

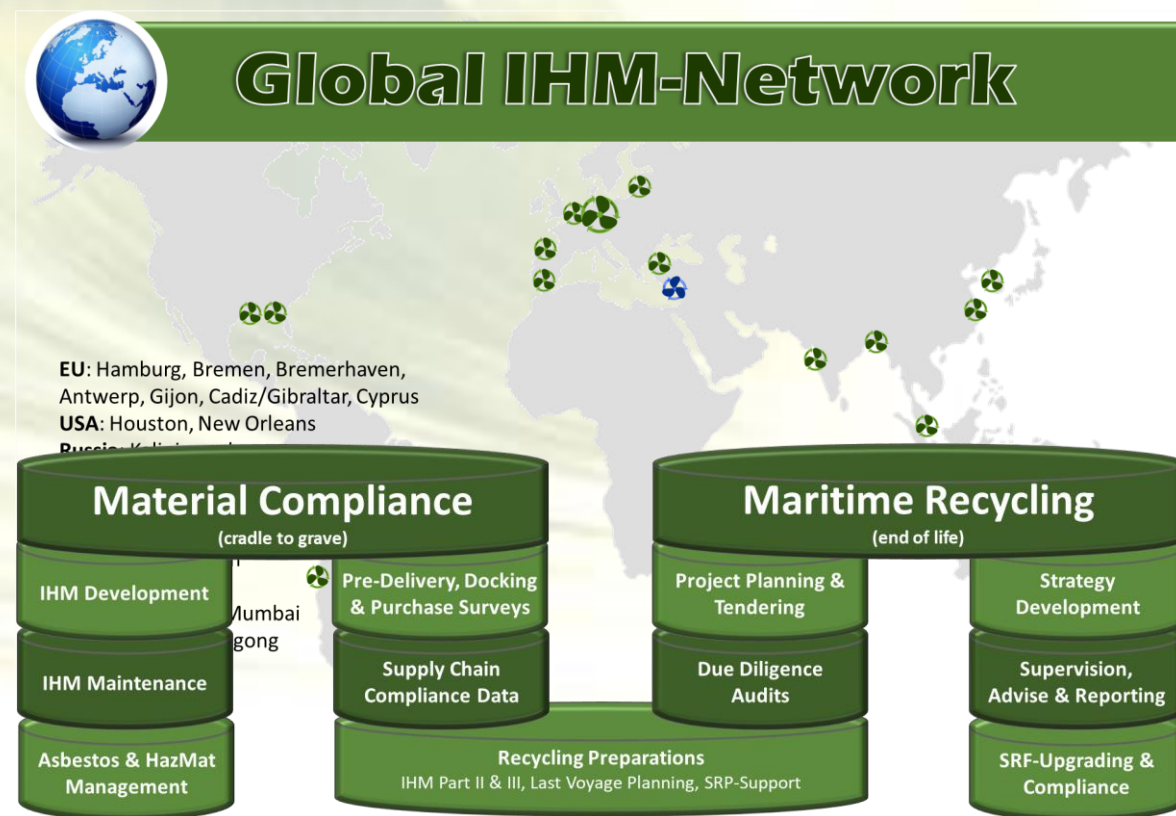


The role of IHM for decommissioning planning



GSR Services

- Experts for compliance with HKC and EU-SRR in the entire maritime industry
- Key services:
 - IHM development for new and existing ships (global network of 50 certified IHM-Experts)
 - IHM-Maintenance (for shipowners)
 - MD-Development (for suppliers)
 - Compliance & Improvement Projects (for ship recycling facilities)
 - Sustainable Ship Recycling Planning (for owners)



An aerial view of an offshore wind farm in a deep blue sea. Several white wind turbines with yellow bases are visible. Small red and white maintenance vessels are positioned near some of the turbines. In the foreground, a larger red and white supply vessel is moving across the water, leaving a white wake. The background shows distant land under a cloudy sky.

**“It’s only a matter of time
when they become waste”**



Legal Background for Ships

- **IMO:** Hong Kong International Convention for Safe and Environmentally Sound Recycling of Ships (HKC, 2009)
- **Europe:** EU Ship Recycling Regulation (EU-SRR, 2013)
- Applicable to:
 - All merchant ships* > 500GT
 - State-owned non-commercial vessels excluded
 - Ship recycling facilities (SRF)
- Key Requirements:
 - Inventory of Hazardous Materials (Ships)
 - Recycling practices (Ship Recyclers)



MARITIME
— LAW —

*"ship" means a vessel of any type whatsoever operating or having operated in the marine environment, and includes submersibles, floating craft, floating platforms, self-elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), as well as a vessel stripped of equipment or being towed.



Key Requirements: IHMs

Inventory of Hazardous Materials	Building & Operation	Prior to Recycling	
	Part I Structure & Equipment	Part II Hazardous Wastes	Part III Stores
Table A Materials Mandatory for all ships & installations	✓		
Table B Materials Mandatory for new ships & installations, voluntary for existing ships	✓		
Table C Materials Potentially Hazardous Items		✓	✓
Table D Regular consumer (household) products	Excluded items		✓
IHM-Deadlines:	New Ships = 30.12.2018	Existing Ships = 30.12.2020	





IHM-Requirements

- **Development:**

- Existing ships: mainly based on sampling & inspection onboard
 - Owner is responsible
 - Should involve IHM Expert
- New ships: based on documents from suppliers
 - Shipyard is responsible
 - May involve service provider

- **Maintenance:**

- Owner is responsible
- Via data from suppliers
 - Shipowner is responsible
 - May involve service provider

- **Control:**

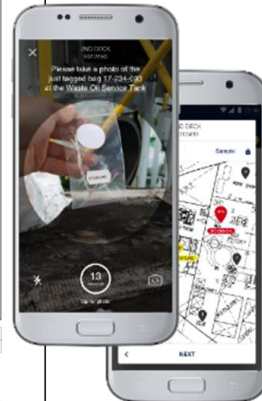
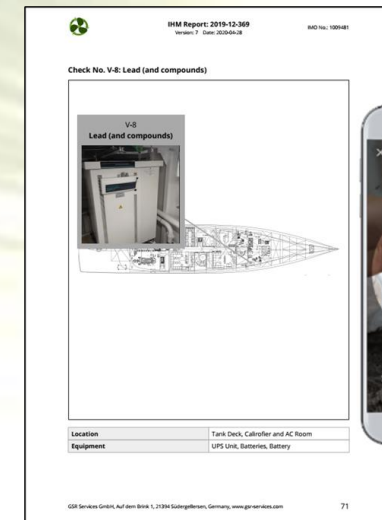
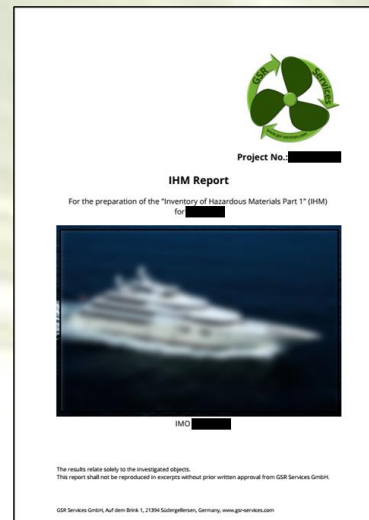
- Flag State
- Classification Society
- Port State Control



Development of IHM Part I for Existing Ships



- IHM Part I
 - Investigation of suspicious materials
 - Sampling & inspection
 - Laboratory analyses
 - Detailed documentation of activities important
 - IHM = only listing HazMats
 - IHM Report = reflects all activities
 - To provide clear details and avoid mis-interpretations





Maintenance of IHMs



Certified IHM

To be re-certified ≤ 5 years!



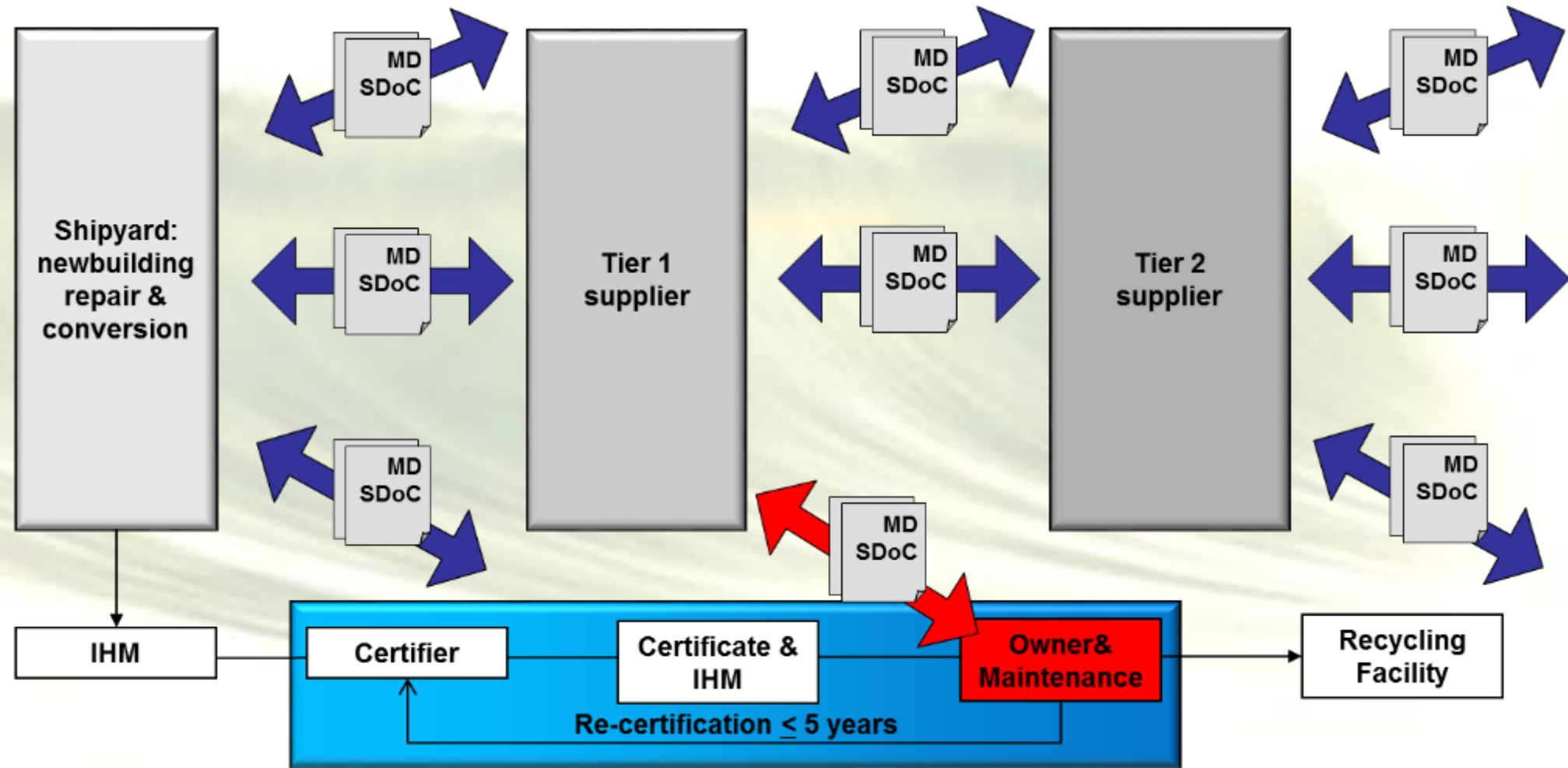
Operations / Maintenance

Class/Flag & PSC



Control

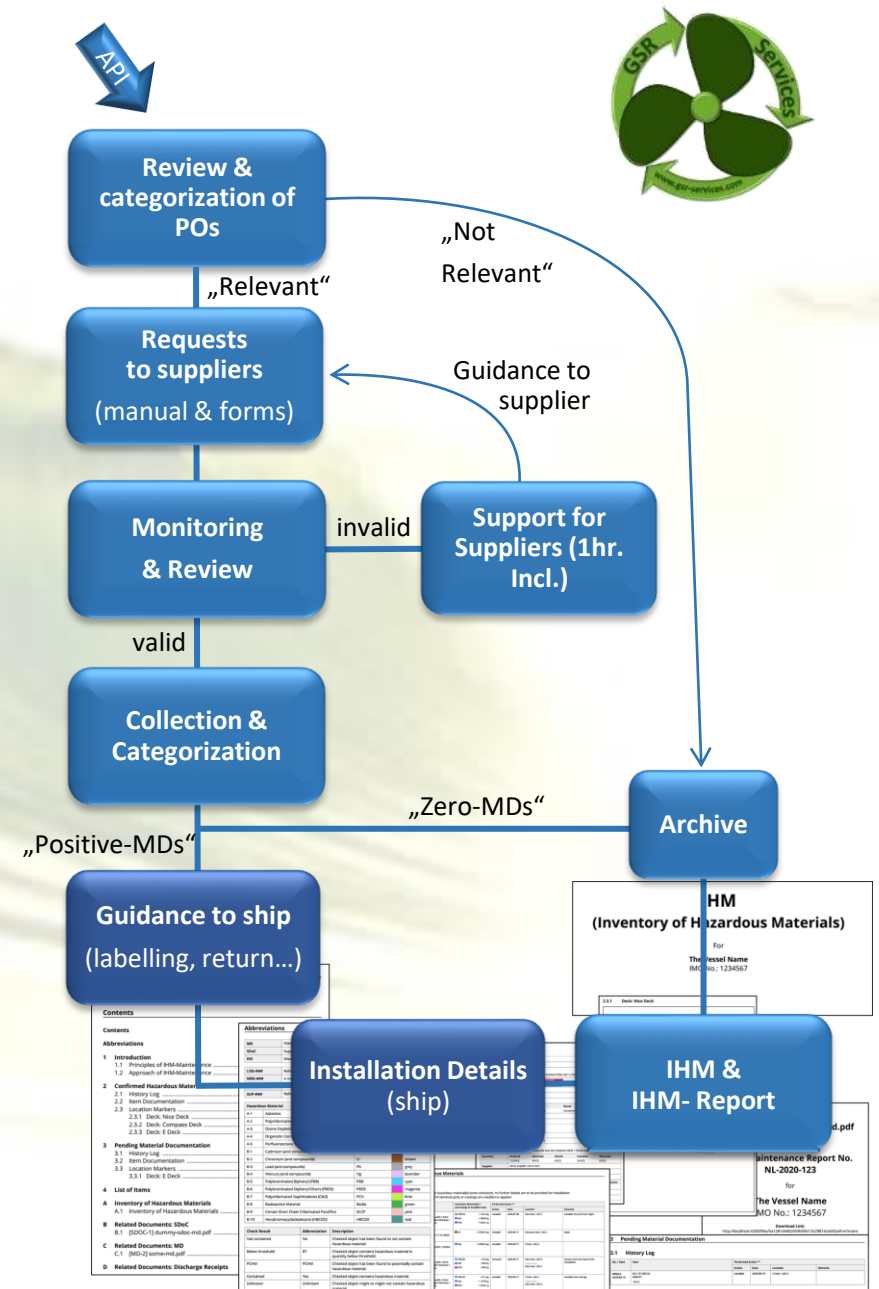
IHM for New Ships & IHM Maintenance



* Ship Recycling Facility

Maintenance by GSR

1. Purchase data is shared automatically via API
2. All PO-items are reviewed and categorized
3. Requests are sent to relevant suppliers
 - including forms and guidance
4. Monitoring of data & documents by experts
5. “Positive-MDs” require follow-up with ship
 - installation details to be provided
6. Updated IHM and IHM Report generated by software by the tip of a finger
 - Download and link for sharing provided 24/7/365



IHM Part I



- Responsibility for IHM Development:
 - New ships: by shipyard
 - Existing ships: by owner/ approved IHM-Expert
- Certification by flag state or classification society
- Maintenance by shipowner/ crew
- Utilized for recycling planning by ship recycler
- IHM covers the full life-cycle of a ship, from cradle to grave





Utilization of IHM for decommissioning planning



HKC & EU

Handling of ships by authorized SRFs

- Detailed recycling planning (SRP)
 - Construction and IHM-specific
 - Type and size
 - Hazardous materials
 - Deviation from standard procedures (SRFP)
 - Owners tasks
 - Preparations and maintenance of IHMs
 - Estimates on
 - operationally generated wastes
 - Spares
 - Safe-for-hot work conditions on delivery
 - Final survey, etc.



SRP

- Comparison of ship-specific information with SRFP and/or DASR
 - Pre-arrival elements
 - Arrival and securing plan
 - Management of HazMats
 - Safe-for-entry / Safe-for-hot-work
 - Dismantling sequence, other elements
 - Attaching a copy of DASR
- Verification by Competent Authority(ies)
 - Final survey, etc.





Conclusions

- IHMs
 - Owner is responsible for development and maintenance (existing assets)
 - Required for planning of recycling
 - Basis for
 - Selection appropriate recycler
 - planning of HSE aspects
 - Planning of dismantling sequence, disposal operations, assigning dedicated areas and storages

No IHM: no safe & sound recycling possible!

Existing Fleet	New Builds	Operation
<ul style="list-style-type: none">• IHM latest by 2020• Order HazMat Experts for IHM preparation• Get class for certification of IHM	<ul style="list-style-type: none">• Include IHM in building specification• Get class for certification of IHM	<ul style="list-style-type: none">• Set up processes to request relevant documentation• Nominate designated person• Decide on system for IHM-Maintenance
Requires intensive communication with the supply chain and may take long time to implement!		

Thank you!

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Presenter

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Current positions

Managing Owner, GSR Services GmbH
Partner, Guideship LLP, India
Chairman & Treasurer of IHMA
Guest Professor WMU

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Experience

Germanischer Lloyd - Global Head of Practice Ship Recycling (2005-2010)
AIDA Cruises - Environmental Officer "AIDABlu" (ex. ArosaBlu), (2003 – 2004)
GAUSS gem.mbH - Project-Manager (2000 – 2003)