

## Module 3, Session 2

### Description of slides

#### Slide 1 - Module 3

Food Service Management

#### Slide 2 - Session 2

In this session we will focus on preventing plate leftovers at the expediting stage. We will discuss solutions for prevention, such as offering different sizes of portions to customers, modifying the composition of dishes or providing “doggy bags”.

#### Slide 3 - Food waste in food service sector - stages

Food waste in catering establishments occurs at various stages of the technological process, as shown in the figure. Food waste can be generated when receiving raw materials, during storage and production and serving, and at the end in the consumer hall as plate leftovers.

Numerous data indicate that food waste most often occurs at the last stages of food circulation in the establishment. Special attention is paid to so-called plate waste. They are created already at the final stage, in the consumer hall.

#### Slide 4 - What is plate waste?

What is plate waste? Plate waste is food that comes back from consumers' tables. It can include edible parts (such as garnish) and non-edible parts (such as bones from meat).

Plate leftovers include food left on plates by consumers and food taken from a food service establishment in the to-go box but not ultimately consumed.

Plate waste in gastronomy is a serious problem because its share in the mass of wasted food is significant - as shown in the following slides - but nothing can be done about it. They are thrown out.

#### Slide 5 - Plate waste in different restaurants

Plate leftovers are generated in almost every food service establishment, regardless of the activity profile. The slide presents the research results from three small and medium-sized restaurants in Warsaw (Poland). These establishments differed in the presence or absence of meat on the menu, character of the place (relaxed vs. elegant) and openness to change.

Process schemes have been developed for each restaurant, showing a typical process flow in a given establishment.

The first restaurant, named LOCAL AND COMMUNITY-BASED, is a small restaurant located in a fashionable neighbourhood of Warsaw. It serves predominantly vegetarian and vegan dishes but also has meat on the menu. The prices are average.



The second restaurant, named IDEALISTIC VEGETARIAN AND VEGAN, is a vegetarian or vegan restaurant that firmly stands by its values. The menu is short, seasonal and lacks meat, while most products are delivered by local suppliers.

The last restaurant, named EXCLUSIVE AND HIGH-PROFILE, is characterized by high prices that attract gourmets. Exceptional culinary experience and matching service. Guests often need to make a reservation.

Studies have shown that plate leftovers are created regardless of the type of establishment. In all three restaurants, the reason for their generation was indicated as a lack of active suggestions to pack the leftovers.

It is clear that in the third restaurant, focusing on image, it is more challenging to deal with leftovers on the plate. This is because apart from the lack of active encouragement by the staff to take uneaten dishes home, in facilities of this type, there is a lack of packaging to pack the leftovers and a lack of possibility of will to pack the leftovers packaging brought by the customer.

### **Slide 6 - Plate waste cause large amounts of waste - case from Poland**

#### **(Warsaw)**

The results of many studies indicate that plate leftovers constitute a significant part of food waste in foodservice establishments. Special attention should be paid to hotel gastronomy in this place.

The slide presents the results of research conducted in four hotels operating in Poland, and more precisely in the capital of Poland - Warsaw. In order to determine the level of food waste in hotel food services, the diary method was used. Each hotel received a sets of tables. Each set consisted of tables concerning the (1) storage department, (2) production department, (3) breakfast buffet, (4) restaurant, (5) service for organized groups, and (6) dishwashing area. Waste from the dishwashing area was actually plate waste.

The share of food not used during the week (7 days) in the total weight of raw material/semi-finished or finished products used for food preparation was for the individual hotels, i.e., H1, H2, H3, and H4 respectively: 11.4%, 12.4%, 14.5%, and 10.6%. The inedible parts of food in the production department accounted for from 2.3% (Hotel 3) to 4.7% (Hotel 2) of the mass of raw materials used. The share of finished products in the breakfast buffet, which were not used as originally intended (breakfast for hotel guests), ranged from 2.1% (Hotel 2) to 4.0% (H1) by mass of raw materials used. The largest percentage of wasted food constituted **plate waste**. Its share ranged from 3.6% (Hotel 1) to 9.9% (Hotel 3) of the mass of raw materials used.

### **Slide 7 - Plate waste cause large amounts of waste - case from Poland**

#### **(Warsaw)**

In the investigated hotels, the most food was wasted in the serving department, i.e., in the buffet in the dining room or in the form of plate waste weighed in the dishwashing room. It was found that in the investigated facilities, on average, 72.55% of the food wasted came from this department. A significant share of this value (48.82%) was



constituted by plate waste left by consumers on their plates, and 23.73% was food left/not consumed by hotel guests on the breakfast buffet in the dining room. As it turns out, a significant part of the food wasted in food services consists of ready-made food.

### **Slide 8 - Plate waste cause large amounts of waste**

In four polish hotels, analyzing the structure of food waste, the share of plate waste in the investigated facilities providing various types of services was nearly 50%. Studies by other authors indicate a much lower share of plate waste in the structure of food waste. For example, data from Malaysia showed that customer plate waste constituted 23–35% of the total. In contrast, In the United Kingdom, plate waste was estimated at 34%. Plate waste left by customers at the Finnish food service sector ranged from 4.4 % to 9.5%.

### **Slide 9 - Always at the beginning ...**

As we can see, plate waste is a serious problem in the foodservice sector. In every foodservice establishment, it is possible to reduce mass of plate waste. This requires specific actions.

First, the plate waste mass in a foodservice establishment should be determined. Second, it is necessary to identify the parts of dishes that are mainly left on consumers' plates.

Once we determine the mass of plate leftovers in our establishment and determine which dishes are most often left on plates by consumers, we will be able to introduce preventive actions.

### **Slide 10 - Measure plate waste**

First, you need to check the total amount of food leftovers that customers leave on their plates.

It is a good idea to label the container "plate waste". There are many waste containers throughout the foodservice establishment. Therefore, clear labeling will reduce the risk of errors when data is recorded.

During serving, throw away food leftovers from customers' plates into the "plate waste" container. At the end of the work, or as needed, weigh the contents of the container using a kitchen or luggage scale. After subtracting the weight of the empty container, you will get the mass of plate waste in it.

Record your findings in the appropriate place on the sheet. An example will be presented on the next slide.

The question arises, how long should the mass of plate waste generated in the foodservice establishment be recorded? For at least 7 days, so that you can see how much of this type of food is wasted every day of the week. However, conducting observations for several weeks, e.g. four (a month) is advisable.



### Slide 11 - Usefull form to note the mass of plate waste

The slide presents an example form for entering the mass of waste generated at all stages of the technological process in a foodservice establishment. The form allows you to enter plate leftovers from each seven days. The note cell will enable you to enter observations that may be important from the point of view of the preventive methods introduced later. Ideas that appear during the observation can also be entered here. This will allow you to discover a particular waste fraction's share in the mass of processed raw materials or dishes served. In the header, for each day, you can additionally include information regarding the mass/or number of portions of dishes prepared on a given day. Remember to familiarize employees with the form before starting the observation and notes.

### Slide 12 - Direct measurement

This measurement method on restaurant and food service sector, is also recommended by the European Commission.

**In this document 'Direct measurement (weighing or volumetric assessment)'** is defined as *Use of a measuring device to determine the mass of samples of food waste or fractions of total waste, directly or determined on the basis of volume. It includes measurement of separately collected food waste.*

### Slide 13 - Monitoring the key dishes or ingredients

Key dishes or ingredients may need more attention than others, such as your most wasted or most popular dish.

It is worth checking which ingredients of these dishes most often remain as plate leftovers.

Choose your most wasted or most popular dish and monitor which items are being left on customer plates.

The container, which could be a little bit smaller, should be labelled to reflect the item you'd like to track. Again, using the appropriate form can monitor ingredient-specific tracking.

The procedure is the same as previously presented, i.e.:

1. Weigh an empty, labeled container designated for a specific ingredient,
2. Throw uneaten ingredients from customers' plates into separate, labeled containers,
3. At the end of the work, or as needed, weigh the contents of each container using a kitchen or luggage scale. After subtracting the weight of the empty container, you will get the mass of each ingredient waste in it.

**Please note that the form should be customized to the individual foodservice establishment. This is just a suggestion.**

### Slide 14 - How to reduce plate waste?

Now that we have information about the mass of plate waste and we have identified which items of dishes are wasted the most, we can take action to reduce it.



Remember, even a small change can significantly reduce the mass of generated plate waste.

Many solutions are used in gastronomy to reduce plate waste, and it will not always be possible to implement them in every establishment. The issue of reducing plate waste should always be approached individually.

### **Slide 15 - Take a look at the size of served portions**

Many studies conducted among consumers on the causes of leaving a meal uneaten indicate that the portion of the dish served is too large.

Polish respondents who declared that they left unfinished meals in restaurants, bars, canteens, or small food service outlets were asked about the reasons for such behavior.

Look at this slide, almost half of the Polish respondents stated that **it was due to overly large portions** and inadequate taste. About 1/5 of the consumers stated that they did not finish their meal in a food service establishment because they found an undesirable element in a dish or ordered too many dishes. About 1/6 of the respondents indicated an unappealing look as the reason for the unfinished meal.

On the right side of slide are presented the results of research conducted among British consumers were presented. The main reason stated for leaving food uneaten was the portion size cited by almost half– either as the portion size was larger than expected (40%) or because they felt they ordered too much (11%). This was followed by the meal including things (e.g., salad, garnishes) that they didn't like or fancy (15%), and not liking the taste (10%).

### **Slide 16 - You can reduce the portion size**

If you have identified products often left on the plate by consumers, such as fries, boiled potatoes, and sauces, reducing their portions may be a good solution. It would be best to verify the existing portions and serving measures first. They may not be followed by employees. Remember that when changing the portions of served dishes, you should provide the staff with appropriate tools, e.g. spoons and containers of proper capacity. By reducing the default portion size you can offer customers a refill option. This option can work well in canteens, buffets, and fast-food restaurants.

### **Slide 17 - You can reduce the plate size**

Plate shape and size delineate norms for appropriate amounts of food to eat at a meal. It has been shown that big bowls lead to overserving, small bowls lead to underserving. The research shows two simple and nonintrusive 'nudges' of reduce plate waste in hotel restaurants by around 20%

- reducing the plate size by 3 cm could reduce the amount of plate waste by about 19,5%.
- introducing the signpointing out that guests can help themselves more than once reduces food waste by 20.5%





### **Slide 18 - Give an information on portion size**

As already noted, the most common reason for leaving an uneaten dish on a plate reported by consumers is a portion that is too large. Foodservice establishments often lack information about the grammage of the dish or its individual components. In such a case, the menu card should be supplemented with the grammage of the dish or its individual components. However, consumers cannot always visualize the portion size based on the text. Various organizational solutions or graphic forms presenting the size of the served portions work great.

How can you do it most simply?

- 1 When serving dishes in a buffet, you can, for example, provide different sizes of plates. Additionally, in such a situation, you can place a sign for customers using the buffet that they should not overfill their plates because, after all, they can always return to the buffet for more dishes.
- 2 You can use iconography in the menu, thanks to which it will be possible to categorize the size of the portions of dishes. Customers will know they can order a smaller portion of the selected dish.
- 3 You can also expand the information about the menu, including the size of the portion, by using a QR code. For example, you can take and share photos of different portion sizes of the same dish.

### **Slide 19 - You can give consumers the possibility to choose**

Consumers like to have a choice, not only in portion size but also in the range of ingredients of the dish.

After all, not everyone has to like buckwheat or French fries. So provide them with THIS.

You can provide customers with greater flexibility in choosing dishes. Let the consumer have the opportunity to select the dish's components so that it is tailored to their preferences.

### **Slide 20 - Write a children's menu**

Food waste is highest among people aged 18-34 and 35-44, especially when eating out with kids, eating in larger groups and eating with work colleagues. And it's happening in all types of food service establishments.

Whether you have many child diners or very few, having a kid's menu on hand and accounted for can be invaluable.

Kids have much smaller appetites and are less likely to enjoy your dish.

Offer a select children's menu in terms of portion and type.

The kids' menu equals less plate waste.

### **Slide 21 - Doggy bags/boxes**

Despite your best efforts to minimise plate waste you may still find some food is left on plates.



In these circumstances allowing customers to take food home is a good option. **Doggy bags/boxes** are another way to help reduce plate waste.

This is the encouragement of consumers by outlet staff to take away uneaten portions in doggy bags or suitable containers to be eaten later, where appropriate.

Make it the norm. Why not make doggy bags / boxes part of your service script or highlight them on menus to help overcome any apprehension they have around asking?

#### **Slide 22 - Reasons to start taking home leftovers...**

1. You paid for it! Why buy a meal and only eat half???
2. It will absolutely end up in the trash. Restaurant can't sell or donate food that has already been served to a customer. This is done for food safety reasons.
3. A lot of resources went into producing that food.

Every resource that went into producing, transporting, distributing and preparing that food is also wasted when it is thrown in the trash.

4. Ready-made lunch for the next day!

If you only have a small portion remaining, you can simply pair it with a side salad, make it into a sandwich or wrap, add some rice or steamed veggies... whatever makes sense for what you're bringing home.

5. Set the example for others.

It might just slip your fellow diners' minds to get their leftovers boxed up, or they may feel uncomfortable about asking for them. Be a leader! People are more likely to do something when they see others doing it first. Be that first person.

#### **Slide 23 - And finally ...**

You have to engage your staff and your guests.

Motivate your staff to encourage guests to personalize their orders, and if customers don't finish a dish, to take it home. But provide them with the right tools to do so.

Make your guests aware that they are wasting their money by not eating their meals and leaving them on their plates. After all, nobody likes to lose money.

#### **Slide 24 - Is it common to take leftovers home from a restaurant in Europe?**

##### **- respondent opinion**

And finally, let's see how European consumers perceive the possibility of taking away plate leftovers.

1. *It's a blanket statement, but from my experience European people find wastefulness in very bad taste. Why throw food away?*

*In my trips to Amsterdam, London, Prague, Bucharest, Paris, Budapest or Copenhagen I've never seen anyone looking down on someone who wants to take the leftovers after a meal. On the contrary, they asked us if we want them.*

2. *European cultures different from each other.*



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*In Germany, it is definitely rude to go to a Restaurant and order food on purpose to take it home with you. You may get to hear some very harsh words from the staff, because that would mean you consider their restaurant a fastfood place.*

*However, if you eat at the restaurant and after an hour or so you ask for the bill and the waiter sees there is a considerably amount of food left on your plate, he will probably ask if something was wrong with it, or If you liked it. If you answer "it was very good but unfortunately, it was too much for me", he is likely to offer to pack it up for you. Or he will at least be fine doing that if you ask him politely. But not all restaurants have suitable containers, so some will say they are sorry but you can't take it with you.*

*3. I have never had a problem taking leftover food from a restaurant.*

*There's a couple of reasons for this:*

*I've paid for the food, it's mine, I'm taking the uneaten bits home*

*The restaurant has to pay for waste collection, the less food they throw away, the smaller their waste bill*

*I've asked for a "doggy bag" (the common British term for taking leftovers home, as it was often bones for their dog) in restaurants of all levels, from cafes to Michelin starred establishments, and never had anyone question me. The waiting staff usually tip the food into takeaway containers.*

## **Slide 25 - Is it common to take leftovers home from a restaurant in Europe?**

### **- respondent opinion**

*4. I live in Europe, Italy and work in relatively a big restaurant.*

*The owners have a very efficient and friendly approach towards customers wanting to take leftovers with them. In our weekly supplies we receive a good chunk of boxes and bags solely for to pack the leftovers for customers.*

*I personally really encourage the clients to take their leftovers mainly for these reasons: If the customers don't take the leftovers, where they gonna end up ultimately? Obviously in the organic waste. Doesn't it make more sense that the food will be consumed by someone instead of going into garbage?*

*The customers like the dish but can't finish for any reason but want to enjoy it later.*

*It's a very small favor i give to my customers and in response most of the time they show big gratitude and appreciate my services.*

*This tiny gesture covers shortcomings during the service if there were any and as a saying goes by "all is well if it ends well".*

*So I'd say, in any part of the world don't be shy and ask for the leftovers and if I'm serving you, I'll do it with a smile .*

*5. In the past it would be seen as a "not to do thing". You usually went to a restaurant to eat in the premises, not to pick up leftovers as if you were starving at home. Nowadays it can even be "cool" as if to show you are conscious about the waste of food and natural resources that is devastating our planet.*





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*Anyway I think it's better to order appropriately and just the number of dishes you are going to eat. It depends also in the kind of appointment your lunch or dinner is. If with close friends or family I would ask for a box for leftovers. If in a romantic date not so sure.*

## **Slide 26 - Thank You**



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