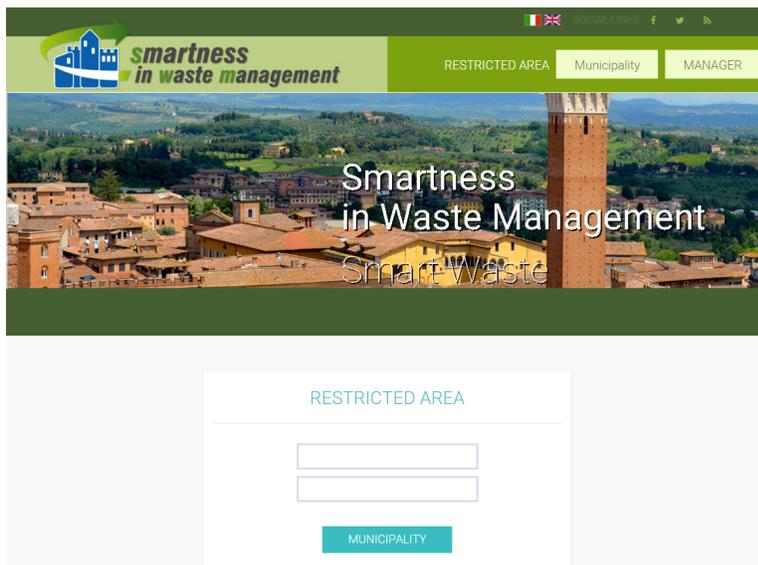


Data collection: IT solution case in Italy

Italian *Ancitel Energia e Ambiente* has developed software able to gather, elaborate and process large amounts of data and parameters relevant to the management of waste. The system, called “Smartness in Waste Management”, allows local and national authorities to have the full picture of the reality on their territory, enabling them to determine what is working and what is not, whether an upgrade that was implemented is showing results, the recycling rate, the rate of separate collection and the quality of the materials.

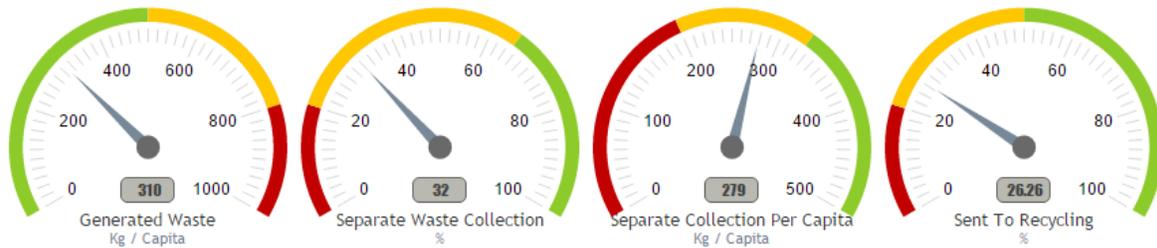


“Smartness in Waste Management” is a Decision Support System (DSS). It is meant as a tool to support administrators in the decision-making process. It elaborates large amounts of various kinds of data in order to **measure the technical, economic and environmental performances of waste cycles**. The concept is based on the fact that timely and easily accessible information has proven to be one of the keys to making effective and impactful decisions.

The system is tailor-made to satisfy the current targets of the Italian system, but it was developed in a way that allows it to be adapted and modified to different needs.

Once set up, users can gain a full understanding of the state of waste management in a specific region by logging into the “Smartness in Waste Management” portal. The system displays dashboards that summarize the situation on the territory through the principal indicators. They are up to date, easy to read, and have an ‘alert’ system that allows users to quickly spot problem areas and implement corrections in a timely manner. The pre-requisite is data insertion to the system.

1. Waste collection dashboard

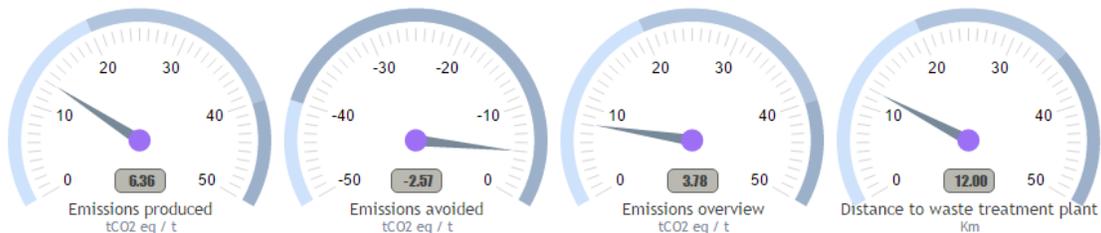


The Waste Collection Dashboard gives an overview of the following:

- The amount of waste produced in the territory of interest;
- How much of it is collected separately;
- How much of it is sent to recycling plants;
- Amounts of the different types of waste;
- The quality of the recyclable materials.

Having access to this data on a monthly basis is very beneficial. Users are not only able to closely monitor the total amount of waste produced and how much of it is collected separately, but also how much of the latter actually reaches recycling plants.

2. Emissions dashboard

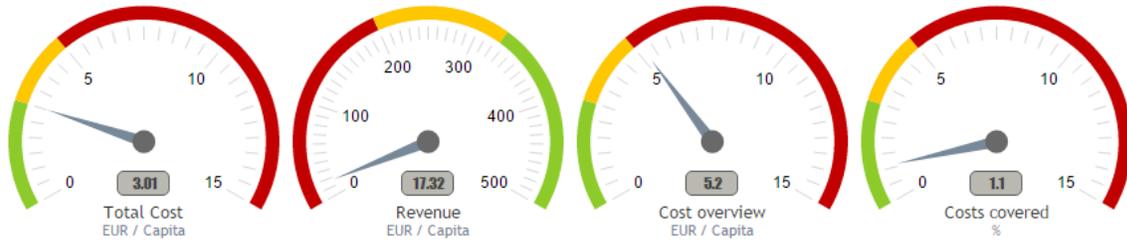


Proper waste management can be a very significant contributor to lower CO₂ emissions, even more so if we consider the amount of emissions that can be avoided by increasing use of secondary raw materials as opposed to virgin materials.” Smartness in Waste Management” is particularly innovative in that it is able to calculate total emissions produced and avoided through the waste management strategy in place. Looking at waste management in terms of emissions can be a powerful incentive to improve separate collection, recycling rates and quality. In this sense, “Smartness in Waste Management” can provide a solid base or support upon which to develop and update environmental policy.

The Emissions Dashboard gives an overview of the following:

- Emissions produced by the waste management system;
- Emissions avoided thanks to separate collection and recycling;
- Overview of produced and avoided emissions;
- Distance travelled to/from facilities.

3. Economic dashboard



Usually types of services such as waste management only allow the responsible parties to gain a full picture of costs and revenues through the final annual balance sheet. Smartness in Waste management, instead, enables users to monitor costs and revenues on a monthly basis, allowing for timely intervention in case of need. It is also a powerful tool to promote accountability as it keeps track of costs, revenues, investments, and also to evaluate return on investments.

The Economic Dashboard gives an overview of the following:

- Total cost of waste management;
- Revenue from recyclable materials;
- Cost overview;
- Costs covered.

4. Added Value

“Smartness in Waste Management” can also be a tool for transparency towards the general public, as administrators are able to easily export and share data and results from the software to different social media platforms. Sharing this information regularly can be a powerful incentive for both public administrations and citizens to strive to improve results.

Furthermore, it is a compelling facilitator between stakeholders. It enables all players to have timely access to the information they need in order to make knowledgeable decisions, monitor results, implement changes etc.

A tool to interpret data, provide support and assistance in waste management, through an integrated approach that takes into account technical, economic and environmental data.