Role	Curriculum Manager
Organisation	Nautical College
Module	ETO - DC and AC Principles
Your Feedback - Outcome 1	N/A
Sub-Group 1.2 Response	N/A
Your Feedback - Outcome 2	N/A
Sub-Outcome 1.2 Response	N/A
Your Feedback - Outcomes Above and Beyond	N/A
Sub-Group 1.2 Response	N/A
Your Proposed Outcome	I would like to see another outcome on Magnetic circuits, including topic on Magnetic fields, Magnetic flux and flux density, Magnetomotive force and magnetic field strength, Permeability and B–H curves, Reluctance Composite series magnetic circuits, Comparison between electrical and magnetic quantities,
Your Rational for this outcome	To to get a sound understanding of electrical machines a sound knowledge Magnetic circuits is essential.
Your Action for this outcome	Outcome 3 Demonstrate knowledge of electromagnetic field concepts and circuits Knowledge and/or skills Magnetic quantities (mmf, flux and reluctance) Simple magnetic circuit calculations Composite magnetic circuits Induced emf and current Leakage fluxes Magnetic losses Pulsating and rotating mmfs
Sub-Group 1.2 Response	Many thanks for your feedback. We are in agreement with the points you have raised and have added all three to the module.
Your Proposed Outcome	Addition to Kirchoffs laws apply network theorems like Superposition Theorem (applied to d.c. and a.c. circuits), Thevenin and Norton's Theorems (applied to d.c. and a.c. circuits) and Maximum Power Transfer Theorem (d.c. or a.c. cases)
Your Rationale for this outcome	Sound understanding of network theorems are essential for electrical engineers
Your Action for this outcome	Add this topic to outcome 1
Sub-Group 1.2 Response	Many thanks for your feedback. We are in agreement with the points you have raised and have added all three to the module.
Your Proposed Outcome	Add another outcome on resonating circuits
Your Rationale for this outcome	Knowledge of resonating circuits are needed in application like radio transmission, signal processing and communication etc
Your Action for this outcome	Add a new outcome called Solve problems involving resonating passive circuits Knowledge Resonant frequency and dynamic impedance in an R - L - C Q - factor and bandwidth in an R - L - C series circuit Impedance/frequency and current/frequency graphs associated with an R - L - C series circuit Resonant frequency and dynamic impedance in a R - L in parallel with C circuit Q - factor and dynamic impedance in a R - L parallel C circuit Impedance/frequency and current/frequency graphs associated with an R – L parallel C circuit
Sub-Group 1.2 Response	Many thanks for your feedback. We are in agreement with the points you have raised and have added all three to the module.

Role	Curriculum Manager
Organisation	Nautical College
Module	ETO - Transformers
Your Feedback - Outcome 1	Add transformer shell type construction as well
Sub-Group 1.2 Response	Many thanks for your feedback. We are in agreement that this is relevant to outcome 1.1, owing to the increased use of shore power while alongside. As such, this is essential knowledge and we have added to the outcome.
Your Feedback - Outcome 2	N/A
Sub-Group 1.2 Response	N/A
Your Feedback - Outcomes Above and Beyond	N/A
Sub-Group 1.2 Response	N/A
Your Proposed Outcome	Add protection systems of transformers Overcurrent Protection in Transformer : IDMT relay Differential Protection of Transformer : differential relay Restricted Earth Fault Protection
Your Rationale for this outcome	Electrical engineers need to know the different protection system on transformers
Your Action for this outcome	Add as additional knowledge in outcome 4
Sub-Group 1.2 Response	Many thanks for your feedback, we are in agreement and have added this to outcome 4.
Your Proposed Outcome	Need to add knowledge of: Instrument transformers
Your Rationale for this outcome	ETO's need the knowledge of Principle of working of Instrument transformers like CT & PT .
Your Action for this outcome	Add Instrument transformers as an additional topic in outcome 4
Sub-Group 1.2 Response	Many thanks for your feedback, we are in agreement that this should be added. However, we believe it would be more appropriate in outcome 1, so have included it there.

Role	Fleet Training and Development Manager	2nd Mate	Vessel Manager	Maritime Standards Manager	Lecturer	Captain	Vice President	Chief Officer	Captain	Principal	Marine Assurane Manager	Trainee Solicitor
Organisation	International Shipping Company	National Shipping Company	Offshore Shipping Company	National Government Body	Nautical College	International Shipping Company	International Shipping Company	Freelance	Yacht Industry	Nautical College	Utility Company	Law Firm
Module	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication	Deck - Emergency Response and Communication
Your Feedback - Outcome 1	#N/A	#N/A	Cannot comment on Outcome 1.5 as its not shown on the screen	Agree with the basis premise with respect to maintaining the current methods for teaching this area are acceptable With respect to 1.2 it is considered that this proposed change to cadet training should await the outcome of the pending IMO discussions There is no 1.5 tabulated above	For 1.2 - Suggest that the reason behind this extra focus is explained to teachers and students - ideally with a one liner in the syllabus or through a MIIN. Reason - Most students and teachers who I have spoken to feel that this is irrelevant, as very few have seen / experienced / heard of aircraft casualties at sea. And if one occurs, they will simply follow the MRCC's instructions - why do they need to spend time learning about this in nautical college? 1.3 d - Homing - is not relevant for ships today, as we don't have Df fitted on the bridge any more. Unless you wish to explain how the shore establishment can home in? Or you wish to show how the SART can be used for homing in? If so, this should be clarified in the syllabus so that teachers teach that.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	#N/A	Many thanks for your feedback, apologies this was on the next question.	Many thanks for your feedback. While we will certainly take into account the outcome of the IMO discussions regarding communication with distressed craft. We believe it would be beneficial to be ahead of the curve and help lead the discussion by including the suggestions in outcome 1.2. Apologies regarding outcome 1.5, this was included on the next question.	Many thanks for your feedback. With regards to outcome 1.2 it has been indicated through the working group and the industry consultation that this remains a relevant topic. The additional information suggested is for awareness to help respond to an emergency if it arises. With regards to outcome 1.3 this has been indicated through the working group and industry consultation that this remains a relevant topic. While direction finders are no longer fitted to modern vessels, understanding the concept for how shore based establishments would use these techniques remains relevant as well as the use of SARTs, this will be clarified in the academic guidance document published upon completion of the syllabus review.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Feedback - Outcome 1	#N/A	I believe that outcome 1.8 could also benefit from modernisation alongside the others with regards to personal security and security of property when cairing for and transferring survivors.	#N/A	1.5 Whilst simulator training in this area may have benefit it should not become a mandatory part of the cadet training syllabus 1.6 comments as per 1.5 above the theoretical training of cadets in this area can usefully be supplemented by enabling simulation to be part of the training, it is not however considered necessary to make this a mandatory part of UK first CoC training and examination. 1.7 Whilst basically in favour of the suggested additions, the change should only be implemented after the IMO STCW review 1.8 Agree that current training in this area remains appropriate.	Additionally, it would be useful to add sessions with MCA personnel coming in to talk to the candidates - even if it is for an hour. Else this will continue to be highly theoretical even after the changes.	#N/A	1.5 G) Inclusion of props and cons of a datum search and sector search, and use of environment (ie: Sun & Moon)	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	Many thanks for your feedback. We are unsure exactly what you are suggesting, are you referring to the personal security of the seafarers or the personal security of the survivors and their property? Please provide further clarification to ctandm.enquiries@mcga.gov.uk	#N/A	Many thanks for your feedback. While we appreciate your opinion on outcomes 1.5 and 1.6, the use of simulators is already a requirement for NAEST(O). In addition, the feedback from the working group and industry consultation is that this is desireable. While we will certainly take into account the outcome of the IMO discussions regarding communication with Mass Casualty/ Migrant Rescue. We believe it would be beneficial to be ahead of the curve and help lead the discussion by including the suggestions in outcome 1.7.	Many thanks for your feedback, it has been noted. This is something that would certainly be best practice and we can suggest this as a teaching method for colleges to take forward. However, it will not be something that we can mandate within the syllabus. In addition, we believe that this is not necessary to be someone from the MCA but, instead, any outside speaker with experience in real life emergency response scenarios.	#N/A	Many thanks for your feedback. Datum search and sector search are already covered within this outcome. Taking into account environmental factors such as the sun and moon are already covered under "visibility" within this outcome and the practical aspects are covered through IAMSAR Volume III.	#N/A	#N/A	#N/A	#N/A	#N/A
Your Feedback - Outcome 1	#N/A	#N/A	#N/A	1.10 This proposal can be welcomed in principle but the changes to cadet training should await the outcome of the IMO STCW review	Examples and clarity is needed regarding what exactly teachers should teach - since this will be new to them as well. Else each university / nautical college might end up teaching different things.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	I think legal obligations should also be linked with a basic understanding of what salvage is and the situations in which it can be claimed over a vessel.
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	Many thanks for your feedback. For clarification, the STCW Comprehensive review is due to start in 2024, the MCA intends to propose the inclusion of this topic as part of the review but believe adding it to the UK syllabus would provide strong evidence for its inclusion in STCW.	Many thanks for your feedback, this has been noted. Our intention is to create academic modules with delivery guidance for colleges following this review.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. This module is purely looking at the practical side of emergency response. Salvage is covered in the Shipmasters' Law and Business module.
Your Feedback - Outcome 2	#N/A	#N/A	#N/A	Agree that the current training of cadets wrt IMO approved communication procedures used to avoid misinterpretation at sea remain appropriate and that no change is required in this area.	N.A.	I question whether a 'Morse Code' examination is relevent in this day and age, in 25+ years at sea I have never been called on to use it.....	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	Many thanks for your feedback, it has been noted.	Many thanks for your feedback, it has been noted.	Many thanks for your feedback, it has been noted. This is actually covered in outcome 3.1 in which we have suggested "A review of signals certificate outcome should be undertaken looking into relationship between Signals Certificate and CoC".	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Feedback - Outcome 3	#N/A	#N/A	#N/A	The requirements for Cadet training and examination by visual means law the International Code of signals remains relevant, the review of the necessity of the separate signals certificate is welcomed.	2 letter flag signals are really not needed, as they are not used by merchant ships at sea any more.	#N/A	#N/A	Morse restricted / focused to those mentioned in Colregs. Regarding flags - apart from hoisting Alpha, Bravo and Hotel in 11 years at sea no others have been hoisted.	Having an appreciation of morse and signals even if not kept current through CPD is important in my opinion and feel it would be detrimental to remove all testing of this from such an early stage. That said i would question how relevant it is for later tickets and also if CPD training comes commonplace i would question its validity there	An awareness of Morse Code is all that is needed since the advent of GMDSS - no need for a certificate at all. The current requirement to send and receive at 3wpm is antiquated	Although the likelihood of signals being transmitted via flashlight in the event of an emergency, if all other attempts failed and in the middle of the ocean the Officers should have some awareness of this.	I fail to understand why this would require review. So long as the signals certificate is achieved prior to the CoC why does it matter if it was 6 months ago or 3 years ago? Questions can still be asked in the oral exam if the examiner so wishes.
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	Many thanks for your feedback, it has been noted.	Many thanks for your feedback, it has been noted. We are in agreement and we will bring this outcome in line with STCW by including in the guidance document, "Ability to transmit and receive, by Morse light, distress signal SOS as specified in Annex IV of the International Regulations for Preventing Collisions at Sea, 1972, as amended, and appendix 1 of the International Code of Signals, and visual signalling of single-letter signals as also specified in the International Code of Signals"	#N/A	#N/A	Many thanks for your feedback, it has been noted. A more focussed approach has been suggested in outcome 3.1 in which we have suggested "A review of signals certificate outcome should be undertaken looking into relationship between Signals Certificate and CoC".	Many thanks for your feedback, it has been noted. Pleasse be advised that we are not suggesting to remove all testing of morse code. However, a more focussed approach has been suggested in outcome 3.1 in which we have suggested "A review of signals certificate outcome should be undertaken looking into relationship between Signals Certificate and CoC".	Many thanks for your feedback, it has been noted. A more focussed approach has been suggested in outcome 3.1 in which we have suggested "A review of signals certificate outcome should be undertaken looking into relationship between Signals Certificate and CoC".	Many thanks for your feedback, it has been noted. A more focussed approach has been suggested in outcome 3.1 in which we have suggested "A review of signals certificate outcome should be undertaken looking into relationship between Signals Certificate and CoC".	Many thanks for your feedback. Please be advised that, as per MSN 1856 - Amendment 1, to achieve an OOW Unlimited CoC a candidate must hold a Signals certificate issued in the previous 3 years. We are in agreement that it does not matter whether the certificate was achieved in this period and have suggested that this requirement should be reviewed.

Your Feedback - Outcomes Above and Beyond	'Data science' is a big topic. I am guessing that the outcome is not for the cadets to learn to produce data, but instead to clean smart/big data and take some analysis from it. All careers are going to need to handle larger data and seafaring is no exception, but I feel we need to be realistic about the skills required by Mariners. They will not be data scientists or analysis (yet!), but may well need to be data specialists (as defined by programmes like Tableau)	I agree with all of the recommendations with regards to data science skills, however I believe this could be taken further with regards to up to date IT skills. Cadets need a solid foundation of knowledge concerning computer science in a this industry as it becomes more reliant on IT for compliance and safety.	#N/A	There should be no additional examination or assessment of cadets in any new ' Topic' of 'Data Science Skills' unless and until included in changes to STCW; such skills can be developed informally as part of more general training	N.A.	#N/A	#N/A	#N/A	#N/A	Contextualisation is done currently, hence the need for this review. Care should be taken to ensure that the formal embedding of specific "soft skills" into units/module are not done to "tick a box" and actually enhance the learning within a particular unit/module. Data analysis is an important skill to learn but it is just as important understand the appropriateness of the data to a particular given situation	#N/A	#N/A
Sub-Group 1.2 Response	Many thanks for your feedback. You are correct in your assumption, we are looking to formalise the teaching of data handling and interpretation skills, to ensure that seafarers can make best use of the data they are being presented with.	Many thanks for your feedback. IT skills are already covered within the syllabus and the use of electronic resources throughout training will improve the seafarer's computer skills.	#N/A	Thank you for your feedback, it has been noted. This is a topic which we are looking to introduce above an beyond the requirements of STCW, in order to future proof the skills of seafarers. It will be included as a UK recommendation as part of the IMO's comprehensive review of STCW.	Many thanks for your feedback.	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. As per the suggested Human Element Factors section we are looking to provide seafarers with a contextualised understanding of the Human Element in the maritime industry, showing how they can put theory into practice in the work they carry out at sea. This should provide practical examples of how these can be implemented at sea. We are in agreement with your comment about data analysis and the appropriateness of data, this will be covered as part of the data science module.	#N/A	#N/A
Your Proposed Outcome	#N/A	As stated, I believe that it is important for future cadets to have a solid knowledge of ICT skills and Computer Science, especially with regards to networks and connectivity on board, as well as maintenance of both hardware and software on board. This could include software maintenance, recognising error messages and resolving issues on board.	#N/A	#N/A	The current sea time requirements are very low (just 12 months). Feedback from sailing officers suggests that they find cadets and officers who have gone through this stream to be pretty poor in their practical knowledge and skills on board. 12 months is simply insufficient to get this in a profession as practical as the merchant navy. This is not because of the cadet's mistake, but rather because the current system does not give them 18 24 months at sea to learn and assimilate diverse learning from different seafarers on board ships. Hence suggest that the current 12 months of sea time be changed to 18 months at sea.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Rationale for this outcome	#N/A	The role of computers and digital tools in the industry cannot be understated. It would be helpful from a perspective of operations and maintenance for seafarers themselves to be able to maintain their own systems instead of relying on shore-based contractors and facilities who may not be able to assist the vessel directly. At the very least, trained seafarers could assist these shore side facilities by correctly diagnosing the problem and providing accurate information about IT systems on board to allow them to resolve problems more efficiently. As matters stand, seafarers are not always able to provide the information that shore based help desks need to resolve IT issues on board ships.	#N/A	#N/A	The current sea time requirements are very low (just 12 months). Feedback from sailing officers suggests that they find cadets and officers who have gone through this stream to be pretty poor in their practical knowledge and skills on board. 12 months is simply insufficient to get this in a profession as practical as the merchant navy. This is not because of the cadet's mistake, but rather because the current system does not give them 18 24 months at sea to learn and assimilate diverse learning from different seafarers on board ships.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Action for this outcome	#N/A	The required knowledge could be introduced to the syllabus as another outcome linked to outcomes regarding the human element on board.	#N/A	#N/A	Current 12 months of sea time be changed to 18 months at sea.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	Many thanks for your feedback. While we agree that IT skills are an important topic, and already included in the syllabus, we do not think it would be appropriate to require Deck Officers to be computer engineers as this would be covered within the Engineering/ ETO syllabuses.	#N/A	#N/A	Many thanks for your feedback. This review is looking only at the content of the syllabus and, as such, will not be able to influence the amount of seagoing service required. However, we are looking to ensure that all Cadet training is appropriately contextualised to the work on board ships, which we hope will help Cadets become an efficient member of the ship's team.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Proposed Outcome	#N/A	#N/A	#N/A	#N/A	Use of alternative fuels should be added as a topic.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Rationale for this outcome	#N/A	#N/A	#N/A	#N/A	Due to the increasing number of ships being fitted with alternative / dual fuel systems	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Action for this outcome	#N/A	#N/A	#N/A	#N/A	Addition of this to the existing syllabus, or better, a 1 day course teaching this, made mandatory for all cadets and Masters and Chief mates.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. While we agree that alternative fuels are relevant to the modern seafarer, we do not feel that they are required to be covered within this module. These are covered in the Marine Engineering Systerms module.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Proposed Outcome	#N/A	#N/A	#N/A	#N/A	Suggest that once the consultations are over, a more detailed syllabus (similar to the IMO model course) with Data Science action verbs (define, analyse, explain, etc.) be published as a MIN or MGN notice. This will help guide teachers on what needs to be taught, in what detail, and will help standardise education in all colleges.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Rationale for this outcome	#N/A	#N/A	#N/A	#N/A	To help guide teachers on what needs to be taught, in what detail.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Your Action for this outcome	#N/A	#N/A	#N/A	#N/A	This will help standardise education in all colleges.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. Following the compition of the syllabus review the finalised modules will be converted into academic guidance documents and provided to colleges.	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

Role	2nd Engineer
Organisation	International Shipping Company
Module	Marine Engineering - Process Control
Your Feedback - Outcome 1	Ensure to add ISO 14726 (Pipe colour coding) in any understanding of pipework
Sub-Group 1.2 Response	Many thanks for your feedback, we are in agreement and have added to the outcome.
Your Feedback - Outcome 2	N/A
Sub-Group 1.2 Response	N/A
Your Feedback - Outcome 3	N/A
Sub-Group 1.2 Response	N/A
Your Feedback - Outcome 4	N/A
Sub-Group 1.2 Response	N/A
Your Feedback - Outcomes Above and Beyond	N/A
Sub-Group 1.2 Response	N/A

No feedback requiring a response was received for the module Marine Engineering - Fundamentals of Control Systems.

Role	OOW Unlimited	Fleet Training and Development Manager	Vessel Manager	Maritime Standards Manager	Vice President	Chief Officer	Marine Lecturer
Organisation	Maritime Charity	International Shipping Company	Offshore Company	Government Administrative Body	International Shipping Company	Freelance	N/A
Module	Deck - Celestial Navigation	Deck - Celestial Navigation	Deck - Celestial Navigation	Deck - Celestial Navigation	Deck - Celestial Navigation	Deck - Celestial Navigation	Deck - Celestial Navigation
Your Feedback - Outcome 1	#N/A	#N/A	#N/A	#N/A	1.2. DISAGREE with Remove. Imperative to understanding these fundamentals in the use of a sextant and calculations	#N/A	A sextant is not carried by some categories of seagoing vessels coded by the MCA. This must mean that that the principles are not an important feature of safety at sea in modern vessels. There have been no incidents investigated by the MAIB which found that the use of sextant would have prevented the incident.
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. While we appreciate your point of view, the overwhelming feedback from the industry consultation has been to agree with our suggestion.	#N/A	Many thanks for your feedback. While we appreciate your point of view, the overwhelming feedback from the industry consultation has been to agree with our suggestion.
Your Feedback - Outcome 2	#N/A	#N/A	Primary method can be moved to a computer based system but the underpinnings of the knowledge on how to do things if the computer system fails should still be required.	Whilst there is no objection to including reference to Celestial Navigation Computer Software in teaching in this area. Manual calculation (with the use of basic scientific calculator to aid calculation using the basic formulae) should remain the primary examinable and instruction method.	#N/A	#N/A	The recommendation in place suggest the use of computer programmes for astro calculations - it is worthy of note that there are very few modern/recent programmes for these calculation since they are not required even to make landfall without GNSS.
Sub-Group 1.2 Response	#N/A	#N/A	Many thanks for your feedback, we are in agreement and have attempted to represent this in our suggested actions.	Many thanks for your feedback, while we are in agreement that manual calculation should still be taught, the opinion of the working group is that it should be taught as a contingency method. The feedback received from the industry consultation supports this point of view.	#N/A	#N/A	Many thanks for your feedback, it has been noted.
Your Feedback - Outcome 3	3.1 A really vital piece of knowledge that should be known how to be completed by hand before considering electronic aids. In my experience, not all vessels have the electronic 'nav-pack' facilities and these calculations are still required to be done by hand every watch.	#N/A	#N/A	Celestial Navigation Computer Software has a place in cadet training but must remain a secondary method unless and until the carriage of such software becomes a statutory requirement	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	Many thanks for your feedback, while we are in agreement that manual calculation should still be taught, the opinion of the working group is that it should be taught as a contingency method. The feedback received from the industry consultation supports this point of view.	#N/A	#N/A	Many thanks for your feedback, while we are in agreement that manual calculation should still be taught, the opinion of the working group is that it should be taught as a contingency method. The feedback received from the industry consultation supports this point of view.	#N/A	#N/A	#N/A
Your Feedback - Outcome 4	#N/A	#N/A	#N/A	Celestial Navigation Computer Software has a place in cadet training, but manual calculation must remain the primary and examinable method (including the use of a standard scientific calculator to simplify calculations using standard formulae) unless and until the carriage of such software becomes a statutory requirement for all vessels.	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	Many thanks for your feedback, while we are in agreement that manual calculation should still be taught, the opinion of the working group is that it should be taught as a contingency method. The feedback received from the industry consultation supports this point of view.	#N/A	#N/A	#N/A

Your Feedback - Outcomes Above and Beyond	#N/A	This needs to be data analytic skills, not data science	#N/A	There should be no specific examinable topic of 'Data Science Skills' within the Cadet training syllabus, nor should such skills form part of formal Cadet assessment, unless and until it becomes formally part of STCW. These skills can be developed informally within the various subjects during training.	#N/A	#N/A	#N/A
Sub-Group 1.2 Response	#N/A	Many thanks for your feedback. Please note that Data Analysis Skills are included within the topic of Data Science.	#N/A	Thank you for feedback, it has been noted. This is a topic which we are looking to introduce above an beyond the requirements of STCW, in order to future proof the skills of seafarers. It will be included as a UK recommendation as part of the IMO's comprehensive review of STCW.	#N/A	#N/A	#N/A
Your Proposed Outcome	#N/A	#N/A	#N/A	#N/A	#N/A	Remove 'rendevous at sunrise' as an essential element. Clarify the sweeping term 'modernise' . yes by all means include the apps that can be used instead of hand written lengthy calculations using an almanac where finite interpolations are required but also accept that celestial is an art and 'optional' and not voyage critical for many vessels - it cannot be done whilst bouncing around the North sea in winter etc	There is a need for a top down review of the OOW level training requirement and outcomes to ensure that the syllabus fully recognises the procedures used in modern vessels with modern equipment fits.
Your Rationale for this outcome	#N/A	#N/A	#N/A	#N/A	#N/A	Frustrating having its apparent importance drilled into us as students but never actually used since leaving college, including equator crossings etc	However automated/modern a vessel is there is a requirement for bridge watchkeepers to be fully trained in the tasks that they will have to perform including fall-back procedures and emergency operating procedures. This means that the modern OOW will need to have a thorough understanding of the principles of navigation including knowledge of past procedures. But the focus should be on the use of modern equipment that is used at sea (and not just brought out for training purposes). A modern bridge employs highly complicated and technical systems with integration of aids to navigation and control systems. Understanding the basic theory will be important along with the implications of failures of individual/multiple equipment's or even complete system failures. The OOW must be comfortable operating in this environment and know his own limitations in ascertaining the accuracy of the information provided to him.
Your Action for this outcome	#N/A	#N/A	#N/A	#N/A	#N/A	More details in the the proposal.	Much more importance needs to be given to modern system training including exposure to failure and backup modes (using computer training and simulation). To make room for this element it will be important to reduce the emphasis on outdated navigation techniques and procedures. It is interesting that the recommendations included in this consultation include moving to computer based Celestial Navigation when these programmes have already been in use for some 40 years! The MCA needs to ensure that UK training remains at the forefront of worldwide maritime training and this will require a shift from historic teaching. The proliferation in modern equipment including Gyros, ECDIS, Inertial navigation systems, and software will mean that many ships will be reducing bridge watchkeeping capacity and increasing automation. The modern bridge watchkeeper will need the skills to manage systems and with the rapid increase on the deployment of 5G satellites is most unlikely to need to take out a sextant and do any manual calculations.
Sub-Group 1.2 Response	#N/A	#N/A	#N/A	#N/A	#N/A	Many thanks for your feedback. Rendezvous at sunrise is a mix of celestial navigation and plane sailing and, as such, provides a useful assessment tool to provide a real life situation to test Cadets. We have attempted to clarify what we mean by modernise throughout the template by providing an action and the rationale for the action.	Many thanks for your feedback. We are in agreement that the Cadet training syllabi require a review and updating. We hope to achieve this goal through the modernisation process.

No feedback requiring a response was received for the module ETO - Electrical Systems in Potentially Explosive Environments.

No feedback requiring a response was received for the module ETO - Electrical Safety.