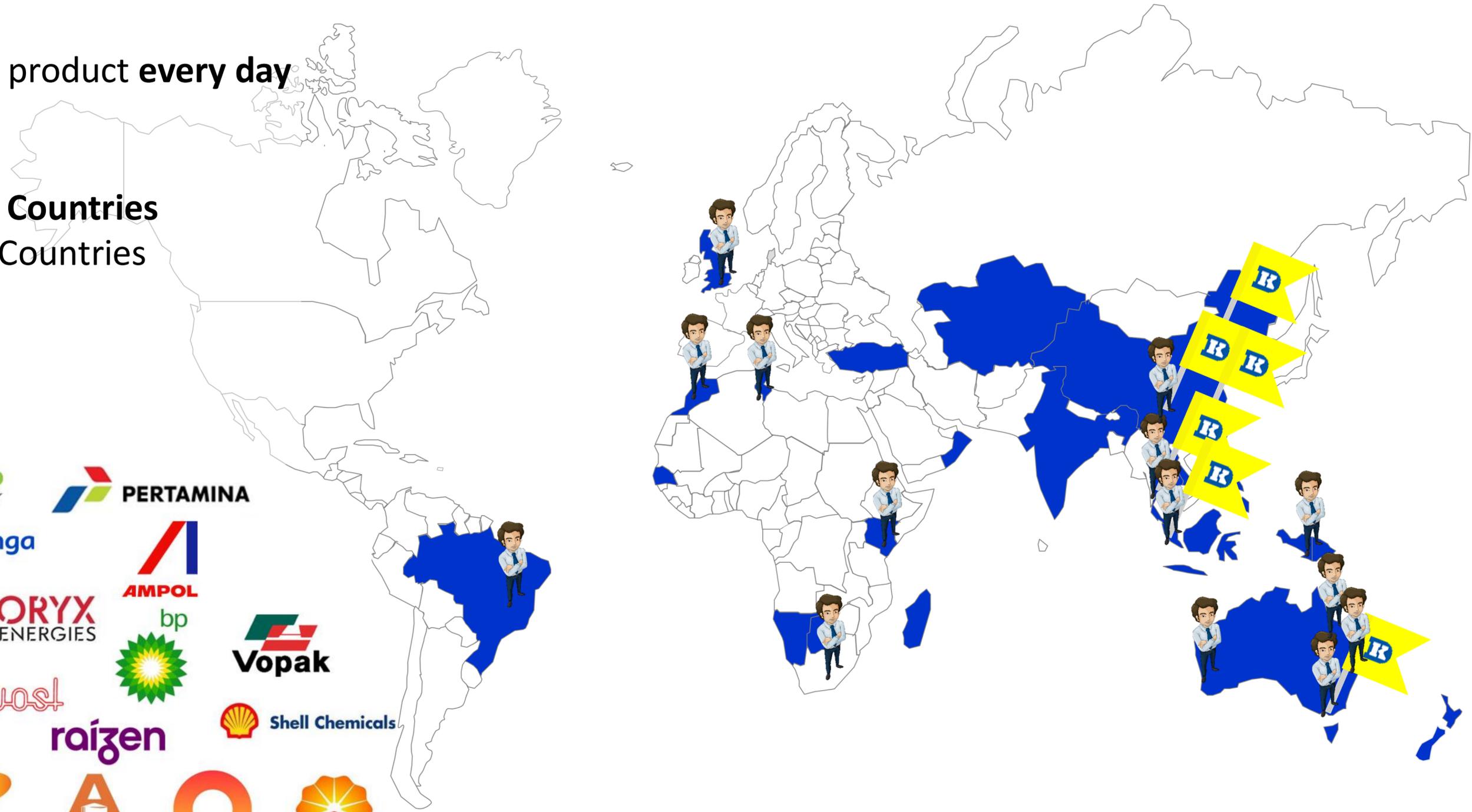


# Global Energy and Fuel Supply Chain, Powered by DKI

**1 billion+** litres of moved product **every day**

- **27 Years Operation**
- Installations across **28 Countries**
- **260+ Staff** across 15+ Countries
- **600+** terminals



# What is unstructured data?

Reduce VRU costs and emissions

Reduced queues and wait times

Condition based maintenance

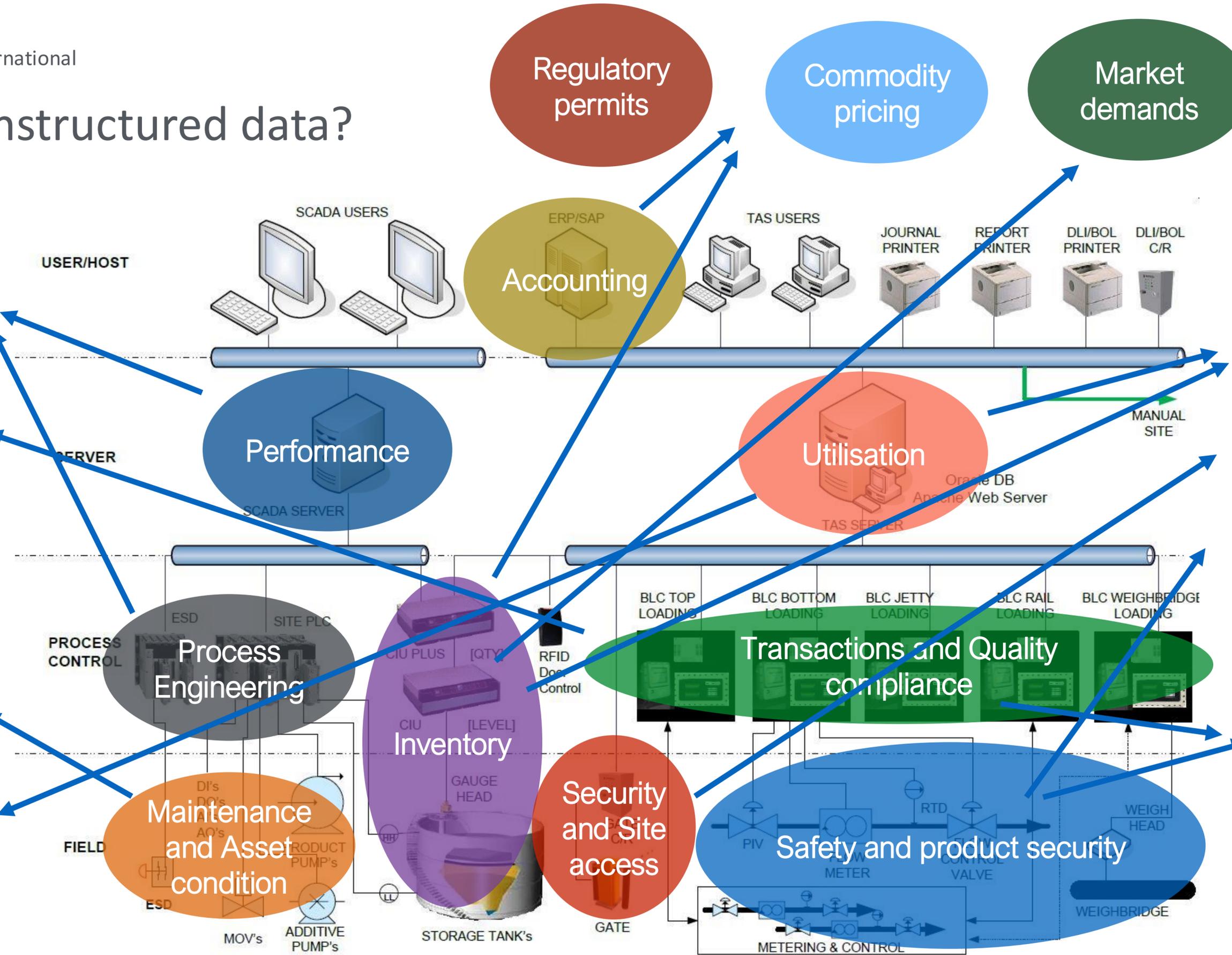
Faster loading

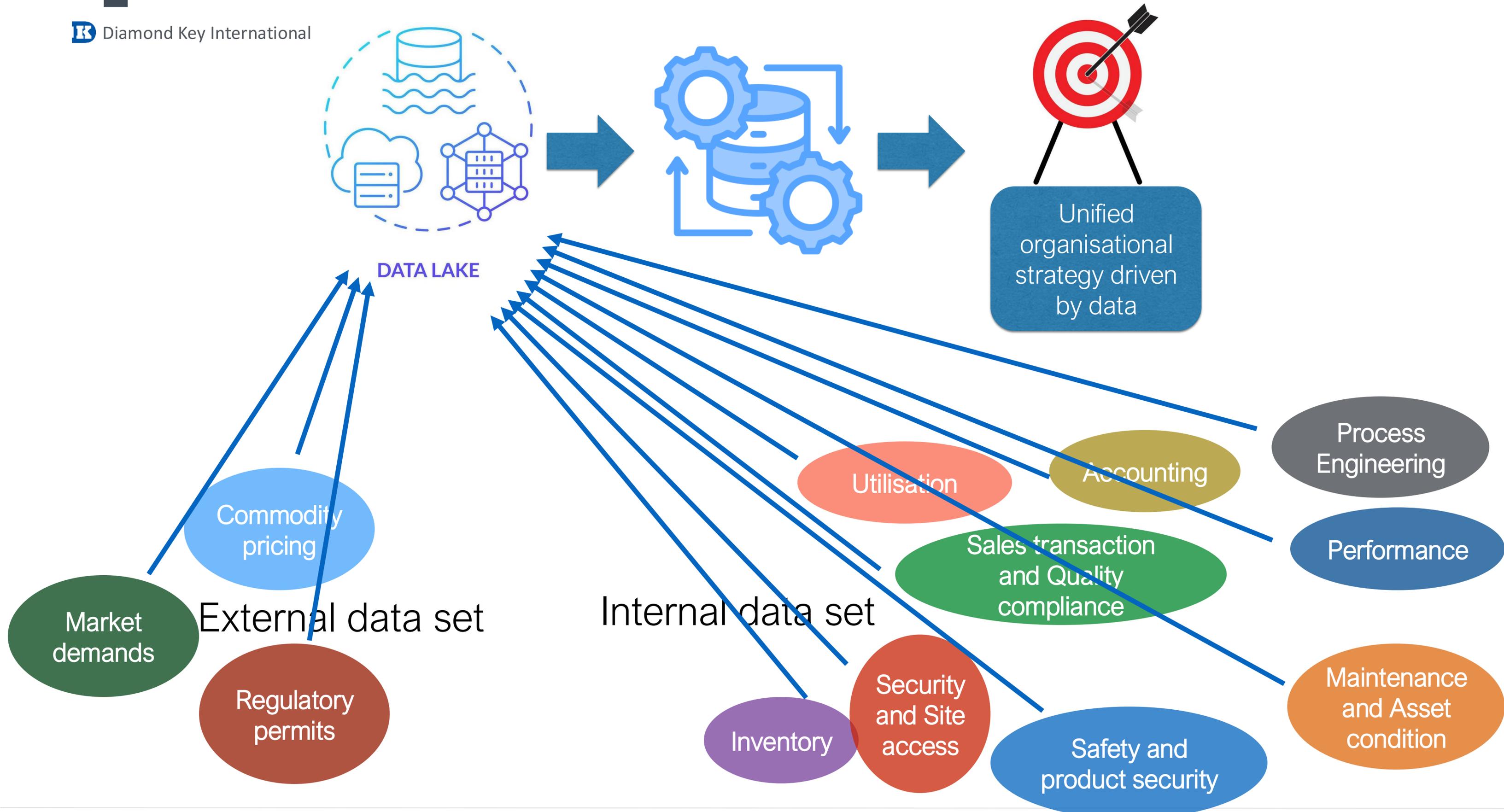
Change product combination

Reduce gate to gate times

Procedure streamlining

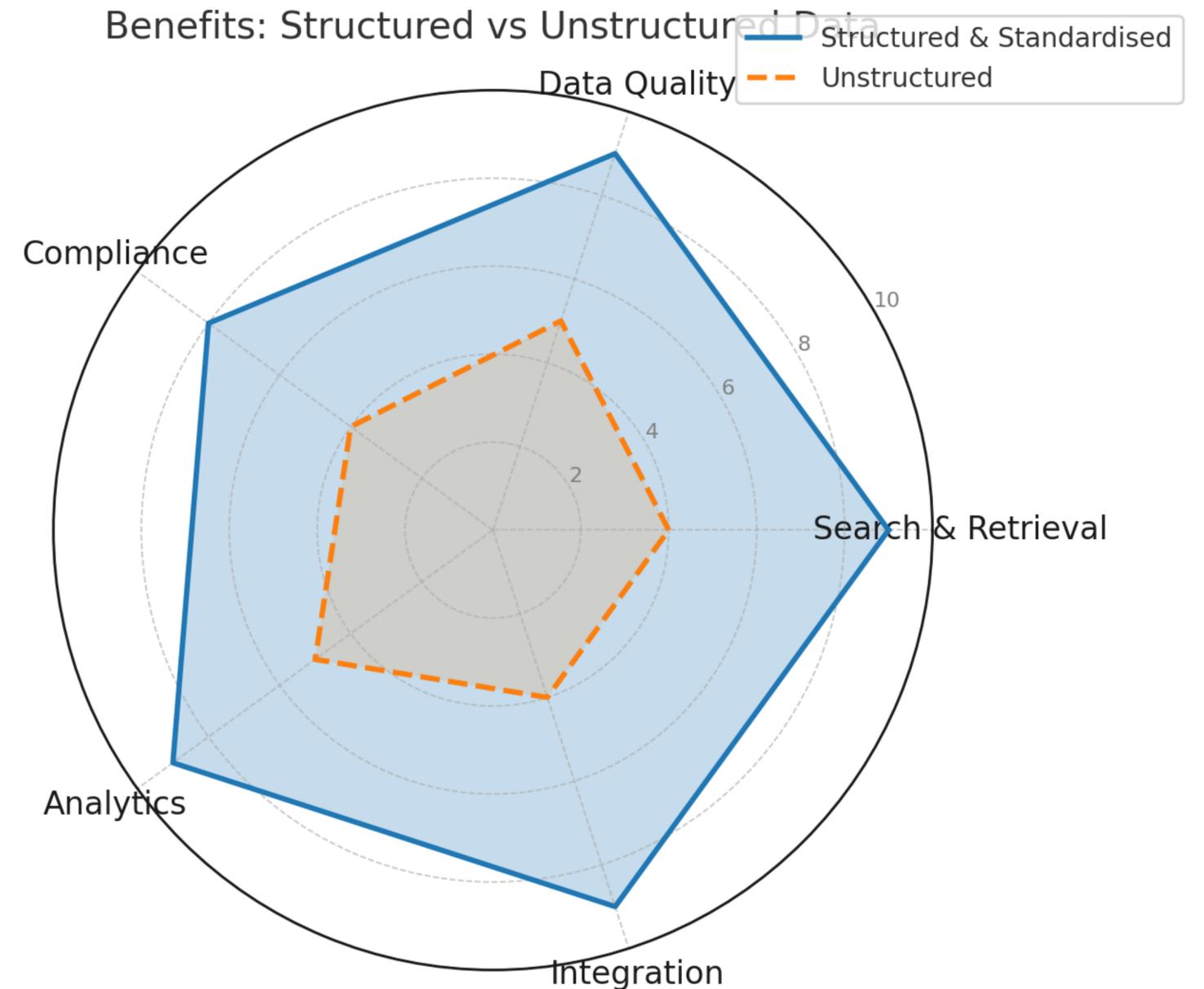
Reduce bay downtime





# Structured data is the key to unlock organizational effectiveness

- 1) Easier Search, Retrieval, and Access** - Enables tremendous collaboration across stakeholders.
- 2) Seamless System Integration** - Allows automation of performance monitoring to shorten the information chain
- 3) Faster and More Accurate Analytics** - Increase proactive response to changing conditions.
- 4) Seamless system integration**
- 5) Better compliance and governance**

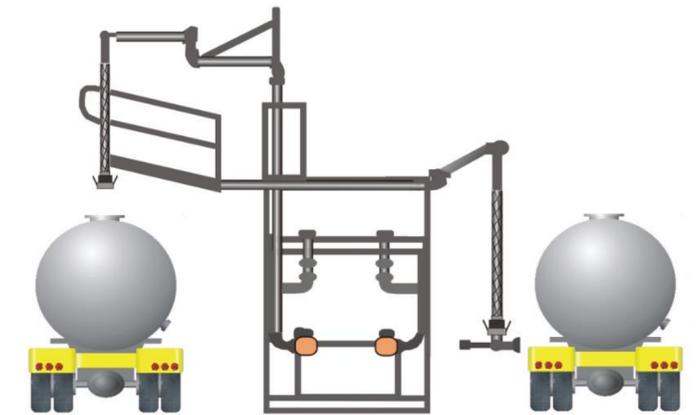


# Case Study – Safe Load Program

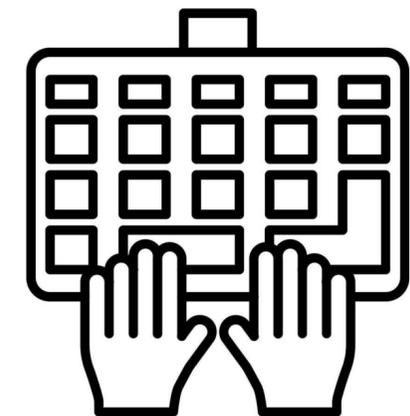
- Safe Load Program is used in Australia as a independent organisation that manages truck & driver permits to safely enter a fuel terminal or fuel depot for the purpose of loading a bulk fuel tanker.
- The SLP includes training courses, exams and inspections as a basis to grant access to filling tankers and transporting fuel.
- The SLP is a independent regulatory body which covers over 6,500 drivers and 11,000 tankers nationally.



Manual document inspection by terminal staff



Load tanker



Manual data entry

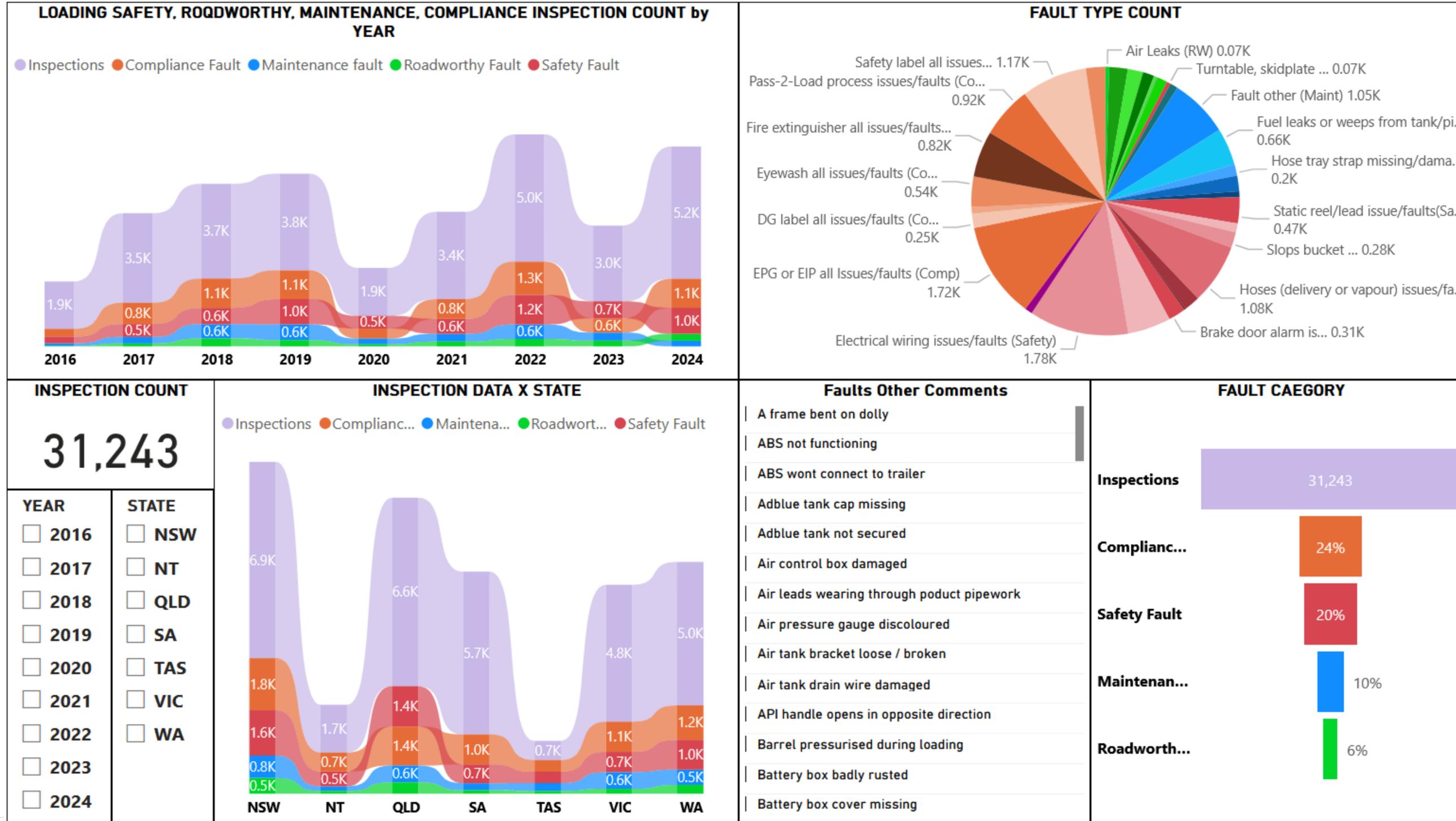
Workers permits:

- Dangerous goods licence
- Drivers licence

Vehicle permits:

- Dangerous goods licence
- Drivers licence
- Seal inspection
- Electrical inspection

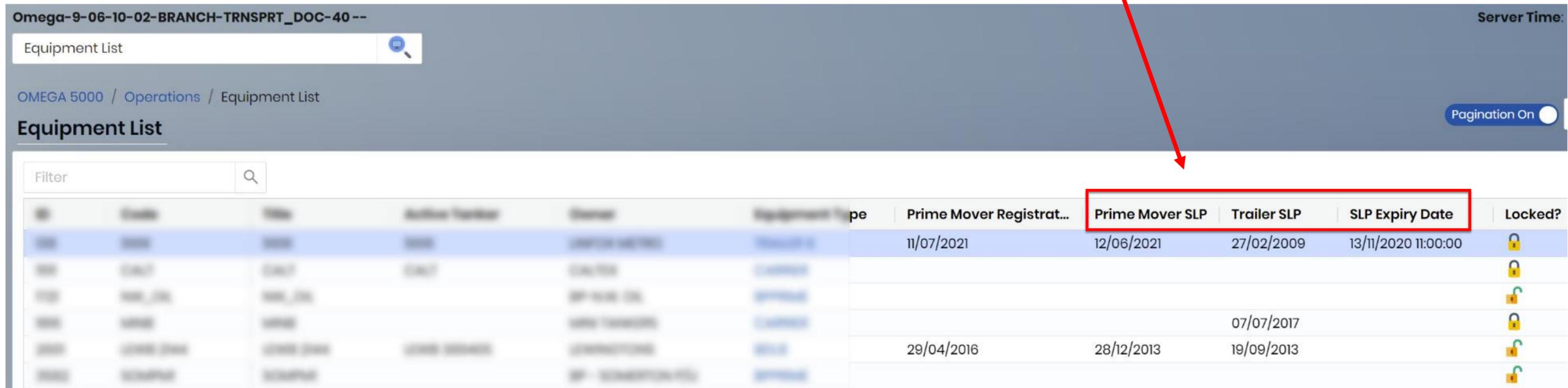
# Case Study – Safe Load Program



# TIDE SLP Benefits

- TIDE SLP Provides a link between Sites running Omega 5000 to Industry platform Safe Load Program (SLP).
- Allows SLP ID's for personnel and vehicle be synchronised between SLP & connected Omega 5000 TAS sites.
- Expiry dates a control point for load authorization.
- Expiry dates are automatically updated 24 hrs (configurable) by TIDE from SLP DB.

Omega 5000 SLP expiry dates will be automatically updated from SLP Database



Omega-9-06-10-02-BRANCH-TRNSPRT\_DOC-40 -- Server Time: [ ]

Equipment List [ ]

OMEGA 5000 / Operations / Equipment List

Equipment List [ ]

Filter [ ]

ID	Code	Site	Active Number	Name	Equipment Type	Prime Mover Registrat...	Prime Mover SLP	Trailer SLP	SLP Expiry Date	Locked?
100	100	100	100	100	100	11/07/2021	12/06/2021	27/02/2009	13/11/2020 11:00:00	
101	101	101	101	101	101					
102	102	102	102	102	102			07/07/2017		
103	103	103	103	103	103	29/04/2016	28/12/2013	19/09/2013		
104	104	104	104	104	104					

General

\* Employer

\* Code

\* Name

\* Role

\* Time Code

Department

Email

Driver Licence

SLP ID

Status

- INACTIVE
- ACTIVE
- LOCKED

Comments

Selected For All Area Locked

Lock Out

Selected Area Access Rejection

ON\_SITE  BOL  OFF SITE

1) Mandatory SLP ID field for Personnel  
VIN field for Equipment

Expiry Dates

Add New Expiry

Type Description	Expiry Date	Enabled?	Reject Authorisation?
Drivers licence	31/10/2021	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dangerous goods licence	31/10/2021	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AIP Passport	31/10/2021	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SLP Expiry Date	13/11/2020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2) Automatically updated every 24 hours

# SLP: Vehicle Management - Registrations

The screenshot shows the SLP Vehicle Management interface. At the top, there is a navigation bar with 'SLP', 'My', and 'Admin' menus. Below this, there are tabs for 'Vehicle Management' and 'Documentation'. The main heading is 'Vehicle Management', with a sub-heading: 'Here you'll be able to search, add, import & export vehicles. Click Help for more information.' A 'Search/Add Vehicles' button is present, with a note: 'Import/Export functions are in the "Actions" button'. A search bar contains 'Demo03'. Below the search bar, there are navigation arrows and '1 - 1 of 1'. A summary table shows: Registration No: Demo03, Tier: Registered For Inspection, Vehicle Type: Tanker, VIN: 09087654321. To the right, there are tabs for 'Summary', 'Details', 'Inspections', and 'Audits'. Under 'Details', there are sub-tabs: 'Vehicle Details', 'Aviation', 'Vehicle Features', 'DG', and 'Compartments'. The 'Vehicle Details' tab is active, showing a form with the following fields: Owner (Blind Freddie's Trucks Demo), Vehicle Type (Tanker), Vehicle Subtype (Triaxle Trailer), Registration No. (Demo03), Registration State (TAS), VIN (09087654321), Vehicle Fleet No. (13), Manufacturer (Omega), Build Date (01-03-2000), and Tare Weight (in KG) (6400). A red box highlights the VIN field, and a red arrow points to it from a text box on the left.

VIN  
Omega mandatory slide

# Expiry Reports Available in Omega 5000

OMEGA 5000 / Reports / On Demand Reports

## On Demand Reports

\* Supplier

ALL

\* Report

Expiry Report (Personnel)

Equipments Safefill Report

Expiry Report (Equipment)

**Expiry Report (Personnel)**

Expiry Report (Tanker)

Gate To Gate Report

ID Assignment Report

ID Media Changes Report

Meter Details Report

Remaining Days before Expiry Date

## PERSONNEL EXPIRY REPORT

COMPANY NAME	PERSON CODE	PERSON NAME	LOCK FLAG	LICENCE NUMBER	EXPIRY DATE	DAYS LEFT	ENABLE	EXPIRY TYPE
ACB GROUP AG	XYZ	XOM S	N	lic	13-Nov-20 11:00:00	EXPIRED	Y	SLP Expiry Date
ADELAIDE FUEL SC	trew	trew	N		23-Apr-20 02:15:00	EXPIRED		expiry date3
ADVANCE PETROLEUM	999988	Davdi test Person	N	234567	23-Jul-21 23:23:00	EXPIRED	Y	Drivers licence
					19-Jul-21 23:23:00	EXPIRED	Y	Dangerous goods licence
					19-Jul-21 00:00:00	EXPIRED	Y	AIP Passport
					13-Nov-20 11:00:00	EXPIRED	Y	SLP Expiry Date
					19-Jul-21 00:00:00	EXPIRED	Y	expiry date
	tst2	tst234	N	license	27-Jun-22 00:00:00	104	Y	SLP Expiry Date
AERO REFUELLERS MO	10948	GUY COLIN	Y		17-Feb-21 23:59:59	EXPIRED	Y	Dangerous goods licence
					30-Apr-20 23:59:59	EXPIRED	Y	AIP Passport
					23-Jul-21 23:59:59	EXPIRED	Y	Dangerous goods licence
	10949	GUY PETER	N		30-Jun-20 23:59:59	EXPIRED	Y	AIP Passport
	10994	GUY COLIN	Y		17-Feb-21 23:59:59	EXPIRED	Y	Dangerous goods licence
					07-Apr-20 23:59:59	EXPIRED	Y	AIP Passport
APCO AP	Red1	Red1	N		30-Apr-21 23:59:59	EXPIRED	Y	Drivers licence
					30-Apr-21 23:59:59	EXPIRED	Y	Dangerous goods licence
					30-Apr-21 23:59:59	EXPIRED	Y	AIP Passport
BP - EMERALD CARRYING	26130	BOWSER GLYNN	Y		03-Sep-17 00:00:00	EXPIRED	Y	Drivers licence
					03-Sep-17 00:00:00	EXPIRED	Y	Dangerous goods licence
					16-Aug-16 00:00:00	EXPIRED	Y	AIP Passport
BP - HILLS TANKERS	26417	TOLLEY GREG	N		10-Apr-24 23:59:59	758	Y	Dangerous goods licence
					31-Oct-20 23:59:59	EXPIRED	Y	Dangerous goods licence
					31-Jul-19 23:59:59	EXPIRED	Y	AIP Passport
					30-Apr-21 23:59:59	EXPIRED	Y	AIP Passport
BP - JUST FUEL	23167	OELDRICH	N		26-Oct-22 00:00:00	225	Y	Drivers licence
								Y

## EQUIPMENT EXPIRY REPORT

COMPANY NAME	EQUIPMENT CODE	EQUIPMENT TITLE	LOCK FLAG	EQUIPMENT TYPE	EXPIRY DATE	DAYS LEFT	ENABLE	EXPIRY TYPE
Mobil Yarraville	Generic Nom Mass	Generic Nom Mass	N	Generic Nom Mass	31-Dec-30 23:59:59	3,218	Y	Prime Mover Registration
					31-Dec-30 23:59:59	3,218	Y	Prime Mover SLP
					31-Dec-30 23:59:59	3,218	Y	Trailer SLP
	Generic Nom Vol	Generic Nom Vol	N	Generic Nom Vol	31-Dec-30 23:59:59	3,218	Y	Prime Mover Registration
					31-Dec-30 23:59:59	3,218	Y	Prime Mover SLP
					31-Dec-30 23:59:59	3,218	Y	Trailer SLP
	Generic Tanker	Generic Tanker	N	Generic Equip	31-Dec-30 23:59:59	3,218	Y	Prime Mover Registration
					31-Dec-30 23:59:59	3,218	Y	Prime Mover SLP
					31-Dec-30 23:59:59	3,218	Y	Trailer SLP
	HUGB	HUGB	N	CARRIER			Y	Prime Mover Registration
							Y	Prime Mover SLP
							Y	Trailer SLP
	SPECIAL	SPECIAL	N	SPECIAL	31-Dec-30 23:59:59	3,218	Y	Prime Mover Registration
					31-Dec-30 23:59:59	3,218	Y	Prime Mover SLP
					31-Dec-30 23:59:59	3,218	Y	Trailer SLP
cwtest6	cwtest6	N	BPTRAILER5	30-Dec-21 00:00:00	EXPIRED	Y	Prime Mover SLP	
sbtest	sbtest	N	SB_TLR5	30-Jun-20 00:00:00	EXPIRED		Prime Mover Registration	
				01-Jul-20 00:00:00	EXPIRED		Prime Mover SLP	
vintest	vintest	N	BPTRAILER4	16-Feb-22 00:00:00	EXPIRED	Y	SLP Expiry Date	
xyz	xyz	N	BPTRAILER8	30-Nov-21 23:59:59	EXPIRED	Y	Prime Mover Registration	
				29-Nov-21 23:59:59	EXPIRED	Y	SLP Expiry Date	
ADVANCE PETROLEUM	19501	19501	N	BPTRAILER6	01-Jun-17 00:00:00	EXPIRED	Y	Prime Mover Registration
					18-Nov-15 00:00:00	EXPIRED	Y	Prime Mover SLP
					18-Nov-15 00:00:00	EXPIRED	Y	Trailer SLP
	19502	19502	N	BPTRAILER7	07-Aug-16 00:00:00	EXPIRED	Y	Prime Mover Registration
					02-Feb-14 00:00:00	EXPIRED	Y	Prime Mover SLP

# SLP: Vehicle Management - Compartments

**Vehicle Management**

Here you'll be able to **search, add, import & export** vehicles  
Click [Help](#) for more information

**Search/Add Vehicles**  
Import/Export functions are in the "Actions" button

Search [History](#)

Demo03

1 - 1 of 1

Registration No: Demo03  
Tier: **Registered For Inspection**  
Vehicle Type: Tanker  
VIN: 09087654321

Summary | Details | Inspections | Audits

Vehicle Details | Aviation | Vehicle Features | DG | **Compartments**

\* indicates a field is mandatory when the vehicle goes live.

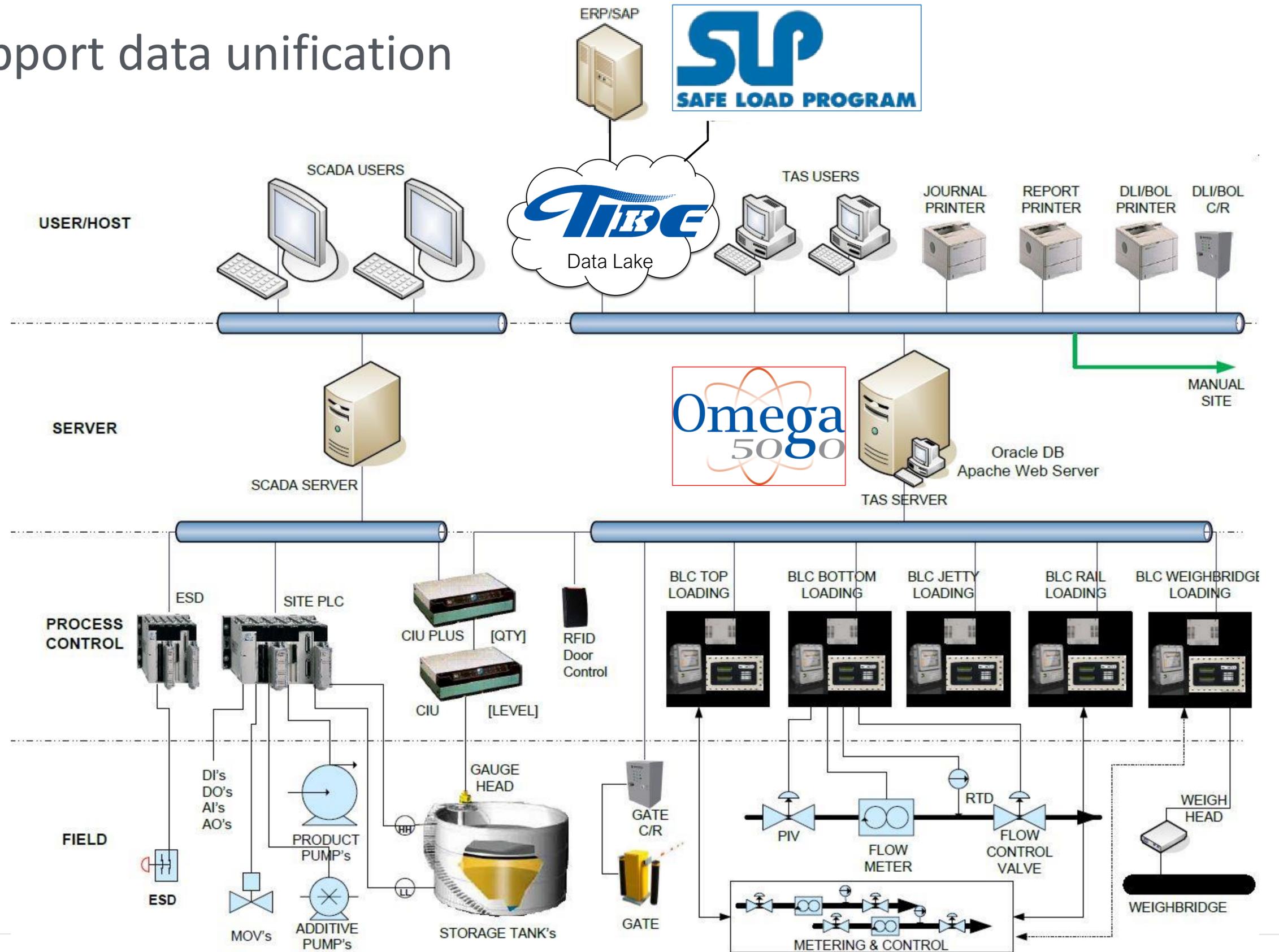
- \* Number of Dummy Compartments: 0
- \* Hatch Fill Tubes Fitted: no
- \* Hatch Dip Tubes Fitted: yes
- \* Dip & fill tube securing clips or locks fitted: yes
- Removable overfill protection probes c/w interlocks fitted: no
- \* Is the tanker dedicated to one product other than aviation?: no

Product

Number	Max Capacity	Safe Fill
1	8000	7700
2	8000	7700
3	8000	7700
4	8000	7700
5	8000	7700

Defined Overfil Qty.  
Omega can be same or less

# Architecture to support data unification



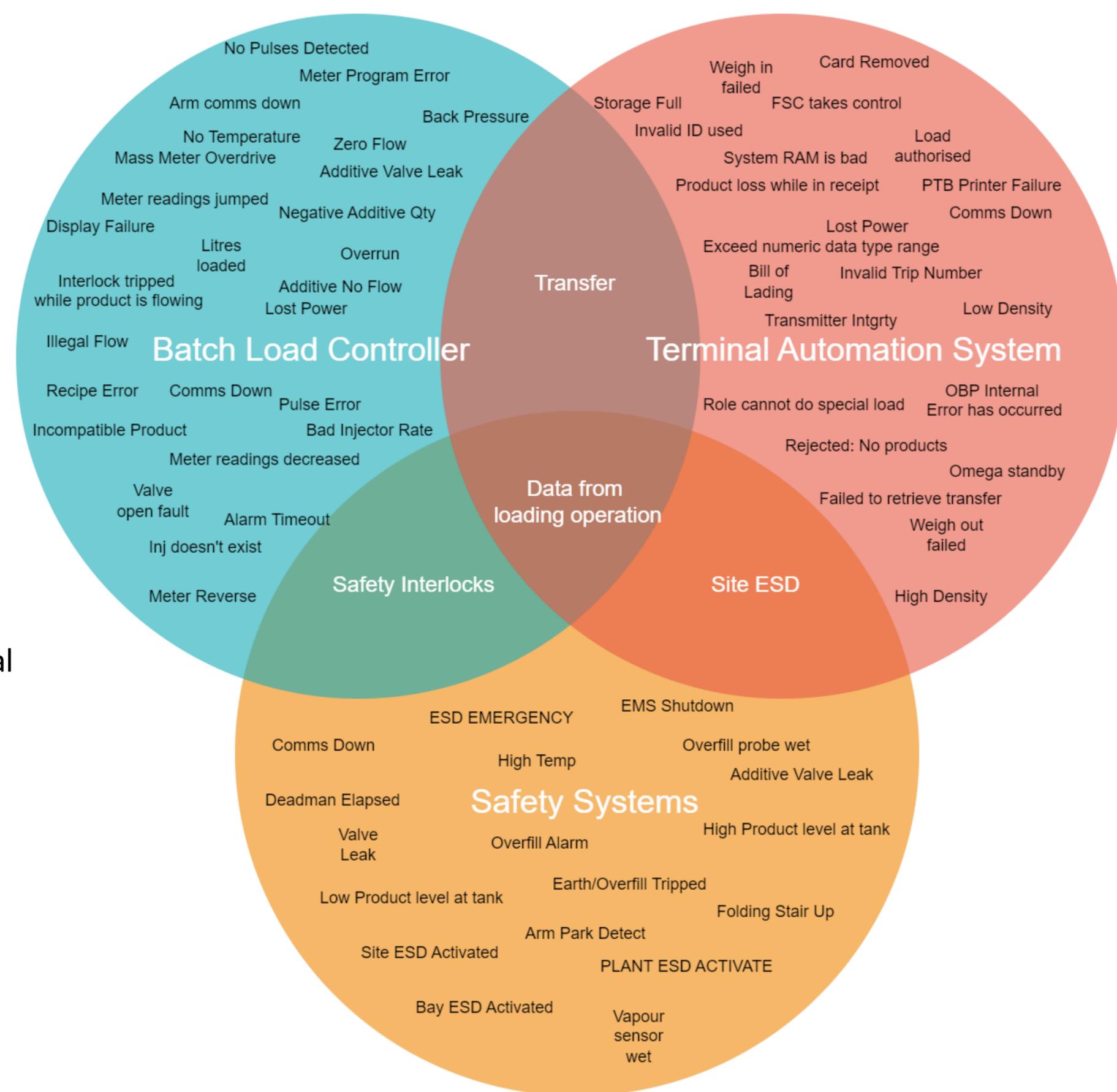
# Case Study – Transform raw data into actionable insights

Terminal data comes in many forms.

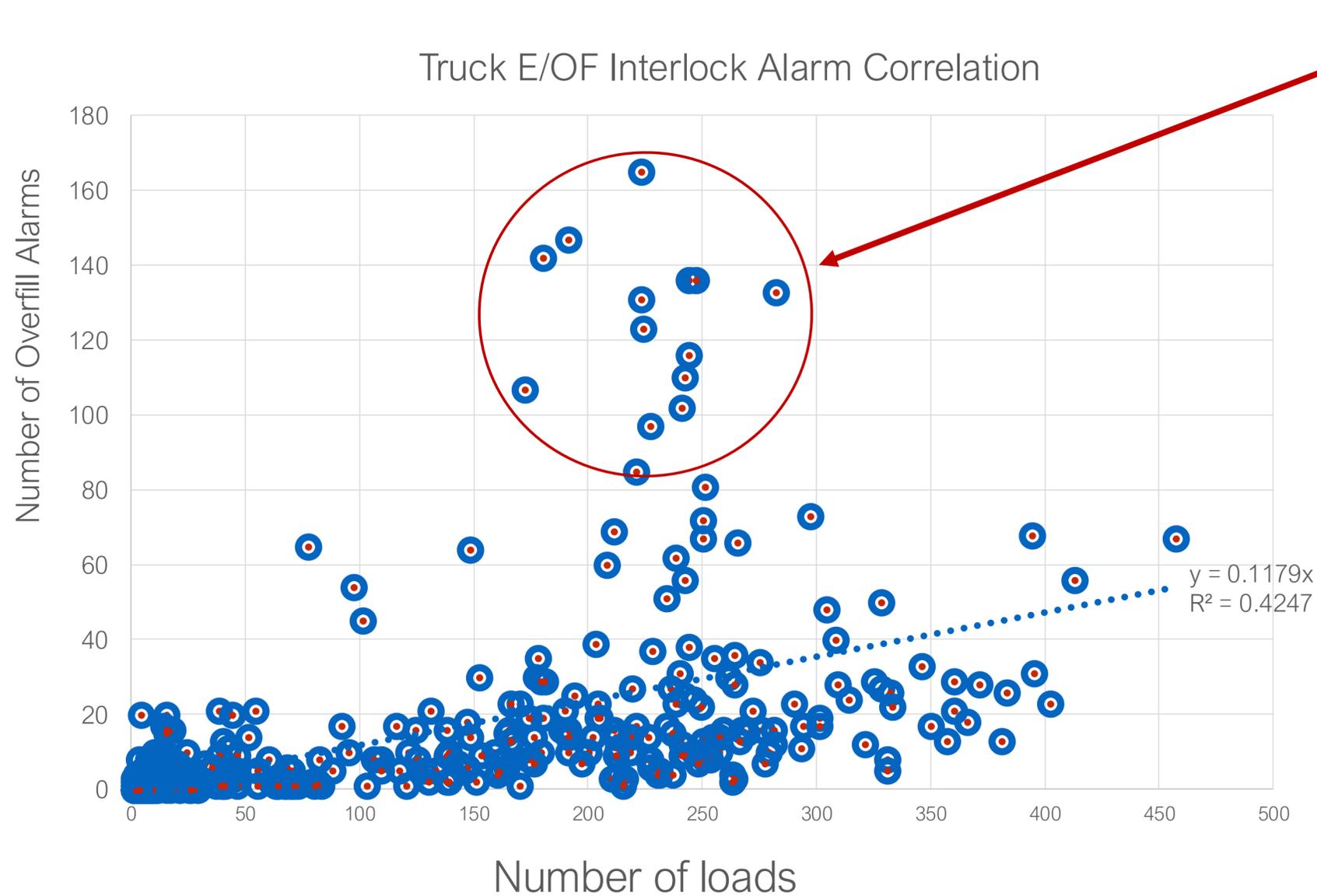
- 1) Transaction/transfer
- 2) Quality
- 3) Safety
- 4) Product Security
- 5) Systems Fault

AI can use this loading operation data to provide terminal staff with business intelligence.

- Operational analysis
- Real time performance dashboard
- Root cause analysis
- Predictive modelling



# Case Study – Using large data sets to find and resolve operational hot spots

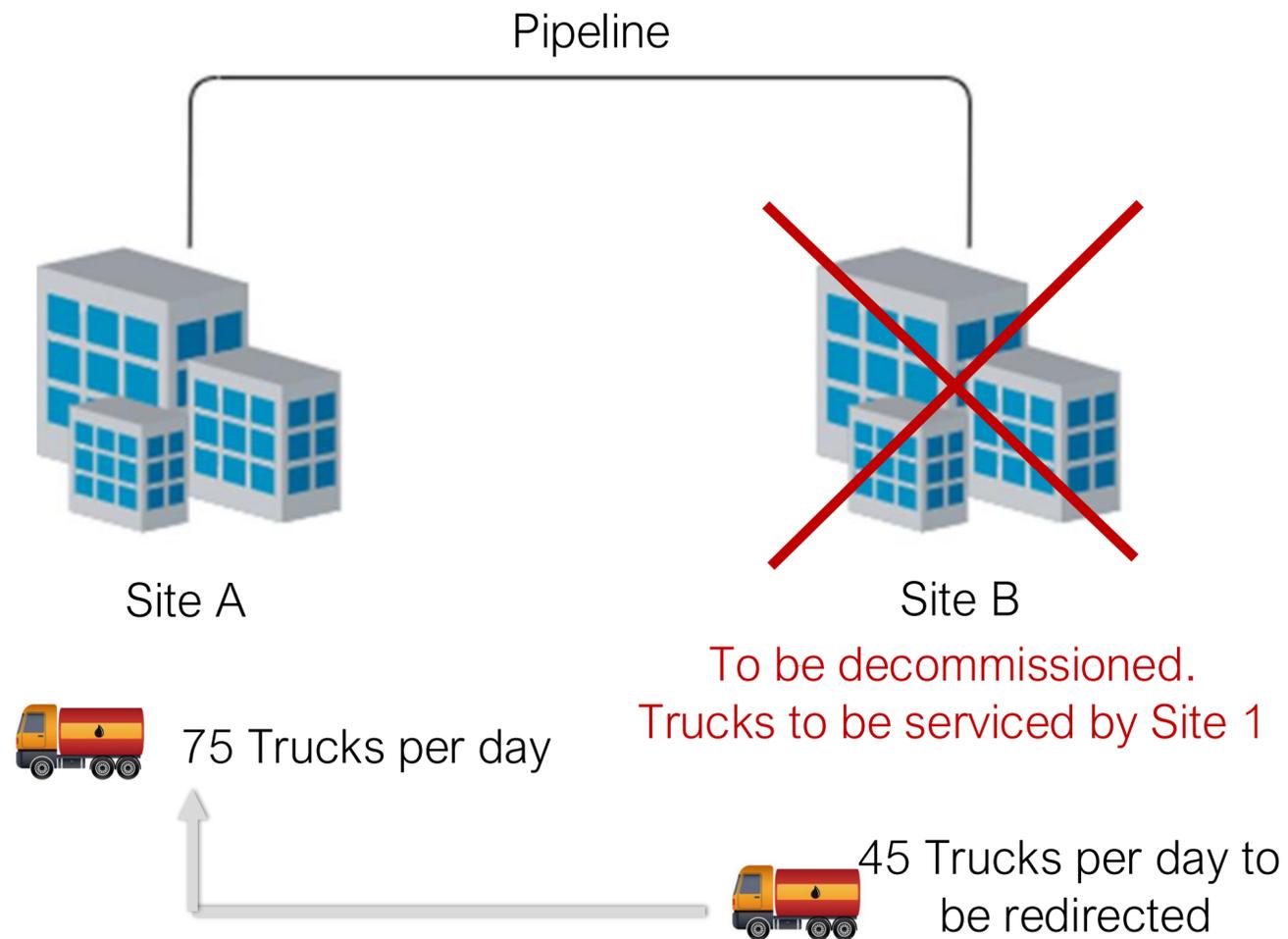


**The worst 10 offenders triggered 23% of the interlock alarms.**

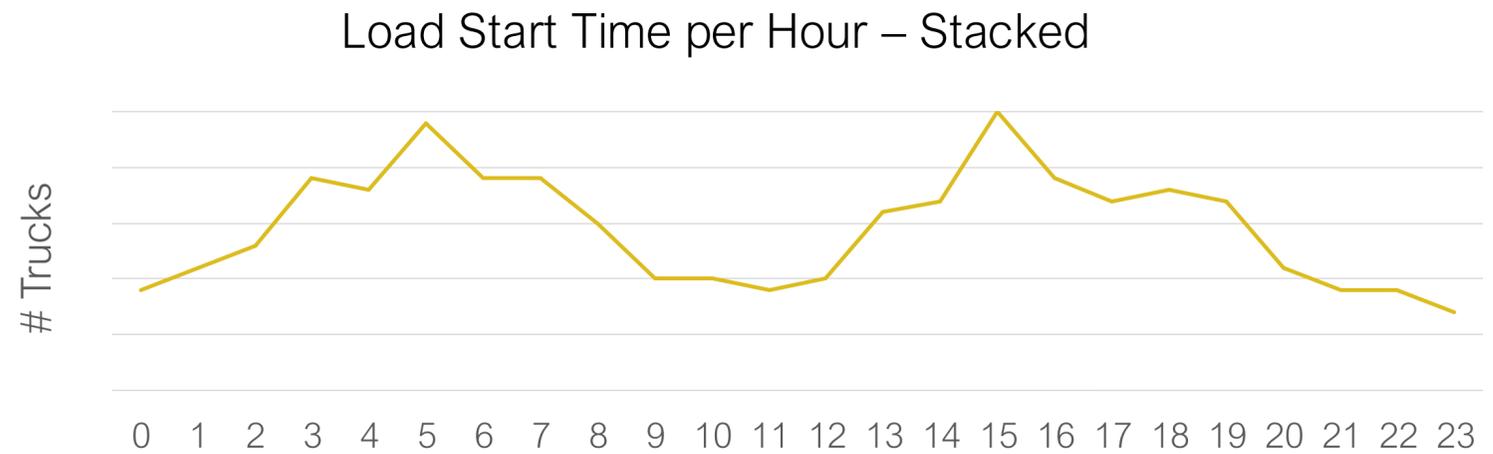
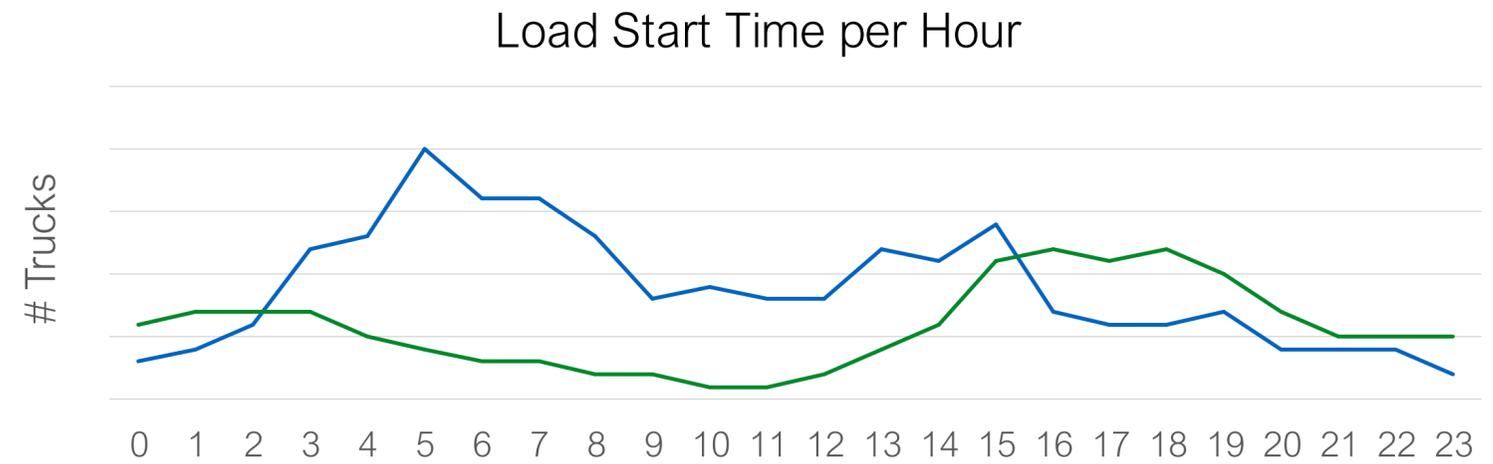
Worst Offenders (0.8% of loaded tankers)

Tanker ID	Loads	Alarm	% Effect Loads
VLC8063	223	165	39%
VLD9013	191	147	48%
NCY6913	180	142	36%
BRL9863	244	136	39%
VLC8373	247	136	30%
NCY5621	282	133	32%
VLD9613	223	131	32%
VLD8013	224	123	32%
VLD9733	244	116	33%
VLD9063	242	110	28%

# Case Study: Using data to train AI model for CAPEX reduction



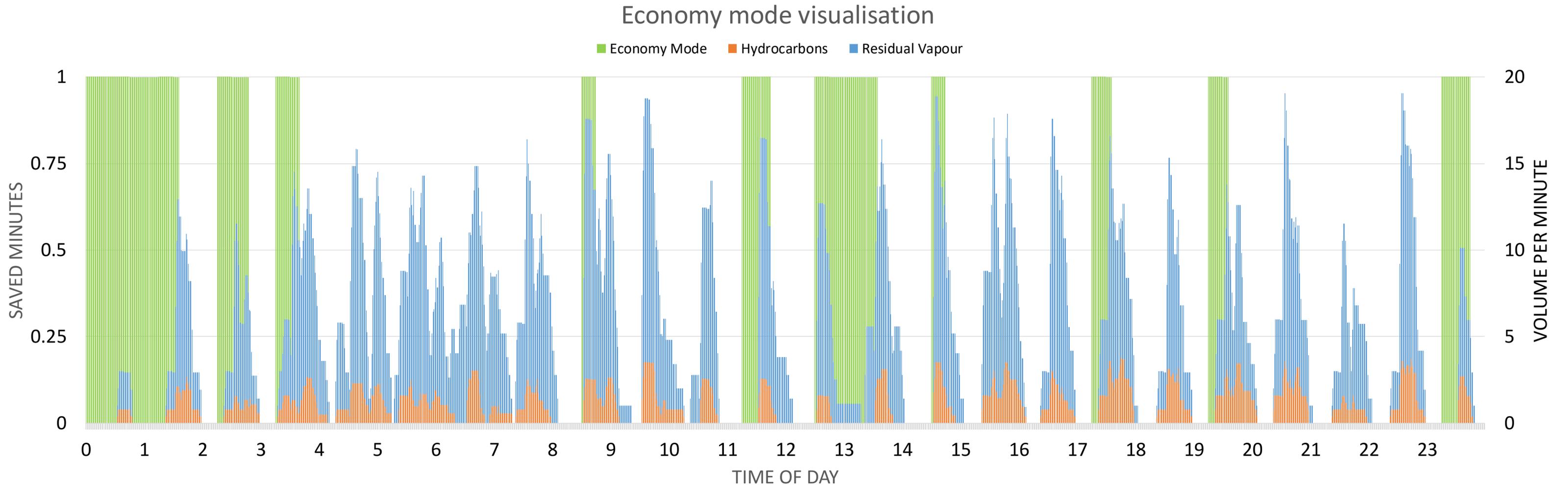
Increased truck demand for Site A.  
Predicted long queues and bay utilisation of 65%.  
Additional bay required



**Digital Twin** revealed that combined demand shows two distinct demand peaks.  
Avg bay utilisation of 36% and 2 truck max queue.  
Bay construction not required

# Case Study: Using data to train AI model for OPEX reduction

- Cross referencing SCADA data and Loading data reveals mismatch between terminal operations and VRU performance.
- Predictive modelling shows that this terminal could save power by switching off VRU between loads. This aligns VRU operations closer to loading demands (65%) resulting in a utilisation of 76%.
- Saving 24% of running costs in economy mode guarantees no increase in emissions.





# Diamond Key International

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Rowville, Victoria 3178  
AUSTRALIA

## Regional Office Locations

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Sydney, Australia  
Beijing, China

Guangzhou, China  
Kuala Lumpur, Malaysia  
Bangkok, Thailand

Tunis, Tunisia  
Jakarta, Indonesia  
Manila, Philippines

