**The Challenge: Traceability of Organic Food**

**Challenge Context**
Increasingly, consumers in many parts of the world demand for verifiable evidence of traceability as an important criterion of food product quality/safety. Food safety and traceability are currently at the forefront of both government and industry discussions around the world. The existing consumer expectations concerning food authenticity and traceability have made them increasingly interested in food labels, such as the signs of origin (e.g., Protected Geographical Indication or PGI, Protected Designation of Origin or PDO) and agricultural labels (Traditional Specialties Guaranteed or TSG, organic label, etc. ...), because they are considered as guarantee of quality and safety.

Consumers, who buy organic food, are even more particular about its quality and rely on certifying organizations to verify this quality as well as to provide information about the origin of organic products. Organic food production is crucial for agricultural sustainability especially due to the rampant use of fertilizers, urea and pesticides reducing soil fertility over time and causing bio-magnification of harmful chemicals in animals/humans. And traceability ensures organic food is certified and thus, encourages farmers to adopt it at scale.

However, organic food traceability knows several issues, such as problems with organic labeling, certification fraud, and concerns about transparency of food information.

**Challenge Description**
Traceability is the ability to follow the movement of food through specified stages of production, processing and distribution. The traceability or product tracking tool should be able to identify at any specified stage of the food chain (from production to distribution) from where the food came and to where the food went, as appropriate to the objectives of the food inspection and certification system.

Assessing food authenticity means being able to detect (i) if food description is correct or incorrect and does not meet the requirements of a legal name, (ii) if ingredients have been replaced by others less expensive, (iii) if processes are not reported (e.g., irradiation, freezing ...) and (iv) if the origin (geographic, species ...) is false. Industrialization and globalization have made the authentication of foods particularly difficult given the fact that a large part of food products available on the market are transformed and therefore, more susceptible to falsifications.

With the use of traceability, a consumer can simply scan the QR code to get to know the origin and provenance of the product and its ingredients.

**The Opportunity**
There seems to be many moving parts to this challenge and lack of an integrated platform that orchestrates the end-to-end food chain (production to distribution) to ensure transparency and efficiencies. **What if we build an overall food traceability system that connect the suppliers, producers, sellers and consumers to increase confidence in food security level and leverage emerging technologies to reduce manual intervention, drive automation, scale readiness and establish trust in buying organic foods thereby building sustainable agriculture ecosystem?**

**The Prizes:** Depending on your implementation, AWS can award you with exclusive goodies, vouchers and AWS credits.