finding solutions to make grassroots sports facilities more sustainable and inclusive, taking into consideration the lack of finances, it is important to involve stakeholders, including sports facility users, community members, and local organizations. This approach will ensure that the solutions developed are tailored to the needs of the community and are more likely to be successful. Additionally, it is important to focus on low-cost and low-fidelity prototypes



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to test and refine ideas before investing significant resources into implementation. This will help ensure that the solutions developed are effective and feasible within the financial constraints of the facility. Finally, it is important to continuously iterate and improve the solutions developed based on feedback from stakeholders and the community.

Tips to apply design thinking to DEDALUS Challenge (example3)

Design thinking can be applied to co-create solutions, inspired by the IOC for the Olympics sustainability framework, but tailored for small sport clubs and associations by following these steps:

- **Empathize**: The first step is to understand the needs and challenges of small sport clubs and associations regarding sustainability. This involves conducting research, interviews, and surveys to understand the needs, desires, and challenges of the clubs and associations, as well as their existing sustainability practices.
- **Define**: Based on the research and insights gathered, define the problem or opportunity that the sport clubs and associations want to address. This could be related to sustainability practices, lack of resources, or limited knowledge about sustainable practices.
- Ideate: Generate ideas to address the defined problem or opportunity, while taking inspiration from the IOC's sustainability framework. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions that are tailored for small sport clubs and associations.
- **Prototype**: Create prototypes of the most promising ideas. This involves building low-cost and low-fidelity prototypes to test and refine the ideas.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from the community and the sport clubs and associations.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the clubs and associations' facilities, programs, or policies to make them more sustainable, cost-effective, and easy to implement.

To apply design thinking to co-create solutions inspired by the IOC's sustainability framework but tailored for small sport clubs and associations, it is important to involve stakeholders, including sport club and association members, community members, and local organizations. This approach



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will ensure that the solutions developed are tailored to the needs of small sport clubs and associations and are more likely to be successful. Additionally, it is important to focus on low-cost and low-fidelity prototypes to test and refine ideas before investing significant resources into implementation. This will help ensure that the solutions developed are effective, feasible, and cost-effective. Finally, it is important to continuously iterate and improve the solutions developed based on feedback from stakeholders and the community.

Tips to apply design thinking to DEDALUS Challenge (example4)

Design thinking can be applied to find unconventional design approaches for neighbourhood sport facilities by following these steps:

- **Empathize**: The first step is to understand the needs and desires of the neighbourhood and the community that the sport facility will serve. This involves conducting research, interviews, and surveys to understand the needs, desires, and challenges of the community.
- **Define**: Based on the research and insights gathered, define the problem or opportunity that the sport facility aims to address. This could be related to the lack of access to sport facilities in the neighbourhood, the need for inclusive and accessible facilities, or the desire for more creative and engaging sport facilities.
- Ideate: Generate ideas for unconventional design approaches for the sport facility. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions that challenge traditional approaches and consider innovative design elements that cater to the unique needs of the neighbourhood and community.
- **Prototype**: Create prototypes of the most promising ideas. This involves building low-cost and low-fidelity prototypes to test and refine the ideas.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from the community and the sport facility users.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the sport facility's design, amenities, or programming to make it more engaging, accessible, and relevant to the community.

To apply design thinking to find unconventional design approaches for neighbourhood sport facilities, it is important to involve stakeholders, including community members, local organizations, and sport facility users. This approach will ensure that the design solutions



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developed are tailored to the needs and desires of the community and are more likely to be successful. Additionally, it is important to consider innovative design elements that cater to the unique needs of the neighbourhood and community, such as the use of sustainable materials, community-driven design processes, and inclusive design elements. Finally, it is important to continuously iterate and improve the design solutions developed based on feedback from stakeholders and the community to ensure that the sport facility meets the evolving needs and desires of the community.

Tips to apply design thinking to DEDALUS Challenge (example5)

Design thinking can be applied to renovate sport club facilities and rethink new sustainable ways to practice sport by following these steps:

- **Empathize**: Start by conducting research and engaging with the sport club members and stakeholders to understand their needs, desires, and challenges. This involves observing the current facilities, interviewing members, and conducting surveys to gain insights.
- **Define**: Based on the insights gathered, define the problem or opportunity that the renovation aims to address. This could be related to the outdated facilities, lack of access to sustainable equipment, or the need to improve the overall member experience.
- Ideate: Generate ideas for the renovation that take into account new sustainable ways to practice sport. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions that challenge traditional approaches and consider innovative design elements.
- **Prototype**: Create prototypes of the most promising ideas. This involves building low-cost and low-fidelity prototypes to test and refine the ideas. For example, a prototype could be a 3D model of the redesigned space, or a small-scale mock-up of a new sustainable piece of equipment.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from members and the community.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the sport club's facilities, equipment, or programming to make it more sustainable, accessible, and engaging for members.



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To apply design thinking to renovate sport club facilities and rethink new sustainable ways to practice sport, it is important to involve stakeholders, including members, coaches, and the local community. This approach will ensure that the design solutions developed are tailored to the needs and desires of the sport club and are more likely to be successful. Additionally, it is important to consider innovative design elements that incorporate sustainable materials, energy-efficient equipment, and programming that promotes sustainable practices. Finally, it is important to continuously iterate and improve the design solutions developed based on feedback from stakeholders to ensure that the renovated sport club meets the evolving needs and desires of its members and the community.

Tips to apply design thinking to DEDALUS Challenge (example6)

Design thinking can be applied to adapt facilities and other recreational activity places with a step-by-step approach, considering the current problem of lack of financial resources, by following these steps:

- **Empathize**: Start by understanding the needs and desires of the target audience, which could be the users of the facilities, the local community, or other stakeholders. Gather insights by conducting research and engaging with the target audience to gain a deeper understanding of their needs, challenges, and aspirations.
- **Define**: Based on the insights gathered, define the problem or opportunity that the renovation aims to address. This could be related to the lack of financial resources, outdated facilities, or the need to improve the overall user experience.
- **Ideate**: Generate ideas for the renovation that consider the lack of financial resources. This involves brainstorming and ideating with stakeholders to come up with a range of possible solutions that are cost-effective and innovative.
- **Prototype**: Create prototypes of the most promising ideas. This involves building low-cost and low-fidelity prototypes to test and refine the ideas. For example, a prototype could be a virtual model of the redesigned space or a small-scale mock-up of a new feature.
- **Test**: Test the prototypes with stakeholders to gather feedback and refine the ideas further. This could involve conducting pilot programs or surveys to gather feedback from users and the community.
- **Implement**: Implement the most promising ideas based on the feedback and insights gathered during the testing phase. This could involve making changes to the facilities or the recreational activities that are cost-effective and aligned with the needs and desires of the target audience.



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To apply design thinking to adapt facilities and other recreational activity places with a step-bystep approach, it is important to prioritize the ideas that are cost-effective, innovative, and aligned with the needs and desires of the target audience. Additionally, it is important to leverage existing resources and partnerships to reduce costs and increase impact. For example, partnerships with local businesses or community organizations can help provide funding, resources, or volunteer support to implement the ideas. Finally, it is important to continuously iterate and improve the design solutions developed based on feedback from stakeholders to ensure that the adapted facilities and recreational activities meet the evolving needs and desires of the target audience.

DEDALUS INNOVATION WORKSHOP: hints and tips

Before implementing the innovation challenge workshop, it could be useful to offer to young participants a short training about the context and the problems addressed, but also about methodologies such as SYSTEM THINKING and DESIGN THINKING.

If it won't be possible to ensure the direct participation of sport managers and staff with all groups participants, It could be very valuable, interesting and useful to start the challenge, listening to the testimonies form sport sector: sport managers and sport staff who are confronted with the problem on a daily basis.

Materials and documentations should be shared in advance, as well as, good practices, a bibliography and links to web resources.



To reinvent and adapt sport grounds for multiple sustainable sport and recreational uses, you could proceed as follows:

Conduct a Needs Assessment: I would first conduct a needs assessment to determine the specific sport and recreational needs of the community. This would involve consulting with community members, local sports organizations, and other stakeholders to identify the types of facilities and amenities that are needed.

Evaluate Site Conditions: I would then evaluate the existing sport grounds to assess their suitability for multiple uses. This would involve evaluating factors such as the size and shape of the grounds, the condition of existing facilities, and the availability of infrastructure such as water and power.

Develop a Concept Plan: Based on the needs assessment and site evaluation, I would develop a concept plan for the grounds that outlines the proposed design, facilities, and amenities. This plan would be based on principles of sustainability, accessibility, and inclusivity, and would aim to maximize the use of natural resources and minimize environmental impact.





Engage Stakeholders: Throughout the design process, I would engage with stakeholders to gather feedback and ensure that their needs are being met. This would involve holding public meetings, workshops, and other forms of engagement to gather input and feedback.

Incorporate Sustainable Design Features: I would incorporate sustainable design features into the plan, such as green roofs, rain gardens, and renewable energy systems. These features would help to reduce the environmental impact of the facility and promote sustainable practices.

Consider Multi-Use Facilities: To maximize the use of the facility, I would consider incorporating multi-use facilities that can be used for a variety of sports and recreational activities. For example, a basketball court could be designed to also function as a volleyball court or a roller-skating rink.

Develop a Management Plan: Finally, I would develop a management plan that outlines how the facility will be operated and maintained. This would involve identifying staffing needs, developing maintenance schedules, and establishing policies and procedures to ensure that the facility is operated in a sustainable and responsible manner.

By following these steps, I believe it would be possible to reinvent and adapt sport grounds for multiple sustainable sport and recreational uses that meet the needs of the community and promote sustainability.

To design a step-by-step process to regenerate the wide context and make existing sport facilities more sustainable, you could proceed as follows:

Conduct a Sustainability Audit: The first step would be to conduct a sustainability audit of the existing sport facilities to identify areas for improvement. This would involve analysing the energy and water usage, waste management practices, and other factors that contribute to the environmental impact of the facilities.

Develop Sustainability Goals: Based on the results of the sustainability audit, I would develop sustainability goals for the sport facilities. These goals could include reducing energy and water usage, increasing the use of renewable energy, improving waste management practices, and promoting sustainable transportation options.

Identify Sustainable Design Features: I would then identify sustainable design features that could be incorporated into the facilities to help achieve these sustainability goals. This could include features such as energy-efficient lighting, solar panels, rainwater harvesting systems, and green roofs.



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Develop a Master Plan: Based on the sustainability goals and design features, I would develop a master plan for the regeneration of the wider context of the sport facilities. This plan would outline the specific steps that need to be taken to make the facilities more sustainable, including the design and construction of new facilities, as well as the retrofitting of existing facilities.

Secure Funding: To implement the master plan, it may be necessary to secure funding from various sources, including government grants, private investors, and community organizations.

Engage Stakeholders: Throughout the regeneration process, I would engage with stakeholders to gather feedback and ensure that their needs are being met. This would involve holding public meetings, workshops, and other forms of engagement to gather input and feedback.

Monitor Progress: Finally, I would monitor the progress of the regeneration process to ensure that the sustainability goals are being met. This would involve regularly reviewing the energy and water usage, waste management practices, and other factors that contribute to the environmental impact of the facilities, and making adjustments as necessary to ensure that the facilities remain sustainable over time.

By following these steps, I believe it would be possible to regenerate the wide context and make existing sport facilities more sustainable, while also meeting the needs of the community and promoting a healthy and active lifestyle.



To define a finance plan and an overall economic framework to make a sport club sustainable, you could proceed as follows:

Conduct a Financial Analysis: The first step would be to conduct a financial analysis of the sport club to identify its current financial situation and to determine the financial needs for sustainability. This would involve analyzing revenue streams, expenses, and identifying areas for cost-saving and revenue generation.

Develop a Business Plan: Based on the financial analysis, I would develop a comprehensive business plan that outlines the strategies and actions required to make the sport club sustainable. This plan would include a detailed budget, marketing and communication plans, and a fundraising strategy.

Identify Potential Revenue Streams: To generate revenue, I would identify potential revenue streams, such as ticket sales, merchandise sales, sponsorships, and grants. I would also explore the possibility of offering services such as coaching and training to generate additional revenue.



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Establish a Fundraising Strategy: I would develop a fundraising strategy that outlines the steps to secure necessary funds. This strategy would involve identifying potential donors and sponsors, developing grant proposals, and organizing fundraising events such as charity auctions and sponsorships.

Seek Out Grants: I would also seek out grants from organizations and foundations that support sports and sustainability initiatives. This could include grants from government agencies, private foundations, and corporate social responsibility programs.

Establish Partnerships: I would seek out partnerships with local businesses and organizations to help generate revenue and build community support for the sport club. This could include partnerships with local sports teams, health and fitness organizations, and community centres.

Monitor Progress: Finally, I would monitor the progress of the finance plan and the overall economic framework to ensure that the sport club remains financially sustainable. This would involve regularly reviewing revenue and expense reports, adjusting the fundraising strategy as necessary, and seeking out new revenue streams as opportunities arise.

In terms of where to look for necessary funds, there are several options available, including government grants, private foundations, corporate sponsorships, and individual donations. It may also be possible to secure funding through crowdfunding campaigns or by partnering with local businesses and organizations. I would recommend conducting research and reaching out to relevant organizations and individuals to explore potential funding opportunities.

To effectively communicate the regeneration sustainable strategy of a sport club and attract funds for the restoration of sport facilities, you could proceed as follows:

Develop a Communication Plan: The first step would be to develop a comprehensive communication plan that outlines the messaging, target audience, and communication channels to be used. This plan would include a clear description of the regeneration sustainable strategy, the benefits of the restoration of sport facilities, and the impact on the community and environment.

Identify Potential Donors and Investors: I would identify potential donors and investors who are aligned with the mission and values of the sport club and are interested in supporting sustainable initiatives. This could include individuals, foundations, corporations, and government agencies.

Craft a Compelling Story: I would craft a compelling story that highlights the need for the restoration of sport facilities and the impact it would have on the community and the





environment. This story would be used in all communication materials, including social media posts, press releases, and fundraising campaigns.

Utilize Social Media: Social media would be used to reach a wider audience and raise awareness of the regeneration sustainable strategy. This would involve creating content that showcases the benefits of the restoration of sport facilities and sharing it on various social media platforms, including Facebook, Twitter, Instagram, and LinkedIn.

Host Fundraising Events: I would organize fundraising events, such as charity auctions, benefit concerts, and sports tournaments, to raise funds for the restoration of sport facilities. These events would provide an opportunity to engage with potential donors and investors and to share the regeneration sustainable strategy with a wider audience.

Collaborate with Partners: I would collaborate with partners, such as local businesses and community organizations, to support the regeneration sustainable strategy and to promote the restoration of sport facilities. This would involve creating mutually beneficial partnerships that align with the mission and values of the sport club.

Track and Measure Results: I would track and measure the results of the communication plan and fundraising efforts to assess the effectiveness of the strategy and adjust as needed. This would involve analysing social media metrics, fundraising results, and donor feedback to continually improve the communication strategy.

Overall, the key to effectively communicating the regeneration sustainable strategy of a sport club and attracting funds for the restoration of sport facilities is to develop a comprehensive communication plan, identify potential donors and investors, and craft a compelling story that showcases the benefits of the strategy. Utilizing social media, hosting fundraising events, collaborating with partners, and tracking and measuring results are all important elements of a successful communication strategy.





Sourcebook

IOC sustainability framework

Links to learn more about the IOC sustainability framework:

- Olympic Agenda 2020: Sustainability This webpage on the official IOC website provides an overview of the sustainability framework and its objectives.
 <u>https://www.olympic.org/sustainability</u>
- Sustainability and Legacy This webpage on the official Tokyo 2020 Olympics website provides information on the sustainability initiatives implemented for the Tokyo 2020 Olympics, which were based on the Olympic Agenda 2020 sustainability framework. https://olympics.com/tokyo-2020/en/sustainability/
- The IOC Sustainability Report This report provides an in-depth overview of the IOC's sustainability initiatives, including progress updates on the Olympic Agenda 2020 sustainability framework. <u>https://www.olympic.org/sustainability-report-2020</u>
- IOC Sustainability Strategy Executive Summary Olympic Agenda 2020, the starting point for the IOC Sustainability Strategy: <u>https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Factsheets-</u> <u>Reference-Documents/Sustainability/2017-03-21-IOC-Sustainability-Strategy-English-</u> 01.pdf
- OLYMPIC MOVEMENT SUSTAINABILITY CASE Studies- 2020: <u>https://olympics.com/ioc/sustainability/ioc-as-leader-of-the-olympic-movement/case-studies</u>
- Carbon footprint methodology for the Olympic games <u>https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC-Carbon-Footprint-Methodology.pdf?</u> ga=2.96618719.1361001246.1677848023-695671387.1677848023
- IOC Supplier Code: The IOC is committed to building a better world through sport. As outlined in its Sustainability Strategy, which underpins to a large extent this Supplier Code, the IOC follows a responsible sourcing approach by which the sourcing of our products and services is carried out with environmental, social and ethical issues in mind. Through this approach, the IOC aims to use its influence to promote higher levels of environmental and social responsibility across its value chain. This Supplier Code outlines the IOC's





minimal requirements from its suppliers – defined as any third party providing or intending to provide goods and services to the IOC. <u>https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/Spheres/IOC-Supplier-Code-Final.pdf? ga=2.162277244.1361001246.1677848023-695671387.1677848023</u>

- IOC SUSTAINABILITY POLICY
 <u>https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/IOC-Sustainability-Policy.pdf?_ga=2.162277244.1361001246.1677848023-695671387.1677848023</u>
- OLYMPIC GAMES GUIDE ON Sustainable Sourcing
 <u>https://stillmed.olympics.com/media/Document%20Library/OlympicOrg/IOC/What-We-Do/celebrate-olympic-games/Sustainability/Olympic-Games-Guide-on-Sustainable-Sourcing-2019.pdf? ga=2.57320426.1361001246.1677848023-695671387.1677848023
 </u>

Sport for climate action

- Sports for Climate Action: UN Climate Change invites sports organizations and their stakeholders to join a new climate action for sport movement. This initiative aims at supporting and guiding sports actors in achieving global climate change goals. Sports organizations can display climate leadership by engaging together in the climate neutrality journey. They can achieve this by taking responsibility for their climate footprint, which in turn will incentivize climate action beyond the sports sector, and therefore help global ambition step-up in the face of the threat posed by climate change. Uniting behind a set of principles, sports organizations and their communities have created an initiative by collaborating in order to position their sector on the path of the low carbon economy that global leaders agreed on in Paris: Sports for Climate Action https://unfccc.int/climate-action/sectoral-engagement/sports-for-climate-action?gclid=Cj0KCQiAOoagBhDHARIsAI-BbgeVAT2U0DLk6ssOe-MxowbiG6TWKxhnl2ryDqtV22uDRXunL_7P30oaArqoEALw_wcB
- SPORTS FOR CLIMATE ACTIO ON THE RACE TO ZERO: INFORMATION PACK <u>https://unfccc.int/sites/default/files/resource/S4CA_prospective%20signatory%20booklet.</u> <u>pdf</u>
- Sports for Climate Action Framework: UN Climate Change invites sports organizations and their stakeholders to join a new climateaction for sport movement that will set the trajectory and provide the support for sport to play a winning role in achieving global





climate change goals:

https://unfccc.int/sites/default/files/resource/Sports_for_Climate_Action_Declaration_and_ Framework_0.pdf

• Participants in the Sports for Climate Action Framework: <u>https://unfccc.int/climate-action/sectoral-engagement/sports-for-climate-action/participants-in-the-sports-for-climate-action-framework</u>

Sustainable sport facilities

"**Sustainable Sports Facilities**" by the Environmental Protection Agency (EPA): This webpage provides a comprehensive overview of sustainable sports facility design, including case studies and best practices. <u>https://www.epa.gov/green-sports/sustainable-sports-facilities</u>

"Green Sports Alliance" case studies: The Green Sports Alliance is a non-profit organization dedicated to promoting sustainability in the sports industry. Their website includes a database of case studies that showcase sustainable sports facility design and architecture. https://greensportsalliance.org/case-studies/

"Sustainable Sports Design" by ArchDaily: This article provides an overview of sustainable design principles and showcases several examples of sustainable sports facilities, including the Sochi 2014 Winter Olympics facilities and the Golden 1 Center arena in Sacramento. https://www.archdaily.com/776187/sustainable-sports-design-what-every-architect-should-know

"**Sustainable Stadium Design**" by Stantec: This article provides an overview of sustainable stadium design, including case studies of the Levi's Stadium in Santa Clara, California and the Avaya Stadium in San Jose, California.

https://www.stantec.com/en/ideas/sustainability/sustainable-stadium-design

"Greening Sports Venues" by the Natural Resources Defense Council (NRDC): This report provides a comprehensive overview of sustainable sports facility design, including case studies of several sports venues that have undergone sustainable renovations, such as the Barclays Center in Brooklyn, New York. <u>https://www.nrdc.org/sites/default/files/greening-sports-venues-IB.pdf</u>

The 5 most sustainable sports venues in the world, by climate action "Surprisingly sports venues are pioneers in the promotion of sustainability. Many sports venues have jumped on the sustainability bandwagon to construct or renovate their structure in a race to minimise their carbon footprint, preserve their green legacy, and take the lead in innovation". https://www.climateaction.org/news/the-5-most-sustainable-sports-venues-in-the-world





Should the Healthier Aspects of Sports Extend Beyond Fans and Players? By Cascadia,

"Sporting venues and stadium arenas are implementing ground-breaking green initiatives to promote sports and environment sustainability. Many venues across the globe have joined the sustainability movement to protect the environment.

The opportunities to do so are many: there are ways to reduce carbon emissions, reduce noise pollution, establish sustainable water systems that reduce water usage, and the use of solar and wind energy for electricity. Given all of these options, the race to go green is quite competitive. Stadiums are trying to outdo each other in creating a combination of superior sporting events and environmentally friendly venues. But let's pause and have a look at some of the benefits of going green" https://cascadiasport.com/sports-and-environment-green-initiatives-in-stadiums/

Impactful, Liveable, Accessible: Three Ways Sports Stadiums Can Support Sustainable Urban Development by Stephanie Gerretsen "In many cities, nothing stands more prominently on the skyline than sports stadiums. They are major parts of the community, giving them an exceedingly important role in the sustainable development of the places they reside." https://globalsportmatters.com/business/2022/04/19/three-ways-sports-stadiums-supportsustainable-urban-development/

Sustainable Stadiums & Arenas, by

https://www.wm.com/sustainability_ services/documents/insights/Stadiums%20and%20Arenas%20Insight.pdf

Human-Centered Design

• The Field Guide to Human-Centred Design A step-by-step guide that will get you solving problems like a designer. By IDEO.org. At IDEO.org, part of our mission is to spread human-centred design to social sector practitioners around the world. The Field Guide to Human-Centred Design reveals our process with the key mindsets that underpin how and why we think about design for the social sector, 57 clear-to-use design methods for new and experienced practitioners, and from-the-field case studies of human-centred design in action. The Field Guide has everything you need to understand the people you're designing for, to have more effective brainstorms, to prototype your ideas, and to ultimately arrive at more creative solutions.

Link to source: https://www.designkit.org/resources/1

SYSTEM THINKING

• Introduction to system thinking Daniel H. Kim





Link to source: <u>https://thesystemsthinker.com/wp-content/uploads/2016/03/Introduction-to-Systems-Thinking-IMS013Epk.pdf</u>

- Introduction to Systems Thinking Principles and Analytical Tools, Short description Series of graphics and tools for ST Link to source: https://www.unescap.org/sites/default/files/Introduction%20to%20systems%20thinking%2 Otools_Eng.pdf
- Systems thinking: An Introductory Toolkit for Civil Servants, Government Office for Science (2022).

Short description: This introductory toolkit for civil servants is one component of a suite of documents by GO-Science that aim to act as a springboard into systems thinking for civil servants unfamiliar with this approach. We introduce a small sample of systems thinking concepts and tools, chosen due to their accessibility and alignment to civil service policy development, but which are by no means comprehensive. We hope this acts as a first step towards using systems thinking approaches to solve complex problems and we strongly encourage the reader to go on to explore the wider systems thinking field further. Link to source:

"Systems Thinking for Sport: A Practical Approach to Developing a Sustainable System" by Mark Falcus and Mike Collins - This book provides a practical guide to applying systems thinking to sport management and innovation.

"Applying Systems Thinking to Sport Development: A Framework for Sport Managers" by Mark Falcus and Mike Collins - This article provides an overview of how systems thinking can be applied to sport development, with a focus on developing sustainable sport systems.

"**Systems Thinking for Sports Organizations**" by Ash Routen - This article introduces systems thinking for sports organizations, with a focus on developing a holistic understanding of the complex systems that make up the sports industry.

"**The Role of Systems Thinking in Sport Management**" by James Skinner and Chris Cushion -This article explores the role of systems thinking in sport management, with a focus on developing a systems-based approach to sport innovation.

"Systems Thinking in Sports Management: Concepts and Applications" by James Skinner and Chris Cushion - This book provides an in-depth exploration of systems thinking in sports management, with practical examples and case studies.





"Sustainability of Sport Venues: Towards the Assessment of their Contribution to the Urban Environment through System Dynamics Modeling" by Michela Robba and Marco Masoero -This article applies system dynamics modelling to assess the sustainability of sport venues, with a focus on their contribution to the urban environment.

"Sustainable Sports Facilities: A System Dynamics Approach" by Giuseppe Giordano and Giuseppe Ioppolo - This article applies system dynamics modelling to assess the sustainability of sports facilities, with a focus on identifying strategies for improving sustainability.

"A Systems Thinking Approach to Sustainable Sports Development" by Mark Falcus and Mike Collins - This article explores how systems thinking can be applied to sustainable sports development, with a focus on developing holistic solutions that address the social, economic, and environmental aspects of sustainability.

"Sustainable Facility Management in Sport: A Systemic Approach" by Joost Jansen and Marc Van Eenennaam - This article applies a systemic approach to sustainable facility management in sport, with a focus on integrating sustainability into all aspects of facility management.

Design thinking

"**Design Thinking for Sustainable Sport Facilities Management**" by Arno Pronk and Joost Jansen - This article applies design thinking to sustainable sport facilities management, with a focus on developing solutions that meet the needs of stakeholders while promoting sustainability.

"Design Thinking for Sports Facilities: A Case Study in Sustainable Innovation" by Laura Magro and Stefania Perri - This article presents a case study of using design thinking to develop sustainable innovation solutions for sports facilities.

"Design Thinking and Sustainability: Exploring New Approaches to Sustainable Sports Facility Design" by Joost Jansen and Marc Van Eenennaam - This article explores how design thinking can be applied to sustainable sports facility design, with a focus on developing solutions that are socially, environmentally, and economically sustainable.

"Design Thinking for Sports Development: A New Approach to Sustainable Sport Facility Design" by Mark Falcus and Mike Collins - This article applies design thinking to sustainable sport facility design, with a focus on developing solutions that are user-centred, creative, and innovative.

"Design Thinking for Sustainable Sport Management" by Maria De Hoyos and Stacy Warren -This article explores how design thinking can be applied to sustainable sport management, with a





focus on developing solutions that promote sustainability while meeting the needs of stakeholders.

HUMAN CENTRED DESIGN

• The Facilitator's Guide

Short description The Facilitator's Guide to Introducing Human-Centred Design is a stepby-step guide to help you introduce new learners to this creative approach to problem solving. Building on your moderate to deep experience with human-centred design and workshop facilitation, you'll learn to plan and lead a one-day, hands-on introductory workshop for 5 to 20 people who have little to no knowledge of human-centred design. The materials include a script, presentation, worksheets, and agendas to maximize your success

Link to source

https://drive.google.com/file/d/1HTU7xn1bS5Qeedmy5ZK9k_BFNn28Et9I/view





ANNEXES



Co-funded by the European Union

DEDALUS

DEDALUS

DESIGN DRIVEN INNOVATION AND SUSTAINABILITY IN GRASSROOTS SPORT CLUBS

2ND COORDINATION MEETING _ 9TH MARCH 2023

Project funded by the EU _ Erasmus 2021-2027



Co-funded by the European Union



TASK 2.2 FACILITORS WORKSHOP METHODOLOGIES FOR DESIGN

System thinking | design thinking | human centred design

Raffaella Lioce

WHAT IS SYSTEMS THINKING?

- A term used to describe a perspective and a set of methods and tools that make it possible to look at the full extent of a system, rather than at fragments or parts
- Systems thinking is an approach to problem-solving that emphasizes understanding how different components of a system interact with each other to produce the behavior of the system as a whole.
- It involves understanding the interconnections and interdependencies of the various parts of a system and how they work together to produce the system's outcomes



WHY IS SYSTEMS THINKING IMPORTANT ?

- Many of the problems we face in the world today are complex and interconnected, and cannot be solved by simply addressing individual components of the system.
- Systems thinking can help us to understand the root causes of these problems and develop effective solutions that address them holistically



KEY CONCEPTS OF SYSTEMS THINKING

- Feedback Loops: The relationships between different parts of a system can create feedback loops, where the output of one part of the system affects the input of another part, and vice versa.
- Emergence: Systems can exhibit emergent properties, which are behaviors or characteristics that arise from the interactions between the system's components, rather than from the components themselves.
- Boundaries: Systems are defined by boundaries that separate them from their environment. These boundaries can be physical, conceptual, or temporal.



APPLYING SYSTEMS THINKING

- Systems thinking can be applied to a wide range of fields, including business, healthcare, education, and the environment.
- It involves identifying the key components of a system, analyzing their interactions, and developing solutions that take into account the entire system and its environment



SYSTEM THINKING EXAMPLES

- Healthcare: Systems thinking can be used to improve patient outcomes by analyzing the interactions between patients, healthcare providers, and the healthcare system as a whole.
- Business: Systems thinking can be used to optimize supply chains by analyzing the interactions between suppliers, manufacturers, and distributors.
- Environment: Systems thinking can be used to address climate change by analyzing the interactions between human activity, the atmosphere, and the biosphere



SYSTEM THINKING

- Systems thinking is an essential tool for understanding complex systems and developing effective solutions that take into account the interconnections and interdependencies of their various parts.
- By applying systems thinking, we can address the root causes of problems and create a more sustainable and equitable world



SYSTEM THINKING HOW TO USE SYSTEM THINKING TO HELP A SPORT CLUB MANAGER DEVELOP A GREEN SPORT CLUB, YOU CAN FOLLOW THESE STEP



Define the system: Start by defining the boundaries of the system. In this case, the system is the sport club and its environment, including the physical facilities, the club's operations, the community it serves, and the broader ecological systems that are impacted by the club's activities.



Identify the interdependencies: Use a systems thinking approach to identify the interdependencies within the system. For example, the club's energy use may impact the local environment and the community's perception of the club.



Gather data: Collect data on the club's current environmental impact and gather feedback from stakeholders, including staff, players, and fans. This data can help you understand the current state of the system and identify areas for improvement.



Analyze the data: Use systems thinking tools, such as causal loop diagrams or systems maps, to analyze the data and identify feedback loops, reinforcing feedback loops, and balancing feedback loops that influence the system's behavior.



SYSTEM THINKING HOW TO USE SYSTEM THINKING TO HELP A SPORT CLUB MANAGER DEVELOP A GREEN SPORT CLUB, YOU CAN FOLLOW THESE STEP



Develop strategies: Use the insights from your analysis to develop strategies for making the sport club more environmentally sustainable. For example, you might focus on reducing the club's energy use, minimizing waste, or promoting sustainable transportation options for fans.



Test and refine: Implement the strategies and monitor their impact on the system. Use feedback from stakeholders to refine the strategies and improve their effectiveness over time.



Communicate the results: Communicate the results of your efforts to stakeholders, including staff, players, fans, and the broader community. Highlight the positive impact of the club's environmental sustainability initiatives and encourage others to adopt similar practices.



By using system thinking to develop a green sport club, you can create a more sustainable and environmentally responsible organization that benefits the club, its stakeholders, and the broader community.



METHODOLOGY: SYSTEM THINKING





WHAT IS DESIGN THINKING?

- Design thinking is a problem-solving methodology that emphasizes empathy, creativity, and experimentation.
- It is a human-centered approach that seeks to understand the needs and behaviors of the people who will use the product or service being designed.
- Design thinking is often used in product design, but it can be applied to any area where creative problem-solving is needed.



THE FIVE STAGES OF DESIGN THINKING

- Empathize: Understand the user's needs and perspectives through observation, conversation, and research.
- Define: Clearly define the problem or challenge to be solved.
- Ideate: Generate a wide range of possible solutions without judgment or criticism.
- Prototype: Build a tangible representation of the best ideas for testing and feedback.
- Test: Test the prototype with users to gather feedback and refine the design.



DISIGN THINKING - EMPATHY STAGE

- In the empathy stage, designers seek to understand the user's needs and experiences.
- Techniques used in the empathy stage include observation, interviews, surveys, and other forms of research.
- The goal is to gain a deep understanding of the user's context and identify any pain points or unmet needs



DISIGN THINKING - DEFINE STAGE

- In the define stage, designers use the insights gained in the empathy stage to define the problem or challenge.
- This involves synthesizing the research to create a clear problem statement that captures the user's needs and motivations.
- The goal is to create a shared understanding of the problem among the design team and stakeholders



DISIGN THINKING - IDEATE STAGE

- In the ideate stage, designers generate a wide range of possible solutions.
- This involves brainstorming, sketching, and other techniques to explore different approaches.
- The goal is to create a large number of potential solutions without judgment or criticism.


DISIGN THINKING - PROTOTYPE STAGE

- In the prototype stage, designers create tangible representations of the best ideas.
- This can be a low-fidelity prototype, such as a sketch or paper model, or a high-fidelity prototype, such as a working model.
- The goal is to create a physical representation of the design that can be tested and refined.



DISIGN THINKING - TEST STAGE

- In the test stage, designers gather feedback on the prototype from users.
- This can involve usability testing, surveys, or other methods of gathering feedback.
- The goal is to use the feedback to refine the design and ensure that it meets the user's needs.



BENEFITS OF DESIGN THINKING

- Design thinking can lead to more innovative solutions that better meet the needs of users.
- It can help teams work collaboratively and with a shared understanding of the problem.
- Design thinking can also help teams iterate quickly and adapt to changing requirements.
- Design thinking is a powerful problem-solving methodology that emphasizes empathy, creativity, and experimentation.
- By using the five stages of design thinking, designers can create innovative solutions that meet the needs of users



DISIGN THINKING CAN BE APPLIED TO SUPPORT A SPORT CLUB TO BECOME MORE SUSTAINABLE BY FOLLOWING THESE STEPS

- Empathize: Develop a deep understanding of the needs and behaviors of stakeholders, including staff, players, and fans, as well as the broader community and ecosystem impacted by the club's activities. This might involve conducting interviews, surveys, and observational research to gather insights and feedback. Example: Conduct interviews with staff and players to understand their daily routines and identify areas where sustainability practices could be integrated into their work.
- Define: Use the insights gathered during the empathy stage to define the problem or challenge that the club is facing. This might involve synthesizing data and identifying key themes and patterns to create a clear problem statement. Example: Define the problem as "How might we reduce the club's carbon footprint and promote sustainable practices among staff, players, and fans?"
- Ideate: Brainstorm and generate a wide range of ideas and potential solutions for addressing the problem or challenge defined in the previous stage. This might involve using brainstorming techniques or other ideation tools to generate and refine ideas. Example: Generate ideas such as using renewable energy sources, reducing waste, encouraging carpooling or public transportation for fans, or integrating sustainability education into the club's training programs.



DISIGN THINKING CAN BE APPLIED TO SUPPORT A SPORT CLUB TO BECOME MORE SUSTAINABLE BY FOLLOWING THESE STEPS

- Prototype: Create rough prototypes or mockups of potential solutions to test and refine them. This might involve creating physical prototypes, sketches, or digital models to visualize and communicate ideas Example: Create a prototype of a sustainability education program that can be integrated into the club's training and development programs for players and staff.
- Test: Test the prototypes and gather feedback from stakeholders to refine and improve the solutions. This might involve conducting user testing, focus groups, or other forms of feedback collection to gather insights and identify areas for improvement. Example: Test the sustainability education program with a small group of players and gather feedback on its effectiveness and relevance.
- Implement: Implement the solutions and integrate them into the club's operations and culture. This might involve training staff and players, communicating the benefits of sustainability to fans, and integrating sustainability metrics into the club's performance evaluation processes. Example: Implement the sustainability education program and promote it among players, staff, and fans. Use metrics such as energy usage, waste reduction, and fan feedback to track the impact of the program and continuously improve it over time.



DISIGN THINKING

By applying design thinking to support a sport club to become more sustainable, you can create innovative and effective solutions that promote sustainability and improve the club's overall performance and impact.





DIFFERENCES BETWEEN SYSTEM THINKING AND DESIGN THINKING

While both systems thinking and design thinking are problem-solving approaches, they have different focuses and methods. Here are some key differences between the two:

- Focus: Systems thinking focuses on understanding and analyzing complex systems and their interdependencies, while design thinking focuses on identifying and solving specific user problems or needs.
- Scope: Systems thinking takes a broader, holistic approach to problem-solving, considering the entire system and its environment, while design thinking focuses on a specific aspect or element of the system.
- Methodology: Systems thinking relies on analytical and modeling tools to understand and analyze systems and their interactions, while design thinking uses creative and iterative methods to develop and test solutions.
- Goals: The goal of systems thinking is to understand and improve the overall behavior and outcomes of a system, while the goal of design thinking is to create innovative and user-centered solutions to specific problems.
- Outputs: Systems thinking outputs tend to be analytical models, diagrams, or reports that describe the behavior of the system, while design thinking outputs include prototypes, user testing results, and other tangible artifacts that demonstrate potential solutions.

• In summary, while both systems thinking and design thinking are valuable approaches to problem-solving, they have different focuses and methods. Systems thinking takes a broader, holistic approach to understanding and improving complex systems, while design thinking focuses on creating user-centered solutions to specific problems or needs.





THANKS FOR THE ATTENTION ANY QUESTIONS?

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