



PR2: Gap Analysis Methodology and Tool Task 2.1: Study and knowledge sharing regarding challenges & weaknesses that target group face

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Abbreviations

Abbreviation	Definition
Horeca SMEs	Hotels, Restaurants, Café Small Medium Enterprises
GA	Gap Analysis
CE	Circular Economy
WM	Waste Management
EC	European Commission

Executive summary

The Gap Analysis tool will be an online tool hosted in ADVANCE Online Platform (PR5) that will be used as a mechanism in which target groups will be enabled to assess their overall competences, capability and skills on Circular Economy (CE) and Waste Management (WM) processes. Through this tool, the target groups will have the chance to measure their current degree on CE and WM procedures and be redirected to what actions shall be taken and what theory and practice should study and follow, in order to approach more to the EU targets and waste management practices. That means that CE principles, methodologies, best practices, and success stories will be identified, evaluated and used in such manner in order a set of requirements to be created against which each representative will be able to quantify its Circular performance.

This report presents the results of “Task 2.1 Study and knowledge sharing regarding challenges”. Task 2.1 indicates the challenges & weaknesses that target group face in regard to waste management procedure. For the purposes of the project, SIGMA created a specific template, which was shared with HORECA Partners, City of Novisad and City of Zadar in order to prepare a catalogue with weaknesses and challenges that the target groups of ADVANCE face.

1 Introduction

ADVANCE is an EU co-funded project, which is funded by the Erasmus+ programme under the Action “KA220-VET - Cooperation partnerships in vocational education and training” (Agreement no. Project 2021-1-EL01-KA220-VET-000033247).

The main objectives of the ADVANCE project are, as follows:

- To assess the current food waste management practices in selected municipalities and SMEs in the HORECA sector and compare the assessment results with the best practices in the relevant fields
- To develop a concrete set of Circularity Indicators that will be used to describe both the current and the future description – monitoring of food waste management
- To assess the gap between the baseline assessment and the requirements posed by the EU Circular Economy Action Plan using the Circularity Indicators
- To develop two Roadmaps for municipalities and HORECA SMEs and a step-by-step methodology to implement the EU Circular Economy Action Plan requirements regarding food waste
- To prepare all the above as training/educational materials and implement training courses in selected municipalities and SMEs in the HORECA sector
- To develop an Open Education Resource online platform which will include & host all the above.

In this direction, ADVANCE will produce the following results:

- Baseline assessment (**PR1**) of the current waste food waste management practices in Municipalities and HORECA SMEs – the baseline assessment will also include benchmarking to existing best practices in EU.
- Gap Analysis methodology and tool (**PR2**) between current and required, according to the EU targets, waste management practices relevant to food waste. The main outcome of the Gap Analysis will be the Circularity Gap Indicators that could be used in other cases too. These indicators concern both the municipalities involved and the HORECA SMEs that will participate in the program.
- Development of Roadmaps (**PR3**) – The Roadmaps will be developed in two different types, one for Municipalities and one for HORECA SMEs. A special part of the Roadmaps will be to demonstrate how Industry 4.0 can help municipalities and SMEs to achieve better food waste management and advance food waste prevention. The Roadmaps will help to design and development of a step-by-step methodological framework for implementing the food waste targets.
- ADVANCE Course (**PR4**) – Creation of a training material broken down into certain learning modules for waste management adopted to the needs of target groups
- Open Education Resource (OER) (**PR5**) – An Online Platform, which will include and host interactively all the above.

This report presents the results of “Task 2.1 Study and knowledge sharing regarding challenges”.

2 Objectives and methodological approach

As mentioned, the Gap Analysis tool will be an online tool hosted in ADVANCE Online Platform (PR5) that will be used as a mechanism in which target groups will be enabled to assess their overall competences, capability and skills on Circular Economy and Waste Management processes. The tool will be interactive, user friendly and will be used by representatives from the selected municipalities and Horeca SMEs to assess their status in relation to the transition in Circular Economy (CE), comparing current and required, according to the EU targets described in the EC Directives 2018/850 and 2018/851, waste management practices relevant to food waste and the Baseline Assessment results (PR1).

Through this tool the target groups will have the chance to measure their current degree on CE and Waste Management procedures and be redirected to what actions shall be taken and what theory and practice should study and follow, in order to approach more to the EU targets and waste management practices. That means that CE principles, methodologies, best practices, and success stories will be identified, evaluated and used in such manner in order a set of requirements to be created against which each representative will be able to quantify its Circular performance.

In this context, the Task 2.1 indicates the challenges & weaknesses that target group face in regard to waste management procedure. For the purposes of the project, SIGMA created a specific template, which was shared with HORECA Partners, City of Novisad and City of Zadar to prepare a catalogue with weaknesses and challenges that the target groups of ADVANCE face.

3 Terms of Reference

For the benchmarking analysis, HORECA Partners, City of Novisad and City of Zadar had to depict the challenges and weaknesses that target group face during their way to waste management process. For the analysis purposes, weaknesses are considered internal factors, while challenges are the external ones. For example, weakness is poor financial capacity to implement waste management practises whereas challenge is low municipal support in recycling.

Also, the challenges and weaknesses are divided in five different categories as per their type:

- Legal/Regulatory/Compliance
- Strategic
- Educational



- Operational
- Other

The areas of study had been identified by SIGMA and are depicted in the following table

Table 1. Area of study per partner

Areas of Study	Partner
Major Challenges and Weaknesses in Food Waste Management for HORECA SMEs in European Level	HORECA PARTNER
Major Challenges and Weaknesses in Food Waste Management for Municipalities in Croatia and also in European Level	CITY OF ZADAR
Major Challenges and Weaknesses in Food Waste Management for Municipalities in Serbia and also in European Level	CITY OF NOVISAD

4 Benchmark Analysis Results

Table 2. City of NoviSad

Category	Type	Description	Severity	Locality
Weakness	Legal/Regulatory/Compliance	Absence of legal framework, support and infrastructure for responsible management of food waste	High	National Level
Weakness	Financial	Food waste is still not recognized as a raw material that can bring profit	Medium	National Level
Weakness	Operational	Lack of special containers for separating food waste	Medium	National Level
Weakness	Strategic	Low level of awareness about ways to manage food waste streams	High	National Level
Weakness	Other	Lack of education and workshops for officials on biowaste management	Medium	National Level
Challenge	Legal/Regulatory	Harmonization of policies and regulations in the field of food waste management	High	National Level
Challenge	Financial	Provide financial (other) relief for socially responsible companies that decide to responsibly dispose of food waste	Low	National Level
Challenge	Operational	Provide infrastructure for proper food waste management	High	National Level
Challenge	Strategic	Campaign to raise awareness about responsible food waste management	Medium	National Level
Challenge	Other	Instruct large generators of food waste in responsible disposal procedures	Medium	National Level

Table 3. City of Zadar

Category	Type	Description	Severity	Locality
Weakness	Financial	Improvement of the waste management system usually includes the procurement of communal equipment (vehicles, bins, devices, etc.). The financial resources of the city and utility companies are limited and insufficient for the quality improvement of waste management system. Therefore, it is very important for all actors (municipality, waste management companies, business) that additional funds are provided through different funding sources at national and EU level.	High	European Level
Challenge	Legal/Regulatory	Regarding to the Croatian Waste Management Low, cities are obliged to ensure separate collection of biowaste. Also, Low prescribes the largest permitted mass of biodegradable municipal waste that is allowed to be disposed by all waste management permits in the Republic of Croatia: 264,661 tons per year, which is 35% of the mass of biodegradable municipal waste produced in 1997. Regarding to Waste Management Plan of Republic of Croatia 2017-2022, one of the goals is to collect 40% of bio-waste from municipal waste separately. Sub-legal regulation on food donation (2019) has an important tool in reducing food waste. These regulations are challenges because legal obligations and goals that must be achieved will stimulate national and EU level to provide additional funds which will help all actors in waste management system to achieve goals.	High	National Level
Weakness	Operational	Establishing of whole biowaste management system needs a large operational engagement. Currently situation in Zadar is that only small percentage of citizens is provided with biowaste bins or composters, there is 1 mobile bio-composter on island Ist, there is no composting plant, biowaste is disposed on landfill and composting plant is under construction. A huge operational engagement will be necessary to undertake in aim to achieve the goals set up by the Low. It includes procurement of equipment, bins, vehicles, construction of composting plant, new employments etc.	High	National Level
Challenge	Strategic	Strategic planning is very important for establishment of biowaste management on the best possible economic and ecological basis. Strategic planning is still very poor but presents a big challenge that can create a base for good progress.	High	National Level

Category	Type	Description	Severity	Locality
Challenge	Other	<p>Education - In order to achieve the best possible results of biowaste management system, it is necessary to develop knowledge, skills, motivation and encourage citizens to change their behavior. This can be achieved by systematic education of all ages (starting from kindergarten to nursing homes) and staff in companies that produce biowaste, specially HoReCa sector.</p> <p>Inspection supervision of business sector, specially HoReCa sector - although law prescribes separate collection of waste, inspection supervision is necessary to force them to comply with regulations.</p> <p>Improving the food donation system - better availability of information related to donating food</p>	High	National Level

Table 4. HORECA Partners

Category	Type	Description	Severity	Locality
Challenge	Societal	Food waste because products do not meet cosmetic standards. According to a 2017 report by the Flemish government, the sales loss of all crops based on cosmetic standards is 10% on average.	Medium	National Level
Challenge	Legal/Regulatory	The European Union sets the standards that fruit, and vegetables must meet to guarantee their freshness and safety.	Medium	European Level
Weakness	Strategic	Restaurants collect little data about what they throw away and why. As a result, they have no idea how to reduce food waste.	High	National Level
Weakness	Operational	Insufficient storage facilities for stocks and surpluses.	Low	National Level
Weakness	Operational	In large-scale kitchens, different diets (diabetes, low salt, etc.) often have to be taken into account. This contributes to food waste.	Low	National Level
Challenge	Legal/Regulatory	A sector-wide, established 'wastage standard' in the hospitality industry is a major missing factor.	High	National Level
Weakness	Financial	Entrepreneurs do not find it necessary to act if their business model does not suffer from food waste.	Medium	National Level
Weakness	Operational	It is often difficult in the hospitality industry to predict exactly how many people will be coming and what they will order. Knowing your guests is essential for good planning.	Medium	National Level
Challenge	Legal/Regulatory	The Royal Decree of 14 November 2003 on self-checking, mandatory notification and traceability in the food chain imposes the obligation on every HORECA operator to set up a self-checking system, based on the principles of HACCP, that includes the safety of its products. Because of the legislation, a lot of food is thrown away to avoid risks.	High	National Level
Weakness	Operational	A major cause of food waste is portioning. No business wants to let the consumer leave with hunger and with the 'one size fits all' approach, hardly any distinction is made in portion sizes. Also, with buffet formulas, guests often scoop more onto their plates than they eat.	High	National Level

Category	Type	Description	Severity	Locality
Weakness	Strategic	The kitchen can store incorrectly, prepare a product incorrectly, make bad planning or fail to reuse surpluses. These consequences of an uncontrolled kitchen management lead to a large-scale food loss.	Medium	National Level
Weakness	Operational	In some cases, chefs lack the creativity to cleverly incorporate products that are approaching their expiry date into a meal.	Low	National Level

5 Conclusion

As a conclusion, it seems that both HORECA SMEs and Municipalities referred to challenges and weaknesses that affect them in national level. The most severe challenge in European level for HORECA SMEs is the legal requirements of the fresh food regarding their freshness and safety. On the other hand, a financial weakness with high impact on European level is the improvement of the waste management system usually includes the procurement of communal equipment (vehicles, bins, devices, etc.).

On the other hand, HORECA Partners depicted two severe challenges and two severe weaknesses that HORECA SMEs face on national level. The Legal Challenges are the non-establishment of a wastage standard' in the hospitality industry and the strict requirements of HACCP Standard, that refer to the safety of the products. As a result, HORECA SMEs throw away a lot of food to avoid risks connected to Legislation. A strategic weakness that seems to highly impact the restaurants on a national level, is the limitation of data collection on the food they produce which leads to limited food waste management. Also, the large portions that restaurants offer to their customers-both buffet and open restaurants- acts as an operational challenge for HORECA SMEs.

For Municipalities in Serbia and Croatia, it appears that one of the most critical weaknesses is the absence of an overall legal framework and the lack of training and awareness on food waste management. Also, the improvement of food donation system by addressing more information to residents and /or households may result in better results to the overall food waste management. As a challenge, the municipalities depict that the absence of a strategic framework is a major factor in the establishment of biowaste management on the best possible economic and ecological basis.