



IO1: Design and development of the e-Platform with e-training resources and 12 case studies. Task: Case study Template

1) Case study template: Hospitality sector

<i>Partner Name</i>	Chamber of Commerce and Industry Bistrita-Nasaud	<i>Case Study Number:2</i>
<i>Case Study Title</i>	Food waste in the hospitality sector	
<i>Sector</i>	Hospitality Sector	
<i>Problem / Background / description of case study</i>	<p>Why is it important not to waste food?</p> <p>Romania generates 5 million tons of food waste every year, most of it coming from consumers (according to data provided by the Ministry of Agriculture). A quarter of food waste is cooked food: 22% fruit, 21% vegetables, 20% bread / bakery products, 11% milk and dairy products, 1% meat products and 1% other foods. Food waste in Romania is a major social problem: we throw away about 250 kg of food / inhabitant annually (above the European average), while 4.74 million people (a quarter of Romania's population) live on the edge of poverty and have difficulty providing food. Although it represents a large part of municipal solid waste, only a small part of all food waste is composted, most reaching landfills. The greatest waste of food is recorded in urban areas: over 95% of municipal waste reaches landfills garbage, thus making it impossible to capitalize on waste of any kind, both food and non-food. Food waste has a lot of negative effects on the environment, affecting water, soil and energy resources, habitats and biodiversity. On the other hand, it contributes to the increase of greenhouse gas emissions and to climate change, the increase of pollution (water, air, soil) with fertilizers, pesticides and methane gas resulting from the decomposition of food that reaches landfills. Food waste causes considerable material damage to producers, importers, traders and consumers.</p>	
<i>Did they consider (modern) consumers behaviour before moving towards CE and waste management? Did consumer behaviour have an impact on them and their operation?</i>	<p>The company we stopped at has been active in the hospital field since 1991 and owns a 3-star hotel with 32 rooms and a restaurant.</p> <p>The company's activity over time has been focused on accommodation services in its own hotel and the organization of events in the related restaurant. These services have generated over time significant amounts of waste, waste that has been managed in accordance with existing legislation in Romania. In the early years of the company's activity there is no clear delimitation in waste sorting, there is no specific legislation. The adoption of normative acts in waste prevention and management has made the company take appropriate measures in terms of waste sorting and training of its employees.</p> <p>The amount of waste managed by the company is closely related to consumer behavior. If we take as a standard the Covid-19 pandemic,</p>	





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	<p>most of the waste results from private events organized before 2020. Food waste was generated by a preconceived behavior of consumers to order more than was necessary. Experience in organizing private events has led to a slight decrease in the amount of waste by advising customers on the products that have the best transition to events, recommending appropriate quantities and reducing dishes on the menu, the opportunity for customers to bring certain products, such as drinks, thus avoiding the creation of over stocks as well as the recommendation of appropriate menus depending on the season in which the event takes place.</p> <p>The Covid-19 pandemic meant the complete stop of private events and a reorientation in activity determined more by the restrictions imposed. The company's activity was reoriented towards catering services. The classic menu items were abandoned and the menu of the day was focused, which involved a daily supply system, depending on an average of orders, thus avoiding food waste as well as non-organic waste resulting from the supply process. Stocks of perishable products were avoided. Also, certain purchased products form the basis for various dishes, so that food waste is reduced to a minimum.</p>
<p><i>Waste management tools / methods applied.</i></p> <p><i>What is their operation process related to food waste? Do they follow specific protocols? Methods? Processes? Etc.</i></p>	<p>The company generates an average of 10m³ of waste per month. Of this amount, about 1m³ is food waste, usually vegetables. The manager of the company is the one who keeps a record of the waste resulting from the activity, the record that is communicated to the County Environmental Agency. In order to comply with the legislation in force, the company selectively selects waste: paper / plastic / metal / organic waste. This waste is stored in a special place until the company with which it has concluded a waste collection contract comes to collect it. Usually the organic ones are picked up weekly and the paper / plastic/metal ones on request. The waste results both from the accommodation services offered by the company and from the food preparation services.</p> <p>Regarding food waste, there are situations in which this waste serves as food for employees' animals.</p> <p>There were also special situations when due to some defects in the cold equipment resulted in a significant amount of compromised raw material (usually meat). In such a situation, these food products were taken to the Sanitary Veterinary Directorate for incineration and a document was issued so that the goods could be taken out of inventory.</p>





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<p><i>Do they have a dedicated team to work with waste management or waste minimisation?</i></p>	<p>There is no dedicated waste collection team. Usually, all employees are trained on the selective collection of waste, the place where it is collected, the time when the waste is collected. The waste record is kept by the company manager.</p>
<p><i>Do they track waste manually or through an automated system? What are their findings? What are the benefits?</i></p>	<p>Usually, when the plastic / metal waste is picked up, the operator who picks up this waste releases a paper in which the high amount of waste is specified. An analysis of the high amount of waste was not performed, so that we can talk about visible results in reducing the amount of waste.</p>
<p><i>How did they get the team onboard and work together? i.e. benefits, reward system, training etc.</i></p>	<p>Unfortunately, there is no system for rewarding employees for waste collection. However, there are situations in which to avoid food waste, the products left over that day are given to employees and their families for consumption.</p>
<p><i>What specific training did they receive on waste management and how did they receive it?</i></p>	<p>The employees did not participate in a specialized training. When hiring or during the activity, from the experience of the company's manager, they are trained on reducing the amount of food waste, reusing certain food products, encouraging customers to pack leftover food.</p>
<p><i>How is circular economy being applied? What can you identify from the case study.</i></p>	<p>Although the company's activity has been reoriented towards the activity of catering and home delivery, recyclable materials are not used in this process, when we talk about daily food deliveries to consumers. When there are certain events where food is delivered, the company prefers to use its own dishes in the restaurant, avoiding the use of paper / plastic products.</p>
<p><i>Which skills can you (partner) identify as needed for the restaurant (case study) staff to possess to successfully conduct food waste management and minimisation</i></p>	<p>In order to reduce food waste and the amount of resulting waste, it is necessary to train and hold employees accountable for:</p> <ul style="list-style-type: none"> -reuse of food products, by capitalizing on the food surplus: many food products can be reused safely: e.g. croutons can be obtained from the remaining bread, the remaining fruits can be added to a dessert, and the chopped unused vegetables can be used for soups or sauces. reducing the amounts of leftovers and waste resulting from food preparation and improperly cooked food, by: <ul style="list-style-type: none"> - training the staff regarding the use of the endowment equipment; - reduction of reheated food quantities (eg soups, sauces); - observance of adequate preparation times and temperatures, food safety and handling practices, in order to reduce inappropriate food.



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	<p>-encouraging customers to take home the leftover food unconsumed from the ordered portion, offering them, for this purpose, variants of recyclable packaging or with minimal impact on the environment (eg aluminum pans or other recyclable / reusable containers).</p> <p>-informing the staff, but also the clients, regarding the importance of the reduction food waste and the presentation of measures available to anyone in the public spaces they frequent and at home.</p>
<p><i>Resulting benefits: impact on restaurant based on their practices (kg in waste, statistics of food being wasted, minimisation statistics following adoption of CE and waste management etc.)</i></p>	<p>Avoiding food waste is an objective whose achievement must be a priority for each unit, bringing many benefits:</p> <p>Social benefits: · Reduction of waste of resources / Support for disadvantaged people with food needs / Involvement of staff in social and environmental actions</p> <p>Environmental benefits: · Reducing the amount of food stored in landfills leading to a decrease in methane gas emissions and leachate generated by these landfills, land and water conservation · Reducing food waste directly at the source · Improving the soil by composting waste vegetable food</p> <p>Economic benefits: · Reduction of waste management costs · Reduction of acquisition costs (correctly sizing the quantities of raw materials purchased) · Improving the image of the restaurant in the economic environment, by promoting the principles of sustainability</p>
<p><i>Can this case study be transferred to small / micro-organisations in the hospitality sector?</i></p>	<p>Yes, but following certain steps:</p> <p>1. Food monitoring:</p> <ul style="list-style-type: none"> -Weekly inventory of food products and raw materials -Storage of food products, by ensuring adequate storage temperatures and priority use of older products. <p>2. Appropriate evaluation of raw material and food purchases</p> <ul style="list-style-type: none"> -Purchase, as much as possible, of raw materials and food products (fruits, vegetables, etc.) in bulk (advantages: low prices and less packaging waste) -Adaptation of the acquisition policies of the raw materials necessary for the preparation of the food, in order to reduce the surplus acquisition of food products -Purchase of food with increased shelf life -Purchase with priority of food raw materials from local producers and traders



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	<p>3. Monitoring of losses and waste</p> <ul style="list-style-type: none">-Following the menu ordered by customers (including ordered garnishes): the most frequently ordered dishes, the dishes sent back unconsumed or partially consumed, the dishes prepared but left unconsumed. Based on this information, the menus and portion sizes can be adjusted.-Reducing the number of dishes on the menu, keeping in the menu rather the dishes most often requested by customers, is one of the best methods to reduce food waste.-Including in the menu the possibility of ordering smaller portions, instead of offering too large portions, which cannot be completely consumed by the customer.-Periodic evaluation of the quantities of waste generated by the food industry units (food, paper-cardboard, plastic, glass, metal, used food oil, residual / non-recyclable municipal waste) and the price paid to sanitation companies and other authorized waste collectors. <p>4. Donating the food surplus to charitable programs</p> <p>5. Use of food scraps to feed animals</p> <p>6. Composting</p>
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	<p>Food waste pyramid:</p>
<p><i>Has collaboration been arranged with local food/service suppliers? If yes, how is this arranged</i></p>	<p>There is no collaboration with certain authorities in order to reduce food waste. However, there are situations in which, in order to avoid food waste, the products left over from that day are given to employees and their families for consumption.</p>
<p><i>Is this case study national?</i></p>	<p>Yes</p>
<p><i>Is this case study innovative? If yes, how?</i></p>	<p>It can be innovative in terms of reorganizing the company's activity determined by the restrictions imposed by the Covid-19 pandemic and by the way in which the behavior of consumers in ordering food meant a reduction of food waste.</p>



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<p><i>Which technologies are used in the case study, if any?</i></p>	<p>Unfortunately, there is no management software used.</p>
<p><i>Can this case study be used in the CE4Food training programme? If yes, which module can it supplement?</i></p>	<p>Yes. Methods of training employees in order to limit food waste, ways to recover food waste, waste management.</p>
<p><i>Source/Reference</i></p>	<p>1. www.mdpi.com-Food Waste Behavior among Romanian Consumers: A Cluster Analysis, site visit on 26.01.2021 2. https://u.profitroom.com/2017.ighp.pl/uploads/pdf_aktualnosci/hotrec_brochure_-_reduce_food_waste.pdf -European hospitality industry guidelines to reduce food waste and recommendations to manage food donations, site visit on 26.01.2021</p>
<p><i>Website</i></p>	
<p><i>Other</i></p>	

