

AI4Gov

Trusted AI for Transparent Public Governance
fostering Democratic Values

Deliverable 6.3

Specification of UC Scenarios and Planning of Integration and Validation Activities V3


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Version 1.0



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Table of Contents

| | |
|--|-----------|
| Abstract | 7 |
| 1 Introduction | 8 |
| 1.1 Purpose and scope of the deliverable | 8 |
| 1.2 Document structure | 8 |
| 1.3 Updates with respect to previous version | 8 |
| 1.4 WP6 Structure..... | 9 |
| 1.5 Relation to other WPs..... | 10 |
| 1.6 Target audience of the deliverable | 10 |
| 1.7 Data management | 10 |
| 2 The AI4Gov Pilot Methodology | 12 |
| 3 Pilots and UC Scenarios | 14 |
| 3.1 Overview | 14 |
| 3.2 Policies for Sustainable Water Cycle Management at a Large Scale (DPB)..... | 16 |
| 3.2.1 Use Case #1 Water management cycle – drinking water | 16 |
| 3.2.2 Use Case #2 Water management cycle – Sewage water..... | 26 |
| 3.3 Sustainable Development and the European Green Deal (JSI)..... | 29 |
| 3.3.1 Use Case #1 IRCAI global top 100 projects | 29 |
| 3.3.2 Use Case #2 SDG Observatory..... | 32 |
| 3.3.3 Use Case #3 OECD policy documents analysis | 35 |
| 3.4 Tourism-driven multi-domain policy management and optimisation (VVV/MT)..... | 39 |
| 3.4.1 Survey on tourist profiles in the municipality of VVV..... | 39 |
| 3.4.2 Use case #1 Traffic violations monitoring..... | 41 |
| 3.4.3 Use case #2 Waste management | 47 |
| 4 The AI4Gov Use Cases factsheets..... | 58 |
| 5 Validation and Evaluation of the AI4Gov pilot activities | 67 |
| 6 Conclusion and next steps | 68 |

List of figures

| | |
|--|----|
| Figure 1 Pilot methodology | 12 |
| Figure 2 Pilot sites | 14 |
| Figure 3 UI of drinking water forecasting that provides predictions, textual and visual explanations and enables users to provide feedback..... | 18 |
| Figure 4: Policy creation form with the appropriate values for the Drinking Water category | 19 |
| Figure 5: Output Summary – Policy Recommendations and Analytics for Drinking Water Management | 20 |
| Figure 6: Saved credentials in the wallet | 21 |
| Figure 7 Select Category & Policy to vote | 22 |
| Figure 8 View policy details | 23 |
| Figure 9 Vote Policy for three options (positive, negative, neutral)..... | 24 |
| Figure 10 Successfully voting | 25 |
| Figure 11 Ballot results after completing vote | 26 |
| Figure 12 UI of sewage water forecasting that provides predictions, textual and visual explanations and enables users to provide feedback..... | 27 |
| Figure 13 Policy Form Interface – Sewage Water Category..... | 28 |
| Figure 14 Policy Summary and Analytics Results – Sewage Water Management | 29 |
| Figure 15 The key areas of innovation, research, and development in Top100 projects. Visualisation available at: https://news-widget.pages.dev/innovations/collaboration | 31 |
| Figure 16 SDG topics visualisation | 32 |
| Figure 17 Missing data analysis in the use case of rare diseases..... | 33 |
| Figure 18 Integration of analysis and visualisation of missing data analysis in the case of breathalyser testing data in Slovenia. | 35 |
| Figure 19 Refactored UI of policies chatbot that supports simultaneous answer extraction from documents of different countries | 36 |
| Figure 20 Example of answer extraction and display of source document for further reading | 36 |
| Figure 21 The current weight of various SDG topics in the policy and legislative landscape. The interactive SDG barcode visually represents the prominence of different topics within policies. Visualisation available at: https://news-widget.pages.dev/policy/heatmap | 37 |
| Figure 22 Evolving relationships between key concepts identified in legal and regulatory documents. Visualisation is showing the frequency of these concepts within policy documents. Visualisation available at: https://news-widget.pages.dev/policy/radar | 38 |
| Figure 23 Fill form with the appropriate values in Traffic Management category | 42 |
| Figure 24 Total policy recommendation and analytics results in Traffic Management category | 43 |
| Figure 25 Traffic violations visualisation..... | 44 |
| Figure 26 Controlled parking visualisation..... | 45 |
| Figure 27 Check Traffic Congestion Interface | 46 |
| Figure 28 Check Road Safety Interface | 47 |
| Figure 29 Fill form with the appropriate values in Waste Management category | 48 |
| Figure 30 Total policy recommendation and analytics results in Waste Management category | 49 |
| Figure 31 Saved credentials in the wallet | 50 |
| Figure 32 Select policy to Vote | 51 |
| Figure 33 View the policy details | 52 |
| Figure 34 Vote Policy for three options (positive, negative, neutral) | 53 |
| Figure 35 Successfully voting | 54 |
| Figure 36 Ballot results after completing vote | 55 |
| Figure 37 Predict Flows Interface | 56 |
| Figure 38 Check My Bin Interface..... | 57 |
| Figure 40 AI4Gov piloting activities timeline | 67 |

List of Tables

| | |
|--------------------------|----|
| Table 1 UC overview..... | 15 |
|--------------------------|----|

Abbreviations

| Abbreviation | Description |
|---------------------------|---|
| AI | Artificial Intelligence |
| CSV | Comma-Separated-Values |
| DGF | Data Governance Framework |
| DPB | Diputación Provincial de Badajoz |
| DWTS (or EDAR in Spanish) | Decentralised Wastewater Treatment System |
| EU | European Union |
| GDPR | General Data Protection Regulation |
| GPS | Global Positioning System |
| HRF | Holistic Regulatory Framework |
| IoT | Internet of Things |
| JSI | Jozef Stefan Institute |
| MD | Markdown |
| MT | Ministry of Tourism |
| OECD | Organisation for Economic Cooperation and Development |
| OwiD | Our World In Data |
| PAYT | Pay As You Through |
| PDF | Portable Document Format |
| RFID | Radio Frequency Identification |
| SAX | Situation-Aware Explainability |
| SCADA | Supervisory Control and Data Acquisition |
| SDG | Sustainable Development Goal |
| SME | Small Medium Enterprise |
| UC | Use Case |
| URL | Uniform Resource Locator |
| US | User Stories |
| VVV | Vari - Voula - Vouliagmeni |
| WP | Work Package |
| WWTP (or in Spanish) | Wastewater Treatment Plants |
| XAI | eXplainable AI |

Abstract

This document, D6.3 “Specifications of UC Scenarios and Planning of Integration and Validation Activities V3”, was developed in the context of WP6 “Use Case Implementation, Validation, and Evaluation”. WP6 is devoted to designing and implementing the AI4Gov piloting activities, leveraging the AI tools developed during the project. It includes the pilot methodology and the third and final version of the pilot descriptions, focusing on the progress that has been made since D6.2 was delivered.

In this project, three pilots are being implemented:

- Using AI for Sustainable Development and the European Green Deal (Slovenia/International)
- Tourism-driven multi-domain policy management and optimisation (Greece/Athens)
- Policies for Sustainable Water Cycle Management at a Large Scale (Spain/Badajoz)

This deliverable is the third and last version of the “Specifications of UC Scenarios and Planning of Integration and Validation Activities” series of deliverables, elaborating on the use cases and the final description of the features that have been developed in the context of AI4Gov of each one of them. In December 2024, the 1st round of the UC validation was implemented and reported in D6.4 “Stakeholders’ Feedback and Evaluation of the AI4Gov Use Cases V1”. Since then, minor updates have been made to the UC descriptions which are included in this report. In addition, the value of each UC is presented explaining what AI4Gov offers to each one of them. Also, a short description of the 2nd round of the UC validation is included. However, the full methodology including all the respective updates, as well as the results will be presented in the final deliverable of this WP, D6.5 “Stakeholders’ Feedback and Evaluation of the AI4Gov Use Cases V2” at the end of the project (M36).

1 Introduction

1.1 Purpose and scope of the deliverable

This deliverable is the result of the work that has taken place under WP6 - Use Cases Implementation, Validation and Evaluation. This WP started in month 1 and ends in month 36, so it runs for the whole lifecycle of the project. Following up to D6.1 and D6.2, D6.3 is the final version of the specifications and requirements of the use cases, gathering all the developments in terms of the actors involved, the AI4Gov tools that are utilised in each use case and the progress the pilots have done so far.

The purpose of D6.3 is to present the final AI4Gov pilot cases, and the scenarios as they have been deployed. This information supported the deployment of the AI4Gov tools showcasing the integration of the use cases with the different components of the AI4Gov platform and is guiding the implementation and experimentation process of the project. In this document, there is no repetition of the information presented in D6.2 and only new additions are included, following the aligned work between the pilots and the technical partners.

1.2 Document structure

The deliverable is structured as follows: **Chapter 1** introduces the document, including the purpose and scope, document structure, and any updates compared to the previous version, while it presents an overview of WP6 and the target audience of the report. **Chapter 2** describes the AI4Gov pilot methodology, detailing the phases of needs assessment, requirements integration, pilot implementation, evaluation, and dissemination. **Chapter 3** presents updates on each use case (UC), including final features and integration status for all pilots. **Chapter 4** summarises what AI4Gov offers to each UC, highlighting the added value and unique contributions of the project's AI tools. **Chapter 5** focuses on the validation and evaluation, highlighting the timeline and the evaluation tools used in the 2nd validation round. **Chapter 6** provides conclusions and outlines the next steps for the project.

1.3 Updates with respect to previous version

This is the final of the three versions of the deliverable on specifications of UC scenarios, integration and validation activities. In this third version the final updates of each UC are included, along with the final features of each UC. The main question that this deliverable answers is **“What does AI4Gov offer to its UCs?”**. The updates are technical as well as operational, shaping the 2nd round of the validation activities that is ongoing until October 2025.

Over the recent reporting period, significant updates have been implemented across all AI4Gov UCs, reinforcing their technical maturity and alignment with the project's objectives. In the DPB pilot, focused on sustainable water management, tools such as the Visualisation Workbench, the Policy Recommendation Toolkit (PRT), and the Wallet app have undergone substantial enhancements for both drinking and sewage water management. These tools now offer advanced forecasting capabilities, blockchain-enabled result validation, and citizen engagement

features via mobile voting. The user-friendly interfaces empower stakeholders to interact with real-time environmental data and co-create policy recommendations informed by predictive analytics. These improvements contribute to more efficient water resource planning and increased transparency in local governance.

Parallel advancements have been achieved in the pilots led by JSI and the Municipality of VVV. JSI's SDG Observatory now incorporates new methodologies for bias detection in health and safety data, alongside interactive visualisations supporting ethical AI policymaking. Updates to the Top100 initiative include the launch of a global matchmaking platform to scale impactful AI solutions. Meanwhile, the VVV pilot, addressing tourism-driven urban challenges, introduced upgraded interfaces for traffic violation monitoring, waste management, and citizen engagement. These include real-time congestion and safety prediction maps, AI-enhanced bin fill rate forecasts, and dynamic policy design tools. Together, these updates demonstrate the AI4Gov platform's ability to support evidence-based, citizen-centric, and sustainable public policy innovation across diverse domains.

All the new updates are being tested during the 2nd round of validation workshops and the results of the usability, trustworthiness and efficiency of the tools will be reflected in D6.5 in M36.

1.4 WP6 Structure

WP6 is the WP associated with the piloting activities, devoted to deploying, operating, validating, and evaluating the use case scenarios with the active engagement of the public organisations and policy makers of the consortium. It breaks down into five tasks:

- **T6.1** Detailed Specification of Scenarios and Use Case Preparation
- **T6.2** Data-Driven Sustainability for a Liveable Badajoz
- **T6.3** Using AI for Sustainable Development and the European Green Deal
- **T6.4** Trustworthy Data-Driven Touristic Policies
- **T6.5** Stakeholders' Feedback and Evaluation

The first task is the preparatory task that supports the design and development of the Use Case Scenarios and the user requirements. Tasks T6.2, T6.3, and T6.4 correspond to the three pilots that will test the AI4Gov technologies. Finally, T6.5 is the task that will coordinate the evaluation of the pilot results and will map the gaps and needs that will arise. In total, the WP6 has 5 deliverables:

- **D6.1** - Specification of UC Scenarios & Planning of Integration and Validation Activities V1
- **D6.2** - Specification of UC Scenarios & Planning of Integration and Validation Activities V2
- **D6.3** - Specification of UC Scenarios & Planning of Integration and Validation Activities V3
- **D6.4** - Stakeholders' Feedback and Evaluation of the AI4Gov Use Cases V1
- **D6.5** - Stakeholders' Feedback and Evaluation of the AI4Gov Use Cases V2

As mentioned in the beginning, WP6 is active throughout the whole lifecycle of the project.

1.5 Relation to other WPs

WP6 is related to all WPs. Given the fact that it provides the user requirements from the pilots' side, WP6 supports the work of the technical tasks in WP2, WP3 and WP4. In addition, it takes feedback from them, in order to better specify the needs of the Use Cases. There is a close linking with T1.4 (Gender and ethics) and T1.5 (Risks and threats of AI), in combination with the HRF (WP2 or T2.1), while it is also related to WP5, since the training courses that have been developed, support the capacity building of the people involved in the pilots and the assessment activities. Finally, WP6 feeds WP7 both in terms of communication and dissemination activities, but also with the final results to structure a solid exploitation and sustainability plan and produce lessons learned and recommendations.

1.6 Target audience of the deliverable

This document constitutes the third version of the specifications of the UC Scenarios of the AI4Gov pilots, for the period M19-M30. It is an internal guide for the project's pilot manager and all project partners to use it as a reference point for understanding the UC Scenarios and the needs of the pilot partners. In addition, the document can be utilised as a practical tool for "Horizon Europe" pilot managers of on-going and future projects, who will be willing to explore the AI4Gov pilot strategy and capitalise on it, as well as a control point for the reviewers of the European Commission.

1.7 Data management

The building of the AI4Gov UCs involved a lot of data gathering from different actors such as the pilot partners themselves, their external collaborators or other publicly available data sources. In order to minimise any data related risks, the partners followed the Data Governance Framework (DGF) that was developed within the AI4Gov Project under T3.2. The DGF is a structured and comprehensive set of guidelines, policies, and procedures designed to manage, share, and protect data in alignment with the EU's legal and regulatory landscape, particularly concerning data protection and privacy. The framework ensures compliance with regulations such as the Data Governance Act, GDPR, AI Regulation, EU AI Act, and ALTAI for self-assessment. It emphasises compliance with data protection laws, clear data ownership definitions, data security through measures like encryption and access controls, and maintaining data quality through standards and validation processes. Privacy by design is integral, incorporating safeguards from the outset, and data sharing agreements are established to define the terms of data access and usage. The framework also involves structured data lifecycle management, ethical AI practices to prevent bias, accountability with designated Data Stewards and a Data Governance Committee, and continuous monitoring and compliance through regular audits and reporting mechanisms.

One of the pieces structuring the DGF is the Data Management plan (DMP) designed under WP1. The DMP outlines the overarching policy and strategy for data management within the AI4Gov project, addressing both administrative and technical aspects. It encompasses topics such as application reconfiguration logs, monitoring metrics collection, the publication and deposition of open data, details about the designated data repository infrastructure, and adherence to the

Open Access Infrastructure for Research in Europe (OpenAIRE). In addition, it contains dedicated sections where it monitors the UCs to highlight the usability, purpose and collection procedures that should be implemented on these datasets.

With that being said, all data management processes in the UCs have been carried out based on these two tools: The DGF and the DMP.

2 The AI4Gov Pilot Methodology

In D6.2, the pilot methodology was presented, following 5 overlapping phases:

Phase 1: Needs Assessment and requirements gathering [M1 – 18] (**Completed**)

Phase 2: Requirements integration to the AI tools [M3 – 24] (**Completed**)

Phase 3: Pilot implementation [M6 – 33] (**Ongoing**)

Phase 4: Evaluation and optimisation [M6 – 36] (**Ongoing**)

Phase 5: Dissemination and scaling [M6 – 36] (**Ongoing**)

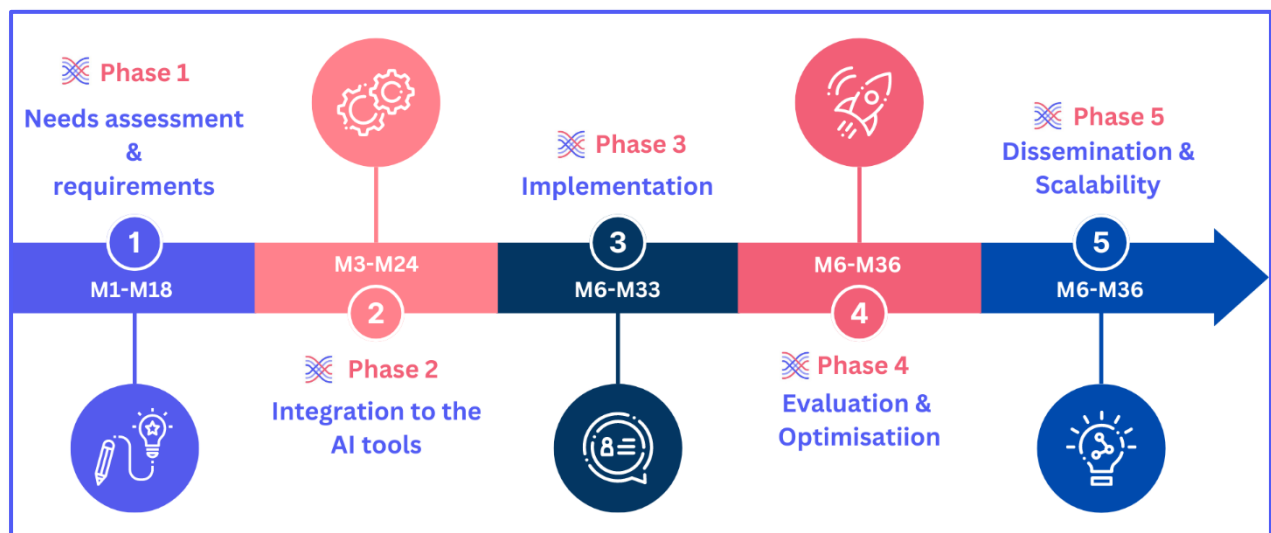


Figure 1 Pilot methodology

This deliverable is the last one including specifications and updates in the UCs, while the results of the 2nd iteration of AI4Gov activities will be included in D6.5 (M36).

Phase 1: Needs Assessment and Requirements Gathering

The needs assessment ran through the first 18 months of the projects, producing 2 deliverables: D6.1 and D6.2, to identify the requirements of the pilots and lay the foundation for AI4Gov tool development. To ensure shared understanding and early alignment, the consortium conducted co-creation sessions (aligned with MS5 and MS11), workshops, and panel discussions with pilot and external stakeholders. The first part of this phase concluded with the delivery of **D6.1** in M6, containing the initial pilot specifications, while the second part ran from M6 to M18, with the results included in **D6.2**.

Phase 2: Requirements Integration to the AI Tools

From M3 to M24, the second phase, which ran in parallel with the first for the most part, focused on translating pilot requirements into technical specifications for AI4Gov tools. This phase

maintained an iterative and dynamic character, as pilots continued to integrate new datasets to expand the scope and impact of their UCs. The results were also included in D6.1 and D6.2.

Phase 3: Pilot Implementation

During this phase, the focus is on the testing of the AI4Gov solutions in each UCs. In M24, the first validation round was completed and reported in D6.4, and now the second round is taking place, foreseen to be concluded in September 2025 (M33). During the validation workshops, feedback is being collected to feed the final evaluation of the AI4Gov activities.

Phase 4: Evaluation and Optimisation

The evaluation phase was initiated in M6 to cover both rounds of validation workshops. The first round ran in the period September - December 2024 (M21 – M24).

The first validation phase of the AI4Gov project has provided valuable insights into the performance, usability, and perceived trustworthiness of the tools developed under each use case. The results from the first phase indicate that the AI4Gov tools are progressing well toward achieving their objectives. Stakeholders recognised the tools' potential to improve operational efficiency, enhance decision-making processes, and introduce innovative solutions for policy optimisation.

The final version of the evaluation results of the AI4Gov project will be included in D6.5 which is to be delivered at the end of the project, in M36.

Phase 5: Dissemination and Scaling

Phase 5 focuses on the dissemination of project outcomes and the scalability of the AI4Gov Use Cases (UCs), running in parallel with all other phases from M6 until the end of the project in M36. This phase is closely coordinated with **WP7**, which covers both the dissemination and communication strategy and the exploitation plan. The latter is especially important for identifying new use case opportunities and helping existing ones evolve beyond the project's lifetime. Throughout this process, the involvement of professionals ensures relevance and usability, while citizen engagement brings in vital user perspectives. Furthermore, collaboration with regulatory bodies helps ensure compliance with EU AI regulations and ethical frameworks, reinforcing the trustworthiness and robustness of AI4Gov solutions.

3 Pilots and UC Scenarios

3.1 Overview

As stated in the two previous deliverables, D6.1 and D6.2, the AI4Gov solutions are tested in three (3) pilots, the Diputación Provincial de Badajoz in Badajoz (DPB), Spain, the Municipality of Vari-Voula-Vouliagmeni (VWV) in cooperation with the Greek Ministry of Tourism (MT) in Athens, Greece and the Josef Stefan Institute (JSI) in Ljubljana, Slovenia. The two pilots in Spain and Greece are implemented locally, while the Slovenian one has an international application, exploiting resources like the Sustainable Development Goals (SDGs) and the Organisation for Economic Co-operation and Development (OECD) repository. The final updates for each UC are included below.



Figure 2 Pilot sites

In total, **7 UCs** are being implemented in AI4Gov. Each pilot has a different focus in the field of policy making, adding value to the project. The JSI's pilot is implementing three (3) different use cases. One of them has two sub-UCs. The pilot sites in Athens and Badajoz have identified two UCs each. The sectors which the pilots cover are Sustainability/Health (1 sub-UC), AI Ethics & Policies (2 UCs), Tourism (2 UCs), Security (1 UC), and Water Management (2 UCs). The aim of the UCs is to facilitate policymakers on the development of automated, educated and evidence-based decisions and increase the trust of citizens in democratic processes and institutions with the support of AI.

This section provides an overview of the final updates of the Use Case Scenarios. The following information was obtained from the pilots in cooperation with the technical partners and the results of the 1st round of the UC validation and the fine-tuning period.

Table 1 UC overview

| | Use Case | | Sector | Stakeholders | AI4Gov tools | Key offerings |
|-----|---|--|------------------|--|---|--|
| DPB | Use Case #1 Water management cycle – drinking water | | Water management | Technicians at the local Waste Management public consortium | Adaptive Analytics Framework XAI Library Visualisation Workbench | Enhanced water system efficiency Reduced energy consumption Greater transparency & informed decision-making |
| | Use Case #2 Water management cycle – Sewage water | | | Policy-makers Consortium officials High-level public administration workers Citizens | Policy Recommendation Toolkit Citizen’s Wallet | Improved wastewater management Enhanced energy efficiency & risk forecasting Increased transparency & policy support |
| JSI | Use Case #1 IRCAI global top 100 projects | | Sustainability | Top100 reviewers Top100 applicants | Bias Detector Toolkit Training materials Organisational guidelines & blueprints for trustworthy AI. | Improved global SDG impact Promotion of responsible AI Support for project growth |
| | Use Case #2 SDG Observatory | Sub-UC #1 Rare diseases | | Policy makers Researchers Journalists General public | Visualisation Workbench | Enhanced rare disease research Increased awareness and transparency Scalable methodology applicable to support equitable research & policymaking. |
| | | Sub-UC #2 Bias analysis of alcohol abuse in traffic – Slovenia | | | | Bias detection in law enforcement Data-driven insights enabling fair & evidence-based policymaking Scalable framework for identifying & visualising bias |

| | | | | | | |
|-----------|--|----------------------|--|--|--|--|
| | | | | | | |
| | Use Case #3 OECD policy documents analysis | AI ethics & Policies | Policy makers Legal & ethical experts on AI Journalists General public | Visualisation workbench Policy oriented analytics & AI algorithms Blockchain | Comprehensive analysis of AI policies Interactive tools & visualisations Bias-aware evaluation framework | |
| VVV MT | Use case #1 Traffic management | Tourism | Municipal police staff and officers Policymakers - Municipal Council Citizens & visitors | Policy-Oriented Analytics & AI Algorithms Adaptive Analytics Framework Visualisation Workbench | Optimised mobility management Citizen-focused travel tools Enhanced resource allocation | |
| | Use Case #2 Waste management | | Policy Recommendation Toolkit Citizen's Wallet | Data-driven waste collection Tourism & flow insights Citizen engagement & transparency | | |

The next sections present the updates in each UC.

3.2 Policies for Sustainable Water Cycle Management at a Large Scale (DPB)

The first pilot of the project, corresponding to T6.2, is based in Badajoz, Spain, and is led by the Diputación Provincial de Badajoz. As described in the previous deliverables, the pilot focuses on developing sustainable water cycle management policies for both drinking and sewage water. By harnessing intelligent tools, the aim is to enhance efficient water management using the extensive data collection. The pilot is developing and applying advanced technologies to identify predictive methods for improving the efficiency of water treatment, distribution, and consumption. The goal is to correlate the data with potential inefficiencies in the system, such as variations in water quality throughout the treatment cycle and off-hour electricity consumption. This approach aims to provide actionable insights to optimise the entire water management process, ultimately leading to better resource use and sustainability.

3.2.1 Use Case #1 Water management cycle – drinking water

Main sector of interest: Water Management | **Keywords:** water management, drinking water, sustainability, Water Cycle, Real-Time Data, Efficiency

Updates: During the reported period, updates have been implemented in a technical level in order to optimise the tools' efficiency regarding the analysis of drinking water data. In particular, updates have been implemented in the Visualisation Workbench, Policy Recommendation Toolkit (PRT) and Wallet.

- **Visualisation Workbench**

The user interface (UI) developed in this UC is designed to simplify the input and analysis of Drinking Water data. To achieve this, data related to the variables to be predicted over the last 24 hours, obtained from the Drinking Water Treatment Plant under study, will be provided. The variables of interest include pH, chlorides, water level, and instantaneous output quantity.

Once this information is entered, the system applies advanced forecasting algorithms to generate the predicted values for the variables of interest, along with an explanation of the results. This is displayed through a heatmap chart. In this chart, the characteristics that are sufficient, as a whole, to predict the selected variable will be shown in green (at the respective time points). That is, by fixing their values, the characteristics in red can change reasonably, while the prediction of the selected variable will remain similar.

Furthermore, the results are also anchored to the projects blockchain so that the users can validate them and be certain that what they see in front of them has not been altered by a third-party but has been generated by the analytics component of the AI4Gov platform. And the users are also able to provide their feedback.

This tool helps users understand the relationships between variables and how they influence each other, thereby improving resource planning. Its user-friendly design and advanced forecasting features make it a powerful tool for making informed decisions based on past trends and predictive analytics.

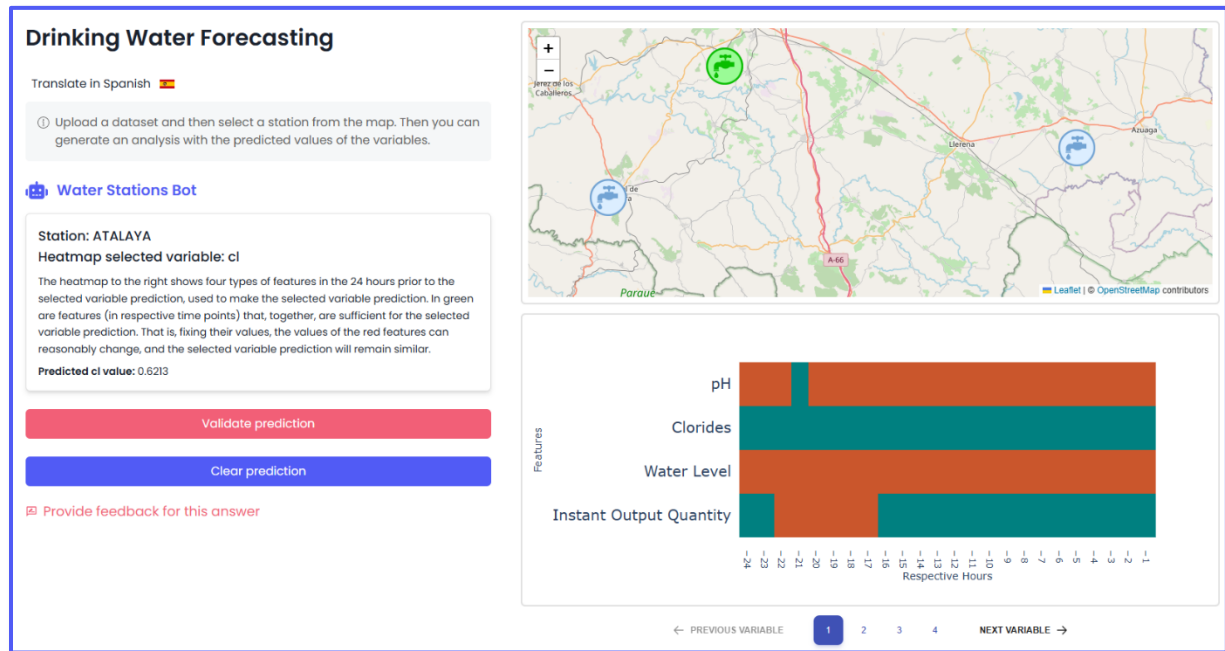


Figure 3 UI of drinking water forecasting that provides predictions, textual and visual explanations and enables users to provide feedback

- **Policy Recommendation Toolkit (PRT)**

The user interface (UI) regarding the Policy Recommendation Toolkit developed in this UC has been enhanced to support the creation and management of policies through a structured and user-friendly process. Users can initiate the creation of a new policy by selecting the relevant category from a dropdown menu. For the Drinking Water category specifically, the user is required to complete a dedicated form, as illustrated in Figure 4:

Figure 4: Policy creation form with the appropriate values for the Drinking Water category

The policy creation form begins with the selection of the Drinking Water Category from a dropdown menu. The user then proceeds to populate the form fields as follows:

1. **Title:** Enter the name of the new policy
2. **Policy:** Select one or more policies relevant to the chosen category
3. **User:** This field is pre-filled with the user's name and is non-editable
4. **Objective/Goal:** Define one or more objectives the policy aims to achieve
5. **Dataset:** Specify the dataset(s) associated with the AI models to be used for analysis in this category
6. **Area of Application:** Choose one of the available regions — Atalaya, Higuera la Real, or Valverde de Llerena — for which the prediction will be generated.

When the user presses the 'Submit' button, certain processes start running in the background. It generates a structured data form that contains all the user-provided inputs, alongside a CSV file that includes historical reports on water quality metrics.

Once the above-mentioned process is completed, the user receives feedback in the form of a window displaying all relevant information. Initially, it includes **the title of the policy** that has been entered, the **user** who submitted it, the **KPIs** generated from the analytics, as well as the **predicted values** produced by the algorithm. These outputs include forecasts for key water quality indicators such as Chlorine (CL), pH, and Water Level, as visualised in Figure 5.

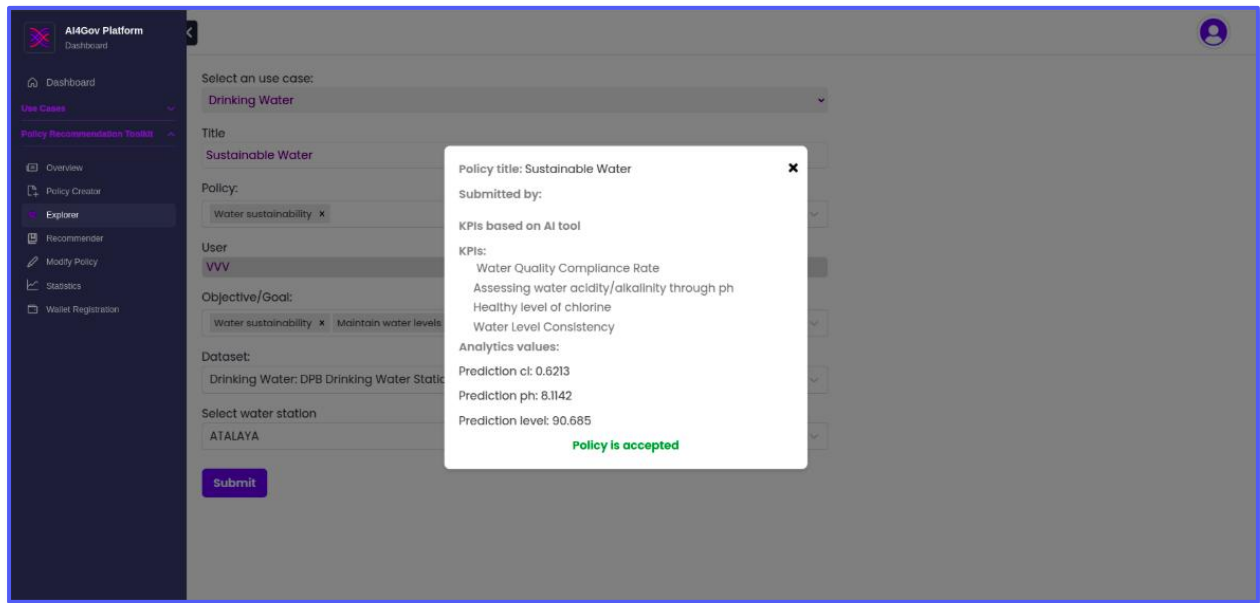


Figure 5: Output Summary – Policy Recommendations and Analytics for Drinking Water Management

- **Wallet each UC Drinking Water - Sewage Water**

As part of the Drinking Water and Sewage Water use cases, an Android-based application was deployed for mobile devices, allowing citizens to monitor policies and participate by voting and providing feedback. This process is presented below.

Application Workflow Overview

Initially, the user utilises the wallet on their personal mobile phone, simultaneously verifying their identity. From the application's home screen, they select the "**Vote Policy**" tab located in the bottom menu. On this screen, the user's stored credentials are displayed, as depicted in Figure 6.



Figure 6: Saved credentials in the wallet

After the user selects the appropriate credential, they are taken to the next screen, where a list of all policies is displayed, as depicted in Figure 7. On this screen, the user can select either 'Sewage Water' or 'Drinking Water' from a drop-down menu to display all policies related to the selected category.

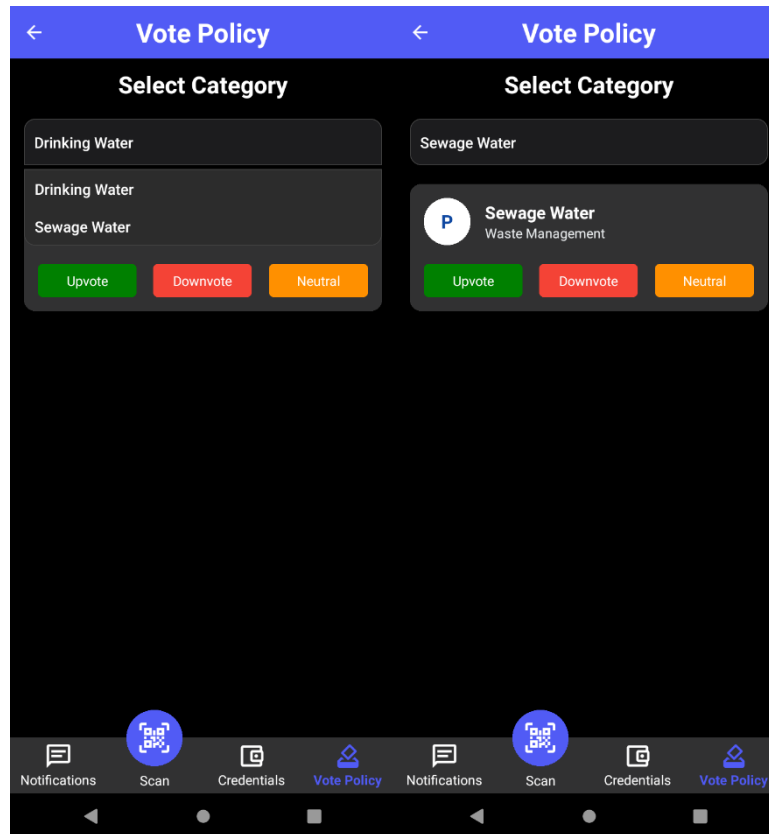


Figure 7 Select Category & Policy to vote

To access additional details about a specific policy, the user can simply click on the desired item. A dedicated window will then appear, presenting all relevant information pertaining to the selected policy, as depicted in figure 8.

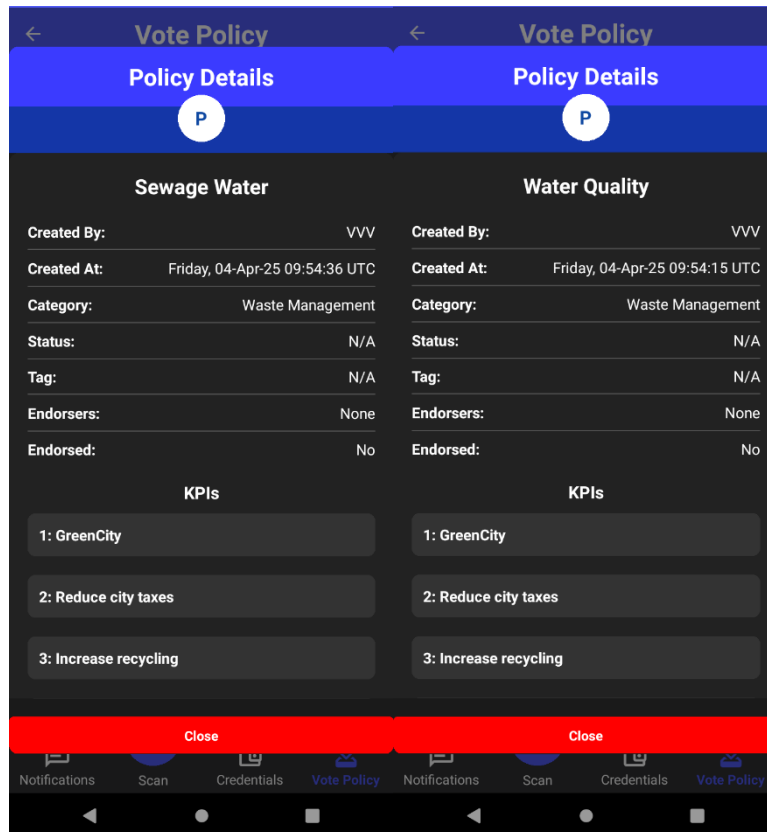


Figure 8 View policy details

Voting mechanism

For each policy, there are three different voting options: **positive**, **negative**, and **neutral**. In this case, the citizen has the ability to choose one of the three. If the citizen with the given credentials has already voted on a policy, the buttons do not appear. Instead, a message is displayed stating that the specific policy has already been voted on by the user. In the first case, '**positive**' means they **approve of the specific policy**; in the second case, '**negative**' means they **disapprove the policy**; and in the last case, '**neutral**' means they **do not express any opinion on the specific policy**. For each of these choices, a window appears confirming the voting decision, as depicted in Figure 9.

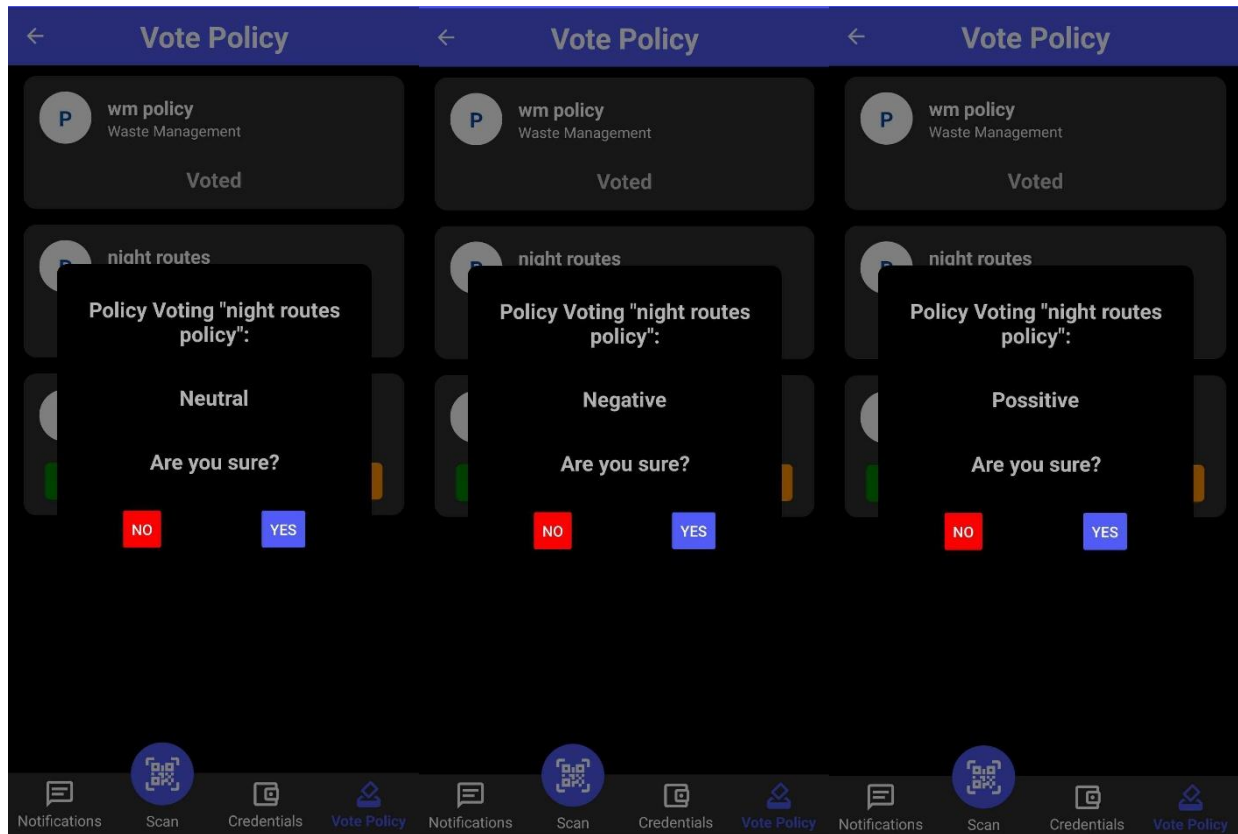


Figure 9 Vote Policy for three options (positive, negative, neutral)

After the voting process is completed, a content window appears to inform the user that the process has been completed, along with a “thank-you” message, as depicted in Figure 10.

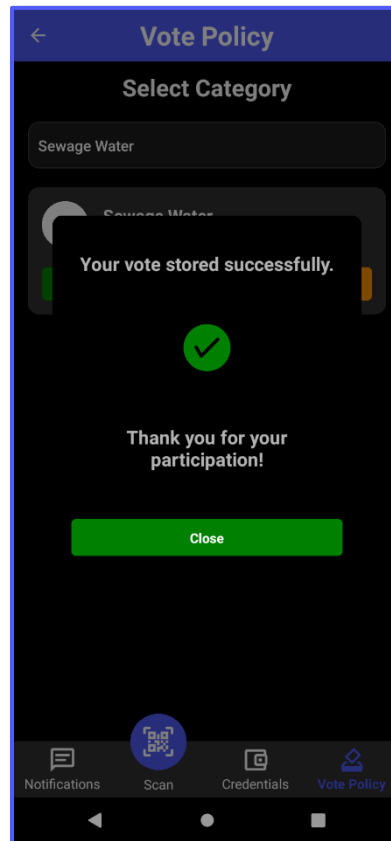


Figure 10 Successfully voting

Post-Vote Results and Transparency

Finally, the voting process has been completed. The user now returns to the previous screen and can no longer vote for the same policy again. Additionally, they can check the policy details by tapping on it, with the difference that in the new window that appears, the current ballot results will also be displayed, Figure 11. At this point, it is worth noting that the result reflects the difference between the participation counts rather than the total number of votes. This helps to avoid bias.

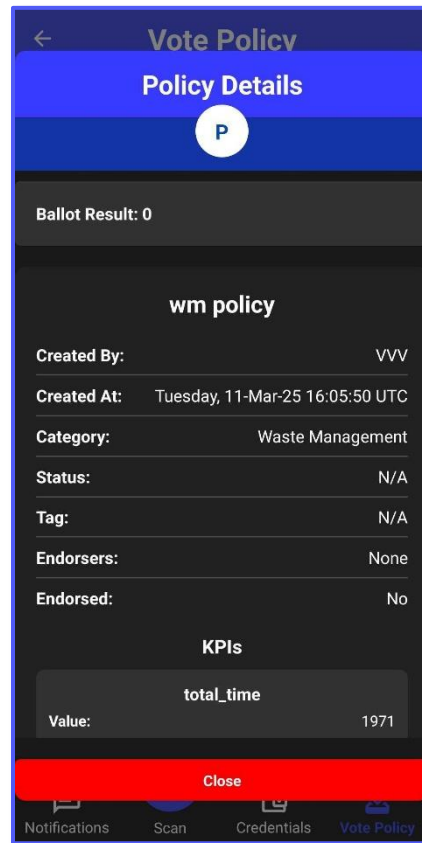


Figure 11 Ballot results after completing vote

3.2.2 Use Case #2 Water management cycle – Sewage water

Main sector of interest: Water Management | **Keywords:** water management, sewage water, sustainability, Water Cycle, Real-Time Data, Efficiency

Updates: During this period, there have been technical updates in the two key components to support efficient and sustainable management of sewage water, the Visualisation Workbench, the Policy Recommendation Toolkit (PRT) and the Wallet. Below are the updates for each of these components.

- **Visualisation Workbench**

In this UC, the user interface serves as a tool to analyse wastewater variables related to energy consumption. For this purpose, data related to the variables to be predicted over the last 7 days, obtained from the Sewage Water Treatment Plant under study, will be provided. The variables of interest are related with energy consumed, active power and reactive power.

Once this information is entered, as in the previous UC, the system uses advanced forecasting algorithms to generate the predicted values for the variables of interest, along with an explanation of the results. This is displayed through a **heatmap chart**. In this chart, the characteristics that, as a whole, are sufficient to predict the selected variable will be shown in

green (at the respective time points). That is, by fixing their values, the characteristics in red can change reasonably, while the prediction of the selected variable will remain similar.

Additionally, the results are securely recorded on the project's blockchain, allowing users to verify their authenticity and ensure that the data they see has not been tampered with by any third party, but has instead been generated by the analytics component of the AI4Gov platform. The users are also able to provide their feedback.

This tool provides valuable insights, aiding proactive decision-making in wastewater treatment and environmental management. Its user-friendly interface and sophisticated forecasting capabilities make it a critical resource for understanding and managing sewage water quality based on historical trends and predictions.

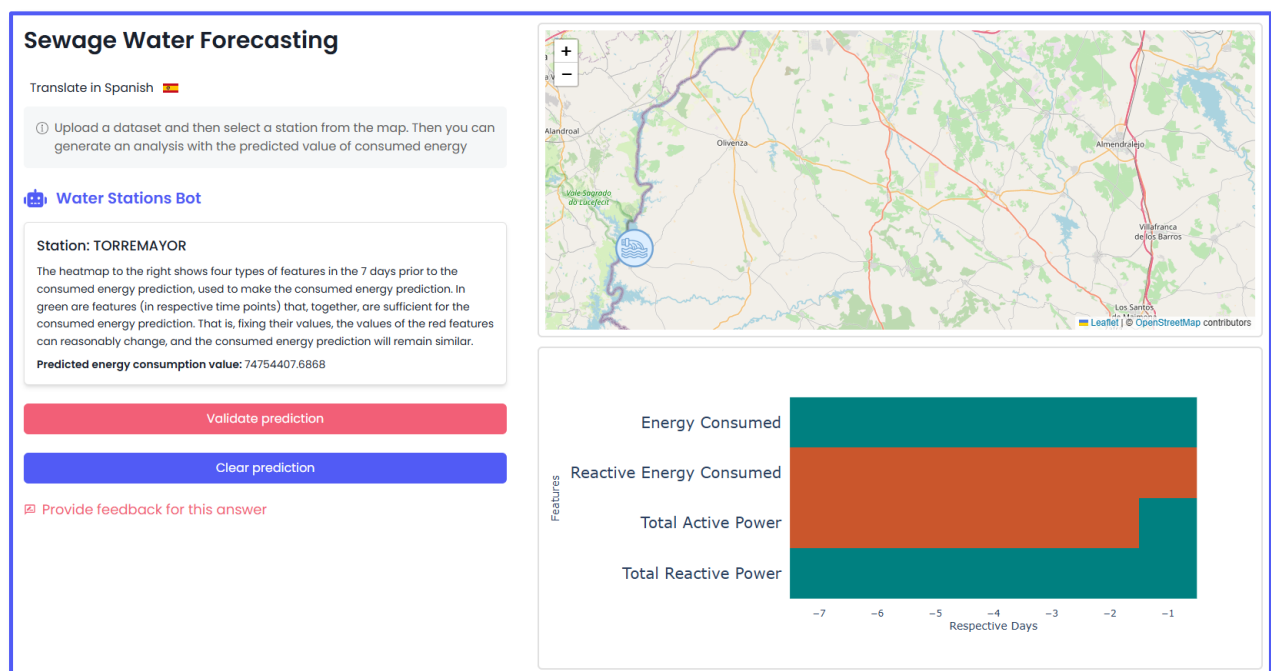


Figure 12 UI of sewage water forecasting that provides predictions, textual and visual explanations and enables users to provide feedback

- **Policy Recommendation Toolkit (PRT)**

The **Policy Recommendation Toolkit (PRT)** allows users to create and manage water-related policies in a structured and transparent manner. For the **Sewage Water** category, the UI guides users through a dedicated form accessible from the main menu to create a policy, as depicted in Figure 13.

The policy creation form begins with the selection of the *Sewage Water* category from the dropdown menu. The user then proceeds to populate the form fields as follows:

1. **Policy Title:** Enter the name of the new policy.

2. **Policy Field** Select one or more predefined policies relevant to this category.
3. **User Field:** Automatically filled with the username; this field is not editable.
4. **Objective/Goal:** Define one or more goals the policy intends to achieve.
5. **Dataset Field:** Choose the dataset that will inform analytics and predictions
6. **Area Selection:** Choose one of the available treatment plant locations: EDAR Cheles, EDAR Oliva de la Frontera, EDAR Torremayor

The screenshot shows the 'Policy Creator' interface within the AI4Gov Platform. The left sidebar contains navigation links: Dashboard, Use Cases, Policy Recommendation Toolkit, Overview, Policy Creator (active), Explorer, Recommender, Modify Policy, Statistics, and Wallet Registration. The main form area is titled 'Select a Category:' and has a dropdown menu set to 'Sewage Water'. Below this, the 'Title' field is 'Sewage Policy'. The 'Policy:' field contains 'Water sustainability x'. The 'User' field is 'VVV'. The 'Objective/Goal:' field contains 'Water sustainability x'. The 'Dataset:' field is 'Sewage Water: DPB waste water treatment plant Sensors'. The 'Select water station' dropdown is set to 'EDAR Cheles'. A purple 'Submit' button is at the bottom left of the form area.

Figure 13 Policy Form Interface – Sewage Water Category

When the user presses the 'Submit' button, certain processes start running in the background. A form is created that contains the necessary information that has been entered, as well as an additional CSV file that includes the history of previous reports regarding energy consumption.

After submission, the user receives feedback through a results window displaying all relevant information. Initially, it includes the **title of the policy** that has been created, the **user** who submitted it, the **KPIs** generated by the analytics, as well as the **predicted values** produced by the algorithm. These values include the prediction of energy consumption as well, as depicted in the Figure 14.

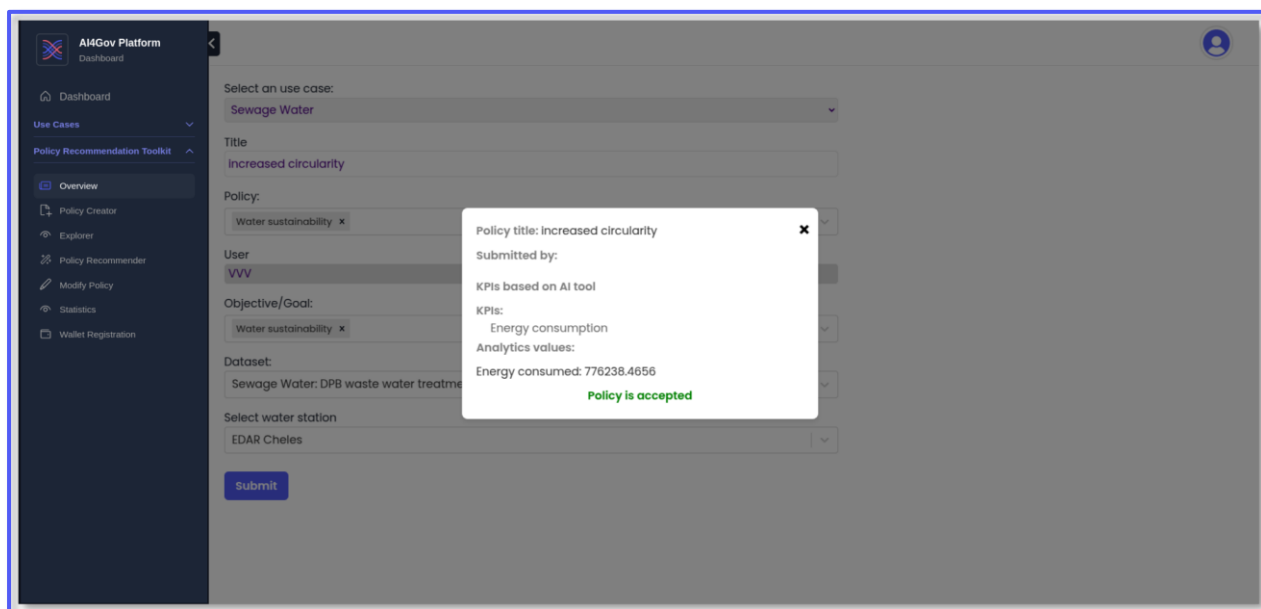


Figure 14 Policy Summary and Analytics Results – Sewage Water Management

- **Citizen Wallet**

The updates for the Wallet in this UC are the same with the Drinking Water UC. For the updates please see 3.2.1.

3.3 Sustainable Development and the European Green Deal (JSI)

The second pilot, corresponding to T6.3, is implemented by the Jožef Stefan Institute (JSI), specifically through its International Research Centre on Artificial Intelligence (IRCAI), which operates under the auspices of UNESCO. JSI is implementing three UCs, with one of them including two sub-UCs. The latter is the SDG observatory which nests the sub-UCs of alcohol abuse and rare diseases. The following sub-sections present the updated descriptions of these UCs along with their achievements to date.

3.3.1 Use Case #1 IRCAI global top 100 projects

Main sector of interest: Sustainability | **Keywords:** SDGs, IRCAI, Top100 projects

Updates: In this UC, JSI/IRCAI has started to prepare the new edition of the Top100 call, where we plan not just get submissions of impactful, ethical and scalable AI tools and AI-supported solutions advancing the SDGs across sectors, regions and development stages, but also to create a matchmaking platform with a business and potential investors. Projects in more advanced stages will be invited to participate in a dedicated matchmaking process and will have the opportunity to be introduced to our network of corporate partners, public institutions (for government pilots), grant-making foundations (for non-profits) and R&D sponsors (for academic teams). As part of this effort, IRCAI has also produced interactive data visualisations hosted on the SDG Observatory

portal, providing real-time insights into trends and thematic focus areas. The goal is to scale impact through strategic partnerships and support real-world integration.

Goals of the renewed project:

- Achieve 300 submissions in 4 months
- Highlight the ethical aspect of submissions with a focus on bias in AI
- Establish the Global Top 100 as the world's premier index for AI for SDG impact
- Create a matchmaking platform with a business model
- Drive global visibility, high-quality submissions, and fostering new partnerships for IRCAI.
- Increase brand visibility of IRCAI and Global Top 100 in AI for Good ecosystems
- Position IRCAI as a trusted platform for scaling impactful AI projects
- Attract diverse applicants across sectors (startups, academia, public sector, nonprofits)
- Cultivate partnerships with key stakeholders and sponsors

Progress and Timeline

IRCAI's team has prepared a dedicated launch website and PR materials and had several meetings with potential sponsors and partners. JSI is also in contact with international AI experts and industry leaders that will be part of a panel that will review the projects.

Call launch was on **June 2, 2025**, and submissions deadline is **October 1, 2025**. In October 2025 the evaluation phase will take place and from October 2025 till March 2026 there will be a matchmaking phase where selected high-quality projects will be introduced to potential investors and partners.

IRCAI's team is planning to prepare the **Top 100 Report**, which will be a reference document distributed to decision-makers, international organisations, funders and research institutions with the description of selected projects. Selected projects will also receive an **official certificate** and **digital badge**, and the 10 highest-rated projects will be spotlighted at an international event in February 2026 before a world-class panel of experts.

This UC follows the timeline of the Top100 projects initiative. Any results generated before the end of AI4Gov are considered pilot results, while any results generated after the end of the project will be reflected in the exploitation and sustainability plan.

Evaluation Criteria

IRCAI's team also defined evaluation criteria, with a special emphasis on ethical and responsible AI practices. A panel of international AI experts and industry leaders will evaluate:

- AI Maturity and Technical Strength
- SDG Alignment and Relevance
- Ethical and Responsible AI Practices
- Implementation and Scaling Potential

Data Visualisation in the SDG Observatory

Based on the past Top100 submissions' data, the team also developed two interactive visualisations that are available through the [SDG Observatory portal](#) currently focusing on data from the Top100 initiative within a wider scope of innovation ecosystems on AI and Sustainability (see Section 3.3.2). These visualisations can help users and Top100 team better understanding of the various topics covered by Top100 submissions.

1. Innovation Landscape Overview

The first one provides an in-depth look at the various topics engaged by different actors within the existing innovation ecosystem focused on AI and sustainability. It highlights the key areas of innovation, research, and development that are driving progress in the intersection of AI and sustainable development.

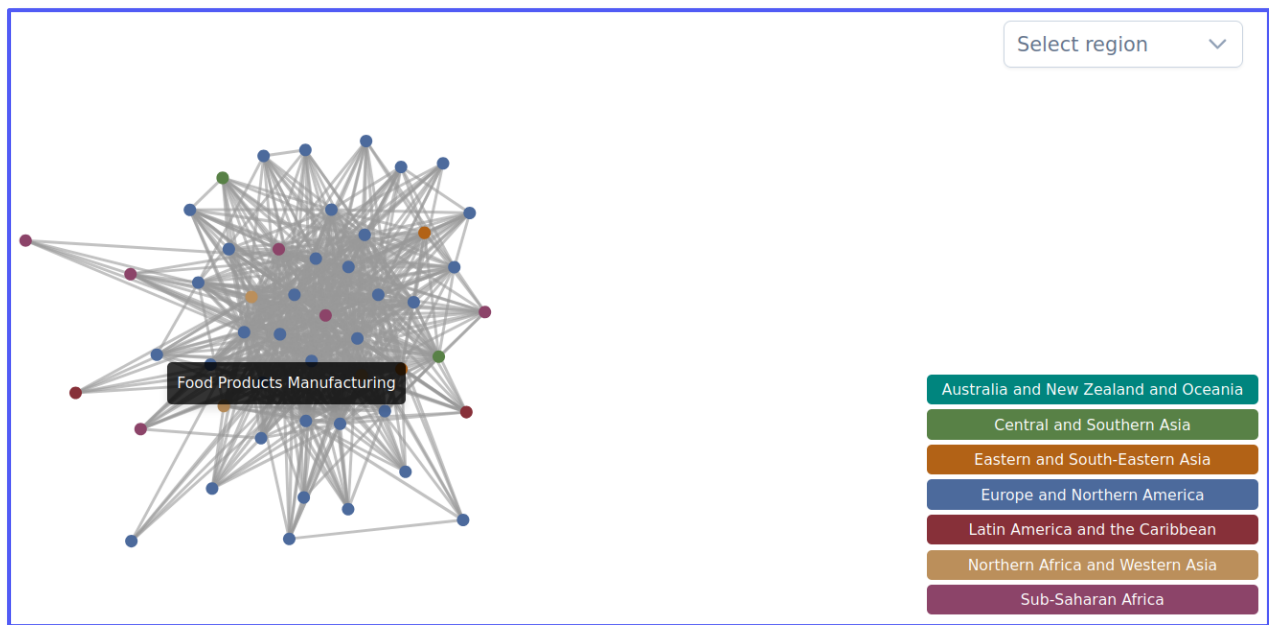


Figure 15 The key areas of innovation, research, and development in Top100 projects. Visualisation available at: <https://news-widget.pages.dev/innovations/collaboration>

This visualisation helps users identify emerging trends, key players, and critical areas of focus within the innovation landscape. By exploring this visualisation, user can better understand how different actors—such as research institutions, enterprises, and governmental bodies—are tackling sustainability challenges with AI technologies, providing valuable insights into the current state of innovation in the field.

2. Topic-SDG Alignment Explorer

With the second visualisation user can explore the various topics and subtopics associated with existing initiatives that are dedicated to advancing specific objectives related to the selected SDG. This visualisation provides a detailed look at the ongoing efforts and innovations that are making significant contributions to the achievement of the SDG.

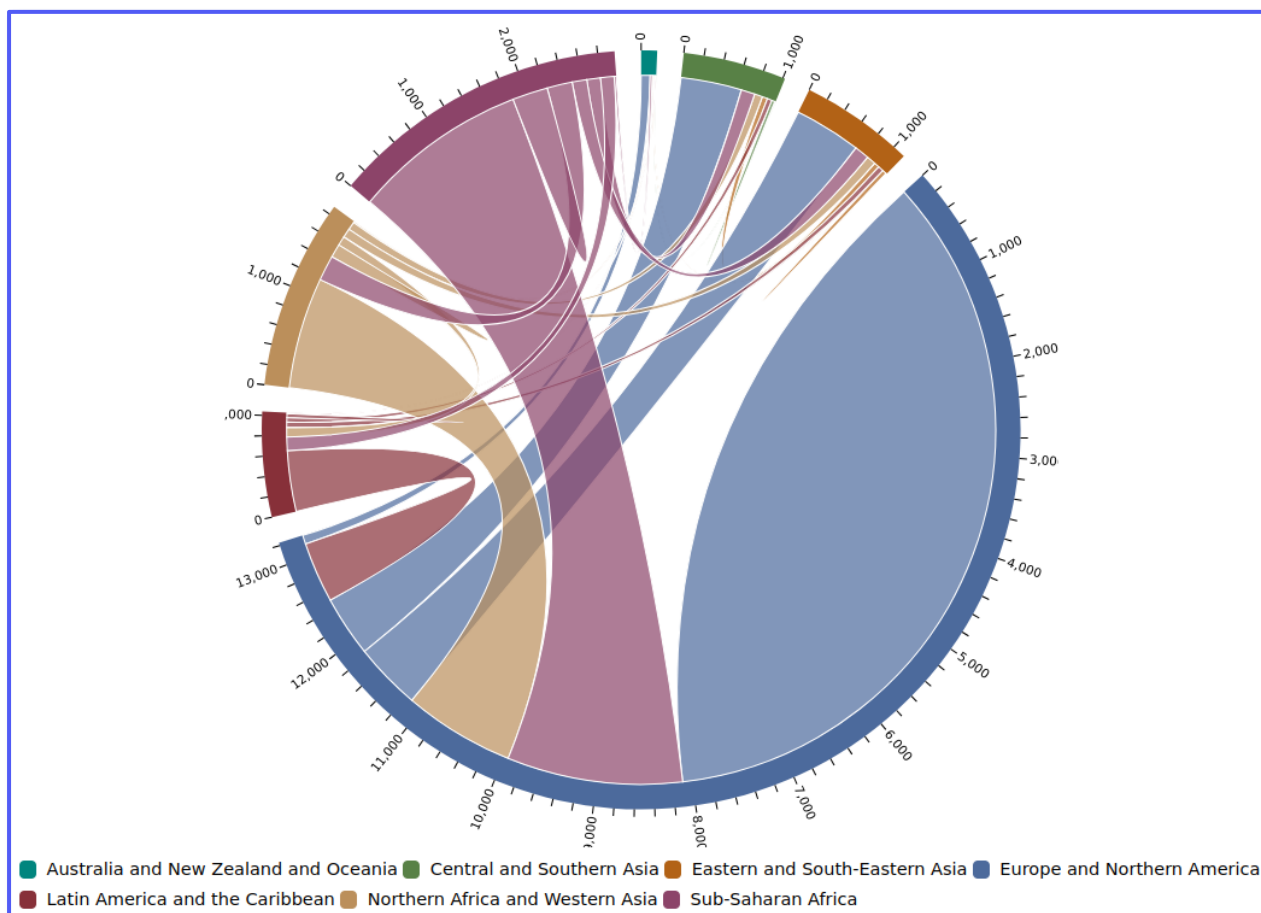


Figure 16 SDG topics visualisation

The various topics and subtopics associated with existing initiatives that are dedicated to advancing specific objectives related to the selected SDG. This visualisation provides a detailed look at the ongoing efforts and innovations that are making significant contributions to the achievement of the SDG. Visualisation available at: <https://news-widget.pages.dev/innovations/relations>.

By engaging with this tool, user can gain a deeper understanding of how different initiatives are aligned with the progress of the SDG, as well as identify the key areas where AI-driven solutions are being applied to achieve specific SDG targets.

3.3.2 Use Case #2 SDG Observatory

Main sector of interest: Sustainability | **Keywords:** SDGs, IRCAI, SDG achievements, bias

The UC of the SDG observatory includes 2 sub-UCs: the **“Rare diseases”**, which is the main application of the Observatory methodology, and the **“Bias analysis in Breathalyser Alcoholmeter”** which explores the transferability of this methodology to a new policy domain. Both sub-UCs address the challenge of bias arising from missing or incomplete data, a critical issue when designing responsible AI systems for public services.

3.3.2.1 Sub-UC #1: Rare diseases

Updates: In scenarios when data are not available or missing, developing unbiased AI solutions becomes particularly challenging. This sub-use case addresses that issue by developing a methodology for missing data analysis in the context of rare diseases. The primary aim is to identify areas with insufficient data coverage and encourage targeted efforts to collect additional data from those regions.

The idea is to show where the problem of missing data is and then initiate more extensive data collection from those missing areas. This methodology has been implemented in the area of rare diseases which is facing a bias because of data incompleteness. Although a comprehensive understanding necessitates data from all corners of the globe, the reality is that more data predominantly originates from Western countries, where healthcare systems are more developed.

To address this, our use case already implemented an advanced analytics pipeline to ingest data about rare diseases from so called patient-reported outcomes (PROs) repositories and caregiver-reported outcomes (CROs). Patient-reported outcomes (and caregiver-reported outcomes are any reports coming directly from patients (or caregivers) about how they function or feel in relation to a health condition and its treatment, without interpretation of the patient's responses by a clinician, or anyone else).

In the very first version, the pipeline has been focused on the Kleeftstra syndrome PRO data, but now we **extended pipeline to cover 83 rare diseases** from GenIDA repository. Web application now allows the user to select a rare disease and **see the visualisation of missing data**. We also implemented weighting according to number of people in a specific country, so results are more comparable.

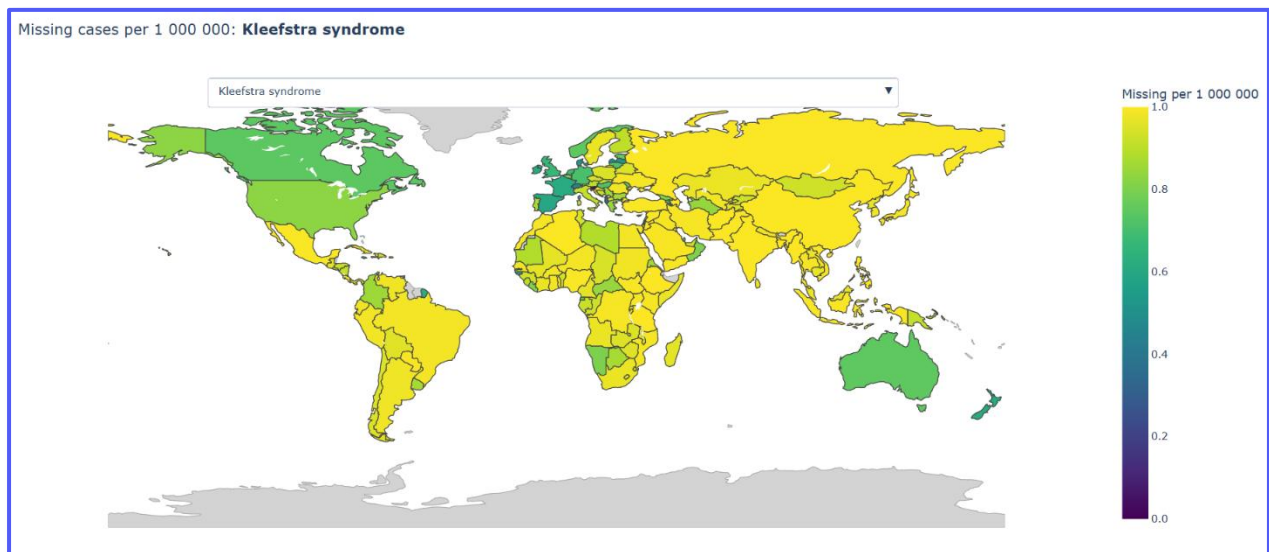


Figure 17 Missing data analysis in the use case of rare diseases.

This sub-use case is already **integrated into the AI4Gov platform**, enabling stakeholders to gain actionable insights about global data disparities in rare disease reporting.

3.3.2.2 Sub-UC #2: *Bias analysis in Breathalyser Alcoholmeter - Slovenia*

Updates: This sub-use case builds on the rare diseases methodology and applies it to a new domain, **alcohol testing data in traffic-related incidents in Slovenia**. The goal of this use case is to identify areas of missing or underreported data in order to highlight potential sources of bias and guide improved data collection practices.

Slovenian police have several databases with breathalyser data. When police treat traffic accidents, they are required to breathalyse traffic accident participants if there are physical injuries or death or if the police officer thinks that the participant is likely intoxicated. These data are stored in a **database of traffic accidents**, and this database contains data about participants of traffic accident with exceeded alcohol, participants with allowed alcohol and participants without any detected alcohol.

Another database is a **database of traffic offences**, which contains data about random tests carried out as a part of traffic control. This database contains all cases where a driver had exceeded alcohol levels, but (and this was highlighted during the workshops with police experts) unfortunately police officers do not always record cases when there is no violation (i. e. driver has not been found intoxicated). This could be a great cause of missing data.

Obtaining access to this data was time-consuming, but the team succeeded in compiling and preparing it for analysis. One of the challenges encountered was the **lack of precise geolocation data**. Some data is available at the **municipality level**, some by **administrative unit**, and others only by **larger police administrative units**, which include several smaller regions. To ensure consistency, the team **aggregated all data by police administrative units** and developed **visualisations** to show the ratio of breathalyser tests to traffic accidents (e.g., tests per 100 accidents).

The team prepared analysis of ratios of how many breathalyser tests were ordered per all accidents (ordered breathalysers per 100 accidents), and the data shows that there are differences among police administrative units. During the workshops with the police experts it turned out that there are some specifics that could explain the differences among the regions, including staff capacity and **de-bureaucratisation**. Police experts also highlighted the fact **that police databases are incomplete** and that the **methodology for collecting the data is also unclear and deficient**. This sub-use case demonstrates clear **bias in data collection** due to procedural gaps and highlights the need for **standardised, mandatory data recording** policies.

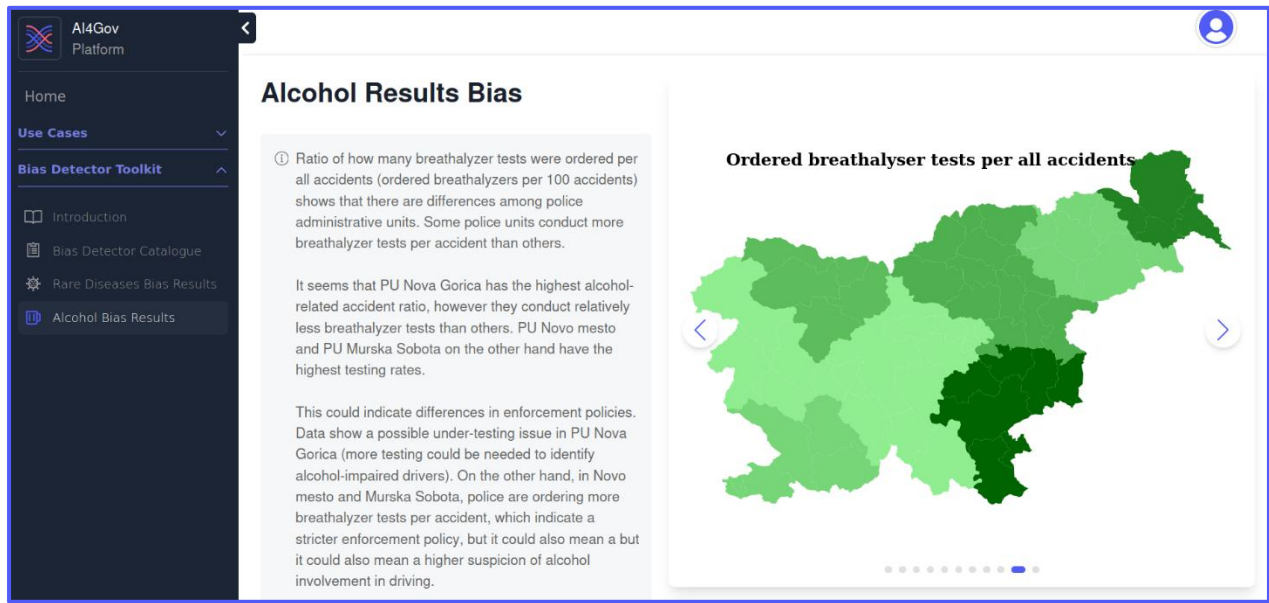


Figure 18 Integration of analysis and visualisation of missing data analysis in the case of breathalyser testing data in Slovenia.

It has also been successfully integrated into the AI4Gov platform.

3.3.3 Use Case #3 OECD policy documents analysis

Main sector of interest: AI Ethics & Policies | **Keywords:** OECD papers, AI policies, anti-bias strategies

Updates: During the reporting period, the first version of policies chatbot received critical feedback. The main suggestion was to enable users to view the source of the documents referred in the answers provided by the LLM, thereby improving transparency and credibility. Another recommendation was to link those references to the bias tools library provided by AI4GOV.

In the new version of the policies chatbot the implementation and user interface have been updated to not only extract answers from policy documents but also allow the users to view the source documents in order to compare them, as shown in the following two images.

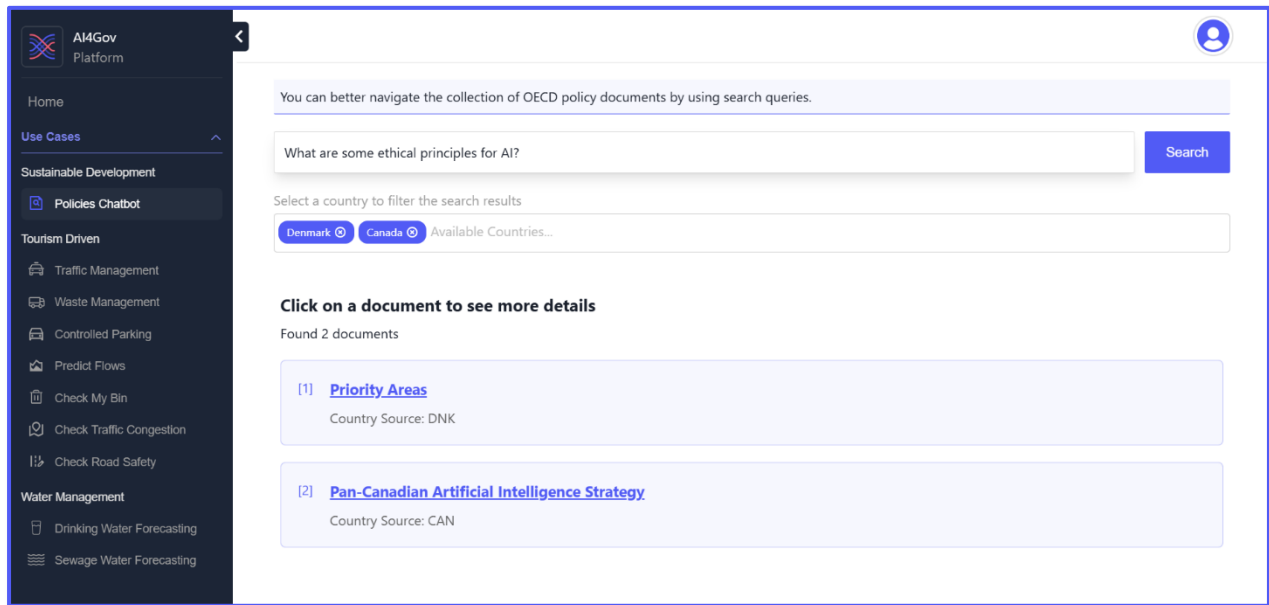


Figure 19 Refactored UI of policies chatbot that supports simultaneous answer extraction from documents of different countries

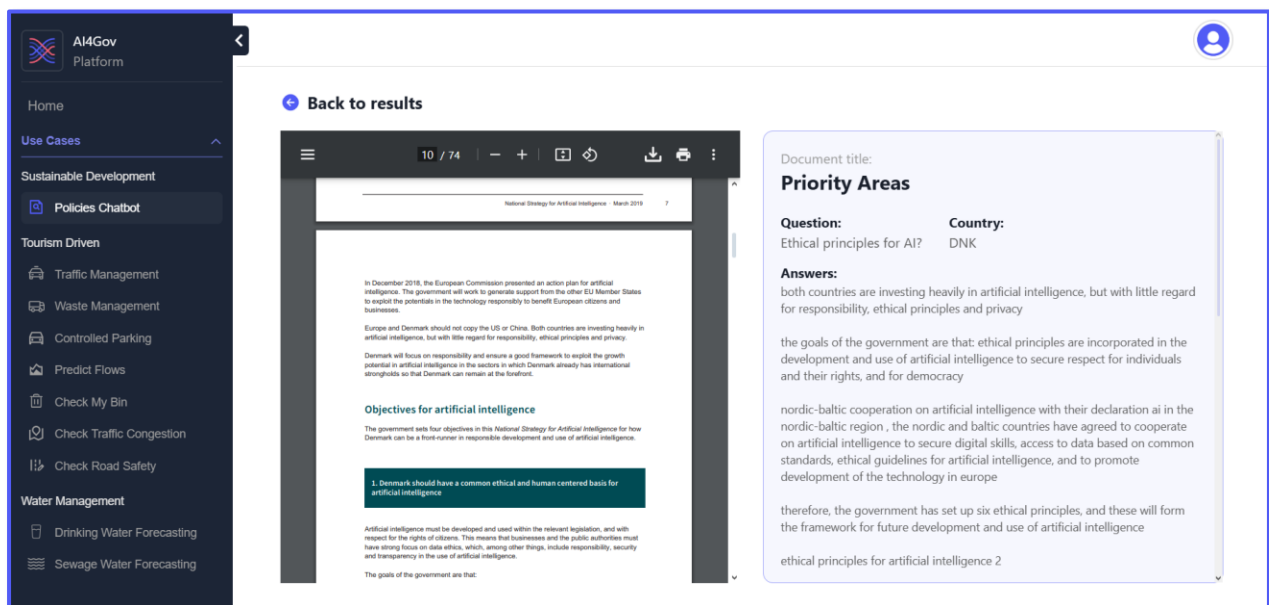


Figure 20 Example of answer extraction and display of source document for further reading

Advanced Visualisations for Policy Trends

Since the observation of policies applied worldwide on SDGs is fundamental to better understand the progress of the global action, we also prepared **two complex interactive visualisations** to explore the **topics related to the legal and regulatory landscape** from these data using

sophisticated data analytics and machine learning methods, such as automated text classification, SDG annotation based on text similarity, and sentiment analysis. They are accessible on the [SDG Observatory website](#). These visualisations form the **"Policy" vertical** of the Observatory (linked with Section 3.3.2), offering new perspectives on the legal and regulatory landscape.

1. SDG Barcode

The first is called **"SDG barcode"** and allows the user to observe the current weight of various SDG topics in the policy and legislative landscape for the selected SDG or for all documents (fed at the OECD AI dataset). It is based on an SDG Ontology (made available at IRCAI's GitHub repository) developed together with UNESCO and IRCAI's domain experts highlighting 10 priority topics per SDG, referenced as Wikidata concepts. The interactive SDG barcode visually represents the prominence of different topics within policies related to the chosen SDG, in the different world regions (selected from the dropdown menu).

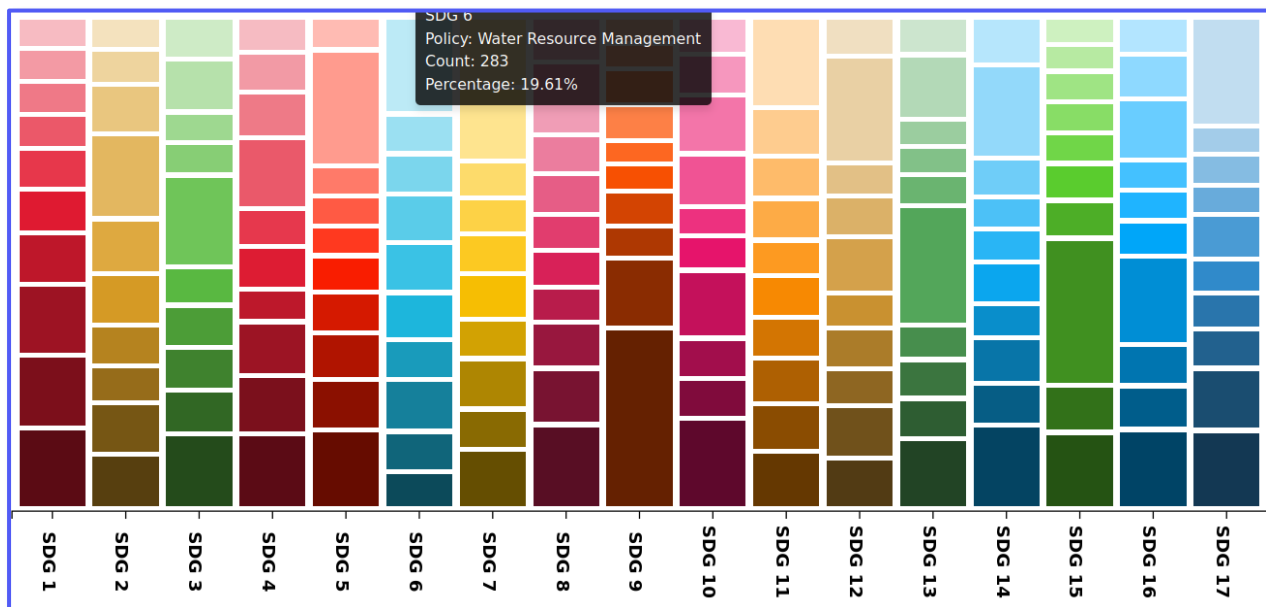


Figure 21 The current weight of various SDG topics in the policy and legislative landscape. The interactive SDG barcode visually represents the prominence of different topics within policies. Visualisation available at: <https://news-widget.pages.dev/policy/heatmap>

Taking into consideration that there is an initial choice of the SDG, then those represented in the SDG barcode are intersecting two SDGs: the one initially selected and that SDG represented in the column of the SDG barcode. By hovering over them, users can explore which topics are being prioritised in current legislation across different world regions.

2. Insights Map

The second visualisation is called "**Insights**" and allows user to observe the evolving relationships between **key concepts identified in legal and regulatory documents** related to the selected SDG (or for all documents). By analysing the frequency of these concepts within policy documents, user can gain insights **into how different topics are interrelated** and **how their prominence shifts over time** in the context of the chosen SDG or for all documents (all SDGs). Once again, the user can have a global view or choose a specific world region. To overcome language barriers, we have implemented the wikification (using the JSI technology wikifier.jsi.si) of the title and body of each document to detect the most relevant Wikidata concepts (which in the case of English language documents is added to the keyword search). The metrics of approximation of the OECD AI policy documents to each SDG correspond to the amount of wikidata concepts detected in the title, description and wikification referring to that SDG.

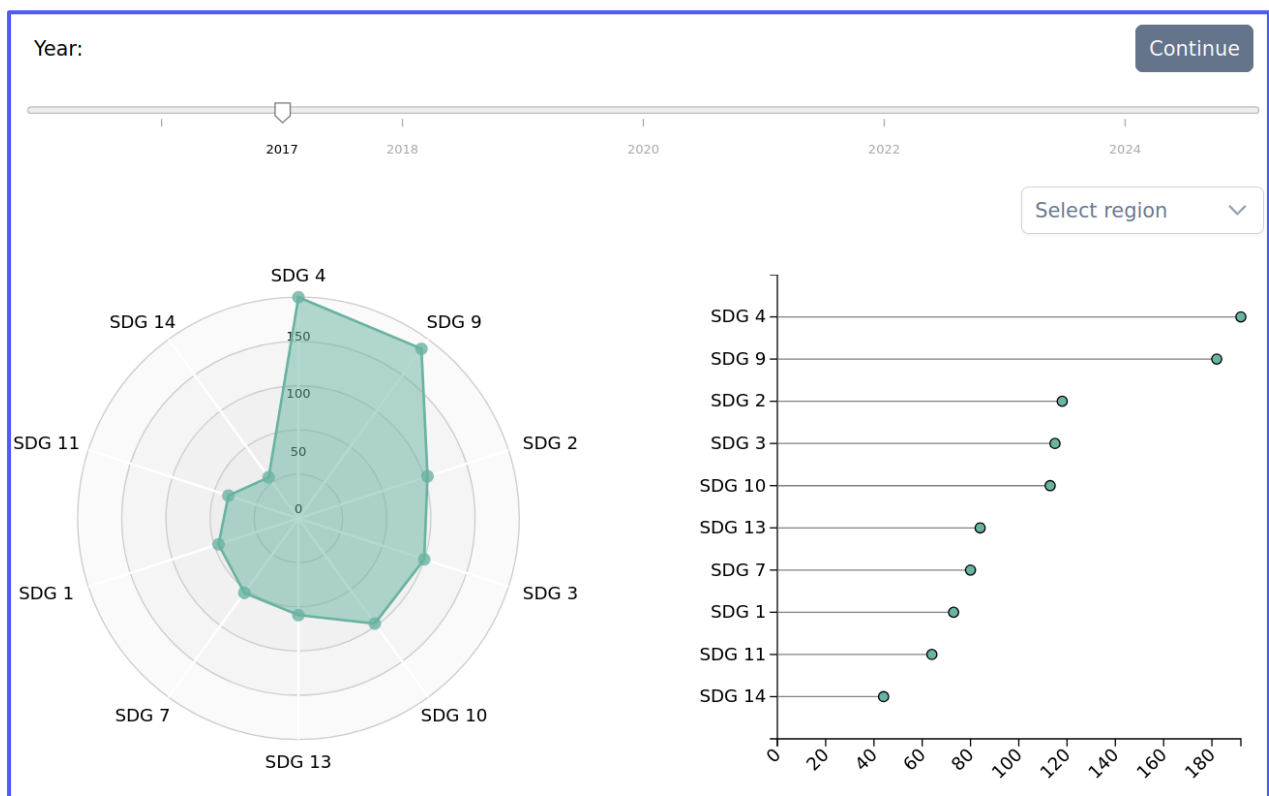


Figure 22 Evolving relationships between key concepts identified in legal and regulatory documents. Visualisation is showing the frequency of these concepts within policy documents. Visualisation available at: <https://news-widget.pages.dev/policy/radar>

The visualisation is intended to explore how concepts are linked within the policy landscape, providing an understanding of the areas that are receiving more focus and those that might need further attention. The relationships between these concepts are mapped according to their frequency and the SDG they correspond to in the policy documents.

Value for Policymakers and Stakeholders

These two visualisations of OECD AI policy documents offer a comprehensive overview of policy trends and legislative priorities and provides policymakers with valuable insights into how different SDG topics are being addressed at the policy level, helping to guide more targeted and effective legislative action for sustainable development. On one hand, they provide the worldwide distribution of priority SDG-related topics measuring their importance on the collected AI policies for each of the SDGs, and on the other hand they infer in a timeline between 2017 and 2024 what are the main SDGs present in those policies and how they vary over the years.

3.4 Tourism-driven multi-domain policy management and optimisation (VVV/MT)

The final AI4Gov pilot, corresponding to T6.4, is implemented by the Municipality of Vari-Voula-Vouliagmeni (VVV) in Athens, in collaboration with the Greek Ministry of Tourism (MT). The pilot aims to identify and predict citizen flows and develop integrated, multi-domain policies to manage both people and vehicle movements efficiently. VVV has defined two Use Cases (UCs) focusing on Traffic Violations management and waste management. These UCs are further detailed in the sub-sections below. Before moving to the updates for each use case, it is important to mention that a foundational component of this effort was a comprehensive survey conducted by the Ministry of Tourism to map tourist profiles in VVV. This research provided essential data on visitor behaviors, stakeholder perceptions of municipal services, and public attitudes toward the use of AI, helping to inform and shape the pilot's design.

3.4.1 Survey on tourist profiles in the municipality of VVV

3.4.1.1 Research Outline

In the framework of the AI4GOV project-Pilot 3 “Trustworthy data-driven tourism policies” of the EU-funded Horizon Europe Program for Research and Innovation for the programming period 2021-2027, the Ministry of Tourism of Greece is conducting **primary qualitative and quantitative research with the twofold aim to:**

- understand **the views of visitors, permanent residents, employees and business owners of the municipality of Vari-Voula-Vouliagmeni regarding the use of Artificial Intelligence tools,**
- **collect qualitative and quantitative data on tourism flows** in the Municipality of Vari-Voula-Vouliagmeni.

The Municipality of Vari-Voula-Vouliagmeni is a touristic destination and therefore should accommodate the needs of residents and travelers alike, including one-day visitors from the region of Attica. The insights gained by the collection and analysis of the data will contribute to the improvement of the Municipality's services towards residents, businesses and visitors and help address issues that are exacerbated by the considerable tourist flows in the area. All stages of the primary research were conducted in-house by the Ministry's Directorate of Research.

3.4.1.2 Phase 1: Qualitative research. Semi-structured interviews (May-July 2024)

A series of **semi-structured interviews** were conducted with **key stakeholders** at the Municipality, including hotel managers, travel agencies and other tourism enterprises, as well as the Hoteliers' Association for Athens and the Region of Attica.

The purpose of the research was threefold:

- to identify the **visitors profile** in the Municipality of Vari-Voula-Vouliagmeni,
- to understand the **preferences** and the **points of interest** of the visitors staying at the municipality's hotels as well as daily visitors,
- to assess the Municipality's **services and the usefulness of the applications** used for the management of public spaces.

An **interview guide** was used during the interviews, which was adapted to each key stakeholder category. The guide ensured that during the interviews all topics were covered, and enough flexibility was provided to allow key informants to freely express their views on the subject.

3.4.1.3 Phase 2: Desk research (November 2024 – December 2024)

An **extensive exploratory literature review** was carried out, which covered the following topics concerning municipal services and the use of AI:

- Cleanliness
- Traffic Regulation
- Parking
- Recycling
- Beaches
- Road and sidewalks maintenance
- Accessibility

3.4.1.4 Phase 3: Quantitative field research (November 2024-ongoing)

Results from both interviews and desk research served as background information to plan phase 3, which includes extensive quantitative research among residents, visitors, local businesses and employees in the Municipality.

Questionnaires Structure

Questionnaire for permanent residents: The questionnaire was formed in early November 2024. It includes a total of 12 questions (10 close-ended questions and 2 open-ended questions). The questions concern, among others, the popular places to visit in the Municipality, the assessment of the impact of visitors on specific areas (noise pollution, parking, etc.), the assessment of the services of the municipality in specific areas (cleanliness, recycling, Novoville application, etc.), the assessment of the potential of Artificial Intelligence in improving municipal services. Questions concerning basic demographic data of the survey participants are also included.

Visitors' questionnaire: The questionnaire was formed in early November 2024 and was translated into English to facilitate distribution to Greek and foreign visitors. It includes a total of 18 questions (15 close-ended questions and 3 open-ended questions) on the demographic characteristics of the respondents, their tourism experience, the evaluation of municipal services as well as an assessment of the potential of AI to contribute to the improvement of municipal services.

Questionnaire for the municipality's employees: In December 2024, an additional questionnaire was created, addressed to the **municipality's employees**. This includes a total of 9 questions (2 open-ended and 7 close-ended), which concern the impact of visitor flows in specific areas as well as the ability of AI tools to improve municipal services.

Questionnaire for businesses: It includes a total of 12 questions (10 close-ended and 2 open-ended). The questions aim to assess the impact of visitor flows in specific areas, the Municipality's services as well as the use of smart tools to improve municipal services.

The questionnaires were posted on Google forms but were also available for completion in printed form, whenever this was deemed necessary. Google forms were chosen because questionnaires hosted there can be filled in by many participants, the answers are automatically recorded, and the processing and analysis of all data becomes easier. The questionnaires were filled in anonymously, always with the informed consent of the participants.

Sampling method

The survey is addressed to residents, visitors, employees and business owners of the municipality of Vari-Voula-Vouliagmeni, aged 18 and over. Due to the difficulty of approaching such a large population, as well as the limited time in which the survey had to be completed, the **convenience sampling method** was used, in which participants were selected based on the ease with which we can approach them.

Regarding residents and visitors, to make the sample as diverse as possible and to increase the participation of the subjects under study, an effort was made to **collect responses on different days and times at different points of interest in all three communities of the municipality**. The **selection of the survey sites was based on the results of qualitative research**, which **identified areas that attract the interest of visitors**, such as: Lake Vouliagmeni, the municipality's beaches, areas with shops and cafes, the coastal front, marinas, hotels that agreed to participate in our research and allow our partners to distribute questionnaires. In cases where private spaces were used to complete the questionnaires (e.g. Vouliagmeni Lake, Marinas, hotels), **special permission was requested** and secured from those responsible.

Regarding **business owners**, their contact information was obtained through the business registry of the Athens Chamber of Commerce and Industry which is available at their official site (<https://acci.gr/>).

3.4.2 Use case #1 Traffic violations monitoring

Main sector of interest: Tourism | **Keywords:** tourism, traffic violations, visitors

Updates: During the reporting period, significant updates were made to the Policy Recommendation Toolkit (PRT), and the technical update of the Visualisation Workbench with the following interfaces, dedicated to the Traffic Violations monitoring UC: Traffic Violations Interface, Controlled Parking Visualisation Interface, Check Traffic Congestion Interface and Check Road Safety Interface.

- **Policy Recommendation Toolkit (PRT)**

The **Policy Recommendation Toolkit (PRT)** allows users to create and manage traffic-related policies in a structured and transparent manner. For the **Traffic Violations** category, the UI guides users through a dedicated form accessible from the main menu to create a policy, as depicted in Figure 24.

The policy creation form begins with the selection of the *Traffic Violations* category from the dropdown menu. The user then proceeds to populate the form fields as follows:

1. **Policy Title:** The name of the policy.
2. **Policy Field:** One or more policies relevant to the selected category.
3. **User Field:** Automatically filled with the username; this field is not editable.
4. **Objective/Goal:** Description of the expected outcomes.
5. **Dataset Field:** The dataset to be used by the AI models.
6. **Violation Details:** Type of traffic violation targeted.
7. **Time Frame:** Selection of the part of the week we want to examine; either "Weekday" or "Weekend" for predictive analysis.

The final form, once the form has been completed, as depicted in Figure 25.

When the user presses the 'Submit' button, certain processes start running in the background. A form is created that contains the necessary information that has been entered, as well as an additional CSV file that includes the history of previous reports regarding energy consumption.

The screenshot shows the AI4Gov Platform interface. On the left is a dark sidebar with a menu: Dashboard, Use Cases, Policy Recommendation Toolkit (expanded), Overview, Policy Creator (selected), Explorer, Recommender, Modify Policy, Statistics, and Wallet Registration. The main content area is white and contains a form for creating a policy. At the top right of the main area is a user profile icon. The form fields are: 'Select a Category:' with a dropdown menu showing 'Traffic Management'; 'Title' with a text input field containing 'Traffic Policy'; 'Policy:' with a multi-select tag input showing 'Safe City' and 'Sustainable, smart, secure, accessible and flexible urban mobility policy'; 'User' with a text input field containing 'VVV'; 'Objective/Goal:' with a multi-select tag input showing 'Reduce traffic congestion' and 'Increase visitors' satisfaction'; 'Dataset:' with a dropdown menu showing 'Waste Management: VVV Smart Bins Fill Levels'; 'Select violation' with a dropdown menu showing 'Speed Limit Violation'; and 'Part of week:' with a dropdown menu showing 'Weekend'. At the bottom of the form is a purple 'Submit' button.

Figure 23 Fill form with the appropriate values in Traffic Management category

After submission, the user receives feedback through a results window displaying all relevant information, as depicted in Figure 25:

- The policy title and user
- Key performance indicators (KPIs) generated by the analytics engine
- Predicted values, including:
 - Estimated fuel cost
 - Travel distance
 - Required travel time
 - Number of police cars needed

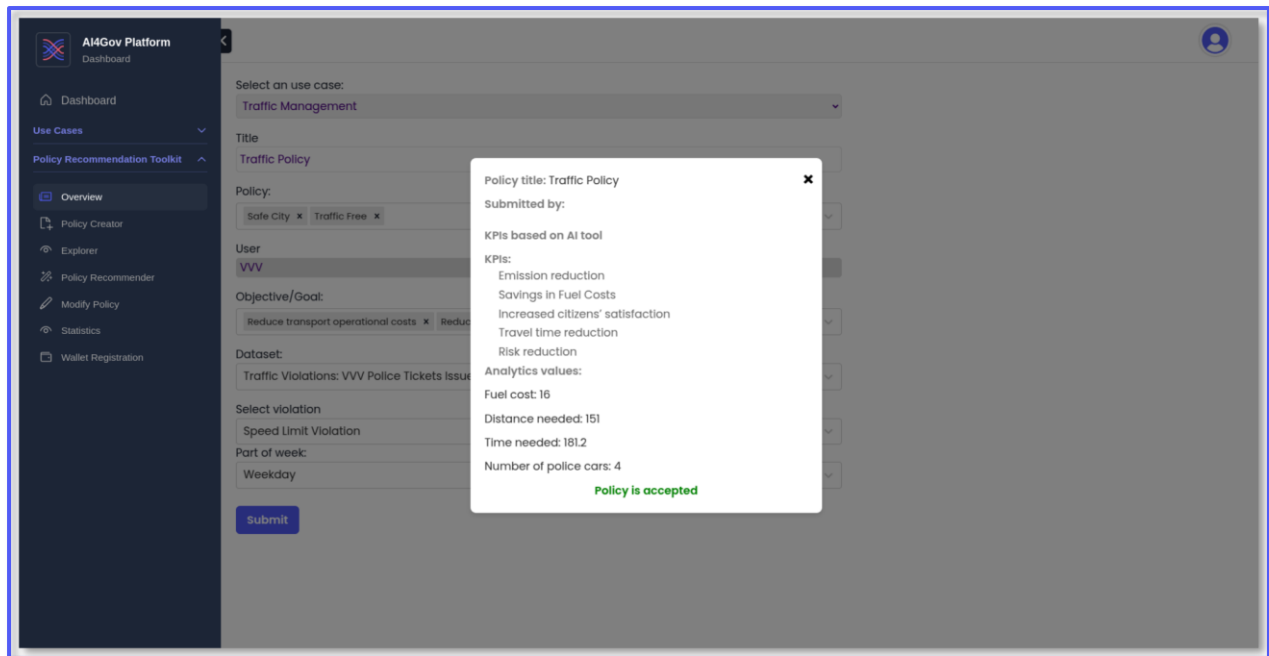


Figure 24 Total policy recommendation and analytics results in Traffic Management category

• Traffic Violations Interface

In this UC, the **Policy-Oriented Analytics & AI Algorithms and Adaptive Analytics Framework** have been integrated with the Visualisation Workbench. This platform efficiently predicts potential violations in the VVV municipality using a user-friendly interface. The interface allows users to input key details through four main fields:

- **Month:** Specify the time period.
- **Weekday or Weekend:** Refine the time frame.
- **Time of Day:** Indicate morning, noon, evening, or night.
- **Violation Type:** Choose from options like speed limit violations, traffic light violations, parking violations, etc.

After entering this information, the system uses advanced algorithms to analyse historical data and patterns specific to the municipality. The result is a dynamic map that visually highlights areas most at risk for the specified violations. The map uses color-coded or shaded regions to indicate high-risk areas.

This predictive map helps enhance proactive measures, such as increased surveillance or targeted awareness campaigns in identified zones. The interface simplifies the reporting process and provides valuable insights to local authorities and residents, promoting a safer and more compliant community. This innovative approach demonstrates the power of technology and data analytics in improving public safety and urban planning.

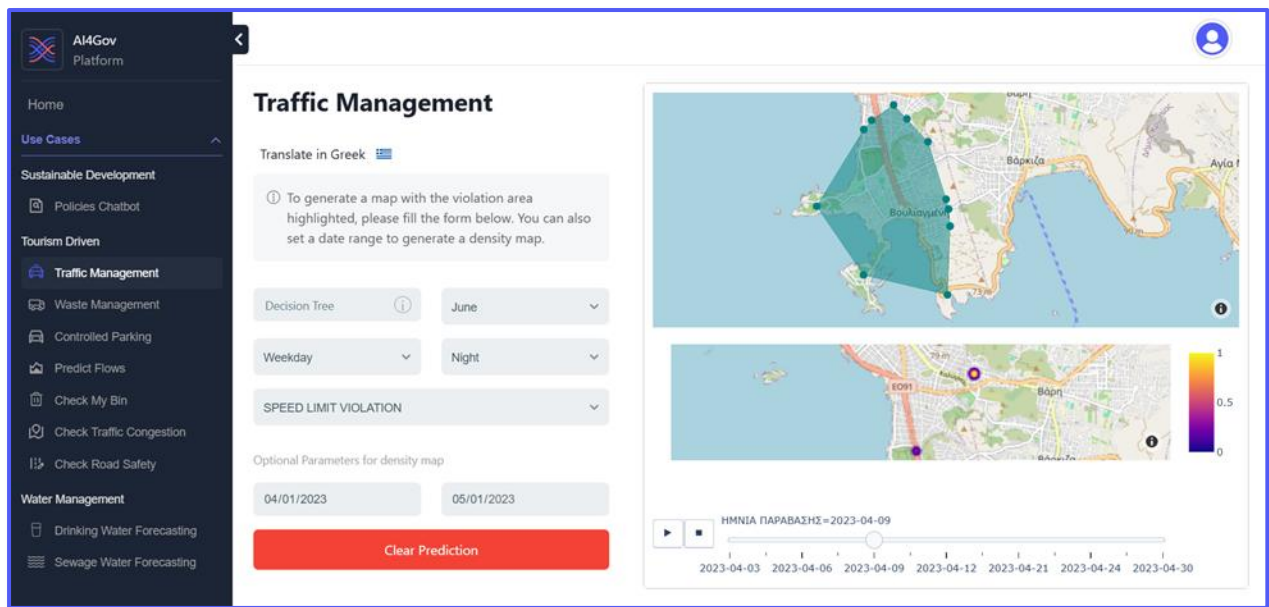


Figure 25 Traffic violations visualisation

- **Controlled Parking Visualisation Interface**

In the context of this use case, another functionality and the corresponding interface were implemented based on the additional data gathered by the first parking violations system put in pilot operation during the summer of 2024 in a restricted area in Vouliagmeni. The data consisted of the dates and the names of the streets where parking violations occurred during the pilot operation of the system. The provided interface provides a form where the users can select the date range for which they would like to visualise the streets and the corresponding number of parking tickets that were issued. The users can also select whether they are only interested in weekends or not. As a result, a clear view regarding the streets and the corresponding tickets that were issued is provided that can enable the users to discover any trends and peak hours, thus supporting more efficient management of resources. Each road is shown in different colour, based on the number of tickets issued, which makes it even easier to identify the streets that are more prone to the parking problem. An indicative example of the provided functionality is shown in the following figure.

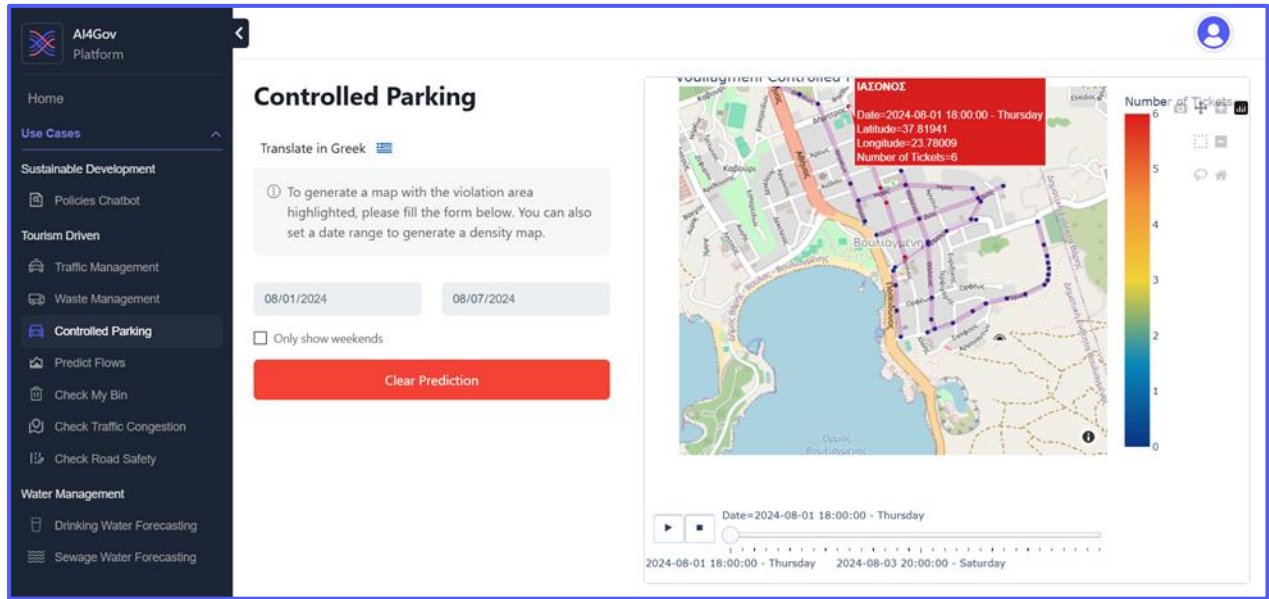


Figure 26 Controlled parking visualisation

- **Check Traffic Congestion Interface**

Within the Check Traffic Congestion interface, citizens and visitors of the Vari - Voula – Vouliagmeni municipality can efficiently plan their mobility and parking needs with the help of advanced AI-driven predictions.

By selecting a specific date and time, users can receive real-time insights into expected traffic conditions and parking availability within the municipality premises, for which they can also provide their feedback. Once the user inputs their preferred time, a machine learning model generates the corresponding predictions. The results are then displayed on an interactive map, highlighting the most suitable roads for parking at the given time while also marking areas to avoid due to high congestion or limited availability.

This predictive system empowers users to make informed decisions, reducing unnecessary time spent searching for parking and easing overall traffic congestion in the town. By optimising mobility and transportation efficiency, the interface not only enhances user convenience but also contributes to a more sustainable urban environment by minimising emissions and improving traffic flow within the municipality.

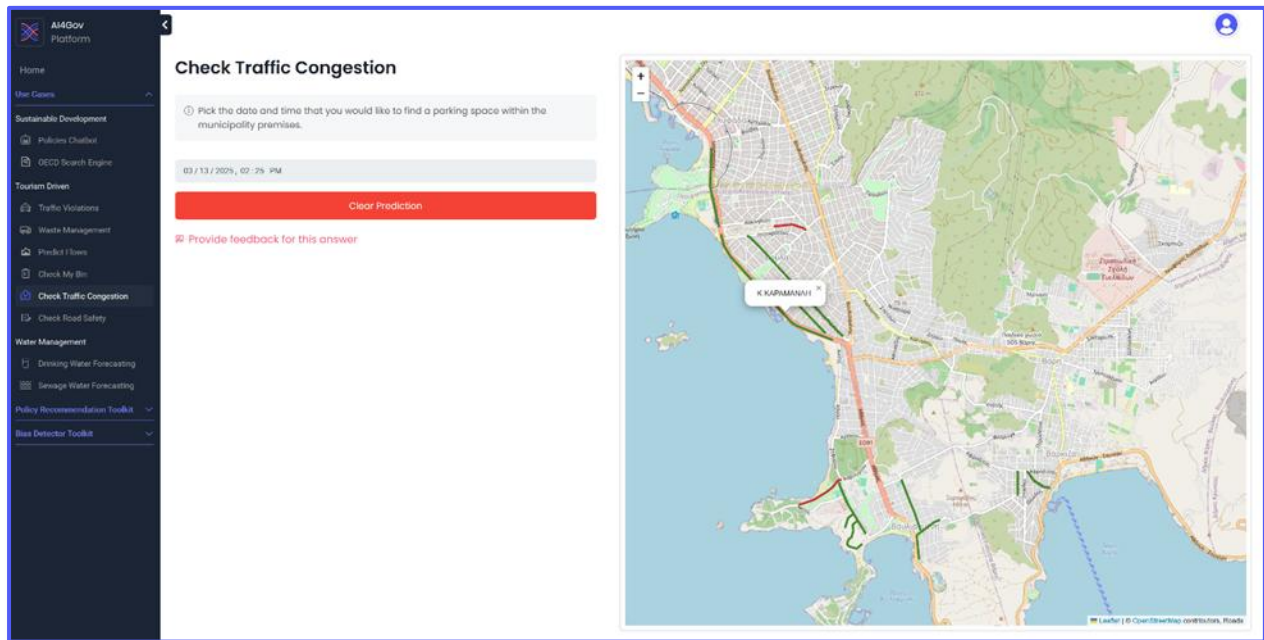


Figure 27 Check Traffic Congestion Interface

- **Check Road Safety Interface**

Within the Check Road Safety interactive interface, citizens and visitors of the Vari - Voula - Vouliagmeni municipality can access crucial insights into road safety conditions, helping them make informed decisions about their routes.

By selecting a specific date and time, users receive predictions about the safety levels of different roads within the municipality, for which they can also provide their feedback. A machine learning model, trained on historical traffic patterns and other relevant data, analyses potential risks and generates an interactive map. This map visually highlights roads that are considered safe and recommended for travel, while also marking dangerous areas that should be avoided due to factors such as high accident probability, or poor lighting.

By providing this valuable information, the system enables users to adapt their travel plans proactively, reducing the likelihood of accidents and improving overall road safety. Whether for daily commuting or tourism purposes, this AI-driven approach enhances public awareness, promotes safer driving behavior, and contributes to a more secure and efficient transportation network within the municipality.

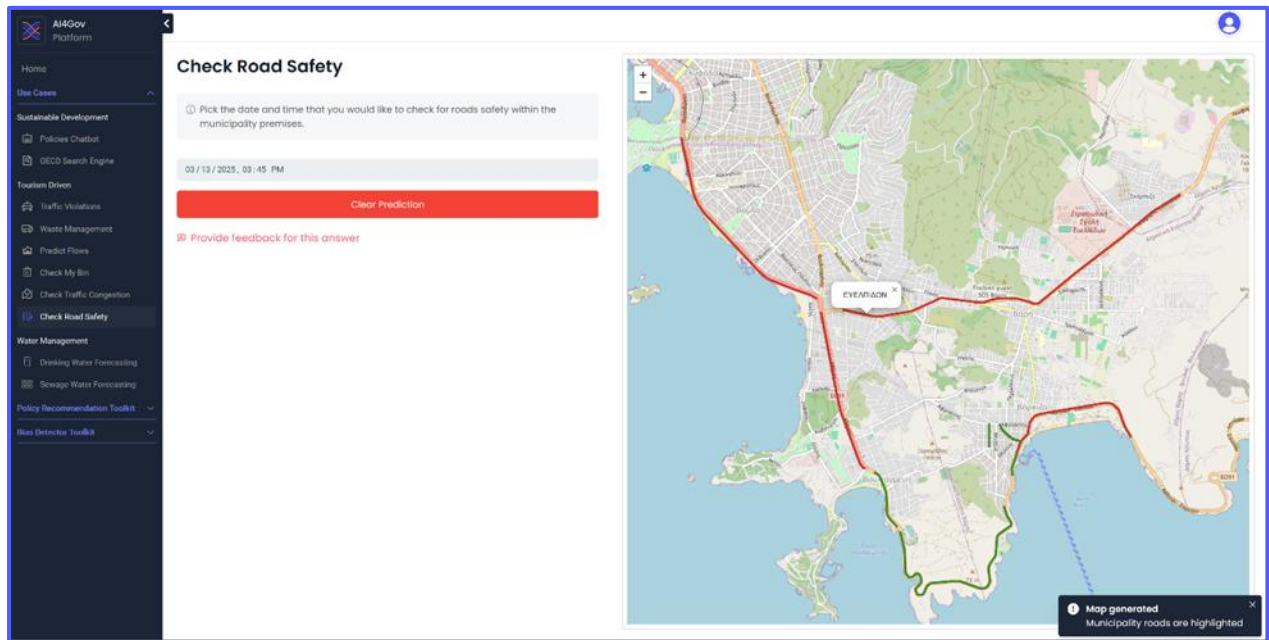


Figure 28 Check Road Safety Interface

3.4.3 Use case #2 Waste management

Main sector of interest: Tourism | Keywords: tourism, waste management, visitors

Updates: This section presents the latest technical updates related to the tools and interfaces used in the Waste Management use case. The key components covered include the Policy Recommendation Toolkit (PRT), the citizen engagement Wallet application, and two main functionalities within the Visualisation Workbench: the Predict Flows Interface and the Check My Bin Interface.

- **Policy Recommendations Toolkit (PRT)**

For the **Waste Management** category, the UI guides users through a dedicated form accessible from the main menu to create a policy, as depicted in Figure 30.

The policy creation form begins with the selection of the *Waste Management* category from the dropdown menu. The user then proceeds to populate the form fields as follows:

1. **Policy Title:** The name of the policy.
2. **Policy Field:** One or more policies relevant to the selected category.
3. **User Field:** Automatically filled with the username; this field is not editable.
4. **Objective/Goal:** Description of the expected outcomes.
5. **Dataset Field:** The dataset linked to the AI models to be applied.
6. **Number of vehicles:** The number of available municipal vehicles for waste collection.

7. **Optimisation Criteria:** The criteria that the policy maker wants to optimise. In this example, the criteria include time and distance.

The final form, once the form has been completed, as depicted in Figure 31.

The screenshot displays the AI4Gov Platform interface. On the left is a dark sidebar with navigation links: Dashboard, Use Cases, Policy Recommendation Toolkit, Overview, Policy Creator (highlighted), Explorer, Recommender, Modify Policy, Statistics, and Wallet Registration. The main content area is titled 'Select an use case:' and shows 'Waste Management' selected in a dropdown. Below this, the form is filled with the following values: Title: 'Waste Policy'; Policy: 'Green City' and 'Reduce waste'; User: 'VVV'; Objective/Goal: 'Reduce city taxes'; Dataset: 'Waste Management: VVV Smart Bins Fill Levels'; Number of vehicles: '3'; Optimisation criteria: 'Time'. A purple 'submit' button is located at the bottom of the form.

Figure 29 Fill form with the appropriate values in Waste Management category

When the user presses the 'Submit' button, certain processes start running in the background. All the information entered in the form is collected and properly prepared to be sent as a request to the analytics. This is the body that will be incorporated into the API request. Therefore, the user receives feedback in the form of a window displaying all relevant information.

Initially, it includes the title of the policy that has been entered, the user who submitted it, the KPIs generated by the analytics, as well as the predicted values produced by the algorithm. These values include the distance travelled, the time required, the fuel consumed, and the fuel cost incurred, as depicted in Figure 31. The final policy is stored in the blockchain.

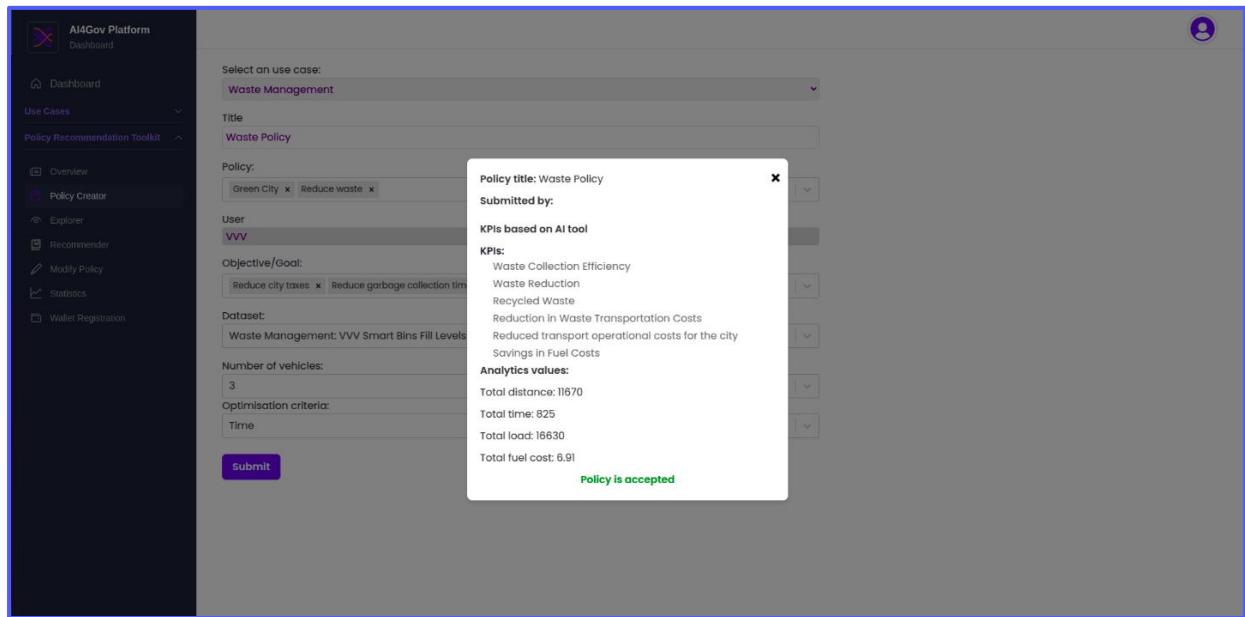


Figure 30 Total policy recommendation and analytics results in Waste Management category

- **Wallet each UC Waste Management- Traffic Violation**

As part of the Waste Management and Traffic Violation Monitoring use cases, an Android-based application was deployed for mobile devices, allowing citizens to monitor policies and participate by voting and providing feedback. This process is presented below.

Application Workflow Overview

Initially, the user utilises the wallet on their personal mobile phone, simultaneously verifying their identity. From the application's home screen, they select the **"Vote Policy"** tab in the bottom menu. On this screen, the user's stored credentials are displayed, as depicted in the Figure 32.



Figure 31 Saved credentials in the wallet

After the user selects the appropriate credential, they are taken to the next screen, where a list of all policies is displayed, as depicted in Figure 33. On this screen, the user can select either 'Waste Management' or 'Traffic Violation' from a drop-down menu to display all policies related to the selected category.

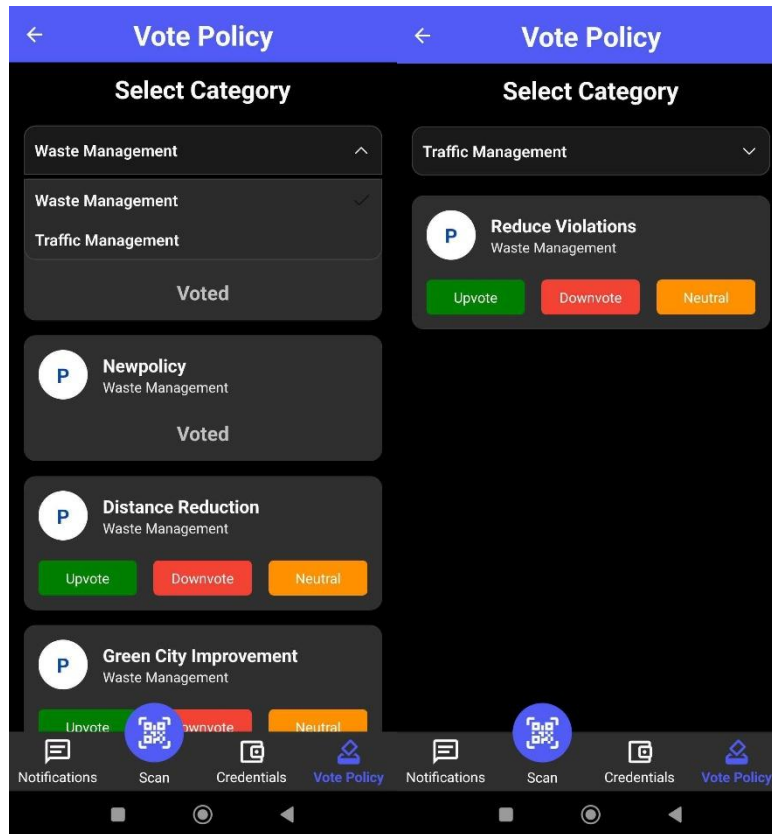


Figure 32 Select policy to Vote

To access additional details about a specific policy, the user can simply click on the desired item. A dedicated window will then appear, presenting all relevant information pertaining to the selected policy, as depicted in figure 34.

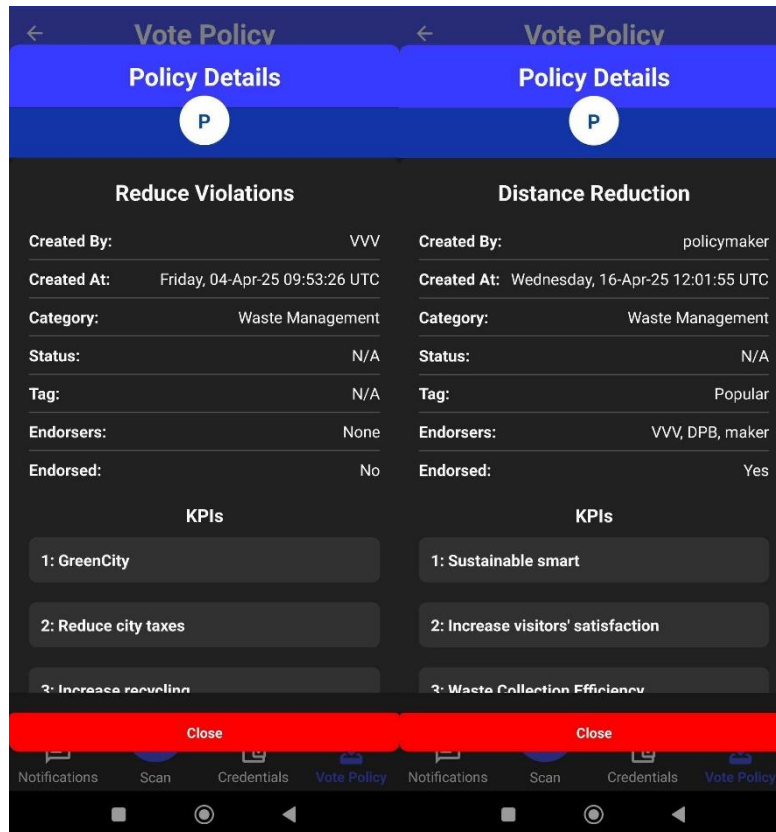


Figure 33 View the policy details

Voting mechanism

For each policy, there are three different voting options: positive, negative, and neutral. In this case, the citizen has the ability to choose one of the three. If the citizen with the given credentials has already voted on a policy, the buttons do not appear. Instead, a message is displayed stating that the specific policy has already been voted on by the user. In the first case, 'positive' means they approve of the specific policy; in the second case, 'negative' means they disapprove the policy; and in the last case, 'neutral' means they do not express any opinion on the specific policy. For each of these choices, a window appears confirming the voting decision, as depicted in Figure 35.

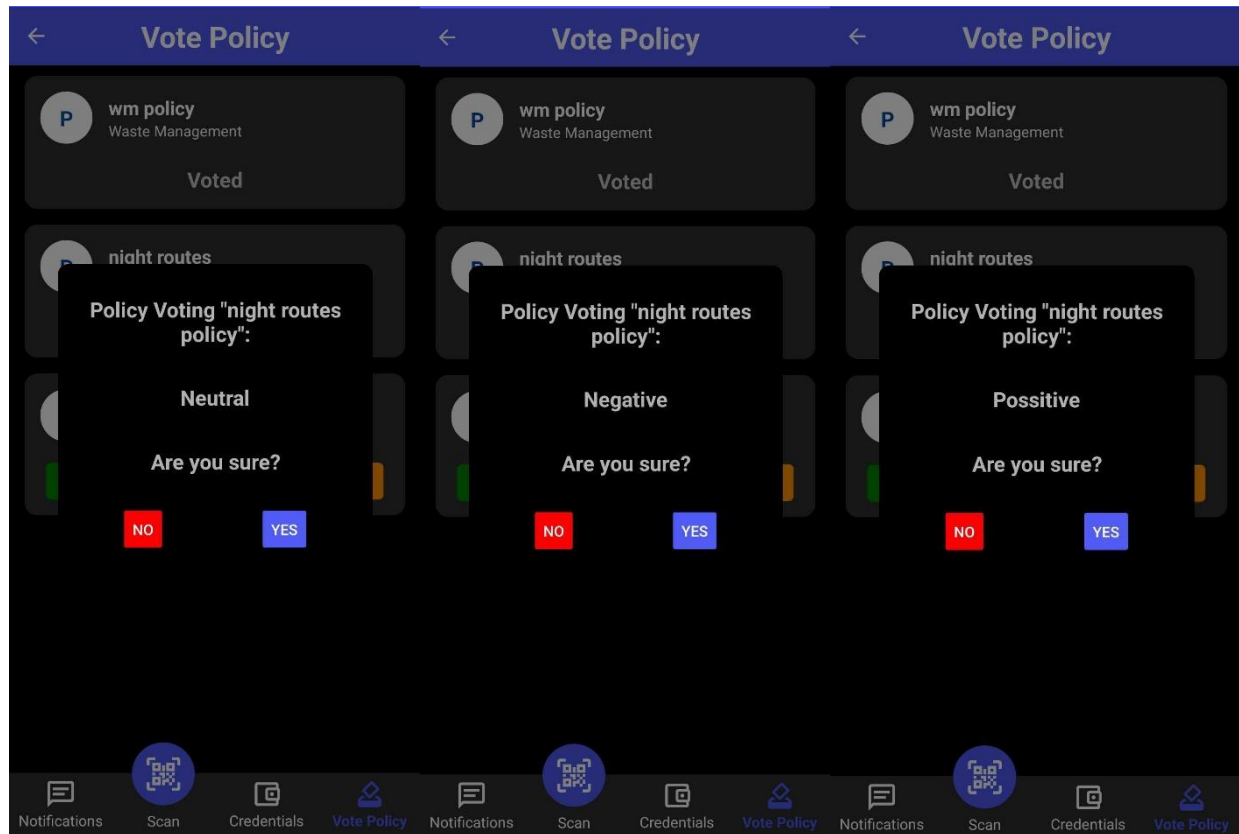


Figure 34 Vote Policy for three options (positive, negative, neutral)

After the voting process is completed, a content window appears to inform the user that the process has been completed, along with a “thank-you” message, as depicted in Figure 36.

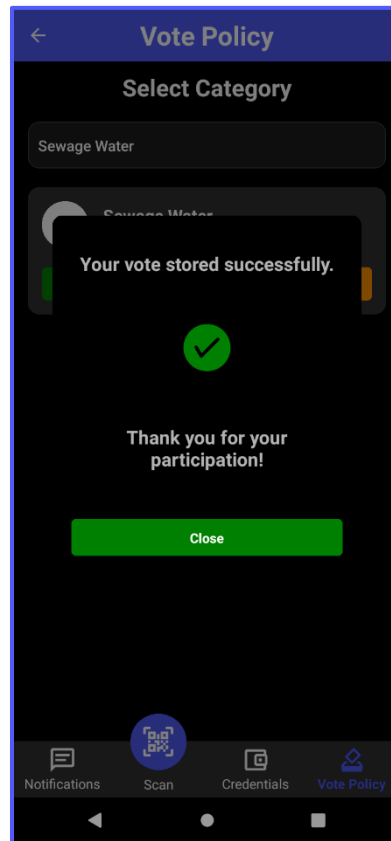


Figure 35 Successfully voting

Post-Vote Results and Transparency

Finally, the voting process has been completed. The user now returns to the previous screen and can no longer vote for the same policy again. Additionally, they can check the policy details by tapping on it, with the difference that in the new window that appears, the current ballot results will also be displayed, Figure 37. At this point, it is worth noting that the result reflects the difference between the participation counts rather than the total number of votes. This helps to avoid bias.

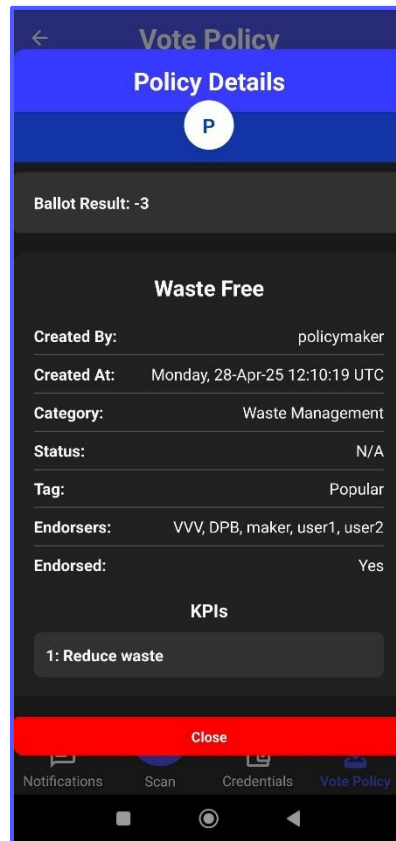


Figure 36 Ballot results after completing vote

Visualisation Workbench Functionalities

The following functionalities and their respective interfaces in the Visualisation Workbench have been developed.

- **Predict Flows Interface**

The fill level of the Municipality's bins can also be utilised in the context of touristic policies, since the rate at which a bin fills is highly co-related with the flows of the citizens/tourists in the area where this bin is located. In other words, the smart bins that are located in higher populated areas and areas that are visited by more people fill at a higher rate than the smart bins that are located in less populated areas.

To this end, **a new Predict Flows interface** was designed for predicting the touristic flows in the premises of VVV. More specifically, a neural network is trained to provide predictions for the future fill level of the smart bins. Then the user can choose to split the municipality into a selected number of areas, based on the location of the bins and also select a number of clusters based on the predicted fill levels and the corresponding fill rate. After that, a map is generated that

highlights with different colors the clustered areas in terms of the projected fill rate, thus allowing the policy makers to identify the expected number of tourists per area of interest and create/enhance the corresponding policies.

In conclusion, predicting the touristic flows in an area is of vital importance for the formulation of the corresponding policies that will enhance both the experience of the visitors and ease the everyday lives of the locals.

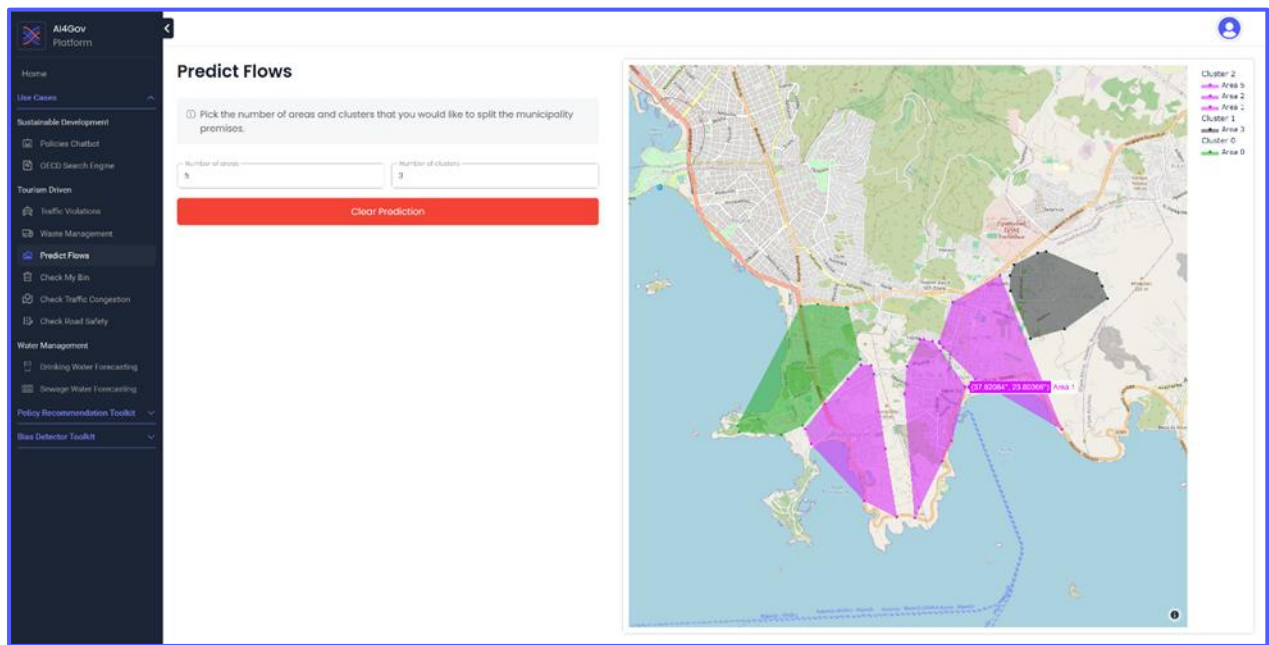


Figure 37 Predict Flows Interface

- **Check My Bin Interface**

Within the **Check My Bin interactive interface**, designed specifically for the citizens and businesses of the Vari - Voula – Vouliagmeni municipality, users can easily monitor and manage waste disposal more efficiently. By selecting any of the municipality's smart bins, individuals gain access to crucial real-time data regarding its fill level and anticipated collection schedule and are also able to provide their feedback for the generated predictions.

Upon selection, a detailed prompt appears, offering insights into whether the bin is scheduled for emptying in the next collection round or if it remains within acceptable fill thresholds and will not be serviced yet. This prediction is powered by a neural network trained on the bin's historical data, enabling the system to provide highly accurate forecasts based on past usage patterns, seasonal trends, and external factors such as tourism activity. This predictive functionality is particularly beneficial for both residents and businesses, especially those in the tourism sector, as it enables them to plan waste disposal proactively.

By knowing exactly when a bin will be emptied, users can avoid unnecessary overflow, contribute to a cleaner urban environment, and optimise their waste management practices in alignment with municipal services. This data-driven approach not only enhances convenience but also promotes sustainability by reducing inefficiencies in waste collection and ensuring smarter resource allocation within the city.

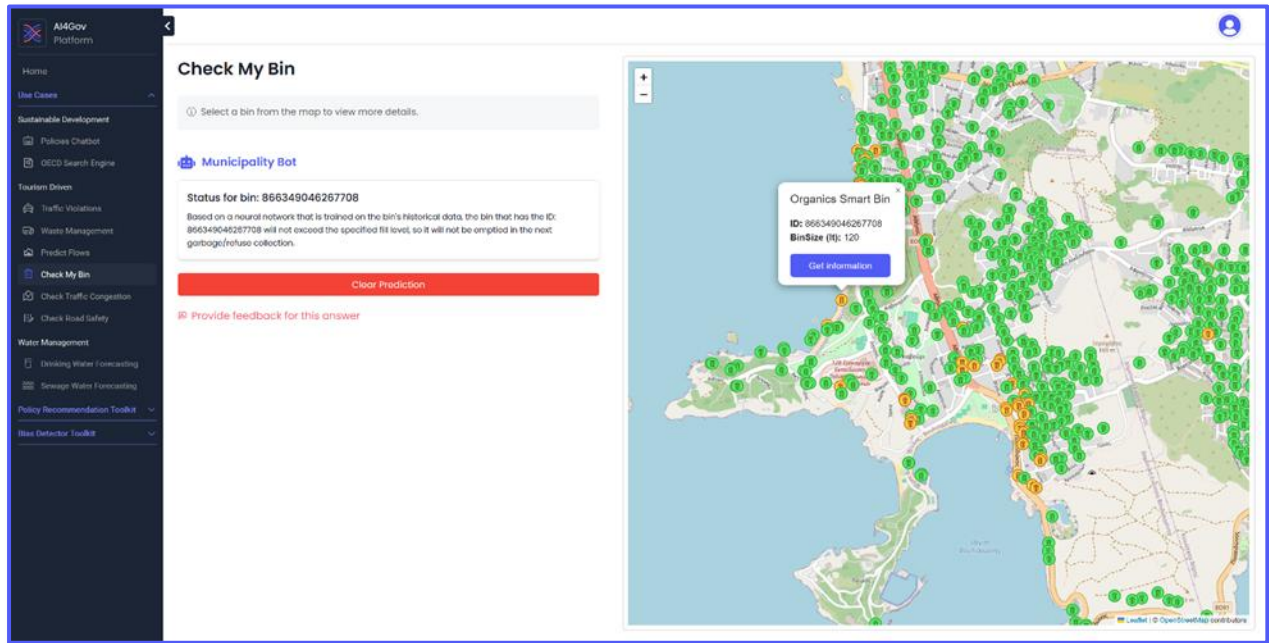


Figure 38 Check My Bin Interface

4 The AI4Gov Use Cases factsheets

This chapter includes a summary of the features the AI4Gov tools offer to the stakeholders of each UC, to present the value of each UC and the potential they have if they further develop. They have been created in a form of a factsheet to easily provide an overview of the value of the AI4Gov UCs and showcase the exploitation and sustainability potential of the project.

Each factsheet includes a short summary of the UC, the AI4Gov tools that are employed in the UC, the stakeholder groups involved and the specific features that are offered.

Documentation: At the moment, the documentation of the technological tools of AI4Gov are under development, so it is possible to click on the link in the factsheets and not find the documents. The goal is to constantly update this folder, so it is an e-library of the technical documents of the project, open to the public.

Water management cycle – Drinking water

Policies for Sustainable Water Cycle Management at a Large Scale

#water_management #drinking_water #sustainability

Diputación Provincial de Badajoz

Badajoz, Spain

This use case enhances drinking water management in the Province of Badajoz, in Spain, by using the AI4Gov tools to predict inefficiencies in water quality and energy use. Through smart forecasting, reporting, and a user-friendly interface, the system empowers technicians and decision-makers to improve long-term strategies and ensure better water service for citizens.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|--|--|--|
| <ul style="list-style-type: none"> Technicians at the local Waste Management public consortium Policymakers & Consortium officials High-level public administration workers Citizens | <ul style="list-style-type: none"> Improved drinking water quality through proactive monitoring and forecasting Reduced energy consumption in water treatment processes Identification of inefficiencies and recurring problems in the water system Clear executive reports for better planning and investment decisions Time series forecasting to detect future trends and anomalies Support of technicians to track and predict water parameters (e.g., pH levels) Increased transparency with downloadable reports for citizens | <ul style="list-style-type: none"> XAI Library Adaptive Analytics Framework Visualisation Workbench |

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[**Documentation**](#)

Water management cycle – Sewage water

Policies for Sustainable Water Cycle Management at a Large Scale

#water_management #sewage_water #sustainability

Diputación Provincial de Badajoz

Badajoz, Spain

This use case supports smarter sewage water management in the Province of Badajoz, Spain, by using the AI4Gov tools to forecast water quality issues and energy usage in wastewater treatment. With predictive analytics and a user-friendly interface, it helps technicians and policy-makers act proactively and sustainably to protect the environment and public health.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|--|---|--|
| <ul style="list-style-type: none"> Technicians at the local Waste Management public consortium Policymakers & Consortium officials High-level public administration workers Citizens | <ul style="list-style-type: none"> Monitoring of sewage water quality with real-time and historical data Improved energy efficiency in wastewater treatment operations Early detection of pollution indicators (e.g. COD, TP, NT, BOD5) Forecast of future risks using advanced time series analysis Clear insights for strategic decisions for the policy-makers Data on agricultural impact on water quality in a timely way Transparency with downloadable citizen reports and policy recommendations | <ul style="list-style-type: none"> XAI Library Adaptive Analytics Framework Visualisation Workbench |

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[**Documentation**](#)

Traffic management in VVV

Tourism-driven multi-domain policy management and optimisation

#tourism #traffic_violations #visitors

Municipality of Vari-Voula-Vouliagmeni

Ministry of Tourism

Athens, Greece

The Municipality of Vari-Voula-Vouliagmeni is a popular coastal tourist area attracting diverse visitors. By using AI4Gov tools, the municipality aims to predict visitor flows and optimise traffic management, while reducing operational costs, traffic congestion and accidents.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|--|--|---|
| <ul style="list-style-type: none"> • Municipal staff & officers • Visitors, tourists, citizens, • Touristic businesses • Policy makers | <ul style="list-style-type: none"> • Enhanced resource allocation through accurate prediction of traffic violations by location and date within the municipality. • Interactive geospatial visualisation of traffic violation trends, offering clear insights into high-risk areas • Detailed mapping of parking violations in Vouliagmeni, highlighting streets with significant parking issue. • Citizen-centric tools that predict road congestion on specific dates, empowering users to plan their travel and provide feedback on the generated predictions • Citizen-centric functionality on safety evaluation features for roads based on reported violations, enabling proactive travel adjustments to reduce accidents and improve overall road safety, with user feedback integration. | <ul style="list-style-type: none"> • Analytics & AI Algorithms • Adaptive Analytics Framework • Visualisation Workbench • Policy Recommendation Toolkit • Citizen's Wallet |

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[Documentation](#)

Waste management in VVV

Tourism-driven multi-domain policy management and optimisation

#tourism #waste_management #visitors

Municipality of Vari-Voula-Vouliagmeni

Ministry of Tourism

Athens, Greece

The Municipality of Vari-Voula-Vouliagmeni is a popular coastal tourist area attracting diverse visitors. By using AI4Gov tools, the municipality aims to predict visitor flows and optimise waste management, while reducing operational costs, garbage and environmental impact.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|--|--|---|
| <ul style="list-style-type: none"> • Municipal staff & officers • Visitors, tourists, citizens, • Touristic businesses • Policy makers | <ul style="list-style-type: none"> • Forecasting of smart bins fill level and routing optimisation of garbage trucks to minimise operational cost. • Utilisation of waste management data to forecast the fill level rate of smart bins that is an indicator of the citizens/tourists flows in the municipality. • Citizen-centric functionality for providing details regarding fill levels of specific smart bins and allowing the users to provide their feedback on the generated predictions. • Modernised waste collection with smart, data-driven tools • Minimised environmental impact from unnecessary fuel consumption • Enabled real-time monitoring using sensors and RFID technology | <ul style="list-style-type: none"> • Analytics & AI Algorithms • Adaptive Analytics Framework • Visualisation Workbench • Policy Recommendation Toolkit • Citizen's Wallet |

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[Documentation](#)

IRCAI global top 100 projects

Sustainable Development and the European Green Deal

#SDGs #IRCAI #Top100_projects

Jožef Stefan Institute

All around the world...

This Use Case supports the IRCAI Top 100 initiative by developing tools and methodologies to assess bias in AI solutions submitted worldwide. It aims to improve ethical evaluation, support applicants in identifying bias in data and models, and enhance transparency and fairness in AI projects contributing to the Sustainable Development Goals.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|---|---|---|
| <ul style="list-style-type: none"> • Top100 reviewers • Top100 applicants | <ul style="list-style-type: none"> • Strengthening of global SDG impact by improving AI project evaluations • Promotion of AI ethics by addressing fairness, privacy, and transparency • A self-assessing bias evaluation toolkit for the applicants • A matchmaking platform with a business and potential investors • Improved project submission form to better capture technical and ethical details • Standardised evaluation rules for ethical and unbiased AI use • Credibility and ethical robustness of AI solutions globally | <ul style="list-style-type: none"> • Bias Detector Toolkit • Training materials • Organisational guidelines and blueprints for trustworthy AI. |

Sounds interesting? Learn how to use our tools!

[Information](#)

SDG observatory – Rare diseases

Sustainable Development and the European Green Deal

#SDGs #bias #health_data

Jožef Stefan Institute

All around the world...

Scenarios when data are not available or missing, presents a significant challenge for unbiased AI solution. This Use Case implemented methodology for missing data analysis in rare disease research. It uses patient-reported outcomes (PRO's) and AI-driven analytics to extract data from PRO's, detect missing data and visualise global imbalances. The goal is to promote equity in healthcare data and enable better, fairer policy decisions worldwide.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|---|--|---|
| <ul style="list-style-type: none"> Policy makers in the EU/Global/National level Researchers & General public/citizens interested in rare diseases research | <ul style="list-style-type: none"> Improvement of rare disease research through better global data coverage Identification of underrepresented regions in patient-reported outcomes Detection of missing/incomplete data to expose systemic biases Usage of AI and machine learning to analyse and visualise global disparities Awareness of bias in global health datasets A replicable methodology for all rare diseases Open-access visualisations for researchers, policymakers, and the public | <ul style="list-style-type: none"> Bias Detector Toolkit Training materials Organisational guidelines and blueprints for trustworthy AI Visualisation workbench |

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[Documentation](#)

SDG observatory – Bias analysis in breathalyser testing in traffic

Sustainable Development and the European Green Deal

#road_safety #bias #SDGs

Jožef Stefan Institute

Slovenia

This Use Case is focused on data incompleteness in the area of traffic accidents and alcohol abuse by the drivers in Slovenia. The goal is to detect data collection bias and promote fairer, evidence-based traffic safety policies across all regions.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|---|--|---|
| <ul style="list-style-type: none"> • Traffic police and traffic experts: • Policy makers: • Journalists and public | <ul style="list-style-type: none"> • Fairness assessment in law enforcement practices related to alcohol checks • Detection of inconsistencies in breathalyser testing across administrative units • Visualisation of regional differences in alcohol-related traffic incidents • Identification of potential data bias due to underreporting or selective enforcement • Comparison of accident rates with actual police testing frequency • Evidence-based policymaking with unbiased data insights • A replicable framework for bias detection in diverse domains | <ul style="list-style-type: none"> • Bias Detector Toolkit • Training materials • Organisational guidelines and blueprints for trustworthy AI. • Visualisation workbench • Policy oriented analytics & AI algorithms |

Sounds interesting? Learn how to use our tools!

[**Documentation**](#)

OECD policy documents analysis

Sustainable Development and the European Green Deal

#OECD_papers #AIpolicies #bias

Jožef Stefan Institute

All around the world...

This Use Case analyses OECD's global repository of AI policy documents to identify how countries address bias in AI. Using advanced semantic, sentiment, and keyword analysis, it maps solutions, gaps, and good practices. The goal is to offer a comprehensive overview of policy trends and legislative priorities and to provide policymakers with valuable insights into how different SDG topics are being addressed at the policy level, helping to guide more targeted and effective legislative action for sustainable development.

| Target stakeholders | What do the solutions offer in this UC? | Technological solutions |
|--|--|--|
| <ul style="list-style-type: none"> Policy makers Legal & ethical experts interested in AI Journalists & public interested in AI | <ul style="list-style-type: none"> Comparison of global AI policies on how they tackle bias and fairness Identification of chapters and content in OECD AI policies that address bias Visual summaries highlighting solutions and good practices Awareness among policymakers and developers on AI ethics An interactive Policy Chatbot to explore national AI strategies Mapping of regional differences in AI policy focus (e.g. "security" vs "human development") Bias-aware methodology to improve AI policy evaluation frameworks | <ul style="list-style-type: none"> Visualisation workbench Policy oriented analytics & AI algorithms |

Sounds interesting? Learn how to use our tools!

[Documentation](#)

5 Validation and Evaluation of the AI4Gov pilot activities

The validation and evaluation of the AI4Gov pilot activities correspond to phases 3 and 4 of the pilot methodology. To ensure alignment between the pilot activities and the progress of the technical work packages, all partners contributed to designing the pilot timeline. This chapter outlines the overall timeline and the next steps until the end of the project in M36.

As described in the previous deliverables, the pilot activities follow a two-cycle evaluation approach. The first testing phase ran from M19 to M24 and focused on gathering initial user feedback on the integration of the AI4Gov tools within the UCs. Feedback workshops were carried out to help identify usability issues, technical gaps, and other areas for improvement, informing a three-month fine-tuning period (M25–M27). A second implementation and validation phase is ongoing now, from M28 to M33, during which the improved tools are being reassessed through user testing and final evaluation activities. The last three months of the project will be dedicated to analysing the collected feedback and compiling the final evaluation results in deliverable D6.5. Throughout the process, pilot partners are engaging diverse stakeholders in testing and feedback activities to maximise outreach and ensure a broad base of user perspectives.

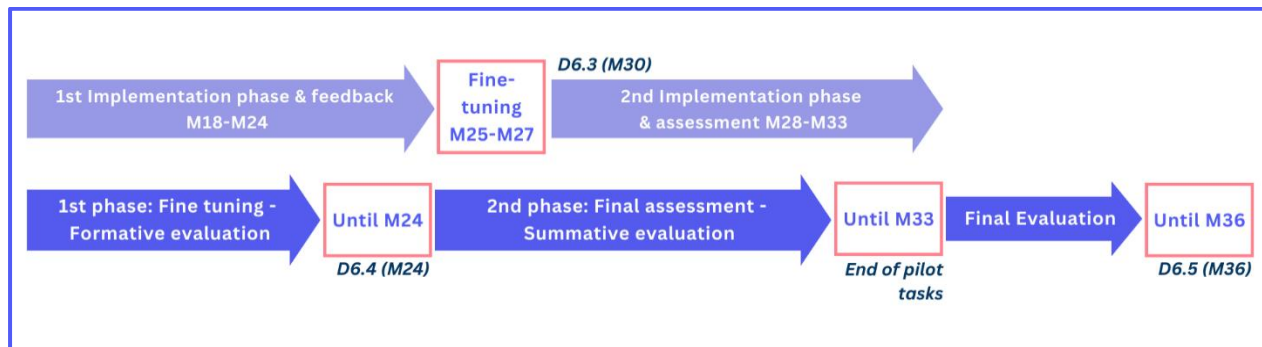


Figure 39 AI4Gov piloting activities timeline

In this second validation phase, the evaluation tools were also refined to better capture user experience and feedback. The User Experience Questionnaire (UEQ) was chosen again as it proved very effective and easy to use during the first validation phase. A customised trust questionnaire was introduced to assess users' confidence in the tools' reliability and usefulness. Additionally, each pilot tailored a set of KPI-related questions to reflect their specific Use Cases and objectives, ensuring that the evaluation process would yield meaningful insights relevant to their local context.

6 Conclusion and next steps

This third and final version of the specifications deliverable reflects the culmination of iterative development, integration, and stakeholder engagement processes that have defined Work Package 6 (WP6) throughout the project lifecycle. Each pilot, spanning sustainable development and the European Green Deal, tourism-driven multi-domain policy management and optimisation, and large-scale water cycle management, has reached a mature stage of implementation, with the AI4Gov tools successfully integrated and operational within their respective domains.

The project's methodology, built on five overlapping phases, has ensured that needs assessment, requirements integration, pilot implementation, evaluation, and dissemination have progressed in a coordinated and systematic manner. Early phases focused on gathering and integrating requirements, while the subsequent stages saw the deployment and real-world testing of the AI4Gov solutions. The first round of validation, completed and reported in D6.4, provided valuable insights into the performance, usability, and trustworthiness of the tools, confirming their potential to improve operational efficiency, inform policy decisions, and enhance transparency in public administration. Stakeholder feedback gathered during this phase has already led to refinements and optimisations, ensuring that the solutions are both relevant and user-centric.

Currently, the second round of validation is underway, with completion anticipated by September 2025. This phase is critical for collecting comprehensive feedback from a broader set of stakeholders, further testing the robustness and societal value of the AI4Gov tools in real-world settings. The outcomes of this process will be thoroughly analysed and presented in the final deliverable, D6.5, at the end of the project. This forthcoming report will synthesise the impact of the pilots, document best practices, and provide actionable recommendations for future deployments.

Looking ahead, the project's final phase will focus on maximising the impact and sustainability of the AI4Gov solutions. Dissemination and exploitation activities will intensify, targeting policymakers, public sector organisations, and the research community to ensure the broad adoption of project outcomes. Efforts will also continue to align the solutions with evolving EU AI regulations and ethical guidelines, reinforcing their trustworthiness and supporting their transfer to new contexts and domains. The engagement of stakeholders will remain a priority, as will the preparation of a robust exploitation and sustainability plan that supports the long-term viability of the innovations developed.

In summary, D6.3 signifies the transition from technical development and integration to comprehensive validation, dissemination, and exploitation. The remaining months of the project will be dedicated to consolidating results, capturing lessons learned, and ensuring that the AI4Gov solutions deliver lasting value to public governance and policy making, both within the consortium's pilots and beyond.