



**Connecting processes and data - Technical
Ship Management**

Agenda

RINA Today

4,000 colleagues

200 offices

70 countries

Our people

More than **90 nationalities**

70%+ educated to degree level	43 average age
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Services

Maritime, 4000+ units in class, 50+mGT Energy Certification	Transport & Infrastructure Industry Real Estate
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Outcome one way to look at it – sample fleet

- 80 vessels in fleet
- 2.4 mUSD – OPEX/vessel/year
- 1.5% - Unplanned fleet off-hire
- 15.000 USD/day – TCE Revenue

Cost of off-hire

- 6.43 mUSD, Lost opportunity revenue
- Equals ≈ 2.5x vessel opex

Off-hire Rate	Lost opportunity revenue (USD)
2%	~8.5
1.50%	~6.5
1%	~4.5

Multiple Disciplines | One solution

SERTICA can with..

- Quality data
- Reliable data exchange
- Streamlined internal processes
- Overview of entire fleet
- Key data in analyzed & dashboarded

...be an enabler to avoid un-desired off-hire and Optimize performance in technical management

Building the Business outcome

Business outcomes

Integrations, Collaboration, Transparency,

Data Quality, People, Processes & technology

Agree on the objective

Having the right data

At the right place & time

With the right people & partners

Making informed decisions

RINA Today



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Troels Møller – Customer Success Manager



DONG
energy



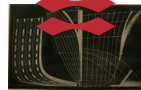
RIINA



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DTU



**MASKINMESTER
SKOLEN
KØBENHAVN**

DTU
EXECUTIVE BUSINESS MASTER ENGLISH
Executive MBA



RINA Digital Solution A/S

Product portfolio

 **SERTICA**

 **Optimum**

 **ELB**

 **INEXTIA**

Company

- Company originally founded in 1987
- 30+ years experience
- 50+ employee
- 50+ Maritime customers
- 150+ industrial customers
- Headquarters in Aalborg, Denmark
- All development done inhouse
- All Service & Support done inhouse

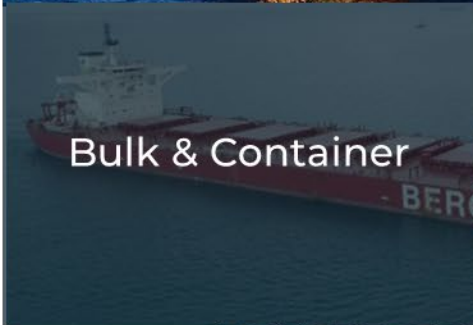
Segments



Off-Shore



Misc. Fishery, Yacht,
Inspection



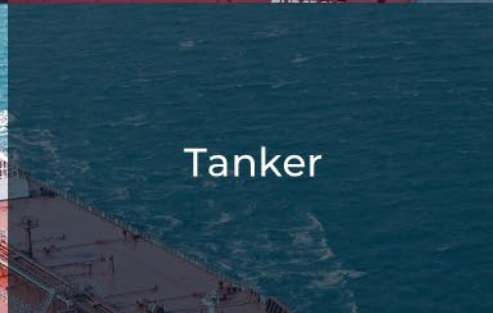
Bulk & Container



Ro/Ro & Passenger



Tug & Pilot



Tanker

Electronic Logbooks

- Analog data being digitized
- Processes is next step.
- Trick is to re-use the same data in different applications
- User should not enter the same data in multiple systems



OPTIMUM Performance Management



OPTIMUM is a modular digital solution to ease the fleet performance management and optimization, that helps monitor and overcome the upcoming decarbonization challenges.



MONITOR

KPIs monitoring, on-board systems live monitoring, Alerts generation



ANALYZE

Retrofitting actions based on real return of investment, create hydrodynamic models



OPTIMIZE

Trim and Voyage optimization, benchmark with performance targets



DECARBONIZATION

Achieve and monitor the compliance with regulations over time

Outcome one way to look at it – sample fleet



80 vessels in fleet



2.4 mUSD – OPEX/vessel/year

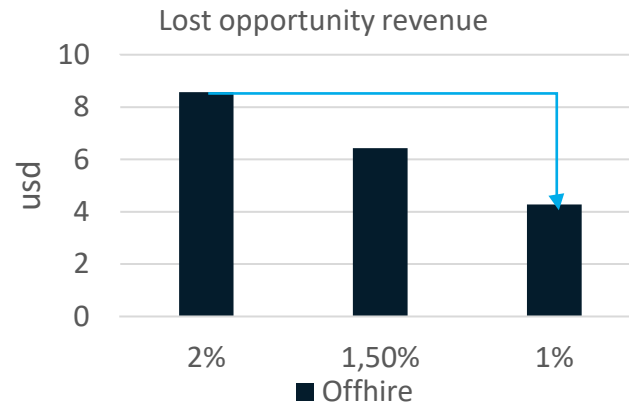


1.5 % - Unplanned fleet off-hire



15.000 USD/day – TCE Revenue

- Cost of off-hire
 - 6.43 mUSD, Lost opportunity revenue
 - Equals $\approx 2.5x$ vessel opex



And what is the cost of..



Dissatisfied customers, clients a.o stakeholders ?



Time spent fighting fires, reporting, insufficient systems ?

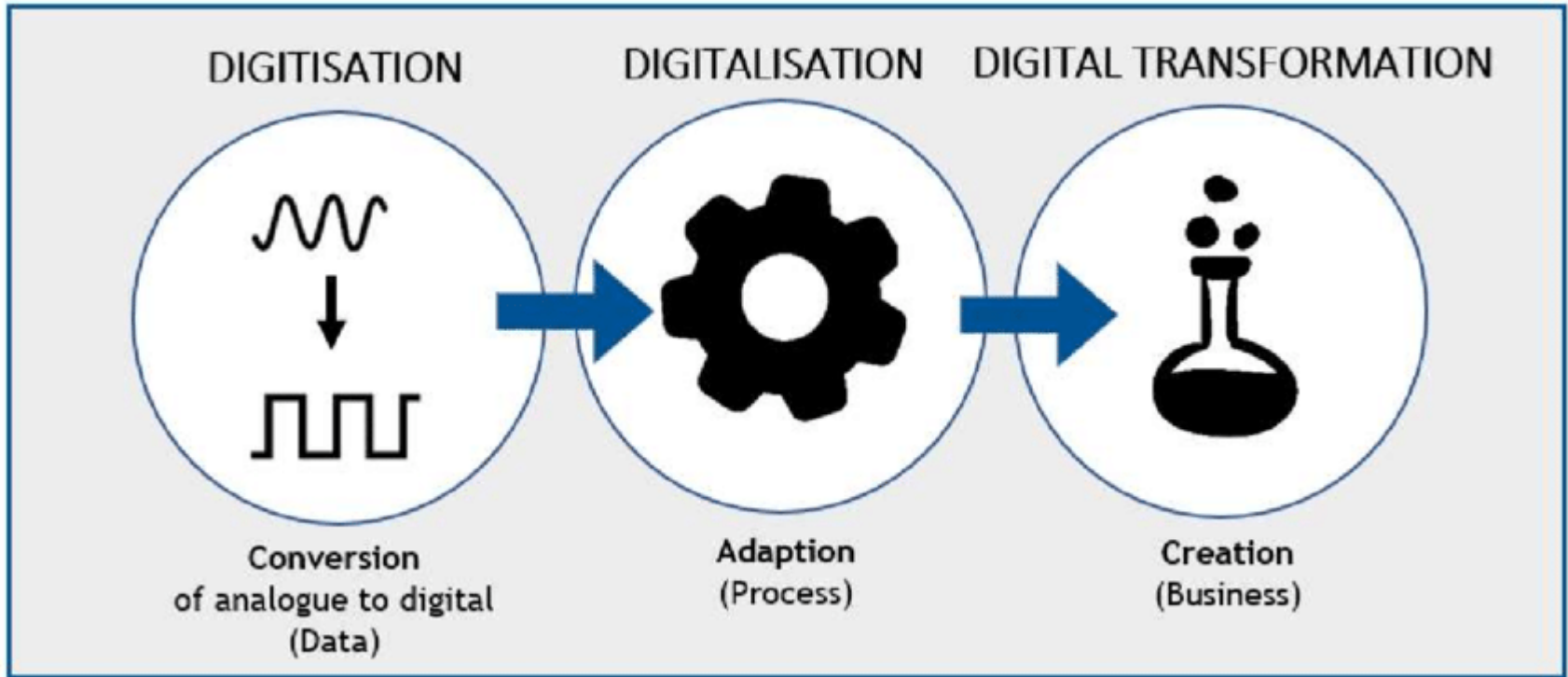


Ressource drag on crew onboard and ashore ?

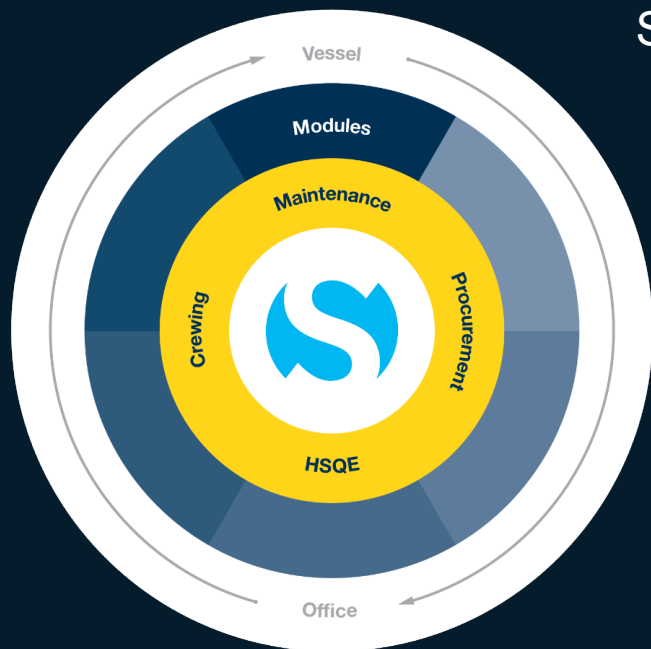


Un-happy, un-motivated people ?

Digitalisation | The way forward



Multiple Disciplines | One solution



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...be an enabler to avoid un-desired off-hire and
Optimize performance in technical management



50+ shipping companies using the **SERTICA** platform on **1400+** Vessels



Maintenance – Equipment data, Maintenance & performance recordings, history, plans, breakdowns, Dry- docking, Certificates etc.



Procurement – Suppliers, Contracts, Orders, distribution, Lead times, catalogues, Inventory & stock, invoices, budgets, etc.



HSQE – Drills, Incidents, Accidents, Inspections, audits, observations follow up etc.



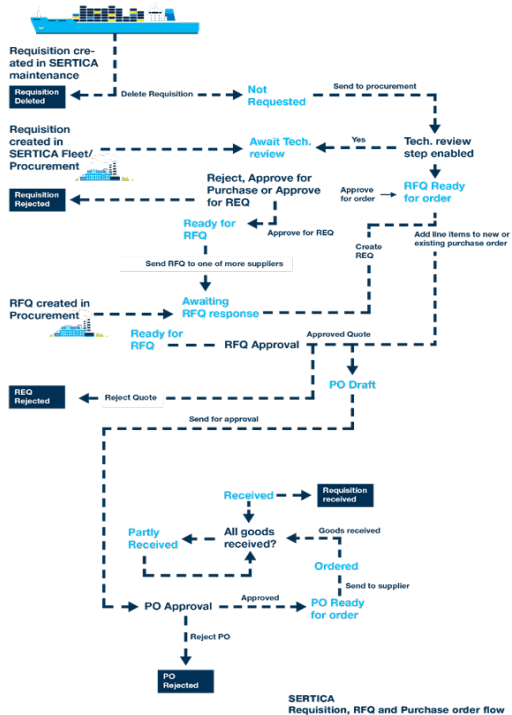
Crewing – Management, planning & rotation, Payroll, etc.

SERTICA Maintenance | The basics



The Component is a central element in SERTICA. It can be used for many different purposes and not only maintenance related activities. Components and its subcomponents will design the tree structure

Procurement | Transparent information



Vessels



- ✓ Maintenance
- ✓ Inventory
- ✓ Requisition

Technical Department



- ✓ Requisition Handling
- ✓ Tech. approval
- ✓ Spare parts
- ✓ Qualification
- ✓ Forecasting

Purchasing Department



- ✓ Cost Control
- ✓ Quotes
- ✓ Orders
- ✓ Approval
- ✓ Supplier Management
- ✓ Invoice Matching

Logistics & Distribution



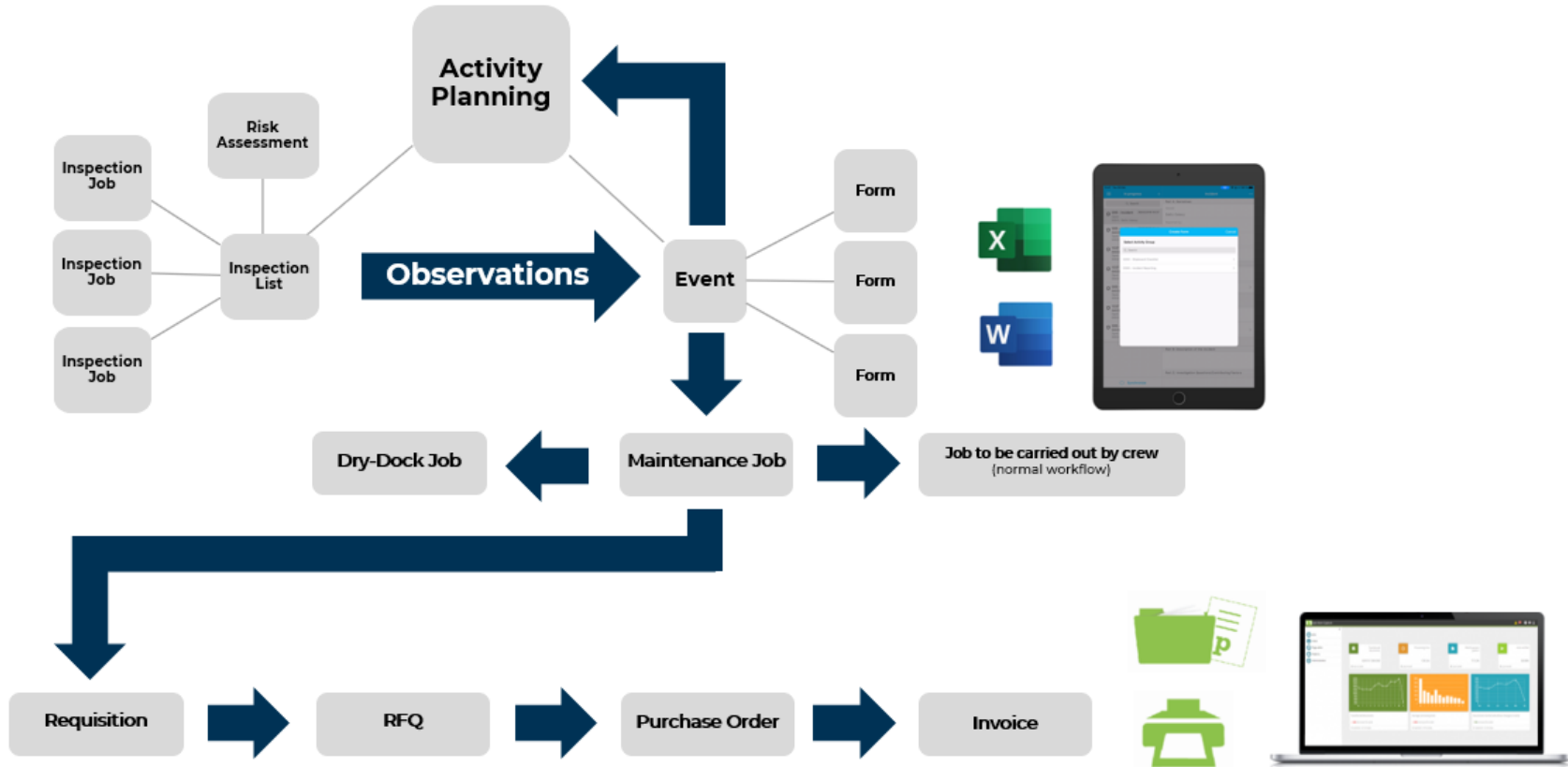
- ✓ Agents
- ✓ Forwarders
- ✓ Shipment
- ✓ Documents

Finance & Management

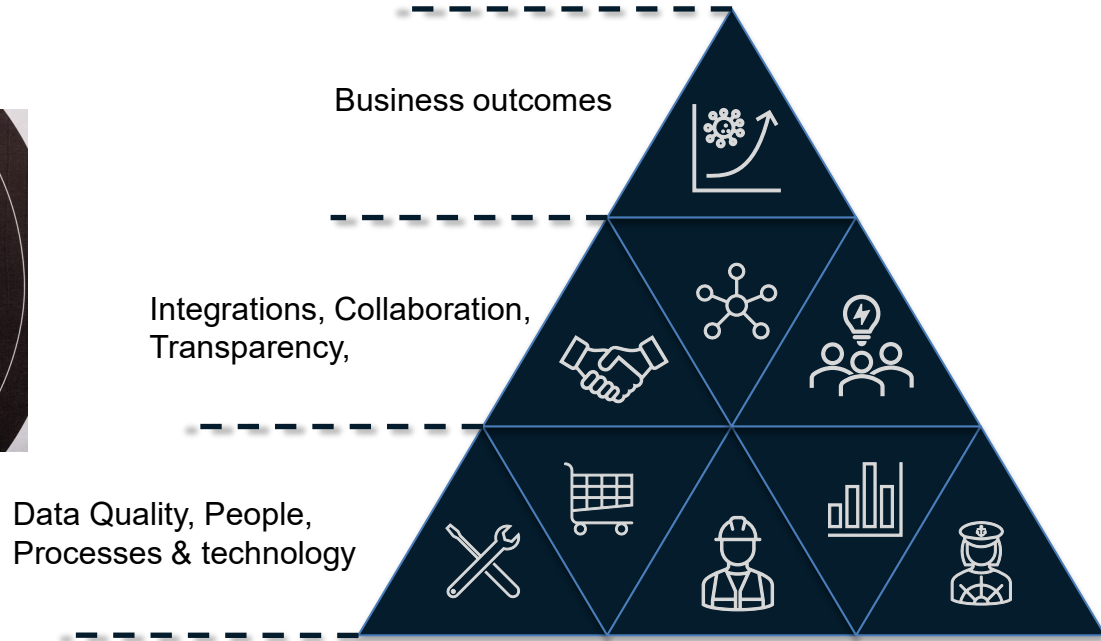


- ✓ Contracts
- ✓ Accounts
- ✓ Invoice payment
- ✓ Financial Reporting

SERTICA HSQE, example



Building the Business outcome



Agree on the
objective

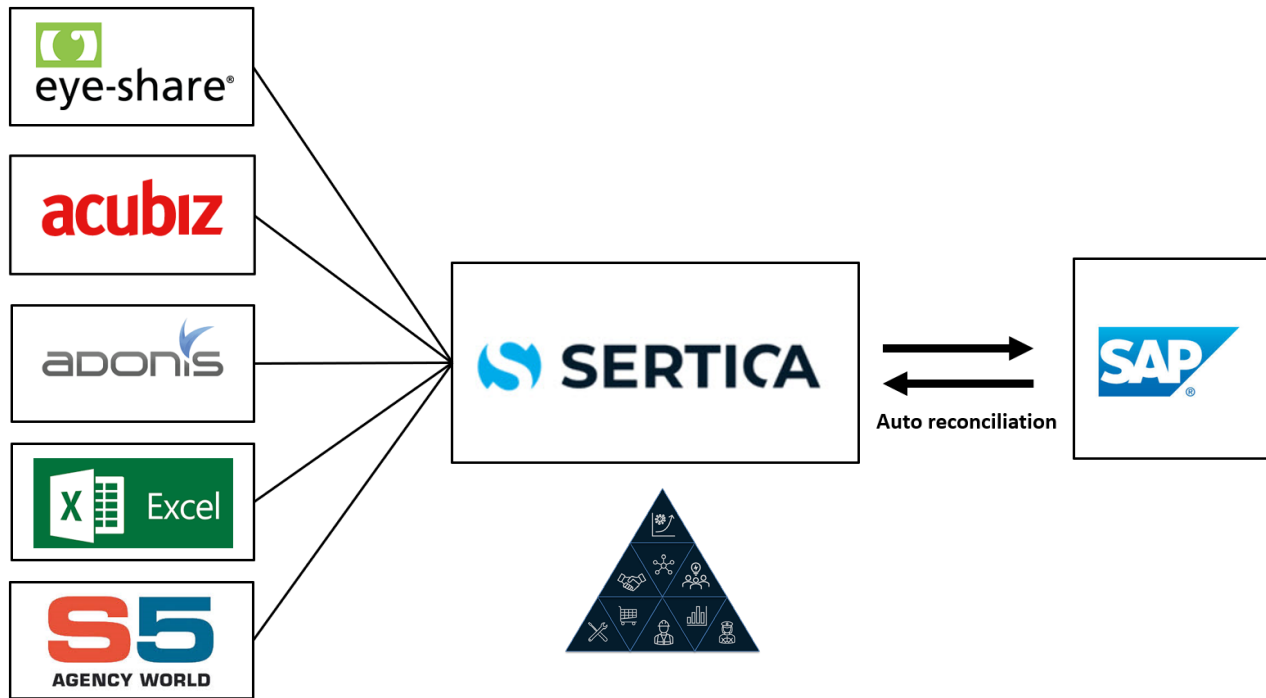
Having the
right data

At the right
place & time

With the right
people & partners

Making informed
decisions

SERTICA SYNC. | Customer example



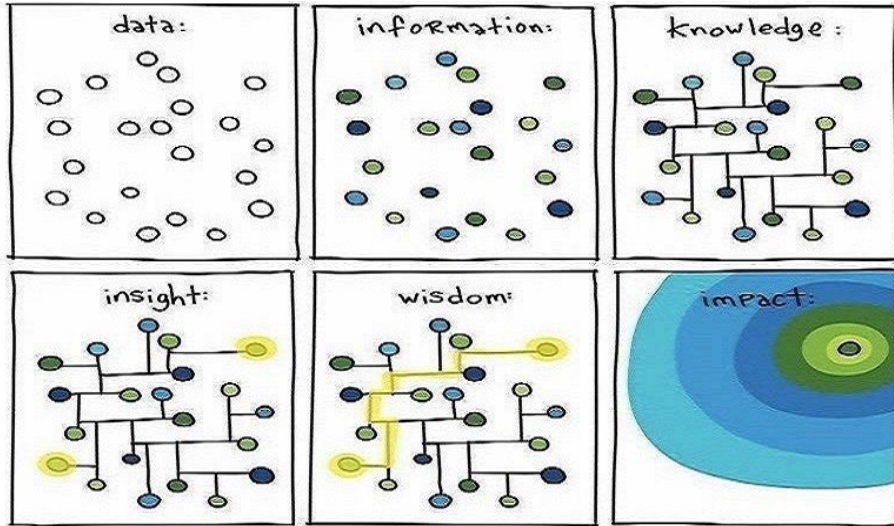
All costs (OPEX, Dry-Dock, New buildings etc.) are updated in SERTICA.

SERTICA then feeds SAP with data & info and is total in-sync with SAP.

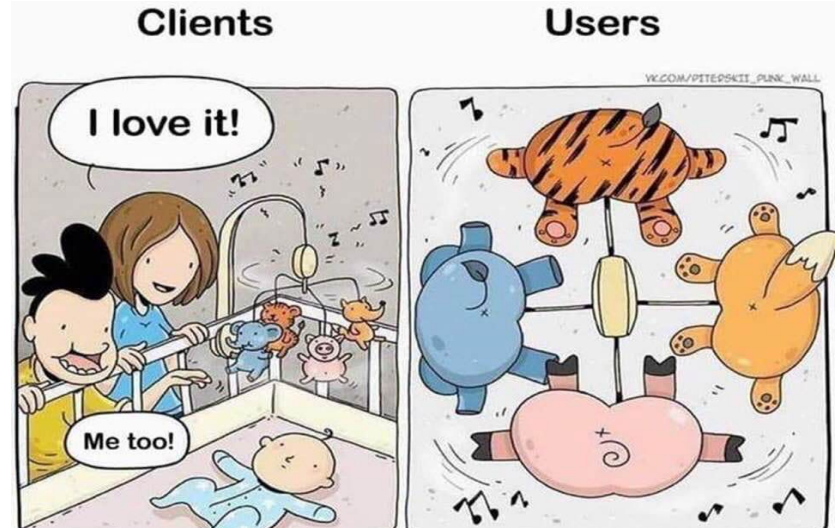
SERTICA is the main system.

This is where they find all relevant data & info for technical fleet operations.

Data based goals – Value driven decisions



Make sure it adds value for end-users





- Near Miss Reports
- Event Reports
- Actionboard
- Drills
- N/C



- Spareparts
- Inventory
- Catalogs



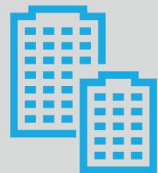
SHIP / UNIT



- Cpt. / 1st / Chief
- Messages / Info
- Responsibility
- Response Log
- Notifications
- Ack. ISM



- Calendar / Hours / CBM
- Equipment / Assets
- Defects
- History
- Joblist



OFFICE



- Logistics / Stock
- Consolidation
- Connect Web
- Workflow
- Approval
- Supplier QA
- RFQ
- P.O



- Change Management
- User Management
- Operating status
- Synchronization
- Data Exchange
- Interfaces
- Admin



- Document Management
- Technical Review
- FM Overview
- PMS
- Approval



- Technical Review
- FM Overview
- Master Data
- Approval
- PMS



- Financial Follow-up
- Accounts
- Budget
- Invoice



- Management Reports
- Dashboards
- Analytics
- KPI

Inspection Audits
Vetting Dry Dock
Notifications Yard Quote
Class Codes Shipdex



AUTHORITY, CLASS, YARD, PORT

Connect Integration
RFQ PO
Quote Overview Shipdex
Price Management Framework Contacts



SUPPLIER

RESULTS

No Detentions | Equipment Availability
Vessel In Perfect Condition | Compliance W. Class

Happy Crew

Reduced Workflows | Minimizing Errors
Fleet Overview | Cost Optimization

Data Streamlining

Save Money





PROCESSES

Procurement & logistics
Technical
People & quality



MASTER DATA

Components/equipment
Documentation
Maintenance tasks
Maintenance History
Data recording, manual and IOT
Item/spare parts catalogues
Item prices
Item tracking (IHM, CO2, TA,MSDS)
Certificates
Etc.



Suppliers

Classification

OEM's

Insurance

Analysis centres

Consultancies

Road ahead | focus

It now requires greater collaboration with business leaders and users”



It must cover much more than just technology. It must include workflow, roles, collaboration and processes



Make it sure, make it simple.

