Proposal Title: An Intelligent Food Safety Monitoring System Using Drones.

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Abstract

Monitoring Food safety is a critical process in Food Logistics Management (FLM). Suppliers, food organizations, consumers, and other stakeholders involved in this process play essential roles to achieve successful food logistics management. Traceability of food conditions during transportation and storage must be provided to ensure they follow food safety standards. Hence, detecting and recording food conditions during various stages would be essential to assess and predict food quality, providing an early warning for the decision-maker (the stakeholders) to control and take action. During this process, the type of food plays an essential factor in choosing the assessment methods and the quality standards to follow.

This research develops a solution consisting of three components to monitor food safety. The first component includes sensors and a communication channel attached to the food packages. Sensors are used to record food conditions and environmental changes. The communication channel collects and carries out these data with integrity. The second component includes automated and intelligent drone technology, enabling mobility during data collection from sensors. The last component includes an intelligent algorithm to assess and predict food quality status based on its biological characteristics. The added values by this research can expand the implementation of this project to other areas such as medicines and cosmetics logistics.