

| Use Case Reduction of food waste through consumer profiles | | | | | | | 14 |
|---|--|----------------|-----------------|-------------------------------------|--------------|-------------------------------------|----|
| Context | As soon as a customer consumes a prepared dish, the system shall acquire the quantity and nutrients consumed in order to be able to determine the amount and nutritional components of future meals in a personalized way. | | | | | | |
| Domain | Food & Nutrition | Business Value | Personalization | <input checked="" type="checkbox"/> | Acquisition | <input checked="" type="checkbox"/> | |
| | | | Communication | <input checked="" type="checkbox"/> | Optimization | <input checked="" type="checkbox"/> | |
| | | | Control | <input type="checkbox"/> | Analysis | <input checked="" type="checkbox"/> | |

| Description | | |
|-------------------------------------|--|---|
| <i>Stakeholders & Interests</i> | <i>Stakeholder</i> | <i>Interests</i> |
| | Kitchen staff | Minimization of workload or adjustment of the production quantity |
| | Manager of the kitchen | Adaptation of meal quantities to consumers; reduction of food waste |
| | Customer | Satisfy hunger; adhere to nutritional guidelines |
| | Nutritionist | Receive nutritional information from patient |
| <i>Required Data</i> | Order information Image data of dish/plate served Image data of dish/plate after consumption by customer Unique identifier of customer | |
| <i>Current Conditions</i> | Especially in the hospital environment, a waste rate of 6% to 65% per meal served can be expected. An additional driver is the incorrect serving of meals due to the need to comply with nutritional information. There is no example of how this problem is currently being solved. | |

| Procedure | | |
|---------------------------|---|--|
| <i>Trigger</i> | The preparation of a desired dish is complete and ready to serve. | |
| <i>Use Case Procedure</i> | <i>Step</i> | <i>Activity</i> |
| | 1. Capture ready-to-serve dish | An AI records the dish to be served. |
| | 2. Serving the dish | The dish is served to the customer. |
| | 3. Capture consumed dish | An AI records the dish to be consumed. |
| | 4. Analysis and extraction | Nutritional information and the amount consumed are extracted. |
| | 5. Transmission of information | The recorded information is sent to the kitchen, the customer, and the nutritionist. |
| | 6. Gaining knowledge and optimization | The information is used to derive findings and optimize the dish if necessary. |
| <i>Use Case Anomalies</i> | <i>Step</i> | <i>Activity</i> |
| | No information provided. | |
| <i>Final State</i> | The quantity and nutritional components of future meals are recorded. | |

| Overlaps | | | | | | |
|---|-------------|----------------|-----------------|--------------------------|--------------|-------------------------------------|
| Domain 2 | Preparation | Business Value | Personalization | <input type="checkbox"/> | Acquisition | <input type="checkbox"/> |
| | | | Communication | <input type="checkbox"/> | Optimization | <input checked="" type="checkbox"/> |
| | | | Control | <input type="checkbox"/> | Analysis | <input type="checkbox"/> |
| Sum of Business Values total (incl. title domain, header) | | | Personalization | 1 | Acquisition | 1 |
| | | | Communication | 1 | Optimization | 2 |
| | | | Control | 0 | Analysis | 1 |