

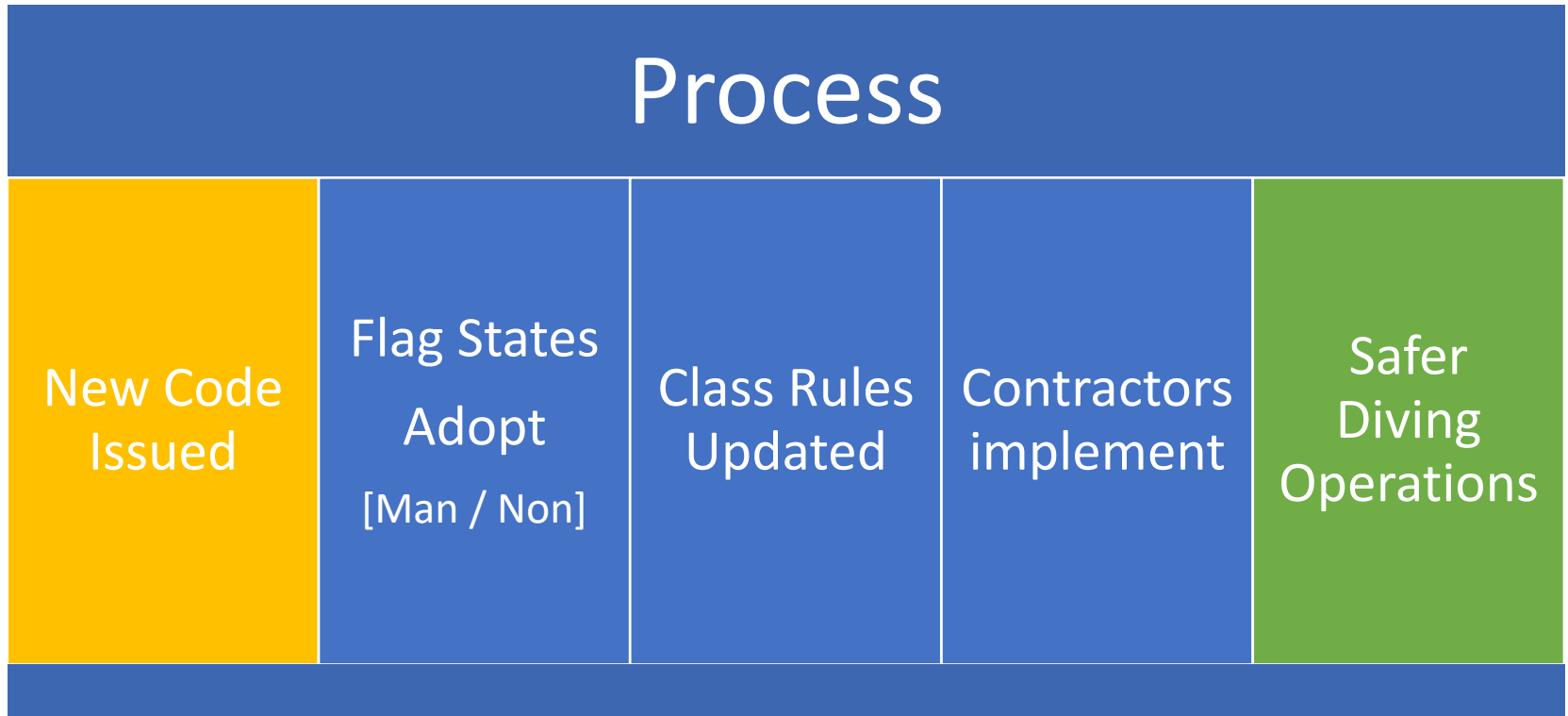


International Diving
Industry Forum

The Code of Safety for Diving Operations. Our Work Starts Now!

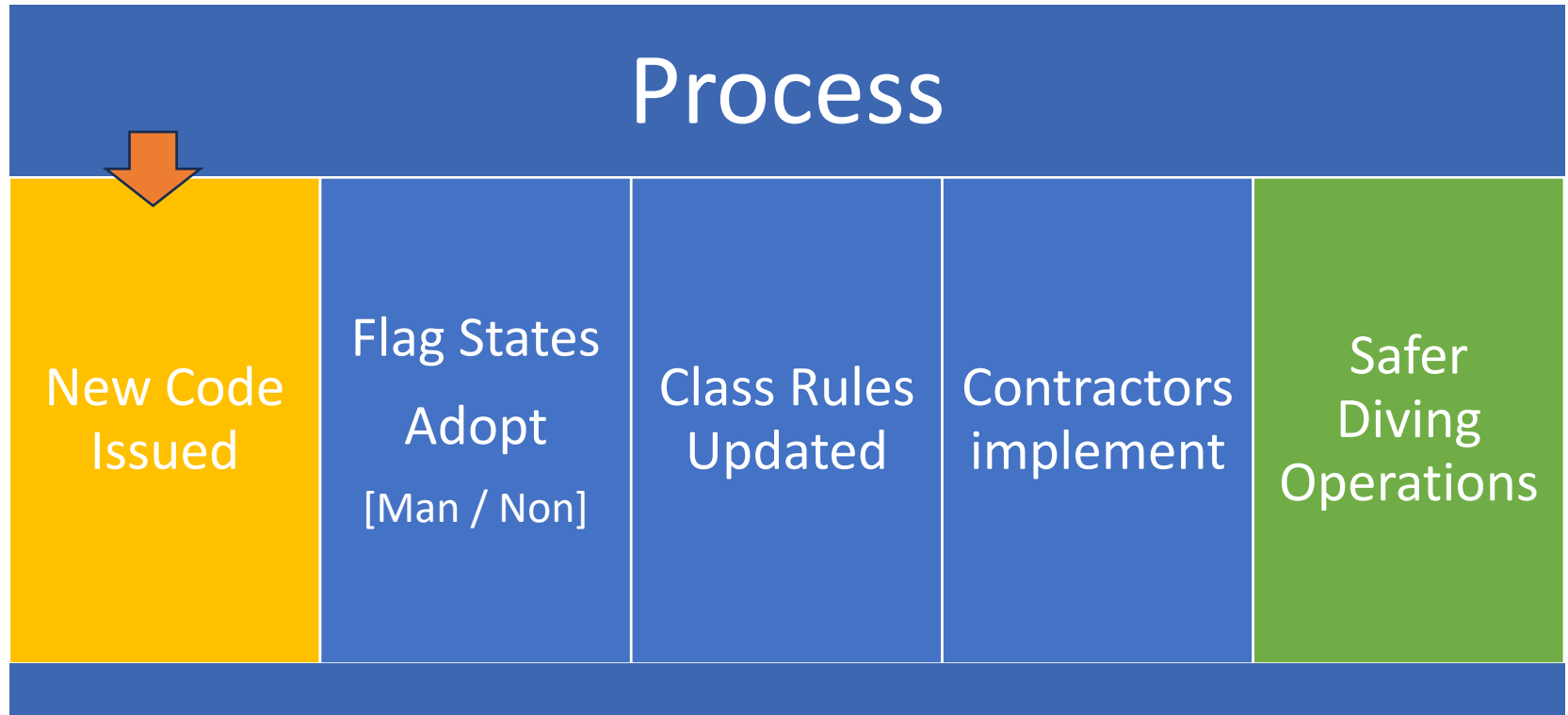
Presenter: Mike Jessop [OSC Marine Group]

Implementing our Industry Primary Code for Safe Diving



X

Implementing our Industry Primary Code for Safe Diving



X

Contents of the New Code

Ch1 General	NEW
Ch2 Diving Unit	NEW
Ch3 Diving platform	NEW
Ch4 Diving system	←
Ch5 Safety management	NEW
Guidance	NEW

The existing 95' code only corresponds to chapter 4 in the new code only. It deals with diving system equipment and has a good safety record



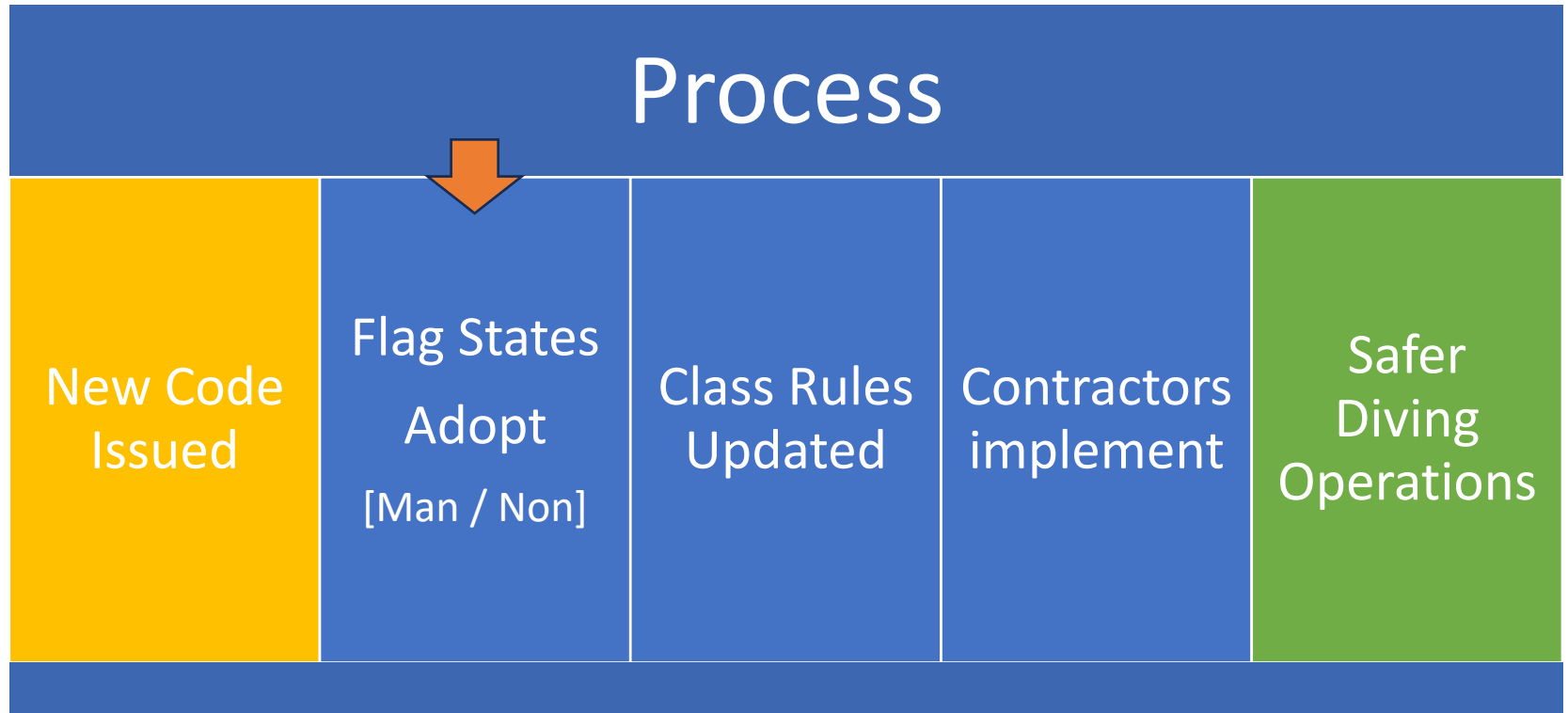
Equipment aspects clarified based on current interpretation (small changes only)

Existing Diving unit	New Diving unit
Diving System (existing code)	Diving System (new code)
Diving platform (new code)	Diving Platform (new code)

IF Ch4 is the old code...

- Introduction
 - Definitions
 - Survey requirements
- Ch1 General
- Ch2 Diving Unit
 - FMEA
 - Integration and testing
- Ch3 Diving Platform
 - DP, Stability, Evacuation time
- Ch5 Safety Management
 - ISM, evacuation, qualifications

Implementing our Industry Primary Code for Safe Diving



Mandatory/ non-Mandatory

- Mandatory was a psychological step too far this time.
- Non-Mandatory does not mean ignored, Preamble
 - Now gives Equivalence to SOLAS, MODU code, SPS code, highlights evacuation, removes loop holes.
- Non-Mandatory solutions to Mandatory problems.
 - Diving has always been a shipboard operation
 - Divers have always had the right to a means of escape
 - An HRC/SPHL have always been lifesaving appliances (HBSC) and connected to ships certificates.

The old code ignored the ship which is what the flag states care about, the new code is almost entirely about the ship. We will see significantly better implementation.

ISM requires consideration of non-mandatory.

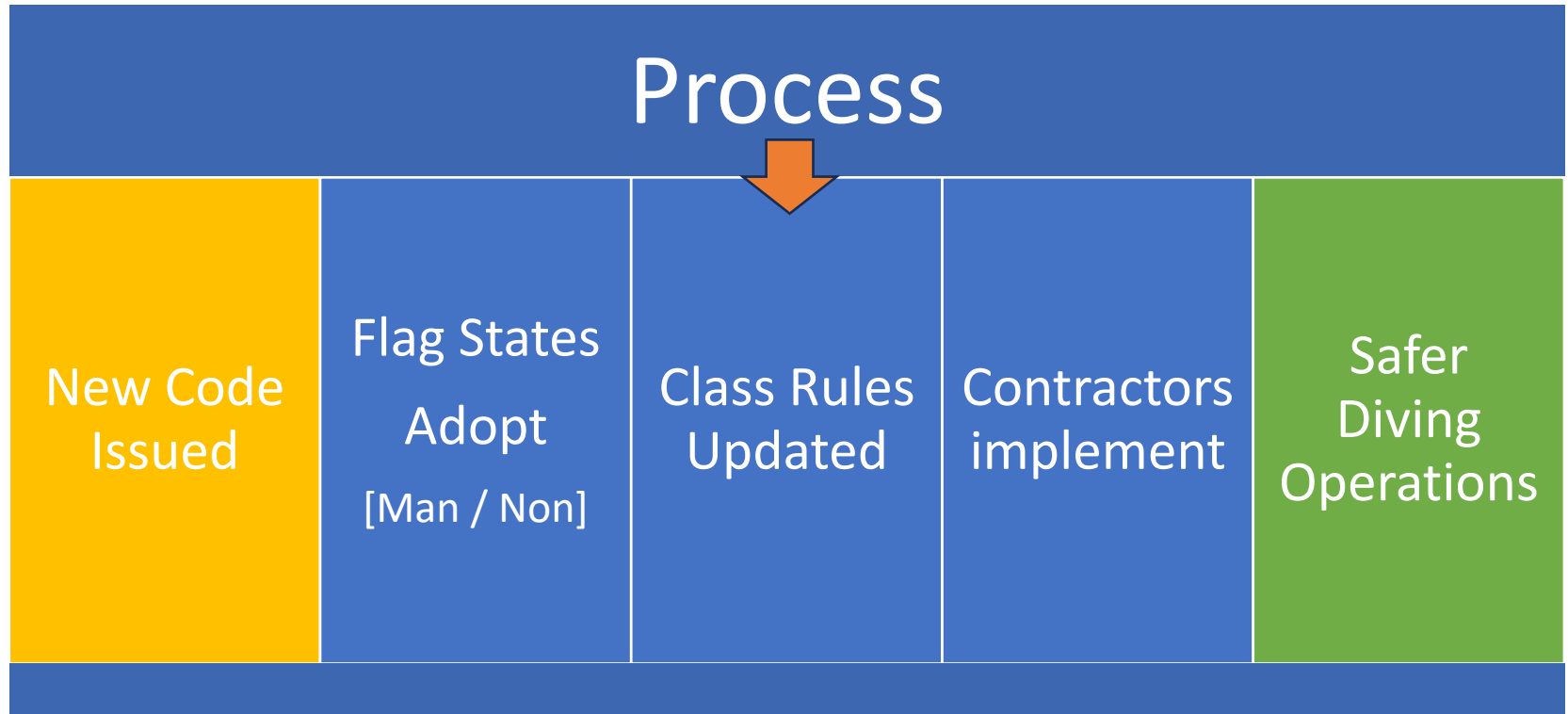
Application

- All flag states will decide now whether the code is adopted as Mandatory.

If a flag decides to apply the code

- Applies to all existing and new diving units having diving systems installed after 1st Jan 2024.
- Applies to all existing diving units at the first renewal survey after 1st Jan 2024.
- Allows a period of 5 years for diving systems that don't have a DSSC, to get one.
- Grace period not expected to apply to administrations requiring a DSSC now.
- Applies to Surface systems.

Implementing our Industry Primary Code for Safe Diving



Class Societies

- ABS – American Bureau of Shipping
- BV Bureau Veritas
- CCS China Classification Society
- CRS – Croatian Register of Shipping
- DNV – Det Norske Veritas
- IRS – Indian Register of Shipping
- KR – Korean Register [2021]
- LR – Lloyds Register
- ClassNK – Nippon Kaiji Kyokai [2020]
- PRS – Polish Register of Shipping
- RINA – Rina Services S.p.A
- Turk Loydu – Turkish Register of Shipping
- * Green Highlights Have Diving/Submersible Rules





Class Societies Diving Rules

- https://ww2.eagle.org/content/dam/eagle/rules-and-guides/current/special_service/7_rulesforbuildingandclassingunderwatervehiclessystemsandhyperbaricfacilities_2021/uwvs-rules-jan21.pdf
- <https://marine-offshore.bureauveritas.com/nr535-rules-classification-naval-submarines>
- <https://www.ccs.org.cn/ccswzen/specialDetail?id=201910000000003438>
- [https://rules.dnv.com/ServiceDocuments/dnv/#!/industry/1/Maritime/5/Rules%20for%20classification:%20Underwater%20technology%20\(RU-UWT\)](https://rules.dnv.com/ServiceDocuments/dnv/#!/industry/1/Maritime/5/Rules%20for%20classification:%20Underwater%20technology%20(RU-UWT))
<https://standards.dnv.com/explorer/document/7F43603DDDC9477D9B1F044D89FE4A99/4>
- https://eclass.krs.co.kr/KRRules/KRRules2016/data/DATA_OTHER/ENGLISH/rb05e000.pdf
- <https://www.lr.org/en/rules-for-submersibles/>
- https://www.classnk.or.jp/account/en/Rules_Guidance/ssl/tech_rules.aspx
- <https://membermarine.rina.org/content/rg>



Two-part certification

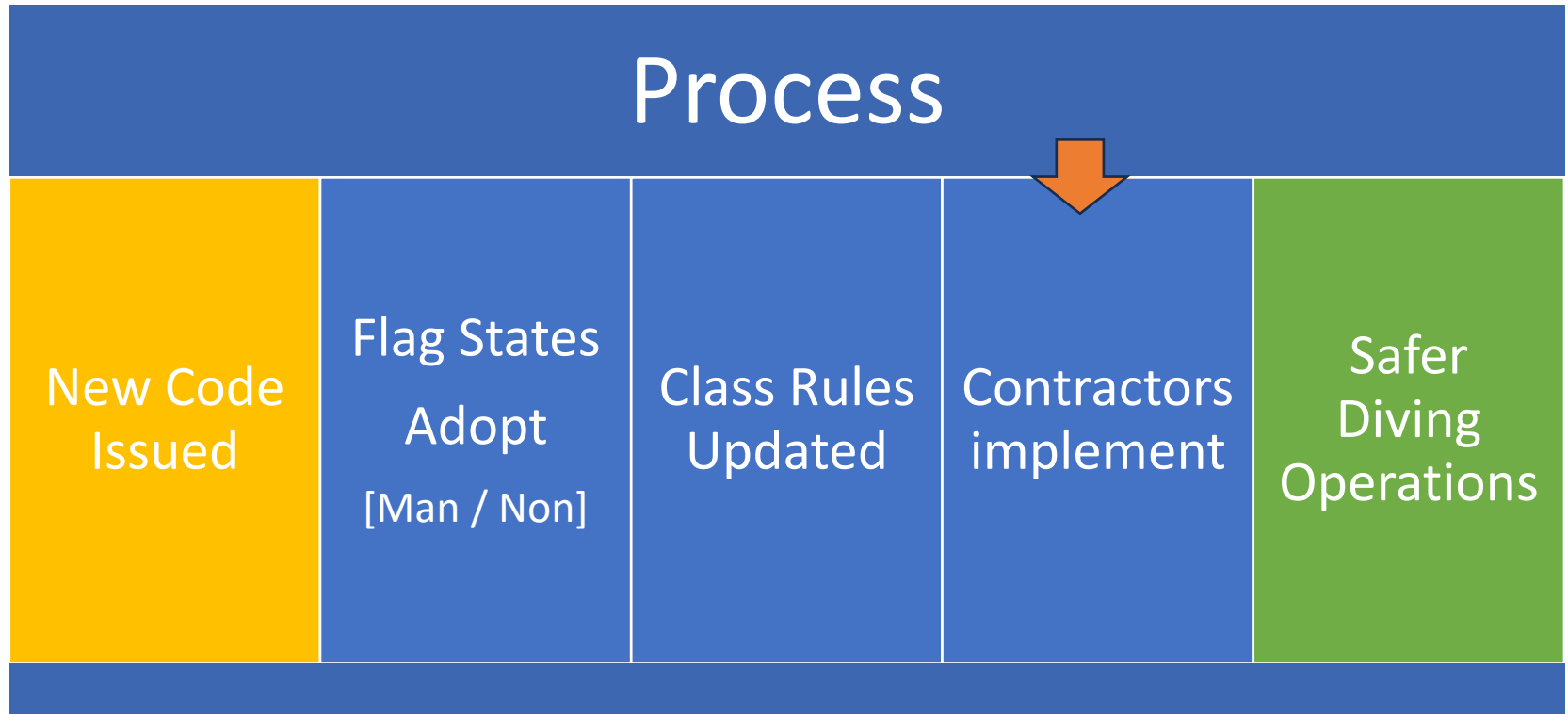
- Diving Unit Safety Certificate Part I
 - Applies to the Diving Unit
 - Issued on behalf of the Flag state and is the trading certificate.
 - Certifies that the diving system (Pt II) is acceptable to the flag and installed according to the code

- Diving Unit Safety Certificate Part II
 - Applies to the Diving System
 - Issued by a certifying authority (does not guarantee final acceptance)
 - Has the same basic scope as today's code and will allow existing diving systems to continue with the old code.

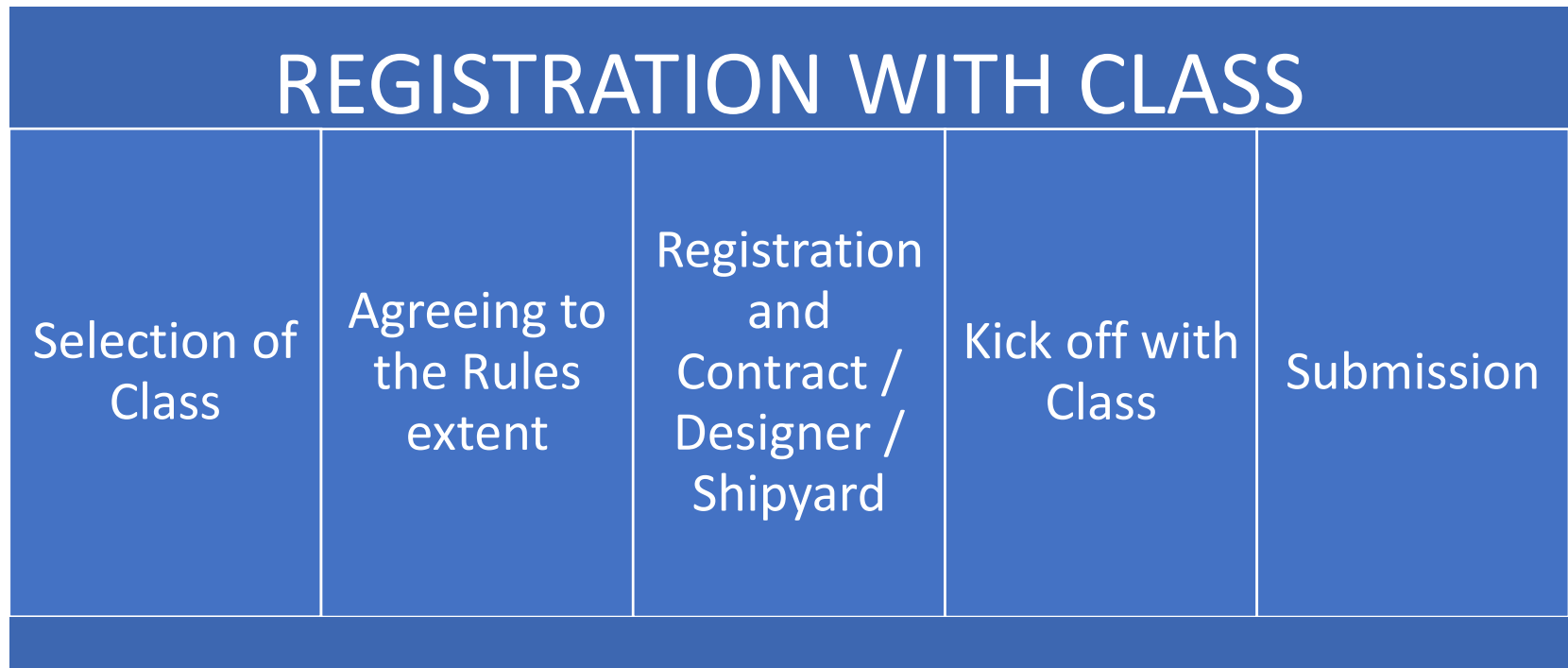
Existing systems

- 5-year period.
- Flag dependent for SAT and most systems without a DSSC [1995 Code] could get one.
- Much bigger issue for Surface Dive System.
- “Designed and built”, built is the problem as it's not possible to re-witness construction.
- Guidance provides a simplified DUSC II for the 5-year period for existing systems. [See App 3 Ch 4.3]
 - 3.2 (third party) for chambers
 - 3.1 (works cert) to relevant standard other equipment.
 - Design review remains in place.

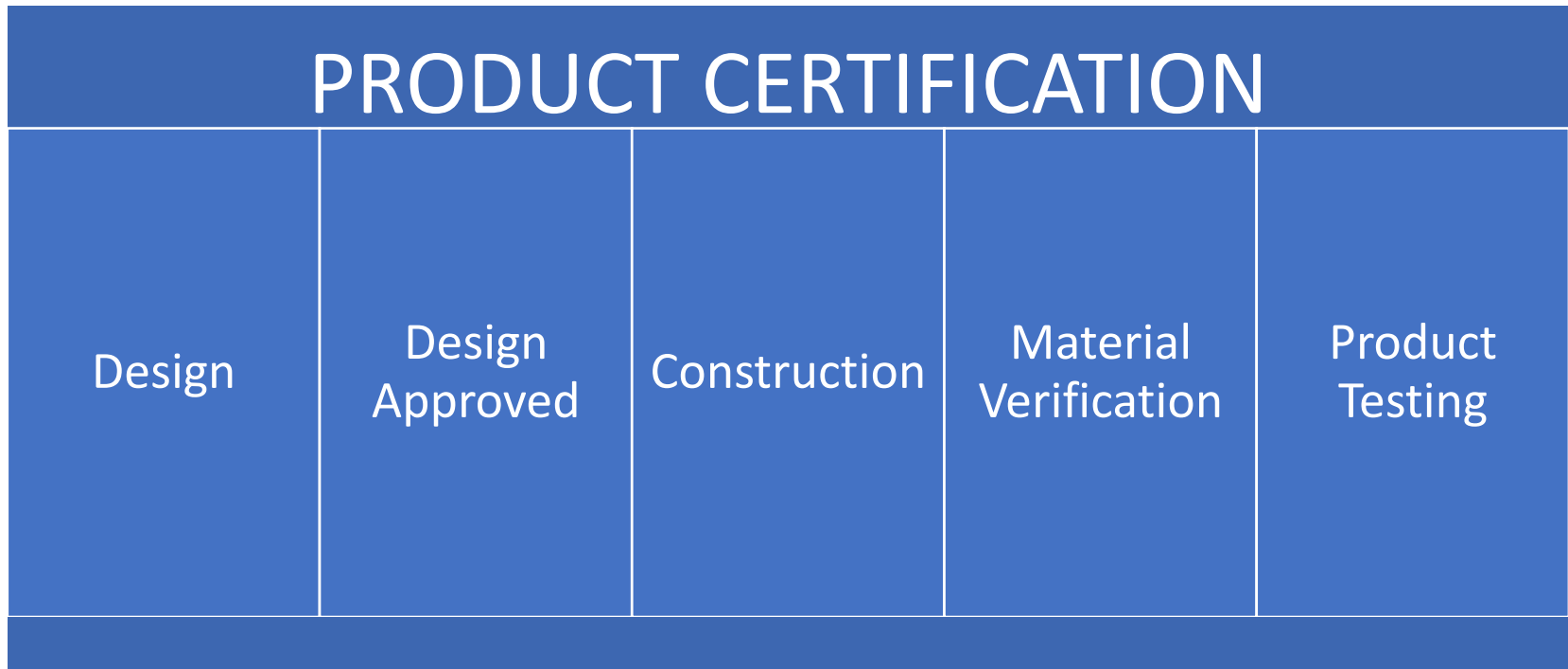
Implementing our Industry Primary Code for Safe Diving



A Snapshot of the Class Process



Class Process – Product Certification



Product Certificate – Issued by a 3rd Party or other to show conformance of the equipment to the completion of the above process.

Work Order:
First Visit Date:
Last Visit Date:
Vendor PO
Number:
Survey
Location:

Work Order:
First Visit Date:
Last Visit Date:
Vendor PO
Number:
Survey
Location:

Equipment Certification Report

Asset Type: Diving System
Customer Name:
WCN of Customer:
Location:

This is to certify that the undersigned Surveyors to this Bureau did at the request of _____, from 09 Sep 2022 to 28 Oct 2022, carry out the following survey and report as follows:

Client Asset Name: _____ Quantity: _____
SL3.4 1800 DDC, Containerized Dive System: 1

Name Plate Data
ABS Label: _____ Manufacturer: _____ Purchaser: _____ Designer: _____ Destination Vessel: _____
SL3.4 1800 DDC, Containerized Dive System

Basic Identification Data
Serial Number: _____ Owner Tag Number: _____ Supplier Ref. Number: _____
22/56071 - -

Report Details
ABS Stamping: Maltese Cross
5451214 Yes

Design Details
Design state: _____ Project Number: _____ Reviewing Organization: _____ Rule Set Name: _____ Rule Set Version: _____
Design Approved/Reviewed: _____ 2941030 Houston SED - Underwater Systems and Lifting Appl. Rules for Building and Classing Underwater Vehicles, Systems and Hyperbaric Facilities 2021

Statement of Work - Classification Service - Certification -

- All parts of the machinery/equipment satisfactorily complied with the approved drawings. Amendments, if any, verified to be rectified and considered satisfactory.
- Asbestos-free declaration verified and supporting documentation reviewed.
- Examination during manufacturer assembly has been carried out to verify all critical phases of welding, fitting, machining, and non-destructive examination as required by the applicable Rules and/or requirements.
- Subject to satisfactory installation, testing and trials after installation onboard the vessel.
- The principal data has been verified in accordance with the applicable Rules/specifications and applicable approved plans, and confirmed to be within acceptable tolerances.
- All testing (pressure/load/operational/etc.) has been carried out as applicable and verified in accordance with the applicable Rules/specifications.
- Testing machines are maintained in a satisfactory condition and records of their recheck or calibration dates confirmed.
- Traceability of materials used on this project has been verified.

NOTE: This Report evidences that the survey reported herein was carried out in compliance with one or more of the Rules, guides, standards or other criteria of the American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Report is a representation only that the essential structural items of material equipment, machinery or equipment have been reviewed by this Bureau and have been reviewed for compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping. The validity, applicability and interpretation of this Report is governed by the Rules and standards of American Bureau of Shipping which shall remain the sole judge thereof. Nothing contained in this Report or in any related issued in connection with this Report shall be deemed to relieve any designer, builder, owner, manufacturer, self, supplier, repairer, operator or other entity of any liability expressed or implied.

All the required tests were satisfactorily carried out and the following surveyor comments closed out.

-
-
-
-

Closing Paragraph:

The component/equipment was surveyed in accordance with the Rules, specifications, and approved drawings, as applicable, and is eligible for installation on board an ABS classed vessel subject to satisfactory installation and testing, as necessary.

Attending Surveyor(s):

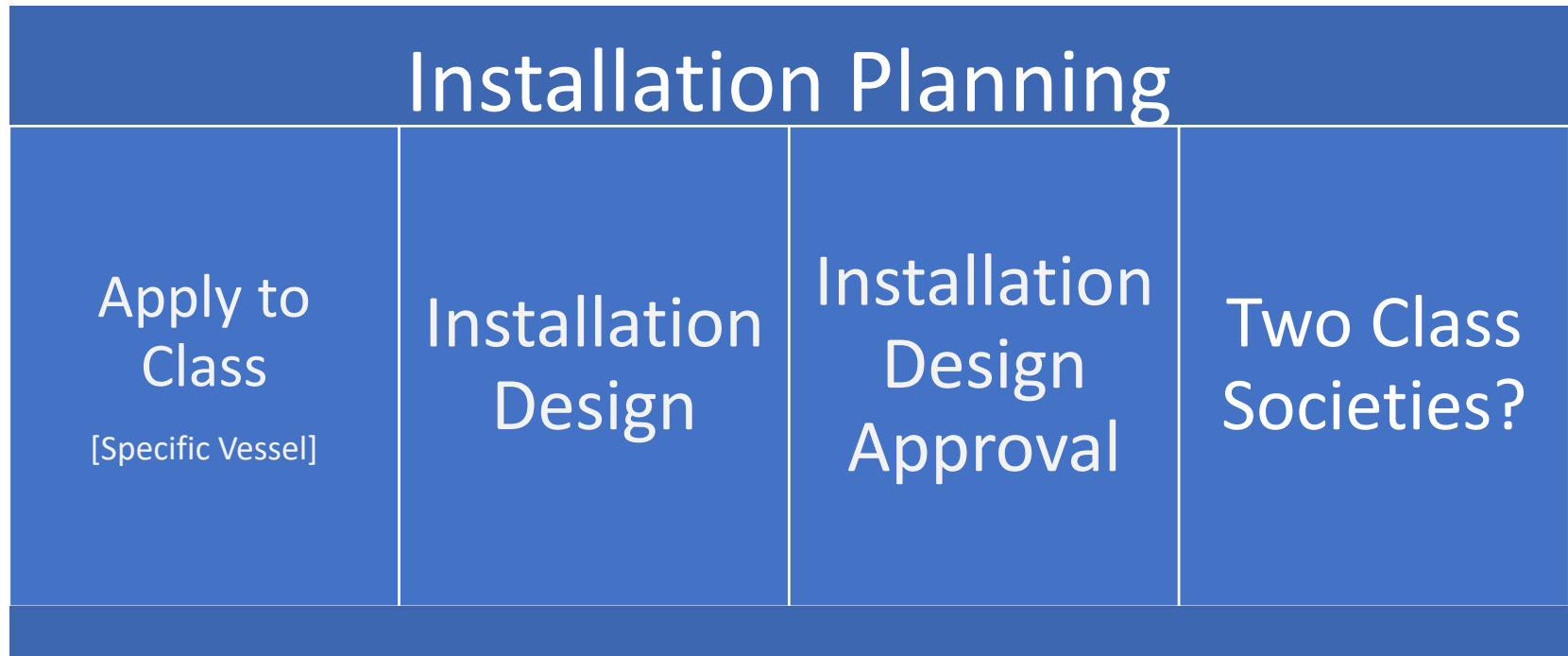
Signed-off Date: 28-Oct-2022

Reviewing Surveyor(s)

Work Order Reviewer: _____
Work Order Credit Date: 28-Oct-2022



Class Process – Installation [Vessel specific]



Installation design is specific to the vessel.
Post installation a DUSC Part I is issued.

Verification (A quality step)

- DUSC II verification
- Installation design issues closed,
- Material validation confirmed
- Manufacturing completed and correct
- Testing results match the required output of the product

Commissioning [On Vessel]

- Witness the assembly of the products
- Witness and confirm that all products work together as per the requirements of the nominated rules or operating process (Client defined)
- Record test results
- Issue certification [Class Certificate] or Interim class certificate



ABS

CLASS CERTIFICATE

Class Number

Builder

Vessel on Which the Diving System is Fitted
Name

IMO Number

This is to certify that the above has been surveyed in accordance with the Rules of this Bureau and entered in the Record with the Class and based upon certified components listed on page 3.

*A1, Diving System
Additional Notations



04 May 2021

Issue Date

Chief Surveyor

21 April 2024

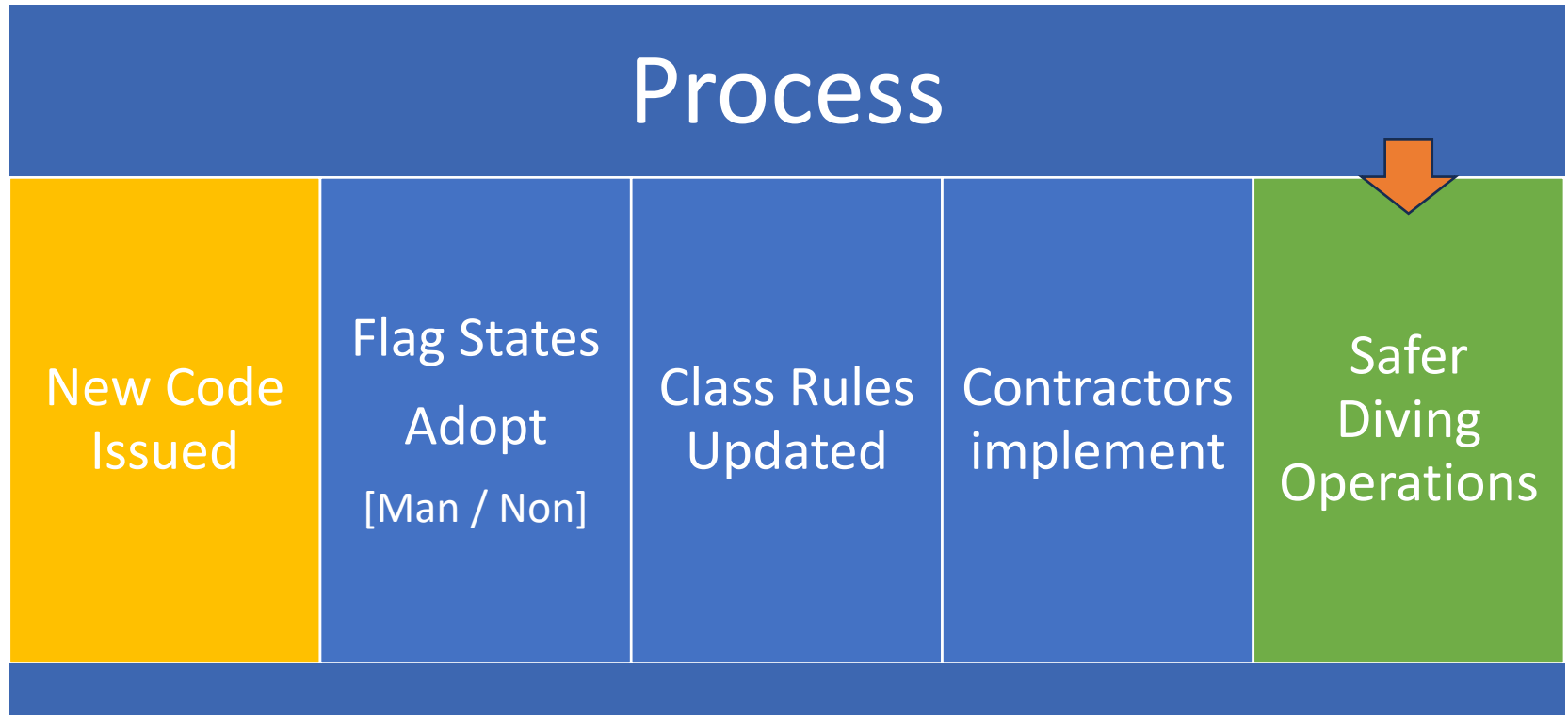
Expiration Date

Corporate Secretary

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. The classification certificate is a representation only that the vessel, structure, item of material, equipment or machinery or any other item covered by this certificate has met one or more of the Rules of American Bureau of Shipping. The certificate is governed by the terms and conditions on the reverse side hereof, and governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof.



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What can you Do?

- Read it and share it with your teams.
- Meet your Class Societies on operational impacts.
- Do not leave it for a Mobilization phase.

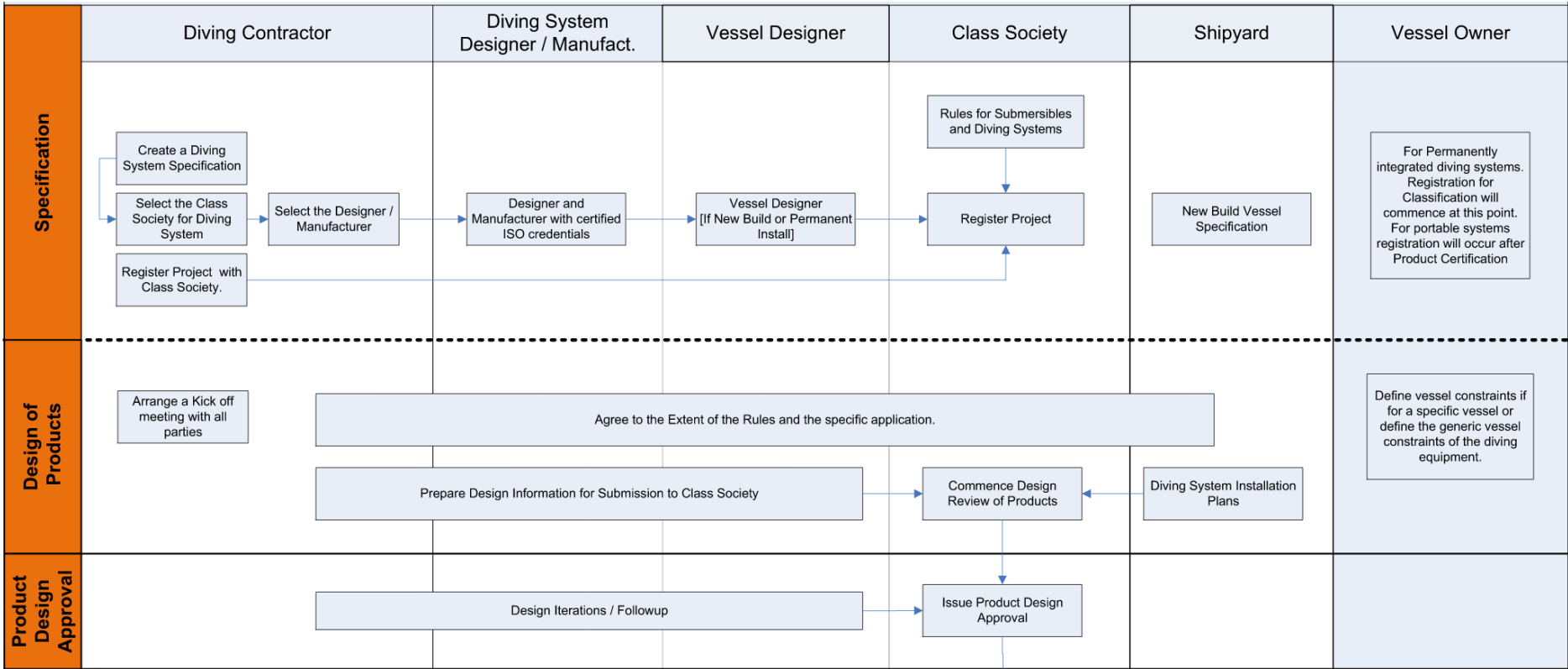
Any Questions?

Mike Jessop

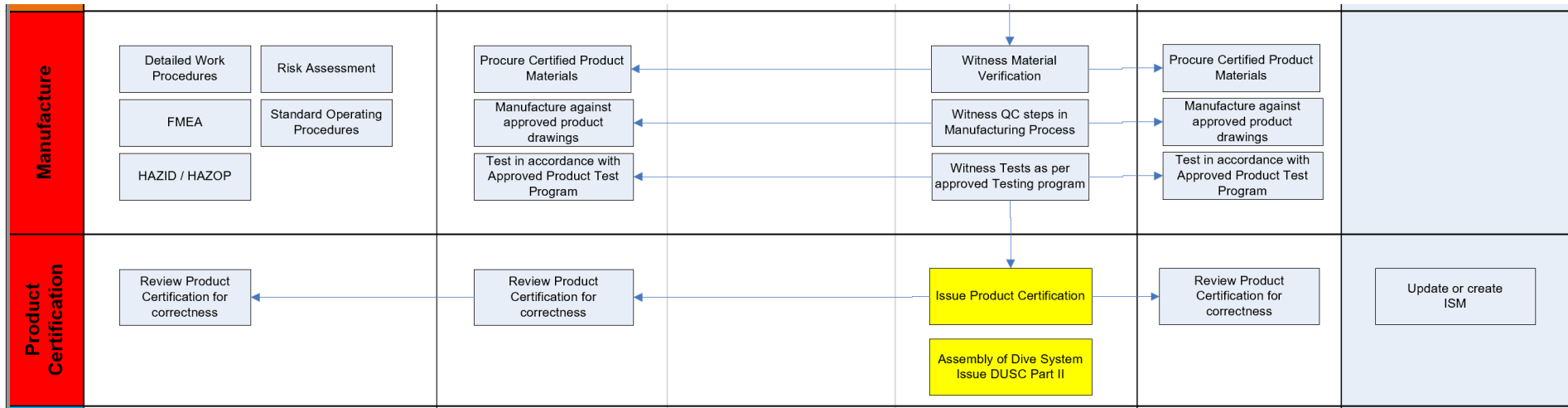
Mike.Jessop@oscmarine.com



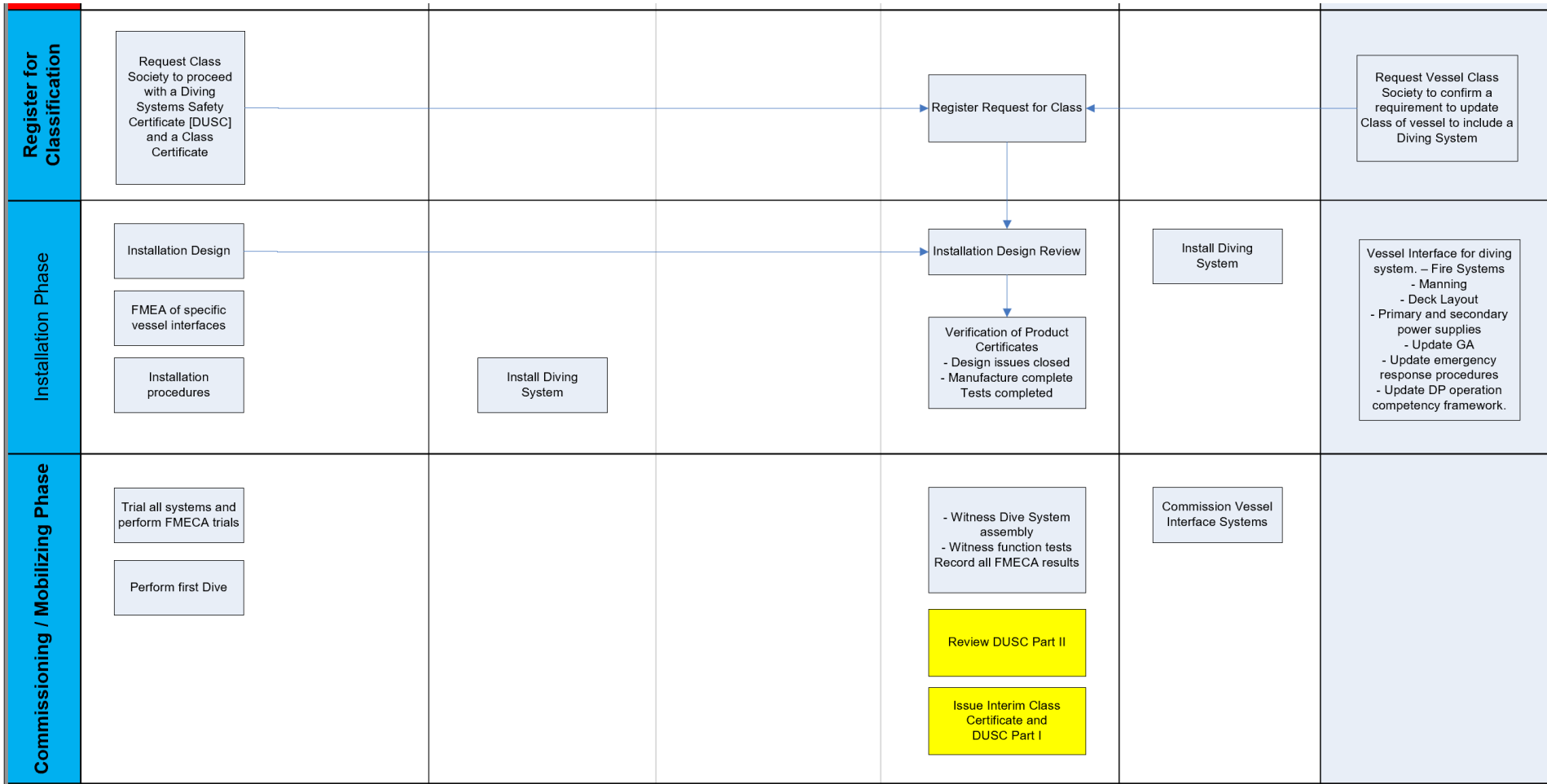
Specification and Design



Manufacture & Product Certification



Classification - Commissioning



In Service

Classification				<div data-bbox="1076 468 1242 539">Class society Review</div> <div data-bbox="1076 555 1242 626">Full Class Certificate</div>		
Survey				<div data-bbox="1076 682 1242 753">Conduct Surveys as per Classification Requirements</div>		<div data-bbox="1528 682 1694 753">Prepare Survey Planning Document</div>