



WELCOME
ABOARD!

WELCOME TO REAL
PARTNERSHIP!



CONTENTS

4-5

WELCOME MESSAGE

6-14

NEWS & EVENTS

16-17

MARLOW OPINION

Blended Learning - the best of both worlds

20-23

EQUIPMENT & FACILITIES

24-27

TRAINING PROJECTS

28-33

ANALYSIS

Empowering maritime training through advanced simulators and innovation

34-36

FACTS & FIGURES

Established infrastructure supports training activities

38-41

TRAINING OPPORTUNITIES

42-45

INTERVIEW

Adapting to change – Training always a primary solution

47

TRAINING PARTNERS



“ We will always face challenges ahead,
but ultimately it is our commitment
and resilience and our ability to adapt
that determines how we deal with them ”



WELCOME MESSAGE

Dear Readers,

We are pleased to present the 2023 Marlow Training Journal.

Each year, our journal reports on latest training activities, including an update on news and events, overview of new equipment installations and facility upgrades, recently introduced training projects, as well as Key Performance Indicators (KPIs).

The journal also always has a number of special features on some of the industry's current hot topics. This year, the *Marlow Opinion* piece introduces blended learning and why we consider it a vital part of the future of maritime education and training.

Blended learning utilises multiple methods of delivery, namely integrating innovation and technology, such as digital and eLearning, with conventional and hands-on interactions and participation at a training centre. Indeed, we must always adapt and evolve in training, both to latest advancements, such as in technology, but also more generally in multidisciplinary methodologies.

The *Analysis* this year digs deep into how maritime training has been revolutionised by advanced simulators and innovation, and looks at what's in stall for the future. Meanwhile, in *Training Opportunities*, we have a special report from the Lithuanian Maritime Academy (LMA) on how its collaboration with Kherson State Maritime Academy (KSMA) and Marlow is supporting many Ukrainian cadets continue their studies and provide them the opportunity to pursue their careers as marine professionals.

Finally, in this year's *Interview*, we speak to a specialised Training Consultant at United Marine Training Center (UMTC) in Manila to get a take on major changes in maritime training – from moving himself from ship to shore to take on the role, adapting to online training channels, to new

requirements in keeping up with the industry's evolution in digitalisation and decarbonisation.

The events in Ukraine sadly persist. As a company, we are doing what we can to help ensure the safety of our people, seafarers, cadets and shore-based colleagues and their families. Our colleagues and partners on the ground remain a pillar of strength, supporting these efforts and the local communities in every way possible. Meanwhile, our established infrastructure, including the successful integration of online tools and programs is allowing us to maintain training activities and learning for Ukrainian crew remotely. This, and training overall across the Marlow network is further enhanced by being able to fully leverage our dedicated partner facility in the Philippines, UMTC as a hub for content creation, which is now operating at a much larger capacity.

Our training activities advance solidly, having endured the disruption from recent years caused by the Covid pandemic and coming out stronger than before. We will always face challenges ahead, but ultimately it is our commitment and resilience and our ability to adapt that determines how we deal with them.

As we celebrate our company's 40 Year Anniversary, we can be very proud of our accomplishments. Forty years of dedication, innovation and growth, whilst we look ahead with excitement and anticipation, knowing that the next chapter can hold even greater achievements.

THANK YOU to all our customers and industry partners, seafarers and shore-based staff and their families for the ongoing loyalty and support throughout these times.

**Marlow Navigation
Management**

KSMA's Rector, Professor Vasyl Cherniavskyy presenting cooperation agreement with Marlow



“ We appreciate the professionalism and cooperation of everyone involved in this partnership, including our seafarers, staff and associates in Ukraine, as well as our loyal clients and partners for their ongoing support ”



Signing of annual cooperation agreement between KSMA and Marlow Navigation in the training and development of marine professionals

KSMA-MARLOW COOPERATION CONTINUES

Kherson State Maritime Academy (KSMA) in Ukraine and Marlow Navigation signed their annual cooperation agreement for the training and employment of Ukrainian marine officers, with 70 new cadets taken for year 2023.

The agreement was signed towards the end of last year by KSMA's Rector, Professor Vasyl Cherniavskiy and Marlow's Joint Managing Director, Jan Meyering, in the attendance of the group's Chairman, Hermann Eden and representatives from both the head office in Cyprus and Ukraine.

During the engagement, all parties expressed their support in the ongoing, constructive partnership, and in hopes for further strengthening business relations, especially important during the difficult times for the Academy and Ukraine.

"Marlow has been cooperating with KSMA in the training and employment of marine professionals since 2005. Over the years, we have enjoyed many mutual successes. We appreciate the professionalism and cooperation of everyone involved in this partnership, including our seafarers, staff and associates in Ukraine, as well as our loyal clients and partners for their ongoing support," said Meyering.

Further to this, Marlow has been working closely with KSMA since the beginning of the military conflict to provide Ukrainian cadets the opportunity to maintain their studies, training and livelihoods. Where possible, KSMA cadets continued their progress online.

In addition, many have been given the opportunity to pursue their education and training at KSMA's partner maritime academies in Eastern Europe.

A cooperation agreement, for instance, has been signed between KSMA and Lithuanian Maritime Academy (LMA) in Klaipeda, with cadets able to join LMA for studies directly after signing off from their ship. LMA has agreed to recognise cadets' previous studies at KSMA and incorporate them into their own programmes by issuing a dual Bachelor diploma and dual certificate of competence upon completion of their studies.

Meanwhile, Marlow has also been contributing substantially to cadets' studying and living expenses during their time in Lithuania, as well as continuing supporting their learning via online tools and practical training at sea.



SEMINAR ON LNG-POWERED VESSELS & FUEL MANAGEMENT

A two-day Technical Training and Orientation seminar was held for crew in Poland at the end of last year.

More than 30 crew members took part, together with representatives from Marlow's shore-based team in Poland, and superintendent Pawel Graban from group head office in Cyprus.

The seminar focussed on covering important topics in shipping, namely LNG-powered vessels and management of compliant fuels with MARPOL 73/78 Annex VI regulations and amendments. In the meantime, we hold similar seminars on fuel management online for our crew across the Marlow network.

"MARPOL 73/78 Annex VI sets limits on Sulphur oxide and Nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances."

In order to comply with MARPOL 73/78 Annex VI regulations and amendments, there are several methods that can be followed.

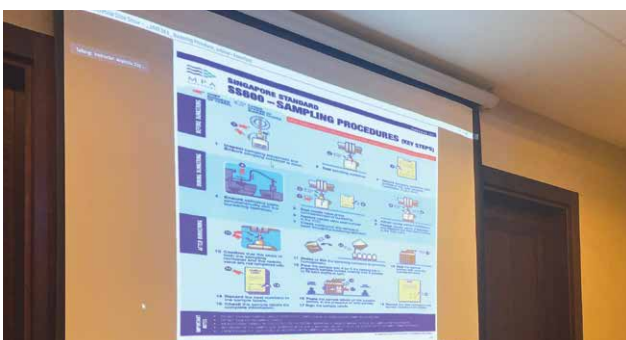
One method is to use compliant fuels with a maximum sulphur content of 0.5% globally and 0.1% in Emission control areas (ECAs). Compliant fuels include very low sulphur fuel oil (VLSFO) and marine gas oil (MGO). Some ships limit their air pollutants by installing exhaust gas cleaning systems, also known as "scrubbers". This is accepted under the MARPOL Convention as an alternative means to meet the sulphur limit requirement.

Dealing with the new fuel blends and switching to VLSFO, as well as maintaining scrubbers, necessitates additional training for the ship's engine crew to assess and manage risks and address potential safety concerns. Upgrading their skills will enable them to mitigate these risks effectively.

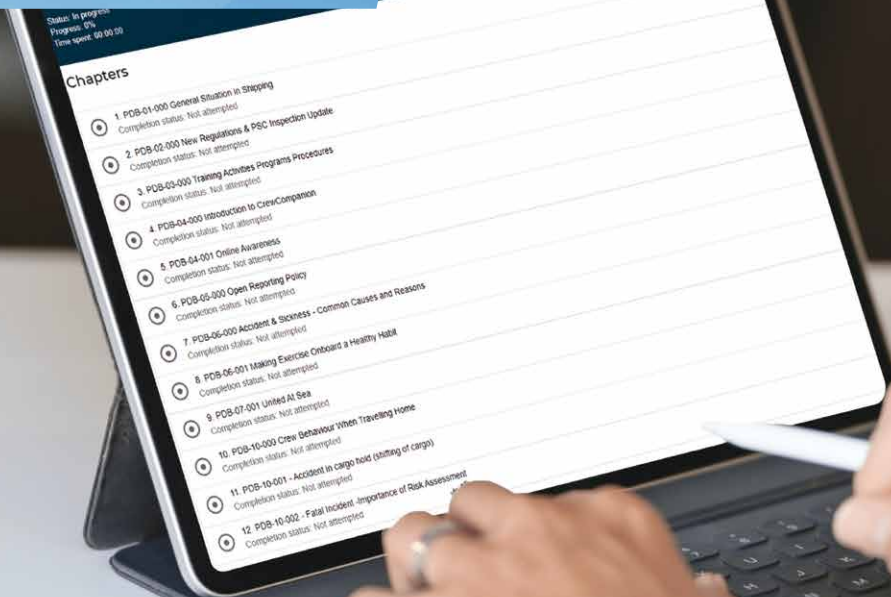
Ships can also have engines which are able to use different fuels, which may contain low or zero sulphur, such as liquefied natural gas (LNG) or biofuels. LNG is one of the so-called alternative fuels for shipping. LNG, LPG, methanol, biofuel, hydrogen and ammonia have been identified as the most promising alternative fuels solutions for shipping.

LNG is widely considered across the industry as a transitional fuel option on the path towards carbon neutrality. This has been predominantly driven by a combination of the environmental benefits and reducing an Energy Efficiency Design Index (EEDI) rating. When it comes to CO2 emissions, LNG is the fossil fuel producing the lowest amounts. LNG bunkering infrastructure is also continually improving, with fuel already available in a growing number of major shipping hubs.

Looking ahead, LNG has already overcome the hurdles of international legislation, and methanol and biofuels will follow suit very soon. It will be a while before alternative fuels and technologies are covered by appropriate new regulations within the IMO.



Seminar in Poland on LNG-powered vessels and Fuel Management



This year's PDB had been converted into an E-Learning module and can be reviewed and completed via the Ocean Learning Platform.

MARLOW PDB 2023 E-LEARNING MODULE

Marlow Navigation's Pre-departure Briefing (PDB) 2023 was released in January this year.

Unlike previous versions, this year's PDB had been converted into an E-Learning module and can be reviewed and completed via the Ocean Learning Platform, similar to other maritime E-learning titles which form part of the Marlow Training Matrix requirements.

Like the other CBTs, Verification of Training certificate can be generated by the platform once all modules of the training titles are 100% completed.

This is the 10th Marlow PDB, and like previous years, it covers numerous important issues for crew, with various forms of engaging training and learning

material, including presentations, documents, video tutorials and case studies.

PDB 2023 has updates regarding Marlow's training programs, upcoming industry rules/regulations, as well as port state control results for the previous year. It also provides several case studies on incidents based on actual events, with summaries of key points and preventive actions, further helping to enhance safety at sea.

Other modules include: moral, ethical, and professional code-of-conducts; open reporting policy; analysis on accident and sickness on board, together with guidance on creating and maintaining healthy habits.

KSMA CADETS GRADUATE IN LITHUANIA

Fourth year students from Kherson State Maritime Academy (KSMA) were awarded with their diplomas during two special ceremonies at the Lithuanian Maritime Academy (LMA) in Klaipeda, one in December last year and the other February this year.

In total, 57 students successfully defended their final thesis and passed the qualifying exams, whilst a further 50 will continue their studies and graduate in 2023 and 2024.

During the awarding ceremony, a number of motivational speeches were given, emphasising the cadets' achievement, and the support of LMA, including from KSMA's Rector, Professor Vasyl Cherniavskiy, Director of LMA Vaclav Stankevič, Mayor of Klaipėda City Vytautas Grubliauskas, Chairman of the Marine Transport Workers' Trade Union (MTWTU) of Ukraine

Oleg Grygoriuk, as well as Marlow's Training and Development Manager, Captain Martin Bankov.

"We congratulate these KSMA cadets for this exceptional and admirable effort and wish them all the best in their future careers as marine professionals," said Captain Bankov. "Despite the many concerns and challenges, of course not being able to continue their studies and training in Ukraine, they have managed to endure and succeed."

Since early 2022, a cooperation agreement signed between KSMA and LMA is allowing Ukrainian cadets the opportunity to pursue their education and training.

"Our thanks also to LMA and all their staff, who have responded to the cadets' and KSMA's need for assistance during these times without any hesitation," added Captain Bankov.



KSMA fourth year cadets receiving their diplomas at the Lithuanian Maritime Academy (LMA)



Professor in the Department of Social and Humanitarian studies at KSMA, and cadet supervisor for Marlow based at LMA, Dr. Alena Leschenko



Marlow's Crew Training and Development Manager, Captain Martin Bankov addressing cadets during the graduation ceremony

MARLOW KICKS OFF SENIOR OFFICER SEMINARS IN THE PHILIPPINES

After an extended pause due to the Covid pandemic, Marlow resumed with its Senior Officer Seminars around the global network, beginning with Marlow Philippines in mid-February.

With 30 management-level officers in each of the two groups, the seminars covered various company news and hot topics of concern.

Key presentations during the seminars included:

- Communication, information exchange, reporting procedures and correspondence;
- Dealing with customer complaints;
- Crew P&I and accident statistics analysis, leading to enhanced safety and a drop in accidents;
- Safety and actions to reduce accidents;
- Introduction to maritime resource management;
- Appraisals and crew performance reports; and
- Training on board – expectations and experiences.

Participants were fully engaged with lively discussions, which also included case studies and real-life scenarios.

The event was a huge success and the day ended with a dinner, catered by cook trainees at Marlow's dedicated training partner in the Philippines, UMTC, giving everyone a chance to relax and socialise.



Crewing Director, Marlow Navigation, Captain Frank Brodersen welcoming participants



Group photo of participants, including representatives from Marlow's head office in Cyprus, the Netherlands, Philippines and partner training centre UMTC



CEO – Administration, Marlow Navigation Phils., Inc., Tony Galvez



Crewing Director, Marlow Navigation Netherlands, Georg Buseman and Director of Operations, Marlow Philippines, Captain Rizaldo Madanlo engaging with participants



SENIOR OFFICERS' SEMINAR IN INDIA

Marlow Navigation India organised a seminar for senior officers, held in February this year at Hotel Goldfinch, Mumbai with great success.

The one-day seminar focused on providing information and training on the latest company and industry updates, as well as encouraging a closer and more personal exchange of information and feedback among participants. Twenty officers from around the country took part, together with shore-based teams.

Managing Director, Marlow India, Wilson Mascarenhas welcomed everyone and opened the forum with an address. "Our office here in India aims to better promote the industry as an attractive and visible career, and Marlow as one of the leading maritime companies to work for," he said.

Senior Crew Superintendent, Radostin Petrov also visited from Marlow's head office in Cyprus to take part in the event. Petrov shared a general introduction of the Marlow Group of companies, including core services, activities, milestones, and its long-term vision. "Seminars like these are very important,



Managing Director, Marlow Navigation India, Wilson Mascarenhas

helping to create a platform for sharing and learning, whilst promoting proactive and valuable interaction," he said during his presentation.

Meanwhile, Technical Superintendent at Marlow India, Chetan Keluskar gave a presentation on decarbonisation and alternative fuels, highlighting the facts and ways in which digital technologies can help accelerate decarbonisation goals by boosting efficiency, productivity, and transparency.

Other presentations included: cyber security awareness; media handling and best practices on social media; value added training and development for crew; near miss reporting, incident and accident investigation and root cause analysis; preparation of inspections and audits; crew performance reports; and behavioural based safety and leadership quality, among other. Presentations offered real life case studies, together with Q&A and engaging discussions.

The seminar ended with dinner and opportunity for participants to unwind and socialise.



Senior Crew Superintendent from Marlow HQ in Cyprus, Radostin Petrov



SHIPPING MUST ADAPT TO ATTRACT NEW TALENT

Collaboration and optimism are expected to set the tone for the shipping industry, consensus says at the Future Skills Maritime (FSM) 2023 in Goa, India.

Marlow Navigation India participated at the Future Skills Maritime (FSM) conference held in South Goa on the 17th and 18th of March.

The conference brought together leading figures from across the Indian maritime industry to discuss key challenges, mainly driven by the fallout of the Covid pandemic, advancements in digitalisation, and decarbonisation.

Top of the agenda was creating a sustainable future for shipping. A number of important topics were covered for this, including: enhancing the image of the seafaring profession; retaining and attracting new talent; creating career paths; and the assessment of existing human resources and how maritime education and training can both meet the present skills gap and stay ahead of the curve.

“Seafaring has long been associated with the romance of adventure, but also has the practicalities and rewards of a stable, well-paid job. This is still very relevant and true today, especially in developing countries where the bulk of seafarers come from,” said Managing Director, Marlow Navigation India, Wilson Mascarenhas during his panel discussion on day two.

“As an industry, we need to continue to enhance the image of our profession. It must also be a dynamic process, evolving to cater to the present and future situation; that is, the demands of younger generations, their expectations and mindset,” he continued.

“The good news is our industry is going through a major transformation, such as with digitalisation and the green transition. These are all much higher on the agenda for younger generations when considering a career, because they are exciting areas to be involved in, have lots of opportunities, and also very much in line with their values.”

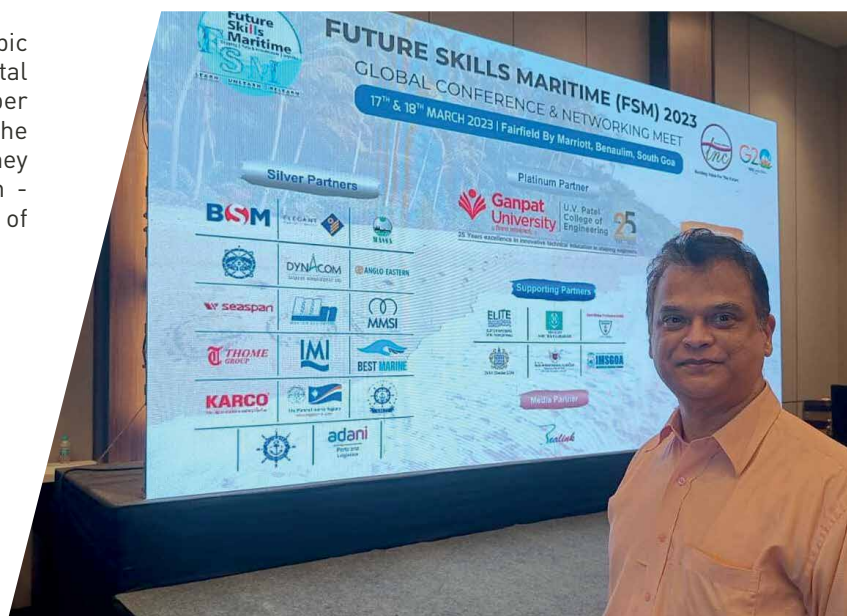
Research on future skills was another hot topic discussed at the conference, with fundamental changes in the job market coming due to a number of powerful drivers. While many studies focus on the changes brought through digital technologies, they relate future skills directly to digital skills, which - as important as they are - only represent one side of the future skill coin.

*Managing Director,
Marlow Navigation India,
Wilson Mascarenhas
at FSM 2023 in Goa, India*

According to many in the industry, future employees no longer want to wait for maritime colleges to offer the right courses. While some institutes have started subjects on such new technologies, they lack on relevant content and lab environments to develop the required skills. Other main areas where many institutions are lacking include: academic infrastructure, guidance, industry and practical exposure, foundation knowledge on new technologies, proper assessment certification, among other.

Seafarer education and training must continue to progress at pace, remaining up-to-date with latest industry advancements, in both technologies and methodologies, whilst providing seafarers with the necessary knowledge and skills of the future. Regulation also plays a big part in driving such important change. Beyond this, the industry must be consciousness and active in continuing to nurture and develop other important areas, such as soft and personal skills, and of course seamanship.

Over the years, Marlow has intensified its recruitment of cadets from India for its structured training programmes. Having a presence in the country with an office in Mumbai since 2006 puts the company in good stead to continue expanding this initiative. India is a significant maritime labour supply nation and emerging source market for the Marlow. Supported by a well-established office and team here, the company aims to better promote the industry as an attractive and viable career, and Marlow as one of the leading maritime companies to work for.





Marlow's Training Director Joern Clodius

MARLOW'S TRAINING DIRECTOR RE-ELECTED AS COMMITTEE CHAIRMAN AT IMEC

Marlow Navigation's Training Director, Joern Clodius has been re-elected as Recruitment and Training Committee Chairman at The International Maritime Employers' Council (IMEC) for a second two-year term.

The appointment was confirmed during the annual general meeting on the 26th of April 2023.

Clodius will continue to play a vital role in helping to promote and enhance maritime training and development across IMEC's network, as well as to attract new talent to the industry.

"It is a privilege to maintain representation here at IMEC and be involved in its many important initiatives and achievements in crew recruitment, training and development," said Clodius.

"I thank IMEC and its members for the trust they have placed in me with this mandate and look forward

to continuing as chairman of an enthusiastic and motivated team of recruitment and training experts. As the Recruitment & Training Committee, we will continue to enhance the profile of our work, and the industry at large, whilst addressing key maritime issues, and creating and promoting sustainable training initiatives to secure the future of seafaring," he added.

For 30 years, IMEC has been the primary organisation dedicated to maritime human resources and the support of seafarer welfare, promoting good and fair employment practices, as well as high standards of training and safety. One of the organisation's key strengths is in its unity, backed by the weight of a large section of the industry, which allows it to effectively negotiate collective bargaining agreement worldwide.

“ It is a privilege to maintain representation here at IMEC and be involved in its many important initiatives and achievements in crew recruitment, training and development ”



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When quality matters_

BLENDED LEARNING – THE BEST OF BOTH WORLDS

The importance of maritime education and training cannot be overstated. For sure we need to always adapt and evolve in this area, both to latest advancements, such as in technology, but also more generally in multidisciplinary teaching and training methodologies.

Distance learning tools are opening up many doors, and have certainly already demonstrated their necessity.

Later, fast-tracked by the disruption of the Covid pandemic, and then again proving essential, helping to maintain learning and training to all those impacted by the military conflict in Ukraine. Also, the reality is that we belong to an industry where the majority of the time, seafarers can be away at sea for extended periods, so such tools offer many possibilities for upgrading knowledge and skills.

Another key advantage is that distance learning elements are often open to self-pacing by each individual student or trainee, and offer additional learning material which stimulate an initiative to study independently, instead of just always receiving information passively. Meanwhile, its digital features certainly offer a great deal of dynamism, such as with audiovisual, gaming, and interactive assignments.

On the other hand, we have learnt, or rather confirmed what we've always been saying: that the lessons and skills gained from traditional on-site approaches is paramount, as it both helps with learning, and nurtures other hands-on, but also soft skills, that are not so easily, or at all, attainable via digital tools.



Briefing of delegates to Full Mission Engine Simulator course at UMTC

Class-based and practical training supports the learning process

Following the pandemic, much of education and training had to move online. Although there were no other options at the time, some drawbacks have since appeared in online training.

At the same time, the industry has been grappling with a significant shortage of qualified instructors. This issue also affects maritime academies. To address this shortage, many began hiring ex-seafarers to act as on call instructors. However, whilst these prospective instructors might possess the necessary talent and professional experience, their tutorial and teaching skills are often lacking.

The problem became even more prevalent with online training programmes, which demand a whole range of new skills and teaching abilities, such as in communication, presentation, multitasking and engagement – all qualities that are perhaps easier to exercise, or at least pick up, when you are an experienced instructor and know your curriculum so well that you can put extra effort to focus on them.

Meanwhile, general feedback from the industry has been that cadets lacked fundamental understanding of some key technical subjects. Maritime academies and training centres have also expressed the same sentiments, especially when observing younger generations who undertook the bulk of their studies online, with limited or no practical experience or access to workshops and simulators.

No doubt, the process of absorbing information and learning also differs in the online world compared to the traditional in-class environment, and some aspects of this can have a negative impact.

Whereas class-based and practical training provide many unique aspects, invaluable to learning. For instance, building skills and the overall hands-on aspects to maritime training, but also the discipline and personal interaction it fosters, both among trainees, and with instructors. This includes collaborating, and the active and voluntarily sharing of information and knowledge, such as during group exercises and face-to-face discussions. Such exchanges help trainees work together to find answers to questions, strengthen their ability of critical thinking and problem solving, as well as accelerate their understanding of a particular subject.

Instructors and trainees also become closer and get to know each other better psychologically, which then nurtures a sense of calm and certainty about competence achievement.

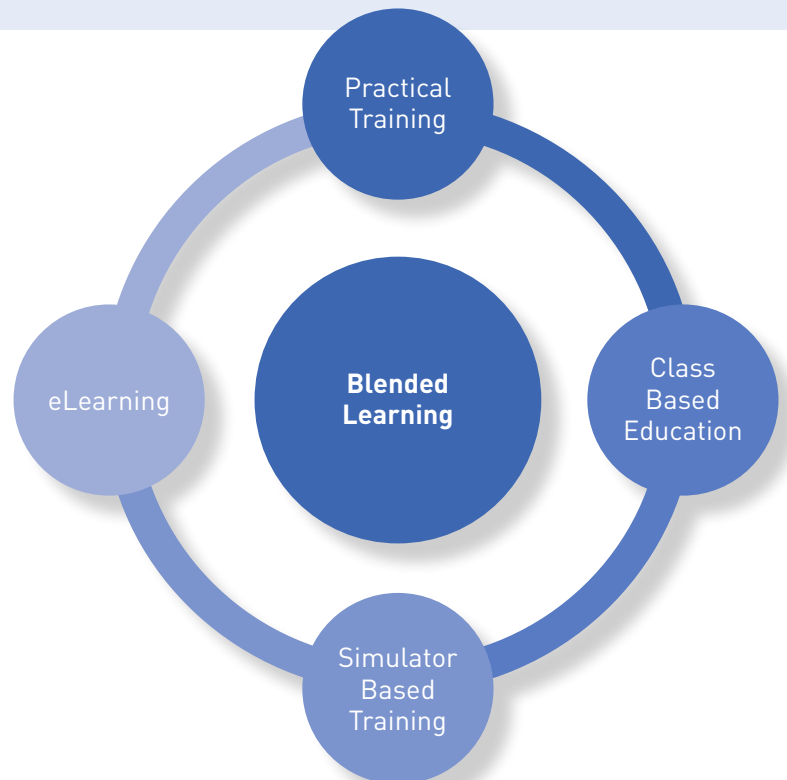
Overall, it is clear that relying on distance learning alone is not sufficient. It can and should, however, be used to complement the curriculum and enhance learners' understanding of specific knowledge.

What is blended learning?

Blended learning is a modern approach to education and training that utilises multiple methods of delivery, namely by integrating innovation and technology (such as digital and eLearning) with conventional place-based (face-to-face, physical) interactions and participation; done so in a seamless and complementary flow of learning.

Key Approaches of Blended Learning

Learning and training system varies depending on the specific course. Each method has its advantages and disadvantages, so by blending them appropriately, it achieves greater outcomes in cultivating seafarer competence and skills.



Why is blended learning so effective?

Thus, digitally enabled distant learning tools, together with place-based education and training gives us a blended approach. As a multichannel method, blended learning offers the best of both worlds.

Its vast potential as a flexible, accessible and engaging model has already sparked a surge of interest among general higher educational institutions around the world, and now commonly in practice.

With this model, maritime instructors and training centres can better cater for the range of different strengths and requirements of the trainees, as well as select the best method, or combination thereof, for when developing courses.

From a trainee's perspective, blended learning keeps it all more 'interesting' so to speak, offering the advantages of digital and online tools where needed, but also the qualities of in-person relations. This translates to motivation, which then helps to stimulate interest and attention, and becomes crucial in the learning process itself.

At Marlow, we're committed to continue providing the highest-level of training, today, and for the future. This means advancing our adoption of blended learning, developing the approach to better suit the maritime industry, and our partners.

It is quite evident that the future of maritime education and training is with blended learning. As such, we must remain at the forefront of this approach to continue providing the highest quality in training, and enhancing the learning experience for our seafarers.

Tool box meeting with delegates to Safe Mooring Operations course at UMTC





WITH YOU **ALL THE WAY**



#Marlow40years

WELCOME TO REAL PARTNERSHIP



Dedication, innovation and growth. As we reflect on our journey, we look ahead with anticipation and excitement, knowing that the next chapter holds even greater achievements.

Since 1982, Marlow Navigation has grown to become a globally renowned and trusted name in ship management.

Today, a network of 30 fully controlled offices spanning across 14 countries, with over 1,150 shore-based staff and 25,000 active seafarers, underpin the company's success story, business sustainability, and client focused ethos.



STANDARDS YOU CAN RELY ON WHEREVER, WHENEVER

At Marlow, our training activities have been set up to provide a holistic, constant and reliable option for supplying crew managed vessels with well-trained, competent and skilled seafarers.

ANNUAL TRAINING KPIs

*average over the past 10 years

Average training course attendances

131,000

Admissions to training programmes

800

Promotions of crew from training

700

Average active seafarers from training

5,000

More than **10,000** graduates from Marlow's cadet training programmes!



“ We have already received extremely positive feedback about these classes and overall training, from participants and industry observers alike ”



Actual operation and maintenance class, with support from South Korean-based Techcross. The 2-day class took place in March and was facilitated by Techcross Instructors, Kim Gon Yun and Seo Yon Guk and attended by 12 Deck and Engine Officers, together with UMTC Engine senior faculty and training consultants.

NEW BALLAST WATER TREATMENT TRAINING EQUIPMENT

Marlow's dedicated training partner in the Far East, United Marine Training Center (UMTC) has collaborated with South Korean-based Techcross to offer a Ballast Water Management System (BWMS) course that provides actual operation and maintenance classes of Electro-Clean Systems, troubleshooting, and demonstration.

"This collaboration assists marine engineers in acquiring knowledge to maintain and operate specific equipment," commented Managing Director, UMTC, Donald Bautista.

The course focusses on building knowledge on the electrolysis method of Ballast Water Treatment, skilfully operating and monitoring the Electro-Clean Systems parameters, and to effectively maintain and troubleshoot the system. Participants receive a Certificate of Completion from Techcross, which is recognised locally and worldwide.

To cater for the course, a new BWMS training system has been installed at UMTC. The Techcross BWMS is a reliable and effective solution for ballast water management. Techcross Electro-Clean™ System (ECS) is one of the most effective ballast water management systems utilising electrolysis. ECS treats all incoming ballast water by in-situ production of hypochlorite with combined effects of electric shock and hydroxyl radical in the Electro Chamber Unit (ECU).

This simple disinfection processing is so powerful that it destroys cell membrane of micro-organism and prevents regrowth, needing only one time treatment.

Meanwhile, voltage and current from the rectifier enable electrical energy and oxygen from the water to oxidise together to form hypochlorite and sterilises the micro-organisms in the water during the ballast water operation. Treated water will be stored in the ballast tank for the duration of the voyage and will remain active to prevent the introduction of invasive species into new ecosystems.

Techcross, a globally leading BWMS manufacturer, developed the first BWMS in the world in 2006 using the unique electrolysis technology. Since then, they have been providing high-quality products with maximum efficiency leading to cost-saving and environmental measures.

"We have already received extremely positive feedback about these classes and overall training, from participants and industry observers alike," continued Bautista. "Our thanks to Techcross for their expert input and support along the way, working together with our own team to provide this training course."

"At UMTC, we are fully committed to excellence and ongoing advancements, continuing to position our facility as a leading maritime training partner here in the Philippines and across the Far East region, with the highest-quality upgrading and development for marine professionals."



EQUIPMENT & FACILITIES

EXPANSION OF WELDING FACILITIES IN MANILA

Addressing the growing needs of the maritime industry and its customers for skilled welders at sea, United Marine Training Center (UMTC) has expanded its welding facilities.

The area is now composed of an additional 16 welding booths, on top of the existing 8 arc and 8 gas welding stations, equipped with the latest technology from manufacturer Miller Electric Company. With these 24 stations and utilising two shifts per day, UMTC has multiplied its capacity to train and produce qualified and skilled welders at sea and meet the increasing demand.

These welding facilities allow trainees to perform all types of Electric Arc Welding processes, including Shielded Metal Arc Welding (SMAW), Metal Inert Gas (MIG), and Tungsten Inert Gas (TIG), among other.

UMTC trains welders in 3G and 6G positions for their Welder Performance Qualification conducted by Bureau Veritas Certification, ensuring they meet the highest industry quality standards.

The training is also designed to convert skilled welders with shore-based experience to be able to offer their services to the maritime industry, as well as to upgrade experienced ratings.



Expanded welding facility at UMTC, Manila

6G arc welding



TRAINING PROJECTS

ENHANCING INSTRUCTORS' ABILITIES FOR THE DIGITAL ERA

Marlow has introduced a number of new programmes to further develop instructors' abilities in teaching with digital tools.

Essentially, this involves deeper knowledge and best practices on utilisation of the company's customised version of Learning Management System (LMS) Moodle Workplace, which has become an integral component of the production and administration of training courses.

This includes creating more dynamic content with video, audio, charts and other visual aids, uploading and management of courses, as well as delivering more interactive classes, with live chat and encouraging engagement.

Naturally, many instructors come from a different generation, whilst such contemporary tools can be rather different to the traditional methods of maritime training and education. These new

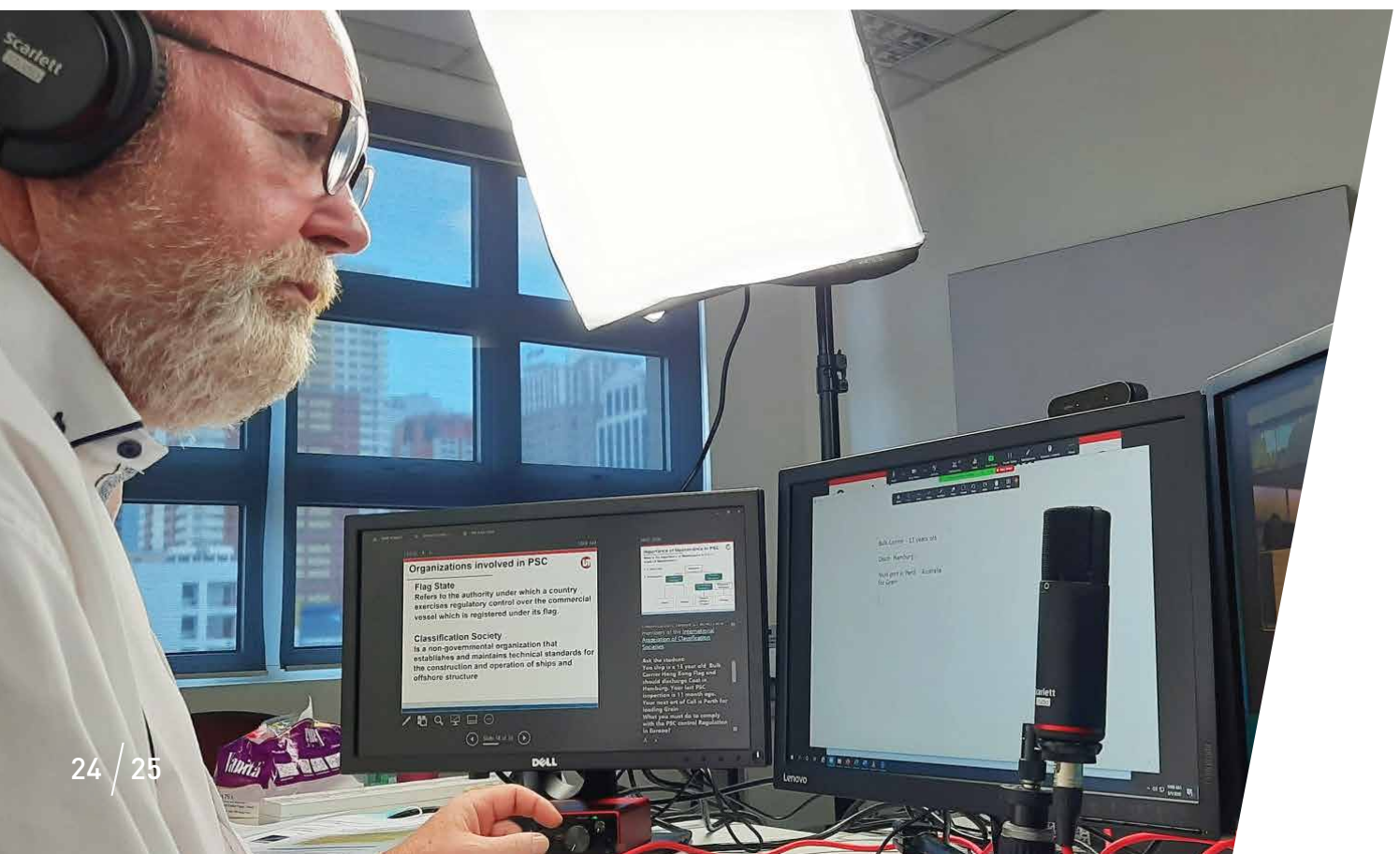
development initiatives will help instructors stay well up-to-date and even ahead of the curve, overall enhancing online learning.

Over the last few years, Marlow and its training partners have been transforming the education and training experience for cadets and seafarers alike, with many new digitalised and blending learning approaches.

Although modernisation and digitalisation had always been on the agenda at Marlow, and had already been rolled out, the Covid pandemic certainly fast-tracked it all, together with a range of new robust tools and technologies coming out to better cater for this demand.

Despite huge logistical and technological challenges, the company pivoted with its expansion in remote learning, and in only a short space of time, successfully moved thousands of seafarers and instructors online.

Marlow's Training Consultant in the Philippines, Captain Peter Grunau going through some of the features of our learning management system with instructors



SUPPORTING SEAFARERS THROUGH WELL-BEING TRAINING

Marlow continues its initiatives for improving seafarer well-being through education and training, with a Mental Health Awareness and Well-being course being provided to all Marlow crew.

The course aims to educate participants on understanding seafarers' mental health and well-being and how to respond in a crisis at sea.

"We appreciate the support of the Mission to Seafarers and ISCA in developing these two courses, which have been funded by the International Maritime Training Fund (IMTF)," said Training Director, Marlow Navigation, Joern Clodius.

Mental health at sea is a particular challenge to crew safety. There are many interconnecting causes with risk factors that are inherent to the environment and nature of the work. For instance, loneliness, lack of space, fatigue, irregular sleeping patterns, and the overall challenging nature of the work can cause mental health issues or exacerbate underlying conditions.

Life at sea requires conversations, whilst navigating emotions and talking about mental health takes courage, patience, and perseverance. Through the Mental Health Awareness and Well-being training course, Marlow strives to promote open and empowering conversations amongst crew, so they may face and overcome challenges together.

At the same time, a Mental Health Officers course has been created, concentrating on the ship's command. Certainly, having a supportive management structure helps to ensure seafarers are able to take due care of their mental health. Senior leadership on board, and ashore for that matter, are vital for cultivating an atmosphere of tolerance, open discussion and in creating a work culture that protects mental health, rather than stigmatises it.

Further to this, a safeTALK suicide alertness seminar and workshop was held for key management personnel at Marlow Philippines and partner training centre in Manila, United Marine Training Center (UMTC). The seminar and workshop was conducted by Programme Manager at The Mission to Seafarers, Thomas O'Hare, and designed by LivingWorks, one of the world's leading suicide intervention training companies.

Suicide is preventable and everyone can learn to play a life-saving role. Using a simple yet effective model, safeTALK empowers everyone to make a difference, learning how to prevent suicide by recognising signs, engaging someone, and connecting them to an intervention resource for further support.

"The subject of suicide is difficult. Heavily stigmatised, the issue – along with poor mental health – is often avoided or dismissed. But to remove the stigma we must be brave enough to confront it head on. Thoughts of suicide are acceptable. Acts of suicide are preventable," said O'Hare.

"Through education, we aim to destigmatise mental health in the industry, making the subject less taboo, so seafarers (and people ashore for that matter) who might be struggling feel comfortable talking with their peers about their well-being, and any potential problems can be addressed before they escalate," continued O'Hare.

"When you learn about mental health, you gain a better understanding of yourself and those around you – it makes you kinder, more patient, and increases your levels of empathy."

Mental Health Awareness and Well-being course participants in the Philippines



TRAINING PROJECTS

NEWLY INTRODUCED TRAINING CONTENT

(Instructor-led and online training, including webinars, eLearning and blended learning, as well as class-based training)

COURSE TITLE	DURATION (IN HOURS)
Pre-test for 2nd Officer Promoted to Chief Officer	16
Pre-test for 2nd Engineer Promoted to Chief Engineer	20
Pre-test for Chief Officer Promoted to Master	16
Pre-test for 3rd Engineer Promoted to 2nd Engineer	8
Promotion Training for Chief Officer to Master	80
Promotion Training for 2nd Engineers to Chief Engineer	40
Promotion Training for 2nd Officer to Chief Officer	68
Promotion Training for 3rd Engineer to 2nd Engineer	80
Seafarer`s Mental Health and Well-being	8
Mental Health for Officers	8
Environment Management System Training	8
Environment Management System Training for Officers	8
Ships Cook Upgrading Course	64
Victualing Calculation and Healthy Menu Plan Webinar	16
Container Handling and Stowage for Promotion	32
Bosuns Role of Responsibility Enhancement and Evaluation Program	32
Marine Refrigeration and Air Conditioning	32
Intermediate Lathe Machine Operation	56

HUB FOR LEARNING CONTENT

As remote learning continues to be a vital component of maritime education and training, Marlow's well-established and dedicated training partner United Marine Training Center (UMTC) has quickly become a major hub for content creation and delivery.

Marlow's tailored version of the Learning Management System (LMS) Moodle Workplace hosts and administers this training content, which is then easily used by training providers in other locations across the global network, including Kherson Maritime Specialized Training Centre (KMSTC). At the same time, all seafarers are able to register and utilise the platform for their eLearning purposes.

CAREER ADVANCEMENT VIA EDUCATION, TRAINING & PRACTICE

Demand for qualified and proficient marine officers and ratings continues to grow worldwide. For seafarers, this means assurance with ongoing work, but also greater opportunities for continued career advancement, no doubt both high priorities.

Progressing in one's career certainly requires personal attributes such as dedication, hard work, and a willingness to go beyond your comfort zone. Moreover, ongoing learning and development are also essential for career advancement.

Here at Marlow, we strictly follow the principle that continuous training of crew is vital in sustaining skills and know-how, as well as for bridging any gaps and enhancing proficiency – especially important when needing to stay relevant with industry changes and technological advancements, or when preparing for a new position or vessel type.

What we are doing is streamlining the training approach and packaging it as rank specific courses as part of the Continuous Proficiency Development (CPD). These build on the Marlow cadet training programmes and the practical experience collected at sea, preparing seafarers for the next major stage of their careers; for instance, becoming Chief Officers, Masters, Second Engineers and Chief Engineers.



Continuous Proficiency Development (CPD) courses in the Philippines

In the Philippines, we have been working in close cooperation with our partner training centre United Marine Training Center (UMTC) to develop these new CPD courses and provide an ideal setting for teaching and training. Although the pilot stages are taking place here, adapted training solutions have also been made available at our other recruitment locations.

With these CPD courses, participants can best refresh their skills, update and enhance their knowledge and expertise, which then supports them in their work and long-term career aspirations.

IMEC TRAIN THE TRAINER COURSES

The International Maritime Employers' Council (IMEC) has been providing a number of Train the Trainer courses, free-of-charge for its members since 2020.

A total of ten instructors from Marlow's training partners United Marine Training Center (UMTC) in Manila and Kherson Maritime Specialized Training Centre (KMSTC) in Ukraine are also taking part in the programme.

Delivered online over a three-week period by UK-based Solent University, these courses aim to provide instructors with teaching techniques and assets that will help them better deliver courses for the modern era. A particular aspect of the course, for instance, focuses on the creation of learning environments within an online setting, instilling simple, yet invaluable skill sets which instructors can

easily adopt and integrate into their existing teaching methodologies and classes.

The courses are funded by the International Maritime Training Fund (IMTF), IMTF International and the Associated Marine Officer's and Seamen's Union of the Philippines (AMOSUP). Participants who complete all three weeks will also receive certification by Solent University.

Based in Southampton, Solent was incorporated as an independent higher education institution in 1989, but its origins can be traced back to a private School founded in 1855. Mergers between Southampton College of Art, the College of Technology and the College of Nautical Studies at Warsash laid the foundations for what is now Solent University.

EMPOWERING MARITIME TRAINING THROUGH ADVANCED SIMULATORS AND INNOVATION

In an ever-evolving maritime industry, integration of advanced technologies and innovative training methods is crucial to ensure the competency and safety of seafarers.

Marlow Navigation, together with its dedicated training partner in the Philippines, United Marine Training Center (UMTC), have been at the forefront of maritime training excellence. ARI Simulation has collaborated with both for several years to provide advanced training solutions for seafarers. This article explores the longstanding partnership and how it has revolutionised training through the supply of modern maritime simulators.



Upgraded full Mission Ship Manoeuvring Simulator at UMTC

A Strong Partnership in Training

Marlow Navigation and its dedicated training partner in the Philippines, UMTC were among the early adopters of simulation-based training and invested in ARI Simulation's full mission bridge simulators, making them one of the first companies to recognise the value of simulation-based training. For over 15 years, these simulators have provided trainees with a realistic and immersive training environment that simulates the challenges of operating a vessel in different weather conditions, sea states, and traffic scenarios.

The simulators delivered by ARI have been used to train and assess personnel across all levels – from cadets to senior officers, the utilisation of advanced simulators in training programmes empowers undergo realistic and immersive experiences, enabling

them to develop crucial skills and make informed decisions in a controlled environment.

During the Covid pandemic, ARI's simulators were being used on the cloud, enabling uninterrupted training and allowing seamless continuity in training operations regardless of physical limitations. ARI's Cloud based crane simulator platform in particular was extensively used during this period.

The partnership between ARI, Marlow and UMTC has been instrumental in advancing the field of maritime simulation technology and providing seafarers with effective training solutions. This is an unwavering dedication to raising the bar in maritime training, united in a pursuit of excellence and shared passion for cultivating highly skilled and competent seafarers.

AR/XR 3D Immersion Station



“ The partnership between ARI, Marlow and UMTC has been instrumental in advancing the field of maritime simulation technology and providing seafarers with effective training solutions ”

Modern Maritime Simulators: Transforming Training ARI installations at UMTC

- Full Mission Ship Manoeuvring Simulator
 - 8 Stations of ARI's Mini Bridge Simulators
 - Full Mission Engine Room Simulator
 - 12 Stations of GMDSS Simulators
- technologies such as virtual reality for providing the most realistic training scenarios



Mini Bridge Simulator



Full Mission Engine Room Handling Simulator at UMTC

Recent Upgrades and Additions at UMTC

- Upgrade of the Full Mission Bridge Simulator with new HMI, additional resources from ARI library and one customised own ship model
- Integrating the Bridge and Engine Room Simulators
- Upgrade of the mini-bridge simulators with HMI Controls, additional Resources from ARI library and additional Radar software
- eGlobe ECDIS integration with the Upgraded Bridge Simulator
- FMERS Upgrade with new Engine Models:
 - Upgrade for existing MC Engine Model
 - ME Engine Model
 - MEGI with LNG Bunkering
 - RT-Flex Engine Model
 - MAN B&W 6L48/60B Engine Model
- 3D Engine Room Walk through modules and 3D Interactive Modules
- 1+12 standalone ECDIS software in Classroom set-up
- VR based Ship Handling Simulator with HMI Controls

Future of Simulation Systems

ARI has consistently pushed the boundaries of innovation in marine simulation, introducing groundbreaking technologies such as Augmented Reality (AR), VR, and Extended Reality to enhance the immersive training experience and provide trainees with cutting-edge tools for skill development and knowledge acquisition.

ARI's VR simulator presents a comprehensive full mission simulator system that harnesses the power of VR technology. With the capability to accommodate an unlimited number of users simultaneously, this solution allows individuals to collaborate and train together in shared or distinct scenarios, even involving different vessels. Through VR avatars, participants can visually perceive and engage in interactive conversations with fellow trainees within the training environment.

Notably, ARI's VR simulator excels in handling intricate and extensive scenarios involving multiple users and vessels, ensuring scalability and effectiveness in training delivery. The 3D immersion station module brings to life different parts of the virtual spaces and the corresponding components. The user can

navigate as well as operate various machinery and different zones representing an actual bridge or engine room.

The 3D immersion station offers new possibilities with regards to bridge equipment configurations and layouts being tailored to suit specific vessel types and propulsion system configurations.

ARI's maritime simulators embody a digital and futuristic revolution in training. By seamlessly integrating physical simulators with state-of-the-art digital tools, advanced sensors, and machine learning algorithms, this groundbreaking technology delivers an unparalleled immersive training experience.

Real-time feedback on technical and behavioural performance empowers trainees, while robust algorithms analyse the data to provide valuable insights and personalised recommendations for improvement.

Leveraging virtual and augmented reality advancements, these simulators generate dynamic and hyper-realistic scenarios, challenging trainees in unprecedented and captivating ways. The result is an engaging, highly effective, and truly futuristic training experience that surpasses all expectations.

Integration with Real-Time Digital Monitoring

ARI has pioneered the development of next-generation maritime simulators equipped with advanced technology, where real-time audio and video feeds of trainees are captured and analysed through embedded sensors within the simulator consoles.

This data, combined with inputs from multiple video channels, sensor inputs, scenario data, simulation data, and trainees' biometric data, undergoes comprehensive analysis. This provides a holistic evaluation of training outcomes, encompassing technical skills and behavioural decision-making.



Engine Integration with Real-Time Digital Monitoring

Hybrid Modes of Operations

Future simulators should facilitate the inclusion of authorised participants, enabling remote trainees to actively engage in physical simulator sessions or participate as part of a global team training environment, assuming any desired role.

These remote trainees have equal access to the functionalities available to physical trainees, ensuring a unified experience within the simulation exercise.

Immersive training is accomplished through the integration of multiple data streams, encompassing video feeds, visual channels, sensor outputs, RADAR, ECDIS, visualisation, and CCTV visuals of fellow team members. Consequently, simulation exercises can be conducted with hybrid physical and remote presence.



Hybrid Modes of Simulator Training Operations



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Full Mission Engine Room Simulator at UMTC



“ The MCA’s recognition of the value of full mission simulation is a significant step forward in improving the safety and efficiency of the maritime industry ”



Full Mission Ship Manoeuvring Simulator

Full Mission Systems – The Gold Standard in Training

The benefits of full mission simulation are numerous. Firstly, it provides a safe and controlled environment for trainees to learn and practice critical skills without risking damage to vessels or the environment. Secondly, it allows trainees to experience a broad range of scenarios that may not be feasible or safe to replicate in real-life situations. Finally, it provides immediate feedback and analysis of trainees' performance, allowing for continuous improvement and refinement of skills.

Full mission simulators have been the gold standard in training for many years. However, contemporary technology has led to the development of new simulation techniques such as XR (Extended Reality) and VR. These technologies provide immersion and interactivity, enabling trainees to experience realistic scenarios in a fully immersive virtual environment.

Full Mission simulation systems require more hardware to create a realistic and effective training environment. They offer an immersive, collaborative, and skill-building experience. The human touch, bonding among

participants, real-time decision-making, physical skill development, and emotional engagement make these systems a powerful tool for training and preparing individuals for real-world scenarios.

In July 2020, the United Kingdom's Maritime and Coastguard Agency (MCA) recognised the value of full mission simulation by awarding five days of training in a full mission bridge simulator as equivalent to fifteen days of seagoing service. This decision acknowledges the importance of simulation-based training and the effectiveness of full mission simulators in providing seafarers with the skills and experience they need to operate vessels safely and efficiently.

The MCA's recognition of the value of full mission simulation is a significant step forward in improving the safety and efficiency of the maritime industry. Full mission simulators provide seafarers with a safe and controlled environment to practice and enhance their skills. They enable trainees to experience a wide range of scenarios that may not be possible or safe to replicate in real-life situations, which is critical for developing and refining their skills.

About ARI Simulation

ARI Simulation is a global leader in the production of cutting-edge simulation and VR training solutions for the marine, energy, construction, airport and defence industries. ARI designs and develops high-specification complex simulation systems used in training, screening, feasibility analysis and process development. As a simulation technology pioneer, they have developed some of the most sophisticated training simulators in the maritime industry, providing seafarers with realistic and challenging scenarios to enhance their skills.

About the author

CEO, ARI Singapore, Bhupesh Gandhi is a Master Mariner and a Management Graduate (MBA), a seasoned Business Leader and C suite Maritime Professional, who has profound understanding and Experience at Management level of entire gamut of Maritime Industry, viz. Ship Management, Port Operations, Maritime Training, Maritime Technology and Marine Electronics.



FACTS & FIGURES

ESTABLISHED INFRASTRUCTURE SUPPORTS TRAINING ACTIVITIES

Despite challenges with the situation in Ukraine, traditionally a major location for Marlow training activities, overall Key Performance Indicators (KPIs) for the group have remained relatively stable, and in most cases record good growth. This can be attributed to two main factors:

Firstly, our existing infrastructure, namely the successful integration of digital tools and programs put in place since some time, allowing a large part of training – learning and assessments – to continue remotely. Having this operating successfully means seafarers and cadets across the Marlow network could continue their training and development from wherever, including Ukrainians. To further support this, our dedicated partner training facility in Manila, United Marine Training Center (UMTC) has become a hub for content creation and delivery.

In total, attendances at both training centres and online courses in 2022 reached almost 100,000 seafarers (see figure 1.1), and like the previous year, was mostly driven by online courses, including both self-paced and instructor-led (virtual classrooms).

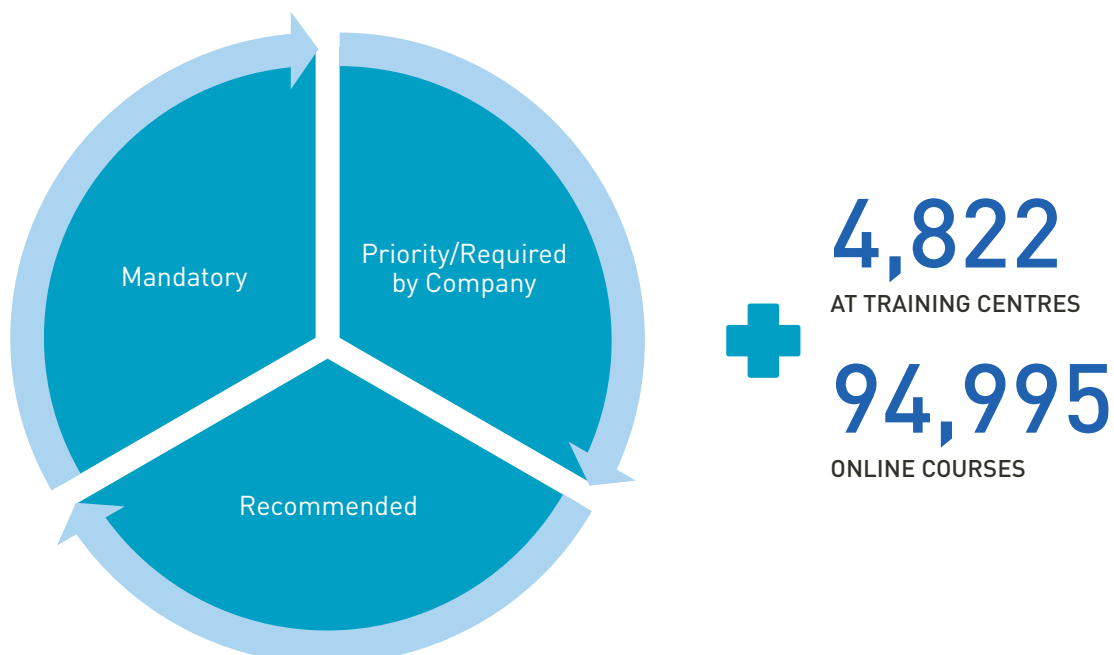
Online and digital tools will most certainly continue to play a vital role for us, complement and enhance our wider training activities, whilst also help to further standardise the approach globally. As Covid pandemic restrictions ended in the later part of 2022, however, workshops and simulator training, as well as officer seminars did return gradually – a trend expected to continue into 2023.

The other development positively impacting our training KPIs was further diversification in both crew and cadet intakes, as well as overall activities from other countries, such as the Indian subcontinent and South America, as well as greater recruitment and training efforts in the Philippines. As such, active seafarers from training increased slightly from the previous year and continues to remain diverse, with representation from 15 countries (figure 1.2).

Officers on board, most of them graduates from our training programmes, does record a decrease in 2022 (figure 1.3). As to be expected, this was influenced by the situation in Ukraine, where we have a long-established training programme, preventing or at least delaying, many of them from being able to go on board and pursue their career at sea.

UPGRADING TRAINING TOTAL COURSE ATTENDANCES IN 2022

Fig. 1.1



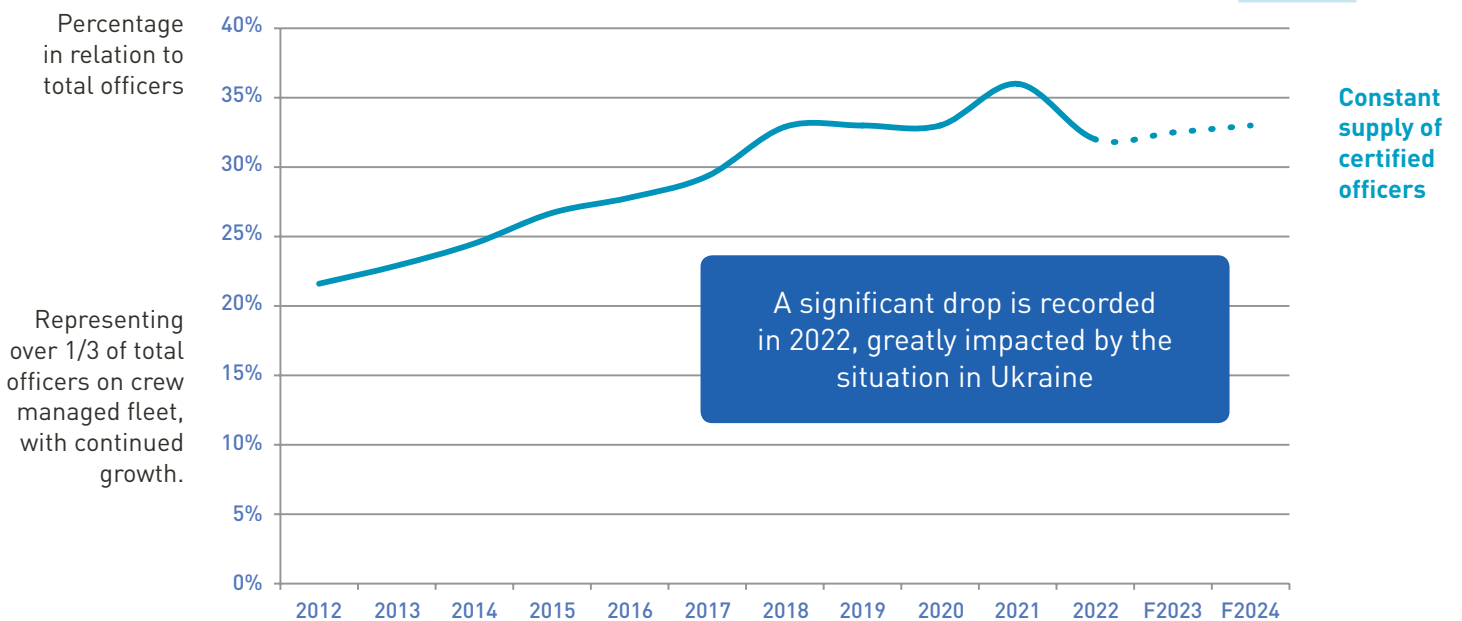
ACTIVE SEAFARERS OUT OF TRAINING PROGRAMME PROMOTING CREW DIVERSITY

Fig. 1.2



OFFICERS ON BOARD OUT OF TRAINING PROGRAMME

Fig. 1.3



Officers on board out of the Marlow training programme

FACTS & FIGURES

Promotions and new intakes to our structured training and career development programmes continue to expand and recorded promising results in 2022 **(figure 1.4)**. Overall, there were 258 promotions of Operational Level Officers to Management Level Officers, 605 promotions of Prospective Officers to Operational Level Officers, and 232 promotions to senior management, including Chief Engineer or Captain. Additionally, there were 137 promotions to Ship's Cook or Chief Cook. Meanwhile, total new intakes into Marlow training programmes reached 783. The industry's increasing demand for qualified seafarers no doubt also spurring these figures along.

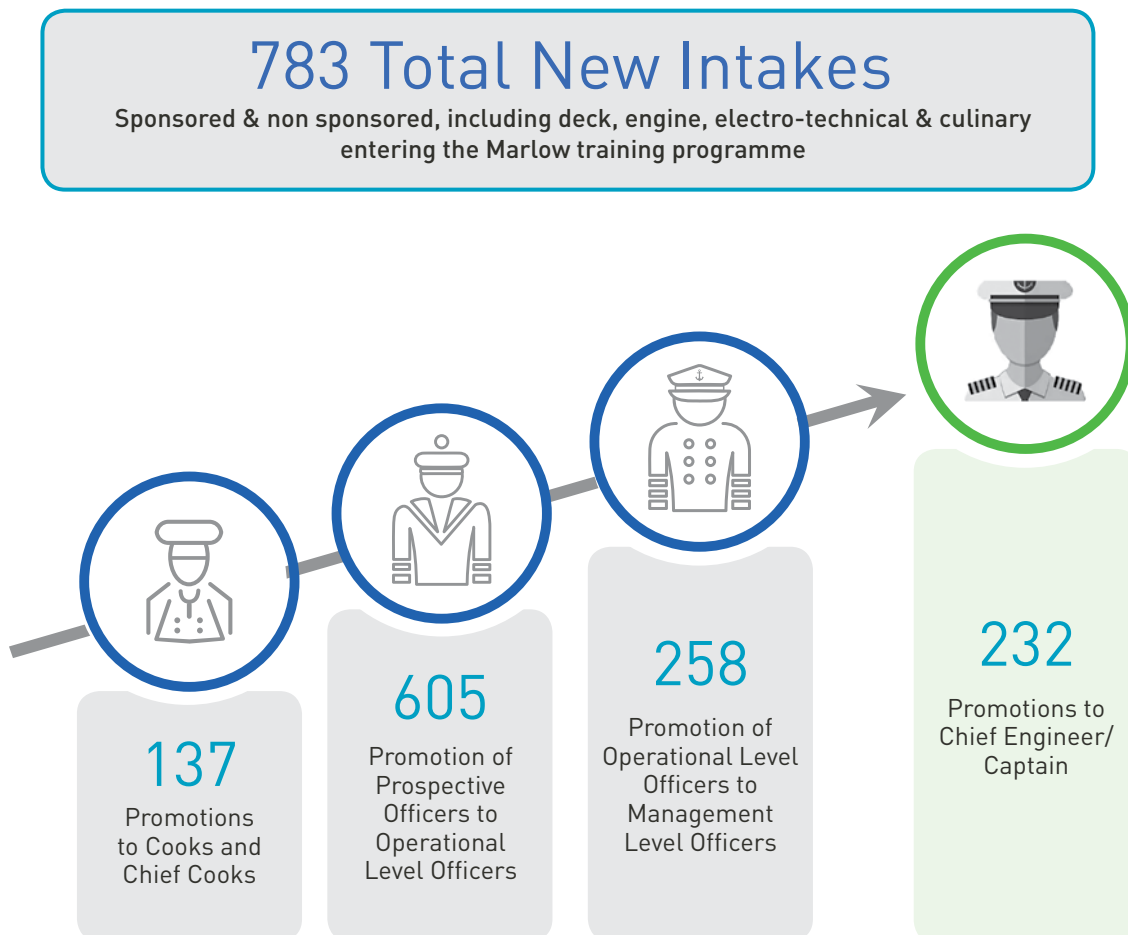
Our training programmes are diversifying and expanding geographically by accepting cadets from a number of other countries.

The partnership between Kherson State Maritime Academy (KSMA) and Lithuanian Maritime Academy (LMA) has fortunately allowed our Ukrainian cadets to complete their education and training, and offer them the opportunity to continue advancing their careers.

Attracting and developing talent continues to be a pressing issue in our industry. Key to this is the ongoing and long-term investment in human capital, creating more opportunities for cadets, but also all seafarers to further their education and practical training at sea and in turn pursue their careers. At the same time, this ensures crew remain highly skilled and competent marine professionals. Our training programmes, as well as all training initiatives here at Marlow, together with the ongoing commitment and support of all partners ensures this continues successfully.

MARLOW DEDICATED TRAINING & CAREER DEVELOPMENT 2022

Fig. 1.4





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TRAINING OPPORTUNITIES

SUPPORTING UKRAINIAN CADETS THROUGH COLLABORATION

Contribution from Director of LMA, Captain Vaclav Stankevič; Deputy Director for Academic Affairs and Lecturer, Rima Mickienė; and Head of the International Relations Department, Associate Professor, Dr Simona Briedienė.

Recently having celebrated its 75th Anniversary, the Lithuanian Maritime Academy (LMA) has been educating and training maritime and shipping professionals since 1948.

Over the years, LMA has been providing higher education and preparing qualified maritime professionals to work in both local and international environments, and under the conditions of rapidly changing technologies. Some of Academy's standout strengths include curriculums that focus on training for specialised vessels, such as dredging and heavy lifts, whilst new programmes have been introduced for LNG, LP, offshore and renewable energy sectors.

Since the conflict in Ukraine, LMA quickly stepped in to offer assistance to Kherson State Maritime Academy (KSMA), helping to provide students the opportunity to continue their studies, graduate from a maritime higher institution, and in turn successfully peruse their careers at sea.

Collaboration between the two academies had actually been taking place for some years prior. When KSMA's management approached LMA to see if their final year students could be taken in, who at the time were undertaking seagoing training, LMA did not hesitate to respond to the call.

Collaboration between industry and academia is essential for a more sustainable future in maritime. Below: Marlow, KSMA, and representatives from our social partner organisations attending the Diploma awarding ceremony of Ukrainian cadets from KSMA on the occasion of the 75th Anniversary of LMA in June 2023.



LMA Director, Stankevič addressing graduates during the Diploma awarding ceremony of Ukrainian cadets from KSMA on the occasion of the 75th Anniversary of LMA in June 2023



“Already during the first weeks of the military conflict, when Russia occupied the Kherson region, we thought about how we could help the Ukrainian maritime academies, with which we have been communicating since 2019”

“Already during the first weeks of the conflict, when Russia occupied the Kherson region, we thought about how we could help the Ukrainian maritime academies, with which we have been communicating since 2019 – having organised joint scientific and practical internships for academic staff, scientific conferences, and implemented various projects together,” stated Director of LMA, Capt. Vaclav Stankevič.

Meanwhile, Marlow Navigation has provided substantial financial assistance for studies and living at LMA to Ukrainian cadets, graduates of Kherson State Maritime Academy.

Maritime studies are strictly regulated by STCW Convention, therefore content of key study programmes at both LMA and KSMA is already rather similar. Naturally, this helped make it possible,

or at least much easier, to bring the Ukrainian students into alignment and smoothly integrate them into the programme – in navigation, engineering, and marine electrical and electronics.

At the same time, students have the opportunity to learn other approaches, such as from local curricula, different research methodologies, and even language and culture. Inclusion in extra curriculum activities, social life, as well as participation in a number of EU projects and conferences is also no doubt further helping Ukrainian cadets ‘feel more at home’, encouraged and supported.

KSMA's Rector, Professor Vasyl Cherniavskyy at the Diploma awarding ceremony of Ukrainian cadets from KSMA on the occasion of 75th Anniversary of LMA in June 2023





TRAINING OPPORTUNITIES



LIETUVOS AUKŠTOJI
JŪREIVYSTĖS
MOKYKLA

The cooperation between LMA and KSMA, together with Marlow Navigation is a powerful example of how collaboration between academia and industry can support maritime students with their studies and careers, whilst helping to meet the needs of the global maritime labour market. In this particular case, assisting students from one of the largest seafarer supplying countries in the world, especially for officers, Ukraine, and which is of course in great need of support.

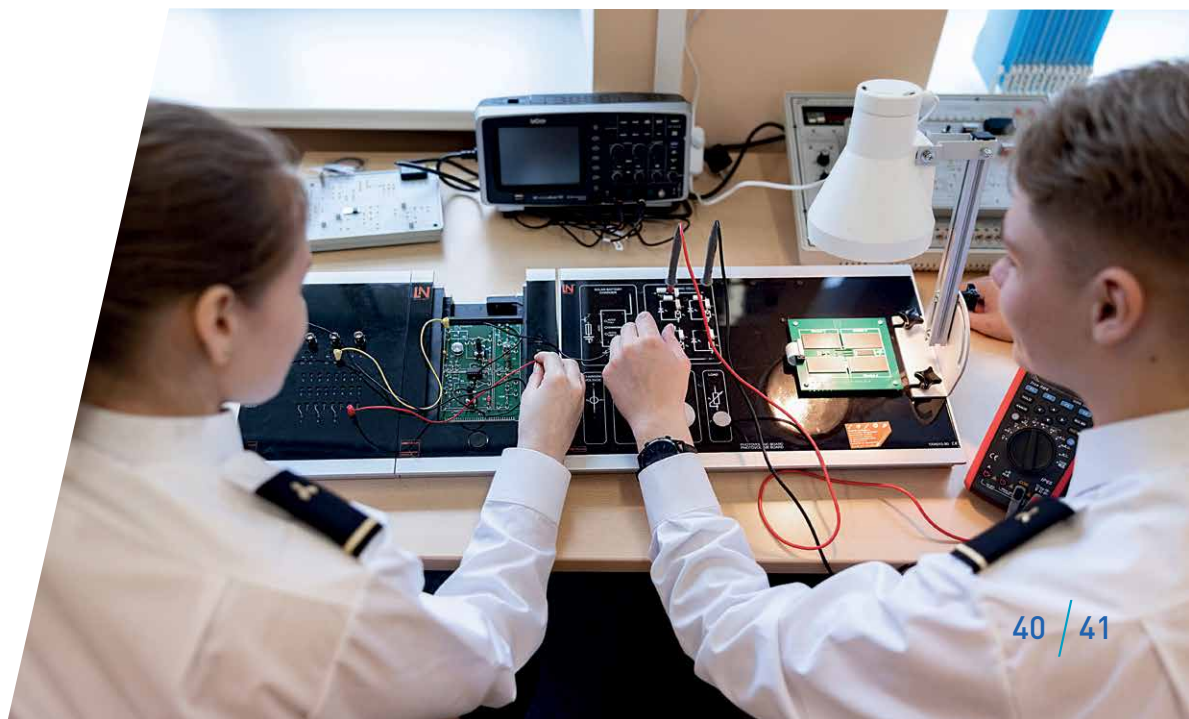
These efforts alone have thus far resulted in more than 200 fourth year KSMA students completing their studies. Some of whom are now continuing to study in Klaipėda, whilst others pursue their careers as officers at sea.



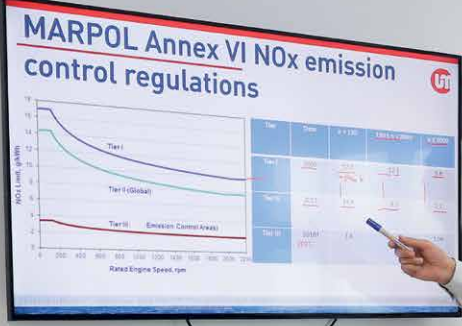
Head of the International Relations Department, Associate Professor at LMA, Dr Simona Briedienė speaking to KSMA graduates

Truth is, such partnerships are also vital in many other areas, such as for accelerating research and ideas, promoting technological advancement and innovation, as well as fostering talent; knowledge, skills and competency.

Importantly, it creates a platform that offers cadets placement opportunities, so to enter the workforce and gain vital practical experience at sea.



**Credit and thanks to Domas Rimeika for supplying the photos for this article*



Exhaust gas cleaning systems training course at UMTC



“ The key takeaway is ensuring to have involvement and participation from the class, with ongoing interaction ”



Techcross ballast water treatment system training

ADAPTING TO CHANGE – TRAINING ALWAYS A PRIMARY SOLUTION

In this year's interview, we speak to **Training Consultant at United Marine Training Center (UMTC) in Manila, Yurii Rybakov** and get his take on major changes in maritime training – from moving himself to the Far East, adapting to online training channels, to new requirements in keeping up with the industry's evolution in digitalisation and decarbonisation.

Since 2018, Yurii Rybakov has been working as a specialised Training Consultant at UMTC. He completed his education in marine engineering from Kherson Maritime College and later a post grad from Odessa Maritime Academy, together with over 35 years' experience at sea on a variety of vessel types, including 30 years sailing as a Chief Engineer. Yurii started at Marlow in 1999 as a Chief Engineer.



If we may start on a more personal note, please tell us how your move to the Far East has been in terms of adapting to lifestyle and working environment?

The people here, colleagues and the general public are very friendly and welcoming. Everyone at UMTC has been supportive and always willing to assist me to adjust in my new role. So too have been the colleagues in training departments abroad.

With regards to the lifestyle, there are similarities with my home country Ukraine, like there are with many places, but also of course some differences. I think being open and engaged in the workplace and community certainly helps you to become better accustomed to the local ways, and enjoy it more.

You have extensive prior experience at sea as a Marine Engineer and Chief Engineer. What aspects and qualities of your sea service have you mostly carried across in your work today as an instructor?

Naturally, I have brought across the experiences gained at sea into my work as a training consultant. Firsthand experiences can be invaluable lessons for younger students and trainees who have not yet had such opportunities, but also across the board.

I incorporate a lot of these experiences into my lessons and dealings with students and trainees. Especially aspects such as taking preventive actions, analysing cases studies and different situations, and critical thinking. This includes thinking 'outside of the box' to explore creative and unique solutions to problems.

Soft skills remain a major component of the training curriculum in order to produce highly proficient and professional mariners. Considering such skills can also be greatly impacted by local environments and culture, how does this differ in this part of the world, and how could it be more standardised?

People from different cultural backgrounds approach or handle such skills differently. For instance, communicating differently; language of course, but also gestures/body language and in solving problems. Culture also shapes people's attitudes, such as with learning, dealing with others, and in times of conflict.

Hence why soft skills are a fundamental part of training here at UMTC. It is vital that marine professionals, especially officers who are leaders, understand the importance of these attributes, and how they can differ among people, as well as continue to develop their own skills. Such skills help the entire unit at sea be more in tune, more productive and safer.

INTERVIEW

Globally, the approach to education and training has changed dramatically over the last few years, very much driven by new digital technologies, and a need for them. How has course content and delivery also changed to better suit the transformation towards more remote and blended learning?

Various tools have given us the ability to adapt and maintain the training and assessment of seafarers remotely. Content has to be adapted by UMTC staff, content developers, to ensure it is dynamic and engaging, thereby substituting, or rather complimenting other forms of training. A lot of additional material, for instance, needs to be included in lessons for self-study, whilst all subjects must be well defined and packaged.

The delivery of such courses has also changed greatly. On the one hand, they are now better supported by a lot of additional material, such as audio-visuals and interactive exercises that are easily accessible by the learner. On the other hand, the way courses are presented must become more lively and highly engaging.

Guided and student-led discussions are very effective methods. The key takeaway is ensuring to have involvement and participation from the class, with ongoing interaction, especially since it is somewhat harder to monitor and determine their enthusiasm with such channels. Some very good ways, for example, is with open discussions, case study investigations and brainstorming sessions.

Could you tell us more about your experience in transferring from a purely class-based training mode to online teaching. Specifically, what were your biggest challenges during this transition and how do you now approach it? For instance, what techniques do you use to obtain a better feel of the audience, and in turn control the environment more effectively, but also make the lessons more engaging?

With online courses, you do not have eye contact nor the personal connection with the class, especially challenging if there are many students. This also means you cannot so easily pick up on feedback, i.e. any enthusiasm or if someone needs additional assistance. At the beginning, this was the biggest

challenge for me. However, I have followed the structured faculty development scheme at UMTC and had the chance to join various online classes and observe different teaching methodologies and techniques. Meanwhile, I have also attended the IMEC train-the-trainer course, among other assistances. After such specific training and support, learning the tools and getting comfortable with the features and capabilities, as well as gaining my own experience of taking classes, I have managed to advance.

I believe the key to delivering successful training online is by controlling the environment, teaching with confidence and varying your voice – tone and pitch – keeping it dynamic and interesting. It is absolutely essential to continually motivate and engage with the class, such as frequently asking questions and seeking feedback, even if not directly connected to the course content. Asking trainees to share their experience and opinions almost always leads to active student-led discussions, then the class becomes livelier and more involved.

Another very effective approach is group exercises, which really becomes important and interesting, especially if multinational seafarers are involved. These exercises should be limited in time, aimed at prompting and energising the class. At the same time, it builds class teamwork and collaboration.

Part of your main subjects of teaching are maintenance and practical use of water ballast systems, marine fuel management, and Exhaust Gas Cleaning Systems on board. As a professional with hands-on experience, we are interested in your opinion on the latter.

Of course, all these abovementioned subjects are very important. Seafarers often face operational problems because they are quite new systems and still need improving by manufacturers. Together with my colleagues at the training centre, we are doing our best to provide trainees with the maximum volume of information pertaining to the maintenance and troubleshooting of these systems.

A large number of ships are already equipped with Exhaust Gas Cleaning Systems to reduce sulphur oxides in exhaust gases, and more ships are under retrofitting. The "Introduction to Exhaust Gas Cleaning Systems" online course, as well as face-to-face training we are conducting 2-3 times per month, whilst demand is growing. Most trainees have no experience in using SOx EGCS and related IMO and local regulations and are very satisfied after the completion of this course, also gaining the experience in using these systems because they are able to get practical advices in troubleshooting and maintenance.



*Training Consultant
at UMTC, Yuri Rybakov
conducting an online course*

In your online courses, you have been teaching about new technologies for the protection of marine environments. We are curious to know how far seafarers – present marine engineers – have adapted to these new technologies?

The IMO's environmental aims will never be achieved if there isn't closer cooperation from all stakeholders; we all must be involved in the process to achieve these goals, including seafarers and training institutions.

Seafarers are provided with all required regulations and requirements and must comply with these regulations. But each seafarer must also assess his approach in protecting the environment and do his/her best, especially officers and those who are leaders.

I believe education and training is key to ensuring seafarers understand these important changes, are fully motivated, and also armed with the necessary knowhow and skills. It is very much a ground-up and holistic approach. From what I have seen, seafarers are ready and always willing to do what's necessary, as well as quite flexible in learning and adapting to these new technologies.

The transition to alternative fuels will require significant training for crew in the coming years, as alternative fuels will have to replace conventional ones to pave the way for shipping's decarbonisation. This has already started at Marlow since the last five years and more. How has the response and receptiveness from learners been thus far and how do you believe such training should continue?

From my experience, students and trainees are highly receptive to these changes, eager to learn about the technology and equipment that is needed for shipping's transition, and what will drive our industry forward. Of course, it is also part of their career as marine professionals to always develop and evolve, and be proficient in whatever is required.

Maritime training must and does continue to reinvent itself to keep up with the rapidly changing environment, as driven by technological advancements and new requirements in regulations. Education and training are becoming a lot more targeted, as needed for different vessel types and different equipment e.g. specialised engine training for marine fuel management, exhaust gas cleaning systems, ballast water treatment systems, dual fuel engines, and more.

Using alternative fuels (such as LNG) requires additional training and technical knowledge to provide safe operation. No doubt, such training will be continued. Currently, here at UMTC we conduct in-house training in using LNG as an alternative fuel. During this training, we are using the TRANSAS simulator in LNG bunkering operations and change-over to LNG fuel.

Additionally, our Full Mission Engine Room Simulator will be updated with new engine models, including Dual-Fuel Electronically Controlled Engines from different vendors, including a 3D Immersion Station providing a real-time immersive and interactive 3D environment in which the user can move through the virtual engine room and carry out the tasks related to machinery operations and watch keeping, just as these are performed inside the vessel's engine room.

Overall, how do you see education and training progressing in the years ahead in order to keep up with the industry's evolution, particularly in areas such as digitalisation and automations on board, and the seafarers of the future?

Naturally, specific training is required for seafarers to understand and stay up-to-date on the latest technologies and solutions available. This is a given and is true for any change to the way ships are operated or controlled. Our job as training providers is not only to ensure seafarers are upgraded appropriately, in line with current regulations and policies, but to also foresee upcoming changes and already start having these conversations, if not also begin the learning process.

There is no doubt that highly interactive and immersive tools will drive training in the years ahead, such as Virtual Reality (VR) and Augmented reality (AR), gamification, and also advanced simulator training. Meanwhile, Learning Management Systems (LMS) such as Moodle, what we use here at UMTC, will also continue to play a vital role, allowing seafarers to maintain a consistent learning environment through centralised and rich content, as well as improve engagement, performance, and overall satisfaction. With such tools, seafarers can access course materials and find answers quickly at any time and from anywhere around the world. Likewise, us as training providers can monitor and administer it all more effectively.

Finally, we should not forget the importance of practical training, both at the training centre and at sea, crucial components for developing hands-on and other skills and ensuring competency. Technology requires technical skills, and it is there to enhance the human element. But learning by doing, together with soft skills such as critical thinking, problem-solving, communication, and leadership will continue to play a vital role going forward.

Engine workshop turbocharger training







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