

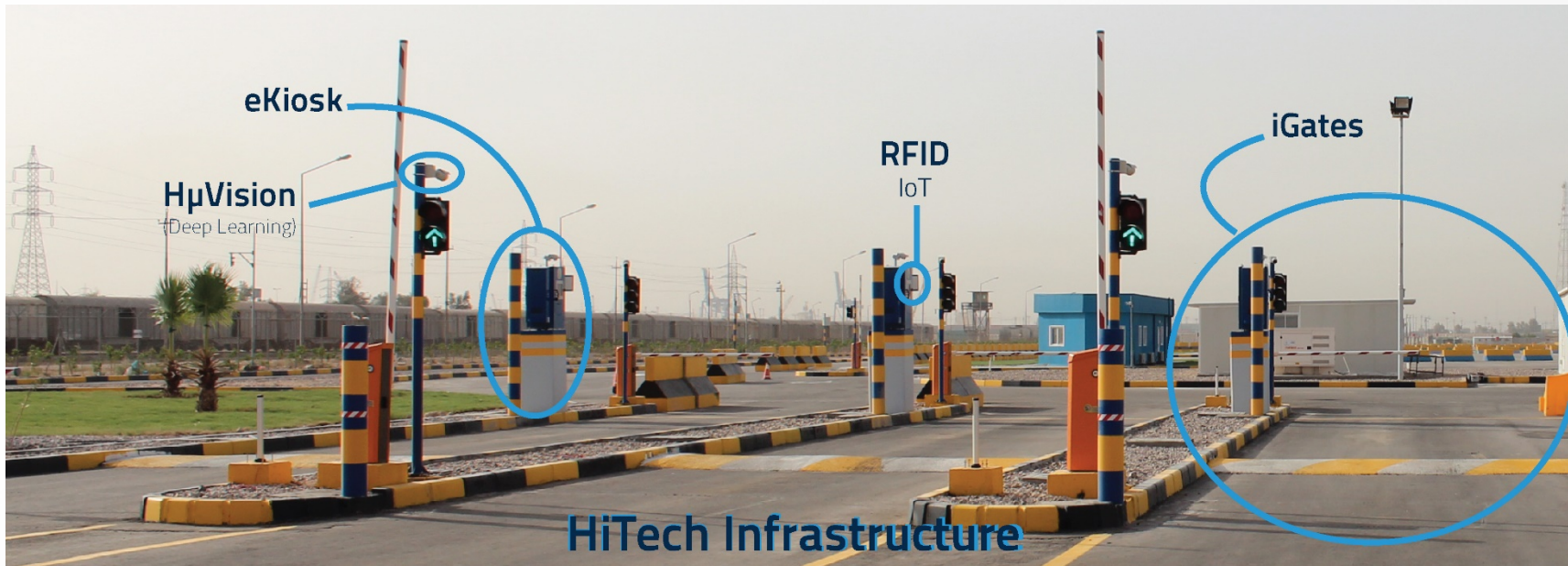


# Digitalizing Port Access at the Hinterland

June 1<sup>st</sup>, 2021

# Nafith International LLC

- Trade & Transport Facilitation infrastructure and Logistics Technology
- Port access business in USA since 2001
- IFC (World Bank Group), Foursan Fund investors, US and Jordanian shareholders
- National Projects to digitalize national logistics of countries/ cities/ hubs
- Decongest logistics hubs/ ports/ borders, secure cargo corridors
- PPP BOT projects in Jordan, Iraq and Oman
- Process 6000 trucks, 120K transactions / day in all operations
- Holds international patents in RFID and Weighing
- Applies in-house developed and manufactured IoT and Deep Vision in Logistics operations



# Hinterland/Yard/Berth Cycles



# Hinterland Cycle



- Basics

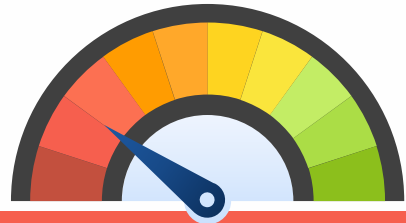
- Assume “No Friction”:
- Info before arrival of trucks
- Booking/appointment system
- Digitalize pre-gate and out-gate processes
- Install eGates, auto-Weighing
- **Capacity management of everything – MAXIMIZE**
- Operate at max efficiency ... all the time

- **Friction** is

- Teamsters
- Labor Unions
- Trucking unions
- Equipment shifting
- Equipment maintenance
- **Traffic outside the port**
- **Capacity Management at adjacent ports**

# Hinterland Cycle Efficiency by Mode

Maximize Port/Hub Capacity



+10%

## Standard Booking

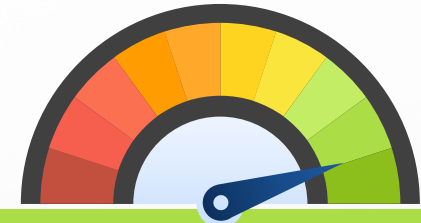
- Operate at your own risk of congestion
- Deal with truck waiting times, outside the port
- High truck dwell times
- More delay at the gate
- Slow port gates
- Negative environmental effect
- Higher hinterland transport costs



+70%

## Truck Appointment

- Digitalizes a wide part of the Hinterland cycle
- Very small Infrastructure investment
- Prone to port Friction
- Pre-determined capacity = max capacity
- Open slots are lost capacity
- Data analytics yield negligible enhancement
- Port specific, negative optimization of Logistics for multiple ports in one zone

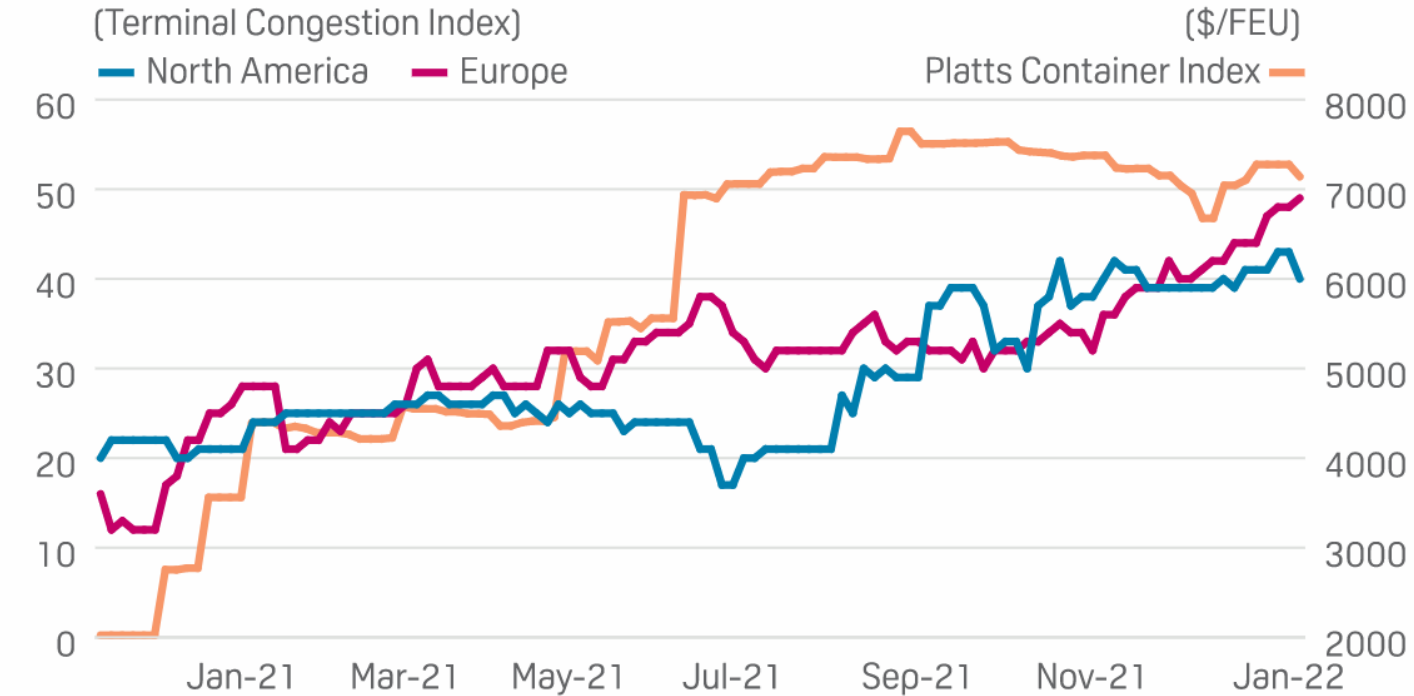


++90%

## Scheduling System

- Step up from the Appointment System
- Mutes Friction effects
- Operate at max capacity, or even higher
- Apply Data analytics (**Tinàmica**) to reach extreme optimization
- Close coupling with Yard and Berth cycles
- Requires minor infrastructure investment
- Can be a Port Authority project to add an extra layer of logistics optimization

## FREIGHT RATES TRACK ESCALATING DISCHARGE PORT CONGESTION



Source: Sea-Intelligence, S&P Global Platts

**As port container dwell times increase, cost increases across the supply chain in a multiplier effect**

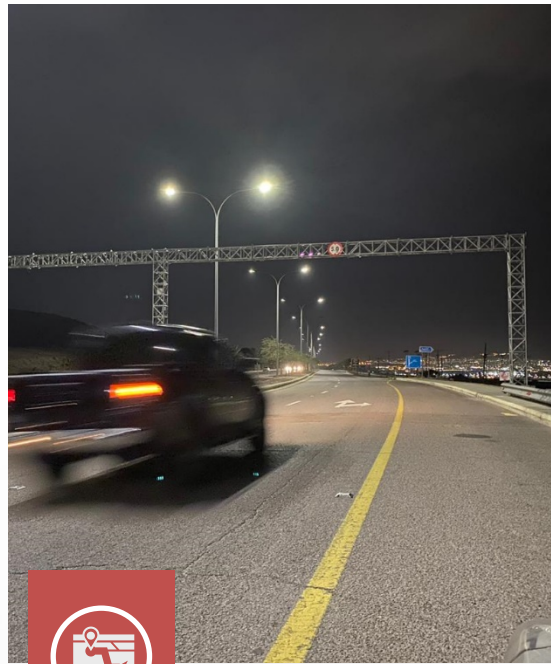
# Tools & Technology



## iGates

Centrally controlled

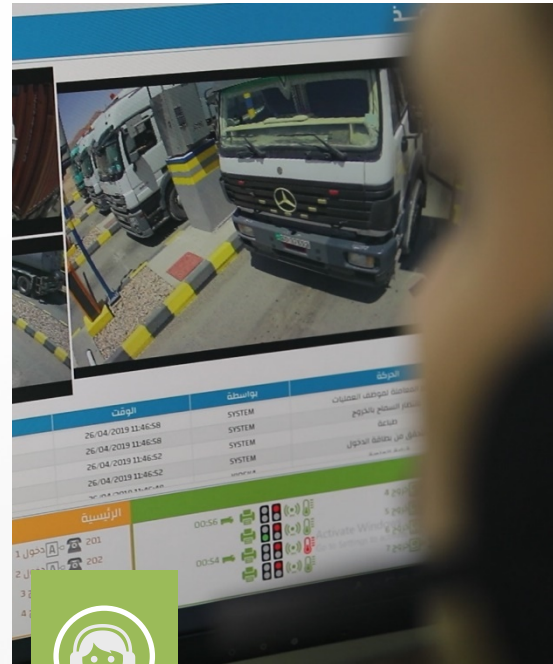
iGates are manufactured and delivered by NFIDENT, a wholly owned factory/subsidiary of Nafith



## iPortals

Sense everything

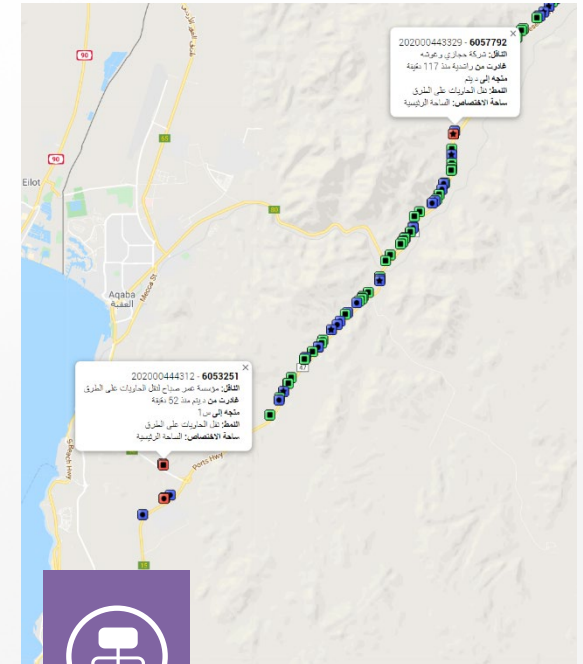
iPortals Categorize vehicles, streamlined monitoring, using Deep Learning/Vision



## CC Centers

Control & Monitor

Command and Controls Center that covers all logistics events and interventions



## Logistics Systems

NFlow, NCheck, NStar

Platforms are web, mobile, GIS, Data Analytics, Dashboards, accessible within a centralized entry point

# Tools & Technology

IoT, D/L, Edge Tech



**eSeals**

Secure Cargo on the Move



**eID Cards**

Long Range For Truck drivers and Access Mgmt



**Truck eID**

Secure RFID tags, Trailer/Chassis eSeals



**Deep Vision**

Deep Learning Edge Technology for Traffic Sensing



**Weigh In Motion / One-Step Weighing**

Axle Load Mgmt, Advanced Vehicle Sensing



**Internet of Things**

Continuous Development into the Future



# iGates

Watch video here:  
NFIDENT iGates for Logistics Hubs



# Thank You

## Contact

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