

FOOD CHAIN RISK MANAGEMENT SYSTEMS

Blockchain
Internet of Things
Secure cloud
Tagging and tracking, holographic labels
Sensors/in line monitoring/handheld devices ("lab on a chip")

Smart contracts (payment on evidence of compliance)
Digital twin/simulation
Smart manufacturing
Big data analysis/modelling
DNA speciation /stable isotope

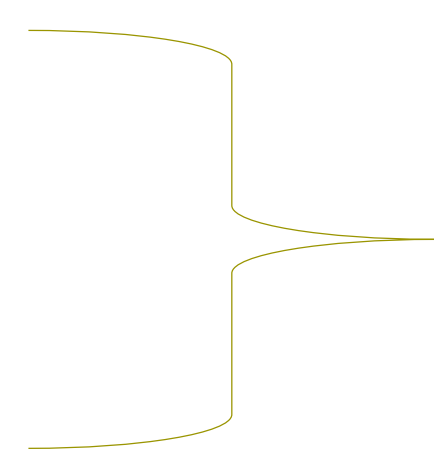
AIMS

We are conducting a project to answer the following questions:

- 1) How can the flow of critical information from stakeholder to stakeholder be improved, both up and down the supply chain?
- 2) Can we identify common principles/specifications to facilitate consistent application given the increase/divergence in technological solutions?

SCOPE

- Integrity/Authenticity
- Food/Feed Safety
- Quality?



Understanding that what is a quality issue to one stakeholder may be a food safety issue elsewhere in the supply chain

WHY IS IFST DOING THIS?

To realise advantages and solve challenges for stakeholders

Advantages	Challenges
Consumer benefits	Degradation of trust
Build trust	Increased regulatory intervention
Facilitate meeting legal obligations	Complexity of supply chain
Foster best practice	Inaccuracy of information
Efficiencies (speed, frictionless borders. waste)	Poor/slow responsiveness
Avoid business disruptions	Lack of technological capability
Freedom to operate	Accessibility restricted
Earned recognition	Risk appetite/uncertainty
Accessible	Cost
	Misinterpretation or misuse of data

GENERAL PRINCIPLES

- Global – a common best practice standard
- Accessible – all food chain players
- Confidential and secure
- Permit open flow of information
- Relevant to food chain needs/data format
- Real-time batch/lot location in food chain
- Consumer visibility of information
- Build food safety culture

TECHNOLOGICAL PRINCIPLES

- Interoperability across technologies
- Up and down the supply chain
- Security levels of disclosure (different actors)
- Open standard
- Immutable
- Affordable
- Independently verifiable

