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IDEA

The research topic mainly addresses current and future technological and managerial opportunities and barriers in the digital transformation of food safety and quality control. The possible food safety and quality control and management stages where digitalization can interfere and make the information traffic, transparency, security, online and real-time control and management, forward and retrospective case evaluations accessible will be shed light on.

HOW

A major rationale for this research is the increasing consumer and customer demands for better quality, safety, and shelf life of food products and the resultant competitive food industry ambient. Besides, the accelerated digitalization in the Industry 4.0 era spread towards food safety and quality. Its potential benefits are acknowledged by e.g., FAO, WHO and EU Commission.

However, a systematic evaluation of the current and promising digital technology and tools from a technological and managerial perspective is yet lacking. The research includes the investigation of the status of current state-of-the-art digital technologies by a systematic literature review and complementation of findings with food safety professionals' expertise and experience.

RESULTS

The expected result of this research is to design a conceptual framework as a map for digital transformation in food safety and quality control and management activities by analysing the collected information from a techno-managerial perspective. This type of map will outline the effects of digital transformation on outputs and encourage the food industry towards possible digital transformation.

IMPACT

In this way, real-time measurements and analyses would be made and predictive and preventive actions can be taken before problems arise. Ultimately, the research results will support a strategy of fewer safety and quality issues, less waste, and more sustainable food operations.





