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### The importance of Navigation

Keynote address

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Good morning, ladies and gentlemen. Before I begin, a word about The Nautical Institute. We are wedded to navigation. Call us to talk about it any time of the night or day, we will respond, from every corner of the world. We didn't invent navigation, but we represent its practitioners. We didn't invent e-Navigation either, but we drive the concept, quietly and firmly. We certainly don't patent dazzling new designs of ECDIS or IBS, but we will run the tests, review functionalities and provide objective end-user analyses. And by the way, we gave the world bridge team management, a gold standard in navigation. So please forgive me if I presume everyone in this hall is already a member of the Institute. Certainly if navigation is your interest I'm hoping you will be very shortly be soon after I finish!

It may interest you to know that the word navigate is possibly derived from the ancient Sanskrit words 'nav' meaning ship and 'gati' meaning direction. 'Nav' also means to float in Latin. So I guess, shipping was as international in ancient times as it is today.

Back in 1993, I was taught that navigation, as a legal responsibility of a Master, goes beyond just the control a craft's movement. It includes ensuring seaworthiness, emergency response, pollution prevention, efficient prosecution of voyage and safe delivery of cargo and passengers. The only area that was left out was engine room management, which I thought would really have completed the whole picture!

If we can think of the planet as a living organism, which indeed most of it is, sea transport of people and goods represents the cardiovascular system of the global economy. Just over one million seafarers ensure the immediate survival of 7 billion people on the planet. From this perspective, I hardly need to state the importance of navigation.

Navigation means different things to different kinds of navigators; driving everything from fighter jets to fishing boats; lakers to ULCCs; dredgers to naval frigates; truck drivers to VTS operators. When we try to design equipment, procedures, regulations or training standards, we need to be conscious of the variety of end-users and their unique needs.

A navigator differs from a plant manager in a fundamental way. A navigator is constantly managing an ever-changing environment, anticipating and surmounting the attendant risks. From the moment a ship weighs anchor the monster called risk is also underway and stalking you. We aim for safe navigation. But if by that we mean that this risk will just go away, we are mistaken. Navigation is all about learning to live with the risk monster, not expect it to go away. I did not go to sea because I wanted to be safe. I could have stayed home and sold life insurance. I went to sea because I wanted to get very close to danger – close enough to almost touch it – yet cocky, as only youth can be, that danger would not touch me.

Nothing has changed over the years, except that this generation has very good safety nets that we recognize by the alphabet soup of names employed – such as ISM, PSC, STCW or OPA. But nothing takes away the taste of adventure that a sea career offers.

For those of you who are skeptical about the efficacy of these nets, take a look at the incident stats:

The total losses of ships over 500 gt came down from 180 in 1994 to 60 in 2010  
High value accident claims came down from 520 in 1990 to 200 in 2010.  
450 lives were lost at sea in 1995 as against 250 in 2007  
The number of major oil spills from ships was 22 a year in the 1970s. This came down to three a year in the last decade.  
The total oil spilt from ships in 1993 was 140 million tons. This came down to 0.1 million tons in 2009.

To put this in perspective, measure these against a global seaborne trade of 9 billion tons in 2011 carried by 1.3 million ocean-going ships of all descriptions. If you took the average length of a voyage as 3 days, you are looking at 9 trillion tonne miles of a trade with cargo value of \$7 trillion annually.

Does anyone doubt if good navigation has something to do with these impressive safety statistics?

And yet, those that speak on behalf of the 7 billion humans on land demand nothing short of safe navigation. Therein lies the ultimate challenge that faces the modern navigator. The reality of the statistics I gave seems strangely not obvious to a world that is turning increasingly cynical and negative towards maritime transport.

I look forward to the array of excellent papers on technical innovations and scientific knowledge that will be presented over the next two days. We will see a gentle battle over methodologies – traditional or modern skill sets? We will also hear of the long overdue notion of machines taking over routine, boring navigational and collision avoidance manoeuvres. We might even dare ask the forbidden question of whether we need fully qualified OOW on the bridge through all the segments of an ocean passage. All I ask for is that when the dust settles down, every idea that is proposed is rigorously tested for proof of concept against the overarching challenge of safe navigation. I ask that this be done on the test-bed of a real marine environment. I ask that the concept or the technology be tested for integrity, resilience and, I dare I say it, inbuilt redundancy.

I'd like to share a few thoughts on key technical issues on navigation – after all, it has been the very essence of my working life.

The e-Navigation initiative lays stress on ergonomics and user-friendly interface.

Traditional navigational methods may be needed as a back-up and not for nostalgia or disciplinary reasons.

From years of inspection outcomes, we realise that passage planning and execution, chart correction procedures and the application of collision regulations are still not consistently applied on all ships in the world. We want to see consistency.

Let's not forget that port infrastructure, and particularly VTMS management, is a critical element of navigation. The level of standardisation and regulatory effectiveness in this area is not consistent across the globe. I took the opportunity to tell port leaders this at the International Association of Ports and Harbors regional conference in Colombo last year.

Now let me summarise. Is navigation important because we have to ensure the safety of fellow mariners, passengers, property, cargo and the environment?

Or does it derive its importance from keeping the global economy's cardiovascular systems healthy and free of blockages?

While the answer is yes to both, as a professional navigator, I believe navigation has a higher calling – a higher purpose. And that is to fulfill the instinct of wanderlust, to thrive in an ever-changing environment, to reach out and touch dangers unknown. And in this learning process I believe, the navigator discovers himself. And that, dear friends, is the true purpose of navigation. It leads you to your own soul.

I will leave you with these thoughts as the Plymouth University kicks off this very absorbing Seminar. We at The Nautical Institute are very keen to learn from these discussions and help carry the outcomes to a logical and workable solution. I wish this Seminar every success.

Thank you.