

The Czech Node of METROFOOD-RI

To enhance quality and reliability of measurement results

To make available and share data, information and metrological tools

To enhance scientific excellence in the field of food quality & safety

To strengthen scientific knowledge, promoting scientific cooperation and integration

PARTNERS

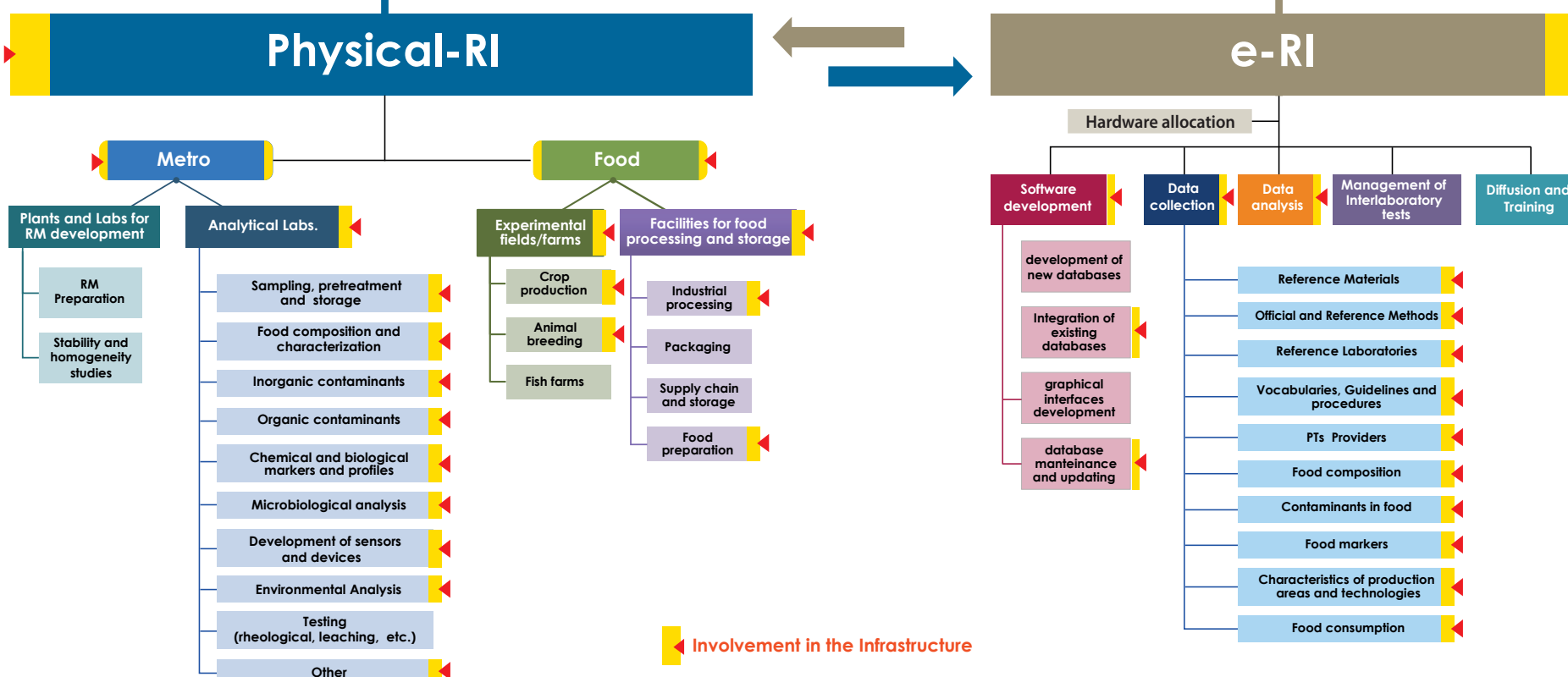
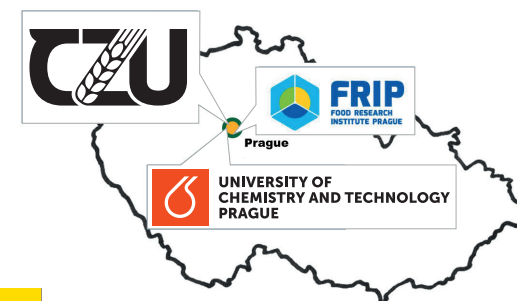
CZU Česká zemědělská univerzita v Praze (CZU)/Czech University of Life Sciences Prague(CZU)
CZU is a public university with around 20 thousand students. CZU research concerns overall quality assessment of primary agricultural products and foods, including plant and vegetable products, dairy and meat products, cereals etc. Our expertise covers chemical, microbiological, health-related and sensory analyses, e.g. bioactive compounds evaluation, mobility and bioavailability of selected risk elements or nutritional value assessment.
www.czu.cz



Výzkumný ústav potravinářský Praha (VÚPP)/Food Research Institute Prague (FRIP)
The Food Research Institute Prague has already been a full profile research institute in the field of food processing more than 55 years. The objective of its main activities consists in basic and applied research and development in the fields of food. FRIP studies the influence of high pressure on allergens, microorganisms and nutritionally important quality parameters of selected foods, mainly of plant origin (e.g. fruit-vegetable juices).
www.vupp.cz



Vysoká škola chemicko-technologická v Praze (VŠCHT)/University of Chemistry and Technology Prague (UCT)
University of Chemistry and Technology Prague is the leading Czech university in food quality & safety research, education and training. The research activities of UCT Prague are focused on advanced chemical analysis of foodstuffs including beverages and food supplements, food and pharmaceutical raw materials and products, feedstuffs, chemical preparations, biological materials of human, animal and plant origin, environmental and forensic samples including addictive drugs. UCT closely collaborates with EFSA (article 36) and Czech Agriculture and Food Inspection as the 'nominated laboratory'. The ISO 17025 accredited laboratory performs both target analysis (various contaminants, residues, natural toxins, processing contaminants...) and non-target screening including metabolomics. UCT is involved in many international collaborations, among them a number H2020 projects.
www.vsch.cz



Pre-existing value:
• Tot. 30.000 k€
Involved researchers:
• Tot. 30 (8 FTE)

Research Areas:
• Primary production, processing, analyses of agricultural and food products – analytical, sensorial, profiling, etc ...

MINISTERIAL SUPPORT

Ministry of Education, Youth and Sports of the Czech Republic

Physical Facilities

Analytical Labs

CZU Prague
Equipment for targeted and non-targeted analysis of primary production - MNR, GC-QTOF, LC-QTOF, MALDI-TOF, PREP-HPLC, SFE, ICP-MS Readers

UCT Prague
Facilities for sample handling, cutting edge analytical instrumentation - mass analyzers including QQQ, Q-orbitrap, Q-tof, multidimensional separation LCxLC, GCxGC and ion mobility



ANALYTICAL CAPACITIES																							
OTHER ANALYTICAL CAPACITIES		MATERIALS		AGROECOSYSTEM				NUTRITION		AUTHENTICITY TRACEABILITY				FOOD QUALITY				FOOD SAFETY					
		Ceramic materials and composites	Plastic materials	Metals	Other	Bi-availability studies	Air pollution	Wet & Dry depositions	Biocorrosion	Soils and sediments characterization	Surface and groundwater quality characterization	Water	Water	Water	Water	Water	Water	Foodborne viruses and Phages	Foodborne bacteria	Foodborne fungi	Food contact materials (migration)	GM	Trace elements

Food

CZU Prague
Experimental greenhouses, fields and farms/stables

FRIP
Atomizer, spray drying, rheological instruments, bioreactor



Electronic Facilities

Software

Within available software, we develop our own libraries of standards, defined samples, profiles etc.:
GCMS Wiley10 and NIST8 & NIST14 Libraries, fully evaluated collection of electron ionization (EI) and MS/MS mass spectra, with chemical and GC data
MALDI Biotyper 3.1 build 66, provide high-speed, high-confidence identification and taxonomical classification of bacteria, yeasts, and fungi. Classification and identification are based on proteomic fingerprinting using high-throughput MALDI-TOF mass spectrometry
ProteinScape - advanced data mining features, sophisticated reports for proteomics projects
MestReNova 10.0 is a multipage, multivendor, multitechnique and multiplatform analytical chemistry software suite designed as a container for our plugins.
In-house **NMR fingerprint libraries** of wine samples, selected plant species.

Data Base / Data Calculation

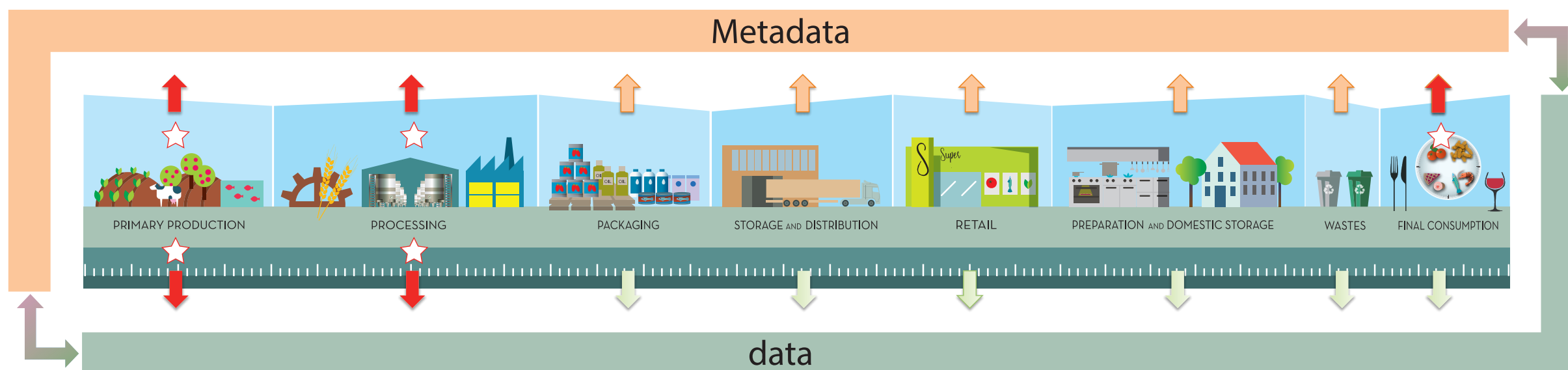
Calculation / Data Processing

Modeling / Data Integration

E-learning platforms

Other e-facilities

Food Chain Data



Food Quality & Safety Data

