

HANHAA

IoT and Blockchain Integration



PARCELIVE

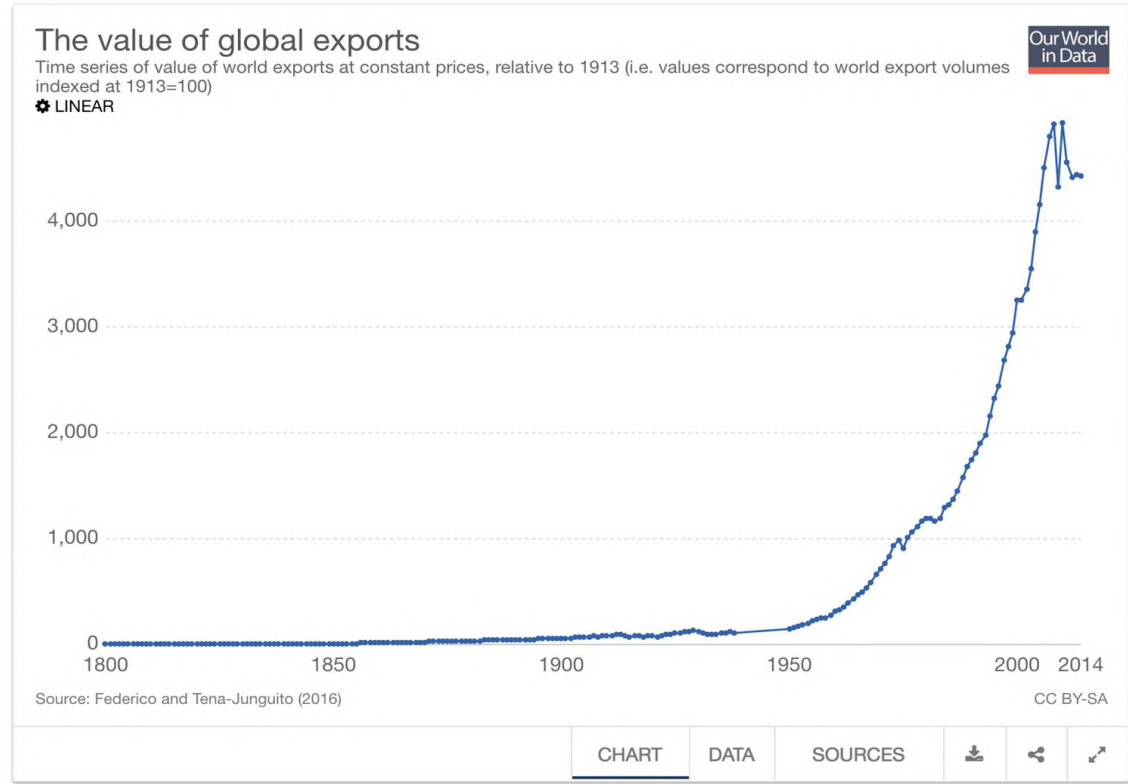


256587

256587

The Challenges

- Globalization has driven trade growth 3.5 times since the 1980s to USD \$16 Trillion, **global supply chains have not kept pace.**
- Customs are overburdened with manual processes and have few tools to detect the entry of black market, counterfeit or contraband goods.
- Regulatory authorities struggle with the compliance of health, safety and security standards.

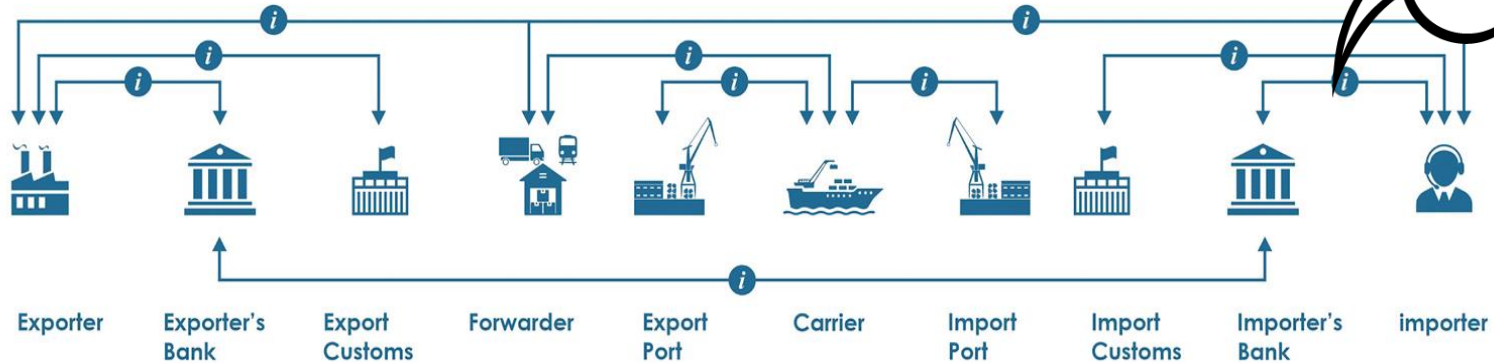


The Challenges

There are two key challenges:

- Create real time visibility into the shipment and product status.
- Empower stakeholders with tools to add digital documentation for regulatory compliance and shipping in an effective and timely manner.

Disconnected flows,
High operating costs,
a US \$2 trillion
opportunity

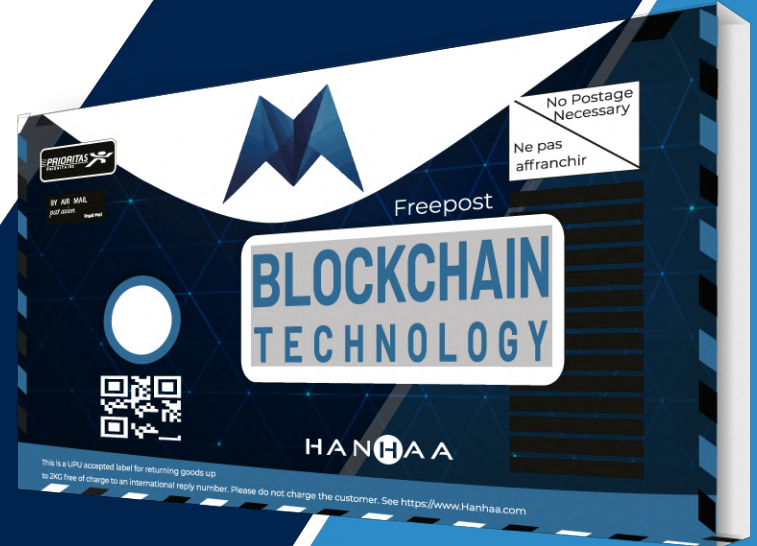


The Solution: IoT and Blockchain Integration

Hanhaa have engaged in a strategic partnership with Morpheus.Network, a supply chain SaaS middleware platform that integrates legacy and emerging technologies.

What does this mean for your supply chain?

- **IoT provides real time monitoring and tracking** of key data points such as temperature, humidity and shock as well as tampering, theft, irregular movement. These are added to the blockchain to provide a trusted history of events.
- **Workflows use IoT data and actionable business rules.** These include email and SMS notifications through to reorder events, insurance responsibility, security and SLA exceptions.
- **Complete Digital Footprint.** Pair with unique QR Code for end to end shipment history that guarantees regulatory compliance and item visibility for optimizing global supply chains with automated workflows.



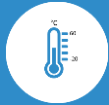
How Does It Work?

Hanhaa's ParcelLive provides best in class real-time monitoring and tracking of assets and goods.

ParcelLive Tracker



GPS location



Temperature



Impact & Shock



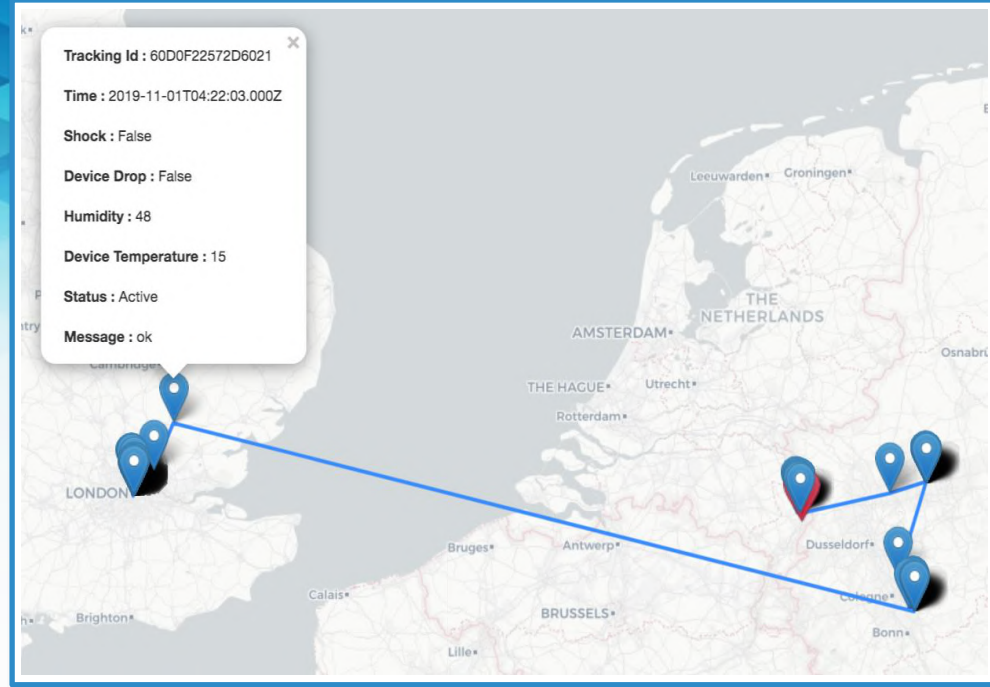
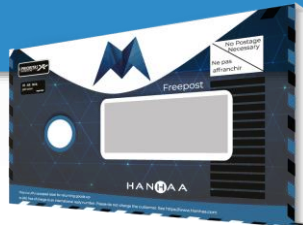
Tilt



Humidity



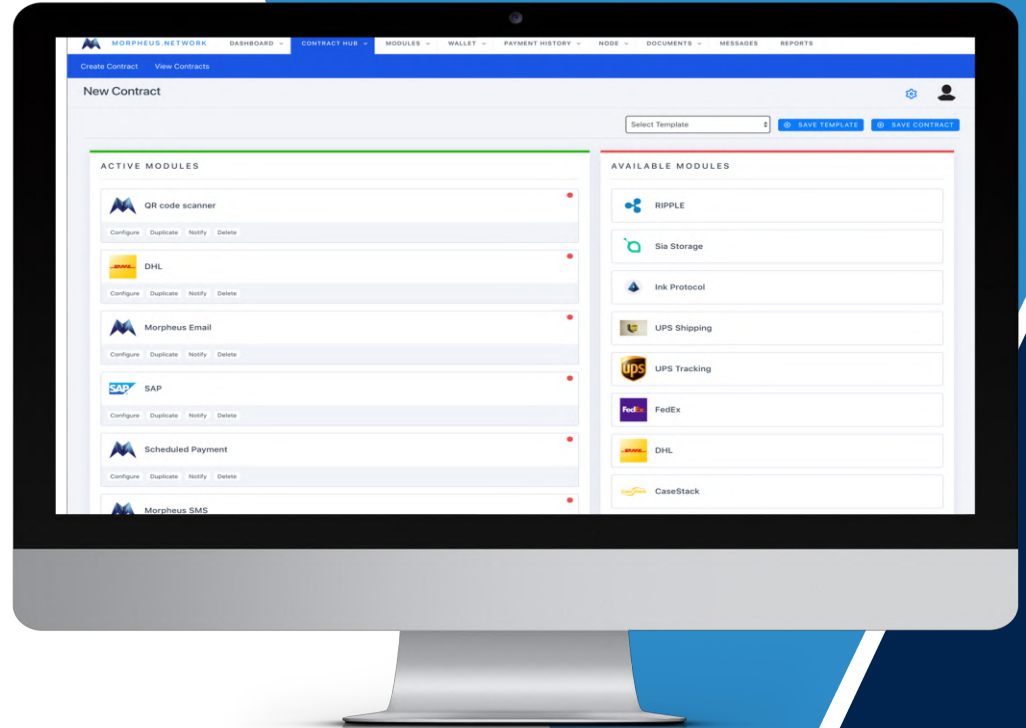
Box opened



How Does It Work?



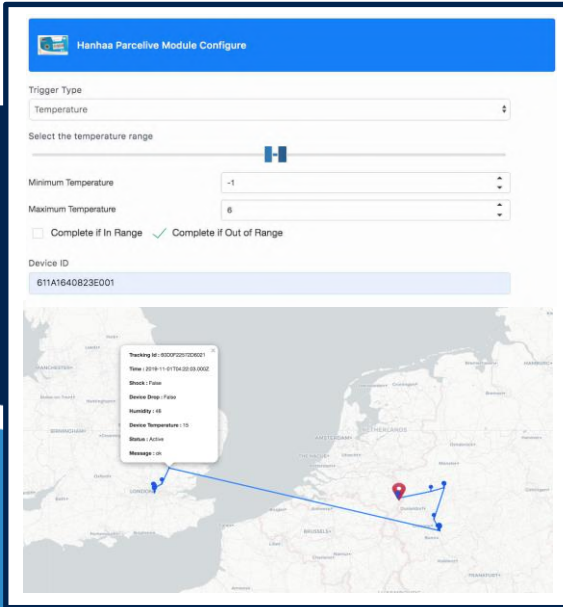
Morpheus.Network empowers your Hanhaa Parcelive deployment with simple drag and drop workflow automations.



How Does It Work? Actionable Business Rules

Morpheus.Network workflows use ParcelLive data points and easy to build actionable business rules.

Temperature Ranges for Cold Chain



Hanhaa Parcelive Module Configure

Trigger Type
Temperature

Select the temperature range

Minimum Temperature: -1

Maximum Temperature: 6

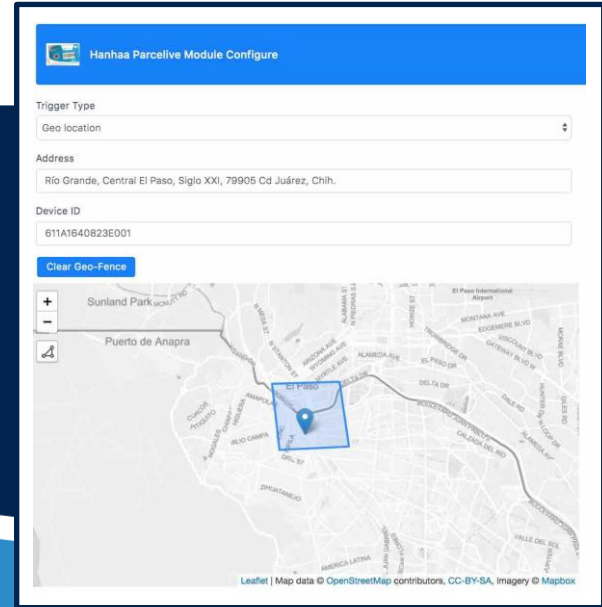
Complete if In Range Complete if Out of Range

Device ID
611A1640B23E001

Map Data:

- Tracking Id: 611A1640B23E001
- Time: 2018-11-01T16:03:00Z
- Speed: 7kmh
- Device Drop: False
- Humidity: 46
- Device Temperature: 13
- Status: Active
- Message: OK

Geofence based on loading and unloading events and security exceptions



Hanhaa Parcelive Module Configure

Trigger Type
Geo location

Address
Río Grande, Central El Paso, Siglo XXI, 79905 Cd Juárez, Chih.

Device ID
611A1640B23E001

Clear Geo-Fence

Map Data:

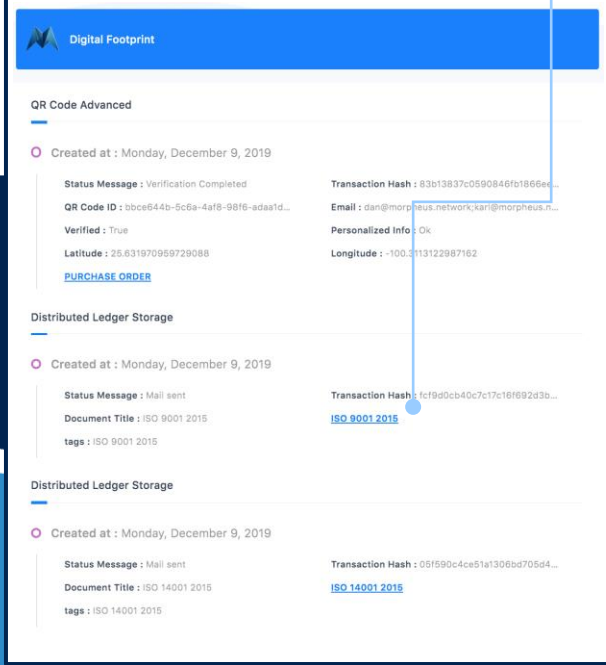
- Sunland Park
- Puerto de Anapra
- El Paso

Leaflet | Map data © OpenStreetMap contributors, CC-BY-SA, Imagery © Mapbox

How does it work? Digital Footprint

Morpheus.Network provides end to end shipment history that guarantees regulatory compliance and item visibility.

1. CORRECT DIGITIZED DOCUMENTATION FOR EXPORTS AND REGULATORY COMPLIANCE



Digital Footprint

QR Code Advanced

- Created at : Monday, December 9, 2019
- Status Message : Verification Completed
- Transaction Hash : 83b1387c0590846f01866e...
- QR Code ID : b0ce644b-5c6a-4af8-9816-adaa1d...
- Email : dan@morpheus.network,karl@morpheus.n...
- Verified : True
- Personalized Info : Ok
- Latitude : 25.631970959729088
- Longitude : -100.3113122987162
- [PURCHASE ORDER](#)

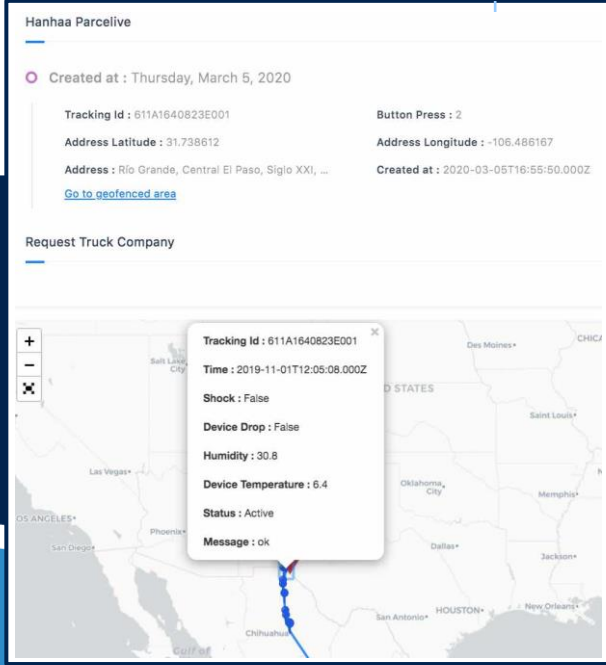
Distributed Ledger Storage

- Created at : Monday, December 9, 2019
- Status Message : Mail sent
- Transaction Hash : cf19d0cb40c7c17c16f692d3b...
- Document Title : ISO 9001 2015
- tags : ISO 9001 2015
- [ISO 9001 2015](#)

Distributed Ledger Storage

- Created at : Monday, December 9, 2019
- Status Message : Mail sent
- Transaction Hash : 05f590c4ce51a1306bd705d4...
- Document Title : ISO 14001 2015
- tags : ISO 14001 2015
- [ISO 14001 2015](#)

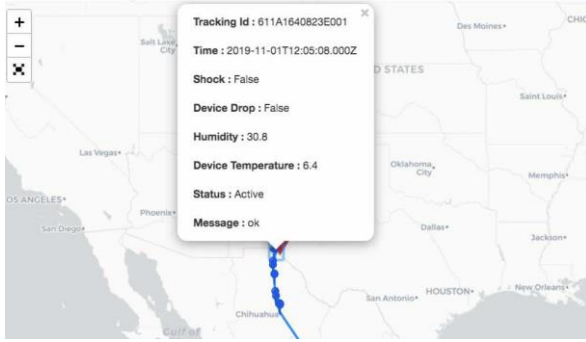
2. ACTIONABLE BUSINESS RULES FOR GEO FENCE, TEMPERATURE



Hanhaa Parcelive

- Created at : Thursday, March 5, 2020
- Tracking Id : 611A1640823E001
- Button Press : 2
- Address Latitude : 31.738612
- Address Longitude : -106.486167
- Address : Rio Grande, Central El Paso, Siglo XXI, ...
- Created at : 2020-03-05T16:55:50.000Z
- [Go to geofenced area](#)

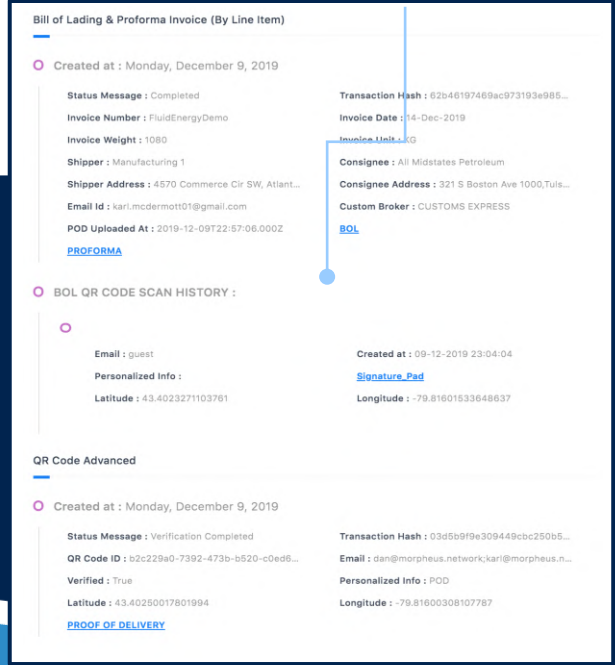
Request Truck Company



Tracking Id : 611A1640823E001

- Time : 2019-11-01T12:05:08.000Z
- Shock : False
- Device Drop : False
- Humidity : 30.8
- Device Temperature : 6.4
- Status : Active
- Message : ok

3. QR CODE INTEGRATION FOR EVENT HANDLING SUCH AS PROOF OF DELIVERY



Bill of Lading & Proforma Invoice (By Line Item)

- Created at : Monday, December 9, 2019
- Status Message : Completed
- Transaction Hash : 62b46197469ac973193e985...
- Invoice Number : FluidEnergyDemo
- Invoice Date : 14-Dec-2019
- Invoice Unit : CG
- Invoice Weight : 1080
- Shipper : Manufacturing 1
- Consignee : All Midstates Petroleum
- Shipper Address : 4570 Commerce Cir SW, Atlant...
- Consignee Address : 321 S Boston Ave 1000,Tulsa...
- Email Id : karl.mcdermott01@gmail.com
- Custom Broker : CUSTOMS EXPRESS
- POD Uploaded At : 2019-12-09T22:57:06.000Z
- [BOL](#)
- [PROFORMA](#)

BOL QR CODE SCAN HISTORY :

- Created at : 09-12-2019 23:04:04
- Email : guest
- Personalized Info :
- Signature_Pad
- Latitude : 43.4023271103761
- Longitude : -79.816001833648637

QR Code Advanced

- Created at : Monday, December 9, 2019
- Status Message : Verification Completed
- Transaction Hash : 03d5b9f9e309449c250b5...
- QR Code ID : b2c229a0-7392-473b-8520-c0ed6...
- Email : dan@morpheus.network,karl@morpheus.n...
- Verified : True
- Personalized Info : POD
- Latitude : 43.40250017801994
- Longitude : -79.81600308107787
- [PROOF OF DELIVERY](#)



Use Case #1: Brexit and Agri Food

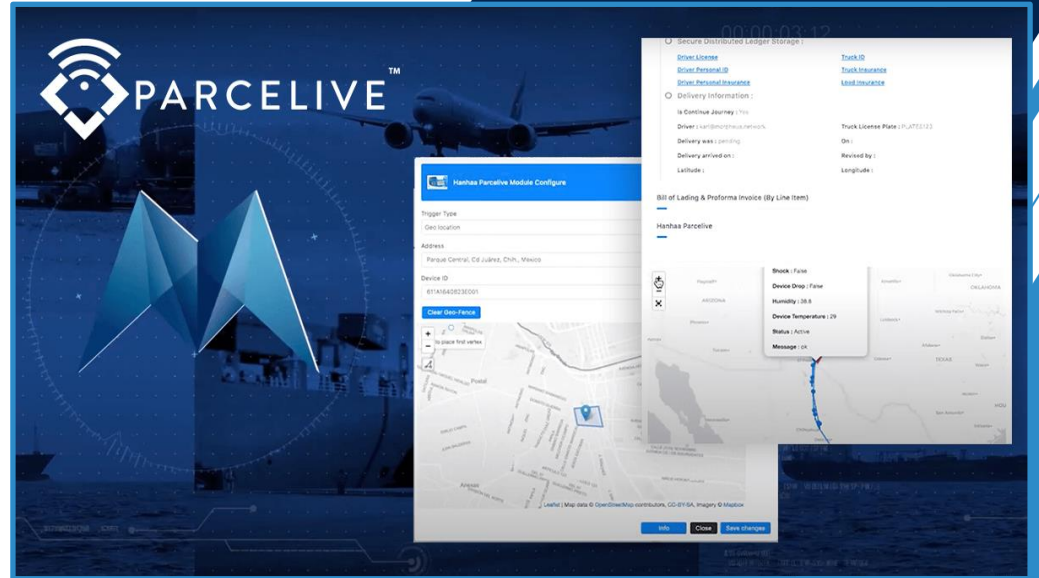
- As simple to use as an Amazon tracking number, we make a trusted digital footprint.
- European Food Safety Authority (EFSA) compliance for agri food health and nutrition.
- Combining blockchain and IoT provides automated workflows that increase visibility and accountability.
- Actionable as part of a workflow.



[Watch Video](#)

Use Case #2: USMCA Cross Border Supply Chains

- New USMCA rules for cross border shipments travelling from Mexico to the USA.
- A Digital Footprint together with C-TPAT streamlines the release process, reduces CBP inspections, and priority processing for CBP to create secure shipments for cross-border trade.
- Customers using Morpheus.Network and Hanhaa can be pro trade AND pro security.

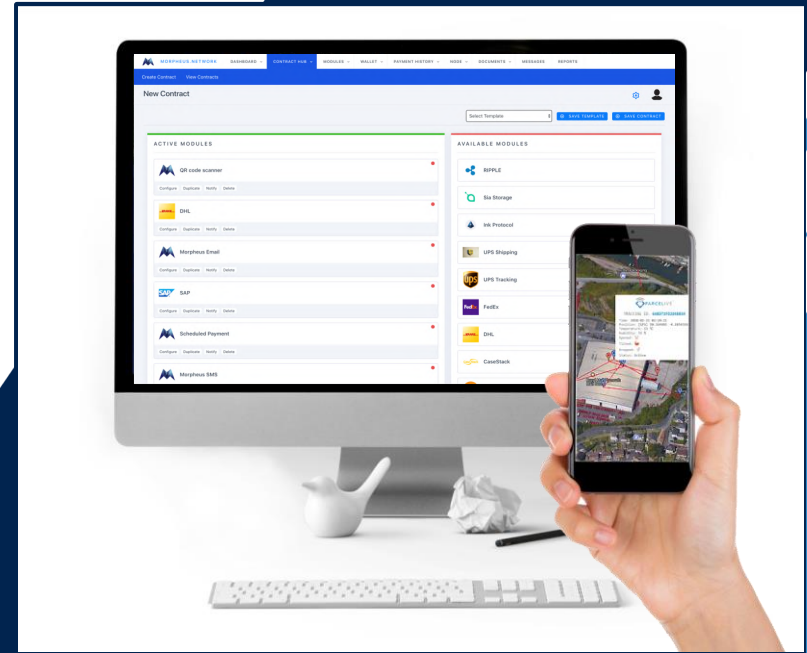


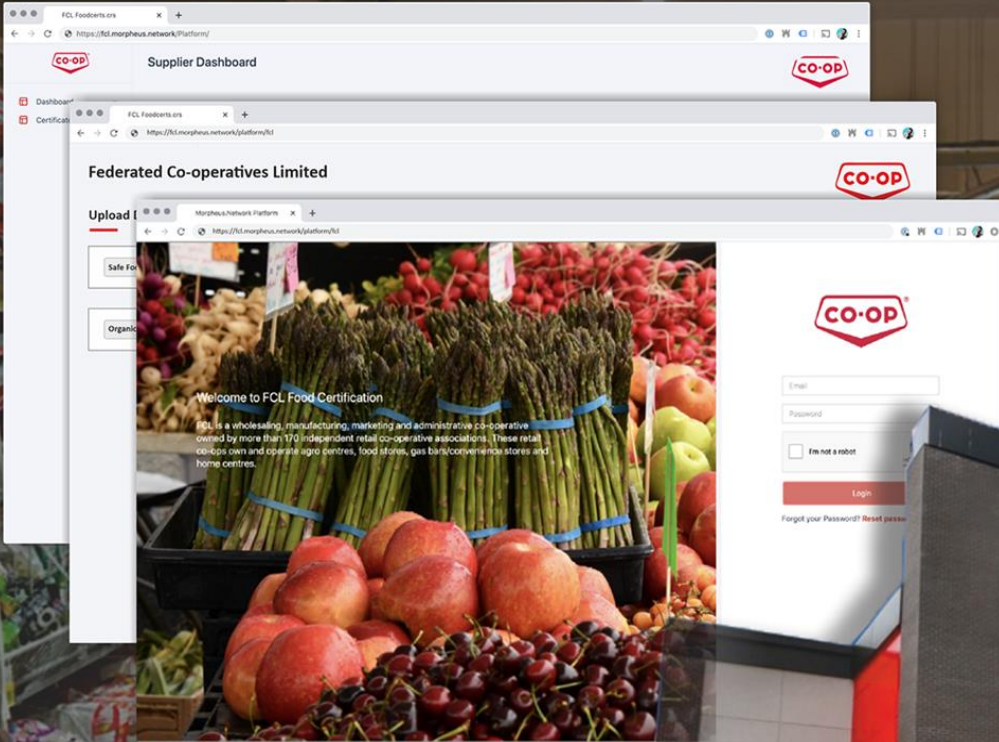
[Watch Video](#)



The Benefits

- **Purchase Orders:** ERP integrations such as SAP ensure that orders are captured digitally at source.
- **Digitize Regulatory Compliance and Shipping Documentation:** Improved control and stakeholder accountability over complete process will reduce manual errors and costly delays such as demurrage, lowering OPEX and increasing profits.
- **High Precision Inventory at Scale:** IoT gives you real time visibility throughout the supply chain leading to a reduction in working capital requirements and clear IoT event responsibility.
- **Immutable Proof Of Delivery:** Effectively close the shipment and link core financial processes such as billing and payments, accounts receivable, payments and credit letters to convert shipments into cash.





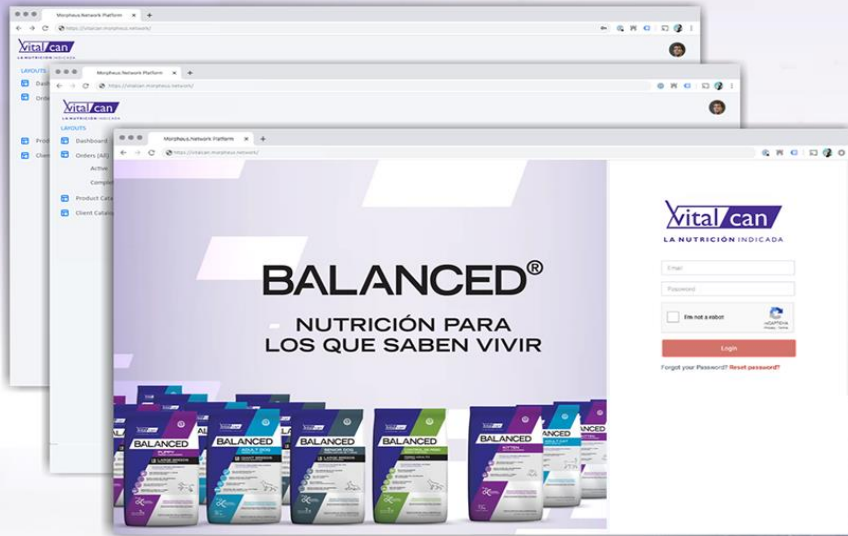
MORPHEUS.NETWORK



“ This system replaces a largely manual process where thousands of regulatory certification and documents from more than 150 suppliers are collected and managed by FCL which all need to be scanned, validated, processed and tracked. ”

Raymond Gareau
Supply Chain Manager, FCL





“ We are using the platform for reducing supply chain operating costs such as delays, fines, SLA, rework and reverse logistics. Tracking shipments in real time equals faster stock turn, accounts receivable and reduced working capital requirements. ”

Jorge Marcos Madrid
Presidente, Vitalcan



HANHAA

Hanhaa GenX is a company registered in England and Wales (12320548)

Hanhaa GenX, LU.214 The Light Bulb, 1 Filament Walker, London, SW18 4GQ
www.hanhaa.com

