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# New Role of Port and Container Terminal Automation in a Pandemic Age

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Chief Operations Officer

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ports & logistics




# Company Profile



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**Pelabuhan Tanjung Pelepas** started in 1999 as a regional transshipment hub for South East Asia and one of the world's biggest container terminal with **Over 120mil TEUs** cumulative record for past 21 years

## Core Businesses

-  Transshipment
-  Marine
-  Free Zone

## Asset Capacity

- 5.04km** linear quay
- 4500** manpower
- 62** Quay Crane
- 172** RTG
- 459** Prime Movers
- 483** Terminal trailer

*"PTP is delivering digital transformation with mobile apps – that enable to manage operation, anytime, anywhere"*



# Digitalization of Bus Request

## Objective

- ▶ Efficient and safe transportation mechanism
- ▶ Manage movement of employee
- ▶ Optimizing resource allocation

## Features

- ▶ Accurate pick-up & drop-off points
- ▶ Manage social distance upon request

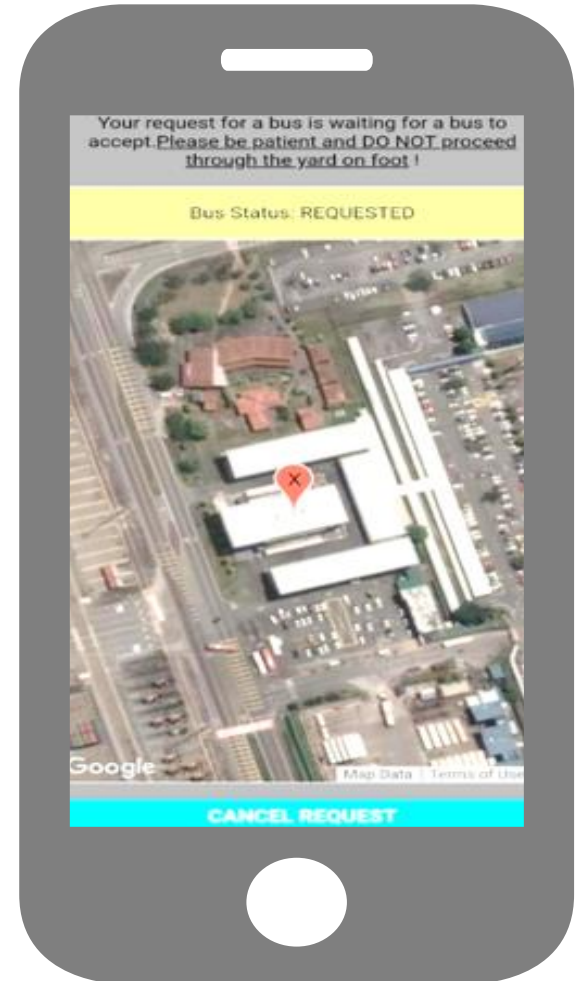
## Results

**90%**

Reduce waiting time (open request)

**100%**

Enhance pedestrian safety



# Live Incentive Monitoring

Objective

- ▶ Motivate operation staff
- ▶ Performance reward appliance
- ▶ Real time performance management

Features

- ▶ Gamification
- ▶ Live roster

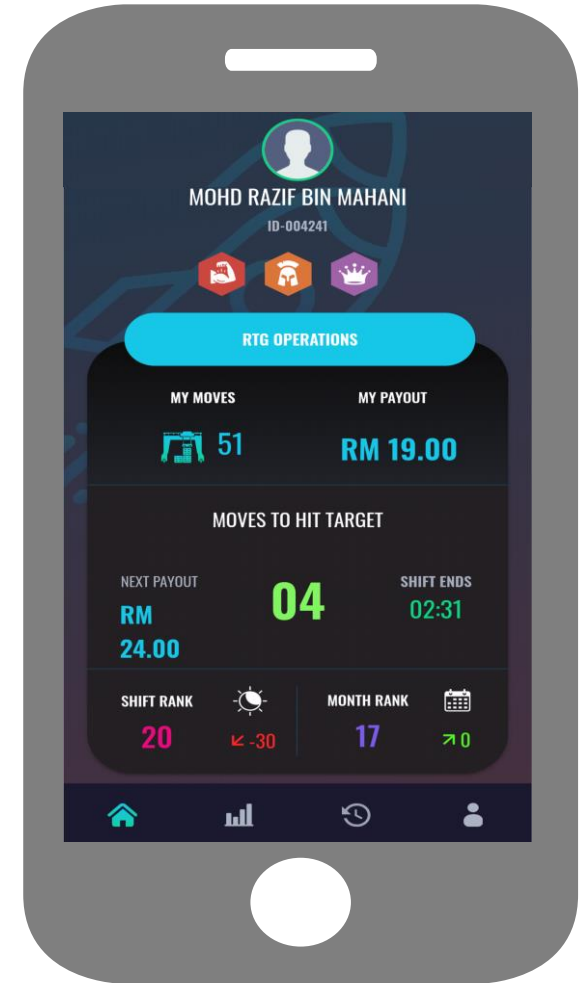
Results

100%

Live time performance visibility

Motivates

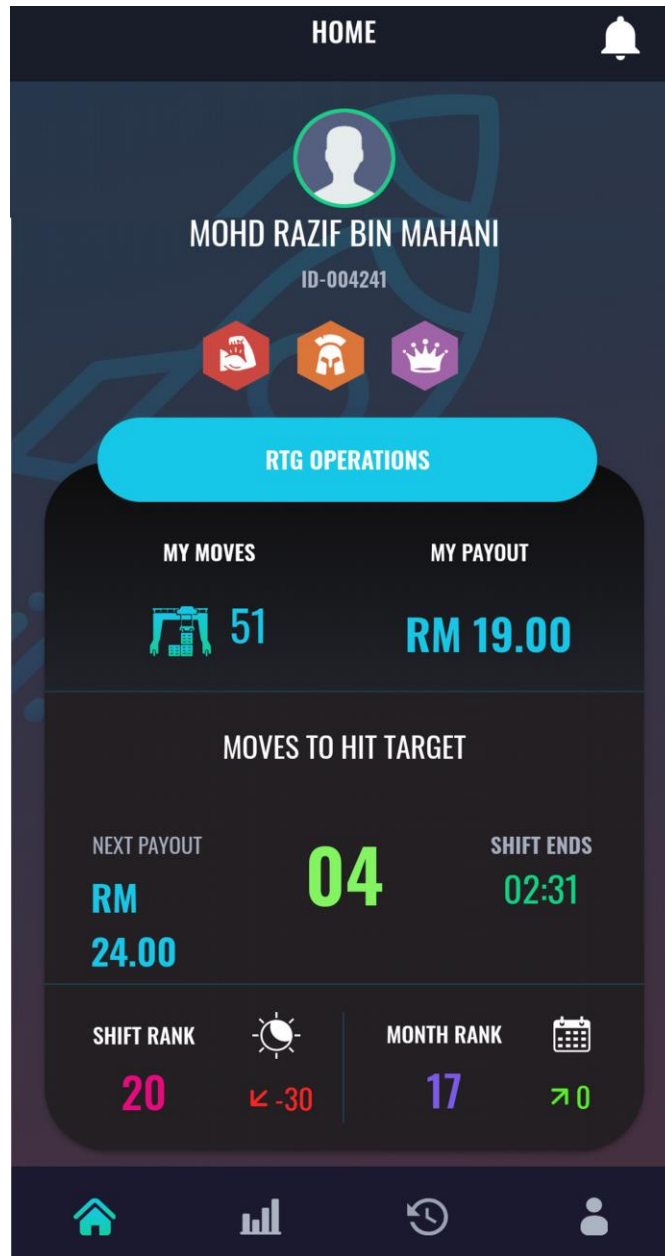
Relate own performance to incentive earned



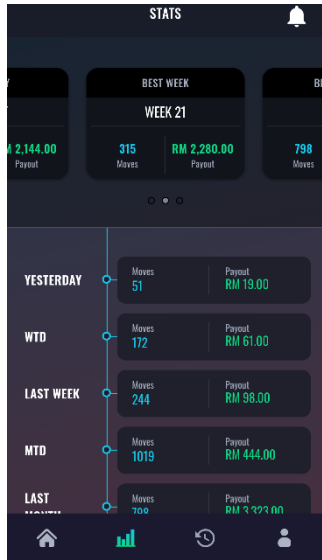
# i) Home screen



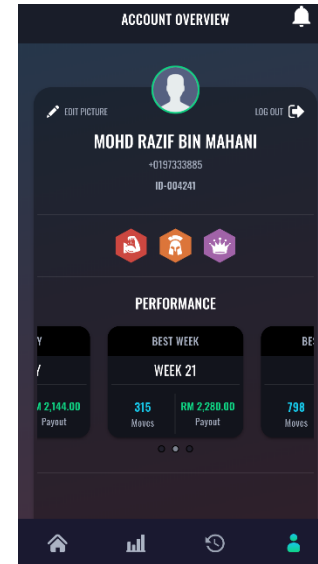
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# ii) Statistic screen



# iv) Account Overview



# iii) History screen

DATE	SHIFT TIME	TOTAL BOX
25 Jun, 2020	08:00-15:59	51
23 Jun, 2020	08:00-15:59	15
22 Jun, 2020	08:00-15:59	48
21 Jun, 2020	08:00-15:59	58
19 Jun, 2020	00:00-07:59	55
18 Jun, 2020	00:00-07:59	29
17 Jun, 2020	00:00-07:59	69
16 Jun, 2020	00:00-07:59	30
15 Jun, 2020	00:00-07:59	61

# Real Time Operation Insight



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Objective

- ▶ Full visibility of operations, data governance & safety, all in real-time



Features

- ▶ Decoupled from N4
- ▶ On cloud - system deployment as fast as 6 hours



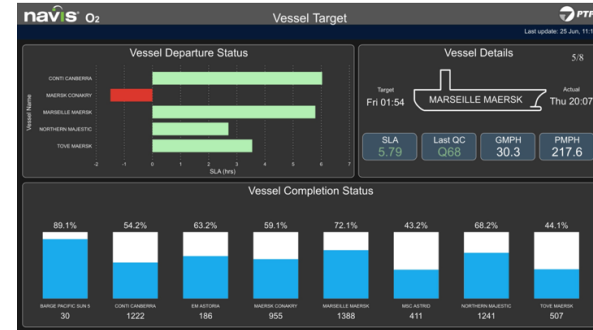
Results

100%

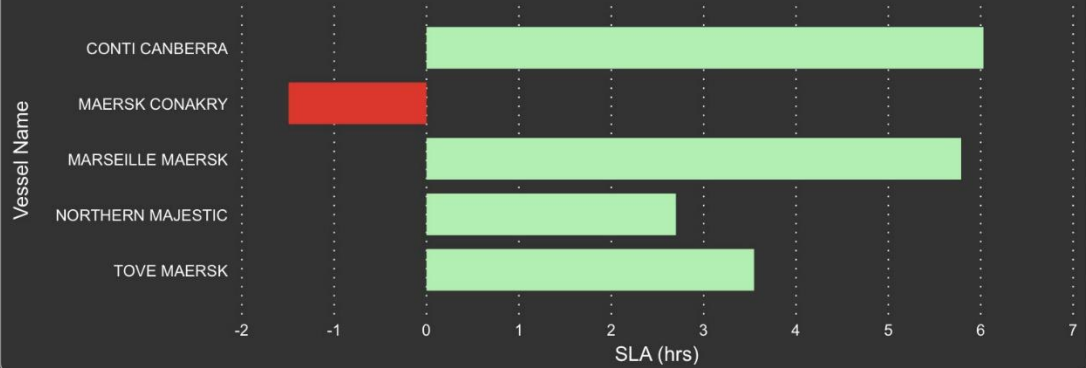
No downtime required

100%

Data accuracy



### Vessel Departure Status



### Vessel Details

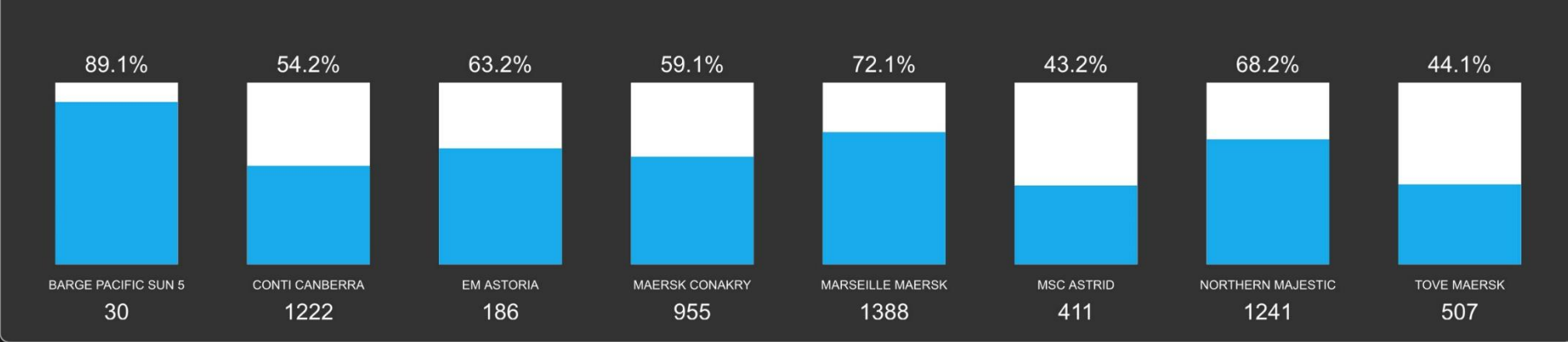
5/8

Target: Fri 01:54

Actual: Thu 20:07

SLA 5.79	Last QC Q68	GMPH 30.3	PMPH 217.6
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### Vessel Completion Status







# Virtual Pinning Strategy

## Objective

- ▶ Eliminate suspended load hazard
- ▶ Resource optimization
- ▶ Enhance data accuracy

## Features

- ▶ Early confirmation prior operation
- ▶ Unit allocation visibility

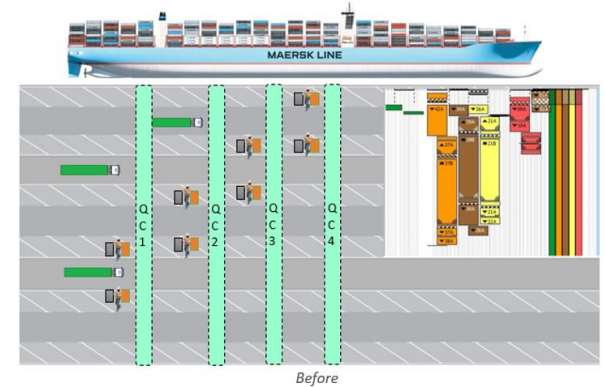
## Results

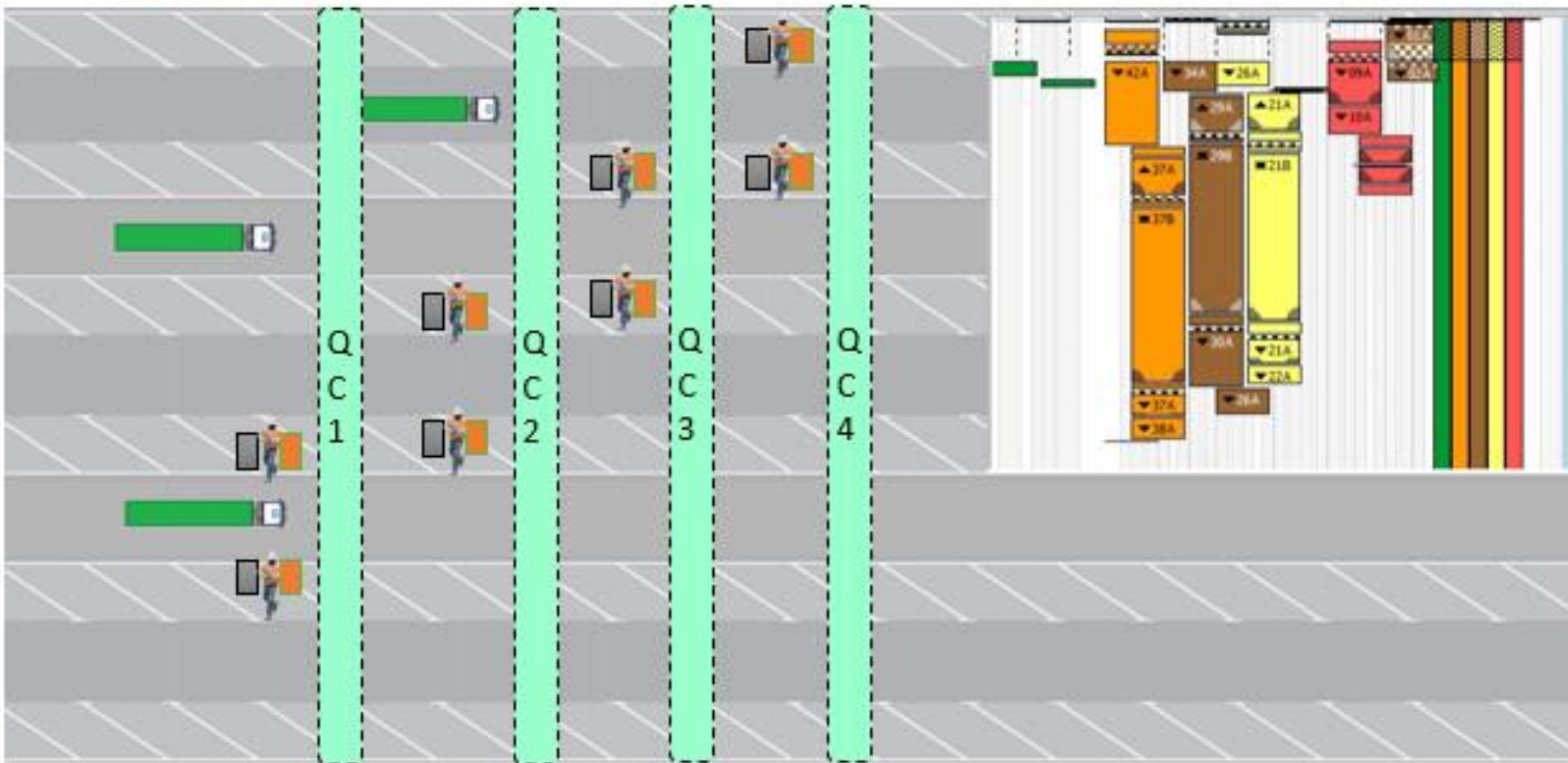
**20%**

Headcount  
reduction

**70%**

Reduction of  
forklift movement





*Before*



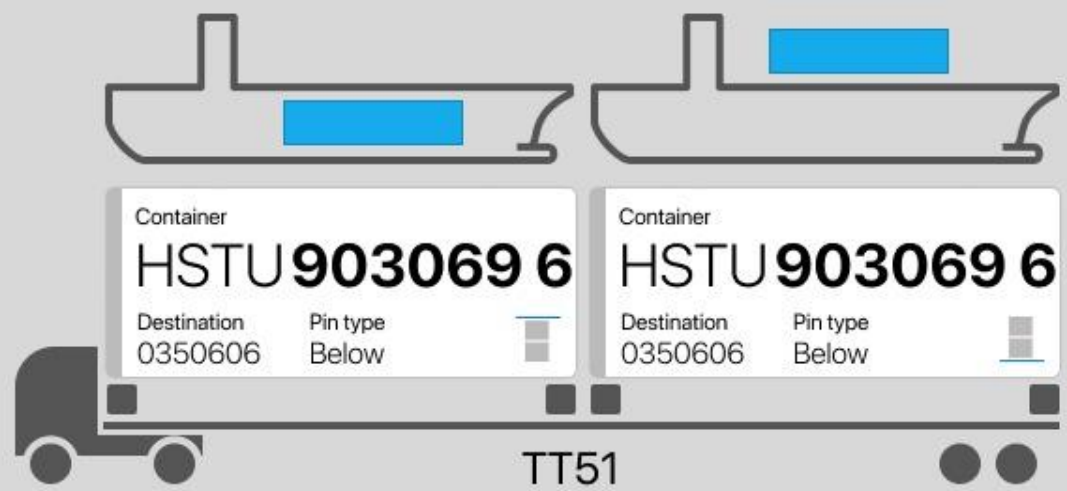
PS02-R



Lane 001



STOP



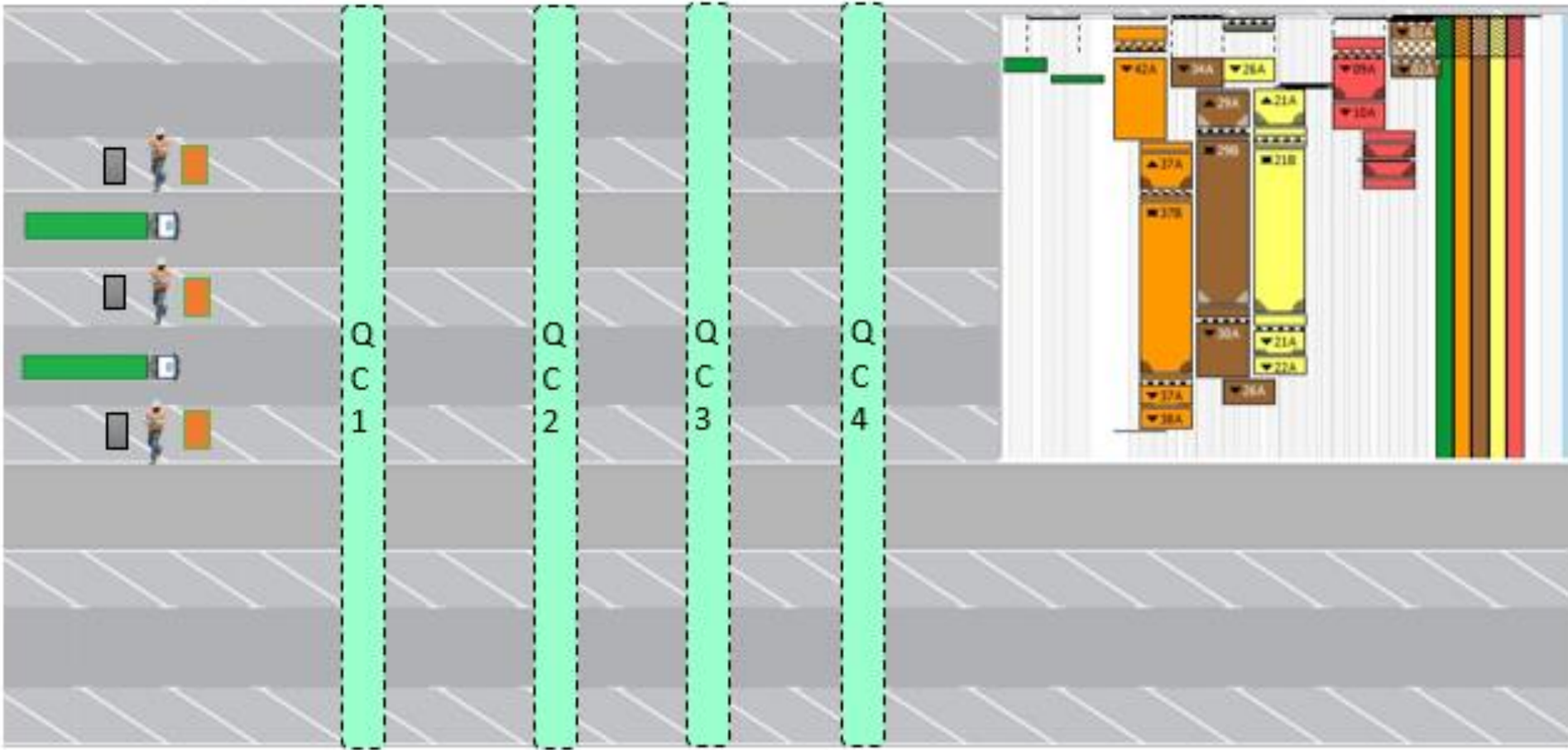
PS01-L



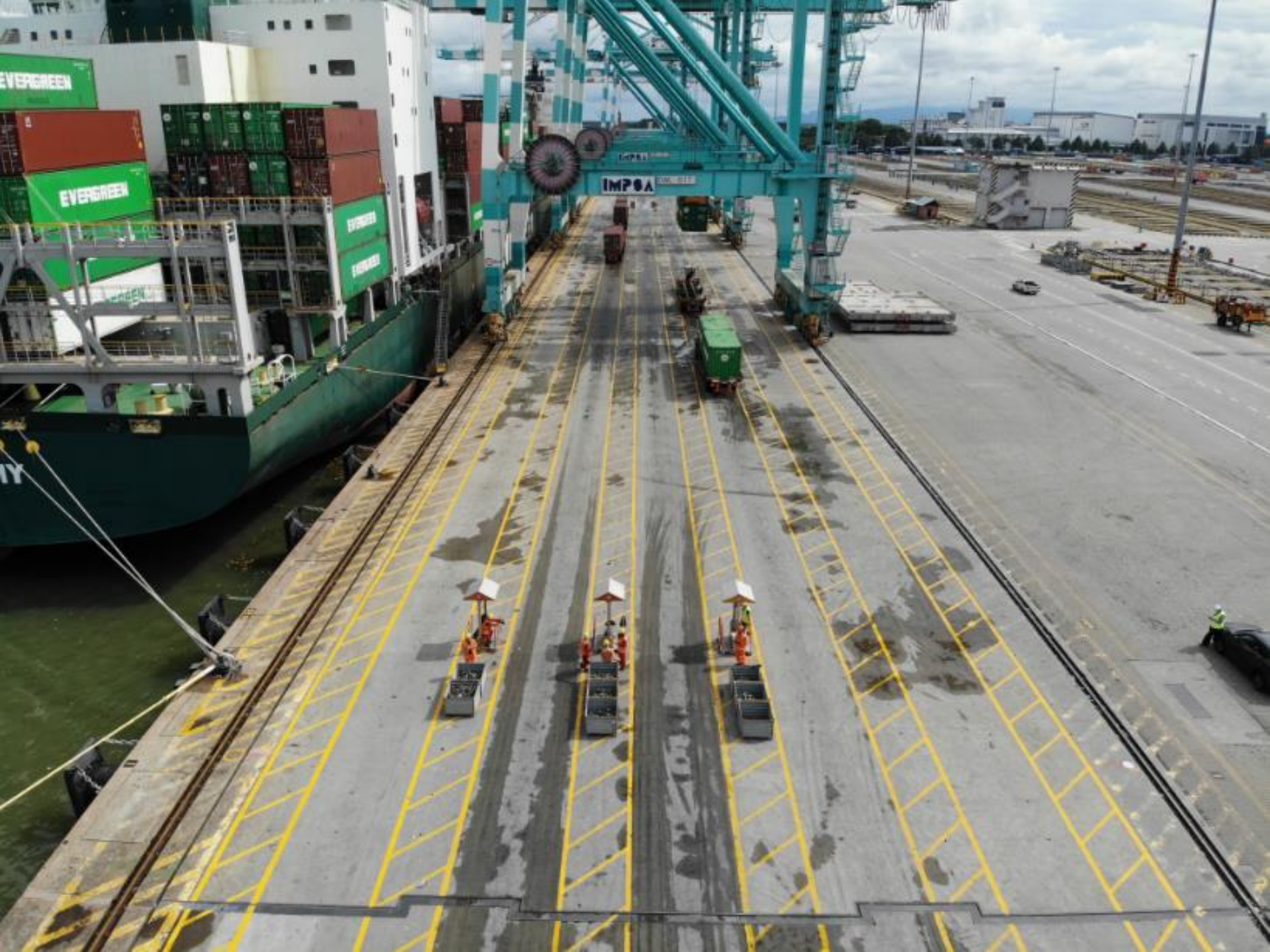
Enter container number

Start pinning

Wait for PS02-R to Verify Container Number



*Current*





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Thank You



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