

**IACS**

# EMSA WS on GBS matters

## IACS CSR & IMO GBS Verification

Prepared by

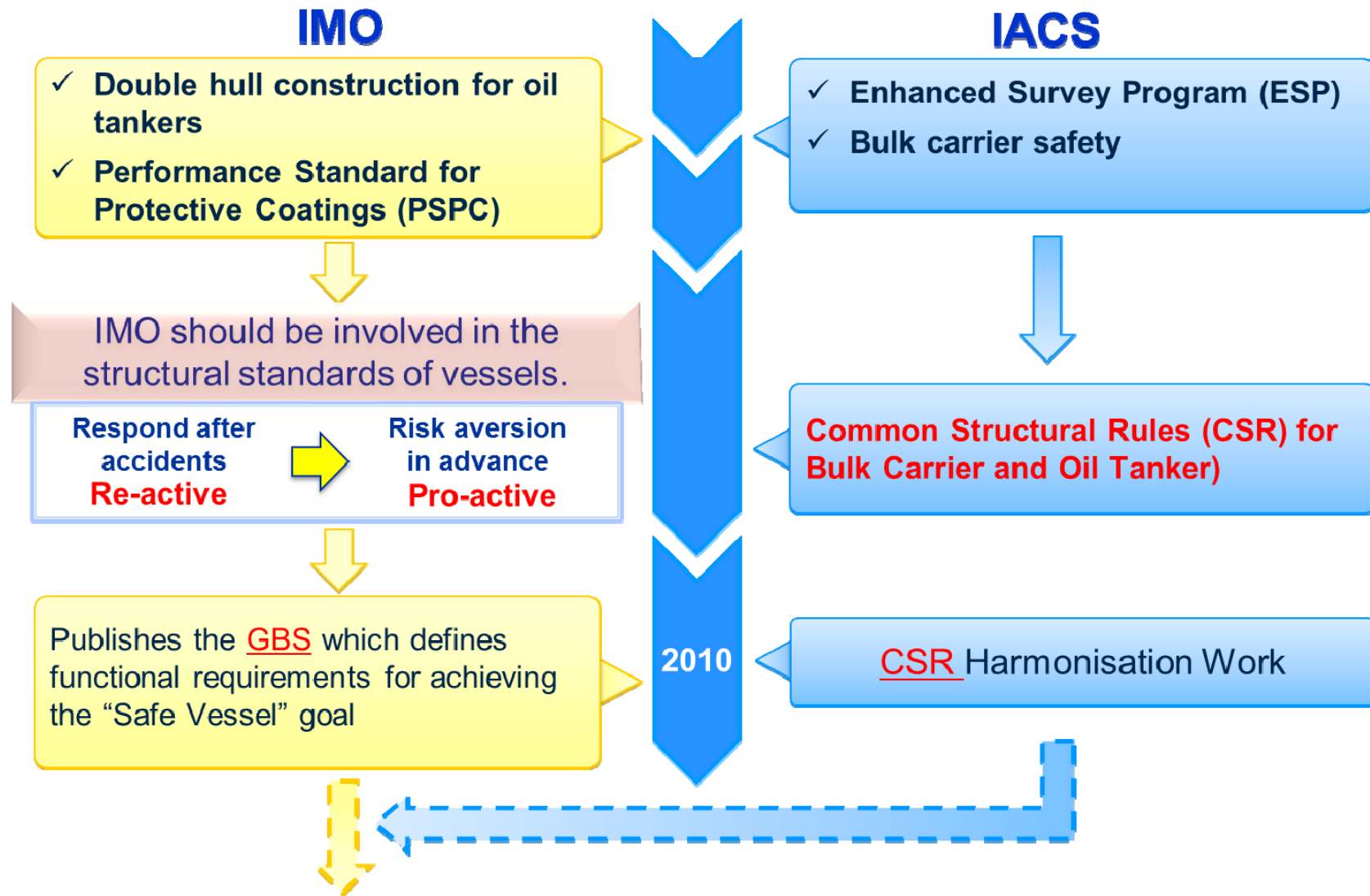
Toshiro ARIMA, IACS EG/GBS Chair

Lisbon, 11 November 2014

Safer  
and  
Cleaner  
Shipping



1. Background of IMO GBS & IACS CSR
2. IACS CSR
3. IMO GBS
4. IMO GBS Verification

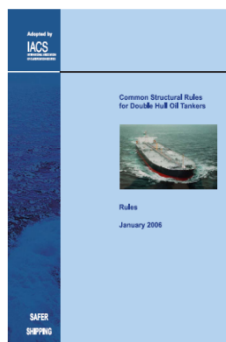
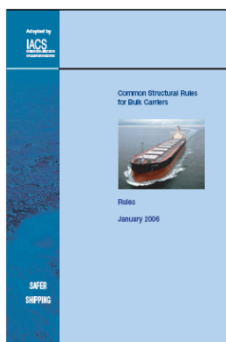


## CSR Harmonisation Project

- Harmonise CSR for bulk carriers and CSR for oil tankers
  - ✓ Respond to industry concerns originally expressed when the CSRs were introduced.
- Achieve GBS Compliance by CSR + other IACS Technical Resolutions.

CSR for Bulk Carriers

CSR for Oil Tankers



**Harmonisation  
+  
GBS Compliance**

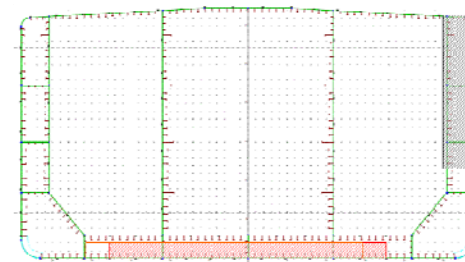
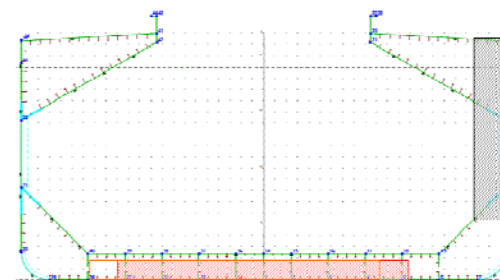
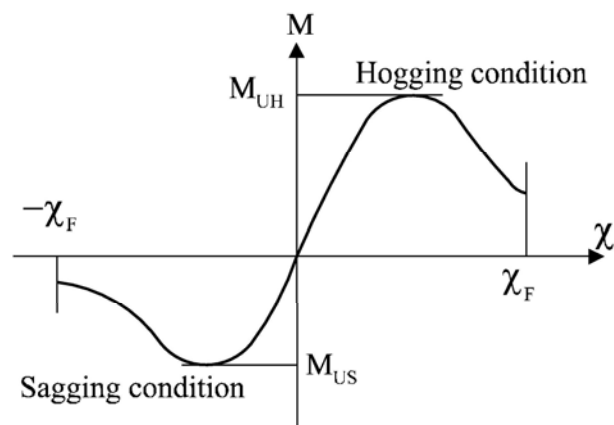
## Harmonised CSR



GBS compliance: e.g. HG Residual Strength Req. to be included



Hull Girder Strength Assessment under damaged conditions due to collision and grounding





- **Rules**
  - January 2014 version of CSR released & available on IACS web site
  - Date of entry into force = 1 July 2015
- **Technical Background documents released & available on IACS web site**
  - TB Rule References
  - TB Reports

TB Report List for CSR-H TC Release 2014-06-01

No	Filename	Version	Release Date	Rule Edition
1	TB Rep_Pt1_Ch01_Rule General Principles and Validation	4	2014-06-01	2014-01-01
2	TB Rep_Pt1_Ch03_Sec03_Corrosion Additions	5	2014-06-01	2014-01-01
3	TB Rep_Pt1_Ch03_Sec07_Effective Plate Breadth	2	2014-06-01	2014-01-01
4	TB Rep_Pt1_Ch04_Sec02_EDW for Extreme Loads	4	2014-06-01	2014-01-01
5	TB Rep_Pt1_Ch04_Sec02_EDW for Fatigue Loads	2	2014-06-01	2014-01-01
6	TB Rep_Pt1_Ch04_Sec06_Examine of Wave Data	2	2014-06-01	2014-01-01
7	TB Rep_Pt1_Ch04_Sec06_Joint Probability Factor	2	2014-06-01	2014-01-01

Common Structural Rules for  
Bulk Carriers and  
Oil Tankers

Technical Background Rule Reference



01 January 2014 Release

- **Knowledge Centre** in place to deal with any industry questions

## Consequence Assessment

- 'Final' CA reports now published on IACS web site
- Based upon 1 Jan 2014 CSR
- Summary report only submitted to IMO for GBS verification of compliance
- Individual CA reports ~2,000 pages

IACS		HARMONISED CSR	TB-REPORT
Report No: CA Rep – General Summary	Revision No. & Date: Rev 3 – 01 June 2014	Status of Report: <input checked="" type="checkbox"/> Draft <input checked="" type="checkbox"/> Final	
Report Title: <b>Consequence Assessment (CA) – Summary Report</b>		Rules Reference: 01 January 2014 version	
		Distribution by IACS <input checked="" type="checkbox"/> External <input checked="" type="checkbox"/> Internal	
Project Teams: HPT10-Consequence assessment		Approved for Issue by: <input checked="" type="checkbox"/> PMT <input checked="" type="checkbox"/> HP Technical review	
Reporting Organisation Name & Address: IACS 36 Broadway London SW1H 0BH		No. of Pages: 42	
<p>Summary:</p> <p>Consequence assessment has been carried out in order to determine the effect of applying the 01 January 2014 release of the Common Structural Rules (CSR-H).</p> <p>Detailed consequence assessment results are reported in separate individual Technical Background reports. An explanation and summary of the CA report results are presented herein.</p>			
Revision History:			



INTERNATIONAL  
MARITIME  
ORGANIZATION

# Goal-Based Ship Construction Standards for Bulk carriers and Oil Tankers

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## Goal-based construction standards for new ships

### Background

The notion of "goal-based ship construction standards" was introduced in IMO at the 89th session of the Council in November 2002 through a proposal by two Member States, the Bahamas and Greece (C 89/12/1), suggesting that IMO should play a larger role in determining the standards to which new ships are built, traditionally the responsibility of classification societies and shipyards.

The submission argued that the Organization should develop initial ship construction standards that would permit innovative designs but at the same time ensure that ships are constructed in such a manner that, if properly maintained, they could remain safe for their economic life. The standards would also have to ensure that all parts of a ship could be easily accessed to facilitate proper inspection and ease of maintenance.

Over the next two years the matter was extensively discussed in the Maritime Safety Committee (MSC), the Council and finally the IMO Assembly which, at its twenty-third session in 2003, included the item "Goal-based new ship construction standards" in the strategic plan (A 944(23)) and the long-term work



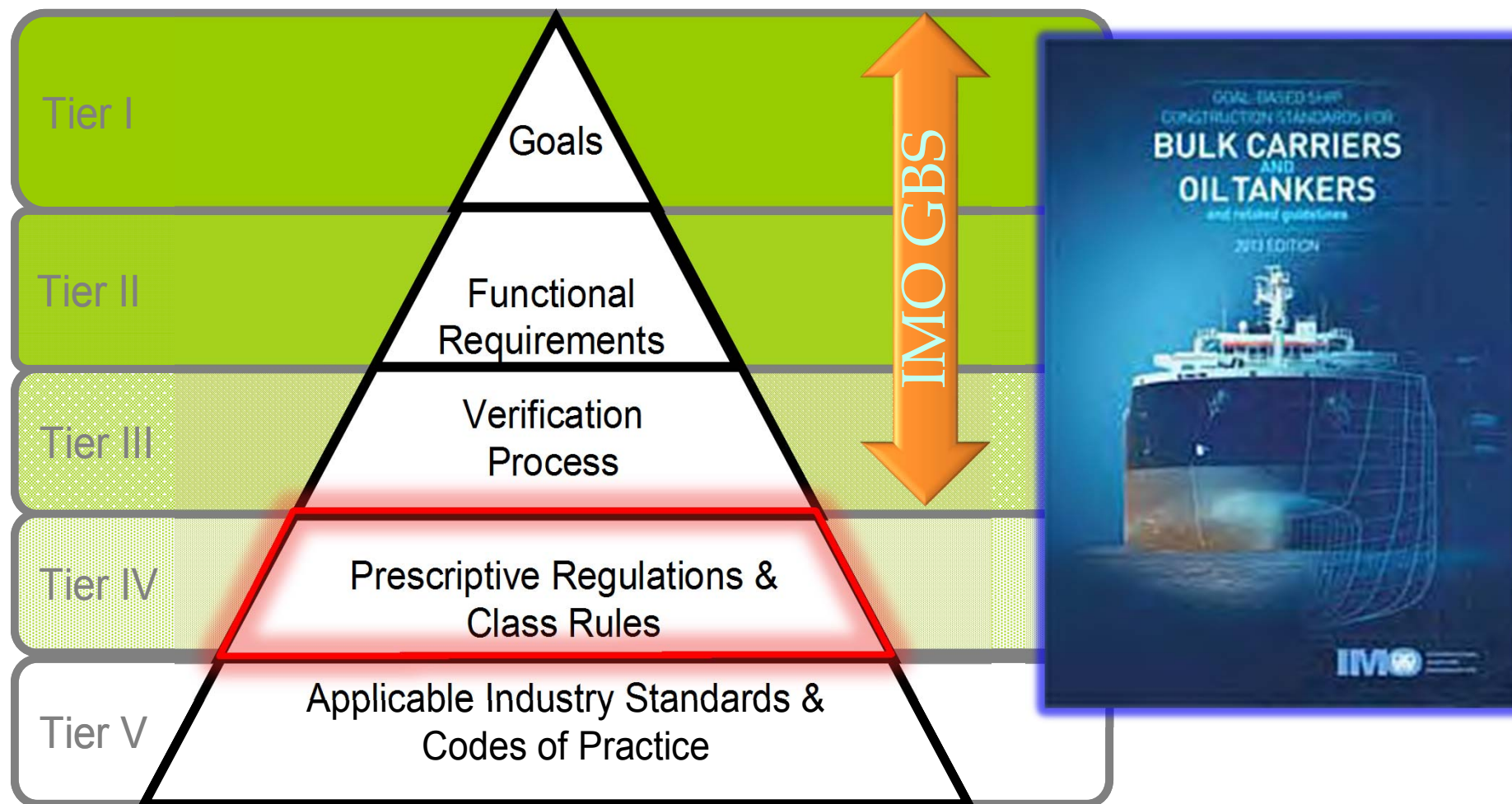
## Timetable agreed at MSC 87

<b>1 Jan 2012</b>	<b>GBS SOLAS amendments enter into force and Standards take effect</b>
<b>31 Dec 2013</b>	<b>Deadline for receipt of initial verification requests at IMO</b>
<b>2014</b>	<b>MSC reviews progress made in GBS implementation</b>
<b>Jan 2016</b>	<b>Secretariat prepares documentation on all audits conducted for MSC 96 for final decision on conformity</b>
<b>May 2016</b>	<b>MSC 96 takes final decisions on conformity with GBS for all rules submitted</b>
<b>1 July 2016</b>	<b>GBS SOLAS amendments (II-1/3-10) become applicable</b>

# IACS

## IMO GBS - Tiers I to V

Safe and Environment-friendly Vessel



**Class Rules to be compliant with GBS**

Safer and Cleaner Shipping

## Summary of Amendments of SOLAS II-1/3-10 (GBS)

- **Application:**

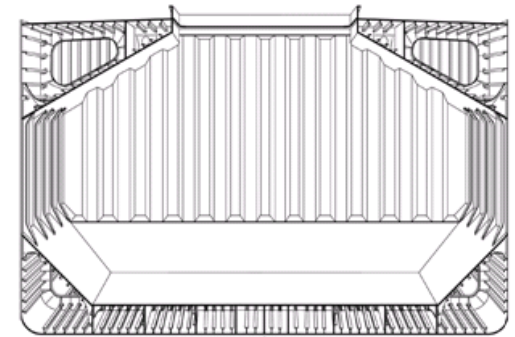
Oil tankers & Bulk carriers of 150 m in length and above

- **Goals:**

Safe and environmentally friendly Ship design

- **Structural Requirements :**

Goals shall be achieved through  
Structural Requirements of ROs (Class)  
conforming to **GBS Functional Requirements**



- **Ship Construction File (SCF):**

Information on how the functional requirements have been  
applied in the ship design and construction to be kept on board

Enter into force on 1 Jan. 2012, and apply to ships:

1. building contract on or after 1 July 2016; or
2. keel lay on or after 1 July 2017; or
3. delivery on or after 1 July 2020

## IMO GBS Tier II vs. Class Rules

Mainly Covered by CSR

Mainly Covered by non-CSR Resolutions

### Design

1. Design life
2. Environmental conditions
3. Structural strength
4. Fatigue life
5. Residual strength
6. Protection against corrosion
7. Structural redundancy
8. Watertight and weathertight integrity

9. Human element consideration

### Construction

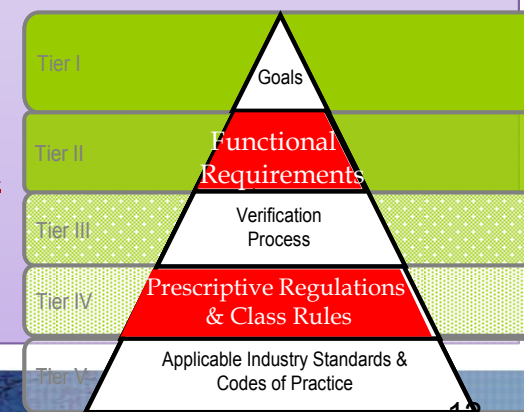
10. Design transparency
11. Construction quality procedures
12. Survey during construction

### In service consideration

13. Survey and maintenance
14. Structural accessibility

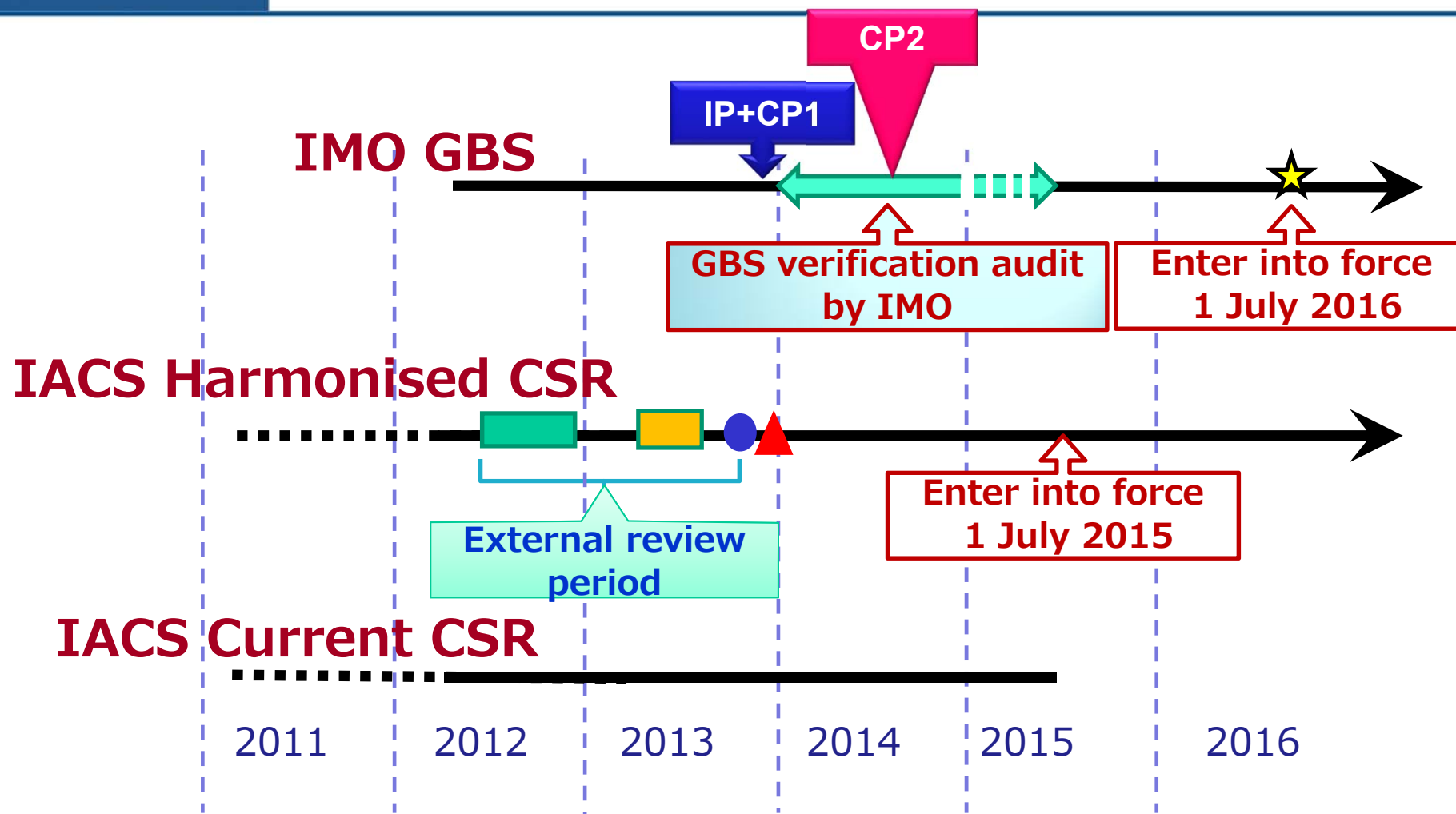
### Recycling consideration

15. Recycling





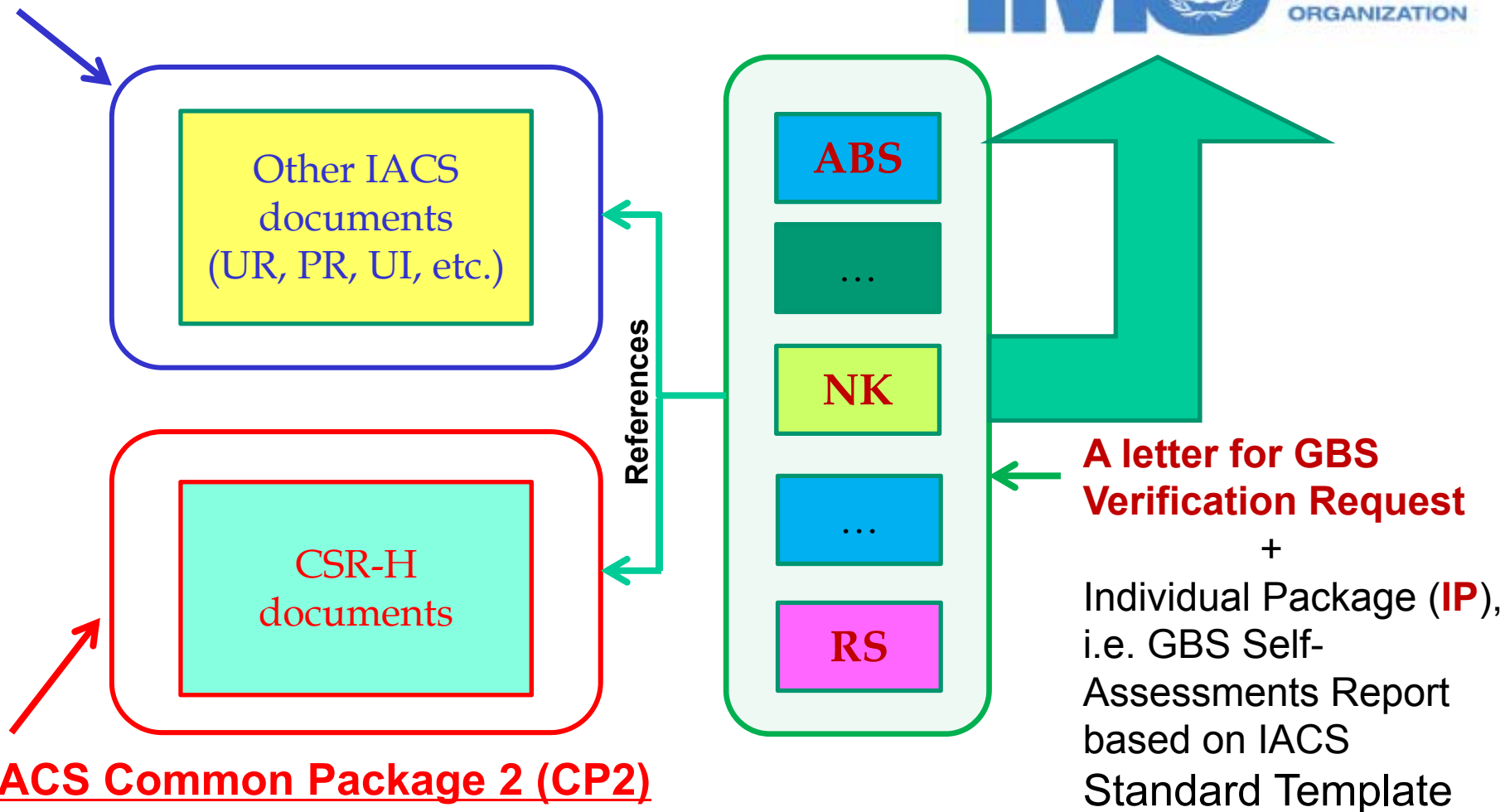
## Long-term Time Schedule



▲ IACS Adoption of Harmonised CSR, 18 Dec. 2013

## How to submit GBS Verification Request to IMO

### IACS Common Package 1 (CP1)



## GBS Verification -Status

- IACS Member Society submitted a request of GBS Verification
- IACS Common Package 1 (CP1) and CP2 including CSR were delivered to IMO Secretariat
- IMO Secretariat established 5 Audit Teams for GBS verification and submitted the progress report (MSC94/5).



- Upon request of IMO Secretariat, IACS assisted IMO Secretariat in providing a briefing to the GBS Audit Team Leaders to facilitate an understanding of what has been submitted.



#1 GBS Workshop/Webinar in March 2014 at IMO headquarter.



## A) July 2014: GBS Workshop/Webinar(Skype)

- ✓ Various comments provided by auditors
- ✓ Q&A session between IACS and **Team 1**, which is in charge of **FR 9-15** in terms of IACS Common Package 1 (**CP1**) and **CP2**.

## B) Sep. 2014: initial comments on Individual Class Packages received from some Audit Teams

## C) Oct. 2014: Audit Teams Meetings organized by IMO Secretariat

- ✓ Q&A session between IACS and **Team 5**, which is in charge of **FR 1-8**, i.e. mainly **CSR**, in terms of **CP1** and **CP2**
- ✓ Q&A sessions between Teams 3/4/5 and individual ROs

**2014:** First Interim reports by Audit Teams

**2015:** Finalization of GBS initial verification reports for 13 applicants including 12 IACS member societies by Audit Teams

**2016:** Report by IMO Secretariat at MSC96

# IACS

## Thank you for your attention.

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and  
Cleaner  
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