

**BIBA**

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Industrial Solutions and Services



## Abschlussveranstaltung des MarLife Verbundforschungsprojekts

Bremen, 26. November 2008

## Szenario Komponentenaustausch

B. Fehlhaber

N. Homburg

U. Eberwien

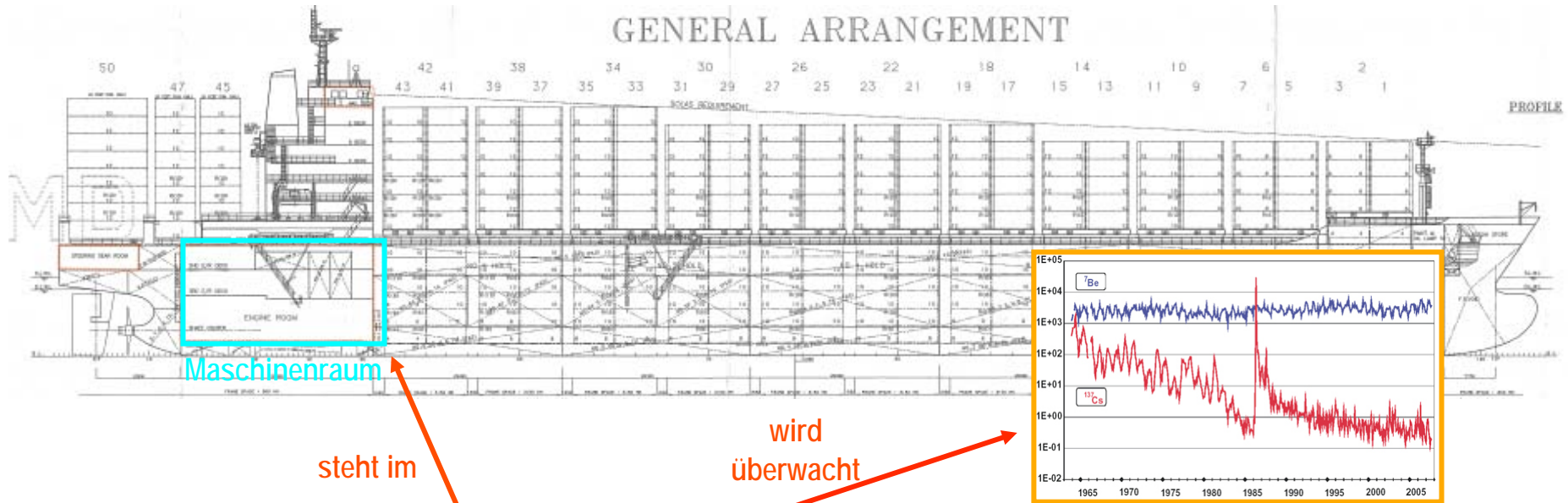
*Ms Logistik Systeme*

*BIBA*

*Germanischer Lloyd*

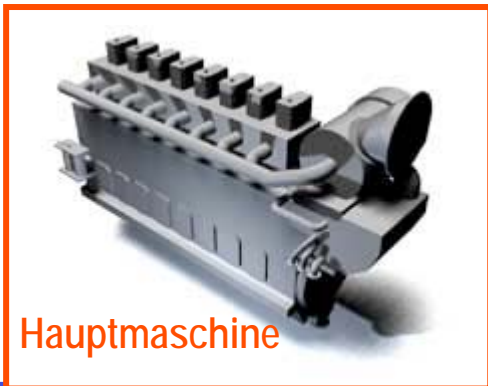


# MS MarLife II - Gesamtübersicht



steht im

wird überwacht



Hauptmaschine

enthält Schadstoffe

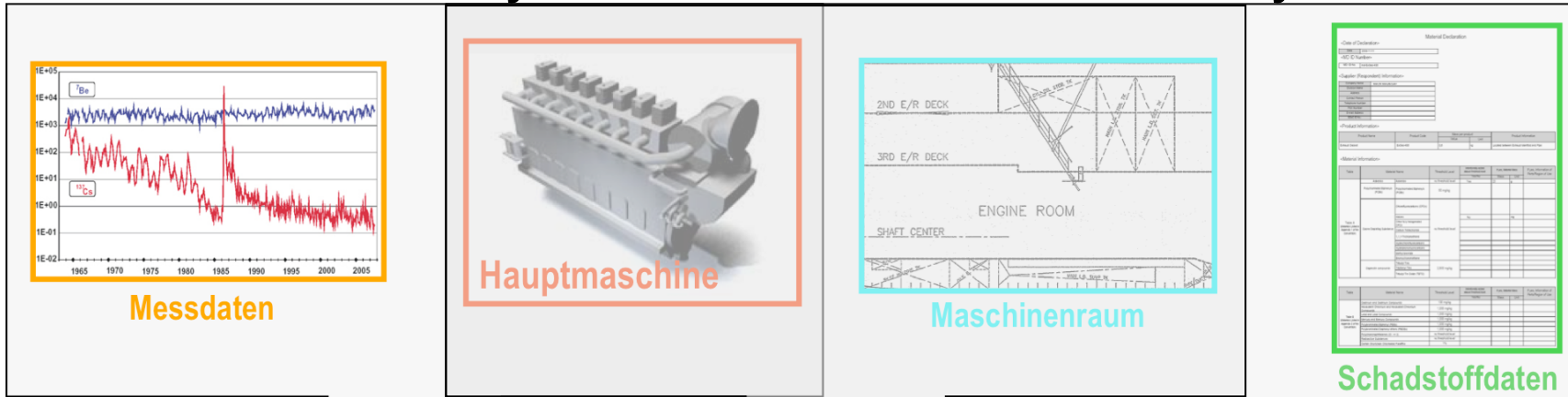
**Material Declaration**

-Date of Declaration: 2008-11-26  
 -MSE ID Number: 10000000000000000000  
 -Supplier (Respondent) Information:  
 -Product Information:  
 -Material Information:

Material Name	Threatened Substances	Substances of Concern	Substances of Concern	Substances of Concern	Substances of Concern
...	...	...	...	...	...

*Materialdeklaration*

# MS MarLife II - Datensynchronisation PMS / LCM-Leitsystem / HMMS

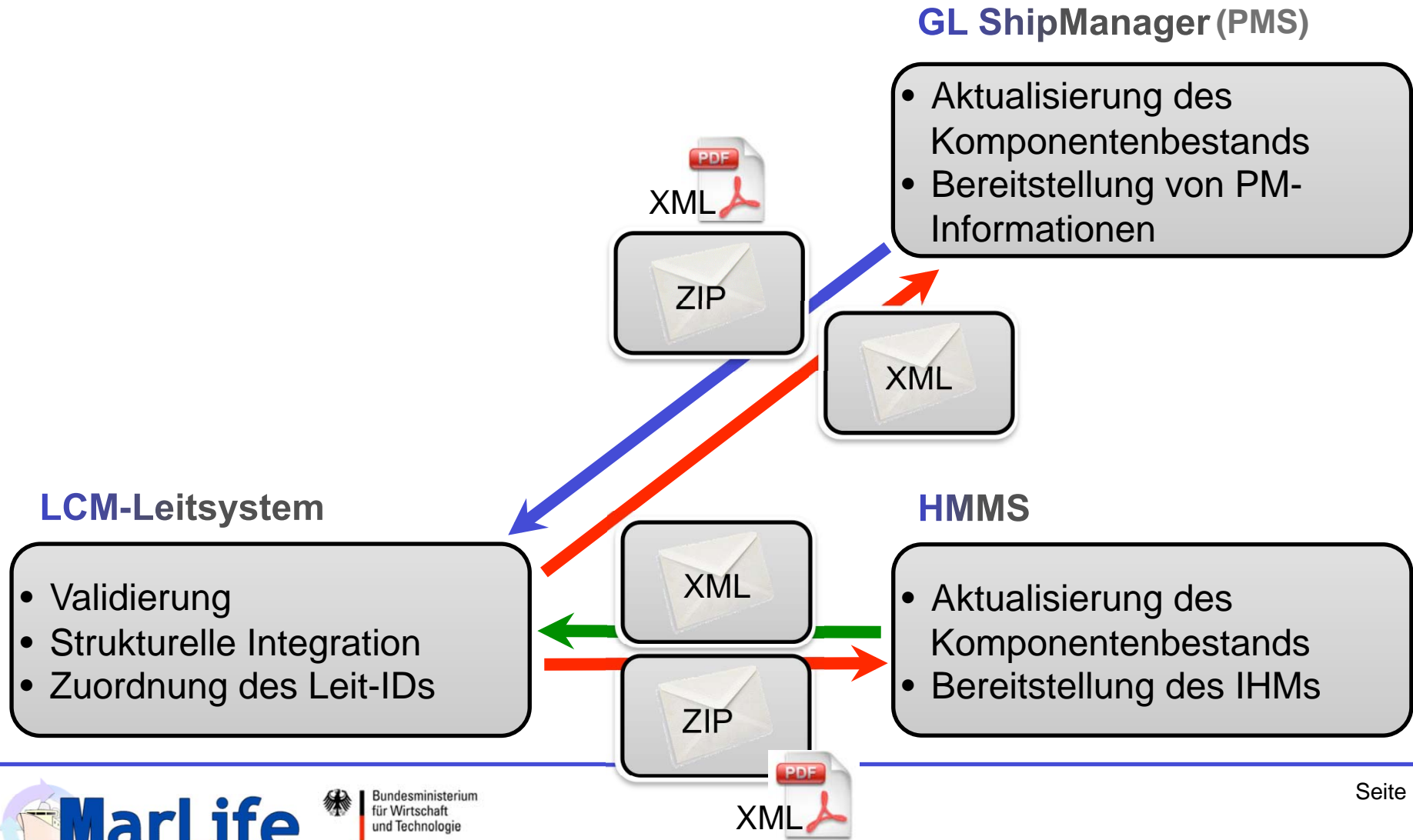


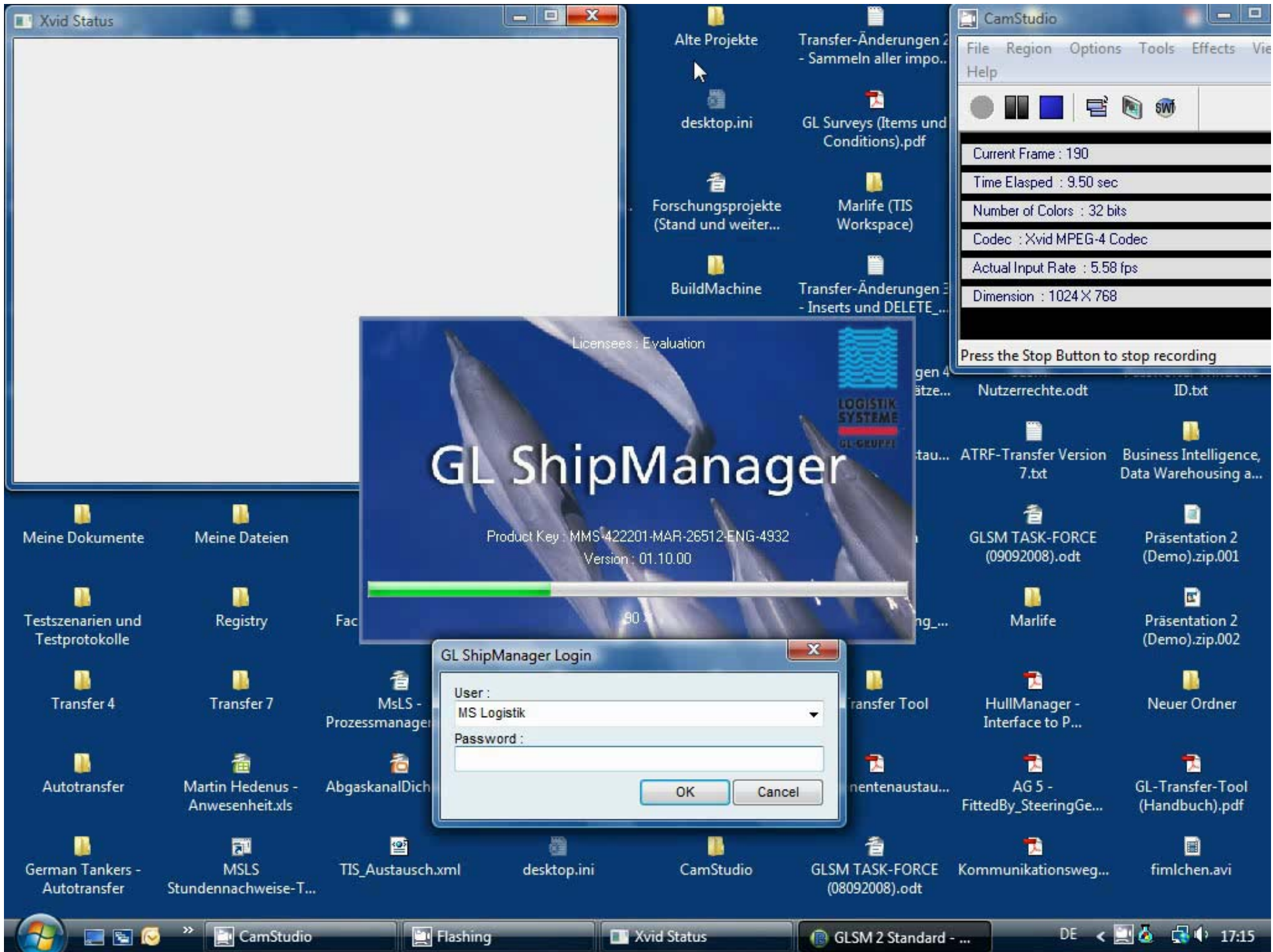
LCM-Leitsystem

GL ShipMan (HMMS) (PMS)

- Validierung
- Strukturelle Integration
- Zuordnung des Leit-IDs
- Komponenteninformationen
- Wartungsinformationen
- des Bestands
- des IHMs

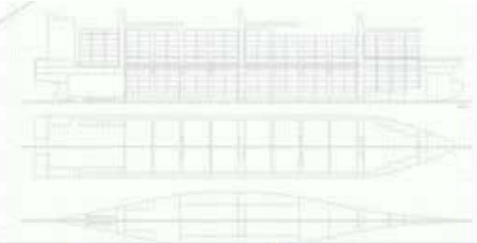
# Kommunikationskette - LCM-Leitsystem / PMS / HMMS







# LCM Leitsystem



Integration

Users

Fleet

Data Sources

Modules

Measurements

Structures

External Data

Template

## Integration

XML File:

ExchangeMessage.xml

Integrator:

Component exchanger

Import Structure:

Run Integrator

```
Starting component exchange...

Replace Main Engine Piston Ring 5/1 with Main Engine Piston
Ring 5/1 replacement.
Replace Exhaust Gasket with Exhaust Gasket (replacement).

Write export file:
D:\MarLife\integration\outgoing\ExchangeMessage-
lcm_export.xml
```



- MS MarLife II
  - Approvals
  - Part Descriptions
  - Calculation Systems
  - Installed Parts
  - Installed Systems
  - Locations
    - design zone
      - 2ND E/R DECK
        - 3RD E/R DECK
          - Located Installed Parts
          - Located Installed Systems
          - Engine Room
            - Located Installed Parts
              - Main Engine Piston R
              - Main Engine Piston 1
              - Main Engine Piston R
              - Main Engine Cross He
              - Main Engine Crank Sh
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston 2
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Cross He
              - Main Engine Crank Sh
              - Main Engine Piston R
              - Main Engine Piston R
              - Main Engine Piston 3

Projects > MS MarLife II

**Ship MS MarLife II**

ID	23473
Description	Demo Schiff fuer MarLife auf Basis der Ital Ordine
Last changed	20/11/2008 14:38:39 [uleb]
<i>Project</i>	
Person in charge	uleb
<i>Base Ship</i>	
Register number	20081126
IWO number	20081126
Newbuilding number	
Inspection in charge	PTJ
Owner AIS number	
Owner	Marlife Consortium
Yard AIS number	
Yard	MarLife Shipyard

**Actions**

- Edit...
- Add Parameter Set...
- Create Calculation System...
- Create Installed System...
- Create Functional Unit...
- Create Part Description...
- Create Installed Part...
- Create Zone...
- Create Compartment...
- Create Production Structure...
- Create Structural System...
- Create Inspection...
- Add Hazardous Inspection Cluster...
- Add To Favorites...
- Export...
- Create approval...
- Fetch Data From SIS...
- (more...)

Attributes	Parameter Sets	Installed Parts	Approvals	Part Descriptions	Locations	Structr Syste
Name	Value		Unit			

# HMMS - Aktualisierte IHM

## 1.1 Paints, Coating Systems and other Processed Materials containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

No.	Application of Coating	Name of Coating	Location	Manufacturer	MD-ID No.	Substance Group	Appx.Quantity		Parts of use	Remarks
							Mass	Unit		

## 1.1 Paints, Coating Systems and other Processed Materials containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

1.2

No.	Application of Coating	Name of Coating	Location	Manufacturer	MD-ID No.	Substance Group	Appx.Quantity		Parts of use	Remarks
							Mass	Unit		
1	Anti-corrosiv Paint	Exagard 400	MAIN DECK	Coatings Maritime	A08.0013	Lead and Lead Compounds	72	kg		Dark grey colour
2	Anti-corrosiv Paint	Exagard 700	MAIN DECK	Coatings Maritime	A08.0014	Lead and Lead Compounds	56	kg		Coat, Yellow colour

## 1.2 Equipment and Machinery containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

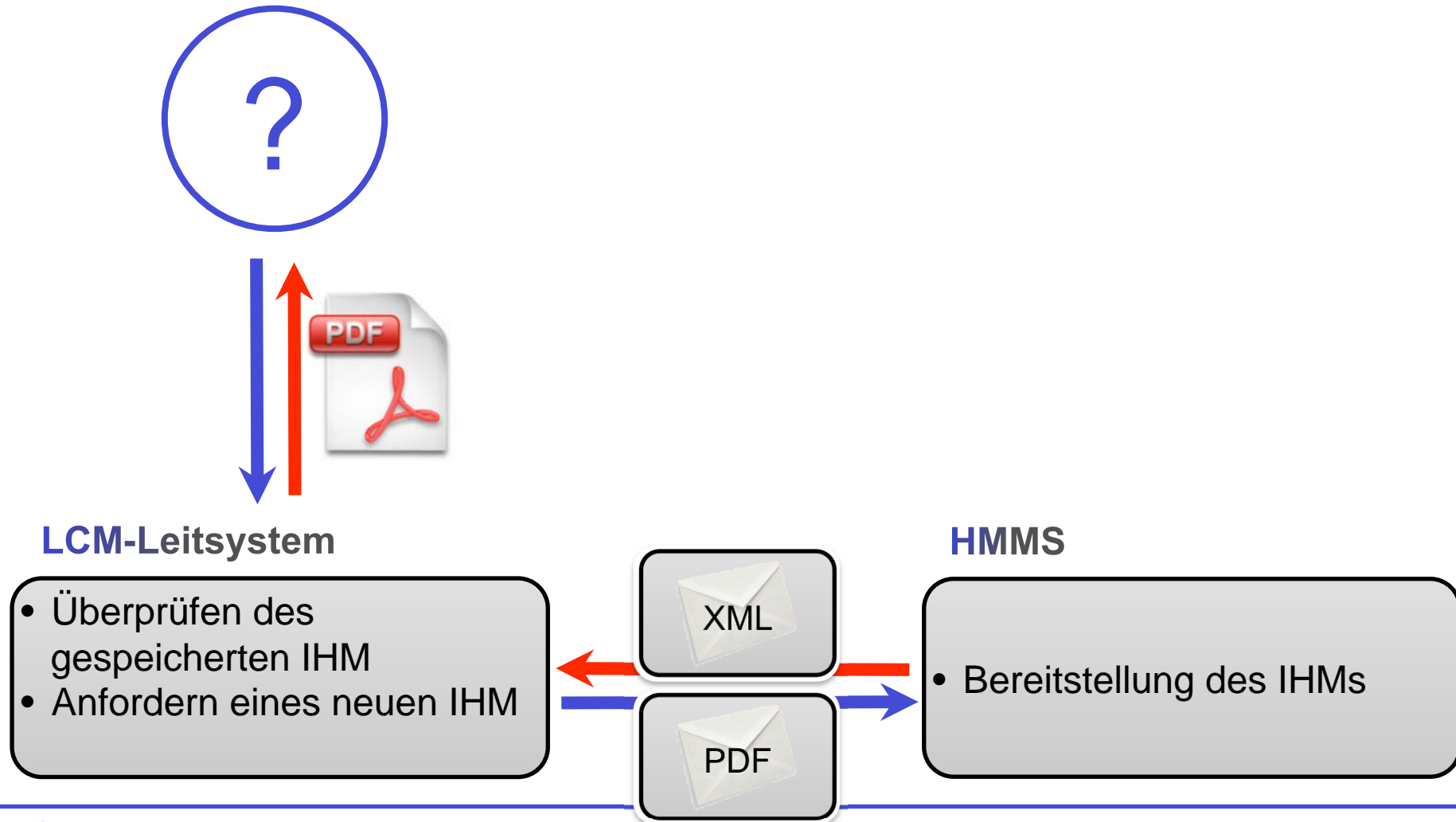
1.3

No.	Name of Equipment and Machinery	Location	Manufacturer	MD-ID No.	Substance Group	Appx.Quantity		Parts of use	Remarks
						Mass	Unit		
1	5th Deck FWD Compressor	E DECK	MarLife Company	MD-Comp-007	Asbestos	1	kg	cardboard	Insulation
2	Exhaust Gasket (replacement)	Engine Room	MarLife Manufacturer	md-ExGas-456	Asbestos	0.023	kg		

## 1.3 Systems containing materials listed in Table A and Table B of Appendix 1 of the Guidelines

No.	Name of System	Location	Manufacturer	MD-ID No.	Substance Group	Appx.Quantity		Parts of use	Remarks
						Mass	Unit		
1	Ceiling	NAV DECK		A08.0012	Asbestos	5.5	kg	Foams	Insulation
					Asbestos	13	kg	Mineral Wool	
2	Exhaust Line	Engine Room		MD5-00087	Asbestos	8	kg	insulation	Insulation for Exhaust Piping

## Kommunikationskette - Bordseitige Anforderung eines aktuellen IHM



# Einbindung von Werften in den Komponentenaustausch

## Lloydwerft Bremerhaven

- Komponenteninformationen
- Action Flag (Tausch / Neu)
- Wartungs- / Reparaturinformationen

## GL ShipManager (PMS)

- Aktualisierung des Komponentenbestands
- Bereitstellung von PM-Informationen

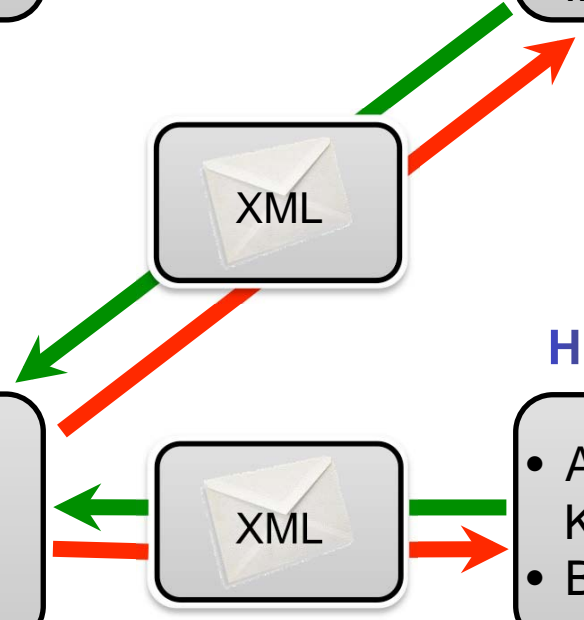


## LCM-Leitsystem

- Validierung
- Strukturelle Integration
- Zuordnung des Leit-IDs

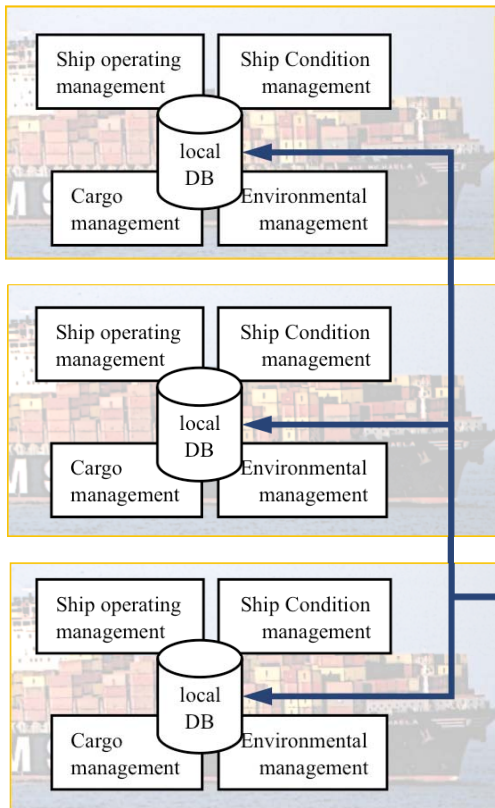
## HMMS

- Aktualisierung des Komponentenbestands
- Bereitstellung des IHMs



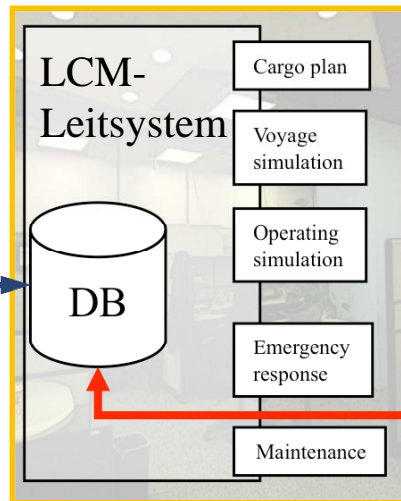
# MarLife-Verwertung

## Fleet



Ship management system

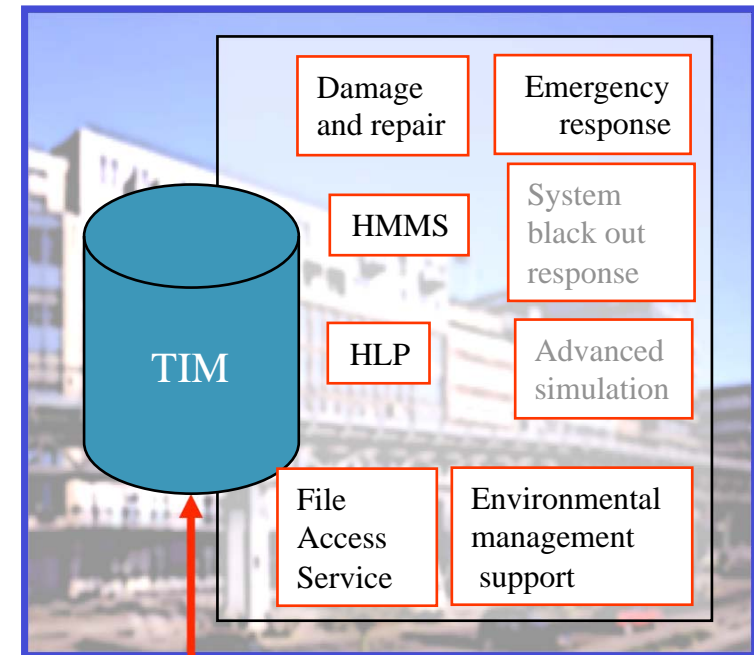
## Ship owner Technical office



Fleet control centre  
• First level support

## GL HO

Advanced support centre  
• Second level support



## Zusammenfassung

- Herstellen synchroner Datenbestände in unterschiedlichen Informationssystemen
- LCM-Leitsystem als zentrale Schaltstelle verringert die Anzahl der Schnittstellen
- Änderung des Komponentenbestandes im PMS führt automatisch
  - zur Aktualisierung des IHM
  - zur Aktualisierung der Messdaten im LCM-Leitsystem
- Änderungen des Komponentenbestandes, die durch andere Quellen (z.B. Reparaturwerft) kommuniziert werden, können integriert werden