



ADCATER

Advanced Digital Solutions for Professional Food and Nutrition Care / Therapy

Background

- **~50%** of global in-patients are at malnutrition risk !
- **30~60%** of food served is wasted
- Malnutrition affects the process of recovery, deterioration and medical complications

The consequences of malnutrition on the medical condition are extensive and complex, to the point of permanent damage to the quality of life and significantly higher mortality rates.

Why is this important

- **Human suffering**
- **The Food supply chain is disconnected**
- **Food Suppliers are not attached to the consumption point**
- **Food Waste**

Preliminary achievements:

- **Modeling:**
 - **Personal Nutrition Control**
 - **Food Supply Chain**
 - **leading control indicators [KPIs]**
- **Research protocol**
- **System requirements specification**
- **System & Data stream architecture**
- **Decoding images of food trays - prototype developed and tested**
- **Food tray image recognition prototype [tested]**
- **Food Ontology Specification and Documentation**
- **Azure Inv., SQL DB structured, Initial APIs**

Preliminary conclusions / potential impact

- **Complete digitization for controlled in-patients' nutrition management**
- **Validation of the base model's analysis based on the digital data flow**
- **Development of decision support information products:**
 - **Accuracy of the personal nutrition plan to achieve adequate actual food intake**
 - **Effective info. for streamlining the food supply chain and improving availability**

Future research activities

- **Completing the development of the integrative system based on real data in a medical center [research environment]**
- **Validation, tuning and verification of the system**
- **Quantification and analysis of the evidence and gaps**
- **Evaluation of automatically collected data versus ground truth**

Data-driven ICT platforms and solutions to improve the sustainability of agri-food Systems

