



Ship Data Exchange protocol

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The non-profit Shipdex organization's executive members



(Technical manager)



KONGSBERG



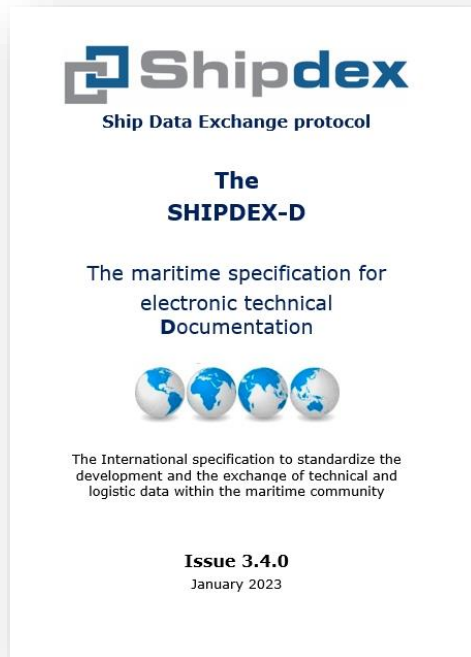
(Chairman)



Shipdex Data Exchange protocol focuses to support maritime community in producing and exchanging structured and standardized data in electronic format.

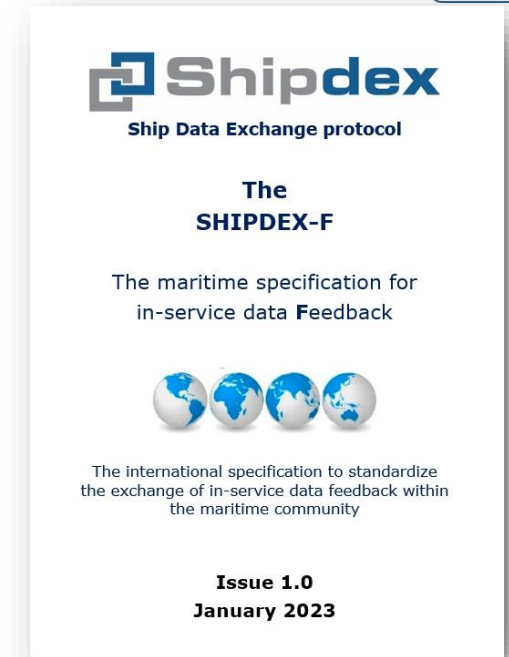
Today, Shipdex protocol is composed of:



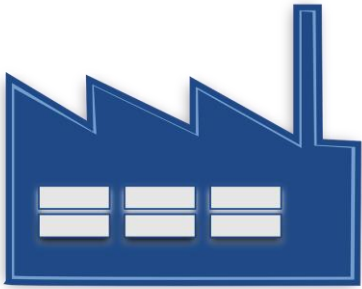


The scope of Shipdex protocol is to give an effective answer to the following main question

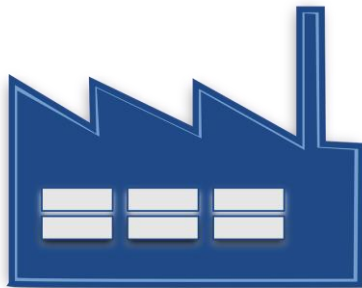
Can we improve the Ship Life Cycle management exchanging structured and standardized electronic information ?



Some of the most important technical data from providers to customers



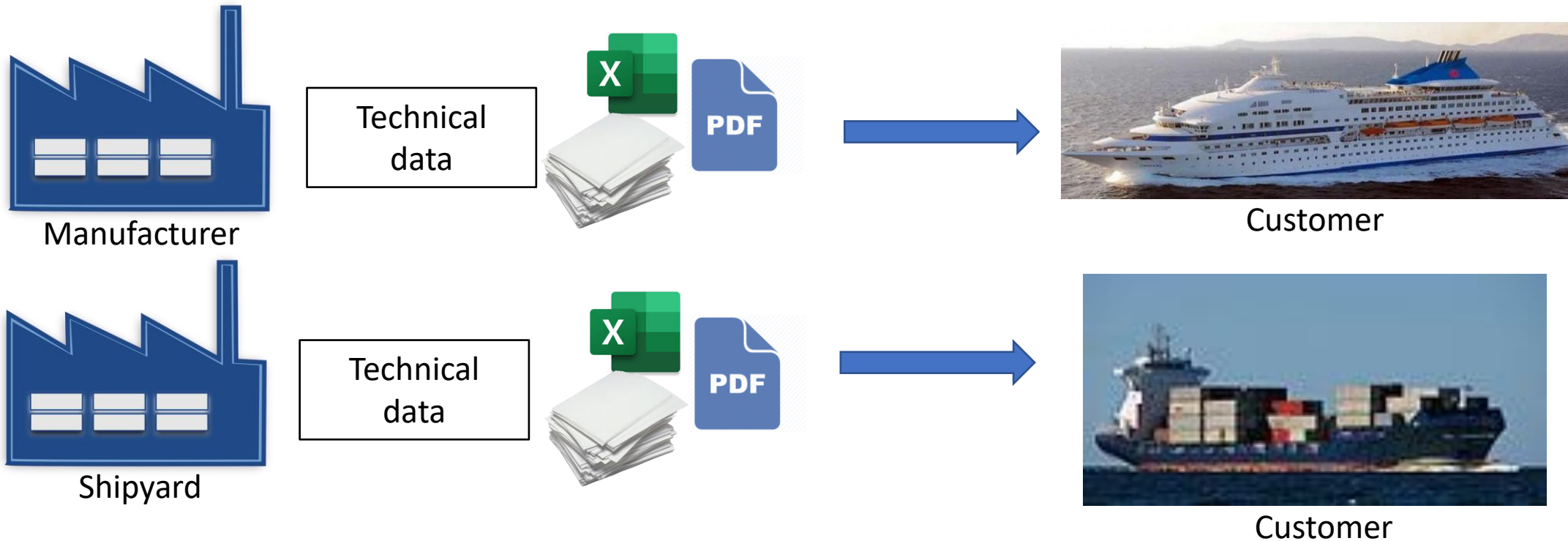
Manufacturers



Shipyards

- ☐ Drawings
- ☐ Product (engine, pump, etc) composition (breakdown)
- ☐ How to operate the product
- ☐ How to maintain the whole product and its physical components:
 - Troubleshooting
 - Preventive maintenance
 - Corrective maintenance
 - Required resources (personnel, spare parts, consumables, etc.)
 - Spare parts, support equipment and consumables catalogues
- ☐ Service Letter/Service Bulletin

The current way to provide technical data to customers



Criticalities:

- The data exchange is done providing “unstructured pages of information” instead of “structured electronic information”.
- Every provider has different information structure and quality, different layouts and chapter structures
- Every customer cannot reuse or import the data automatically into company repositories/databases/IT systems

This is just DATA DIGITIZATION

Some of the most important technical data from customers to providers (in-service data feedback)



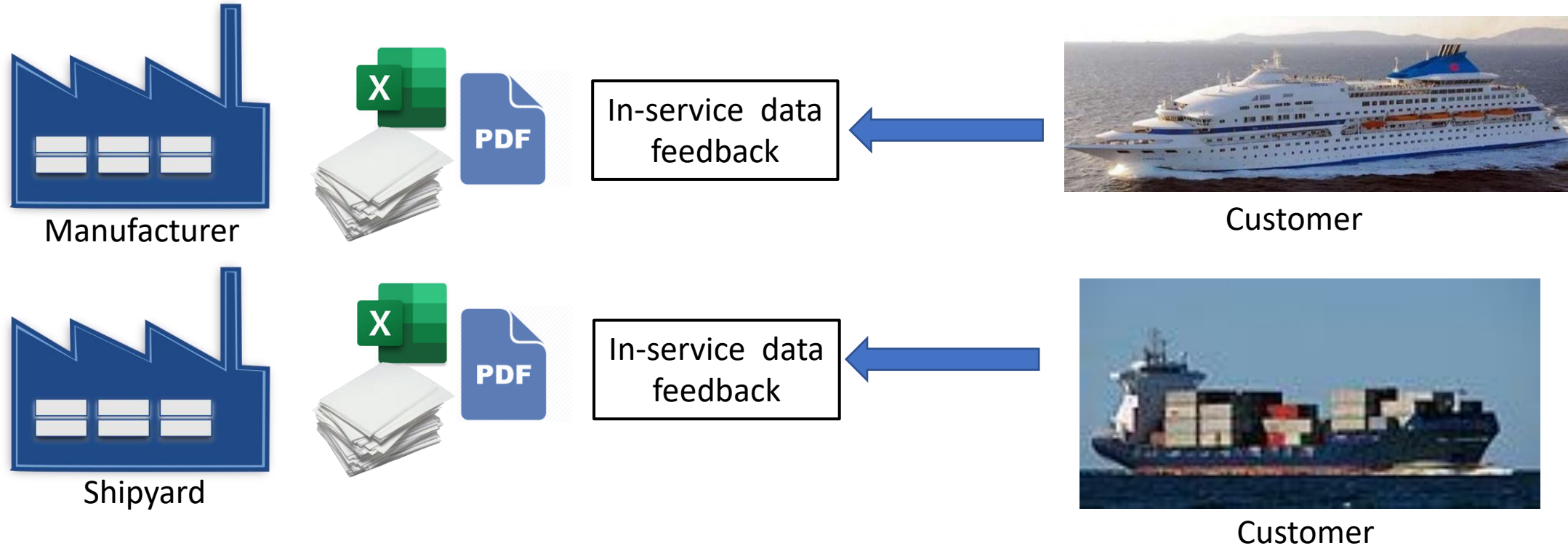
Customer



Customer

- ☐ Product failures
- ☐ Maintenance tasks performed
- ☐ Spare parts used
- ☐ Product performances in different scenarios
- ☐ CO2 emissions
- ☐ Suggestions to reduce CO2 emissions

The current way to provide in-service data feedback to providers

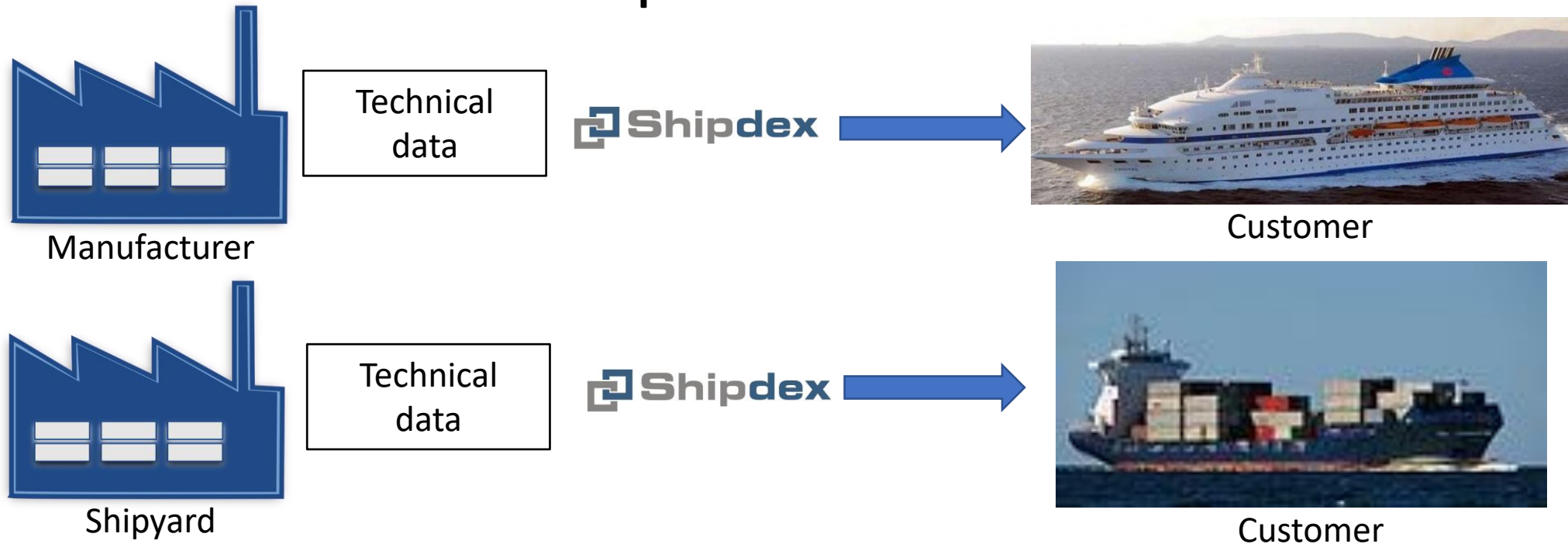


Criticalities:

- The data exchange is done providing “unstructured pages of information” instead of “structured electronic information”.
- The data exchange is done using a provider/customer “proprietary” template
- Providers and Customers must develop their own way to produce/export/import data feedback

This is just DATA DIGITIZATION

The Shipdex solution

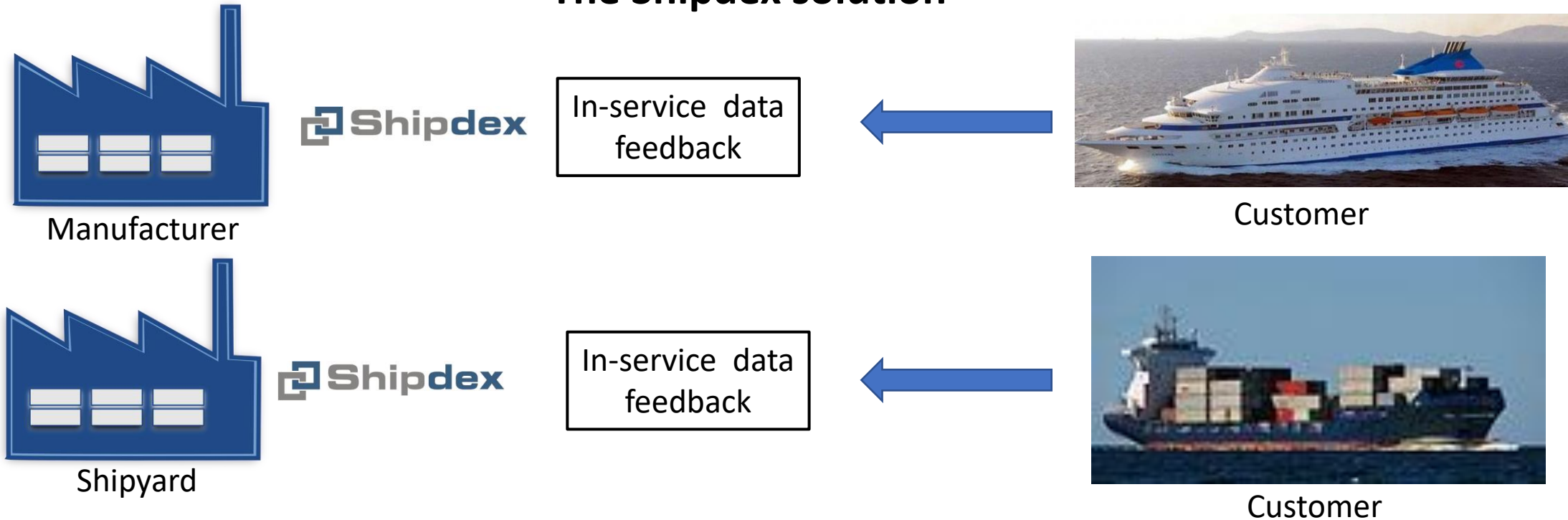


Advantages:

- The data exchange is done providing “structured and standardized electronic information” instead of “unstructured pages of information”
- Information is separated from layout that can be defined/changed later by every single user without affecting the data
- Same data structure and quality.
- NO need to retype the information into IT systems (ERP, CMMS, etc). Structured electronic information can be imported into any IT system instead of retyping the data

This is DATA DIGITALIZATION

The Shipdex solution

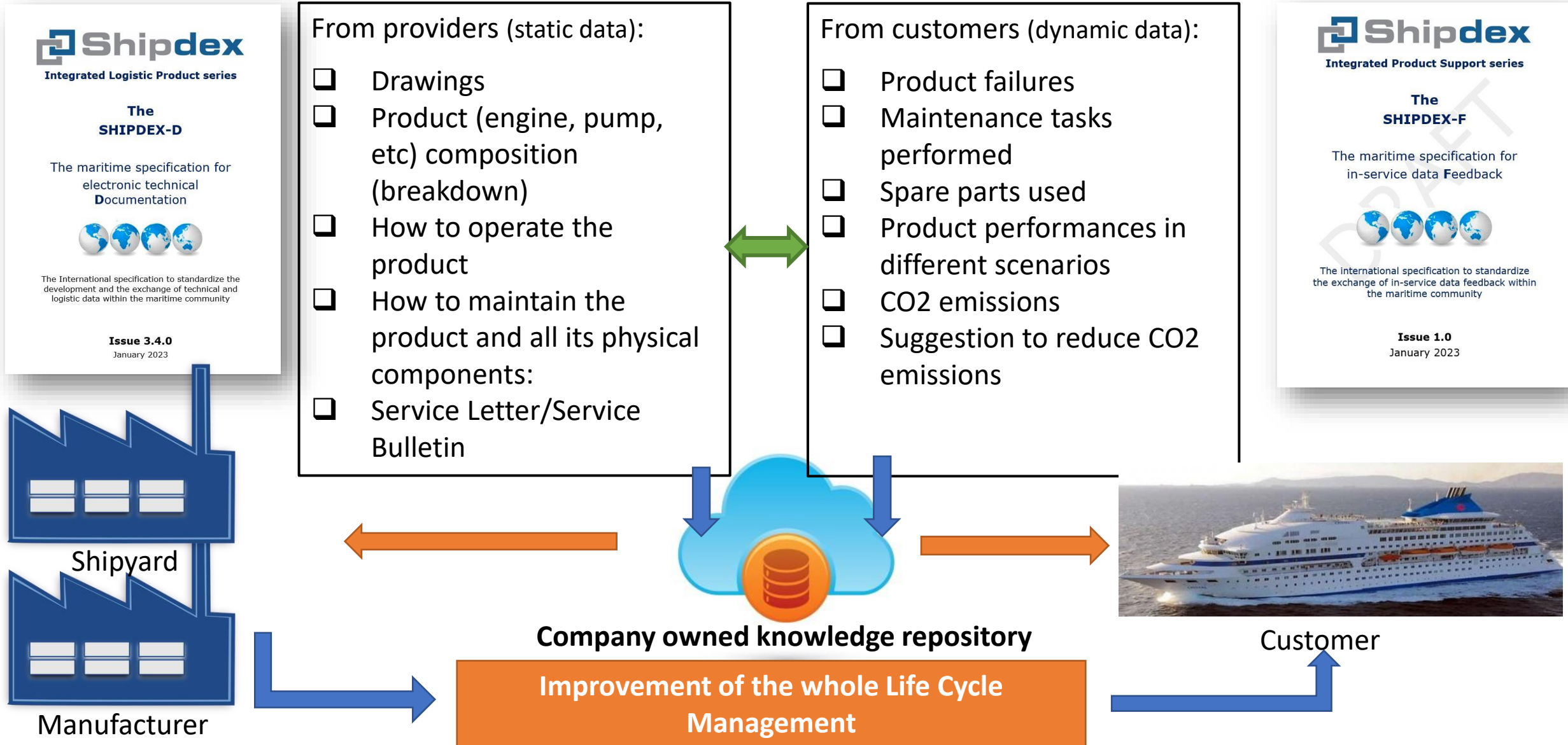


Advantages:

- Every customer provides its manufacturers with in-service data feedback in a structured and standardized electronic format
- Every provider can import in-service data feedback into its own IT systems
- Structured and standardized data can be exported/imported into any kind of IT system instead of retyping activities
- providers can use the information to improve equipment and maintenance plan quality

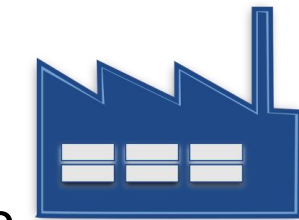
This is DATA DIGITALIZATION

Data exchange within maritime community in Shipdex format

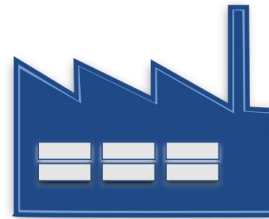


Improvement of the whole Life Cycle Management

- Improvement of the product by modifications and retrofit activities
- Enhancement of the maintenance and support concept
- Cheaper products and services
- Improved safety
- Environmental benefits
- Maritime Authorities wider involvement



Manufacturers



Shipyards



Customers



Maritime Authorities
and Class societies

PRODUCT LONGER AND CHEAPER LIFE

Shipdex Viewer

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File • Content • Comments • Utility • Window • Help •

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 - PGARBARINO-AAAD
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 - MU 200-315 LE Ballast/bilge Pump - Illustrated parts**
 - MU 300-300 LDS LT Cooling FW Pump - Illustrated parts
 - MU 350-315 LSH Main cooling SW Pump - Illustrated parts
 - MU 80-250 LP Emergency Fire Pump - Illustrated parts
 - MU 125-250 L HT Cooling FW Pump - Illustrated parts
 - MU 80-250 LE Main Fire/General service Pump - Illustrated p
 - INFOSET_MAINTENANCE_PROCEDURE
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 - MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Mair
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MU 200-315 LE Ballast/bilge Pump - Illustrated parts

| Pos | Ind | CAGE | Part Number / NSN | Description | NP | HQTY | RQTY | MAVI | ICY | Add Info | CN |
|-----|-----|-------|---------------------------|---|----|---------|------|------|-----|----------|----|
| 000 | 1 | A0984 | 044-20031PBJ8ZXXX13015207 | Ballast/Bilge Pump | | 1 Piece | | | ... | | |
| 001 | 2 | A0984 | 020-20031PBJ3XXXX13015207 | Pump MU 200-315 L | | 1 Piece | | | ... | | |
| 002 | 3 | A0984 | 1122LBA6QA01A | Pump casing without feet | | 1 Piece | | | ... | 1122 | |
| 003 | 3 | A0984 | 1225UBA0601A | Mechanical seal casing cover | | 1 Piece | | | ... | 1225 | |
| 004 | 3 | A0984 | 1521LBA8P8P01A | Casing wear ring,suction side | | 1 Piece | | | ... | 1510 | |
| 005 | 3 | A0984 | 1521LBA060601A | Wear ring | | 1 Piece | | | ... | 1521 | |
| 006 | 3 | A0984 | 2111UAS0601A | Mechanical seal pump shaft | | 1 Piece | | | ... | 2111 | |
| 007 | 3 | A0984 | 2200UBA6Q2950A | Impeller | | 1 Piece | | | ... | 2200 | |
| 008 | 3 | A0984 | 3011-6313-2RS | Radial ball bearing | | 1 Piece | | | ... | 3011 | |
| 009 | 3 | A0984 | 3017-3313 | Double row angular contact ball bearing | | 1 Piece | | | ... | 3017 | |
| 010 | 3 | A0984 | 3130UGH0601A | Bearing bracket | | 1 Piece | | | ... | 3130 | |
| 011 | 3 | A0984 | 3160LFE6Q0N82501A | Motor stool | | 1 Piece | | | ... | 3160 | |
| 012 | 3 | A0984 | 3170LFE6Q01B | Pump stool | | 2 Piece | | | ... | 3170 | |

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Shipdex Viewer

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A0984#ATST#MUpumps#2-0

INFOSET_DESCRIPTION_OPERATION

INFOSET_IPD

PGARBARINO-AAAD

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INFOSET_MAINTENANCE_PROCEDURE

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MU Pump - Grease

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MU 150-250 LE Emergency Bilge Pump - PUMP - Preventive Mainten

MU 200-315 LE Ballast/bilge Pump - Lubrication

MU 200-315 LE Ballast/bilge Pump - MOTOR - Preventive Maintenance

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MU 200-315 LE Ballast/bilge Pump - MOTOR - Preventive Maintenance

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (5

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (2

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (3

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (5

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (1

MU 200-315 LE Ballast/bilge Pump - PUMP - Preventive Maintenance (2

MU 300-300 LDS LT Cooling FW Pump - Lubrication

MU 300-300 LDS LT Cooling FW Pump - MOTOR - Preventive Mainteni

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MU 350-315 LDSH Main cooling SW Pump - Lubrication

MU 350-315 LDSH Main cooling SW Pump - MOTOR - Preventive Maint

MU 350-315 LDSH Main cooling SW Pump - MOTOR - Preventive Maint

MU 300-300 LDS LT Cooling FW Pump - PUMP - Preventive Maintenance (5000)

Periodicity

Description

Working hours5000

Support Equipment

| Description | CAGE | Part Number/CSN | QTY |
|-------------|------|-----------------|-----|
| None | | | |

Supplies


| Description | CAGE | Part Number/CSN | QTY |
|-------------|-------|-----------------|-------|
| Grease | A0984 | 00001 | pc AR |

Spare Parts

| Description | CAGE | Part Number/CSN | QTY |
|-------------|------|-----------------|-----|
| None | | | |

SAFETY PRECAUTIONS

WARNING



AVOID GREASE CONTACT WITH SKIN AND EYES.

CAUTION

If bearing temperature is below 50 °C.

PRELIMINARY OPERATIONS

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Planning

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Selection
☒ Tasks ☐ Operations
 th01 | Working hours; th03 | Months; th98 | One Time - after first worki...

Task Frequency
 500 Working hours

| Component Name | Task Name | Type |
|--|------------------------------|------|
| MU 150-250 LE Emergency Bilge Pum... | Preventive Maintenance (500) | Task |
| MU 150-250 LE Emergency Bilge Pum... | Preventive Maintenance (500) | Task |
| MU 200-315 LE Ballast/bilge Pump - M... | Preventive Maintenance (500) | Task |
| MU 200-315 LE Ballast/bilge Pump - P... | Preventive Maintenance (500) | Task |
| MU 300-300 LDS LT Cooling FW Pump... | Preventive Maintenance (500) | Task |
| MU 300-300 LDS LT Cooling FW Pump... | Preventive Maintenance (500) | Task |
| MU 350-315 LDSH Main cooling SW Pu... | Preventive Maintenance (500) | Task |
| MU 350-315 LDSH Main cooling SW Pu... | Preventive Maintenance (500) | Task |
| MU 80-250 LP Emergency Fire Pump - ... | Preventive Maintenance (500) | Task |
| MU 80-250 LP Emergency Fire Pump - ... | Preventive Maintenance (500) | Task |
| MU 125-250 L HT Cooling FW Pump - ... | Preventive Maintenance (500) | Task |
| MU 125-250 L HT Cooling FW Pump - ... | Preventive Maintenance (500) | Task |
| MU 80-250 LE Main Fire/General servic... | Preventive Maintenance (500) | Task |
| MU 80-250 LE Main Fire/General servic... | Preventive Maintenance (500) | Task |

2500 Working hours

| Component Name | Task Name | Type |
|--|-------------------------------|------|
| MU 150-250 LE Emergency Bilge Pum... | Preventive Maintenance (2500) | Task |
| MU 150-250 LE Emergency Bilge Pum... | Preventive Maintenance (2500) | Task |
| MU 200-315 LE Ballast/bilge Pump - M... | Preventive Maintenance (2500) | Task |
| MU 200-315 LE Ballast/bilge Pump - P... | Preventive Maintenance (2500) | Task |
| MU 300-300 LDS LT Cooling FW Pump... | Preventive Maintenance (2500) | Task |
| MU 300-300 LDS LT Cooling FW Pump... | Preventive Maintenance (2500) | Task |
| MU 350-315 LDSH Main cooling SW Pu... | Preventive Maintenance (2500) | Task |
| MU 350-315 LDSH Main cooling SW Pu... | Preventive Maintenance (2500) | Task |
| MU 80-250 LP Emergency Fire Pump - ... | Preventive Maintenance (2500) | Task |
| MU 80-250 LP Emergency Fire Pump - ... | Preventive Maintenance (2500) | Task |
| MU 125-250 L HT Cooling FW Pump - ... | Preventive Maintenance (2500) | Task |
| MU 125-250 L HT Cooling FW Pump - ... | Preventive Maintenance (2500) | Task |
| MU 80-250 LE Main Fire/General servic... | Preventive Maintenance (2500) | Task |
| MU 80-250 LE Main Fire/General servic... | Preventive Maintenance (2500) | Task |

3000 Working hours
 5000 Working hours
 10000 Working hours
 20000 Working hours
 6 Months
 12 Months
 One Time - after first working hours 300
 0 Unscheduled

MU 200-315 LE Ballast/bilge Pump - MOTOR - Preventive Maintenance (2500)

Shipdex

MU 200-315 LE Ballast/bilge Pump - MOTOR - Preventive Maintenance (2500)
 Data Module Issue:001, Type:new,Date:28-08-2013

Periodicity

Description
 Working hours 2500

Support Equipment

| Description | CAGE | Part Number/CSN | QTY |
|-------------|------|-----------------|------|
| Ohmmeter | | 00009 | pc 1 |

Supplies


| Description | CAGE | Part Number/CSN | QTY |
|-------------|------|-----------------|-----|
| None | | | |

Spare Parts

| Description | CAGE | Part Number/CSN | QTY |
|-------------|------|-----------------|-----|
| None | | | |

SAFETY PRECAUTIONS

CAUTION



Stop the pump, switch off automatic start, interrupt motor feeding.

Table of Content Search Planning

A large, 3D, red, blocky font spelling out the word 'THANKS'.

for your kind attention

For any other question contact me at
technical.manager@shipdex.org
mv@shipdexconsulting.com