

SMART CONTAINERS

IOT FOR CARGO TRACKING

WCO TECH CONFERENCE, Rio

November 13th, 2024



IOT TO MAKE CONTAINERS SMART?



Communicating devices
collect and transmit data in real-time

Various sensors
track events throughout the trip



GEOLOCATION & GEOFENCING



DOOR OR PANELS OPENING DETECTIONS



TRANSPORT CONDITIONS

IOT generate alerts and body of evidences

Door or panels openings detection

Expected or suspicious



*according to the zone, time,
previous events...*

Device tearing/tampering

Abnormal actions on the device



Accurate Geolocation

and zones types

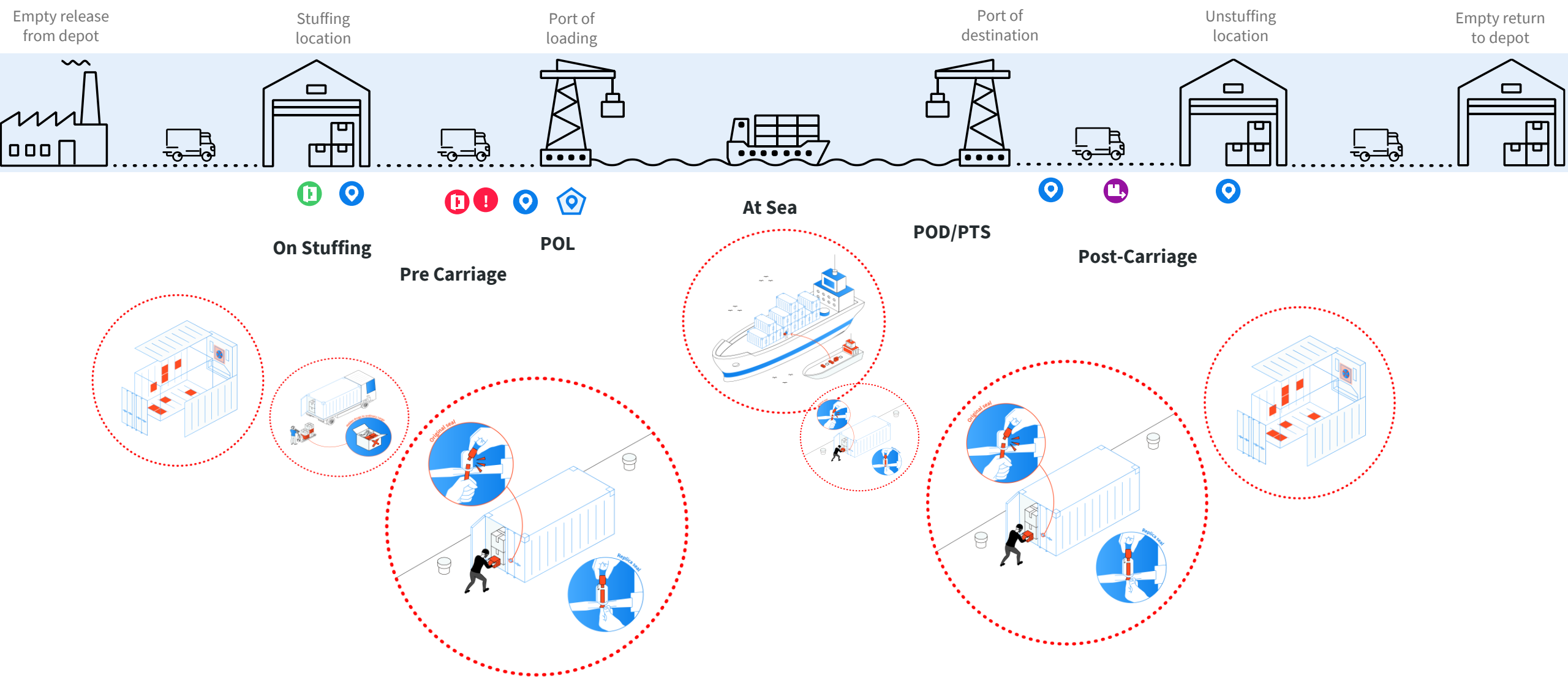


Stop & Motion detection

Stillness and movements



How Smart Container data enable contamination detection along the way?



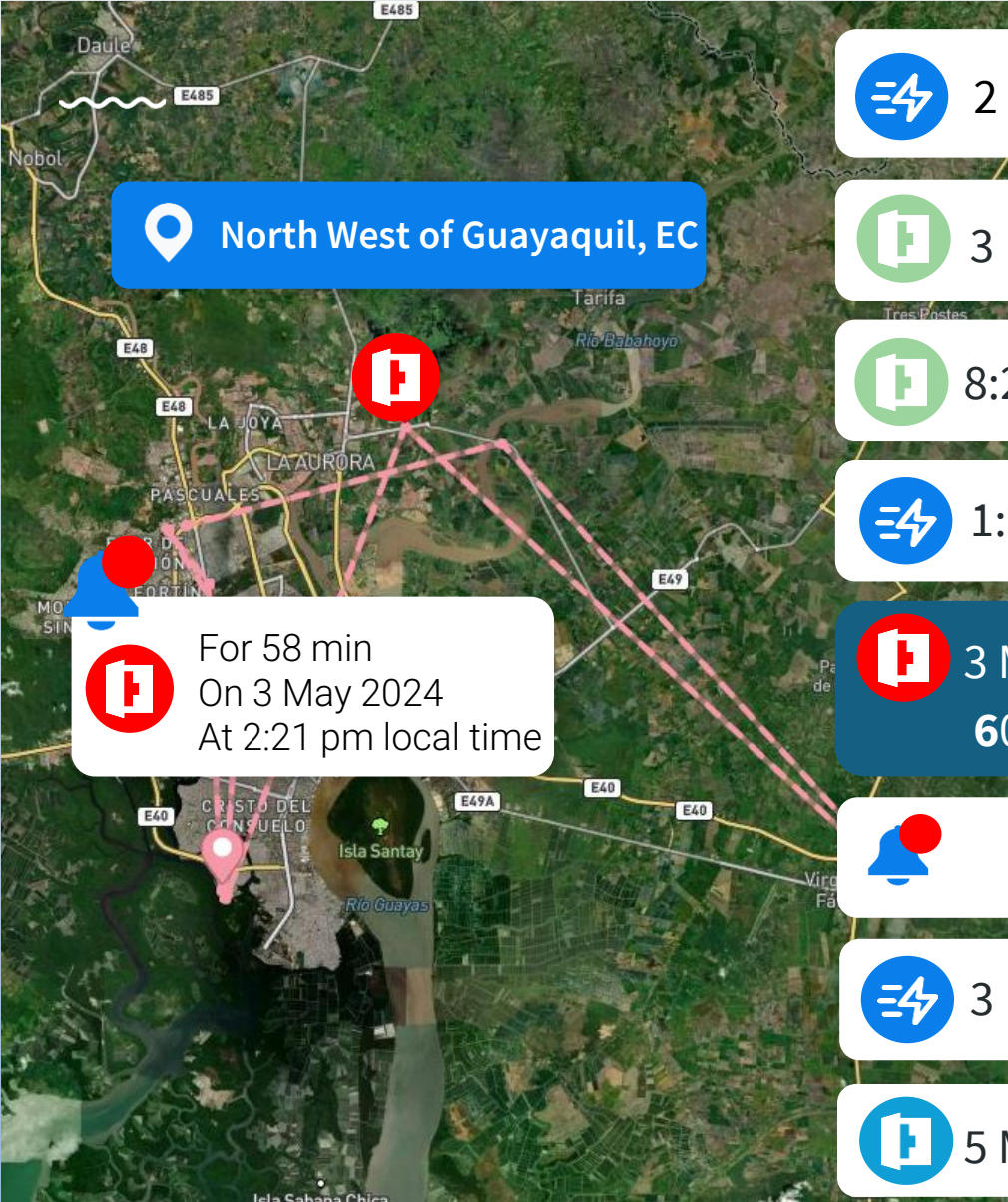
Real Hit Case

Dry container

transporting



POD: Burgas, FI - PTS: Rodman / Gioia Tauro



-  2 May: the container leaves the depot in Guayaquil
-  3 May, 7:23am : arrival at a known Stuffing site.
-  8:26am : 2h58mn **door opening**.
-  1:20pm: container leaves the SUL.
-  3 May, 2:21pm: **58mn door opening** (at an unknown location - 60m away from the SUL and 40m away from the port)
-  Unique notification sent to shipping lines
-  3 May, 4:33pm: container arrives at Naportec terminal.
-  5 May: container is inspected → 1 ton seized

KNOWN RESULTS

**ONLY
30 000**

SMART CONTAINERS

over 360 000 containers

shipped by 1 shipping line from Ecuador

MORE THAN

30

TONS

found in

21 seizures

KEY SUCCESS FACTORS

ACCELERATE THE DEPLOYMENT
INCENTIVES TO SHIPPING LINES
REGULATIONS ?

CARGO OWNERS
CONSIDERATION

