



Real Time Temperature Sensing

**A holistic view of
cold chain supply
process for better
cost management**

The cold chain is a supply and distribution chain for the movement of goods for which temperature needs to be carefully controlled. The use of RFID technology provides real time data and shortens the decision making process, hence provides greater cost control.

Overview

By the time a cold chain product reaches the hands of its consumers, it would have transited through many individuals, lots of equipment, several different vendors and multiple facilities such as production, logistical arrangements and storage. If constant temperature is not maintained at any of these phases, it may pose a potential public health risk. It may also escalate into a legal case where company resources may be drained and cause potential damage to a company's reputation. With careful management of each step of the cold chain supply process, the shelf life of cold chain products can be enhanced, thereby reducing shrinkage and ensuring product integrity.

Traditional temperature-monitoring systems do not allow the environmental storage temperature of products to be tracked as they move through each phase of the cold chain supply process. Different equipment has to be used and it is difficult to retrieve the information. As such, traditional systems are not able to provide real time data to allow immediate decisions on the quality and/or safety of a cold chain product to be made.

In addition, under the HACCP and ISO22000 certification guidelines, records of the environmental storage temperature of cold chain products at any stage of the supply and distribution chain must be made available for inspection at all times.

Our Value Proposition

Real Time Temperature Sensing (RTTS) solution uses a combination of track and trace radio-frequency identification (RFID) technology to resolve the cold chain supply management process.

Tracking involves identifying the geographical location of a particular cold chain product as it moves through each segment of the supply chain. Tracing is the ability to generate a detailed transaction history of a particular product including the geographical location, transit time and environmental storage condition at each location. The resultant detailed transaction history will then be stored in a central monitoring system, allowing easy retrieval of information.

The generated data is useful to business professionals in a number of ways. First, it ensures the quality and/ or safety of a cold chain product. It also provides an archive of data for analysis and therefore, identified areas for process improvement. Through this implementation, the consistency in product freshness is raised, cold chain costs can be better managed and the product integrity is also ensured.

NCS, working together with our technology partners, helps business professionals create business value through an end-to-end solution from RFID consultancy to RFID applications and system integration services.

Our Solution Offerings

Consultancy

Due to the physics of radio-frequency, it is essential for the vendor to possess the domain knowledge to ensure a successful RFID implementation.

Our relevant experience in consultancy and implementation of communication systems such as trunk radio systems, HF/VHF/UHF communication systems and in-building systems in various countries, is evidence of our expertise that we bring forth to our customers.

Capture, Store and Interpret

Our RFID applications are able to capture, store and interpret (CSI). Intelligence is built into our solutions so you will be alerted and/ or reminded for your area of focus.

A Holistic View

NCS can bring to you a holistic end-to-end solution. We are able to integrate the solution into your backend systems, such as Enterprise Resource Planning system. We are also committed to work with you to customise the solutions to your needs and requirements as well as provide future maintenance services.

Benefits

Meet Standards and Certification

RTTS solution allows tracking of the environmental storage temperature of a product as it moves through the cold chain supply process. The quality of the product is guaranteed by ensuring the storage temperature is maintained.

RTTS solution also assures that the stringent HACCP and ISO22000 certification guidelines of making the environmental storage temperature of cold chain products is available for inspection at all times.

Fewer Discrepancies

Reports can be generated real-time for analysis of the cold chain supply management process and therefore produces fewer discrepancies between supplier and buyer.

Visibility and Traceability

With RTTS solution, the generated reports enable areas for process improvement to be identified. This will enable better visibility and traceability of the cold chain products. Through the implementation, the consistency in product freshness and integrity is also ensured. This translates into better managed cold chain costs.

Better Stock and Pricing Management

With better traceability of stock, companies are able to ensure that retailers sell off the cold chain products before the expiry date.

Currently, cold chain products are manually checked for the expiry date and subsequently, decisions are made to adjust the price of the products. Using RTTS, the process can now be automated.

Contact NCS today!

As a leading regional information technology (IT) and communications engineering services provider, NCS aims to work closely with you to create business value through the innovative use of IT and communications engineering. With proven experience and expertise in consulting, development, integration and managed services, we bring end-to-end support for your organisation's entire technology life-cycle.