

Open data solutions in the Burren National Geo Park, Ireland – SDI4Apps pilot

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Contents

- 1. Ireland's Open Data Initiative**
- 2. SDI4Apps Irish Pilot**
 - Burren National GeoPark in Ireland
- 3. SDI4Apps Irish Pilot Services**
 - European Tourism Indicator System (ETIS)
 - Tourism Sites Ground Truthing Apps
- 4. Open Data used**
- 5. Use of SDI4Apps' Functionality**
- 6. Conclusions**

- MAC founded in 1981, Limerick, Ireland
 - An innovative ICT SME
- **eBusiness systems & services design + software/electronics development**
 - Long Track Record developing distributed systems solutions
- **MAC has delivered:**
 - 225 leading edge product developments + 40 Web/online services + Consultancy
 - 34 EU ICT R&D projects + 3,000 new ideas evaluation
- **Partner in many EU research projects → IPR, Products & Services**
 - SmartOpenData, SmartGridEnable, ADMS → **SmartGrid products**
 - WaterBee Demonstration Action & WATER-BEE → **Smart Irrigation products**
 - Plan4All, HABITATS, SmartOpenData, **SDI4Apps** → **Open Data products**



2. Irish Open Data Initiative

Published 2 key Open Data documents -

www.per.gov.ie/open-data/

- **Foundation Document** for the development of Ireland's Open Data Strategy;
- **Technical Framework** for the publication of datasets in open data format on the Government's open data portal data.gov.ie

<http://data.gov.ie>






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IRELAND'S OPEN DATA PORTAL
Promoting innovation and transparency through the publication of Irish Public Sector data in open, free and reusable formats.
[Explore Datasets](#)

4459 Datasets **90** Publishers

Agriculture, Fisheries, Forestry & Food | Arts, Culture and Heritage | Crime and Justice | Economy and Finance | Education | Energy | Environment
 Government and Public Sector | Health | Housing and Zoning | Population and Society | Science and Technology | Towns and Cities | Transport

Third-Level Enrolment Data: Line chart showing Full-Time Students in Third-Level Education from 1970 to 2010, showing a steady increase from approximately 20,000 to 150,000.
 VAT Registrations by Sector Data: Pie chart showing the distribution of VAT registrations by sector, with Agriculture Forestry and Fishing at 17.0% and another sector at 14.0%.
 Pupil-Teacher Ratio Data: Line chart comparing the Pupil-Teacher Ratio for First level education and Second level education from 2000 to 2010.

ODGB BLOG: Catch up with the personal views of members of the Open Data Governance Board (ODGB) on Open Data here. [READ MORE](#)
TECHNICAL FRAMEWORK: Read the technical framework which underpins the publication of datasets on the portal. [READ MORE](#)
PUBLIC SECTOR INFORMATION: Access documentation regarding the re-use of Public Sector Information in Ireland. [READ MORE](#)
GUIDE FOR PUBLISHERS: Read our guide for existing and potential Open Data Publishers. [READ MORE](#)

<http://data.europa.eu/euodp/en/data>



The screenshot shows the European Union Open Data Portal interface. At the top, there is a navigation bar with the EU flag and the text "European Union Open Data Portal". Below this, there are tabs for "Data", "Applications", "Linked Data", "Developers' corner", and "About". A search bar is prominently displayed with the text "Find datasets...". To the right of the search bar, there is a "Suggest a dataset" box with the text "Is there data you would like to find on the portal?" and a "Make a suggestion" link. Below the search bar, it says "Total datasets available: 9069". On the left side, there is a section titled "Most viewed datasets" with a list of datasets and their view counts. On the right side, there is a section titled "Browse datasets by subject or groups" with icons for various categories: Employment and working conditions, Social questions, Economics, Finance, Trade, Industry, Education and communications, and Science. At the bottom, there is a section titled "Popular terms" with a list of terms like "international trade", "annual report", "region", "energy", "vector data", "european union", "agriculture", "statistics", "entreprise", and "consumer protection".

European Union Open Data Portal

EUROPA > Open Data Portal > Data

Data Applications Linked Data Developers' corner About

Find datasets...

Show results with: all of these words | any of these words | the exact phrase

Total datasets available: 9069

Suggest a dataset
Is there data you would like to find on the portal?
Make a suggestion>>

Most viewed datasets

- DGT-Translation Memory (14581 views)
- [LATEST VERSION] Elevation map of Europe (8875 views)
- CORDIS - EU research projects under FP7 (2007-2013) (7659 views)
- Tenders Electronic Daily (TED) - public procurement notices from the EU and beyond (7508 views)
- EuroVoc, the EU's multilingual thesaurus (6900 views)
- Transparency Register (5103 views)
- Register of Commission documents (4380 views)
- She Figures 2013 Gender in Research and Innovation (4304 views)

Browse datasets by subject or groups

- Employment and working conditions
- Social questions
- Economics
- Finance
- Trade
- Industry
- Education and communications
- Science

Popular terms

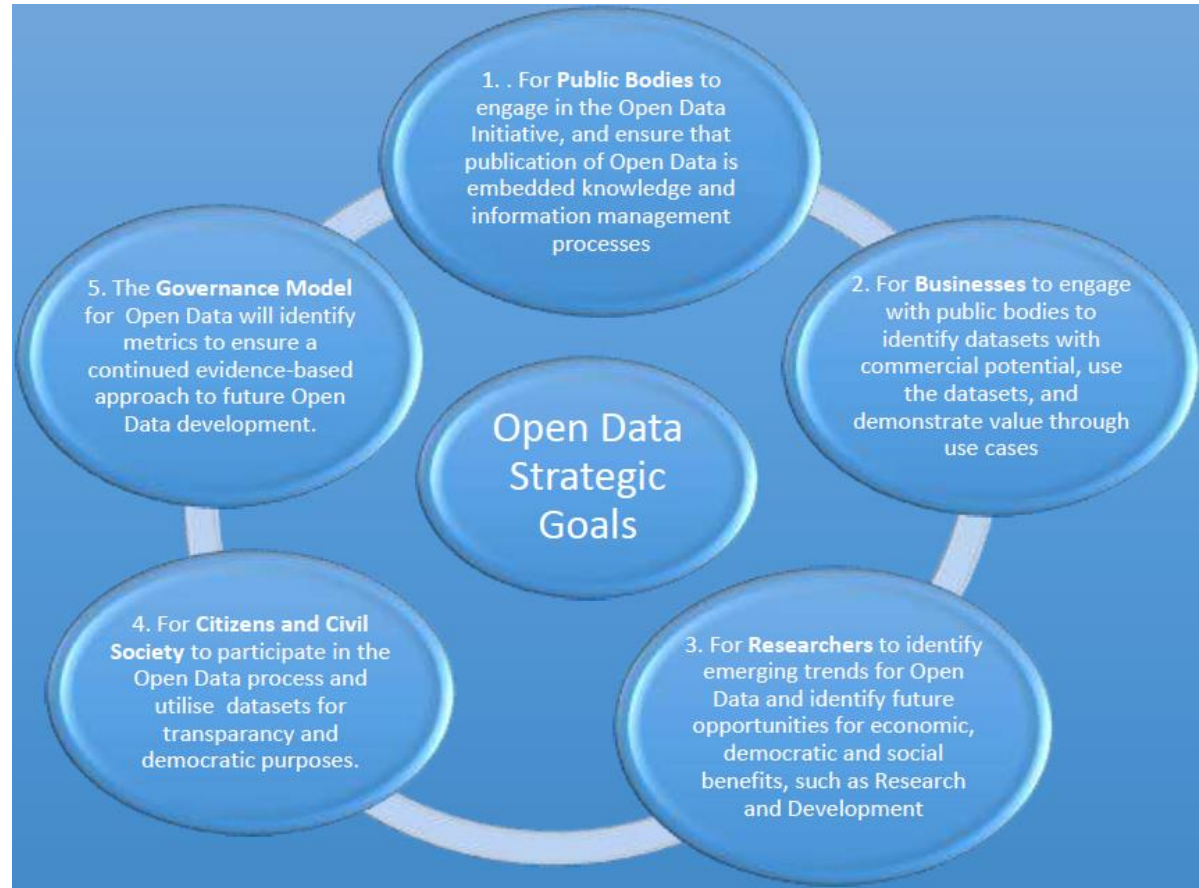
international trade annual report
region energy vector data european union
agriculture statistics entrepreneurship consumer protection

9069
datasets

Foundation Document for the development of the Public Service Open Data Strategy

Every Public Organisation in Ireland

- **Audit** of Datasets
(COMSODE methodology)
- Open Data
Publication Plan
- Using the **Open Data
Technical Framework**
 1. Open Data Licence
 2. Recommended Formats
 3. Metadata Schema
 4. Recommended Standards
 5. Recommended Unique
Resource identifiers
- <http://data.gov.ie>



3. SDI4Apps Mobile “Easy Access” Irish Open Data Pilot Services

Irish Pilot Services built on Open Data using the SDI4Apps Platform



- Focused on the **Burren National GeoPark** & its users in Ireland
- Using the SDI4Apps Platform to support **Tourism for Conservation**
- With the following **Mobile App services** – chosen by users.
 1. **European Tourism Indicator System (ETIS)**
 2. **Ground Truthing Tourism Sites Apps**

SDI4Apps Platform enables these Apps & their maps to operate **even without mobile data coverage** – a huge issue in the Burren.

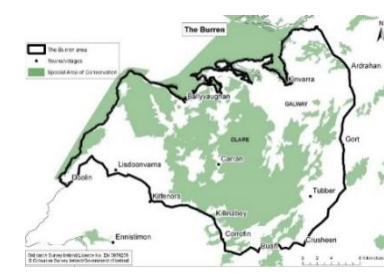
Burren National GeoPark, Ireland

- **1,500 hectares** on the west coast of Ireland
- Managed by the Irish National Parks & Wildlife Service
- An unique area of **high conservation value**
- containing **many habitats of international importance**
 - including limestone pavement, calcareous grassland, oligotrophic lakes, turloughs, hazel scrub & ash/hazel woodland.
- Involves many Communities & Europe-wide environmental issues



Burren National GeoPark, Ireland

www.burrennationalpark.ie

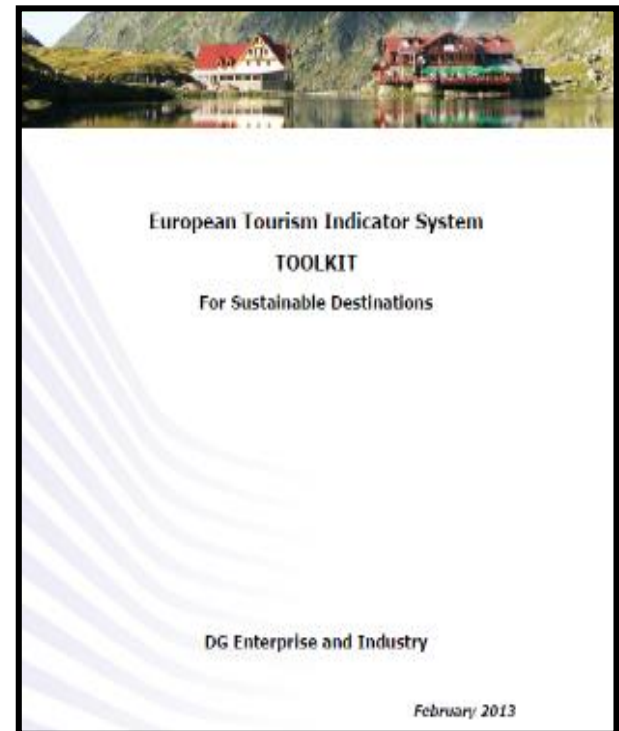



The screenshot shows the website's navigation menu with the following items: Discover & Experience, Learn & Engage, Community & Business, Our Organisation, and Geopark Life. Below the menu is a large banner featuring a '2016 WINNER' award from National Geographic World Legacy Awards, ITB Berlin, and Destination Leadership. The banner also includes the Burren National GeoPark logo and the European Union flag. A central photograph shows a group of people sitting on a rocky coastline with a bicycle.

European Tourism Indicator System (ETIS)



- SDI4Apps enables the **ETIS** Webservice & Apps for the Burren & European GeoParks Network
 - ETIS is a new **EU standard**, that is a locally owned & led process for monitoring, managing, & enhancing the **sustainability of a tourism destination**.
 - To streamline & enhance the current manual system by providing a distributed open data-driven Apps system.

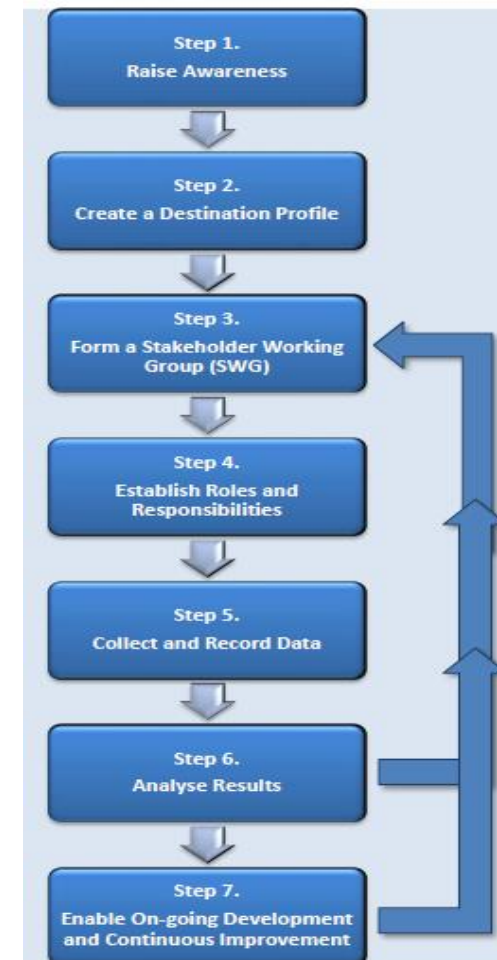


European Tourism Indicator System – Functionalities



ETIS Service Process

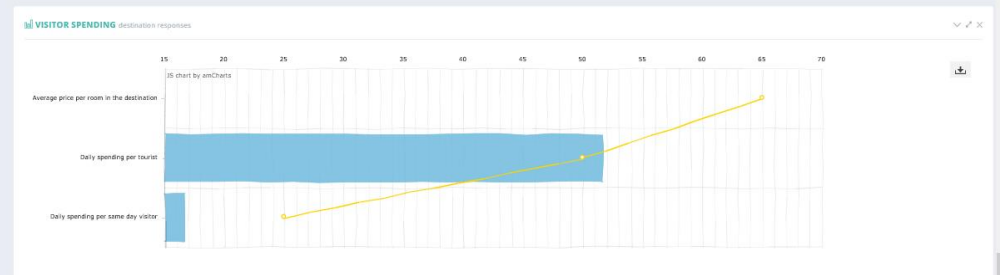
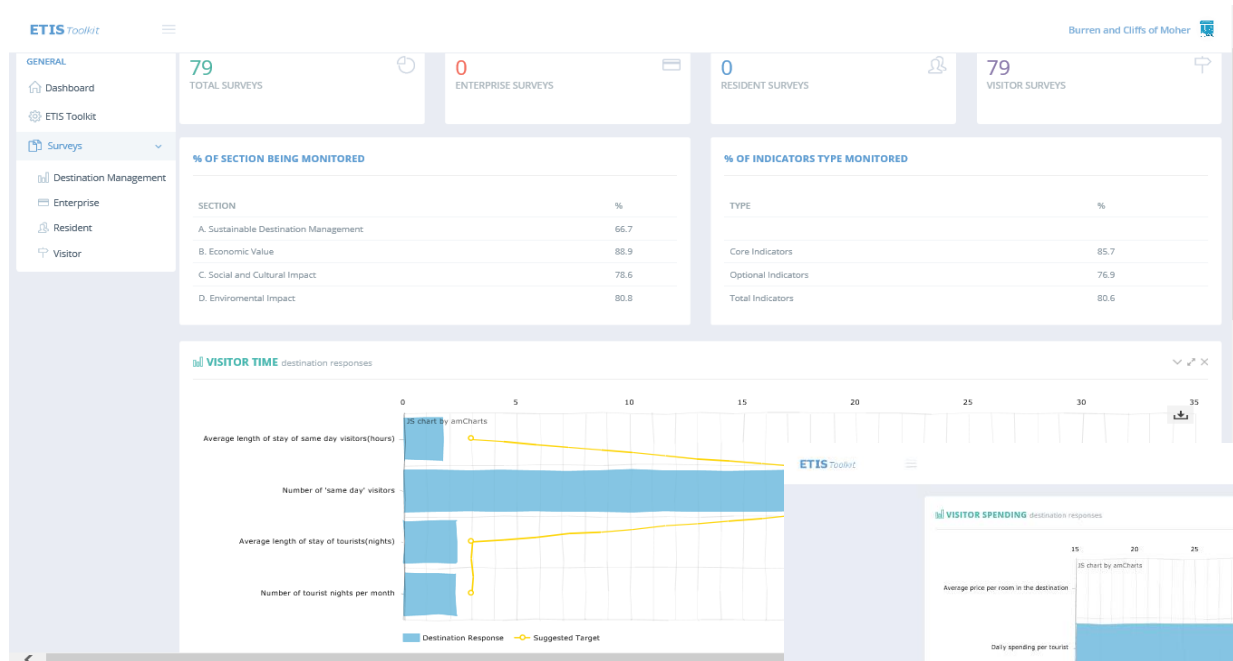
- **In operation**
 - **GeoPark Manager** selects ETIS options relevant to her Park & the content is automatically published in Survey Apps for
 - **Visitors**
 - **Residents**
 - **Enterprises**
 - Webservice **Dashboard** shows how the **destination is performing** as per ETIS framework



ETIS – System Dashboard



System Dashboard interface shows how the destination is performing as per the ETIS framework.



<http://www.ETISapp.eu>

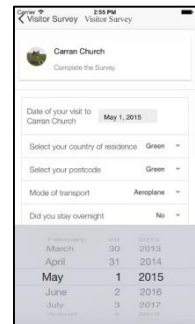
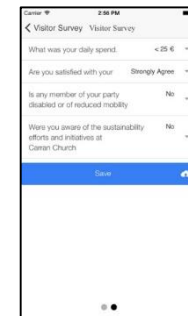
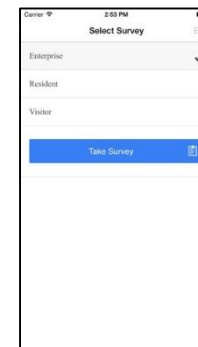
ETIS Stakeholders Surveys



Each of the stakeholders surveys can be accessed with the following URLs

- Visitor <http://www.ETISapp.eu/visitorsurvey.html>
- Resident <http://www.ETISapp.eu/residentsurvey.html>
- Enterprise <http://www.ETISapp.eu/enterprizesurvey.html>

Mobile Apps



From user feedback – these are focused on:

1) Heritage Sites Reporting

- For Field Officers, visitors & people interested in their local heritage, to seek out & ground truth Protected Monument sites



2) GeoPark Management Portal

a) Site Monitoring

- Reporting the status of a site for the Burren GeoPark Management Team

b) Visitor Observation

- Reporting on visitors to a site for the Burren Management Team.

c) Walking Trail Monitoring

- Reporting on several points along a walking trail between sites



Addressing similar user groups to complement the ETIS service
in “**Tourism for Conservation**”

Heritage Sites Reporting



Once reported the inputs are verified to confirm their status,

- at the portal at <http://www.GroundTruthing.eu>
- by Heritage Council Monument Field Officers

National Heritage Verification Vault

The portal provides access to the ground-truthing in relation to newly sites in Ireland.

Login

If you have Username and Password, you can use the button below to access the secured content.

Login »

National Heritage Verification Vault



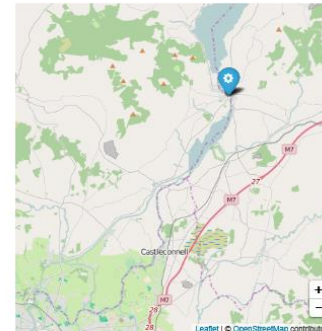
Details

National Heritage Verification Vault



Created by Mac Limited.

National Heritage Verification Vault



Details



Latitude:
53.01650527014351
Longitude:
-8.388513926800833

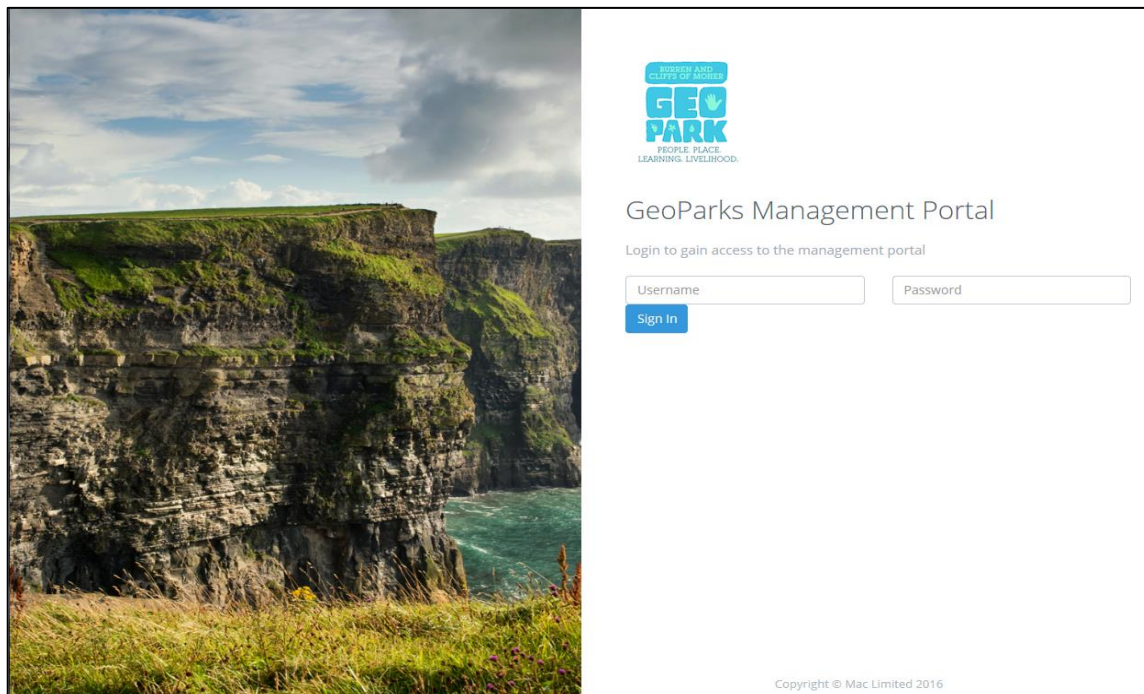
Description

Ruins of a small herds house in Derryjoober townland within 50metres of booley huts. He house is cut into the southern face of a hill providing natural shelter.

Comments

Created by Mac Limited.

GeoPark Management Portal



BIRKEN AND CLIFFS OF MOERLE
GEO PARK
PEOPLE PLACE
LEARNING. LIVELIHOOD.

GeoParks Management Portal

Login to gain access to the management portal

Username

Password

Sign In

Copyright © Mac Limited 2016



a) Site Monitoring

- Reporting the status of a site for the Burren GeoPark Management Team
- **Damage, obstructions, condition** of Signs & Information Panels.



The dashboard displays the following information:

- YEAR TO DATE:** OBSERVATIONS: 7
- DESTINATIONS:** TOTAL: 9
- OBSERVATIONS:** TOTAL: 7

OBSERVATION HISTORY

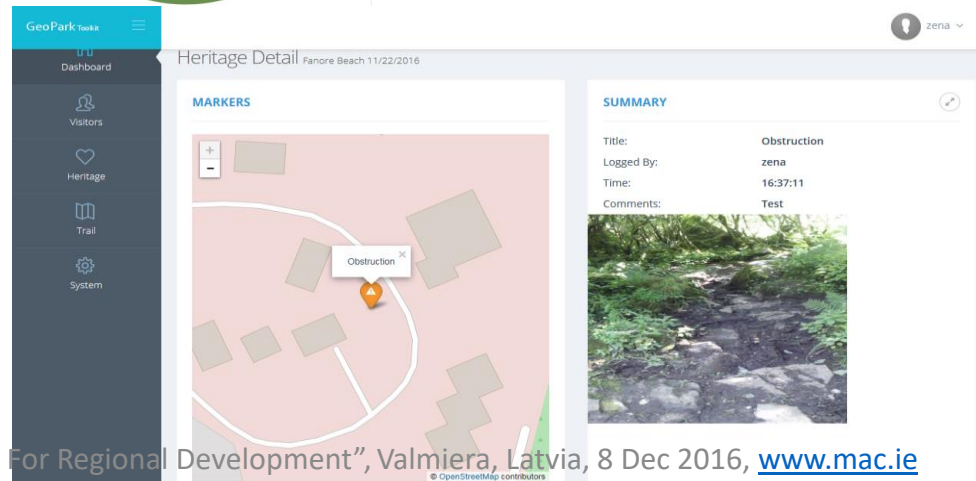
Id	Destination	Logged By	Date	Logged Time	Obstructions	Damage
1	Burren National Park	zena	11/17/2016	14:54:28	1	1
2	Fanore Beach	zena	11/22/2016	16:37:11	1	0
3	Fanore Beach	zena	11/22/2016	16:37:11	1	0
4	Fanore Beach	zena	11/22/2016	16:37:11	1	0
5	Ailwee Cave	zena	11/22/2016	16:43:05	0	1
6	Slieve Carran	zena	11/23/2016	10:02:26	1	1
7	Cahermore	zena	11/23/2016	10:27:52	0	0

Showing 1 to 7 of 7 entries

OBSERVATIONS BY DESTINATION

JS chart by amcharts

Destination	Percentage
Fanore Beach (3)	42.86%
Other Destinations	14.29%



Heritage Detail Fanore Beach 11/22/2016

MARKERS

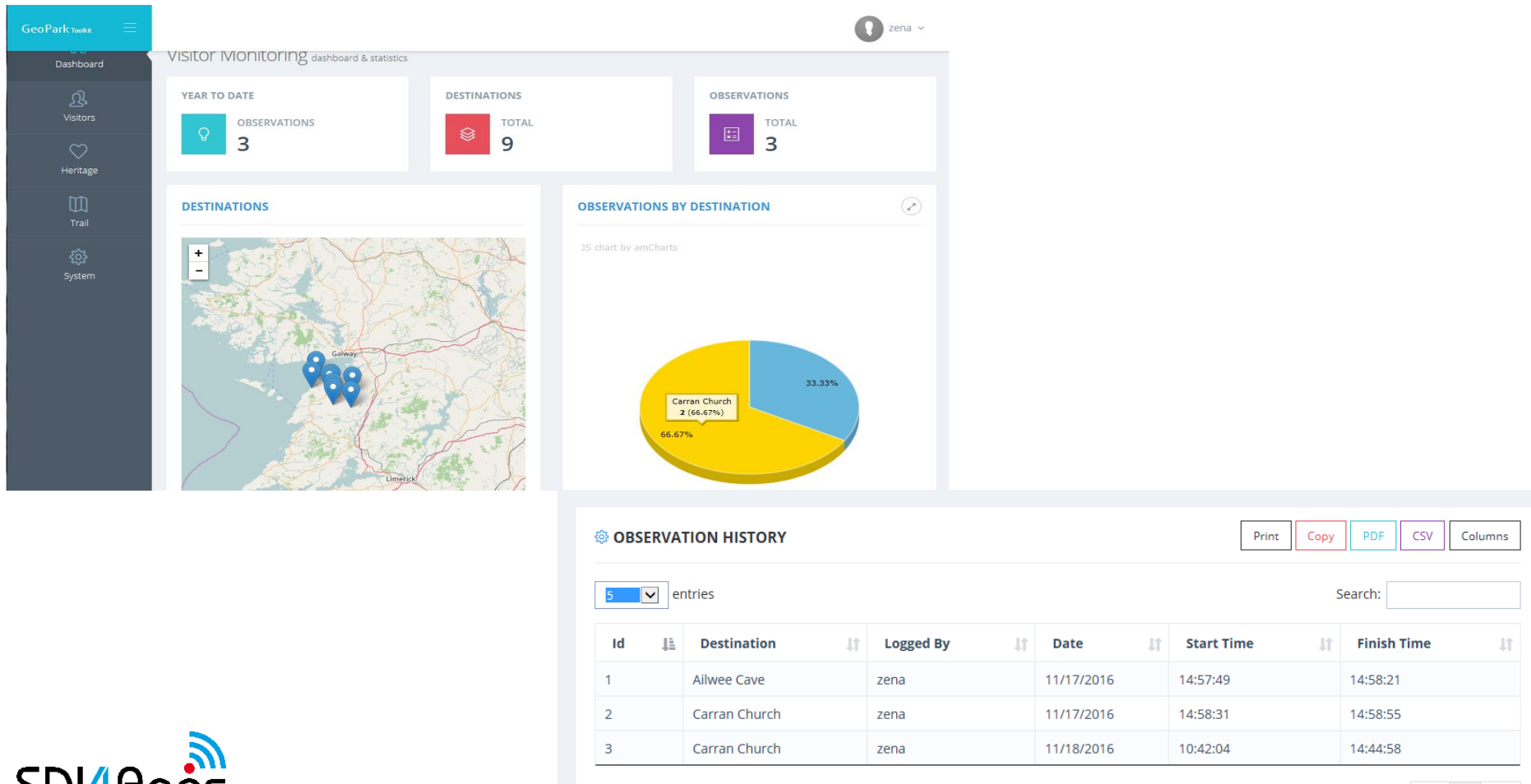
SUMMARY

Title: Obstruction
 Logged By: zena
 Time: 16:37:11
 Comments: Test

The page shows a map with a marker for an obstruction and a photo of the site.

b) Visitor Observation

- Reporting on visitors to a site for the Burren Management Team.
- **Numbers, movement & profile** of visitors **movement** to each site



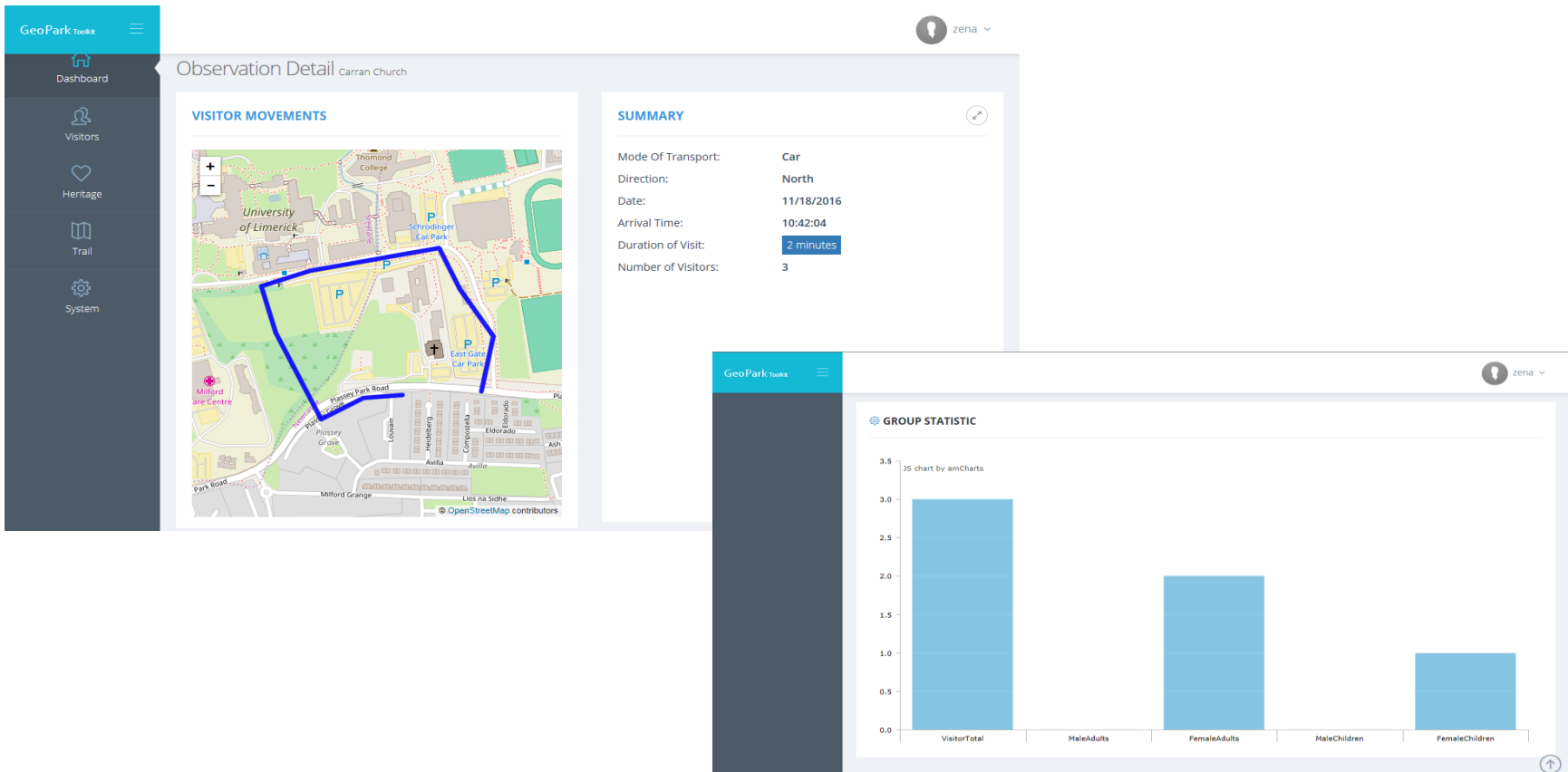
The screenshot displays the 'GeoPark Toolkit' dashboard for 'visitor monitoring'. The top navigation bar includes 'Dashboard', 'Visitors', 'Heritage', 'Trail', and 'System'. The main content area is divided into several sections:

- YEAR TO DATE:** OBSERVATIONS 3
- DESTINATIONS:** TOTAL 9
- OBSERVATIONS:** TOTAL 3
- DESTINATIONS:** A map showing the location of Carran Church and other sites in the region.
- OBSERVATIONS BY DESTINATION:** A 3D pie chart showing the distribution of observations: Carran Church (2, 66.67%) and Ailwee Cave (1, 33.33%).
- OBSERVATION HISTORY:** A table listing individual observations with columns for Id, Destination, Logged By, Date, Start Time, and Finish Time.

Id	Destination	Logged By	Date	Start Time	Finish Time
1	Ailwee Cave	zena	11/17/2016	14:57:49	14:58:21
2	Carran Church	zena	11/17/2016	14:58:31	14:58:55
3	Carran Church	zena	11/18/2016	10:42:04	14:44:58

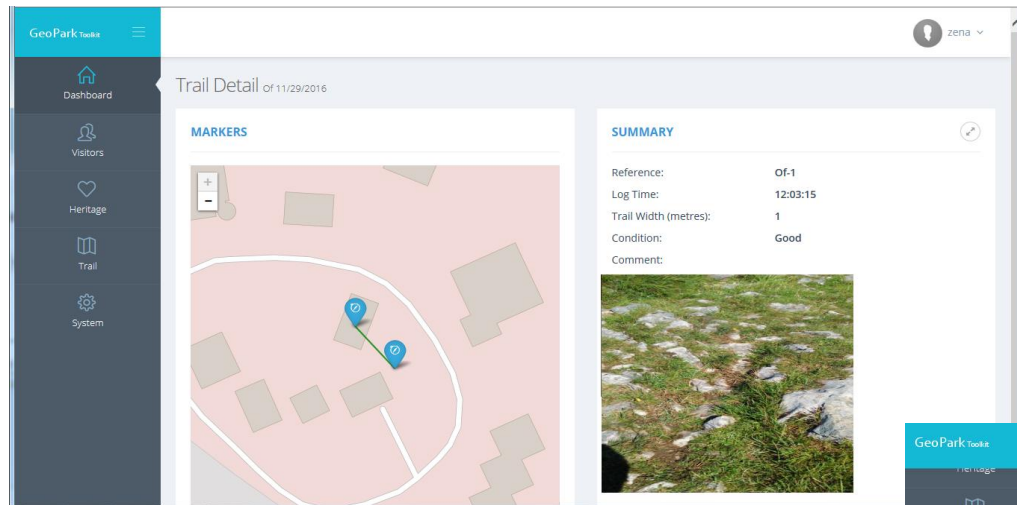
b) Visitor Observation

- Reporting on visitors to a site for the Burren Management Team.
- **Numbers, movement & profile** of visitors movement to each site



c) Walking Trail Monitoring

- Reporting on several points along a walking trail between sites by visitors & surveyors.
- **Condition** of trails at **multiple geo-tagged locations**, litter points, **invasive species** etc.



Trail Detail of 11/29/2016

MARKERS

SUMMARY

Reference:	Of-1
Log Time:	12:03:15
Trail Width (metres):	1
Condition:	Good
Comment:	

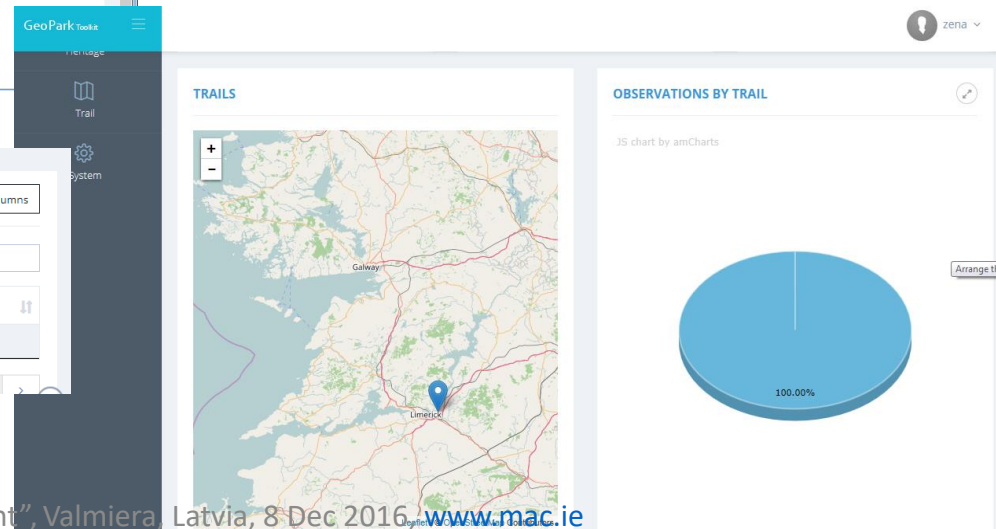
TRAIL HISTORY

10 entries

Search:

Id	Destination	Logged By	Date	Start Time	Number Of Points
6	Officemac	zena	11/29/2016	12:02:45	2

Showing 1 to 1 of 1 entries



TRAILS

OBSERVATIONS BY TRAIL

35 chart by amCharts

100.00%

– Open Data used

- **ETIS (European Tourism Indicator System) Dataset**
 - Defined as an Excel Spreadsheet & PDF Guide
<http://bookshop.europa.eu/en/the-european-tourism-indicator-system-pbNB3213182/>
- **Irish National Monuments Dataset**
 - Compliant to INSPIRE Protected Site Theme – PS v3.2 -
http://inspire.ec.europa.eu/documents/Data_Specifications/INSPIRE_DataSpecification_PS_v3.0.pdf
- **External Open Datasets automatically used**
 - Logainm Placenames Database of Ireland – LOD - www.logainm.ie/en
 - Irish Open Government Data Portal - <http://data.gov.ie/>
 - National Biodiversity Data Centre Ireland - www.biodiversityireland.ie
 - EU Open Data Portal - <http://open-data.europa.eu/en/data/dataset>
 - Eurostat Linked Data - <http://eurostat.linked-statistics.org/>
 - Open Street Map - www.openstreetmap.org
 - GeoNames - www.geonames.org

SDI4Apps Platform Services	Irish Pilots usage
1. Map module	✓
2. Information retrieval module	✓
3. Advanced visualization module	✓
4. Mobile module - Background Map & Database Synchronising	✓✓
5. Analytical & modelling module	
6. Data harmonization module	✓
7. Multilingual module	
8. Semantic tools for LOD data harmonization module	✓



In Conclusion

- **Open Data can ...**
 - Meet real user needs
 - Enable a market & new innovative services.
- **Critical that the open data is**
 - Current & constantly updated.
 - High quality & produced to National & EU Standards.
 - Easily found & seamlessly usable.
- **Huge opportunity**
 - But who pays for the production & ongoing maintenance of the open data ?

SDI4Apps

Thank You



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