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**Interreg**  
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# TOURISMO Final Conference

**Data-driven solutions for smart crowd flow management.**

**Visitor counting with sensors and AI at tourism hotspots.**

**9th of June 2026**

**Valletta, Malta**

**Sustainable Visitor Flow Management in Sensitive Island Destinations –  
The Biševo Island Case.  
Ivo Benzon, PI RERA S.D.**

# About PI RERA S.D.

PI RERA S.D. is a regional development agency of **Split-Dalmatia County**, responsible for preparing regional development and EU-funded initiative.

With a multidisciplinary team and expertise in project development and implementation, PI RERA S.D. has extensive experience in:

- ✓ Sustainable tourism & destination development
- ✓ Coastal, maritime & blue economy (fisheries and aquaculture)
- ✓ Climate change adaptation & environmental resilience
- ✓ Environmental and territorial planning
- ✓ Support for entrepreneurship and SME development
- ✓ Cultural & natural heritage valorization

## Key strengths



EU project expertise



Regional coordination capacity

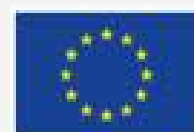


Sustainable tourism & island development



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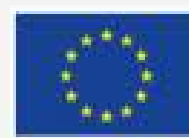
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# Biševo Island: A Pilot for Sustainable Visitor Management



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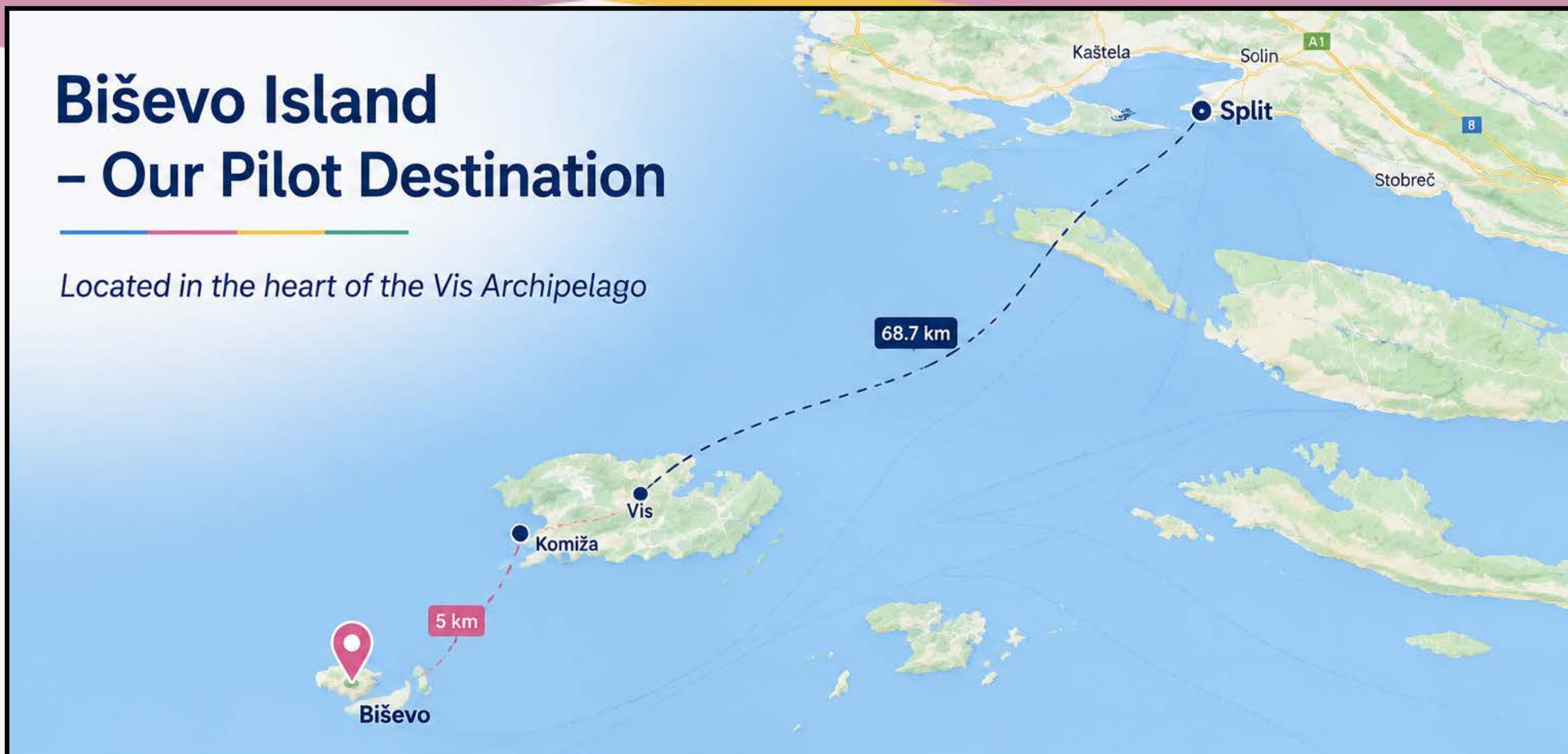
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# Biševo Island – Our Pilot Destination

*Located in the heart of the Vis Archipelago*



## Location

- 5 km from Komiža
- 68.7 km from Split



## Coordinates

42° 58' 30" N | 16° 0' 40" E



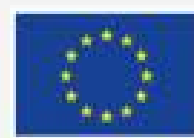
## Status

UNESCO Global Geopark



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# Why Biševo Was Selected as a Pilot



## GLOBAL RECOGNITION

A vital part of the Vis Archipelago UNESCO Global Geopark, featuring irreplaceable natural and marine wealth.



## EXTREME ISOLATION

One of the most remote permanently inhabited Croatian islands, characterized by a highly sensitive ecosystem.



## THE TOURISM PARADOX

Experiencing massive seasonal tourist peaks despite having a very small year-round resident population.



## THE GREAT CHALLENGE

Finding the perfect, delicate balance between global attractiveness and ecological sustainability.



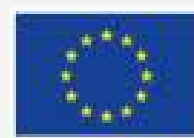
 **13** PERMANENT RESIDENTS

 **~150,000** ANNUAL VISITORS



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# ALL ROADS LEAD TO THE BLUE CAVE

High demand. Many origins. One destination.



**PRESSURE ON THE BLUE CAVE**

- One attraction
- High season peak times
- Many vessels many visitors
- Environmental pressure

**TYPES OF VESSELS**

- Pasara boats
- Speedboats
- RIBs
- Motorboats
- Jet skis
- Sailboats
- Private boats
- Ferry / Boat line No.612

THE CORE REALITY

# SMALL ISLAND. GLOBAL ATTRACTION. LIMITED CAPACITY.

A small island facing a major tourism challenge:  
*balancing attractiveness with sustainability.*

And at the very center of this challenge is

## THE BLUE CAVE



The ultimate tourist magnet  
that shapes the entire destiny  
of the island!



**179,657**  
VISITORS IN 2019  
(RECORD YEAR)



UP TO  
**2,500**  
VISITORS PER DAY  
IN PEAK SEASON

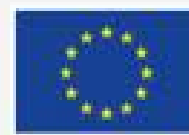


THE GREAT CHALLENGE:  
FINDING THE PERFECT **BALANCE** BETWEEN  
GLOBAL ATTRACTIVENESS AND ECOLOGICAL SUSTAINABILITY.



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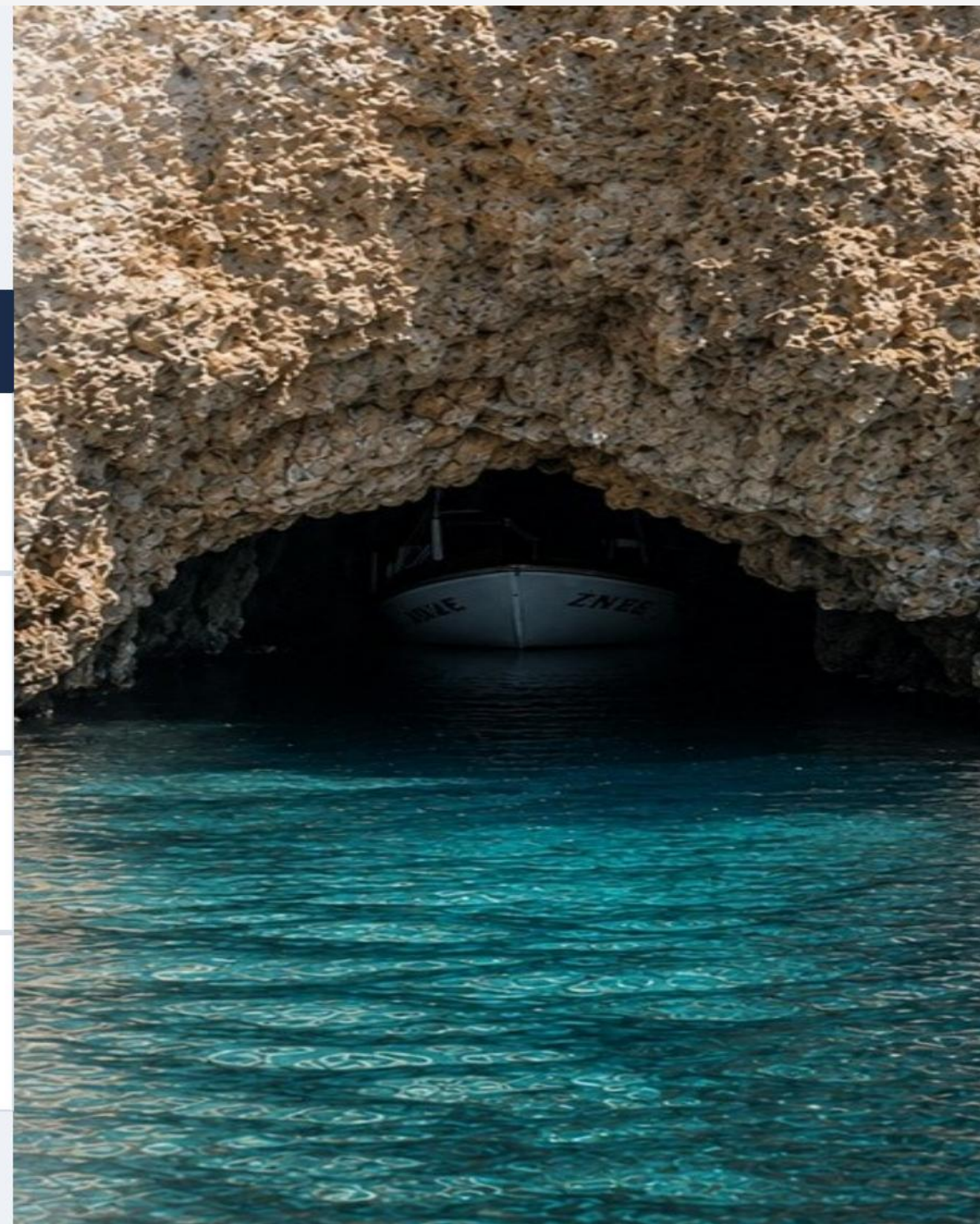


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# The Management Challenge

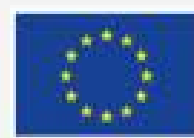
Managing visitor pressure on a small island destination

CHALLENGE	→	IMPACT
 Concentrated visitor arrivals	→	 Congestion at key locations
 Limited infrastructure capacity	→	 Pressure on local services
 Dependence on a single attraction	→	 Uneven visitor distribution
 Peak-time demand	→	 Reduced visitor experience



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# Why This Pilot Matters

Turning visitor data into better destination management



## CURRENT SITUATION



Visitor flows are highly **concentrated** during peak hours



Key sites experience temporary **overcrowding**



Local services face **fluctuating demand**



Decision-making relies on **limited real-time information**



## PILOT APPROACH

Using sensors, data analytics and digital tools to:



Monitor visitor flows in **real time**



Improve **capacity** management



Support **evidence-based** decisions



Enhance visitor and resident **experience**

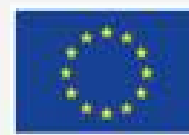


Building a **smarter**, more **sustainable** Biševo – for visitors, residents and **nature**.



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# Visitor Center

Blue Cave – Biševo

will contribute to the sustainable development of Biševo Island.



## ECO-EDUCATION

Exhibitions on Island geology, flora, and fauna.



## LOCAL OFFER

On-site restaurant and authentic souvenir shop.



## RESEARCH & COMMUNITY

Offices and conference room for scientists and NGOs.



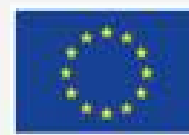
## GREEN MISSION

A shared space dedicated to nature conservation.



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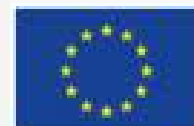
• **CONCEPT**  
 Modern multimedia center in a restored old school building.

• **PURPOSE**  
 Promotion of sustainable tourism and heritage preservation.



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# Sustainable Last-Mile Mobility

## Connecting Mezoporat and the Visitor Centre



CHALLENGE	SOLUTION
 2 km distance	→  Electric mobility
 Walking discomfort	→  Improved accessibility
 Visitor concentration	→  Better flow distribution
 Environmental pressure	→  Low-emission transport



Sustainable mobility helps transform access to the Visitor Centre into part of the overall visitor flow management system.

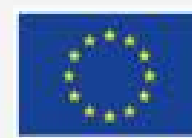


**Electric vehicles on Biševo** are eco-friendly, open-type golf vehicles and smaller electric minibuses, designed to preserve nature and support a **sustainable island experience**.



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MEZOPORAT · THE PROBLEM

# TOO MANY PEOPLE.

A seasonal bottleneck threatening both the visitor experience and the **ecological integrity** of the island.

- Overcrowding & long queues in full sun
- Congestion at Blue Cave boarding
- Zero comfort, zero experience

VISITOR CENTRE · THE OPPORTUNITY

# UNTAPPED POTENTIAL.

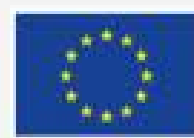
An existing space that can **absorb the flow**, educate visitors and enrich the island experience — waiting to be activated.

- Available space & infrastructure
- Educational & interpretive content
- Comfortable, shaded environment



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# Biševo Pilot – Monitoring Logic




## Monitoring points



 **Point A –**  
Mezopot/Blue Cave



 **Point B –**  
Visitor Centre Biševo

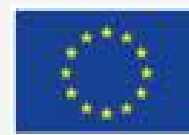


**Goal:**  
understand visitor movement patterns  
and improve destination management



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# SMART MONITORING – TECH INFRASTRUCTURE

From field equipment to visitor flow intelligence

## 1. THE TECHNOLOGY



### Smart Sniffing Technology

Wi-Fi & Bluetooth sniffing technology enables anonymous monitoring of visitor movement patterns between key locations on Biševo.

100% GDPR COMPLIANT

## 2. POINT A – MEZOPORAT / BLUE CAVE



### Mezoporat / Blue Cave Area

Monitoring high visitor concentration and congestion around the Blue Cave boarding area.

## 3. POINT B – VISITOR CENTRE BIŠEVO



### Visitor Centre Biševo

Tracking movement towards the Visitor Centre to support visitor redistribution and improve the waiting experience.



### MEASURE

Real-time data collection from smart sensors at key locations.



### UNDERSTAND

Analyze movement patterns and identify peak pressure points.



### REDIRECT

Use insights to guide visitors towards alternative experiences and reduce overcrowding.

The objective is not only to count visitors – but to support smarter and more sustainable **visitor distribution across Biševo.**

# PRIVACY & PREDICTIVE MODELS

*From raw data to smart decisions*

POINT A

## MEZOPORAT



100% GDPR compliant



Flow modelling



Predictive analytics



Better operational planning

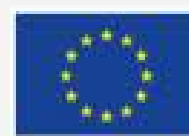
POINT B

## VISITOR CENTRE BIŠEVO

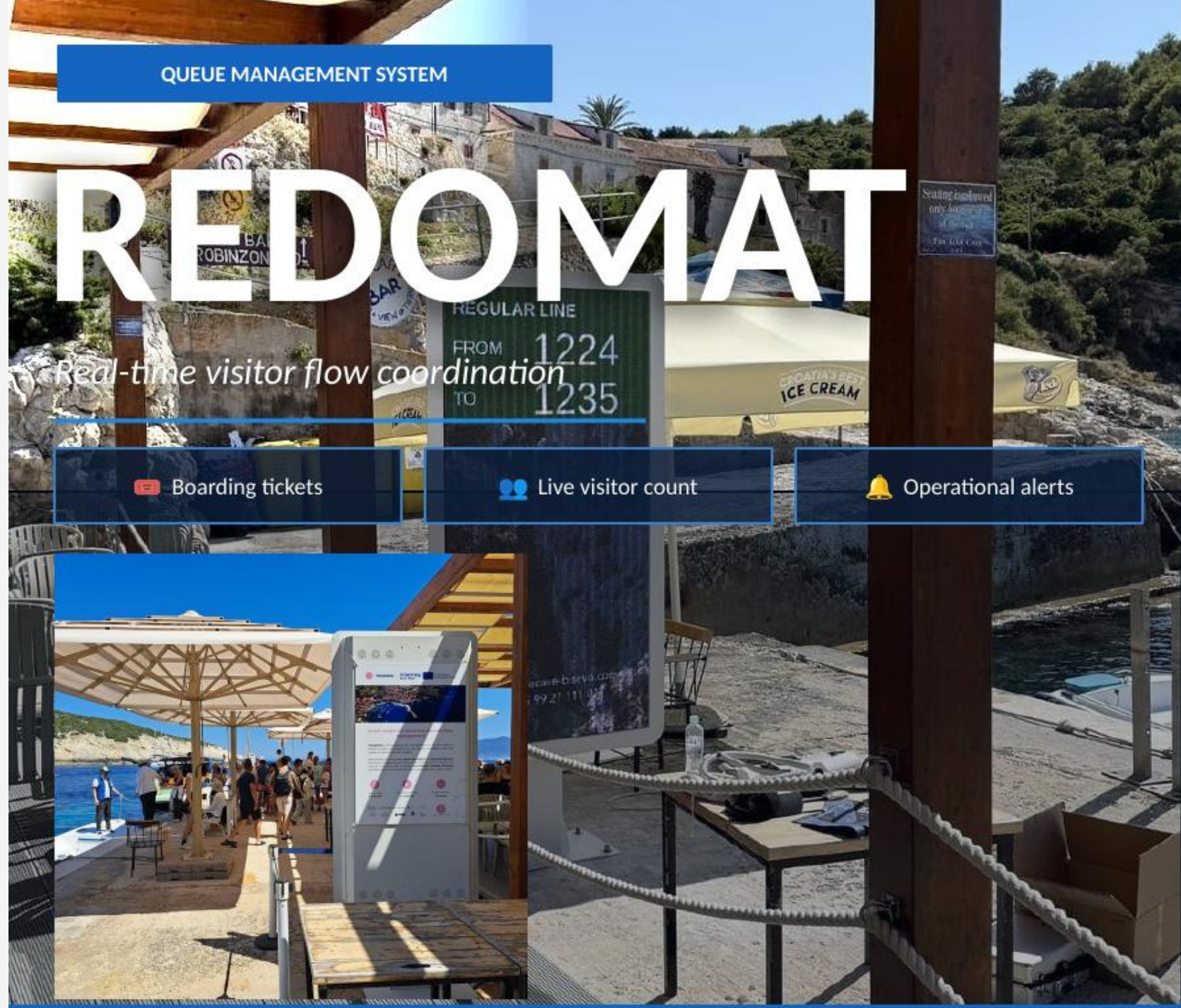


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QUEUE MANAGEMENT SYSTEM

# REDOMAT

Real-time visitor flow coordination

Boarding tickets

Live visitor count

Operational alerts

## Smart Visitor Flow Management

*Turning waiting time into a managed visitor experience*

**QMS Platform**  
Real-time monitoring, boarding ticket overview and operational management.

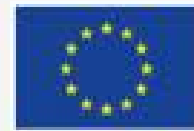
**Web App + LED Video Wall**  
Promotional messages, live alerts, special offers and visitor guidance.

- ✓ Reduced waiting time
- ✓ Better visitor coordination
- ✓ Smarter redistribution
- ✓ Improved experience

**LESS WAITING → BETTER EXPERIENCE → SMARTER MANAGEMENT**



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# TOURISMO - Main

## Biševo Digital Twin | Powered by Snap4City

Biševo

Florence

Lunassol

Malta

**Real-Time Monitoring**  
Visitors · weather · sea conditions

**Origin-Destination Analysis**  
Movement tracking: Point A ↔ Point B

**Congestion Awareness**  
Pressure-point detection

**Forecasting**  
Predictive visitor flow modelling

**TOURISMO Biševo**

● LIVE DASHBOARD ENVIRONMENT

Selector - Map

- Open Weather >
- Sea conditions >
- Air pollution >
- UV Index forecasts >

**BISEVO**  

DAY	UV Index	Open/Close
TODAY	13.4	271.7
2020-05-13T08:00:00	12.7	282.7
2020-05-14T08:00:00	13.4	271.1
2020-05-15T08:00:00	13.9	264.6
2020-05-16T08:00:00	13.1	275.3
2020-05-17T08:00:00	13	276.7

Air Temperature

**21.5 °C**

BISEVO - Air Temperature - Weekly trend

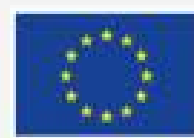
People Counting  
Documentation  
Forecasting

FROM REAL-TIME DATA TO SMARTER TOURISM MANAGEMENT



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# What Does This Enable?

*From monitoring to better destination management*



## Destination Managers

Real-time, data-driven planning enabling more informed operational and strategic decisions.



## Concessionaire

Improved coordination of boarding flows and efficient management of visitor peak periods.



## Visitors

Reduced waiting times, timely information, and a smoother, higher-quality visitor experience.



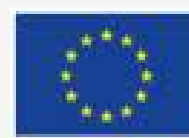
## Island Environment

Lower congestion pressure and a more sustainable tourism carrying capacity.



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Key Lessons from the

# Biševo Pilot

● REAL-TIME FLOW MONITORING

01

## Technology is not enough on its own

Data delivers value only when it directly supports operational decision-making.

02

## Overtourism is often a timing issue

The core challenge is temporal and spatial concentration, not total visitor volume.

03

## Visitor redistribution is essential

The Visitor Centre acts as an active mechanism for balancing flows across the destination.

04

## Real-time data enables sustainability

Faster feedback loops lead to better decisions for visitors, operators, and the environment.

A

B

B

A

B

A

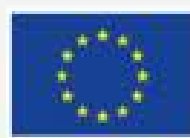
POINT B · Visitor Centre

POINT A · Mezoporat



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# Visitor Satisfaction Survey — Field Implementation

QR code survey deployed on-site at Island of Biševo, enabling anonymous visitor feedback collection.



QR codes placed on-site at Island of Biševo

## TOOL

QR Code — Google Forms satisfaction survey

## PURPOSE

Anonymous visitor experience data collection for TOURISMO pilot evaluation

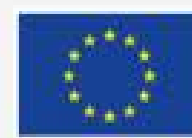
## FORMAT

Printed stickers — scan & complete in 2 min



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## THE TRUE INNOVATION OF TOURISMO



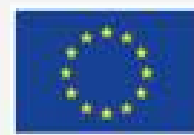
*What makes TOURISMO truly innovative is that pilot areas are not monitored in isolation — they are connected through a **shared real-time digital twin environment.***

10 Partners · 9 Countries · 8 Pilot Areas



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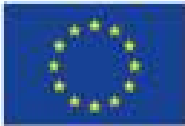


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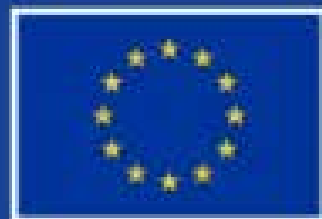
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Making  
the **Mediterranean**  
**Green Transition**  
happen

