

# Port of Antwerp

## Road towards a smart Port



29/04/2021



Port of  
Antwerp





A nighttime photograph of the Port of Antwerp. The central focus is a modern, white, cantilevered building with a complex, faceted glass facade that glows with blue light. To its right is a historic, multi-story building with many windows, some of which are lit. The foreground is a cobblestone plaza with several small, recessed lights. A bright street lamp on the right creates a starburst effect. In the background, other buildings and lights are visible along the waterfront.

Welcome to the Port of  
Antwerp





**A truly global port**  
in a centuries-old city  
in the heart of Europe

**2nd European port**  
**14th port worldwide**

# Port of Antwerp DNA

Belgium's biggest economic driver



**238**

Million tonnes of  
maritime freight



**12,068**

hectares



**20.7**

billion €  
added value



**144,000**

jobs



**1,000**

companies



**4.8%**

GDP

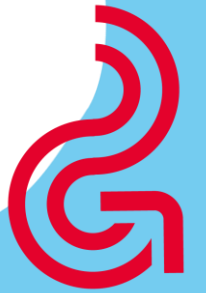


Home port vital for a sustainable future

Sustainable growth




Targeted transition



Resilient port





An aerial, top-down view of a futuristic port. The port features several long, curved piers extending into a dark blue body of water. The piers are lined with modern, multi-story buildings and infrastructure. The sky is a vibrant blue with scattered white clouds. The overall aesthetic is clean, modern, and technologically advanced.

# The road towards a smart port



# The nautical chain at Port of Antwerp

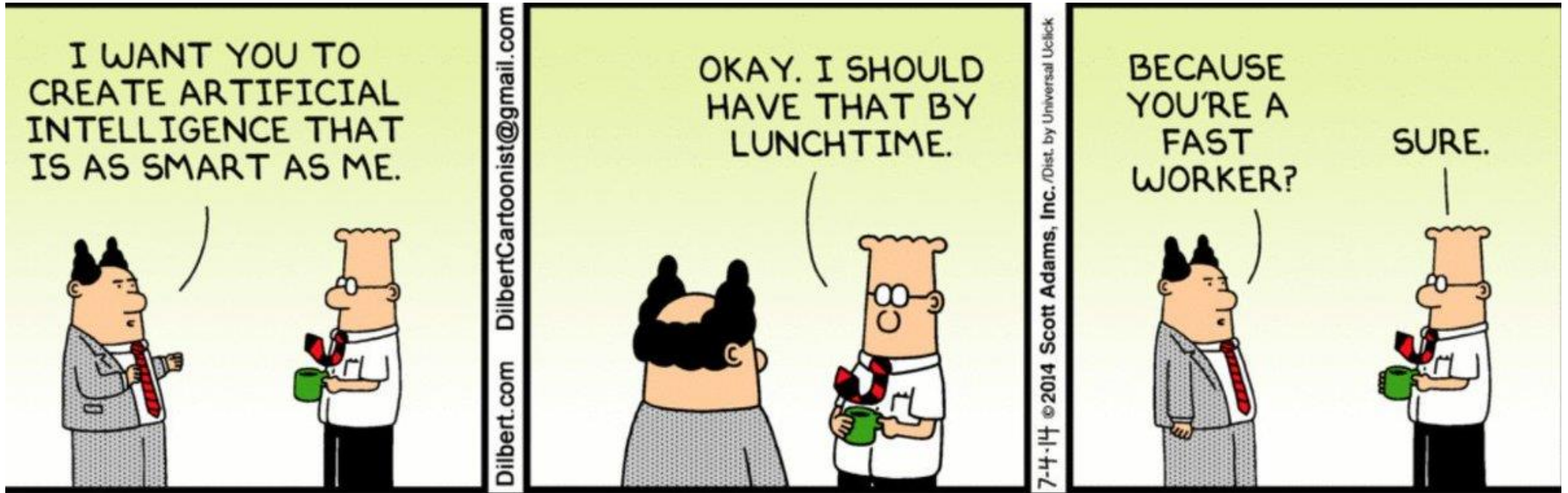


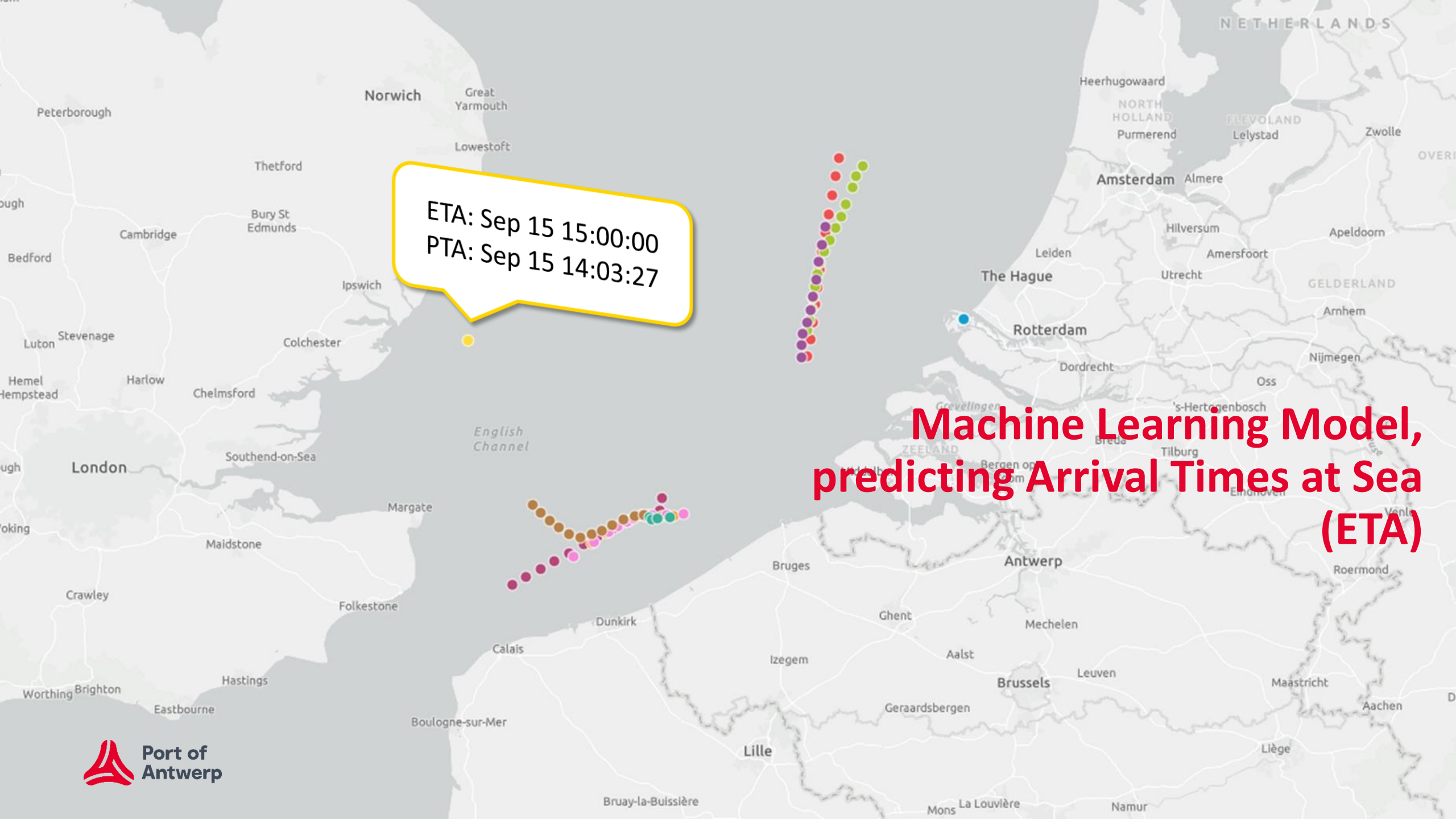


Transparency?



# Artificial Intelligence





ETA: Sep 15 15:00:00  
PTA: Sep 15 14:03:27

**Machine Learning Model,  
predicting Arrival Times at Sea  
(ETA)**



**Recommender system,  
advising the number of  
tugboats for the job**



# Data Sharing



Port of  
Antwerp



OPVOLGING

PLANNING

- INKOMENDE ZEESCHEPEN
- UITGAANDE ZEESCHEPEN
- OPGEGEVEN ZEESCHEPEN
- VERKEERSBEELDMONITOR LOE
- PLANBORD
- SLUISPLANNING
- AANGEMELDE SCHEPEN
- ACTIEVE REIZEN
- BERICHTEN AGENT
- OVERDRACHTEN
- SLOTAGENDA
- VOORRANGEN
- OPONTHOUDEN
- SLEEPBOOTTAKEN IN DOKKEN
- SLEEPBOOTTAKEN OP RIVIER
- TOESTAND SLEEPBOTEN DOK
- TOESTAND SLEEPBOTEN RIVIER
- BRABO SHIFTEN
- BRABO TAKEN
- BRABO BEURTLIJST

PLANBORD

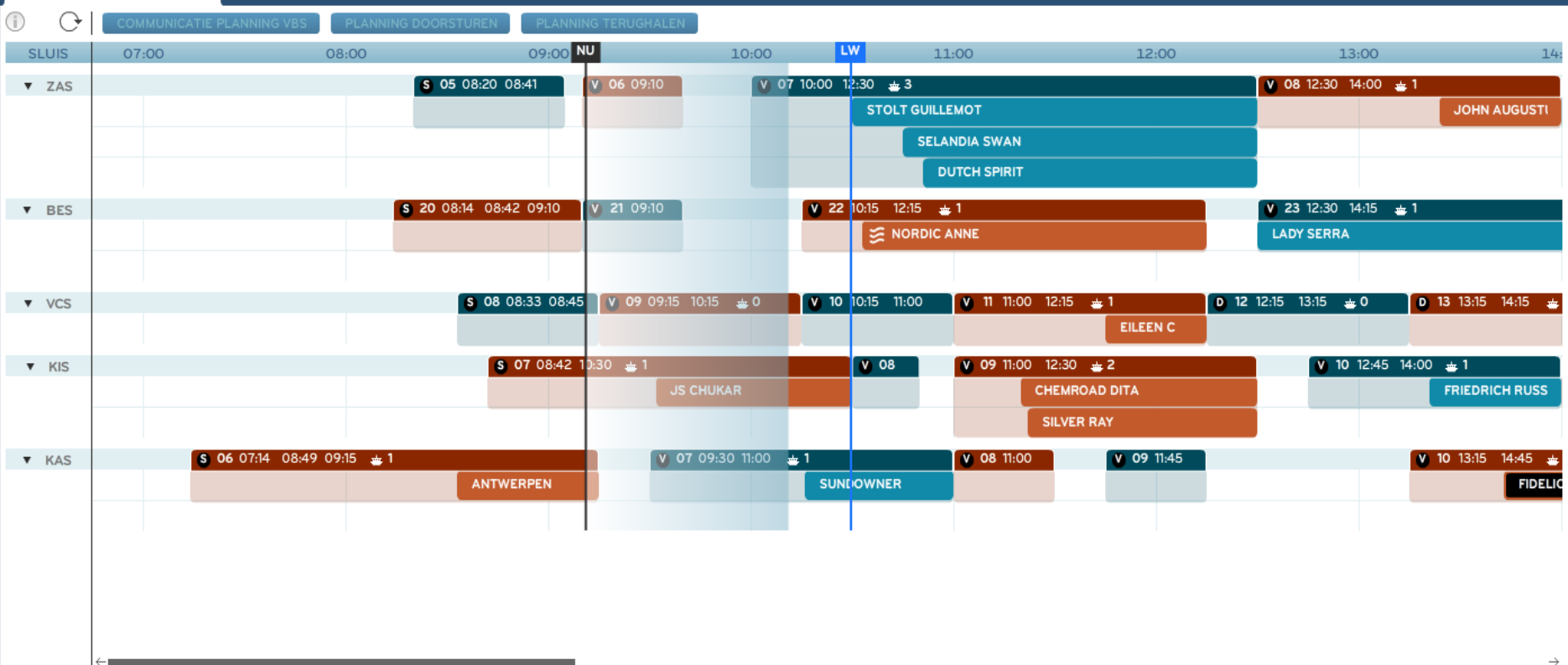
6 - 12 - 24 - 48 - ALLES  INCLUSIEF SCHEPEN VOOR ANKER

AANBOD OMWISSELEN  AUTOMATISCH VERNIEUWEN

INKOMENDE ZEESCHEPEN									
	ETA/ETD	SCHIP	LOA	GBR	DGR	VAN	NAAR	SLR	SLD
▲ ACC	26 10:00	BRABO	60,0	28,5	3,4	604	1622		0
● ACC	26 18:00	LIESEL ESSBERGER	118,1	18,8	6,2	MARZ	1131		1
● LKW	16 02:00	ARKLOW RAINBOW	90,0	14,2			369		
● LKW	29 03:00	MORNING POST	199,9	35,4	10,0		1307		
● LKN	25 17:00	MAINGAS	96,9	15,6	4,8		763		
● LKN	26 01:00	TRF MEMPHIS	184,0	27,4	8,5		306B		
● LKN	26 13:00	KIKKI C	106,1	15,5	4,7		324		
● LKW	26 14:00	STOLT KINGFISHER	100,0	16,5	5,8		1664		
● LKN	29 16:00	MONA SWAN	129,8	19,6	6,0		243		
● LKW	26 14:00	CHEM NEW YORK	145,0	24,2	8,2		501		0
● LKW	24 00:01	NASHWAN	154,0	25,5	8,9		759	LA	1
● LKW	22 10:00	BAYAMO	87,2	14,8	4,1		467		

UITGAANDE ZEESCHEPEN									
	ETD	SCHIP	LOA	GBR	DGR	VAN	NAAR	SLR	SLD
ACC	26 10:00	BRABO	60,0	28,5	3,4	604	SB	1622	0
ACC	26 22:00	FEDERAL MAYUMI	200,0	23,8	6,0	502	SB	LKW	1
ACC	26 23:00	BENJAMIN OLDENDORFF	200,0	32,3	6,8	1209	SB	LKN	2
ACC	26 23:00	BBC MARMARA	115,5	16,9	5,2	121	SB	LKW	0
ACC	27 06:00	AS PALINA	210,1	30,2	9,0	184	SB	LKN	2
ACC	27 10:00	FIDELIO	104,9	17,2	5,8	517	BB	LKN	0
ACC	27 14:00	BALTIC SOUL	182,6	27,4	10,6	620	SB	LKW	2
ACC	27 23:30	STAV VIKING	144,2	23,0	6,7	712B	BB	LKN	0
ACC	28 22:30	GRANDE GUINEA	211,3	32,3	9,7	1351	SB	LKW	1
ACC	29 23:00	GRANDE DAKAR	236,3	36,2	10,4	1345	SB	LKW	1

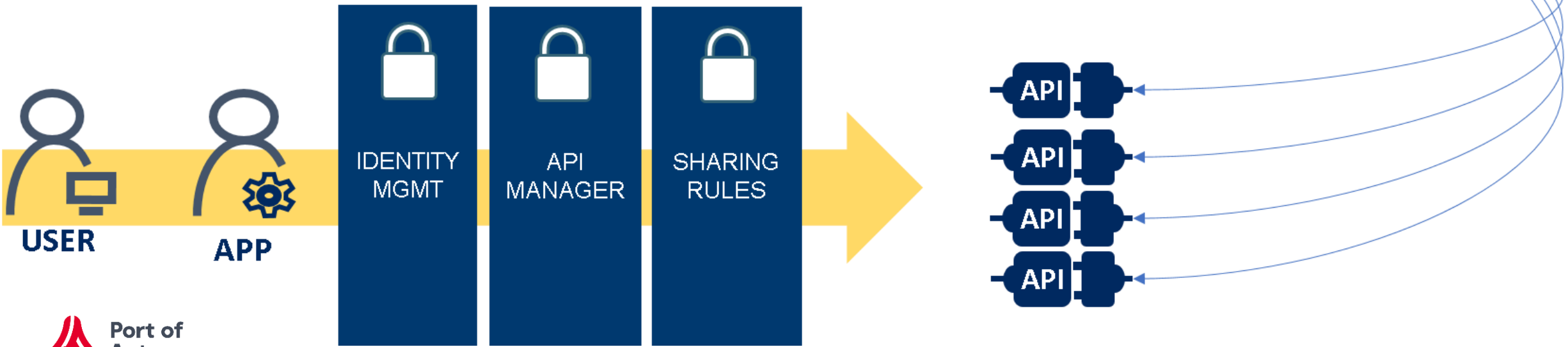
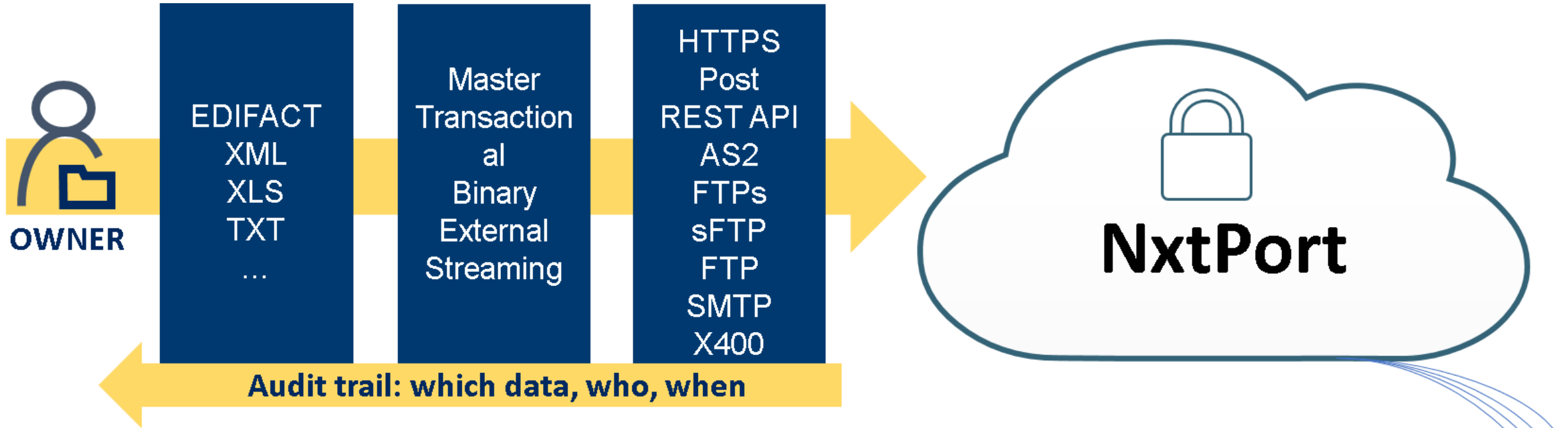
SLUISPLANNING



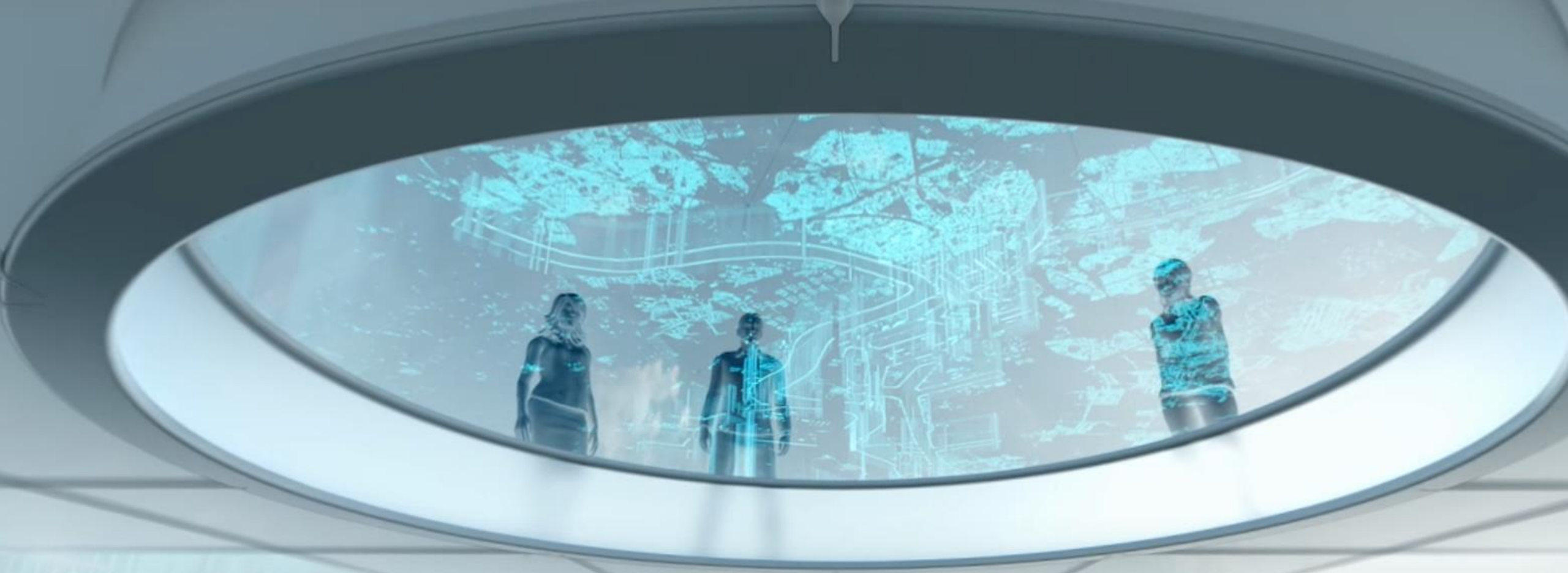
PRIKBORD

- 22-11-2019 09:00 → 30-11-2021 09:00  
STREMMING BOUDEWIJNBRUG VAN 22-11-2019 09:00 TOT 30-11-2021 09:00
- 22-01-2021 14:30 → 22-01-2022 14:30  
STREMMING VAN CAUWELAERTSLUIS VAN 22-01-2021 14:30 TOT 22-01-2022 14:30
- 01-03-2021 06:00 → 30-06-2021 22:00  
STREMMING BOUDEWIJNSLUIS VAN 01-03-2021 06:00 TOT 30-06-2021 22:00
- 02-03-2021 08:00 → 31-12-2021 18:00  
KALLOSLUIS DEUR 4 BUITEN DIENST
- 04-03-2021 14:00 → 31-12-2021 00:00  
STREMMING ROYERSLUIJ VAN 04-03-2021 14:00 TOT 31-12-2021 00:00
- 08-03-2021 16:00 → 31-12-2021 00:00  
STREMMING KANAALDOK B2 VAN 08-03-2021 16:00 TOT 31-12-2021 00:00
- 01-04-2021 08:00 → 01-07-2021 16:00  
BERENDRECHTSLUIS DEUR 1
- 27-04-2021 08:00 → 27-04-2021 16:00  
STREMMING KIELDRECHTSLUIS VAN 27-04-2021 08:00 TOT 27-04-2021 16:00
- 28-04-2021 08:00 → 28-04-2021 15:30  
STREMMING NOORDKASTEELBRUG - WEST VAN 28-04-2021 08:00 TOT 28-04-2021 15:30

- GEVAARLIJKE GOEDEREN
- GOEDERENRAPPORTERING
- REGISTERS
- TABELLEN
- ARCHIEF
- BEVEILIGING



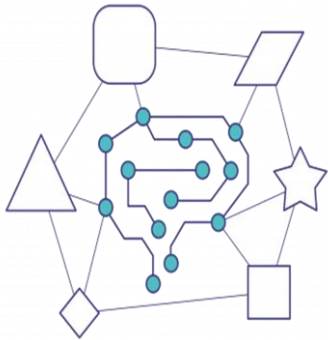




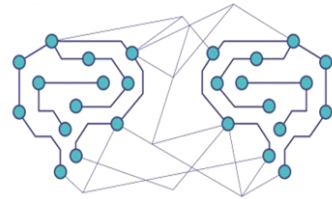
## Prescriptive analytics

# Investing in Artificial Intelligence

## All eyes on shaping the future



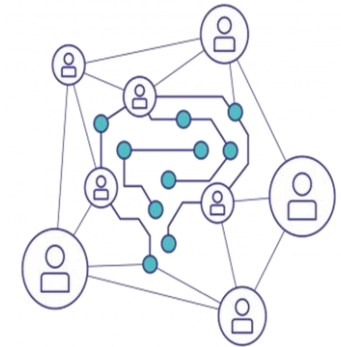
AI-Driven Data Science



Multi-agent collaborative AI



AI in the edge



Human-like AI





# DIGITAL NERVOUS SYSTEM

*sensor devices inspired by the 5 human senses*



USER: CONNECTED USER

DAILY DATA: FRI 15 / 12 / 2018  
08:43 56" TIMEZONE GMT +1  
15°C 59°F  
3M/5

AUTO-ID SYSTEM

SHIPS: 93 SEAGOING  
NOW 508 SHIPS IN PORT 38% CAPACITY  
159 MOTOR TANKSHIP  
57 MOTORSHIP  
38 CONTAINERSHIP  
22.649 SHIPS IN DATABASE

GEO-INFO SYSTEM

GEOGRAPHY: 15/25

STEIGERS DIEPTE

ACTIVE

- SLUIZEN M
- 1000 Berendrechtsluis
  - 1000 **BOUDEWIJNSLUIS**
  - 1000 Kallosluis
  - 1000 Kattendijksluis
  - 1000 Kieldrechtsluis
  - 1000 Royerssluis
  - 1000 Van Cauwelaertsluis
  - 1000 Zandvlietluis

CURRENTLY SELECTED  
**BOUDEWIJN SLUIS**  
LATITUDE 51.2786  
LONGITUDE 4.33185

MOVE CAM

CAMERA INFORMATION

NAME	
ID	0
LAT	0
LONG	0
HEIGHT	15
HOME ROT	(-37, -19, 65)

CALIBRATE  
VOD  
LIVE

# DIGITAL TWIN

*24/7 real-time view of all activities in and around the Port*



LAYERS RESET





## Contact



Want to know more, share experience, thoughts, ideas...



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