

### ***Slide 1: Module 5: Monitoring, Evaluation, and Continuous Improvement***

### ***Slide 2: Session 4: Techniques for quantifying and measuring food waste: Apps for food waste tracking***

### ***Slide 3: Introduction***

The introduction highlights the critical role of quantifying and measuring food waste. This process requires tailored tools and techniques suitable for various contexts, including households, restaurants, and supply chains. Accurate measurement is essential to reduce environmental impacts, optimize resources and costs, enhance food security, and inform sustainable food system policies. Quantifying waste is a key step in addressing environmental, economic, and social challenges.

### ***Slide 4: Why Quantifying and Measuring Food Waste (Part 1)***

The slide explores the importance of quantifying food waste taking into account the following areas:

- Environmental Impact
- Economic benefits
- Social implications
- Informing policy & regulations
- Supply chain optimization
- Contribution to global goals

### ***Slide 5: Why Quantifying and Measuring Food Waste (Part 2)***

The slide explores the importance of quantifying food waste regarding environmental impact and economic benefits:

**Environmental impact:** Food waste contributes significantly to global greenhouse gas emissions, particularly methane from landfills. Measuring waste helps identify sources and reduce emissions. Quantifying waste reveals the loss of resources, such as water, energy, and land, used in food production and disposal.

**Economic benefits:** Reducing waste minimizes the need for agricultural expansion, protecting natural habitats and ecosystems. Businesses can save money by addressing inefficiencies in purchasing, storage, and preparation, enabling better inventory management and reducing overproduction.

### ***Slide 6: Why Quantifying and Measuring Food Waste (Part 3)***

This slide focuses on social implications and policy and regulation:

**Social implications:** Unnecessarily discarded food can be redirected to food banks or charities to assist those in need. Quantifying waste raises awareness among consumers and businesses, encouraging behavioural change.

**Policy & regulation:** Reliable data supports measurable waste reduction targets, such as the UN's SDG 12.3. Governments can design effective policies based on concrete metrics. Quantification aids in the development of innovative solutions, including food tracking apps and efficient supply chain systems.

### ***Slide 7: Why Quantifying and Measuring Food Waste (Part 4)***

The final part highlights strategic advantages:

Supply chain optimization: Measurement detects waste hotspots along the supply chain, enabling better storage, transportation, and processing practices. Data allows companies to demonstrate sustainability commitments and meet certification requirements.

Contribution to global goals: Measuring food waste aligns with global efforts like SDG 12.3 to halve food waste by 2030 and contributes to climate goals by reducing emissions. Addressing food waste strengthens food security by maximizing resource utility.

### ***Slide 8: Apps for Food Waste Tracking (Part 1)***

This slide introduces food waste tracking apps for businesses:

- Too Good To Go
- Phoenix
- Leanpath
- Winnow
- Orbisk

### ***Slide 9: Apps for Food Waste Tracking (Part 2)***

Too Good To Go (Business Version): Assists restaurants, cafes, and grocery stores in selling surplus food at reduced prices. Features include waste tracking, inventory management, real-time analytics, and food redistribution.

Phoenix Professional: Food Waste Donation Platform: Helps businesses track and reduce food waste through donations. Features include waste tracking, donation management, analytics, and sustainability reporting.

### ***Slide 10: Apps for Food Waste Tracking (Part 3)***

Additional tracking platforms are introduced:

Leanpath: a European food service tracking platform used by hospitality businesses for real-time tracking, waste audits, and actionable insights.

Winnow: a commercial kitchen waste system with automated monitoring system with detailed analytics and cost-saving insights.

Orbisk: a hospitality food waste software that offers waste tracking, cost analysis, and operational efficiency improvements.

### ***Slide 11: Challenges in measuring food waste (part 1)***

#### **Lack of Standardized Measurement Methods**

Food waste measurement varies across industries and regions, making data inconsistent and difficult to compare. Different definitions of waste categories (e.g., edible vs. inedible waste) complicate accurate tracking.

#### **Inadequate Data Collection and Reporting**

Many businesses and households lack proper tracking systems, leading to unreliable or incomplete data. Manual data collection is time-consuming and prone to errors, while automation can be expensive to implement.

### ***Slide 12: Challenges in measuring food waste (part 2)***

#### **Food Waste Occurs Across Multiple Stages**

Waste is generated at different points in the supply chain—from farms to retailers to consumers—making it difficult to pinpoint responsibility. Identifying specific sources of waste requires detailed monitoring and coordination among stakeholders.

#### **Consumer Behavior and Awareness Gaps**

Households often underestimate their food waste due to poor tracking habits.

Misinterpretation of expiration labels, over-purchasing, and lack of meal planning contribute to unnecessary waste, which is difficult to measure effectively.

#### **High Costs and Resource Constraints**

Implementing food waste tracking solutions, such as smart sensors or AI-driven systems, can be expensive. Small businesses and low-income households may struggle to invest in food waste reduction programs due to budget limitations.

### ***Slide 13: Apps for food waste tracking (part 1)***

The apps mentioned in this chapter empower European businesses by providing precise tools for monitoring food waste at all stages of their operations, including procurement, inventory management, culinary practices, and customer service.

These solutions help organisations detect inefficiencies, optimise operations, and eliminate surplus food by offering actionable information via thorough analytics and reporting.

Furthermore, many of these apps allow users to donate food to charity or redistribution networks, ensuring that edible food is not wasted and instead benefits underserved regions.

### ***Slide 14: Apps for food waste tracking (part 2)***

This **not only helps businesses minimise expenses** and improve their bottom line, but it also aligns them with sustainability goals, legal obligations, and customer expectations of environmentally responsible behaviour.

In essence, these apps bridge the gap between operational efficiency and social and environmental accountability, making them critical for enterprises looking to lead the worldwide fight against food waste.

### ***Slide 14: Thank you***

