



# LESS IS MORE

Why it pays to systematically look at and reduce food waste

With support from



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In collaboration with:



FH MÜNSTER  
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GERMAN STRATEGY

TOO GOOD FOR THE BIN!

The aim of the project “Too good for the bin! – Dialogue on the avoidance of food waste in out-of-home catering” is to reach a voluntary agreement together with the main stakeholders to avoid food waste for this sector. Parallel to the dialogue events, demonstration projects with selected pilot companies from the business & industry, tourism and care sectors will be carried out.

### **More information about the project can be found at:**

#### **WWF:**

[www.wwf.de/themen-projekte/landwirtschaft/ernaehrung-konsum/  
dialog-zur-vermeidung-von-lebensmittelabfaellen](http://www.wwf.de/themen-projekte/landwirtschaft/ernaehrung-konsum/dialog-zur-vermeidung-von-lebensmittelabfaellen)

#### **BMEL:**

[www.lebensmittelwertschaetzen.de/strategie/handlungsfelder/  
dialogforum-ausser-haus-verpflegung](http://www.lebensmittelwertschaetzen.de/strategie/handlungsfelder/dialogforum-ausser-haus-verpflegung)

## **Imprint**

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Eating out is the trend



The out-of-home catering market has been gaining in importance for years: in 2018, at 80.6 billion euros Germany-wide, it was the second most important sales channel after food retail. The strongest growth was recorded in fast-food catering, followed by canteens in the workplace or places of learning and event catering.<sup>1</sup> As fewer people cook at home and more eat out or have food delivered to them, a reversal of this trend is not to be expected in the coming years.<sup>2,3</sup>



\* Hotel business incl. breakfast for overnight stay  
 \*\* incl. vending at work/training place

Figure 1: Consumption expenditure in the out-of-home market (2018) and change compared to 2017<sup>1</sup>

Catering for homes for the elderly, which has a total cost of goods of 1.1 billion euros per year and school catering at 722.4 million euros per year are also of increasing importance.



# Avoiding food waste: a joint responsibility



While the out-of-home market is growing, so is the responsibility of companies to deal sustainably with the food they are selling – this applies to restaurants and workplace canteens as well as kindergartens and schools, hospitals and homes for the elderly, hotels and cruise ships. In all areas it is important to avoid food waste in the future in order to achieve the common goal of reducing food waste by 50 percent by 2030.

“By 2030, the German government aims to halve global per capita food waste at retail and consumer levels and to reduce food losses along the production and supply chain, including post-harvest losses. This goal can only be achieved nationally with all stakeholders along the food supply chain.”  
National strategy in Germany to reduce food waste 2019

## Despite many initiatives: food waste in Germany still high

Current results show that the volume of food waste in Germany remains high at around 13 million tonnes per year. Of these, approx. 1.7 million tonnes can be attributed to eating out. Up to eight million tonnes of food waste per year could theoretically be avoided.<sup>5</sup>



Figure 2: Distribution of food losses along sectors in percent

## Eating out market: high potential to reduce food waste

Research to date tells us that up to 35 percent of food prepared for the out-of-home market ends up being thrown away. At the same time, the out-of-home sector has a high potential for saving.<sup>6</sup> Current international research results show that savings of up to 50 percent are feasible. Over a period of several years, 242 out-of-home catering facilities around the world have been monitored and assessed.<sup>7</sup>

	Number of companies	Reduction of food waste (weight)	
		After 12 months	After 3 years
Hotels	42	21 percent	
Catering companies	86	36 percent	44 percent
Restaurants	114	26 percent	58 percent

*Table 1: Reduction potential for caterers and restaurants worldwide<sup>8</sup>*



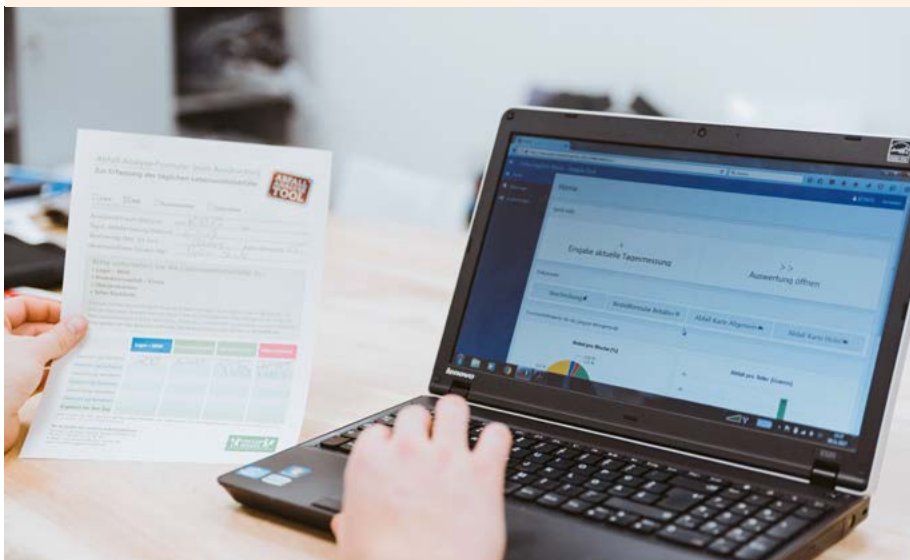


## Interim results from United Against Waste e. V.<sup>9</sup>

Valid results and figures for food waste in the out-of-home sector in Germany in recent years were only available from estimates and projections. They were not sufficient to provide a realistic picture of the waste situation in the various out-of-home areas. In addition, too little data has been available until now to show exactly where food waste occurs daily in the individual (cooking process) areas.

This is why United Against Waste e. V. (UAW) developed the online waste analysis tool in 2014. Waste is sorted, weighed and documented using four transparent collection containers to cover the entire cooking process. From May 2014 until July 2017, UAW carried out a total of 393 waste measurements and analyses in cooperation with various out-of-home companies, including 269 works canteens, 64 hospitals, 24 hotels and 36 school canteens. By 2019, United Against Waste e. V. has collected over 650 waste measurements from various companies. The results show how many grams of food waste are produced per plate in the entire cooking process. Short-term measures that have already been implemented have achieved initial success in reducing food waste. The measurement results presented also show the immense savings potential.

**It is a fact** that in order to achieve the goals of Agenda 2030, Germany needs reliable methods for measuring waste amounts in detail in order to establish a benchmarking system for companies. Measurements, waste analyses and consultation to achieve low-waste catering should become standard practice.



# Food waste: more than the cost of disposal



## A rewarding commitment

There are many reasons for avoiding food waste such as moral/ethical, ecological and economic motives. Studies in Germany, but also in the most diverse regions of the world, show that for several reasons it is worth getting going.

The overriding principle is that sustainability and transparent supply chains are becoming increasingly important, also for out-of-home catering. A major influencing factor here is the growing interest of consumers in the origin and production conditions of the goods used and their impact on the environment. There are various management systems that can help companies optimise their processes.<sup>10</sup> At present, food waste is not looked at systematically. However, the future requirements for recording and reporting mean it can be assumed that food waste will be an integral part of sustainability reporting in the coming years.<sup>11</sup>

“Waste of food concerns us all: it damages the environment and causes high costs for society as a whole. We are interested in being actively involved in developing sustainable concepts in kitchens, and we are aware that sustainability is an important issue for our residents.”

Christoph Specht, Managing Director Augustinum

## Food waste as a cost factor

The basic first step is to measure food waste and the associated costs. Nevertheless, disposal costs are only the tip of the iceberg; further costs are incurred, for example, for energy during storage, production and distribution as well as for personnel during preparation, serving and disposal of food. Estimates assume that the total costs are ten times higher than the pure disposal costs.<sup>12</sup>



*Figure 3: Costs due to food waste*

According to estimates by United Against Waste e. V., one litre of food waste costs at least two euros along the entire value chain. The costs are made up of the purchase and preparation of the goods as well as the energy and disposal costs. For a waste bin with a capacity of 240 litres, this is approx. 480 euros.<sup>13</sup>



But how

can these costs be reduced  
and how much must be  
invested?



Investments pay off  
in several regards



## Avoidance pays off

Food waste costs, every business and every day. These are costs that can be avoided. Depending on the size of the business, companies can save between 5,000 and 70,000 euros within one year by reducing food waste.<sup>14</sup> With regard to school catering, project results show that, depending on the size and structure of all-day schools and school kitchens, annual costs have been reduced by between 1,300 and 6,400 euros. Respective of the number of schools and lunches, catering service providers can achieve significantly higher cost savings.<sup>15</sup>

## Investments

Depending on how comprehensively and systematically the avoidance of food waste in a company is tackled, different levels and types of investment can be expected, such as:

- using analysis tools (purchase, license, etc.)
- involving a management consultancy, e.g. to identify and implement actions to reduce food waste
- introducing innovations in the handling and storage of foodstuffs
- reworking menus
- training employees
- if necessary, using communication activities to increase the acceptance by guests.

“Initially, it was the realization that all production processes can actually be made transparent: Where and why do I have overproduction, plate returns and production waste? Also, core and key figures can be derived from transparent processes, which are of enormous economic importance. We have been monitoring plate returns for several years, but now we have it in black and white: there is still development potential for us to reduce food waste further. Portion sizes have been reduced, and production is more target-group-oriented. In addition, we have created new recipes together, photographed the dishes and placed the photos in the kitchen as well as at the serving counter. In this way, both the guest and the kitchen and service staff can see how large each portion is. This is a simple but effective method.”

Model company “Essen in Hessen”, company staff restaurant

## Small steps that have a large impact

Examples from Germany as well as from abroad show that simple actions can often lead to a significant reduction in food waste, especially in the case of meals outside of the home. The recording of food waste alone contributes to a significant reduction, as awareness is raised in both employees and customers. Furthermore, changing what's on offer, such as different portion sizes, a new organization of the buffet as well as changes at the serving counter, can make an important contribution to the avoidance of waste.<sup>16</sup>

"Certainly, our measurements have brought about positive changes. We now use small serving cutlery (ladles) at the food counter, prepare more food just-in-time. We have also bought new plates that are smaller than the old ones, but they make the portions look more generous. Thus, we automatically avoid plate returns. We have used posters to draw attention to the respectful handling of food when serving meals and in the kitchen. Raising of awareness among our guests has achieved a lot. In addition, it has become established that every guest can get a free second helping at any time."

Model company "Essen in Hessen", company staff restaurant

International research results also confirm that investments are moderate. The average investments of the 242 participating companies were between 3,000 and 7,000 US dollars per year.

	Number	Percentage of participants	Level of investment over 3 years in US dollars
Catering companies	86	80 percent	less than 10,000
Hotels	42	90 percent	less than 20,000
Restaurants	114	100 percent	between 10,000 and 20,000

*Table 2: Average level of investment by for example caterers, hotels and restaurants<sup>17, 18, 19</sup>*



## What can't be measured, can't be managed

Whichever approach a company chooses: measurement is the first step. This is the only way to identify the quantities, points of origin, reasons and economic and ecological effects and then to develop and implement targeted actions. Measurements make it possible to identify those actions that have the greatest potential and thus contribute most effectively to reducing food waste.

"Simple measures as part of the "REFOWAS" (Reduce Food Waste) project have reduced food waste in schools by an average of 30 percent. If, in addition, the processes in the kitchen and the serving area are optimised and the staff is trained and actively involved, waste can even be halved and the global sustainability target (SDG 12.3) achieved."

Frank Waskow, Verbraucherzentrale NRW  
More information: [kuechenmonitor.de](http://kuechenmonitor.de)



## Return on investment

Depending on the design, the type of technology used, e.g. simple recording in tonnes or the use of artificial intelligence, the investment costs vary from company to company. The highest share of the investments is usually incurred at the beginning. However, numerous results from Germany and abroad show that the investor recoups costs fully within a short period of time. But there is more, as a rule, companies can also benefit from the measures themselves, as considerable cost savings can be achieved. These include lower food costs (due to lower expenses when purchasing less food), increased income from new items on the menu (e.g. by incorporating food leftovers in new meals) and lower disposal costs. This results in a positive cost-benefit ratio for the investments made. The savings can in turn be used to improve the quality of the meals served and/or food purchased, e.g. by increasing the proportion of organic food or certification scheme goods.

	Number	Return on investment	
		after 12 months	after 2 years
Catering companies	86	64 percent	80 percent
Hotels	42	70 percent	95 percent
Restaurants	114	76 percent	89 percent

*Table 3: Return on investment through actions to the reduce of food waste*

As can be seen from the table, the cost-benefit ratio of the participating caterers, hotels and restaurants was consistently positive and ranged from 6:1 to 7:1. The return on investment (ROI) was between 300 and 600 percent. For every US dollar invested in reducing food waste, companies received a return on investment of six US dollars or more.<sup>20, 21, 22</sup>

The examples show that – in Germany and worldwide – it is worth investing in the avoidance of food waste; not least because this fulfils society’s expectations regarding a careful use of resources.



*"In the course of waste measurements with the waste analysis tool from United Against Waste, we were able to reduce our cost of goods from 32 to 26 percent."*  
Erik van den Bergh, General Manager,  
Infinity Hotel & Conference Resort Munich

# Staff involvement





Without staff involvement it will not be possible to reduce food waste long term and effectively. It is therefore important to involve all staff members – from top level management to service staff – and keep motivating them. A high level of motivation to avoid waste can be achieved if the employee also recognises his or her own benefit. A competition for the most successful “food saver” or ideas for the company suggestion scheme can be possible approaches. It’s true that the measurements and evaluations create additional work in the kitchen, at the serving counter and in the scullery, but simple, practical measures can be derived from the results and implemented as part of the work routine without a lot of extra effort.<sup>23</sup>

“In order to advance the topic further, the understanding of the employees is always decisive for me – if they don’t go along with something, you’re basically fighting a losing battle. The entire team now has a trained eye and is paying more attention to ensuring that no food is wasted. In addition, the employees are now proactively contributing their ideas as soon as they see that something that doesn’t belong there is ending up in the bin. That really pleases me, as kitchen manager.”

Model company „Essen in Hessen“, company staff restaurant

“In my opinion, awareness must be raised time and again. It is not enough to address it just once, it gets forgotten too quickly. Many people are not aware that cash ends up in the bin each day. That’s why we continue to measure, implement new measures and keep building on experience. Even if it costs us a lot of time and energy, it’s worth it!”

Model company „Essen in Hessen“, company staff restaurant

# Examples of good practice



# IKEA Germany

Since 2015, IKEA has established a comprehensive sustainability strategy. The furnishing company aims to halve food waste in its food stores by 2020.

## Avoiding of food waste

Together with United Against Waste e. V., a holistic food waste management system has been developed since 2018. Andreas Essler, Operations Manager at IKEA Food, accompanies the entire project great enthusiasm. “We measured our food waste with the online waste analysis tool for six weeks. Without taking any actions at all, we were able to save ten percent of the waste right away. We then held workshops in our IKEA stores and developed reduction measures.”

## Selected measures

### Reducing overproduction

- verification of the use of Gastronorm containers (GN containers) and adaptation to customer flows
- switch to more just-in-time production, eliminating of heated trolleys
- review and adaptation of production plans

### Reducing returns on plates

- repeated checking of the plate returns
- verification and adjustment of the portioning by means of the appropriate portioning tool even to the revision and introduction of a ladle plan
- introduction of a sample plate as well as repeated weighing and control of the grams per menu

## Outcomes

A second and third measurement is currently being carried out in all 52 stores in order to document further savings. In the third waste measurement (as of July 2019), food waste was reduced by 37 percent on average.

# LWL-Kliniken Münster & Lengerich

The LWL-Kliniken Münster & Lengerich are specialist hospitals for psychiatry and psychotherapy.

## Avoiding food waste

The first steps were already taken in 2008; since 2013 the clinics have been systematically tackling food waste in their facilities for both ethical and financial reasons. For example, the aim was to partially finance the additional costs incurred by the clinics for the purchase of organic food, by avoiding food waste. From 2013 to 2015, the LWL clinics were partners in a very successful project at Münster University of Applied Sciences aimed at reducing food waste.

The hospitals see the reduction of their food waste as an ongoing responsibility to which they devote themselves on a continuous basis in terms of quality management according to the Plan-Do-Check-Act (PDCA cycle) steps. In this continuous improvement process, they consistently set themselves new goals. The topic is regarded as a joint management task of the hospital and kitchen management.



## Selected measures

Measuring the waste is the basis of every development. Without knowing where, how much and why food waste is produced, there cannot be sustainable improvement. The sum of all measures leads to success; there is not one big hit. However, the drastically reduced output quantities deserve a special mention. Those who are still hungry can get a second helping. This measure has resulted in almost no leftovers on plates. Even soup for a starter, for example, is only available if individually ordered. The newly introduced feedback system from the scullery to production has also led to significant improvements. In the scullery, the first thing that stands out is if there is unusual plate waste. By informing the production department quality defects can be counteracted immediately.

## Outcomes

In total, food waste was reduced by around 12,000 kilograms per year compared with the year the first measurement was carried out (2013). This means an annual saving of at least 30,000 euros. The kitchen manager keeps one hundred percent of the savings and can reinvest it in the purchase of high-quality organic food.



„I see food waste as an ethical and financial problem. Our example shows what is possible to successfully reduce waste. I am pleased that the topic has arrived at national level and is being tackled nationwide. If everyone pulls together, we will be successful.“

Thomas Voss, commercial director,  
LWL-Kliniken Münster & Lengerich





# Schneider Bräuhaus München

The Schneider Bräuhaus Munich is the original outlet of the family-run independent brewery. The brewery has been cultivating traditional hospitality for many years.

## Avoiding food waste

Since 2008, Schneider Bräuhaus has been dealing with the topic of avoiding food waste. The employees receive regular training. In addition to a sense of ecological responsibility, the incentive was to save a lot of money with these measures.

## Selected measures

### Measuring

In cooperation with the Institute for Sanitary Engineering, Water Quality and Solid Waste Management (ISWA) at the University of Stuttgart and United Against Waste e. V., food production was switched over to more economical processes. New recipes were introduced to include the recycling of scraps or leftover food, waste volumes and portion sizes were measured. This led, among other things, to the optimisation of the quantities being prepared, a reduction of the purchasing range and a concentration on a few suppliers with long-term commitments. The Schneider Bräuhaus records the food waste that accumulates in the kitchen and the food leftovers from plates at waste disposal level, and in addition in detail three times a year in the context of its membership in United Against Waste e. V.

### Adjusting of portion sizes

The first step was to reduce all portion sizes to the following rule of thumb: 200 g meat/fish, 200 g of pasta, potatoes, rice or similar and 100 g vegetables or salad. The knuckles of pork were also halved. At the same time, the brewery introduced extra large and extra small portions with corresponding price adjustments. The salads and some other side dishes were also disconnected from the main course. When reservations are made, the offer is adapted to the dining cultures of the guest groups.

### Personnel development

It has been shown that it was good to go step by step on the way, from the pilot project to expanding the measures. This way, the staff could be kept on board. Four times a year, large team meetings are held at the Bräuhaus about the company's goals and the measures to avoid food waste, once a month meetings are held at management level. The topic is now firmly anchored in the corporate culture.

## Outcomes

Since 2008, Schneider Bräuhaus has been able to reduce food waste disposal costs by 70 percent, while at the same time reducing residual waste by 20 percent.

# Uwe Nickut Catering GmbH

Nickut Catering GmbH, based in Burscheid in the Bergisches Land region of Germany, currently supplies kindergartens, schools, health facilities and private customers with around 10,000 healthy lunches a day. Their standards of quality and freshness for their food are very high. Since its foundation almost 25 years ago, the company has been committed to a resource-conserving and sustainable approach to the environment.

## Avoiding food waste

In 2014, Nickut Catering GmbH took up the topic of waste avoidance and joined the United Against Waste e. V. association. From 2015 to 2016, the caterer was involved in the REFOWAS research project to avoid food waste in school catering.



## Selected measures

### Measuring

Two to four times a year, the returns from the facilities are measured and evaluated. Around 50 percent of customers in the community catering sector are currently taking part in the project. The employees then actively approach the facilities and discuss customer-specific actions to reduce food waste together.

### Adjusting portion sizes

One instrument is the adjustment of portion sizes. If, for example, a facility caters for predominantly younger children, who generally consume smaller portions, the company can easily adapt to this. Thanks to its merchandise management system, the company is able to adjust the sizes of individual menu components to suit individual customers. Also in their school canteens seconds are always offered, if food is still left over at the end of serving time. This is very well received and leads to less waste in the bin.

### Order system

The flexible ordering system also makes it possible to avoid a lot of waste. Customers have the option of adapting orders until the previous day, for example in the event of illness or during spontaneous class outings.

### Communication

In addition, the employees regularly talk to customers large and small, ask questions about their favourite dishes and tailor the menu to their wishes and feedback. Because food that is eaten with pleasure rarely ends up in the bin.

## Outcomes

Through these actions, approximately eleven tonnes of food waste can be saved per year across all customers with whom measurements were carried out. This is a good start and a very good step in the right direction. The measures will be expanded gradually. Nickut Catering GmbH is also pleased about small successes. Nevertheless it wishes that there would be substantially more attention given to this topic in the media and that the policy makers would lend more support to the fight against wasting food.

“We have a responsibility as caterers. It is important for us to constantly raise awareness among our customers and employees for this topic and to win them over, because we know that it is only possible to change things together”.

Uwe Nickut Catering GmbH

# OGS Catholic primary school Mengenicher Straße, Cologne

Since 2007, the school is an all-day school with currently approx. 160 children. Every day a fresh lunch is prepared on site and supplemented by a fruit snack in the afternoon break. The school is run by Netzwerk e. V., a network of 23 schools. These schools dish out a total of almost one million lunches a year.

## Avoiding food waste

The kitchen was converted from a regeneration (cook & freeze) kitchen, in which only frozen food was heated, to a fresh (cook & serve) and mixed (+ convenience or frozen foods) kitchen. Now the lunch is freshly cooked daily, with as much regional and seasonal food, fruit and vegetables as possible.

This posed new challenges for the kitchen manager. She no longer ordered ready-made dishes, but bought food to cook according to their own recipes. New dishes were tried that first had to be accepted by the students. The kitchen was in an experimental phase: the quantities consumed were precisely documented in order to be able to produce according to demand on the basis of experience. However, if the food did not suit the taste of the children, the amount of waste was high.

First steps were taken in 2016 in cooperation with the consumer advice centre North Rhine-Westphalia as part of the REFOWAS research project. For the first time, the quantities of waste were recorded and analysed, and measures were developed and implemented.

In the same year, the KEEKS project (Climate and Energy Efficient Kitchens in Schools) was launched in all schools belonging to the Netzwerk e. V.. Over a period of three years, all schools took part in a project funded by the then Federal Ministry of the Environment, Nature Conservation, Construction and Nuclear Safety. Among other things, it was also about avoiding food waste in order to use the money saved, for example, for buying higher quality organic goods. But the aim was also to provoke some rethinking on site, with children, teachers, lunchtime staff and the kitchen team: food is too valuable to be thrown away.



## Selected measures

Waste measurements took place over a period of four weeks, in spring 2016 and 2017 respectively, with an identical menu. After the first measurements, the kitchen was provided with consultancy, support and training. The shortcomings were uncovered and behaviour changed. Recipes were put to the test, because not every healthy dish tastes good to children. In addition, communication between the kitchen and the school management was intensified in order to be able to react more precisely to the number of participants in meals. After the second measurement, the results of the measures were evaluated.

## Outcomes

Fortunately, the waste quota (total waste volume in relation to production volume) was reduced by eight percent. Since the same meal plan was measured twice, reliable statements can be made about the reduction of the production quantity and the total waste quantity. While production was reduced by 5.5 percent, waste volume was reduced by 28.5 percent.

This was the beginning of a long journey that was embarked on in cooperation with the KEEKS project. This not only created a new awareness of our food, but also materials, training opportunities and a KEEKS web app ([keeks-projekt.de](http://keeks-projekt.de)) with many recipes from the kitchens of the participating schools. The KEEKS project was awarded the climate prize “Momentum for Change” at the UN Climate Conference in December 2018.

“Long before Greta Thunberg, the supporting organization responsible for Netzwerk e. V. had focused on environmental and nature conservation projects. Their school kitchens are already on a path that is now attracting more and more attention. It took a lot of work, some innovative, rethinking was necessary, but it was worth it. Success proves us right. And so it goes on.”

OGS catholic primary school Mengenicher Straße in Cologne

# Youth Hostel Cologne-Riehl

With more than 500 beds and around 110,000 overnight stays per year, Cologne-Riehl Youth Hostel is one of the largest accommodation facilities in the city of Cologne. Its location in the countryside, directly on the banks of the Rhine, good transport connections and leisure facilities make Riehl Youth Hostel the perfect destination for families, secondary schools, training organisations and clubs.

## Avoiding food waste

Since 2018, the German Youth Hostel Association – Landesverband Rheinland e. V. has put the issue of avoiding food waste at the top of its agenda. Through the cooperation with the North-Rhine-Westphalia (hereafter NRW) Consumer Advice Centre (the project is called “MehrWertKonsum”, meaning value added consumption), previous activities relating to climate-friendly nutrition and waste avoidance can be bundled, planned, implemented and monitored in a structured way. This project is scheduled to last a total of three years and will be accompanied by workshops, further measuring and recommendations for action. To assess the status quo regarding food waste in various youth hostel locations, food waste was collected and analysed.

The aim is to establish climate-friendly communal catering with a small amount of food waste in the future in the entire regional association of more than 30 youth hostels.



## Selected measures

### Measuring food waste

The food waste was collected and analysed over a period of 14 days in cooperation with the Consumer Advice Centre NRW. The production quantities, serving and plate leftovers as well as the planned and actual number of guests were recorded. The data was entered into the “Kitchen Monitor” ([www.kuechenmonitor.de](http://www.kuechenmonitor.de)) in order to be able to analyse product-specific causes on the basis of the evaluation.

### Actions taken

To avoid plate leftovers, smaller portions were served and smaller salad and dessert bowls were used at the buffet. By measuring waste, dishes that were not accepted or eaten were removed from the menu.

### Personnel development

At all times, staff fully supported the project and all employees were involved in the process. Everyone enjoyed doing a good deed. Beyond the project, the focus on avoiding food waste will remain a part of everyday working life.

## Outcomes

Three months after the first measurement of catering waste, a further measurement was carried out to monitor the success. With simple actions, the total amount of waste was reduced by 34 percent and the plate leftovers from the guests by 46 percent. The results in the pilot youth hostels, which were achieved within the framework of this project together with the Consumer Advice Centre NRW, should help in future to successfully implement the topic of food waste in the entire Rhineland state association.

“It is important to address this issue for two reasons. Firstly, it is our own motivation, which is also laid down in our company statutes. Secondly, it is our integrity towards our guests and future generations to face up to our social responsibility and find answers in order to make the tourism industry climate-friendly and we would like to do our part.”

Cologne-Riehl Youth Hostel

# Navitas Restaurations GmbH

Navitas Restaurations GmbH is a catering company. Using the example of BSH Hausgeräte GmbH in Dillingen's company catering business, we will demonstrate how to deal with the issue of food waste.

## Avoiding food waste

In order to minimize the consumption of resources in the kitchen, the separate collection of food waste by source location (production waste, overproduction, plate leftovers) was started in 2015 in cooperation with the University of Stuttgart. The overproduction was then recorded in detail using the RESOURCEMANAGER FOOD (RMF) tool. The aim was to derive possible courses of action and the greatest need for action in order to reduce food waste to a minimum.

## Selected measures

Between December 2016 and March 2017, the amount and composition of food waste from overproduction was recorded in the company canteen using the RESOURCEMANAGER FOOD (RMF) developed at the University of Stuttgart. Recommendations for action were derived from evaluating the measurements and comparing the results with measurements from the other company canteens. In addition, the canteen developed further savings actions with regard to the avoidance of plate leftovers and returns from external deliveries. This was implemented independently with the existing personnel. Concrete changes, based on measurement results, were for example:

- small portions where possible (two small chops instead of one large one)
- daily meetings with serving staff about the ingredients of the food and portion sizes
- plan for less but be prepared to produce more, if required

## Outcomes

A second measurement was carried out in October and November 2017 to verify the success of the actions. A total saving of 14.4 percent of food waste was achieved. The largest savings of 60 percent were achieved in overproduction and more than ten kilograms of food waste was saved per day.

# Compass Group UK & Ireland

Compass Group UK & Ireland is the UK's number one caterer and support service provider. The company employs more than 60,000 people in canteens, universities, schools, sports and leisure facilities, military bases and offshore locations.

The company has been using Winnow's digital tools to measure and reduce food waste since 2013. After the transition, the system was expanded to more than 250 sites.

## Selected measures

### Measuring

For the Compass locations, daily reports are produced for kitchen chefs and managers. By comparing data across sites, Compass is able to identify best practices and opportunities for collegial learning. Digital measurement tools facilitate timely and accurate measurement and allow chefs to adjust production to reduce waste.

### Personnel development

Compass focused on internal communication to help kitchen chefs and employees understand food waste reduction measures and their benefits. A series of webinars, case studies and videos have been developed for this purpose.

### Start small

Initially, the actions to reduce food waste were tested at a number of key sites and gradually expanded. This made it possible to identify the potential benefits and led to a greater commitment on the part of employees at new locations.

## Outcomes

In twelve months, the value of food wasted at the sites was reduced by an average of 50 percent.<sup>24</sup>



# BaxterStorey

BaxterStorey is a UK and Irish based catering company providing food to a range of industries. In 2014, BaxterStorey began taking steps to reduce food waste and is currently doing so at a total of 910 locations.



## Selected measures

### Measuring

BaxterStorey uses an innovative measurement technique that reduces costs to a minimum. It works with a proprietary cloud-based accounting system. Food waste is weighed and classified via its own online accounting system at all sites. Progress is tracked by weekly reports on food waste. The company differentiates between wasted food and typical production waste to concentrate reduction efforts on the food waste component it considers to be more easily avoidable. Prior to project implementation, BaxterStorey wasted between seven and ten percent of the total volume of food purchased, an annual cost of five to eight million pounds.

### Start small and get creative

The company initially launched pilot projects at selected customer locations. A major site in central London reduced food waste costs by 82 percent in just six weeks, profit margins were increased by six percent and sales by eight percent. As a result of the pilot project, food waste was categorized (overproduction, production waste and storage). This categorization process contributed to prioritization and improved implementation.

### Personnel development

BaxterStorey introduced Green Flash, a series of short, interactive, peer-led training sessions, each focused on a specific aspect of food waste. This increased employee awareness of the impact of food waste while providing best practice guidance to minimize it across the organization. When BaxterStorey extended its program to all sites, it gave kitchen managers autonomy in their decision to collect and measure waste. This ensured that the teams were actively involved in the project and that the project fitted seamlessly into everyday kitchen life without tying up costs and resources.

## Outcomes

To date, BaxterStorey has achieved a reduction of nearly 40 percent in total food waste value, equivalent to more than 4,700 tonnes. The reduction has saved almost £2.5 million in disposal costs and more than £236,000 in energy costs at the sites.



# The Ship Inn

The Ship Inn is a traditional pub near Barrow-in-Furness, Cumbria, in the UK.

## Selected measures

### Measuring

The Ship Inn started with manual measurement and categorized the waste into “perishables”, “preparation” and “overproduction”. The different containers were measured at the end of each day. This process was extremely cost-effective to implement and provided a rough overview of the attitude towards waste in a short space of time.

### Start small

The Ship Inn changed its operations gradually making only one change at a time. This enabled the employees to assess the effectiveness of each change individually. The step-by-step approach helped to better involve employees by giving them more personal responsibility and scope in the transformation process.

## Outcomes

The Ship Inn carried out four-weekly manual measurements and achieved a 67 percent reduction in overproduction (including portion size changes and less trimmings).

# Practical experience reports







## Atlantic Hotel Sail City Bremerhaven

### Interview with Dominik Flettner, head chef

Dominik Flettner is a top chef and has been working as head chef at the Atlantic Hotel for more than ten years. He has established the “leftover dinner” and is constantly working on new recipes to creatively use so-called food waste.

#### **Were there any obstacles with the waste measurements?**

Of course. Everything that is new is difficult. After some initial difficulties, the measurement process went smoothly.

#### **What has changed as a result?**

In addition to actions such as smaller bread rolls and slices of sausage or the purchase of a portioning machine for butter, we are now very creative when it comes to recycling so-called production waste. But you also have to be inventive and have the courage to fail. Not all recycling ideas are immediately successful.

#### **What are your ideas for recycling like?**

Recently, I created a jelly from tomato slices. It is served as finger food. It was very well received at the leftover dinner. Or the delicious dessert we make from one day old croissants – I was inspired by “French toast”. And our potato peel crisps always make for astonished guests.

#### **What is particularly important when it comes to avoiding food waste?**

You should always stay on the ball. The topic is quickly forgotten again. In addition, you have to take young chefs with you on your journey – show them how leftovers can be cleverly used.

#### **What did the people think about the leftover dinner?**

When we organized the first leftover dinner in 2016, we were smiled at and were regarded as rather odd. In the meantime, we are selling the leftover dinner as a “Special Event” to companies that value sustainability and want to demonstrate it.

#### **How high are your current savings?**

We have been carrying out the measurements for four years now. From year to year we achieve better results. This has enabled us to reduce wet waste by almost 4,000 litres (16 waste bins of 120 litres each). With a calculation basis of two to three euros per litre, these are savings of between 8,000 and 12,000 euros per year. As of February 2019, we were able to reduce the amount of food waste in the breakfast buffet alone by 32.5 percent.





## H-Hotels

### Jürgen Schmieder, Director of Food Quality

Jürgen Schmieder, Director of Food, has been working for H-Hotels for more than seven years. He is an expert on all the company's culinary standards.

#### What was the biggest hurdle during the waste measurements in your hotels?

The biggest hurdle was to overcome the fear of the new, because I met with a lot of resistance from the employees. But in the end implementation was very simple and worked perfectly – as is so often the case. In addition, the first measurement phase in the respective hotels helped a lot.

#### Where does most of the food waste come from?

In general, we work with numerous standards and dedicated menu planning in our hotels. This means that a tool is used to precisely calculate and optimize the purchase according to the number of persons. So we have virtually no production waste at all. In our company, food waste is mainly caused by plate returns and overproduction.

#### How did you implement the measurements?

In four large H-hotels we carried out three measurements each over a period of four weeks. After the first measurements we held a workshop together with United Against Waste e. V. It was particularly important to involve all relevant employees in the process: F&B managers, chefs and service personnel. Together we developed numerous practical ideas that were implemented directly.

#### Can you name a few actions?

They were simple measures that hardly required any investment. At the breakfast buffet, for example, we portioned Bircher muesli, delicatessen salads, salmon, etc. We also used smaller dishes in the Dinner & Lunch area and put out smaller chafing dishes. This looks more appetizing anyway.

### **What were the benefits of the measurements?**

Immediately after the first measuring period, a drastic reduction in food waste was noticeable – in some cases up to 60 percent. After six weeks, it settled at around 30 percent. This means that you have to stick to the topic of food waste, it should always be on the agenda and must not get lost in the hectic kitchen routine. The evaluation of the costs for the disposal of scraps showed a clear downward trend: in the establishments selected for measuring, the wet waste per capita could be reduced from 4.9 to up to 1.8 cents. For H-Hotels, this means potential savings of 65,000 euros – in terms of disposal alone. Accordingly, we were able to reduce our cost of goods.

### **What happens now?**

We are currently running a kind of “pre-rollout” with regard to food waste. The aim is to adapt the developed measures to our 55 hotels and to develop (pro-actively) a functioning guest communication system.

A top-down photograph of a round pizza with a thick crust, topped with melted cheese, tomato sauce, and green olives. The pizza is cut into several slices and is being held up by several hands of different people, suggesting a group of people sharing the pizza. The pizza is placed on a dark blue or black rectangular board, which is set on an orange woven placemat. The background is a light-colored wooden table. The text 'Together stronger than alone' is overlaid on the top left of the image.

# Together stronger than alone

## Voluntary agreement

A voluntary agreement is a cooperative solution. Instead of regulatory solutions, a negotiated solution is sought with the aim of achieving a specific goal by a specific date. The advantages of the voluntary agreement are that the desired goals can be achieved more cost-effectively, more flexibly and in less time by the economic actors involved. In addition, the cost to the authorities should be lower compared to the implementation and control of regulatory instruments. The voluntary agreement is not legally binding.

Voluntary agreements on the prevention of food waste have already been established or are in the process of being established in several EU Member States and other countries, including the UK, Norway, Sweden, Denmark, Belgium and China. Some of these explicitly concern the out-of-home sector.

Great Britain can look back on the longest experience. The first Courtauld Commitment was adopted there in 2005, in which the government, industry and trade committed themselves to reducing the amount of waste from packaging and unused food. In 2012, the Hospitality and Food Service Agreement (HaFSA) was established specifically for the out-of-home sector and then became the Courtauld Commitment 2025.<sup>25</sup> Norway adopted a voluntary agreement in 2017 based on the experience in the UK. At the same time, an agreement was established within the framework of the Kutt-Matsvinn-2020 initiative (“Cut Food Waste 2020”) specifically for the out-of-home sector with the aim of saving 20 percent of the food waste by 2020. Currently, 1,850 catering operations are involved.<sup>26</sup>

Recent findings on the agreements, especially from Great Britain and Norway, show that the companies have not only committed themselves to the agreements in large numbers, but have also benefited from them. As a rule, the actions taken to reduce food waste led to companies also being able to achieve economic savings.

The aim of the project “Too good for the bin! Dialogue on the avoidance of food waste in the out-of-home sector” is to develop, conclude and implement such a voluntary agreement on the avoidance of food waste for out-of-home sector. In autumn 2019, a cross-sector agreement between ministries and associations is to be adopted. Based on this, specific agreements will be drawn up for the respective sectors, including the retail market and the out-of-home sector. This will be accompanied by the establishment of structures designed to support and advise companies in their efforts to prevent food losses.

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