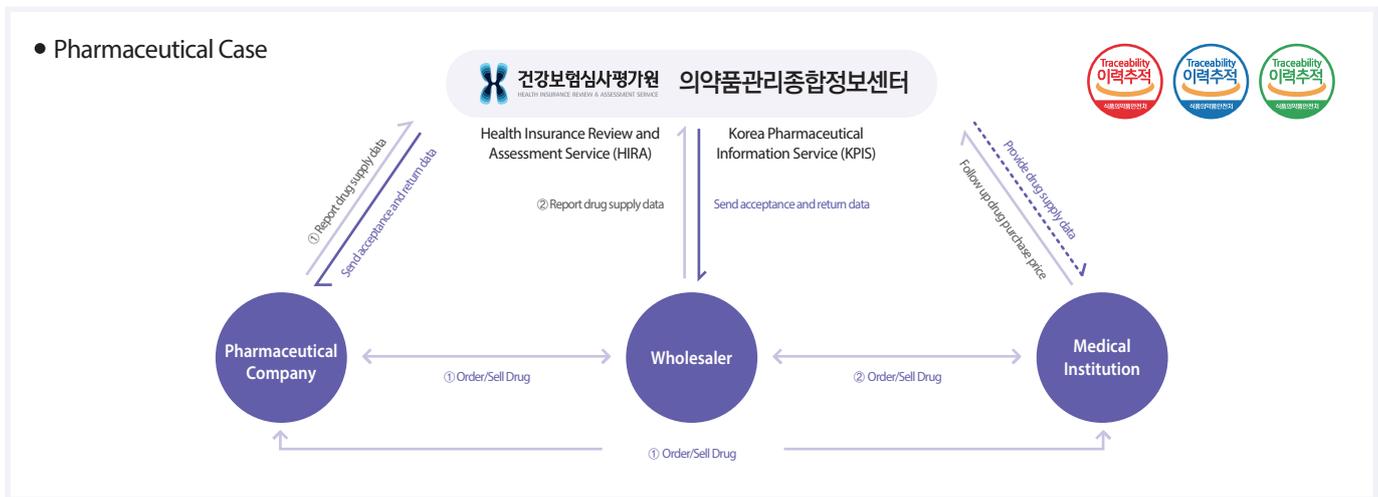


What is Smart Track and Trace System?

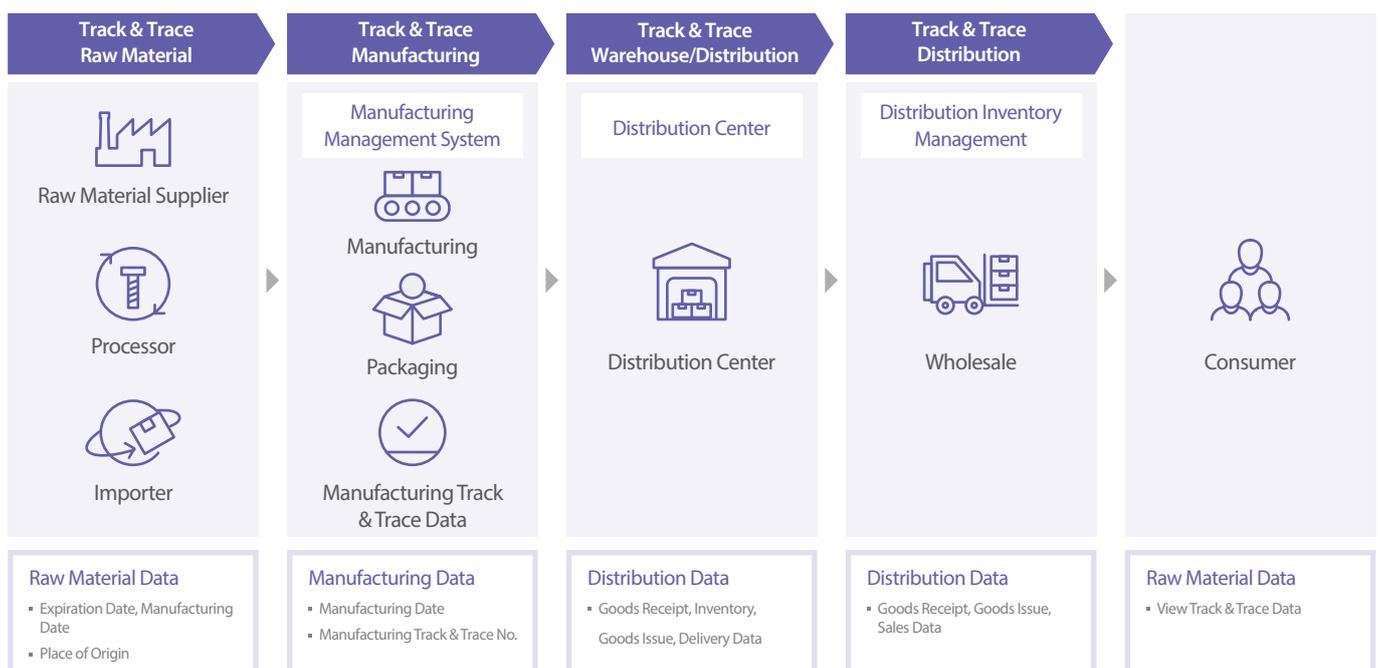
Smart Track and Trace or S-TNT is the system that helps tracking and tracing the entire process of product route in supply chain, from raw material input, production line, distribution, to sale. This system is generally used for products such as food, cosmetics and pharmaceutical.



S-TNT integrates a variety of tracking and tracing data: raw material (from raw material input to manufacturing phase), manufacture (from manufacturing to processing phase), and distribution (from outgoing goods to seller). This system is established to help identifying cause and responding quickly when distribution process problems happened, which enable effective distribution network management service.



S-TNT System Flow Chart



This raw material was used for which product? How was this product distributed? **Tracking (Forward)** →

← **Tracing (Backward)** What product, where it was manufactured, and how it was distributed? Which raw material/part was used?

Hardware Application for Smart Track and Trace System

Labeling



Print barcode on the label and attach to product

Low investment cost, but the speed of work may be reduced due to manual work.

Inkjet Printing



Print on product by using common inkjet type

Easy to print, but the rate of barcode recognition may be reduced depending on packaging material

Laser Marking



Use laser to mark encrypted data on the surface of specific product

Permanent marking is possible, but available material is limited

RFID Tag

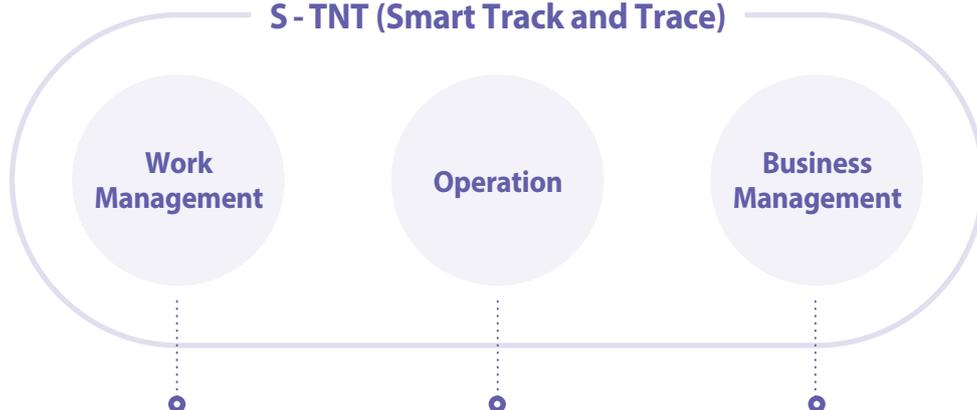


Identify data without contact from a long distance

Easy to recognize product data for a long time, but tag data may not be transmitted (as radio wave problem) in metal surroundings

ZINi S-TNT Application Efficiency

S - TNT (Smart Track and Trace)



- Gather track and trace data in the warehouse automatically
- Enhance track and trace work efficiency and accuracy
- Improve work processing and efficiency of consumer
- Reduce costs of distribution restriction incurred from disorderly drug market, dumping
- Monitor supply chain work processes from raw material to sale in real
- Enhance product safety and reliability in business
- Adapt for marketing service in the future