

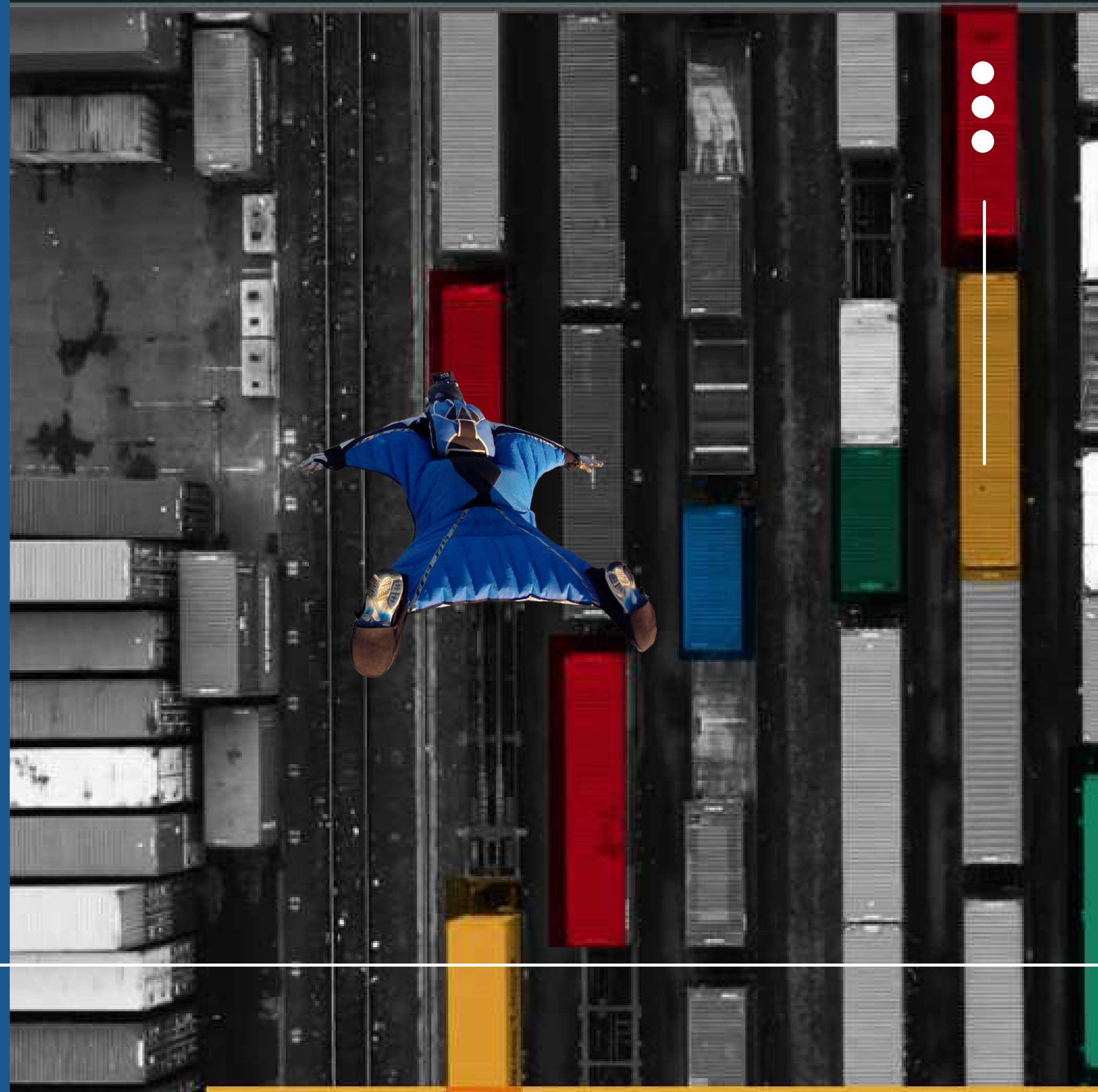


DSP Data and System Planning

We innovate Ports and
Terminals industry
since 1986

DSP. Change the perspective

www.dsp.team



DSP - swiss headquarter with bases all over the world



36 +
years of experience

350 +
projects

45 +
Industry experts



Past
present
future

DSP becomes independent from the Contship Group and focus on implementation of advanced and innovative terminal operational systems

1998



Project leader of IT systems deployment at the new EUROGATE greenfield terminal in Tangier, Morocco.
DSP is a complete system integrator for marine terminals

2008

NAVIS N4 extension certification
Launch of DATAVIEW a new Business Intelligence software



2016



DSP LAB establishment



Energy Management System

2020



DSP America establishment



Master Terminal representative

2022

2023



1986

DSP was founded by Dr. Angelo Ravano, as project leader of the development of Contship Line Information system



2007

First worldwide certified partner of NAVIS.



2014

AUTOMATION
DSP has been involved in terminal automation projects:
Business Process Systems Integrations
Live Equipment Testing
Operations support



2019

Launch of DATAREBOX Octopi Representative



2021

DSP Talumis establishment to develop GEMINI
Member of TIC 4.0



DSP Team

DSP counts more than 40 experts operating worldwide plus a network of trusted partners. Our team network is based in various regions and easily covers all the world.



Management



Administration



Sales & Marketing



Software Engineering



Professional Services



Professional Services



DSP LAB



DSP TALUMIS



DSP AMERICA

DSP speaks 13 languages: English, German, French, Spanish, Italian, Greek, Dutch, Arabic, Urdu, Sinhalese, Hindi, Tamil, Telugu.

Our clients

Over the last 36 years, we have supported customers all over the world on more than 350 tos projects and more.



DSP global market

We are a worldwide company partnering with international terminal operators

AMERICAS

APMT Lazaro Cardenas, Mexico
APMT Port Elisabeth, USA
APMT Pier 400, USA
Baltimore Terminal, USA
CPW Caucedo, Dominican Republic
DPW Prince Rupert, Canada
DPW Vancouver, Canada
DTR Seattle, USA
Ecoporto Santos, Brazil
Everport LA, USA
ICTSI Tecplata, Buenos Aires, Argentina
ICTSI Manzanillo, Mexico
MGTP Montréal Gateway, Canada
NCSPA North Carolina State Port Authority
PAC Chesapeake, USA
Packers Philadelphia, USA
Pasha Hawaii
Port of Baltimore, USA
TCP, Brazil
Termont, Montreal, Canada
TTI FEL, Long Beach, USA
Trapac, USA
Tropical Shipping, USA
WBCT Los Angeles, USA

EUROPE

ACT Burgas, Bulgaria
AGCT Rijeka, Croatia
APMT Maasvlakte II, The Netherlands
APMT Vado, Italy
CICT Cagliari, Italy
Contrepair Group, Italy
CSP, Valencia, Spain
DCT Gdansk, Poland
DPW Antwerp Gateway, Belgium
DPW Constanta, Romania
DPW Eurofos, France
DPW Limassol, Cipro
DPW London Gateway, UK
DPW Southampton, UK
ECT, Rotterdam, The Netherlands
Eurogate CTB Bremerhaven, Germany
Eurogate CTW Wilhelmshaven, Germany
GMP Le Havre, France
IMT Genova, Italy
Kumport, Turkey
LSCT La Spezia, Italy
Malta Free Port Terminals, Malta
MCT Gioia Tauro, Italy
MDHC Liverpool, UK
NTB Bremerhaven, Germany
OPCSA, Las Palmas Gran Canaria
PD Ports – Teesport, UK
Peelports, Liverpool, UK
PSA Antwerp, Belgium
PPA Piraeus Porth Authority, Greece
Port of Borusan, Turkey
Port of Koper, Slovenia
RWG Rotterdam, The Netherlands
SECH Southern European Container Hub, Italy
SoGeMar, Milan, Italy
Terminal Intermodale Venezia, Italy
TIL, Switzerland
Trieste Marine Terminal, Italy
TCR, Ravenna
Yilport Gezbe, Turkey

AFRICA

APMT Tangier Med 2, Morocco
APMT Apapa, Nigeria
APMT Luanda, Angola
APMT Onne, Nigeria
ARISE Mauritania
Bolloré, Congo
Bollorè, Abidjan
Doraleh Container Terminal, Djibouti
EMAA, Ethiopia
Eurogate Tangier, Morocco
Mayotte Channel Gateway, Mayotte
NAMport, Walvis Bay, Namibia
Port de la Réunion, Réunion
STAM, Tunisia
Transnet Durban DCT, South Africa

MIDDLE EAST

ADT Khalifa Port Abu Dhabi, UAE
APMT Bahrein, Bahrein
DPW Jebel Ali TC1 & TC2, UAE
DPW Jebel Ali, Global Office, UAE
DPW Jeddah, Saudi Arabia
GSCC Jeddah, Saudi Arabia
HPA Haifa, Israel
QTerminals, Qatar

ASIA and OCEANIA

APMT POTI, Georgia
DPW AT, Manila, The Philippines
DCB Dachan Bay Terminals, China
KICT Karachi, Pakistan
MICT Manila, The Philippines
MTL Hong Kong, China
Myanmar Industrial Port, Myanmar
POAL Ports of Auckland, New Zealand
SLPA, Colombo, Sri Lanka
Tan Cang-Cat Lai Terminal, Vietnam
Westports, Kuala Lumpur, Malaysia

DSP and NAVIS

DSP is NAVIS service partner since 2007



- 2022 – MASTER TERMINAL Channel Partner
- 2022 – 18 people N4 certified
- 2021 – NAVIS training partner
- 2019 – OCTOPI channel partner
- 2018 – NAVIS Project Lead Implementation Service Partner
- 2016 – NAVIS N4 Extensions Certification Program
- 2014 – NAVIS Support Partner
- 2007 – NAVIS Professional Service implementation partner

Our services portfolio



Analysis and Design

*Project Management
IT and OPS Auditing
Business Process Mapping
Vendor Assessment
Change Management
Revenue and ROI Analysis
Tender requirements
definition*



TOS implementation and upgrade support

*Project Management
Analysis
Configuration
Data Migration
Customization
Integration
Reporting
Testing
Training
Go Live Support
Post Go Live Assistance
Support and Administration*



Optimization

*Project Management
IT and OPS Auditing
Business Process Mapping
Change Management
TOS tuning
Planning and Execution
Strategies*



Automation and Digitalization

*Project Management
Simulation
Automation architecture
Reporting
EDI
Interfaces and Integration
Live Equipment Testing
Agile Software
Development*

DSP Products

A magazine is a periodical publication, which can either be printed or published electronically. It is issued regularly, usually every week or every month, and it contains a variety of content.

DATAVIEW
business
intelligence



GEMINI
digital twin



DATARADIO
radio channel
pooling



DATAREBOX
m&r



DATABILL
billing



Products powered by

We have other interesting products in our portfolio
powered by our partners

Green+
by DBA



N4Pic
by ITL



Test N4
by ITL



Octopi
by NAVIS



master
terminal
by NAVIS



Analysis and design

- Assessment of the current procedures and strategies to enhance overall operations.
- Evaluation of working procedures and ROI evaluation.
- State of the art surveying, system tuning and optimisation.
- Proven experience of project management in terminal business and problem solving.
- DSP Project Managers are PRINCE2 certified.
- In case of public tender, DSP helps with the tender requirements definitions.



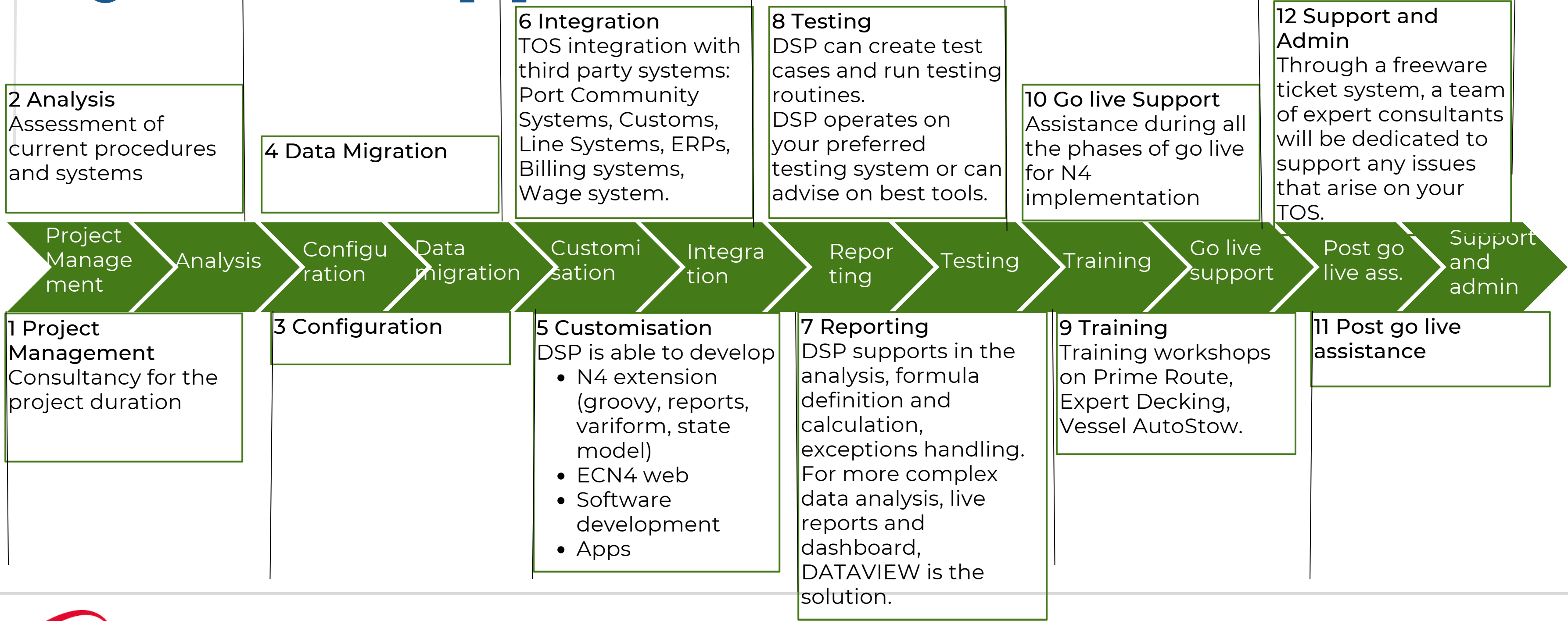
Terminal Operating System support

1. Project Management:
2. Analysis
3. Configuration
4. Data Migration
5. Customisation
6. Integration
7. Reporting
8. Testing
9. Training
10. Go Live support
11. Post go Live assistance
12. Support and Administration



360 degree services through the entire process of TOS implementation

Terminal Operating System support



● TOS Assistance

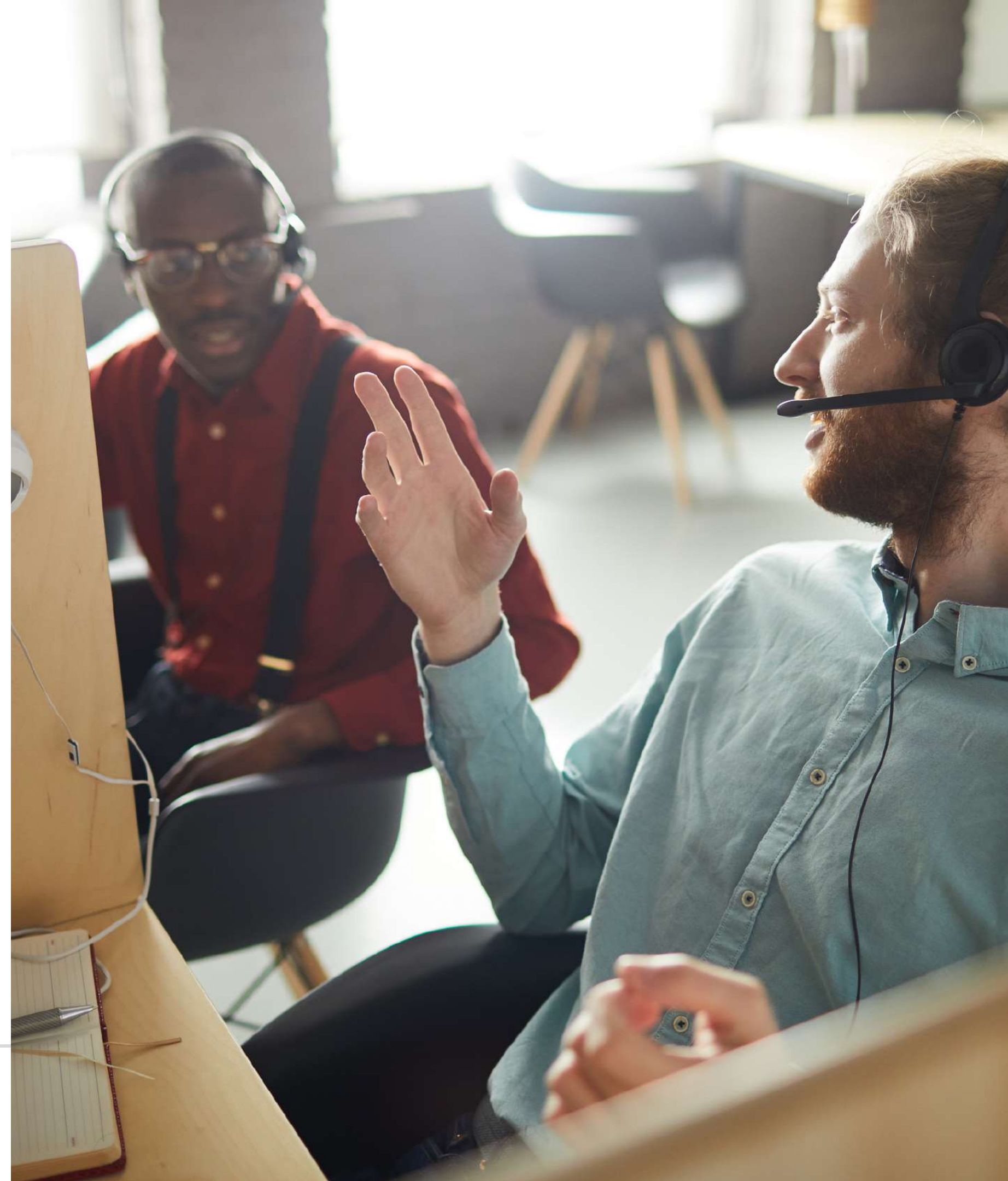
● 24X7 support

To ensure maximum flexibility and optimal integration with your organisation, DSP will put at your disposal a ticket system to request any support from DSP.

Service Level Agreement is tailored on your needs.

Scope of the assistance support includes:

- Issue assessment
- Question: how do I?
- Best practice and recommendations
- Enhancement request and high-level estimate (HLE)
- Existing code external support (Groovy support)
- EDI support
- Will participate in RCA (Root Cause Analysis)
- Escalation matrix
- H24/7 helpdesk is available to support your operations



N4 customization

DSP is part of the Navis N4 Extensions Certification Program and working with Navis' technical services team, is able to develop, deliver and maintain groovy code.

With this important certification, DSP is able to provide full support on TOS N4: system integration, implementation, advanced configuration, go-live and post go-live services.

DSP Solution

- N4 Extensions – groovy, reports, variform, state model
- ECN4 web
- Software development
- Apps
- The groovy store - where readymade and easy self-deployable groovy extensions are available for customer to use at a fixed price. It's a shopping cart of extension components where customers can explore and order/buy the extension to use in their terminals. [<http://idealtechlabs.com/navisstore/>]



```
def yoke = new GYoke(vertx, container)
yoke.engine new GroovyTemplateEngine()
yoke.use(route
yoke.use n "web" 60 * 1000, true, false)
request
request
request.r
request.res (404 - Not Found)
yoke.listen(8080)
```

Optimization

Optimise your process and systems to maximise your investments and performances

DSP offers a holistic solution to optimisation, and with a practical approach will support you in understanding the product features and how to set algorithms and process to maximise your investment and performance.

DSP will give you the key elements to support management to take the right decision.



Automation

Automation gurus at your services

Following the Automation Revolution, DSP established a dedicated specialised team of terminal automation services and becomes your automation service partner.

Thanks to a unique experience acquired on actual projects, DSP is one of the few consulting firms able to respond to the most challenging demands of automation.

DSP Solution

- Solution design
- Systems integration design
- Functional requirements
- Customer/vendor interaction
- KPI definition
- System configuration and implementation
- Troubleshooting and log analysis
- Testing and test management
- Case management
- Training
- Project management
- EDI configuration and mapping
- Billing configuration and customisation

DSP expertise

- N4 Automation-A4-Shuttle carrier and Auto-SC automation
- TBA Controls and Monitor
- Kalmar TLS and Emulation tool
- ABB
- Siemens
- MTS
- Camco



Terminal Automation projects

DSP has been involved since 2012 in various greenfield and brownfield Automation projects supporting both the **TERMINAL AUTOMATION** and the **PROCESS AUTOMATION** activities.

Because of the automation solution complexity and the pioneer approach to the problem we know that each terminal is a unique case study with different solutions and architecture.

DSP has been involved in many Terminal Automation projects worldwide, covering multiple roles; business analysis, design, testing, Go live and post Go live support.

- EUROGATE & APMT Auto-SC Pilot project, Wilhelmshaven, Germany, 2018-2019
- APMT Tangier-Med 2, Tangier, Morocco, 2018-2019
- APMT Vado, Italy, 2018-2019
- APMT MVII, Rotterdam, The Netherlands, 2013-2018
- RWG Rotterdam World Gateway, Rotterdam, The Netherlands, 2016-2017
- APMT Lazaro Cardenas, Mexico, 2013-2017
- DPW London Gateway, United Kingdom, 2017
- DPW Antwerp, Belgium, 2017
- ADT Khalifa Port Container Terminal, Abu Dhabi, UAE, 2012



Process Automation projects

DSP worked with its customers on a wide range of process automation services, including automated yard inventory, automated job stepping, automated gantry steering, OCR and Gate Automation Systems (GOS)

- MGTP Montreal, Canada 2018-2019
- APM Terminals Port Elizabeth, USA, 2018-2019
- DTR Terminal, Seattle USA 2018
- Malta Free Port Terminals, 2018
- Everport LA Long Beach, USA 2018
- APM Terminals Lazaro Cardenas, Mexico, 2013-2017
- Baltimore, USA 2017
- KPI Papua Indonesia, 2017
- APM Terminals Bahrain, 2016
- APMT Apapa, 2016
- SOGESTER, Luanda, 2016
- APM Terminals Onne, Nigeria 2016
- Tan Cang-Cat Lai terminal in Ho Chi Minh City, 2014
- PD Ports Teesport (Middlesbrough, UK), 2019



Digitalization

BILLING

DSP team has a unique experience on TOS billing systems and in billing process in general. DSP developed its own billing and tariff management product DATABILL.

Billing, Reporting and TOS are strictly connected: sometimes a TOS event should be properly configured or customised through field development, to ensure the transition of the right information to the billing systems.

EDI

DSP consultants can help in mapping the inbound and outbound messaging, configuring your business and posting rules that will declare which information shall be reliable and used in operations during each container visit lifecycle.

DSP developers can even help in customised messaging or developing applications to handle EDI files processing, warnings, and corrections.

The EDI expert is a senior professional, in DSP we do have such seniority.





DATAVIEW

Business intelligence
solution for ports and
terminals

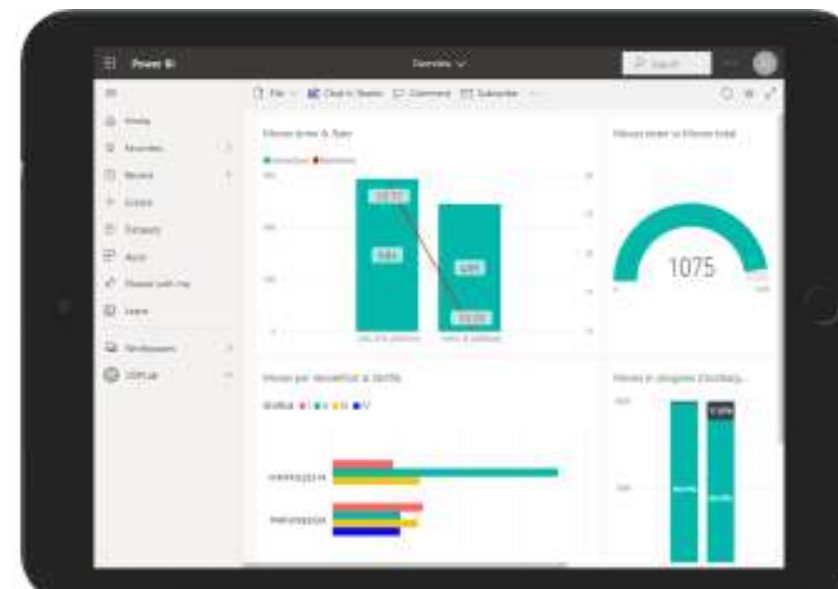
Any data,
anywhere,
all in one view.



DATAVIEW

General Features

- A reliable unique source of data and KPI within the organisation.
- A flexible tool able to progress together with your business.
- Transparent formula of KPI calculation.
- Easy and secure access from any mobile devices.
- Dynamic reporting capability in the hands of the end user.
- Live performance indicators.
- Operational and financial figures to transform data into decision-making material and support what-if analysis for commercial decisions.



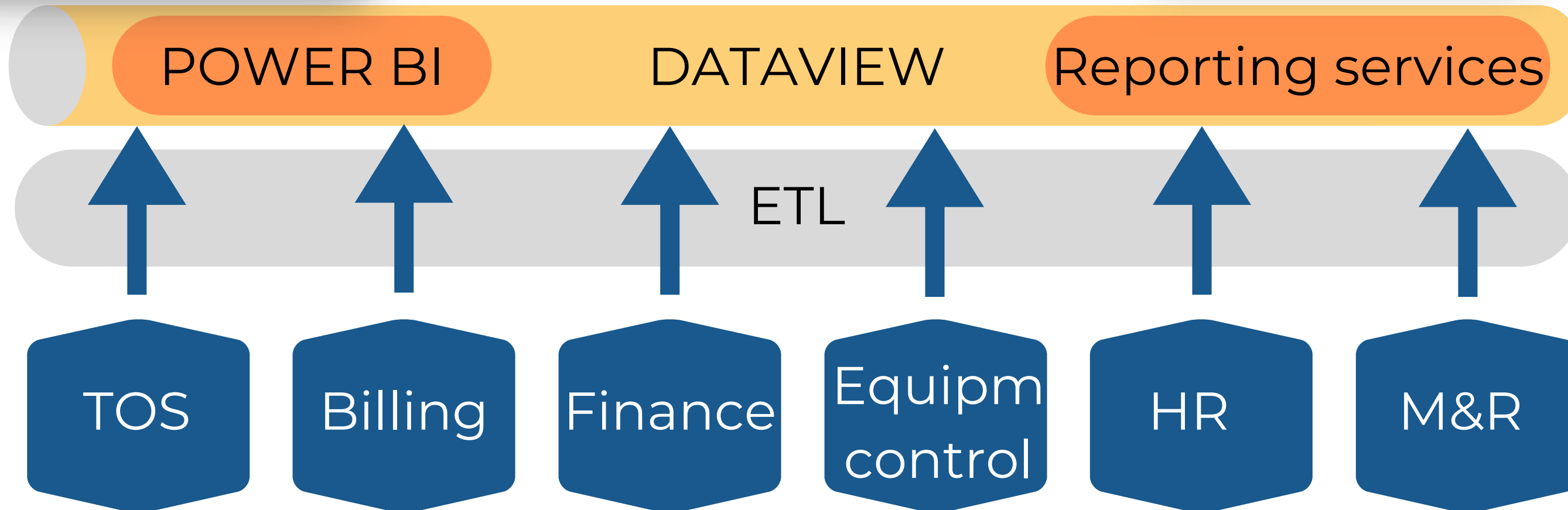


DATAVIEW

Functional Architecture



A screenshot of a Reporting services table displaying a list of data rows with columns for various attributes. The table includes headers and multiple rows of data, likely representing a cost breakdown.





DATAVIEW Architecture Overview

Replica DBs, DWH and PBI data connectors

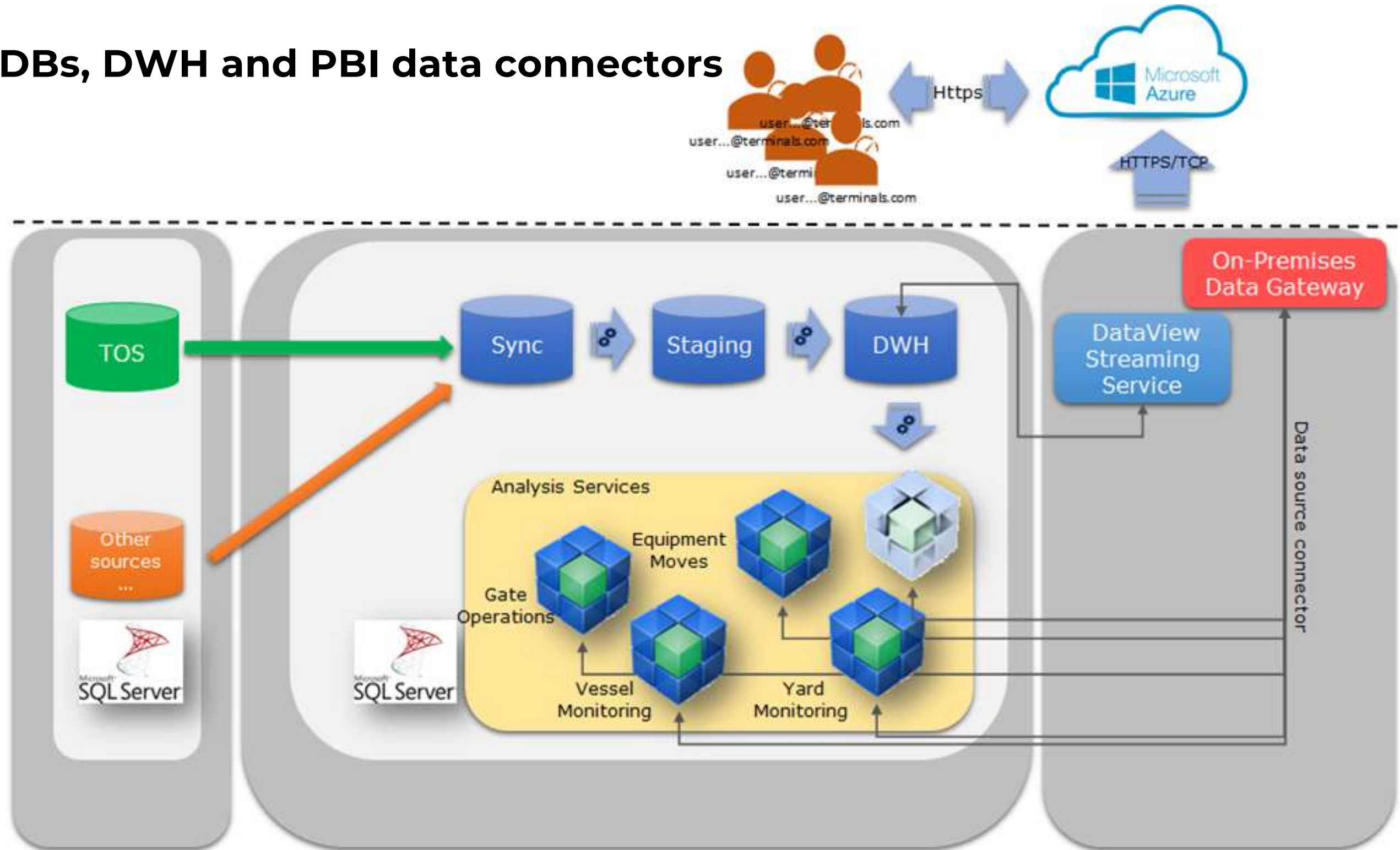


TOS

ETL process

Tabular Models

Data Gateway
Streaming
Service





DATAVIEW

trusted by multiple sites





GEMINI

Gemini supports terminal operators in their daily operational decisions

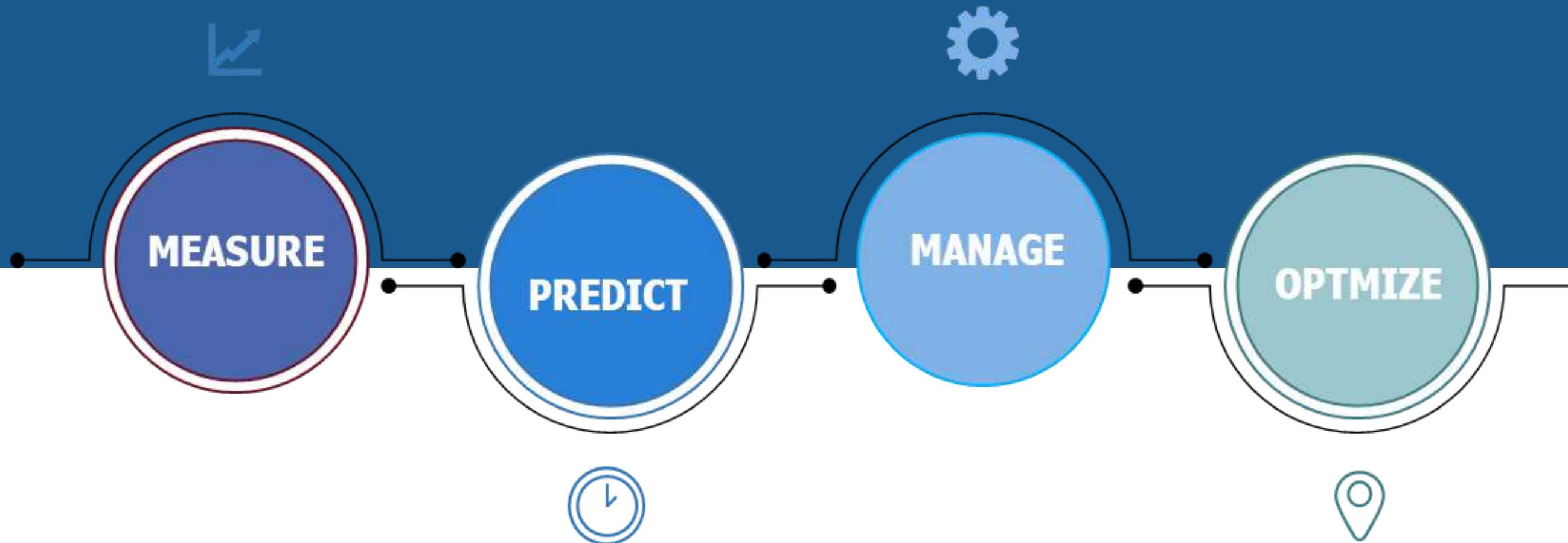
The Digital Twin for your terminal



Goals

GEMINI is a personal platform bespoke on the characteristic of every single terminal organization. GEMINI is a visionary cloud or on-premise application able to mirror decisions, strategies and show workers practice during real operations.

GEMINI allows you to:





Modules

GEMINI combines operational, tactical and strategic optimization through: operational databases (TOS), predictive analysis, simulation, scenario management, emulation, virtual commissioning

PREDICTIVE ANALISYS

Operations and Plananing

Evaluation of current plans/schedules and «What if» scenario to identify ways to improve performance and increase profit.

EMULATION

Operations and IT

Digital copy of the TOS to optimise your operations.

SIMULATION

Concept Design

Evaluation of greenfields or how a structured change can affect the business scenario.

3D VIEWS

Operations and safety

Visualization of the terminal and operations.

VIRTUAL COMMISSIONING

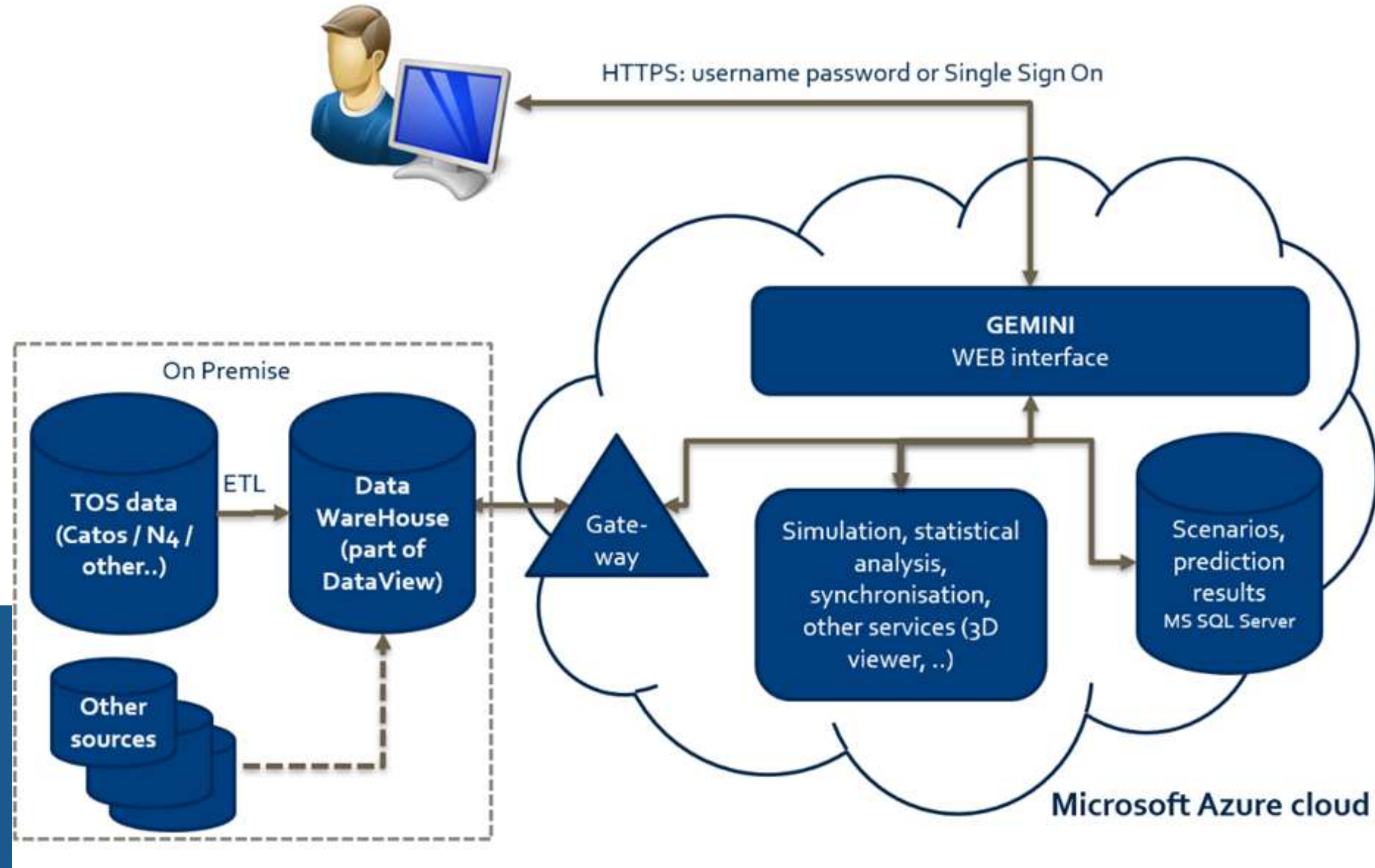
Engineering and safety

Cranes electronic systems commissioning

Powered by **controlLab**



ARCHITECTURE





Customer Story

DP World

GEMINI is used by DP World as an online tool for yard planner training.

GEMINI allows the trainees play with a yard in way they could never do in real life.

GEMINI replicates two terminal sites of DP World.



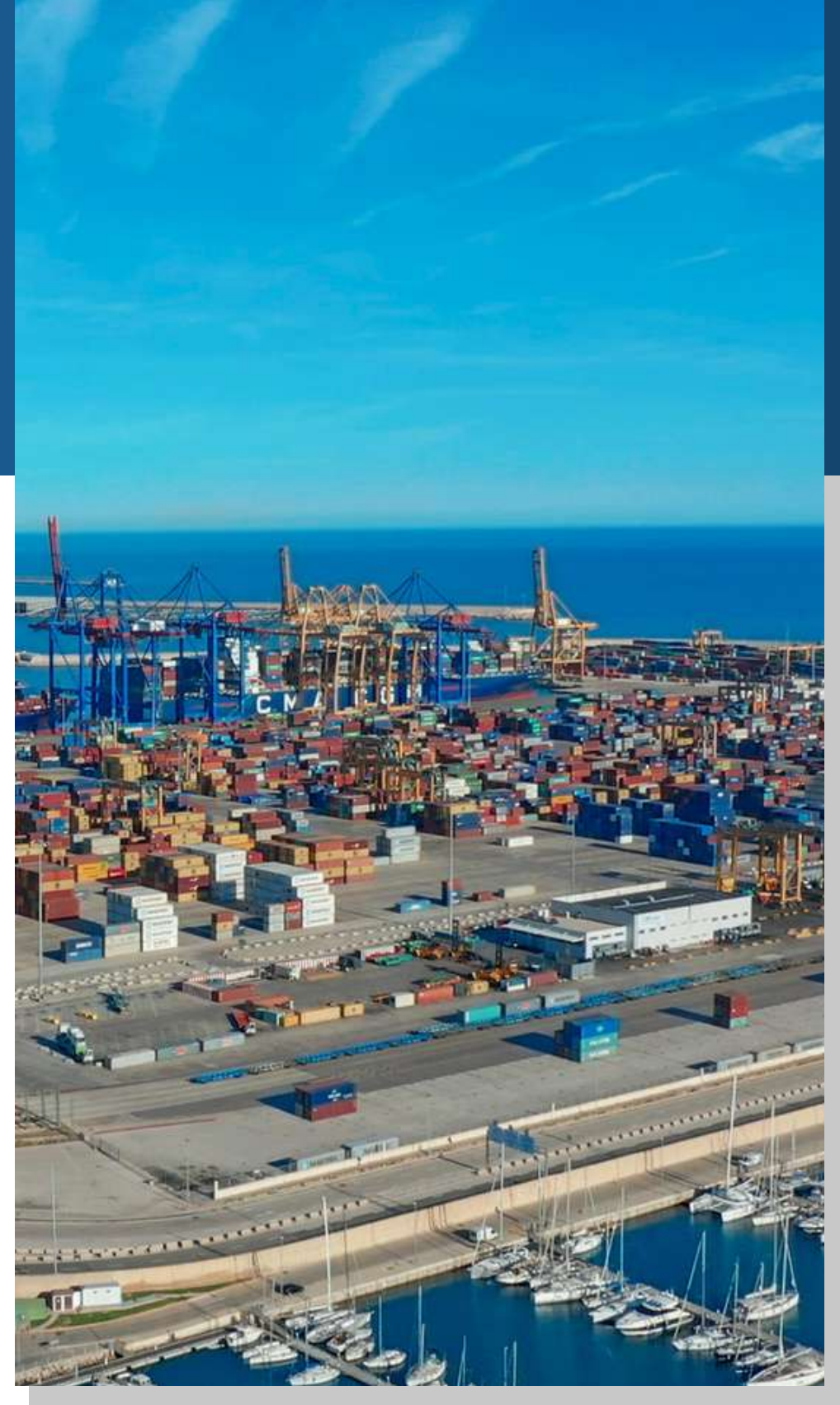


Customer Story

CSP Valencia

Cosco Shipping Ports (Spain) Valencia Terminal is at the side of DSP TALUMIS since the beginning of GEMINI development; a partner who immediately believed in the project and actively cooperate to build the digital twin.

Gemini Predictive Analysis is now in production and supports daily the operations decision making in resource assignments and analysis results.





DATARADIO

The automated solution to
synchronize radio channels
and work instructions

Required Technology

- Digital Radio System
- Pooling dispatching system for Trucks or Straddle Carriers



DATAREBOX



**Container maintenance and
repair application**



DATAREBOX

General Features

- Automatic notification of container to be repaired from terminal TOS and insert of a new container in DATAREBOX database
- Inspection of physical unit using mobile device (OCR and picture) to register damage codes and locations for multiple components (IICL codes pre-loaded)
- Management of all container information in one view (container data, estimate, damages...)
- Standard and customised damage codes
- Reefer spare parts management
- Finalise the estimate of repair with material and hours cost and request for authorisation via EDI (WESTIM), API or custom files
- Estimates and Repairs history tracker
- Pricing list management
- Automatic release of container to production and grade update on the terminal TOS
- Generation of Billing data

DATAREBOX

Retrieved damaged container from TOS

Inspection via mobile device

Estimate finalisation and request for authorisation

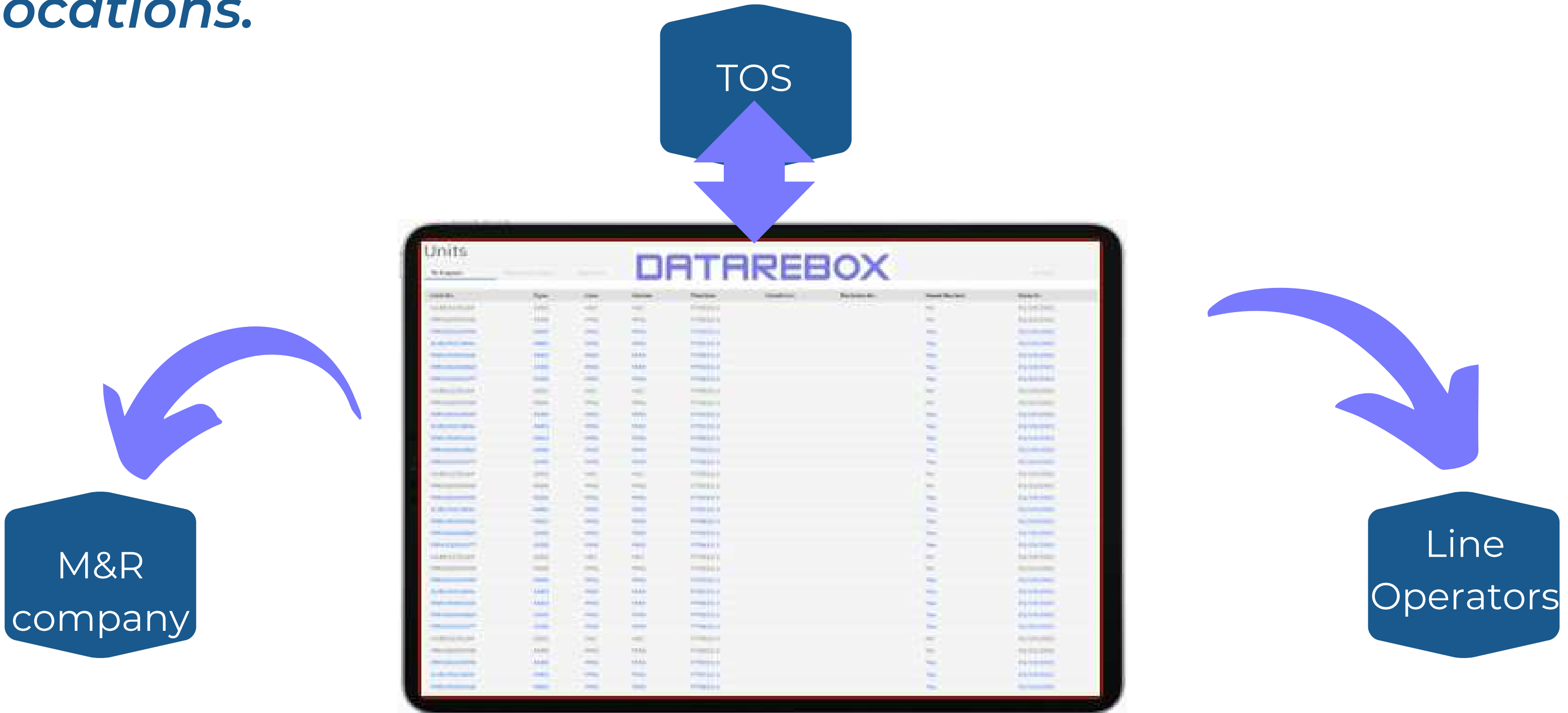
Repair & Maintenance

Billing data



DATAREBOX

DATAREBOX has a safe connection to your terminal TOS and easy access from remote multiple terminal locations.





DATAREBOX

General Features

- International and Localised: speaks your language
- Anywhere and everywhere: the software adapts to any browser and any device
- Always updated: upgrade without any down-time for the user
- Safe and secure: built in the cloud and housed in high security servers
- User Group Level Security: users can be grouped by functional departments to simplify security maintenance
- Small footprint: basic 3G connection is sufficient
- User friendly: easy to use and an intuitive user interface reducing training and deployment time
- Standardised implementation: live in a few days, works in parallel with your current procedures and systems (onboarding)
- Flexible Process: no constraints to handle your exceptions
- Built in reports: default reports available from day one





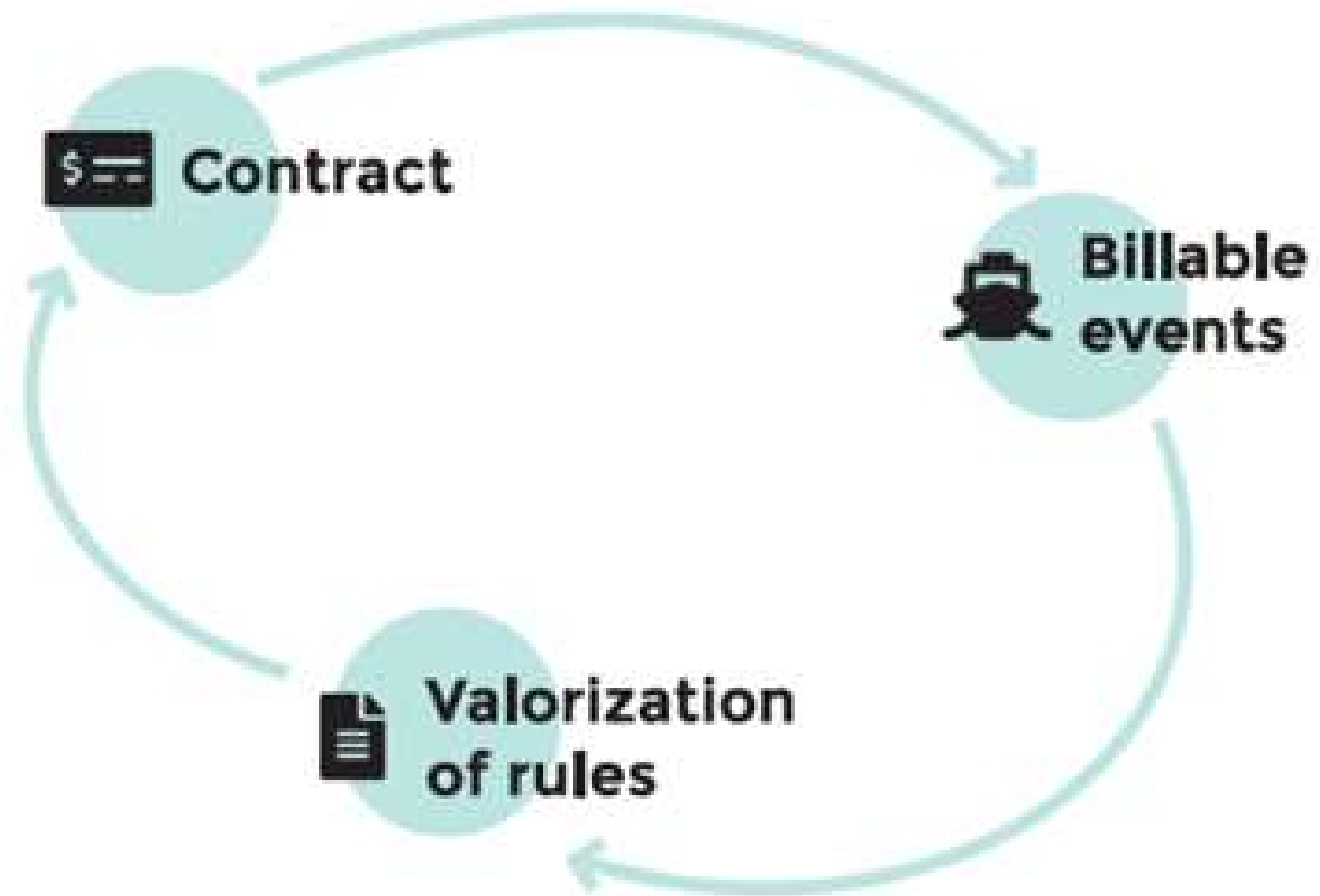
DATABILL

The billing system solution designed for the needs of ports and terminals

With DATABILL the terminal can build its own contract structure, track the sales process storing contracts, proposals and amendments.

You can archive all your commercial contacts and link them to billing instructions.

You can structure the detailed tariff framework by billable events.



DATABILL

Key features

- Pro-forma invoice
- Automatic/manual invoices of Vessel operations, including overtime and common costs
- Automatic/manual Storage charges
- Automatic/manual Terminal Ancillaries Services
- Credit Notes
- UNI/EDIFACT invoices
- Multi-facility (multiple terminals of same operator)
- Interfaced to any Terminal Operations System (TOS) and to any accounting system (ERP)



N4 Pic

Powered by Ideal Tech Lab

N4PIC is a software tool to address the challenges faced during production environment configuration for major releases and upgrades of Navis N4/A4.

N4PIC helps to automate several N4 Post configuration steps for N4 application, N4 environment, Database and XPS.

N4PIC can reduce the downtime drastically during an upgrade. It can be set to run many times producing consistent and accurate configuration changes every time on any number of clusters, saves on testing time.



Test N4

Powered by Ideal Tech Lab

A functional Test Automation tool designed to address the challenges faced during the testing phase of production environment for major releases and upgrades of NAVIS N4.

It is built on an In-House data driven Automation Framework (Unified Automation Framework) which is based on Selenium platform, this provides the Test Data to be independent and decoupled from the Test scripts.

TESTN4 is integrated with STAF/STAX and can also be integrated with third party applications through REST and SOAP. It can also be used as a Load Testing tool with multithreading support.

It provides comprehensive Test Execution Reports which can be directly emailed to the respective teams after each test execution.



Green+

Powered by DBA Group

A web platform that allows you to measure, monitor and analyse the energy performance and environmental parameters of any infrastructure, offering concrete decision support.

This forecasting modelling platform, developed according to the paradigms of IoT, Big Data and machine learning, allows assessing environmental impact. It is based on use and integration of data collected by a distributed and heterogeneous network of environmental sensors and sophisticated forecasting models created by AI technologies.



Green+

Powered by DBA Group

ANALYSIS

Process analysis

Technical inspection

DESIGN

Analysis of plant diagrams

Choice of meters and communication protocols

CONFIGURATION

Hardware supply and installation

Hardware configuration to send data

Software configuration for data reception

Data storage and portal visualisation

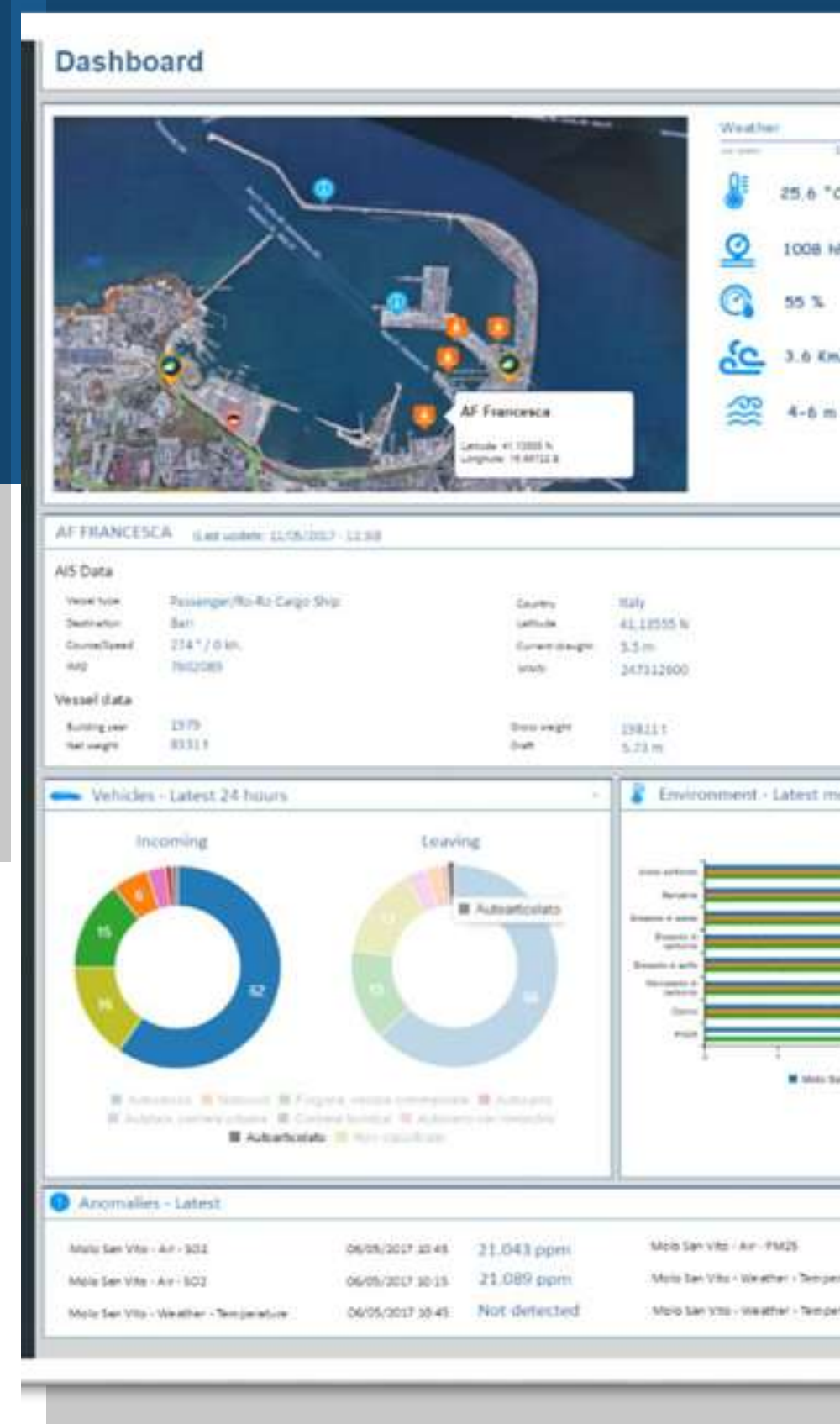
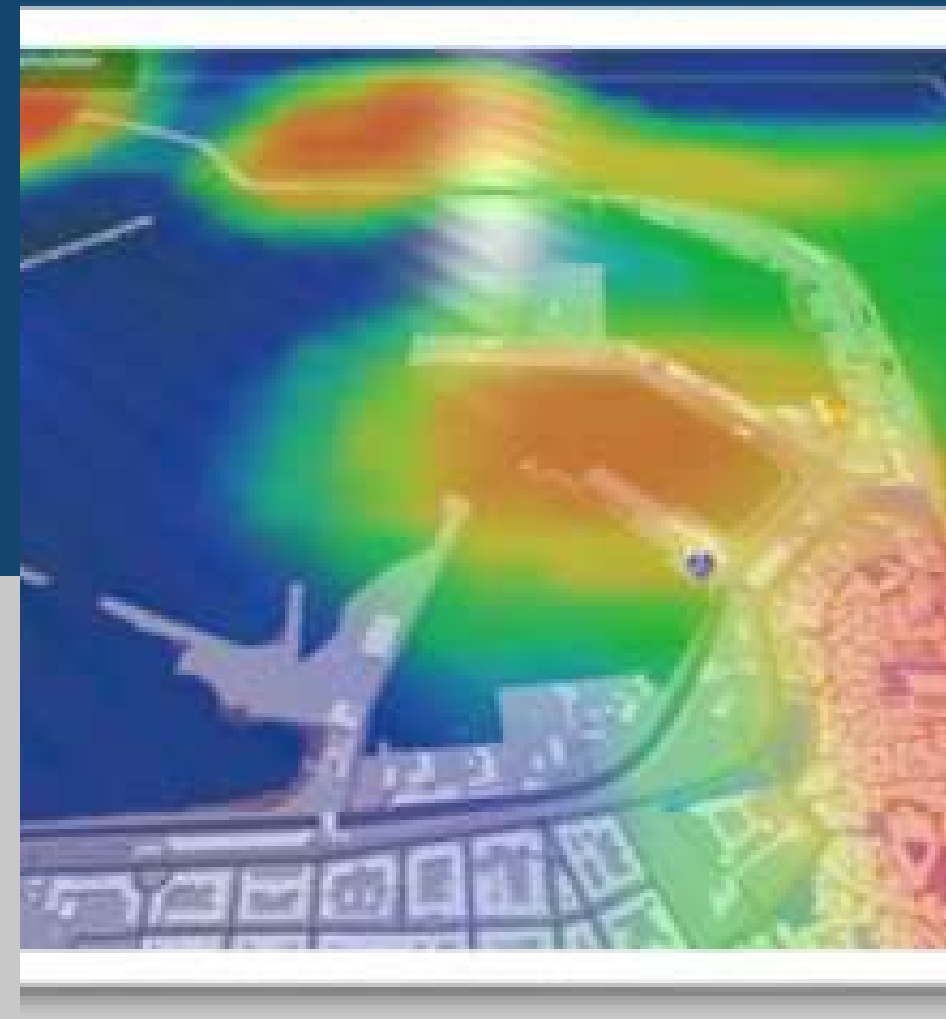
CONSULTATION

Energy consulting for data analysis and interpretation

IMPROVEMENT

Improvement and/or warning proposal

Design and implementation of efficiency measures





Octopi

Powered by NAVIS

OCTOPI TOS FEATURES

- EDI exchange
- Gate processing
- General cargo capabilities
- Yard management
- Vessel planning and critical reporting
- Invoicing functions

TOS for small and medium terminals



master terminal

Powered by NAVIS

The terminal operating system for mixed cargo ports

master terminal has solutions for marine, river, inland and intermodal terminals, and supports full intermodal capability.

Customer Story: Ethiopia Trade Logistics Project

The Ethiopian Maritime Affairs Authority (EMAA) has asked DSP to perform the ICT Analysis & Facilities and Infrastructure Design and to define the requirements of Terminal Operating System, electronic gate pass system and integration platforms of ESLSE to transform Modjo Dry Port as the Largest & Best Green Logistics Hub in Africa by 2025.

The DSP project team was composed of experts on TOS, IT architectures and systems integration platforms.



Tender requirements definition

Analysis and Design

Customer Story: DPW Prince Rupert

DSP team has been involved since the beginning in the project and led the terminal through the transition by providing project management, test management and business analysis services.

The Project Manager was responsible for development of the Project Plan and day-to-day management of the N4 implementation project. The Project Manager secured acceptance and approval of deliverables. The Project Manager was also responsible for communication, including status reporting, risk management, escalation of issues that cannot be resolved by the team, and, in general making sure the project is delivered with the budget, within schedule and within scope.

"Go-live was a success. Thank you to the entire team led by DSP. Our terminal is now equipped with NAVIS N4, enabling us to better plan for more volume and increased productivity, all while further improving the level of service offered to customers"
Ricardo Alvarez, Director of Operations of DP World Prince Rupert

Transition to the Navis N4 TOS

TOS Support



Customer Story: Malta Freeport Terminal

MFT's main goal for this project was to migrate from the XPS radio server to ECN4 and N4 mobile and change the VMT's to make ECN4 work the same as Radio Server.

DSP team were involved with the following:

- Support user testing issues
- Create 20+ groovy solutions to change ECN4 GUI to match old radio server
- Support setting up the new N4 environments
- Remote support of successful upgrade Go-Live
- Set up new MFT Yard file and exchange knowledge with a yard editor workshop.

**N4 Major upgrade 3.1 to 3.7
support, field development
(groovy) and training workshop.**

TOS Support



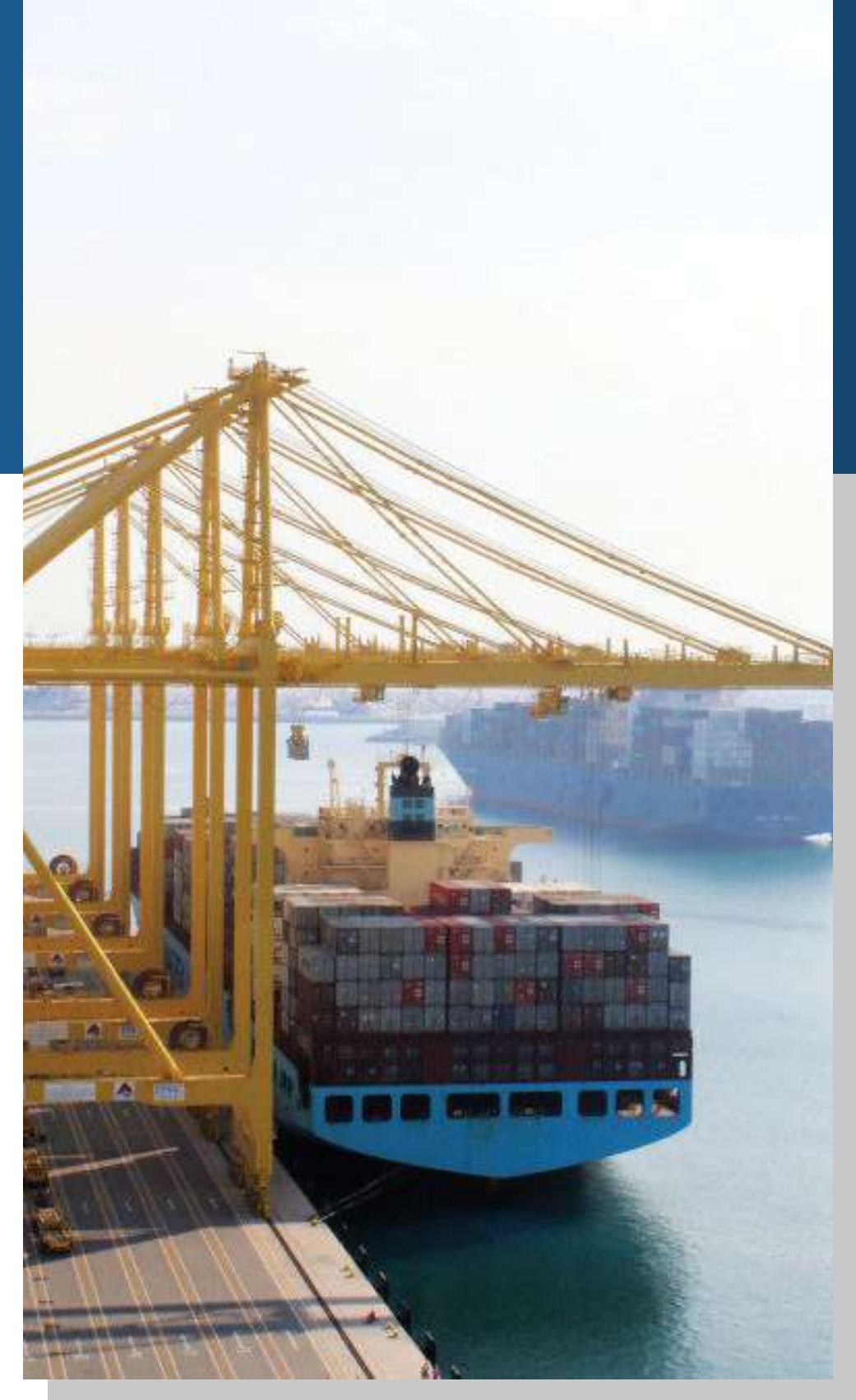
Customer Story: QTerminals

As part of the latest N4 implementation, QTerminals required to maximise the usage of the N4 system to improve the overall efficiency of the terminal. The project was to implement N4's optimisation modules such as Prime Route and Expert Decking.

Project has been turned into a complete remote project due to COVID restrictions.

Phases included: preparation, setup and configuration, workshop, testing and go-live to post go-live support.

The project has been conducted in a remote way, in history, no similar remote projects have taken place on this scale.



Terminal efficiency and optimisation

Optimization

Customer Story: Port Elizabeth

Port Elizabeth is APM Terminals' largest terminal on the east coast of North America and offers the largest reefer capacity in the Port of New York and New Jersey.

The terminal's four ZPMC ship-to-shore super post-panamax cranes are capable of handling the largest container vessels on the water today, up to 23 containers wide on-deck.

Scope of the project: to move from NAVIS EXPRESS and SPARCS to N4 3.6.20 with gate appointments and gate automation.

DSP team has been working in association with Interface, Equipment, IT and Operations teams and was part of the testing team for terminal Go-Live.

Gate Automation

Automation



Customer Story: PD Ports

DSP have worked in collaboration with Camco and PD Ports, to build a bespoke and unique Vehicle Booking System which feeds data into N4 using standard N4 APIs to create Appointments.

PD Ports successfully went live with the VBS in May 2019 to the haulier community with positive feedback.

DSP also worked with PD Ports to implement an Automated Gate solution provided by Camco; DSP provided Test and Development and Go-Live support.



Gate Automation

Automation

Customer Story: APM Terminals Tangier Med

Tanger-Med is the second-busiest container port on the African continent after Port Said, Egypt. The new APM Terminals MedPort Tanger terminal will increase the port's total annual throughput capacity to over nine million TEUs.

APM Terminals MedPort Tanger is featuring state of the art technology having up to 2,000 meters of quay length and featuring the technology pioneered at the APM Terminals Maasvlakte II Rotterdam terminal.

DSP Team has been involved in the project since the beginning being part of the Testing and Automation team for terminal go-live while working also on XPS/N4 installation and configuration and training.



Testing, configuration, training and Go live

Automation



Get in Touch



Contact us to get more info



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