

# Remote Logistics: Intelligent Shipment Monitoring solution

A COVID-19 Imperative



## About The Solution



As we begin to adapt to a post-COVID-19 world, reintroducing normalcy into the disrupted supply chains has begun assuming prime importance. Demand fluctuations are rampant, while unprecedented shortage of essentials like drugs, PPE kits, ventilators and frozen foods are wreaking havoc on severely overloaded supply chains. On the other hand ensuring safety and quality of shipments is critical – making real-time tracking of temperature sensitive shipments, more trusted digitized data flow and custody management, key to reimagining supply chains for the new world order – as we continue to comply with social distancing norms.

**The Intelligent Shipment Monitoring (ISM) solution by IoT WoRKS™** ensures round-the-clock tracking of shipments and utilizes Blockchain technology to enable efficient, paper-less and safe custody management, authenticity and availability. ISM utilizes in-shipment sensors to monitor critical environmental conditions to ensure quality of drugs, vaccines, food and other essentials in transit, and can be integrated with maps to deliver near real-time insights on location and recommendations for optimal, COVID-19 free transit.

## Features



**Real-time location tracking:** Round the clock monitoring of shipment in transit, to ensure timely delivery – through in-shipment GPS modules and sensors – can be integrated with maps to recommend optimal COVID-free routes



**Blockchain-enabled custody management:** Paper-less, shared decentralized ledger for transparency and accountability, maintaining authenticity of shipment and monitoring breach scenarios



**Monitoring of ambient conditions:** Temperature, humidity and/or other environment specific sensors to ensure maintenance of ambient in-shipment conditions and efficacy of the contents, 9-axis accelerometer to track shock or damage to container



**Powerful Insights:** Simple & efficient Edge-driven rule processing integrated with Cloud dashboards to deliver critical notifications & alerts to trigger immediate actions.

## Business drivers for ISM



**Better managed availability of essentials with low shelf-life (food/test samples/vaccines)**



**COVID-19 test samples should be shipped frozen (<math>-20^{\circ}\text{C}</math>). Or, they can be shipped chilled (<math>2-8^{\circ}\text{C}</math>) if delivery is guaranteed within 3 days (as per CDC guidelines)**



**Minimal manual intervention in audit trail being maintained throughout supply chain journey**





## Benefits



**Trace shipment in-transit:** Utilize real-time insights of shipment location through its journey, enabling optimal COVID-free route with minimal disruptions, ensuring delivery of shipment in right time and at right location while realizing cost reduction



**Ensure accountability:** Blockchain enabled custody management ensures transparency and immutability of records, also reducing hassles of paper documentation and complying with social-distancing norms



**Enhance end-user impact:** Minimize counterfeit products, ensure timely availability of essentials with low shelf-life, minimize stock-outs of food, drugs and critical vaccines, ensure quality is maintained



**Reimagine business processes:** Utilize accurate tracking and logging to improve supply chain efficiency, reduce manual intervention, automate and digitize the audit trail to boost productivity



**Up to 90% reduction in shipment damages ensuring safer delivery of essentials**



**Improvements of up to 50% in SLA compliance due to immediate, proactive alarms & resulting rapid response**



**Economical, secure transactions via enterprise systems integration - virtually hack-proof Blockchain smart contract integration**

