



From Data to Decisions: Unlocking Terminal Performance through TOS, Training and Optimization



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Sales Account Manager – School of TOS Coordinator



Precision & Engineering, 40 years of Swiss DNA

- 4 Entities
- 500+ Projects completed worldwide
- 55+ Industry Experts
- 24/7 Global help desk and support services
- 25+ Navis N4 Certified consultants
- 20+ Technology Partners



Since 2023, DSP is compliant with the ISO 27001-2013 certification to grant Information security, cybersecurity, and privacy protection to its customers

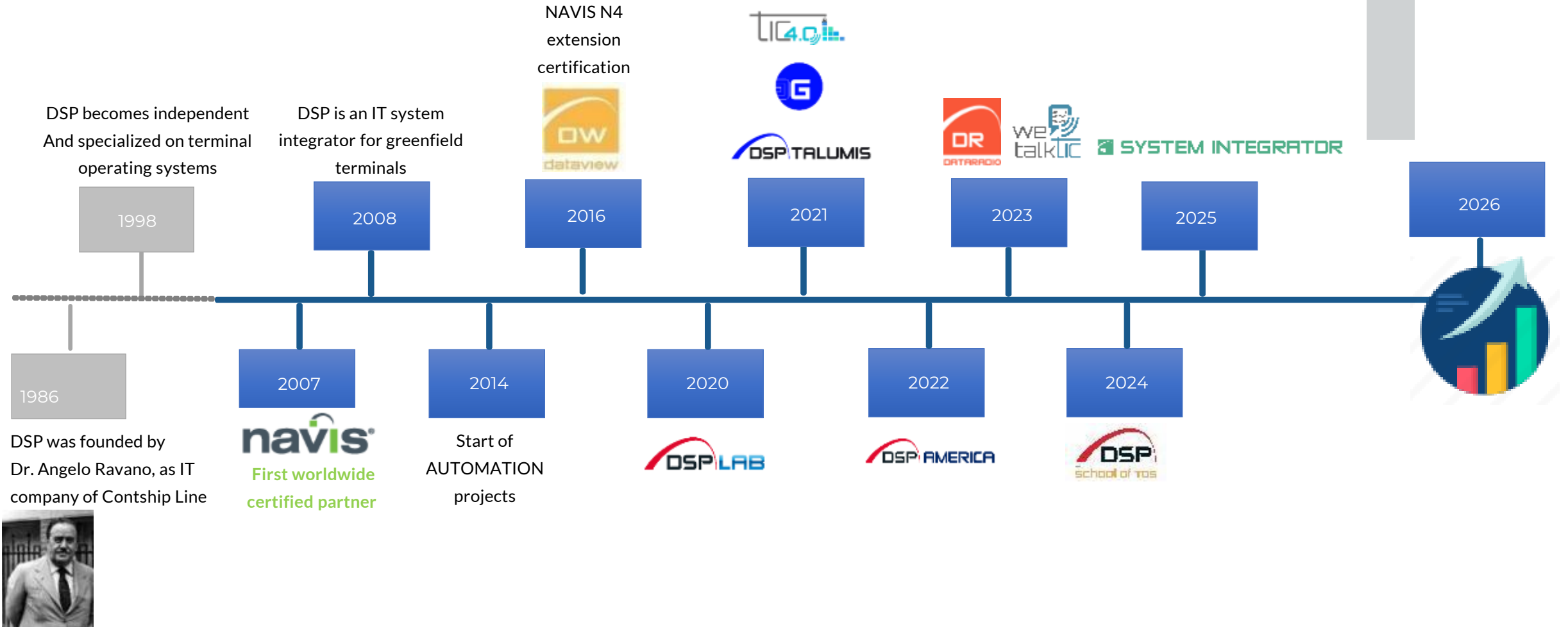


Our customers

Over the past 40 years, we've supported customers around the world on more than 500 projects



DSP's history



Our core business

TOS CONSULTING

DSP team supports the Terminal in all the phases of the Terminal Operating System **implementation, optimization, starting from business process mapping to go live and continuous H24 support**

DIGITAL INTELLIGENCE

Product:  **DATAVIEW**

Product:  **GEMINI**

DATAVIEW is our Business Intelligence tool born from terminal experience showing any data in one view.
GEMINI is our Digital Twin solution for simulation, predictive analytics, what if scenario and suggested optimized solution



DSP offers in depth training services with standard and customized curricula on

- N4
- Terminal operations
- Simulation
- SAS in Data Mining, ML, AI, Big Data

SYSTEM INTEGRATOR

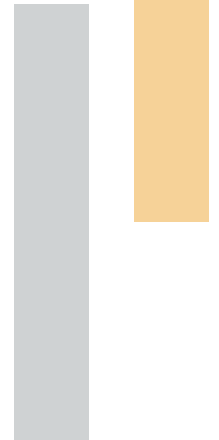
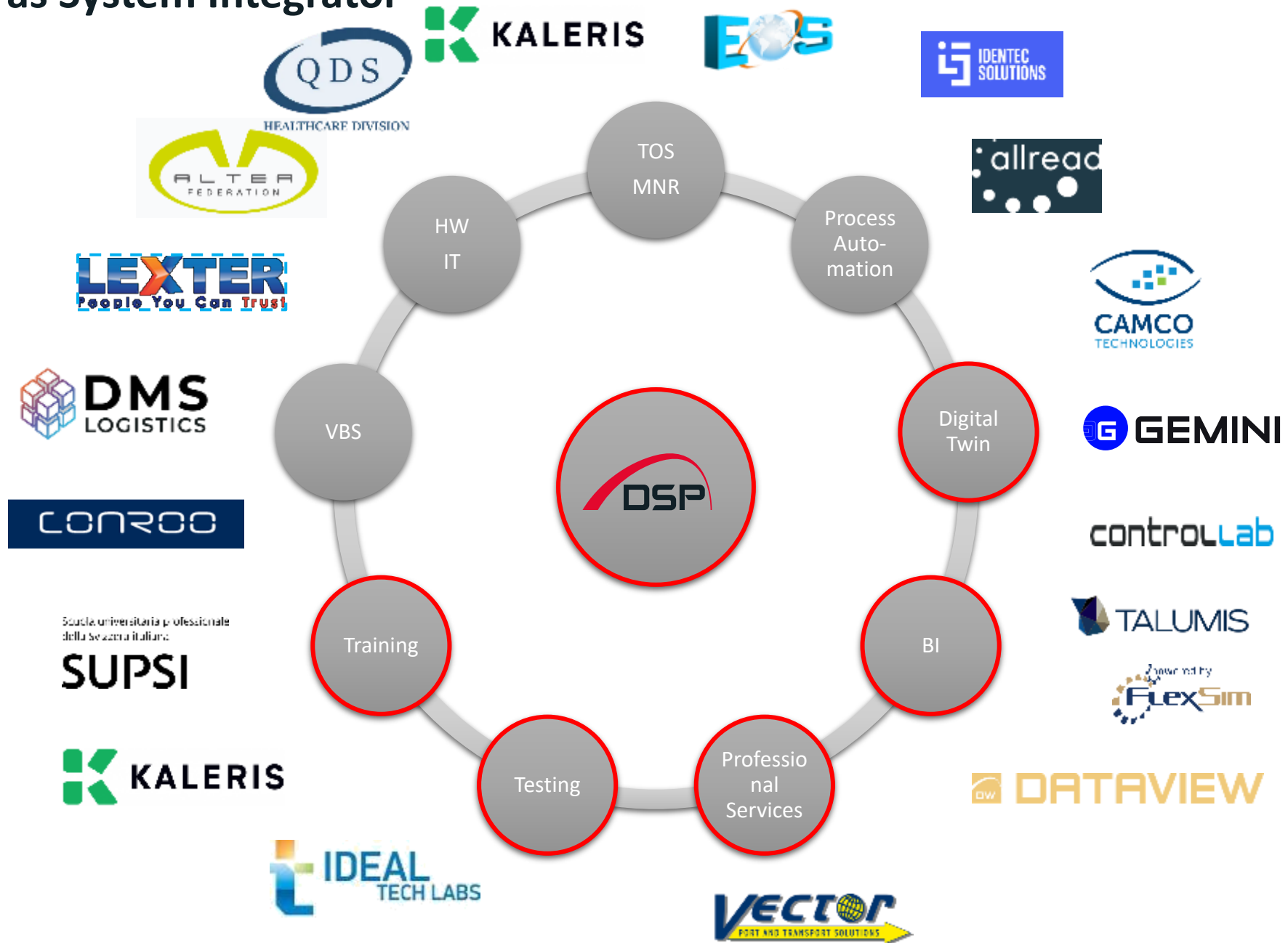
DSP is a System Integrator Company with a well-established network specialized in connecting specific solutions to address individual cases.



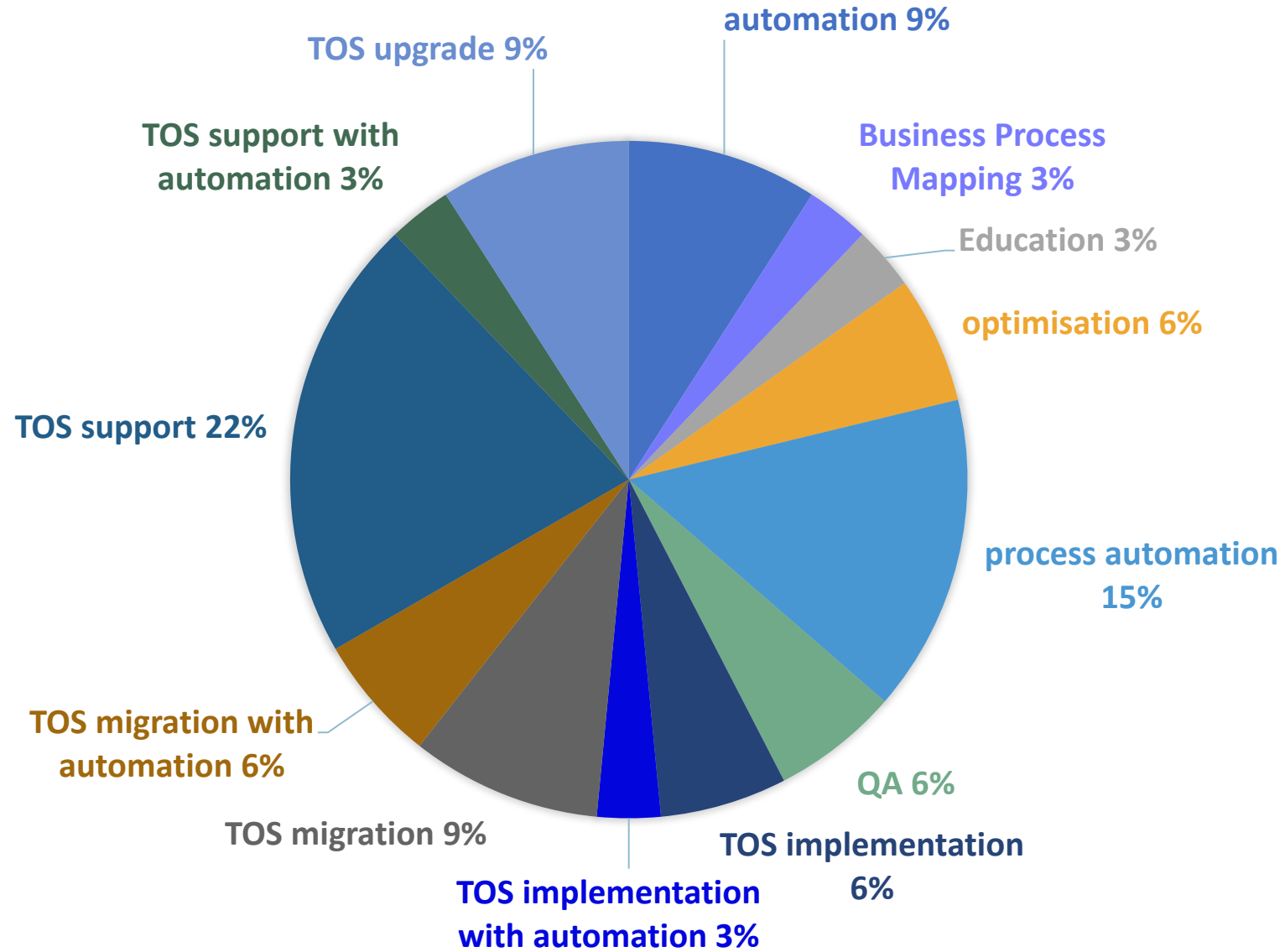
Scuola universitaria professionale della Svizzera italiana



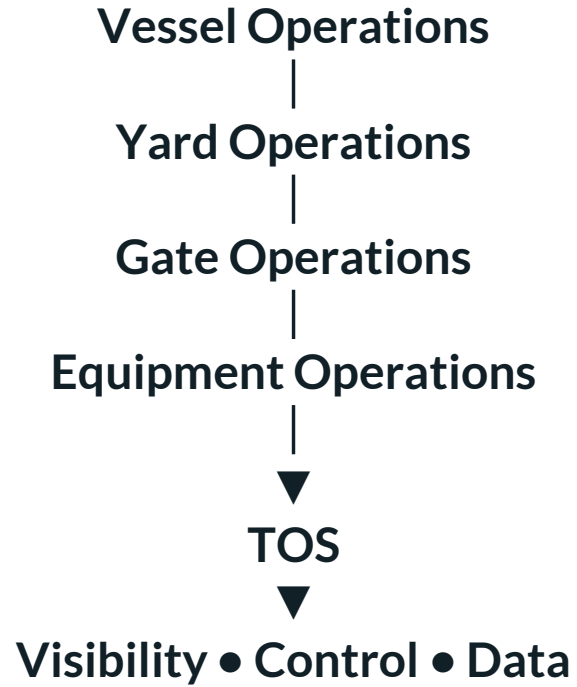
DSP as System Integrator



DSP Running Projects: a picture of the Industry



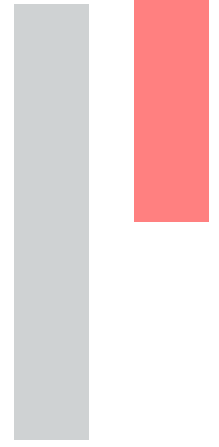
The Role of a Terminal Operating System



The Human Factor

Technology supports. People perform.





What is TestN4?



TESTN4 investigation

How can I reduce the amount of time needed to test when I upgrade our TOS?

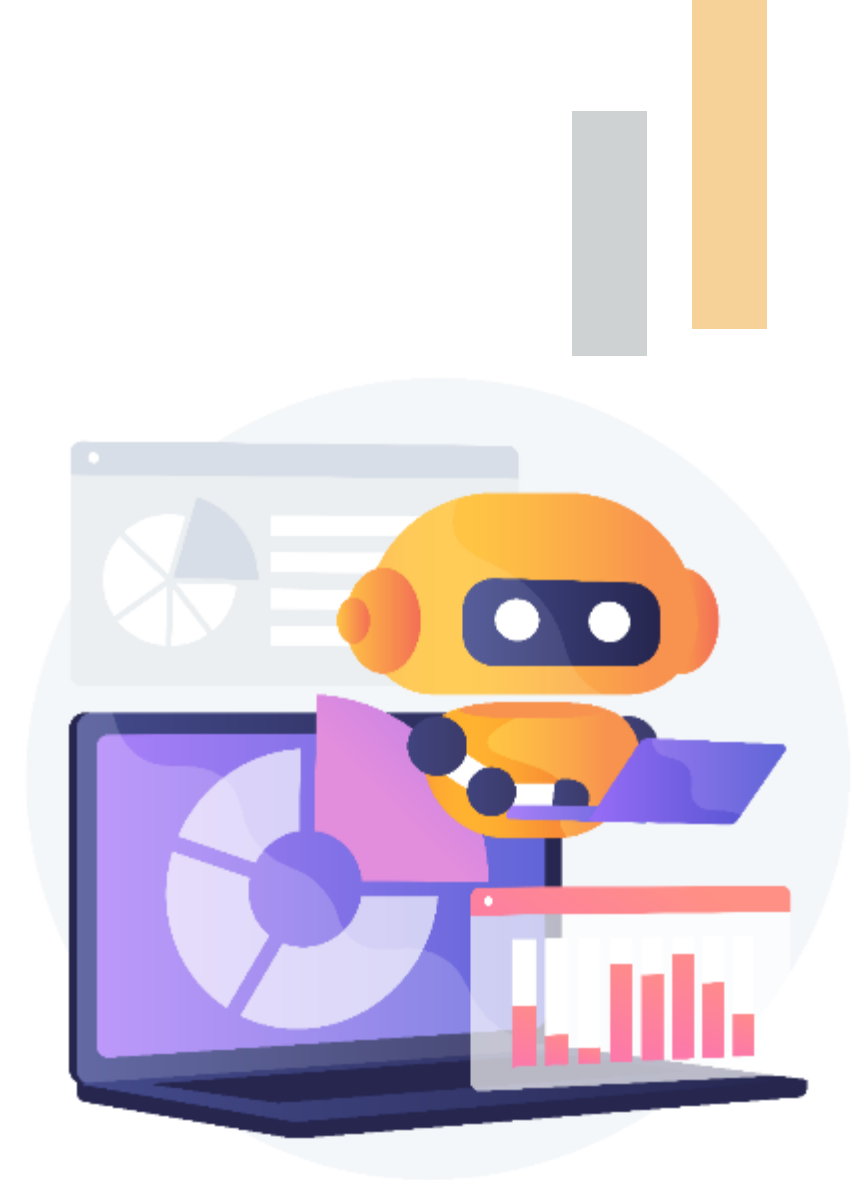


Need for automation

Navis N4(TOS) is a complex application, and ports often need to upgrade their N4, for major version releases or emergency patch releases.

- N4 upgrades take Weeks even Months
- Resource availability
- Manual regression is heavy
- Risk of missing terminal customizations
- Late-night testing cycles

“Every terminal has custom logic. During upgrades, we’re not just testing vanilla N4 — we’re testing their entire operation.”



General N4 Testing - Typical Testing Time

TEU	No of Test cases (Approx.)	Terminal Specific Customization	Duration in Weeks (Approx.)
<2M	350	<5%	7-9
2-5M	500	5-10%	12-14
>5M	800	>10%	>14

Test Cases	Count (Approx.)	Duration (Weeks)
Sanity test Cases	50	1
N4 Test Cases	150	3
XPS Test Cases	40	1
Integration Test cases (N4+XPS+ECN4)	30	1
Customer Specific Groovy	25	1
Total Test Cases	275	7

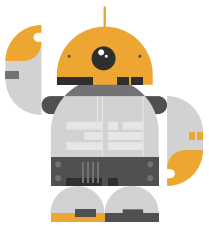
With TestN4 Automation - 1 week (90% reduction in time)



TestN4 Benefits

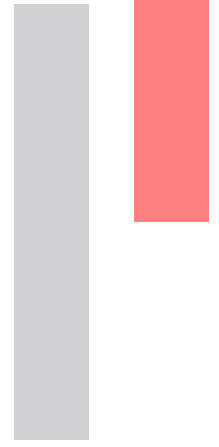
TestN4 can:

- greatly shorten the testing time resulting in faster production upgrades.
- set-once-run-many-times across multiple N4 clusters
- Consistent and accurate test results every time.



We built TestN4 to reduce upgrade time from ~7 weeks to ~1 week.





What is DATAVIEW?



DATAVIEW Investigation

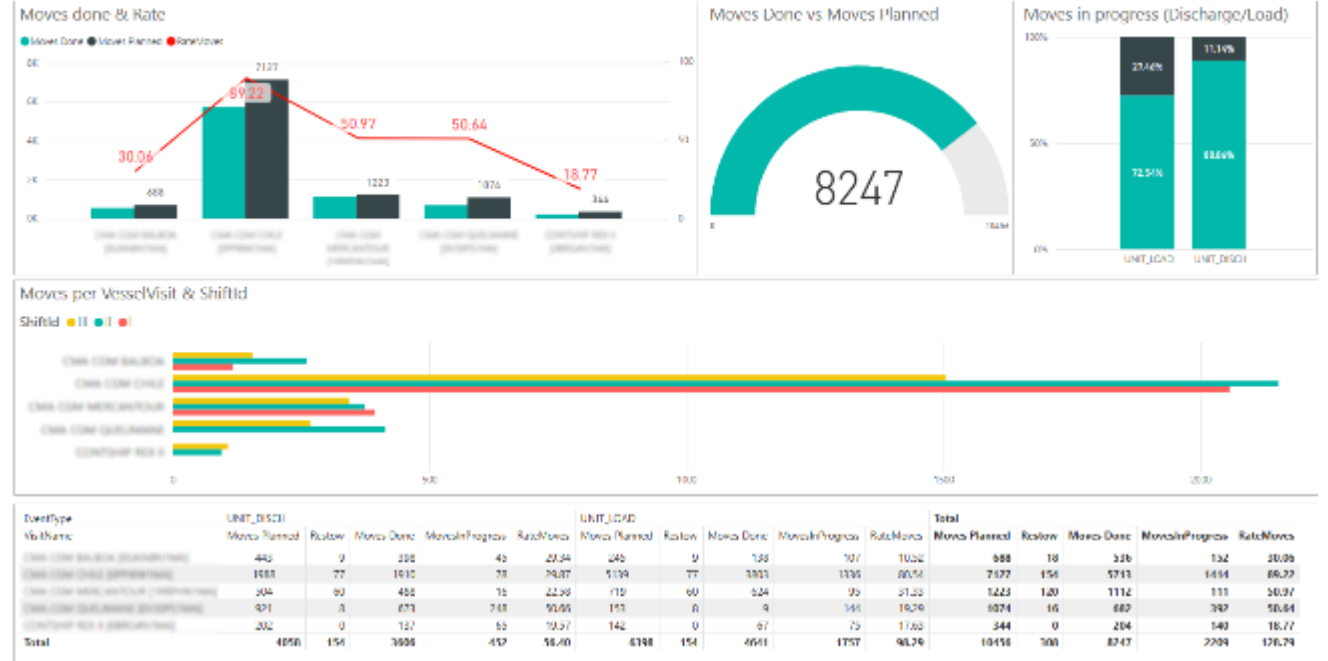
How can I get total cost per movement in my yard?



DATAVIEW Goals

- A reliable single source of data and KPIs across the organisation.
- A flexible tool that evolves alongside your business.
- Transparent KPI calculation methodology.
- Easy and secure access from any mobile device.
- Dynamic reporting capabilities in the hands of end users.
- Real-time performance indicators.
- Operational and financial insights that transform data into actionable decision-making information and support what-if analysis for commercial decisions

Vessel Live Monitoring Rate



Vessel Live Details

Current Shift: All

Name	ATA	Start Shift	Finish	Estimated Time	Completion	Moves Done	Moves Planned	Yard Prod.	Crane Prod.	Crane Working Hour	Yard Working Hour
UNIT_LOAD	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	59.30%	704	544	18.77	15.77	15.77	15.07
UNIT_LOAD	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	65.50%	682	1074	20.04	23.07	23.07	23.57
UNIT_LOAD	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	77.91%	526	666	32.06	17.22	17.22	11.13
UNIT_LOAD	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	80.16%	5719	7127	89.22	32.07	256.55	64.05
UNIT_LOAD	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	07/06/2024 09:00:00	90.02%	1112	1223	50.97	20.39	54.93	21.82
Total					78.87%	8247	10456	64.42	21.60	381.82	128.62

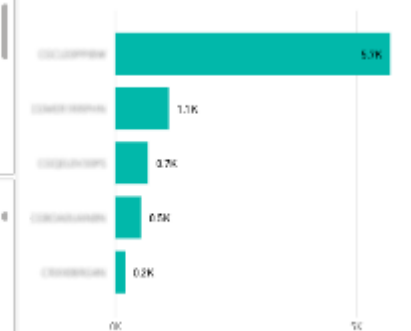
Moves Done & Rate

Name	CRM	Moves Done	Rate	Moves In Progress	Crane Working Hour
UNIT_LOAD	0	32	21.10	8	1.52
UNIT_LOAD	1	273	16.91	0	16.91
UNIT_LOAD	2	751	17.62	0	17.62
UNIT_LOAD	3	1246	21.83	37	6.03
UNIT_LOAD	4	1587	21.69	35	62.91
Total		6245	176.76	218	175.59

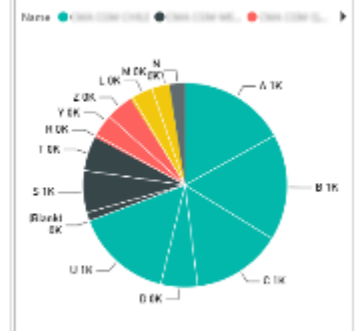
Delays

Name	Delay min.	Description	Type
UNIT_LOAD	2:05	ARRIVING QUARANTY OPERATOR	TERMINAL
UNIT_LOAD	0:05	ARRIVING QUARANTY OPERATOR	TERMINAL
UNIT_LOAD	12:12	ARRIVING LABOUR	TERMINAL
UNIT_LOAD	28:21	CONTAINER HANDLING	TERMINAL
UNIT_LOAD	41:55	CRANE MOVEMENT	TERMINAL
Total	4:29:28		

Moves per QC & ShiftId



Moves per Vessel & QC



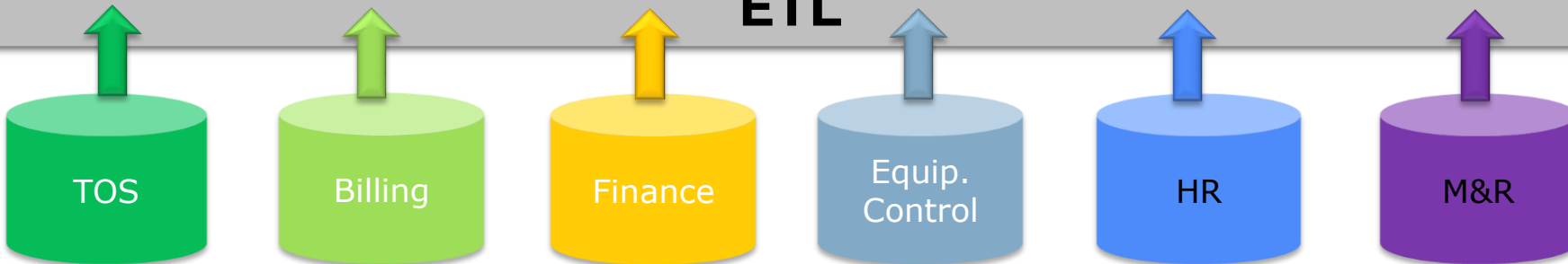
DATAVIEW Functional Architecture



Live Dashboard

Reporting

A screenshot of a 'Reporting' table with columns for 'Date', 'Account', 'Description', 'Quantity', 'Unit Price', 'Total Price', 'Tax', 'Net Price', and 'Gross Price'. The table contains multiple rows of data, with some cells highlighted in red and green.



Live OPS Dashboard

Vessel Live Monitoring - List

Yard Utilization

Overall Utilization (Incl. Reefer)

21.8%

23,831 slots occupied out of 109,528

25.2%

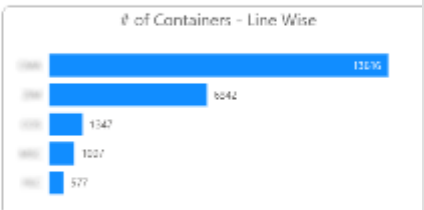
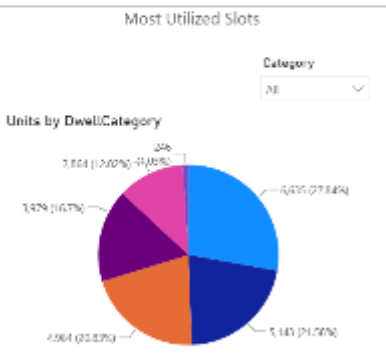
429 slots occupied out of 1,700

Most Utilized Slots

EG	1561
AD	1298
LA	1003
IFN	1023
IA	531
KZ	507
WA	407
IF7	302
HA	126
LDZ	111

Unit Snapshot - Category Wise

DMSTC	EXPRT	IMPRT	STRGE	THRBH	TRSHF
831	272	4,422	9,813	63	8,430

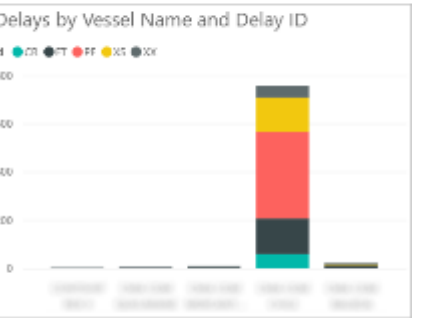
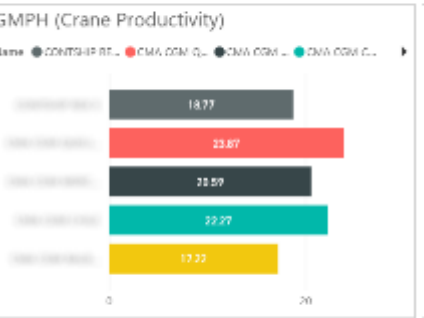
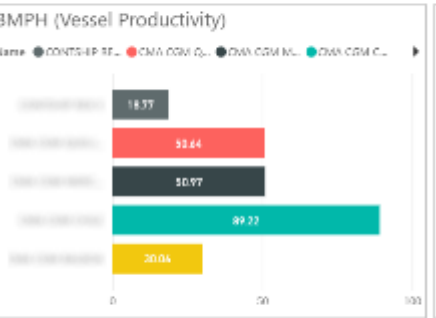


Containers in Yard - Upcoming Voyage

Name	ETA	Units
...	...	877
...	...	1025

Crane Working Hours: **381.82**

Crane Breakdown: **1.05K**



Vessel	Service	BMPH (Vessel Prod.)	Crane Working Hour	MovesDone	Remaining Moves	Planned Moves	FirstLift	LastLift	ETC
...	...	18.77	10.87	204	140	344	...	...	...
...	...	40.64	20.57	692	392	1074	...	...	...
...	...	10.06	11.11	516	152	668	...	...	...
...	...	50.97	50.00	1112	111	1223	...	...	...
...	...	18.22	256.55	5713	1410	7127	...	...	...
Total		64.42	381.82	8247	2209	10456			

SC Moves Current Shift

Hour: All

Equipment: All

Event type: Multiple select...

CHE	23-00	00-01	01-02	02-03	03-04	04-05	05-06	Total
...	4	5	6	7	8	9	10	39
...	...	...	...	...	...	...	...	24
...	...	...	...	...	...	...	...	1
...	7	6	8	9	8	5	4	47
...	5	6	6	4	11	...	...	38
...	4	4	4	6	4	1	2	23
...	...	...	...	...	...	...	...	18
...	3	9	9	...	...	...	...	17
...	4	7	8	7	6	4	2	35
...	4	6	6	6	6	6	4	26
...	4	3	5	5	5	2	2	36
...	7	7	6	7	6	3	3	29
...	5	7	6	7	6	5	3	39
...	3	3	5	2	2	4	1	14
...	4	6	7	6	11	...	...	42
...	3	4	6	6	3	...	...	26
...	3	5	7	6	5	...	...	44
...	2	6	8	6	4	...	...	36
...	15	13	11	6	...	...	...	50
...	3	9	9	6	...	...	...	35
...	1	...	...	...	...	...	...	5
...	3	4	6	7	8	4	3	37
...	3	4	6	7	8	3	2	37
...	7	10	5	5	...	...	...	38
...	7	7	5	6	4	3	2	34
...	6	6	5	7	6	...	...	42
...	3	4	6	6	4	4	...	29
...	4	5	6	6	...	...	...	31
...	4	10	6	5	2	3	...	33
...	5	8	10	9	5	2	...	44
...	3	8	7	6	6	...	...	37
Total	314	422	369	400	394	324	94	2317

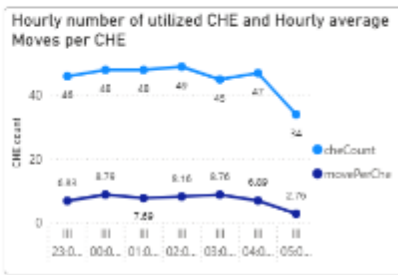
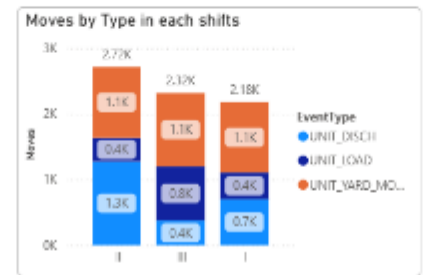
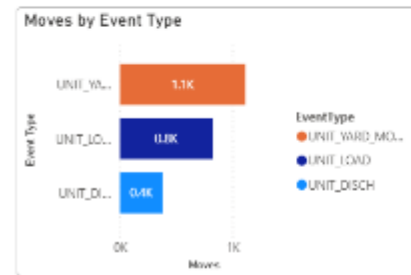
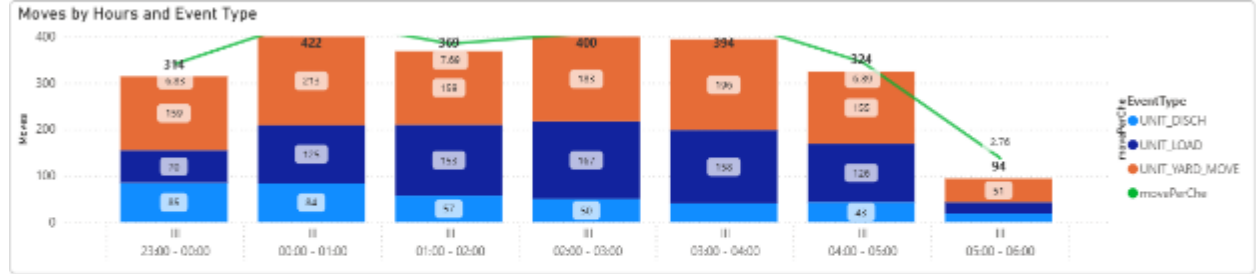
SC Analysis

ShiftId: III

Shift Date: 2024-04-07

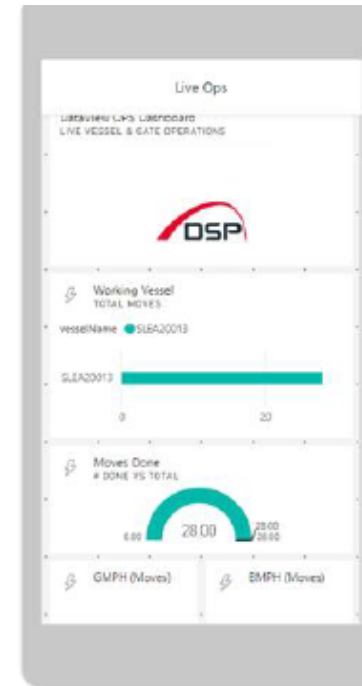
Total Moves: **2317**

MPH / SC: **7.13**



DATAVIEW Mobile App

- Download/ Install the Power BI app from Play or Apple stores
- Notifications may be configured to signal specific events





Thank you

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