



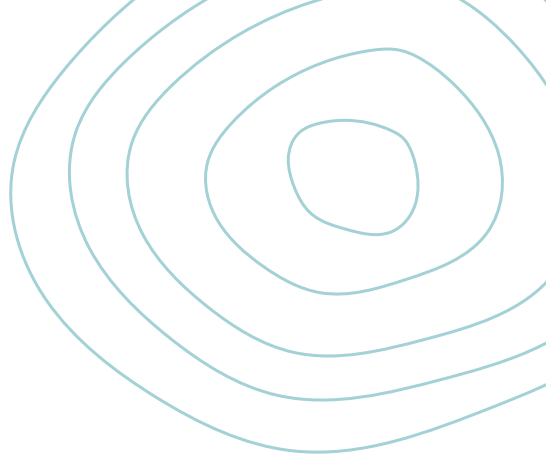
Erasmus+



MAPHER COMPASS

Manual for organizing MAPHER orienteering races





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IMPRESSUM

MAPHER COMPASS

Manual for organizing MAPHER orienteering races, 2027

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I - Introduction

1) ABOUT THE PROJECT

The MAP HER project leverages orienteering as both a sport and an educational tool to engage young women in exploring cultural and natural heritage while promoting physical activity and outdoor sports participation.

Orienteering, a dynamic and strategic sport that combines navigation and endurance, serves as the foundation for MAP HER's activities, fostering essential skills such as decision-making, resilience, and spatial awareness.



Through non-competitive orienteering-based challenges and collaborative experiences, MAP HER aims to create an empowering environment where young women develop confidence, a sense of belonging, and a deeper appreciation for their surroundings.

The MAPHER project is structured to address a range of objectives with a focus on promoting participation in sport and outdoor recreation among young women.



These objectives include:

- Increasing the involvement of young women in outdoor physical activities that reflect European values of equality, solidarity, and environmental sustainability.
- Strengthening the capacity of local communities to highlight the value of their cultural and natural heritage through sustainable sports practices.
- Enhancing the inclusiveness of sporting activities by addressing barriers to participation, particularly for individuals from rural and less serviced areas.

2) ABOUT THE CONSORTIUM

The project unites a consortium of partners with extensive expertise in orienteering. **AZO** has made orienteering a core focus, targeting students, young people, and families. This emphasis has enabled the organization to launch specialized initiatives such as “Orienteering4ALL,” an exemplary project that enhances mental well-being and develops orienteering skills through active participation, engaging games, and interaction with

natural surroundings. Furthermore, **AZO** has pioneered innovations in the sport by incorporating educational and environmental elements into orienteering activities, as seen in EU-funded projects like “Green Sports for Environmental Protection” and “Building Family Bonds Through Sports.”

The MAPHER project strongly aligns with **OTI**'s experience in outdoor sports, cultural heritage promotion, and inclusive community activities. **OTI**'s leadership in projects like “TRAILS” and “SAFEHIKE” underscores its capability to develop hiking infrastructures, ensure safety during outdoor sports, and foster environmental awareness. MAPHER builds upon these foundations by adding a key element of orienteering, integrating the sport into efforts to discover and promote local historical and natural landmarks.

PD Tuhobic has extensive experience in outdoor education and sports initiatives, having coordinated several Erasmus+ projects. As the lead of the “Day in the Mountain” project, PD Tuhobic focused on encouraging primary and kindergarten teachers to take children into nature and organize mountain trips. Additionally, in the “Green School” project, PD Tuhobic designed informal learning curricula for school and preschool children during mountain trips. Over its 60 years, the organization has hosted around 35 orienteering competitions, and in 2023, it revitalized its orienteering events, welcoming participants of all ages, from children to veterans with special emphasis (additional points) on women's participation.

3) OBJECTIVE OF THE HANDBOOK

The MAPHER Compass Handbook is designed to serve as a detailed guide for using orienteering to promote cultural and historical awareness. It will provide clear, step-by-step instructions for creating orienteering maps, integrating educational components, and selecting sites of historical or cultural importance for checkpoint activities.

The handbook will also emphasize the creation of engaging outdoor experiences that deepen participants' understanding of local heritage while encouraging sustainable tourism and rural development. It will highlight the value of orienteering as an intergenerational activity, promoting physical activity, community empowerment, and educational outdoor practices.

By offering practical advice and strategies, it will empower educators, community leaders, and practitioners to incorporate orienteering into their initiatives effectively.

II - Orienteering basics

INTRODUCTION

Orientation is the skill of finding your way around unfamiliar terrain. This is the definition of orientation as stated in the "Mountaineering Handbook" of the Croatian Mountaineering Association (Alan Čaplar, Mountaineering Handbook, Zagreb 2012, Croatian Mountaineering Association).



People have always used various orientation skills, it was very important for them to know where they were. Not for the sake of knowledge alone, but for practical use, finding food and water, a safe habitat, sheltering from enemies.

In addition to the sense of space, as an innate skill, almost, we would say, at the level of instinct, people early on began to use some natural, astronomical phenomena that helped them find their way. Sunrise and sunset, the appearance of stars and their interpretation. Who knows who was the first person, like Moonwatch from 2001: A Space Odyssey, to understand the significance of the Southern Cross or the North Star...

As civilization developed, so did the skills and techniques for better and better orientation in nature. The Chinese early on discovered the principle of the magnetic needle,

from which the compass was a short step, created more than 2000 years ago, but still a very effective way of orientation. Sailors used the sextant...

At the same time, geographical maps appeared. At first, they were very imprecise, giving only a faint idea of the land they represented. But maps were also improved, becoming more and more precise. Each new generation of maps brought more data, and all the armies of the world (this has always been very important to them) tried to draw maps as precisely as possible and to depict the relief as efficiently as possible.

And so we come to our days when relief is drawn with isohypses, when different surfaces are "described" with different colors, from deserts to meadows to forests and up to high mountain peaks under snow. A special science has also developed – cartography, and especially geodesy, which deals with measuring the earth's surface. Special state services have also been established, such as state geodetic administrations, which constantly improve the "Basic State Maps" which represent the basis for drawing and mapping new maps.

MOUNTAIN ORIENTEERING

And thanks to all of this, as is the rule with many aspects of human activity and interest, after the entire world was discovered and mapped – sport developed. Orienteering sport. Since the compass and the map were mostly used by mountaineers for spatial orientation, along with soldiers, the sport of orienteering also developed in the wing of mountaineering. This is how mountaineering orientation was born as a sport practiced mainly by mountaineers.

Mountain orienteering competitions were once held from club levels to European and world championships. The rules were very clear (and this is one of the conditions for sports competition) and changed very little over time. So we can say that the competitions were held according to the team system, and each team had three members. The teams did not start simultaneously, but at a certain time distance. The main task was to correctly find the given, so-called control points, in the shortest possible time. In mountaineering orienteering, theoretical or practical questions from the field of mountaineering have always been part of the competition, especially in lower, club or regional competitions. Night competitions were also held.

Mountaineering orienteering has become one of the reasons for attracting young people to the world of mountaineering. Many of them, when they stopped competing, remained hard-working mountaineers. In recent times, mountaineering orienteering competitions have changed the rules somewhat, so teams are now made up of 3-5 members, mixed male-female, with each female member of the team being awarded bonus points. The aim is to attract as many women as possible to mountaineering orienteering.

Control points have always been marked with red/white flags, cubes hung from a branch or placed on a stick stuck in the ground. As a rule, at the beginning of the competition era, each control point had a controller who would confirm the arrival of the team that reached the control point by stamping it in the team card. He would also write the time of the team's arrival in the control point card, as this could be important in the event of a team losing or in the event of resolving complaints.

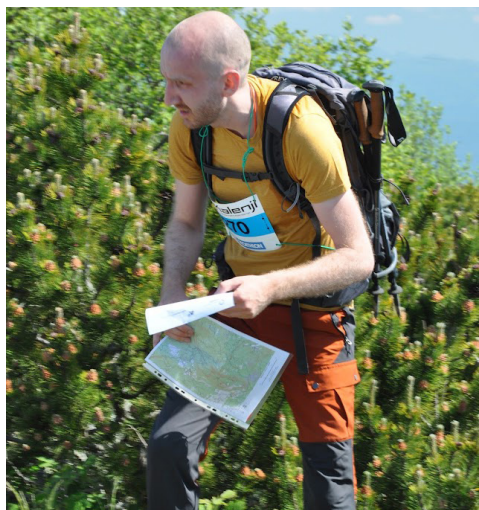
Later, punchers were introduced at checkpoints, which did not require a controller to be present, and more recently, teams carry a control chip with them, which they use to register at each checkpoint in a "station". The station can be connected via the internet to the start-finish service, which can then know at any time which teams have passed which checkpoint.

Nowadays, mountaineering orienteering has undergone the greatest transformation. Orienteering, a team sport, originated in Australia, in which each team chooses which checkpoints to look for (each checkpoint has a certain number of points), the competition is held over a wider area, which requires special preparation of maps, and the competition itself lasts 24 hours. ROGaining (after the founder's initials) is a sport that is becoming increasingly popular, and offers a number of variants - family races, tourist adrenaline gatherings, serious almost professional races. Each race represents a special sports and entertainment event with a number of accompanying contents.

And while mountain orienteering sport (running) could experience a renaissance through ROGaining, another sport that developed from mountain orienteering is already living a full life, in many states it has its own separate associations, but in some places it is still in the bosom of state mountaineering associations. It is orienteering.

ORIENTEERING

Orienteering began to develop in the early seventies, when individual competitions began to be held within mountain orientation. There were several justifications, but the basic one was - in a three-member team in mountaineering orientation, only one member knows orientation procedures anyway, and the other two just run! The remark is in place, and because of it, a whole sport, which is very popular today, was born.



Orienteering is a sport in which a competitor must complete a given course in a variety of and usually unfamiliar terrain in the shortest possible time. In order to complete the course, they orient themselves with the help of a compass and a map of a specific area in nature or an urban environment. The map shows the direction and control points by numbers with a special description of the controls.

It is a challenge in which the goal is to pass all the given points as quickly as possible. The control points are marked on the map with numbers and elevation marks, and in nature with red and white flags. In a given order, the participant reads the map and chooses the path from flag to flag. Which is why it is important to follow the rules to make the competition fair and safe.

Orienteering is one of the few sports that connects all generations. For the youngest, children's races are organized and the course is easy to follow according to the line details.

While for older ages, sections are chosen where it is easy to make mistakes, which results in wasting time and, of course, ultimately a good placement.

The courses are adapted to individual categories and types of competitions by their length and the complexity of the terrain. Types of competitions are divided into individual (independent individual competition), relay (two or more team members run consecutively in individual races) and team (two or more individuals form a team and compete together). Age categories start with boys and girls up to 10 years old, while for the most experienced population, there are categories of competitors from 85 years of age and older.

Orienteering is basically a family sport and supports active participation in sports from the earliest to the late ages of a person. A participant can compete for a medal as an experienced individual or in the "Open" category as a recreational or beginner with other members, friends, children...

When all of the above is taken into account, it is clear that orienteering can be enjoyed by absolutely everyone. It will have a great impact on your physical fitness, the development of cognitive abilities and health in general. Orienteering is an exciting and educational outdoor sport that combines fun, nature and togetherness.

All of the previously mentioned features of orienteering served as a tool for the development of a special Erasmus + project MAPHER, a project that uses a sports discipline as a tool for acquiring knowledge, tourist promotion of a rural (but also urban) environment, for developing awareness of the local community about the characteristics of its territory, but also for intergenerational rapprochement, the inclusion of women in a demanding outdoor sports discipline, and a number of other results that practice itself will lead us to.

In this introductory section of the Mapper Compass manual, so much about the topic of integration of sports and cultural-historical heritage, specific social and geographical values of a territory, rural community and the like. We will talk more about the range of possibilities and the combination of different information that we can incorporate into the sports dimension of orientation in the chapter on Educational integration of this manual.

III - Map creation

BEFORE CREATING A MAP - SELECT AREA - CASE STUDIES

In order to hold a MAPHER activity (orientation + education or orientation + tourist promotion, orientation + promotion of cultural, historical or geographical features, etc. - there are almost countless possibilities and combinations) we must first determine an area where the activity will take place. Why? Simply because only after that we will know which existing map to use and secondly, we will know who to talk to about the cultural, historical and other features of the area.



CASE STUDIES

Depending on what type of MAPHER event we want to organize, our choice of interlocutors and ultimately the choice of the area where the event will be held will also depend. Exploring rural areas and the possibilities they offer, will show us how to organize the map, which points to choose, and which features to include - from cultural and social, geographical to the region's cultural and historical heritage. Checkpoints will be strategically placed to enhance understanding of the local environment and encourage sustainable outdoor activities.

During this case study, it is useful to organize workshops with local school students and representatives of the local community, as they could point out specific features that we did not notice in the first field survey or details that are important to them.

MAP HER event can thus be a form of informal learning for children about their homeland, learning about economic forms, geographical features of rural areas, but it can also represent a tourist-promotional event. All these forms of activity, if we carefully record and group points of interest, can be displayed and implemented on the same map that we will prepare. And which we can use again and again in the future, with minor modifications.

We have determined the area. The next thing we need to determine is - what we want. We have to determine the cultural, historical, geographical or any other features that we want to present through an orienteering race. (The race in this context must be understood conditionally). So from wanting to show elementary school children/competitors what agricultural farms look like and what they produce, in a territory of interest to us, to showing tourists / competitors cultural features and wineries in our area of interest.

These points are determined by the event organizers themselves or with the help of local authorities, local historians, cultural heritage experts...

When we determine the points of interest for a specific Mapper event, our story of map creation begins...

HOW TO CREATE A MAP?

Creating a map is an expensive and time-consuming task. It is much simpler to start from an already created map and get the consent of its owner/creator for use for certain purposes. If we are successful in explaining the reasons for using that map, we will get the necessary map, which will be the basis of "our" map, all the more easily and with less investment. Now our map creation begins.

Together with collaborators who know our points of interest (historical, geographical, social, economic, etc.), we visit the field to determine whether these objects are already represented on the map or not.

Since we will most likely use only a part of the original map, we will load that part of the map into one of the drawing programs or, most simply, into one of the photo editing

programs as a .jpeg or some other similar format and this will become “our original map” in digital format.

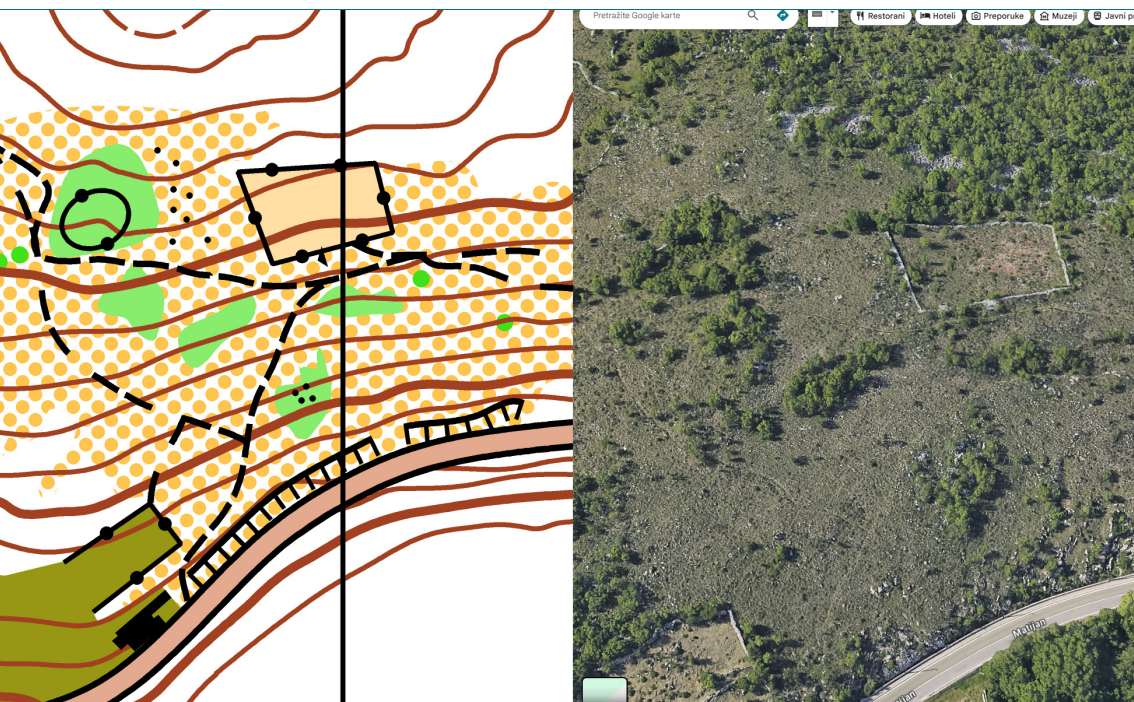
On the working map, which is actually a copy of our original digital map, we will draw the missing elements / points with a pencil. Upon returning from the field, we will draw / place the missing elements on our original map in digital format using a layer system, using topographic signs or similar elements that are easy to create in the program we are working in.

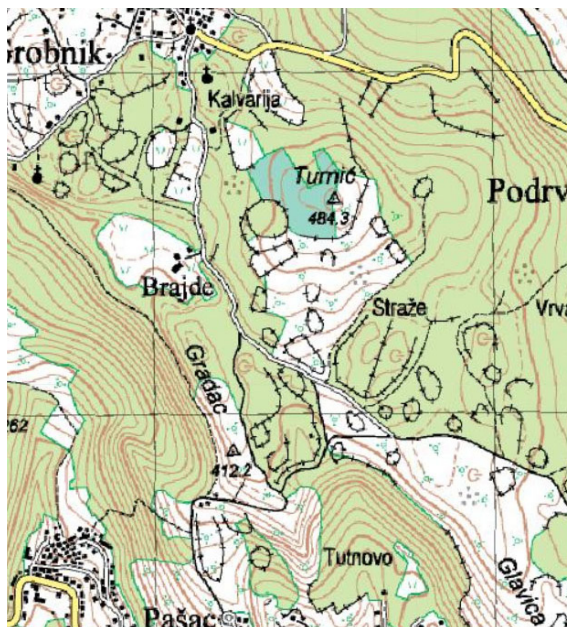
And so our simplest and cheapest map will be created! Our points of interest that we have now entered into the map, along with those that were already drawn, become the checkpoints of our MAPHER orienteering event.

It is good to keep in mind that even the newest and most sophisticated map will need to be supplemented in some details with some elements that are exactly what we need.

Maps are a product that was created at a certain point in time. And the more time has passed since the map was created until the moment we use it, this means, unfortunately, that the map is missing more elements and objects that were created after its creation.

If we want to have a map that is as up-to-date as possible, this means that we must additionally draw these newly created elements on the ground. Similarly, we need to draw the



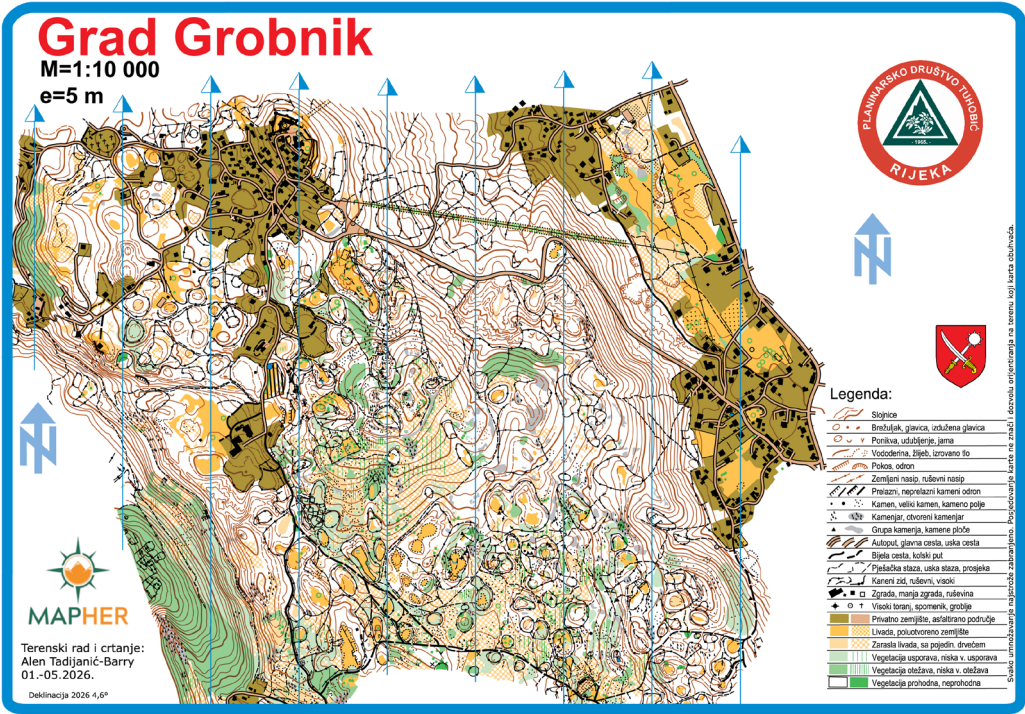


areas of forest that have changed (unfortunately, in most rural areas, forests “conquer” former pastures and even fields. This changes the features of the relief. Some paths disappear into the bushes, others open up...

And all these changes that occurred on the ground, and which were not drawn on the original map, must be transferred to our digital original using the same principle as we used to draw objects of interest - control points.

Drawing as many elements as possible that actually exist but were not represented on the map we started from can require a lot of work and time. Depending on how many people and time, as well as money, we have available for such work, our map will be more or less precise, more up-to-date with the time in which the event is taking place.

Each organizer will determine the level of precision of the map according to their needs. If we expect competitors - tourists, children in an educational program or the like, to move only along the trails, then we will not draw features of thickets and forests outside the trails on the map. If the organizer designs the event well and includes other elements of educational or interesting content, then even less sophisticated maps will be enough to keep everyone satisfied.



Educational integration (AZO)

INTRODUCTION

Orienteering is often seen primarily as a competitive outdoor sport, but it offers much more than physical challenge alone. By combining navigation, movement, and exploration, orienteering creates a powerful learning experience that encourages curiosity, confidence, and critical thinking.

Within the MAPHER project, this potential is fully embraced by integrating cultural and natural heritage into orienteering activities, turning each course into a “living classroom.”

Through this approach, participants not only build physical endurance and navigation skills, but also develop a stronger connection to the places they move through. Learning about local history, traditions, and natural environments while actively exploring them helps make knowledge more engaging and memorable.

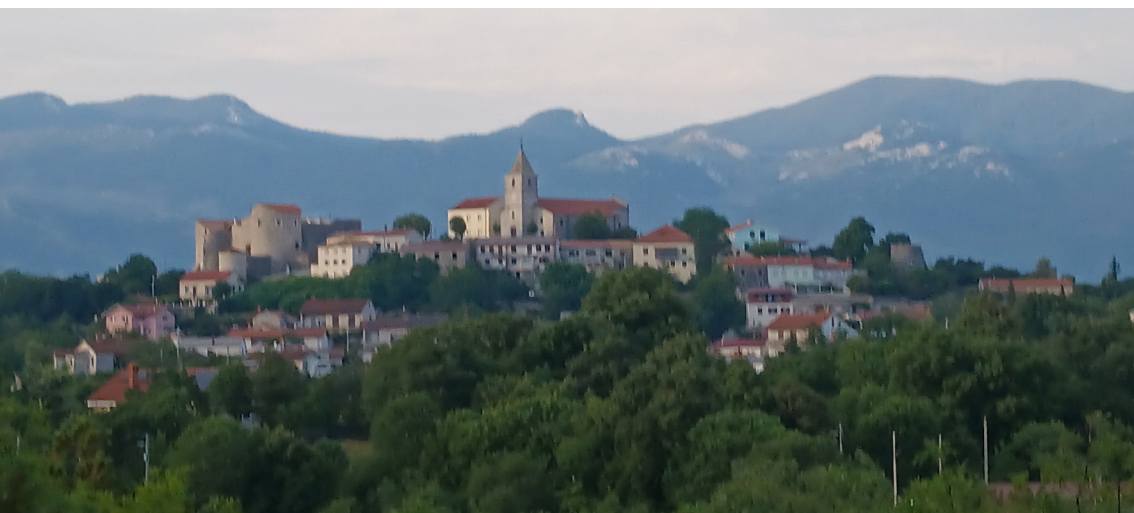
In this way, orienteering becomes a holistic educational tool that connects movement with meaning, and supports young women in discovering, valuing, and feeling confident within their cultural and natural surroundings.



WHY HERITAGE-FOCUSED ORIENTEERING MATTERS

Integrating educational elements related to cultural and natural heritage into orienteering transforms the sport into a multidimensional learning experience that extends beyond physical performance. By combining movement with cognitive engagement, orienteering supports holistic development, enhancing physical fitness, spatial awareness, critical thinking, and problem-solving skills.

Embedding cultural narratives, historical references, and environmental knowledge within courses allows participants to acquire experiential knowledge that is both meaningful and memorable. This approach is particularly important at a time when a decline in cultural awareness among young people can be observed, often resulting from reduced contact with local history, traditions, and natural environments.



Heritage-based orienteering addresses this gap by reconnecting participants with their surroundings, fostering curiosity, cultural understanding, and respect for both tangible and intangible heritage.

The importance of this educational integration becomes even more pronounced in rural areas, which are increasingly facing reduced visibility and declining visitation. Many rural regions possess rich cultural and natural assets, yet these remain underexplored and undervalued, particularly by younger generations and urban populations.

Through the structured integration of heritage into orienteering activities, rural landscapes are transformed into accessible and engaging learning environments. Participants actively explore historical landmarks, traditional practices, and ecological features, strengthening their sense of place and community identity.

At the same time, heritage-focused orienteering can make rural areas more attractive to visitors, outdoor enthusiasts, and other citizens, encouraging exploration, recreation, and cultural exchange.

By increasing awareness and appreciation of rural heritage, orienteering contributes not only to education and youth empowerment but also to the revitalization, sustainability, and long-term attractiveness of rural communities.

How to Add Educational Elements in an Orienteering Map

1. Preparation: Understanding the Purpose

Before even touching a map, it's important to clarify the educational goals of your orienteering event by setting specific questions: What cultural or natural heritage do you want participants to explore? What learning outcomes do you hope to achieve? For example, you may want participants to learn about local historical landmarks, traditional practices, native plants and animals, or environmental conservation.

Defining these objectives early helps shape the route, the checkpoints, and the types of tasks or information to include. At this stage, consider the audience (e.g. gender, mixed groups, age) and how to make the experience engaging, safe, and inspiring.



2. Research and Site Selection

Once the objectives of the orienteering course are clear, the first step is to find an existing orienteering map of the area rather than attempting to create a new map from scratch. Using a pre-existing map saves time, ensures accuracy, and provides a reliable base for adding educational elements.

Start by carefully reviewing the map to understand the terrain, trails, landmarks, and natural or cultural features already marked.



Next, walk through the area to get a first-hand sense of the landscape, assessing accessibility, safety, and potential challenges for participants. Identify additional sites of cultural or natural interest that could serve as meaningful checkpoints, such as historic buildings, monuments, local artisan workshops, traditional gathering spaces, forests, rivers, or protected ecological areas.

Consider how each location aligns with your educational objectives, whether by highlighting historical events, local traditions, ecological features, or storytelling opportunities

Key Sites for Heritage Integration

When adding educational elements to an existing orienteering map, consider including the following types of sites:

Cultural Heritage Sites	Natural Heritage Sites
• Historic buildings • Monuments • Traditional gathering spaces • Local artisan workshops • Archaeological sites or ruins • Public art, statues, or memorials • Heritage gardens or historically significant landscapes • Traditional infrastructure (e.g., mills, bridges, wells)	• Forests • Rivers and streams • Ecological reserves • Notable landscape features • Unique geological formations (rocks, cliffs, caves) • Wetlands or ponds with ecological importance • Areas with notable biodiversity • Scenic viewpoints

Engaging with local experts and community members can greatly enrich the course. Historians, ecologists, and artisans can provide insights, anecdotes, and practical guidance on interacting safely and respectfully with the sites. Involving them in the planning and design process also fosters a sense of ownership and connection, as they feel they are an integral part of the project and the orienteering event.

Their contributions ensure that participants experience authentic and meaningful content while respecting local traditions and environmental sensitivity, and at the same time, strengthen community engagement and pride in local heritage.

Finally, evaluate accessibility and safety carefully. Ensure that trails and checkpoints are suitable for participants of varying ages, abilities, and experience levels. Avoid environmentally sensitive or hazardous areas, and plan routes that allow participants to fully engage with both the navigational challenge and the educational elements.

By combining the use of an existing orienteering map with careful on-site research and community consultation, facilitators can create a rich, immersive educational experience. Participants can explore the landscape actively, engage with cultural and natural heritage, and develop a deeper connection to the environment around them—all without needing to design a map from scratch.

3. Designing Educational Elements at Each Checkpoint

Before drawing the map, it is essential to plan how the orienteering course will provide a learning opportunity. The goal is to create experiences that are interactive, memorable, and connected to the cultural or natural heritage of the area. In this respect, questions are a key tool for turning physical exploration into an engaging educational experience. Well-designed questions guide participants to actively observe, reflect, and synthesize knowledge about cultural and natural heritage.

A layered approach, combining checkpoint interaction questions, observation prompts, and end-of-course questions, ensures that learning is progressive, memorable, and connected to the environment.



3.1 Checkpoint Interaction Questions

Checkpoint interaction questions are designed to engage participants immediately with the site or landmark they are visiting. These questions can take several forms, including multiple choice, yes/no, or open-ended formats, allowing for flexibility in difficulty and depth.

Examples:

- Multiple choice: “Which year was this church built? A) 1720, B) 1785, C) 1810”
- Yes/No: “Was this monument originally used as a watchtower? Yes/No”
- Open-ended: “Describe one feature of this building that reflects the local architectural style.”

The purpose of these interaction questions is to reinforce participants' knowledge about the specific site while simultaneously drawing their attention to important details they might otherwise overlook. By prompting participants to actively engage with the landmark, these questions encourage observation, curiosity, and immediate learning.

They create a sense of discovery and connection to the heritage on-site, making each checkpoint not just a navigational goal but also an opportunity for meaningful interaction and understanding.

3.2 Checkpoint Observation Prompts

In some checkpoints, consider adding observation prompts rather than interaction questions, allowing the participants to actively notice and interact with their surroundings without providing the answers upfront. These prompts encourage careful observation, reflection, and sensory engagement.

Examples include: “Look closely at the carvings on this monument and note any patterns or symbols,” “Observe the types of plants and trees in this area” or “Notice the layout of this square” Participants may sketch, take photographs, make notes, or simply reflect quietly.

Observation prompts are designed to enhance participants' attention to detail, analytical thinking, and understanding of both cultural and natural heritage.

By guiding focus and encouraging exploration, these prompts lay the groundwork for reflection and later end-of-course questions. They also help participants build a personal connection to the sites they encounter, fostering deeper engagement with the surrounding environment, history, and cultural features.

3.3 End-of-Course Questions

End-of-course questions are posed after participants complete the full orienteering route. These questions require reflection, recall, and synthesis of information gathered at multiple checkpoints.

They may include knowledge-recall questions (“What year was the church at checkpoint 3 built?”), observation-based questions (“Name two types of plants you observed in the forest section”), or analytical questions (“How does the design of the village square reflect its historical function?”).

The purpose of end-of-course questions is to consolidate learning and encourage participants to reflect on the entire experience. By recalling and connecting observations across different sites, participants strengthen memory, critical thinking, and understanding of both cultural and natural heritage.

This stage also encourages discussion, collaboration, and sharing of perspectives, making the orienteering activity not only physically engaging but intellectually and socially rewarding.



3.4 Bringing it all together

The three-layered question system offers a wide range of benefits for participants, making heritage-focused orienteering a truly holistic learning experience. By combining checkpoint interactions, observation prompts, and end-of-course questions, participants are engaged physically, mentally, and emotionally throughout the course.

They develop strong observational skills, critical thinking, and the ability to synthesize information, while also gaining practical knowledge about local history, culture, and ecosystems. This approach fosters curiosity, creativity, and problem-solving, encouraging participants to connect what they see and experience in the field with broader cultural

and environmental contexts. Additionally, it strengthens personal connections to the sites visited, promotes teamwork and discussion when questions are tackled collaboratively, and leaves a lasting impression that goes beyond the sport itself. Ultimately, this method turns orienteering into more than a physical activity; it becomes an immersive, meaningful journey that inspires participants to value, explore, and preserve the heritage and natural richness of their surroundings.

3.5 Tips for Managing Question Difficulty

When designing and facilitating heritage-focused orienteering, it is crucial to adapt the difficulty of questions to the participants' age, knowledge, and experience. Properly calibrated questions maintain engagement, provide a stimulating challenge, and ensure meaningful learning, without causing frustration or discouragement.

- **Start Simple, Build Complexity**

At the beginning of the course, use straightforward questions such as yes/no or multiple-choice questions. These help participants build confidence, focus their attention, and familiarize themselves with the format. As the course progresses, gradually introduce more open-ended, reflective, or analytical questions that require observation, interpretation, or synthesis of information from multiple checkpoints. This progression keeps participants motivated and ensures a sense of achievement throughout the activity.

- **Align with Participants' Background**

Consider participants' prior knowledge and familiarity with the local culture, history, or environment. For groups with limited background, focus on concrete questions that are directly observable, such as identifying landmarks, plants, or architectural features. For participants with more experience or knowledge, include questions that encourage higher-order thinking, such as comparing features, analyzing historical significance, or imagining cultural narratives. Tailoring questions to participants' backgrounds ensures that everyone is appropriately challenged and engaged.

- **Mix Question Types**

Use a variety of question formats, such as multiple choice, yes/no, open-ended, and creative prompts, to cater to different learning styles and keep participants engaged. Mixing easier and harder questions throughout the course prevents monotony and ensures that

both novice and advanced participants find the experience stimulating. For example, a multiple-choice question may test basic factual knowledge, while an open-ended prompt encourages reflection or storytelling.

- **Provide Hints and Prompts**

For more challenging questions, subtle hints can guide participants without giving away the answer. Observational cues, such as pointing out details in carvings, plants, or architectural features, help participants focus and think critically. For example, a checkpoint might prompt, “Notice the carved symbol on the door. What might it tell you about the building’s original function?” These hints support learning while maintaining curiosity and a sense of discovery.

- **Encourage Reflection Rather than “Right” Answers**

Especially for open-ended or end-of-course questions, emphasize interpretation, reasoning, and personal engagement over simply getting the “correct” answer. Encourage discussion and reflection, asking participants to explain their observations or justify their conclusions. This approach promotes critical thinking, creativity, and a deeper connection to the cultural or natural heritage being explored.

- **Balance Challenge with Fun**

Questions should be challenging enough to stimulate curiosity and engagement, but not so difficult that they become frustrating. Incorporate playful or creative elements, such as storytelling, sketching, or small competitions, to maintain a sense of fun and adventure. Striking this balance helps participants remain motivated and leaves them with a positive, memorable experience.

- **Observe and Adjust**

Throughout the course, facilitators should monitor participants’ responses and engagement. If many participants struggle with a particular question, be ready to simplify it, provide additional hints, or guide discussion. Conversely, if participants are finding the tasks too easy, introduce more analytical, reflective, or creative challenges. Being flexible and responsive ensures that all participants remain engaged and that learning objectives are met.

4. Integrating Educational Elements into the Map

Once the research is complete and educational objectives are clear, the next step is to integrate the learning elements directly into the existing orienteering map. This step ensures that the educational content is seamlessly connected to the navigation experience, guiding participants through both physical and cognitive challenges.

4.1 Add a Symbol on the Map with Educational Perspective

The first step in integrating educational elements into an existing orienteering map is to identify the heritage sites that participants will explore. These can include historic buildings, monuments, traditional gathering spaces, artisan workshops, forests, rivers, or other notable natural and cultural features. Selecting sites that align with your learning objectives ensures that each checkpoint provides meaningful opportunities for observation, reflection, and interaction. To ensure a well-paced and engaging experience, aim for 10–14 checkpoints spread throughout the course, providing a balanced mix of cultural and natural heritage sites while allowing participants enough time to observe, reflect, and complete tasks at each location.

Once the heritage sites are identified, mark each location on the map using a red circle and assign a checkpoint number. This approach follows standard orienteering practices, making it familiar and intuitive for participants while clearly highlighting the educational component. The red circle and number indicate where participants should stop to engage with the site, complete a task, or answer a question.

5. Points System for Educational Checkpoints

To make heritage-focused orienteering both motivating and educational, it is important to implement a clear and balanced scoring system that considers both task completion and time. Points can be assigned according to the type of task at each checkpoint.

- Navigation-only checkpoints typically carry standard points (e.g., 1–2 points) for reaching the location, rewarding participants for completing the physical navigation aspect of the course.
- Educational checkpoints provide opportunities to earn additional points for completing interaction questions, observation prompts, or reflective tasks, with more complex or analytical activities assigned higher values to encourage deeper engagement.

To maintain fairness and motivation, points should be distributed evenly across the course, ensuring that all 10–14 checkpoints contribute meaningfully to the overall score and preventing any single checkpoint from dominating. In addition to points, the time taken to complete the course should also be assessed, rewarding participants who navigate efficiently while still engaging thoughtfully with educational tasks.

This combination of navigation, learning, and time encourages participants to balance speed, accuracy, and observation, promoting both physical challenge and cognitive engagement.

Finally, the scoring system should be clearly explained before the activity, so participants understand how navigation, educational tasks, and time all contribute to their final score, creating a structured, rewarding, and educational experience.

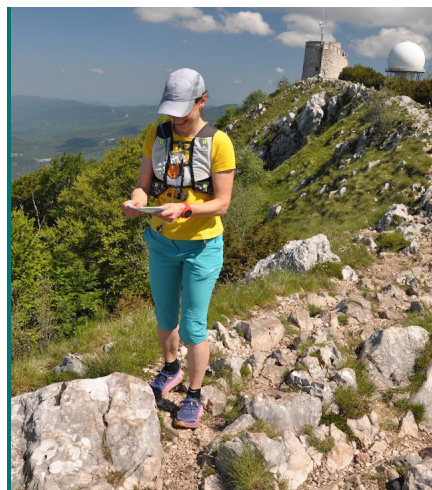
Sample Scoring Table for a 10-Checkpoint Heritage Orienteering Course

Checkpoint	Types of task	Points for completion	Educational Points
1	Navigation	2	-
2	Checkpoint Interaction Question	2	2
3	Checkpoint Observation Prompt	2	-
4	Checkpoint Interaction Question	2	3
5	Navigation	2	-
6	Checkpoint Observation Prompt	2	-
7	Checkpoint Observation Prompt	2	-
8	Checkpoint Interaction Question	2	4
9	Checkpoint Interaction Question	2	4
10	Checkpoint Observation Prompt	2	5

Scoring Summary:

- Navigation: 2 points per checkpoint $\times$ 10 checkpoints = 20 points
- Checkpoint Interaction Questions: Variable points totaling 18 points
- End-of-Course Questions: 14 points in total
- First Team Bonus: 8 points

Total Maximum Points: 60 points



Sustainable tourism strategies (OTI)

INTRODUCTION: WHY SUSTAINABILITY MATTERS IN MAPHER

Sustainability has become a central topic in European policies and initiatives because environmental and social pressures are increasingly visible in everyday life. Climate change, pollution, loss of biodiversity, and the growing amount of waste affect not only ecosystems but also local communities and the ways people travel, spend leisure time, and use natural and cultural spaces.

These challenges are especially relevant in rural and outdoor environments, which tend to be more fragile and more directly impacted by human activity.

In response to these developments, the European Union has placed sustainability at the core of its long-term strategy, most notably through the European Green Deal. The Green Deal aims to reduce greenhouse gas emissions, limit pollution, protect biodiversity, and support a more responsible use of natural resources, while ensuring that economic and social development can continue in a balanced way.

As a result, sustainability has become a horizontal priority across EU-funded programmes, including Erasmus+.



Within the MAPHER project, sustainability is understood as a necessary condition for meaningful outdoor and cultural activities. Orienteering encourages participants to move through landscapes, forests, villages, and heritage sites. Without a sustainable approach, such activities could unintentionally contribute to environmental damage or put pressure on local cultural assets.

When planned responsibly, however, they can foster respect for nature, strengthen connections to places, and support local communities.

MAPHER therefore integrates sustainability as a guiding principle. The project aims to show that outdoor sport, learning, and environmental responsibility can go hand in hand, and that young women can play an active role in shaping more sustainable ways of engaging with nature and cultural heritage.

1. Theoretical Perspective: The Need for Sustainable Tourism Approaches

1.1 Orienteering as Soft and Sustainable Tourism

The activities developed within the MAPHER project are closely linked to the concept of soft and sustainable tourism. This approach emphasises small-scale, low-impact activities that encourage slower movement, observation, and learning. Unlike mass tourism, which often concentrates large numbers of visitors in a limited number of locations, orienteering spreads participants across wider areas and promotes active exploration.

By integrating cultural and natural heritage into orienteering routes and maps, participants engage with places in a more meaningful way. They are encouraged to navigate thoughtfully, observe their surroundings, and reflect on the local context. This supports sustainable tourism goals by reducing pressure on popular sites and promoting alternative ways of experiencing rural and cultural landscapes.

1.2 Environmental Responsibility and Protection of Natural Areas

Many rural and natural areas used for orienteering are environmentally sensitive. If activities are not carefully planned, they can contribute to soil erosion, disturbance of wildlife, or damage to vegetation. Sustainable tourism principles highlight the importance of preventing such impacts through responsible planning and design.

In the context of MAPHER, environmental responsibility means choosing routes that respect ecological limits, making use of existing paths and infrastructure, and avoiding protected or fragile areas. These measures allow outdoor activities to take place while safeguarding biodiversity and reinforcing the idea that environmental protection is an integral part of outdoor sport.

1.3 Cultural Heritage Preservation and Local Identity

Cultural heritage is a key element of the MAPHER project. Historical sites, traditional landscapes, and local infrastructure contribute to the identity of communities and require careful treatment. Sustainable tourism approaches stress the need to respect authenticity, avoid overuse, and ensure that heritage is presented in a way that reflects local values and narratives.

Through heritage-based orienteering activities, participants learn to see cultural sites not only as locations to reach, but as places with meaning and history. This supports cultural sustainability and encourages respectful behaviour, helping to preserve heritage for future generations.

1.4 Social and Community Dimension

Sustainable tourism also has a strong social dimension. Activities that involve local stakeholders are more likely to be relevant, inclusive, and sustainable in the long term. Cooperation with local sports clubs, schools, NGOs, and cultural organisations helps ensure that activities respond to local needs and realities.

Within MAPHER, this approach supports community engagement and the empowerment of young women. Participants are encouraged to take an active role in learning, decision-making, and interaction with local environments, strengthening both personal development and community ties.

2. Practical Perspective: How to Apply Sustainable Tourism Strategies in Practice

1. Smart Use of Existing Infrastructure

Sustainable sport activities should prioritise what already exists instead of creating new infrastructure. Using established paths, sports facilities, public transport links, and community spaces reduces environmental impact and costs. This approach limits land disturbance and supports local services.

In practice, this means planning activities around:

- existing trails and recreational areas,
- local sports facilities and community centres,
- public transport accessibility where possible.

2. Low-Impact Event Design

Sport events and activities can be designed to minimise their environmental footprint. This includes considering scale, duration, and material use from the start. Low-impact design supports sustainability without reducing the quality of the experience.

Good practice includes:

- keeping group sizes manageable,
- limiting one-off materials and promotional items,
- encouraging participants to bring reusable bottles and equipment
- using the principles of 'Leave No Trace' and responsible behavior in nature
- The seven basic principles of "Leave No Trace" include planning ahead, following marked trails, disposing of waste properly, respecting plants and animals, and being considerate of other nature visitors.

3. Sustainable Mobility of Participants

Transport often represents a significant part of a project's environmental impact. Sport projects can support sustainable mobility by encouraging environmentally friendly travel options. Even small changes in mobility planning can significantly reduce emissions.

This can involve:

- promoting walking, cycling, or public transport,
- coordinating shared transport for participants,
- selecting activity locations that are accessible without private cars.

4. Waste Reduction and Responsible Resource Use

Sustainable tourism in sport projects requires careful management of materials and waste. This applies to events, trainings, and everyday project activities. Clear communication with participants helps make these practices effective.

Practical actions include:

- reducing printed materials,
- using reusable signage and equipment,
- ensuring waste sorting and recycling during events
- take your waste with you.

5. Education Through Experience

Sport projects offer a unique opportunity to combine physical activity with informal learning. Sustainability messages are often most effective when they are experienced rather than explained. This strengthens learning outcomes and promotes long-term awareness.

Examples include:

- integrating short reflection moments into activities,
- linking sport tasks to environmental or cultural themes,
- encouraging participants to observe and reflect on their surroundings
- using current situations for learning in nature and responsibility towards it.

6. Inclusion and Social Sustainability

Sustainability also has a social dimension. Sport projects should aim to be accessible, inclusive, and respectful of diverse needs and backgrounds. Inclusive design increases the social impact and relevance of sport initiatives.

This can be supported by:

- adapting activities to different skill levels,
- creating welcoming and safe environments,
- promoting gender equality and participation of underrepresented groups.

7. Cooperation with Local Communities

Engaging local stakeholders enhances both sustainability and acceptance of sport projects. Local actors bring valuable knowledge about environmental limits, cultural values, and community needs. This strengthens local ownership and long-term impact.

Effective cooperation can include:

- consulting local organisations during planning,
- involving community members in activities or events,
- sharing project results with local partners.

8. Long-Term Thinking and Reuse of Outputs

Sustainable sport projects consider what happens after funding ends. Materials, methodologies, and tools should be designed for reuse and adaptation. This ensures that sustainability is embedded not only environmentally, but also organisationally.

Good practice includes:

- creating open-access resources and share it in different way to recycle results and make them sustainable,
- designing activities that can be easily replicated,
- encouraging partners to integrate project outputs into regular activities.

3 Practical Perspective: How to Apply Sustainable Tourism Strategies in Practice within MAPHER

The practical application of sustainability within MAPHER focuses on translating these principles into concrete actions. One of the core approaches of the project is the use of orienteering, combining physical activity with navigation, cultural learning, and reflection. This approach supports young women in developing confidence, outdoor skills, and awareness of their surroundings, while engaging with cultural and natural heritage in a respectful way.

2.1 Sustainable Planning of Orienteering Routes

Route planning is a key element of sustainable practice. Routes are designed to minimise environmental impact and to guide participants naturally through the landscape. In practice, this includes:

- avoiding ecologically sensitive or protected areas,
- using existing trails and paths wherever possible,
- distributing control points to prevent overcrowding.

These choices help reduce pressure on the environment while maintaining the educational and sporting value of the activity.

2.2 Eco-Friendly Map Design and Materials foto: naći fotku mobitela s kartom

Sustainability is also considered in the design and use of maps. Preference is given to digital formats, while printed maps are limited and reused whenever possible. When



printing is necessary, environmentally friendly materials are encouraged. This approach reduces waste and highlights responsible resource use as part of the learning process.

2.3 Responsible Behaviour of Participants

Participants are introduced to responsible behaviour as a natural part of the activity. Briefings and tasks emphasise respect for nature, wildlife, and cultural sites, as well as awareness of personal impact on the environment such as waste and trash. By integrating these messages into the activity itself, sustainability becomes part of the experience rather than an external rule set.

2.4 Involvement of Local Stakeholders

Local stakeholders play an important role in supporting sustainable outcomes. Cooperation with local organisations provides valuable knowledge about environmental conditions and cultural significance, and helps tailor activities to the local context. This collaboration also supports wider dissemination and long-term use of project results.



The project's focus on orientation and navigation skills also contributes to the promotion of local tourism by encouraging participants to explore natural and cultural points of interest in a responsible and engaging way. Through orientation activities, participants become more familiar with local landmarks, heritage sites, and cultural attractions, increasing awareness of their value and strengthening connections between outdoor education, sustainable tourism, and the preservation of local identity.

2.5 Long-Term Use and Sustainability of Project Outputs

The MAPHER Handbook and the developed orienteering maps are designed for long-term use beyond the project duration. By embedding sustainable tourism principles, these outputs can be reused in educational programmes, community activities, and future outdoor initiatives. This ensures continuity of impact and supports the replication of good practices in other contexts.

CONCLUSION

Sustainable tourism principles provide an essential framework for the MAPHER project. By combining orienteering, cultural heritage, and environmental responsibility, the project demonstrates how outdoor activities can support learning, inclusion, and community engagement without compromising natural or cultural resources. Through careful planning, local cooperation, and long-term thinking, MAPHER contributes to a more sustainable and responsible approach to outdoor sport and tourism.

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