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IT INNOVATION MANAGER

DIGITAL EVOLUTION IN EURONAV

28 SEPTEMBER 2021



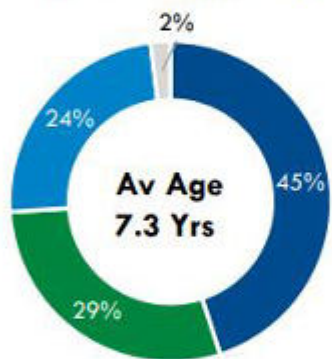
# EURONAV — WHO WE ARE

EURN  
LISTED  
EURONEXT

EURN  
LISTED  
NYSE

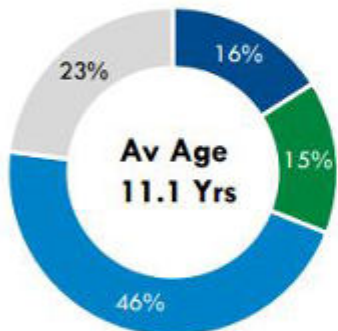
The world's largest, independent quoted crude tanker platform

46 VLCC incl. 4 N/B



■ 0-5 yrs ■ 6-10 yrs ■ 11-14 yrs ■ 15+ yrs

26 Suezmax\*



■ 0-5 yrs ■ 6-10 yrs ■ 11-14 yrs ■ 15+ yrs

International company — internationally connected



55 vessels  
managed  
inhouse

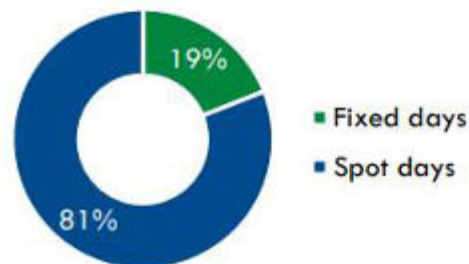
2 FSO\*



2 ULCC



Mix of time charter and spot exposure for the rest of 2020



# INNOVATION IN EURONAV

History and Vision



IoT project onboard



Inventory Management

Mobile apps



RPA

ML/AI



What's Next

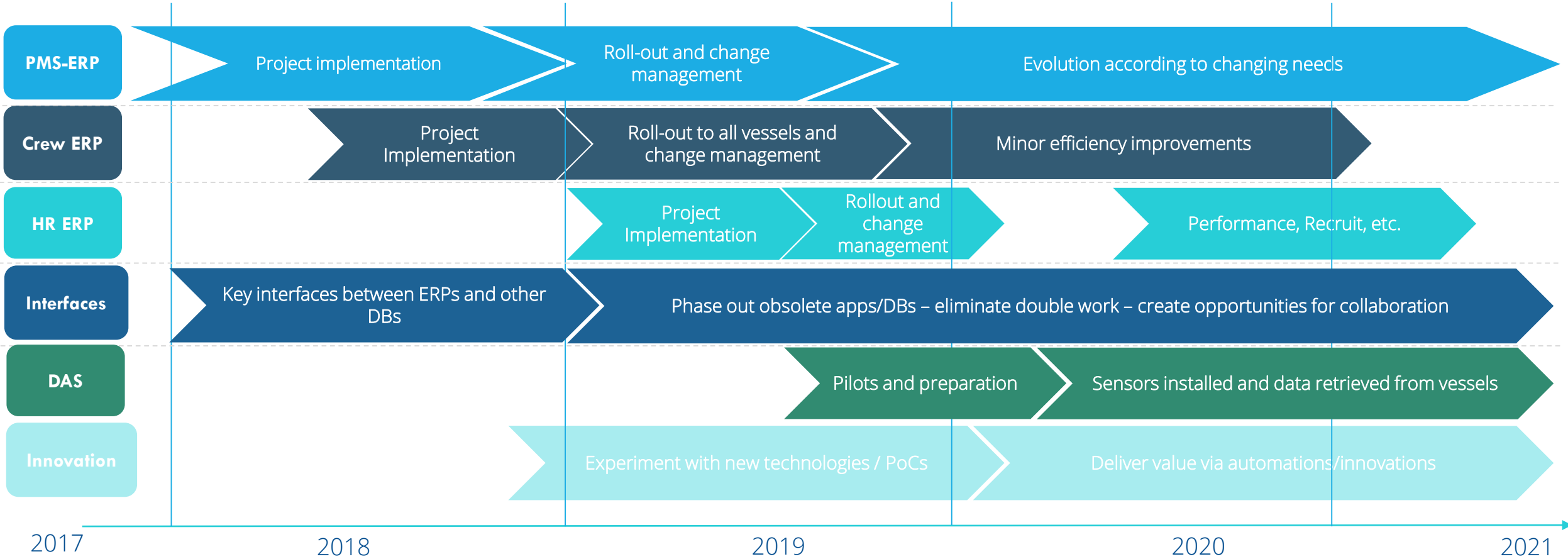


# IT INNOVATION

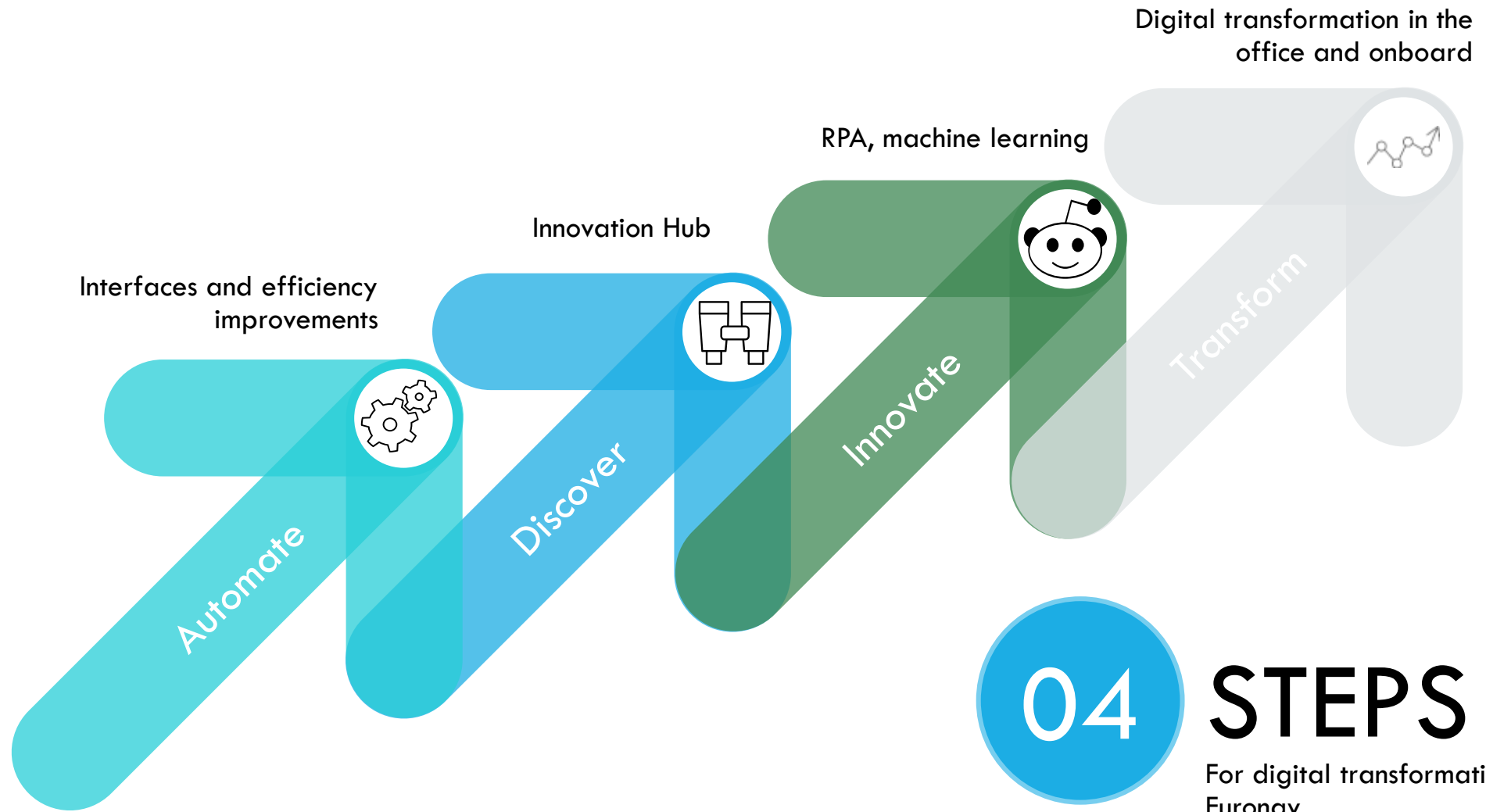
## The story so far



**Euronav is  
Innovation-ready**



# VISION FOR 2020-2022



04

## STEPS

For digital transformation in Euronav

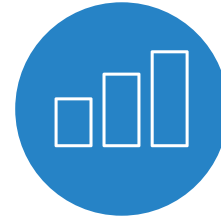
# AUTOMATE

## Day-to-day efficiency improvements



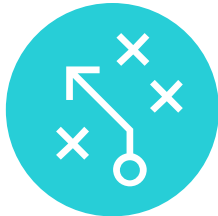
### Eliminate double entry

e.g. vessel particulars, Vetting/PSC, Certificates, etc.



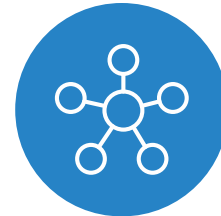
### Create opportunities for improved collaboration

Data available in DWH for combining in PowerBI



### Improve efficiency

e.g. automate the demand planning procedure



### Mid-size projects

Phase out legacy systems  
Matching invoices in ERP/Crew

# DISCOVER — INNOVATION WITHIN

Explore opportunities from new technologies - Cultivate the innovation environment



## Cross-departmental meetings

Bring together people from different departments



## Training and awareness

Spread the word – explain the terms – make people comfortable with emerging technologies



## Foster collaboration

Allow room for “crazy” ideas

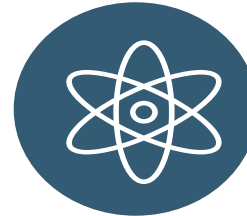
# RPA AND ML

Quick wins (proven ROI) and long-term outlook



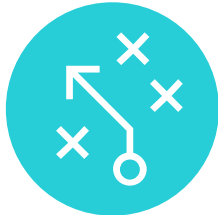
**Robots carry out repetitive tasks**

e.g. AWB update in ERP



**NLP and AI**

Text recognition algorithms, e.g. search in email archive of Technical dept to instantly find the solution to a similar problem in the past



**Robots streamline processes**

e.g. automation of lub-oil monitoring and ordering for the vessels



**INNOVATION ONBOARD**





# IOT FOR REAL TIME MONITORING

## Sensor data management

- Deploy the hardware (PLC, connectors, cabling, configuration, 3<sup>rd</sup>-party modules)
- Develop a fleet data quality management system
- Establish a team for monitoring/maintaining the high quality of sensor data
- Setup Azure data lake and ensure access is possible for all internal/external parties
  - Performant
  - Future-proof

# MOBILE APPLICATIONS ONBOARD

Inspection



Technical and HSQE inspections

PO Reception  
Custom Euronav app



Scan to record delivery of goods

Jobs and stock



Scan to record spares consumption on jobs  
Scan to take stock



# INVENTORY MANAGEMENT

## Scanners/Printers

### Current

- Rugged mobile QR code scanners => **Reception of spares**
- Label printers => **QR code labels**

### Next steps

- Scan QR code to record **Consumption on Jobs**
- Scan QR code to **take stock**

### ➤ ROI:

- Improved process for Inventory Management -> less margin for slippage
- FTE savings onboard
- Proper consumption of spares in jobs -> demand planning
- Estimated value of unaccounted stock per vessel ranges between \$2,000 and \$50,000

**INNOVATION IN THE OFFICE**



A background image showing two darts on a target board. The darts are white with silver barrels and are positioned on the left side of the slide. The target board is white with concentric circles. The right side of the slide is a white diagonal shape that contains the text.

# ROBOTICS PROCESS AUTOMATION

## RPA

- Identify repetitive tasks and automate them with RPA
- Departments:
  - Procurement
  - Accounting
  - Crew
- Systems
  - ERP
  - Internal/External websites

# RPA TIMELINE

First project launched  
with Accounting

Jun2019

Jun2020

Invoice validation **live**

Sep2020

Lub-oil monitoring **live**



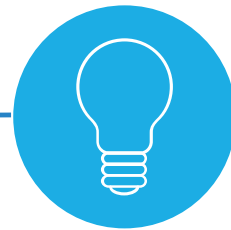
early 2019

First analysis and vendor  
search



April 2020

Discovery workshops with  
Procurement



Jul2020

AWB Update **live**



Nov2020

Next 2 processes **live**



# EMAIL SEARCH ENGINE

ML / AI

## ➤ ROI:

- FTE savings in Technical Dept
- Improved maintenance decisions

❑ Target is to unify searching between

- Enterprise Vault
- O365 archive
- Current folder content

❑ Email Search Engine

❑ Use natural language processing and machine learning algorithms to:

➤ Identify the specific email providing resolution to the issue

*Can later be used for similar data mining purposes by other departments*



WHAT'S NEXT



# IDEAS

## PoCs

- **eLogbooks**
  - Flag approval pending
- **Big Data exploitation**
  - Use modern tools (AI, ML) to exploit sensor data, e.g. predictive maintenance
- **Port Planning**
  - Eliminate emails, instant info to all
- **AR**
  - Enhance user experience using AR



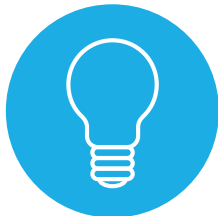
# PLUG-N-PLAY ANTWERP – INNOVATION HUB



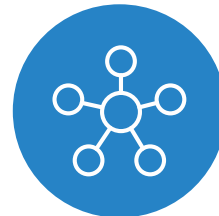
**Deal flows**  
Vendors already running pilots



**Oct 6<sup>th</sup> Launch event**  
Focus on areas of interest



**Startups (2<sup>nd</sup> phase)**



**Plug-n-play conferences**



THANK YOU

EURONAV INNOVATION