WHAT is food chain traceability?
The most basic definition of traceability is “the ability to verify the history, location, or application of an item by means of documented recorded identification” (Wikipedia). It all comes down to what to record (key data elements, or KDEs) and when to record them (critical tracking events, or CTEs). The KDEs and CTEs will differ from one supply chain to the next. For the food chain in general, traceability KDEs and CTEs are an indispensable tool for industry stakeholders in the assurance of food safety and quality. For the cold chain in particular, traceability KDEs have to include the temperature and other environmental conditions under which the fresh and frozen produce has been stored and transported.

WHERE and WHEN should traceability take place?
Everywhere and always. As Michael Wills notes in Food for Thought (12/2013, Supply & Demand Chain Executive), facilities throughout the cold chain must be able to receive, document, and ship both perishable and non-perishable items with tremendous velocity in variable temperatures.

WHY traceability?
With traceability already mandatory for many stakeholders throughout the food/cold chain, one could say that this question is moot. But if we put regulation aside for a moment, traceability has many strong value propositions:
- Consumers are more confident of the origin, safety and quality of the food they purchase.
- This consumer confidence in their products strengthens the brand equity of the processors and manufacturers.
- Regulators can respond more quickly and effectively to food safety breaches, and food recalls are far less complicated and expensive for the food/cold chain stakeholders.

HOW can traceability be implemented?
Because the margin for human error is high and because the volume of traceability data is huge, manual tracking and documentation methods are inadequate. With the advent of barcoding and RFID, it is relatively easy to identify products and track their location as they make their way through the supply/cold chain. But it is not unusual for each player along the chain to have its own unique traceability data structures and solutions, which makes it very difficult to achieve real-time, end-to-end visibility into the quality and safety of food as it makes its way through the supply/cold chain.

It was this very challenge that prompted BT9 to develop Xsense®, its holistic, cloud-based cold chain management solution that provides real-time alerts to potential breaches no matter where and when they occur. For more information, please click here.