



# **BW Planning and Compliance Efforts to meet IMO Requirements**

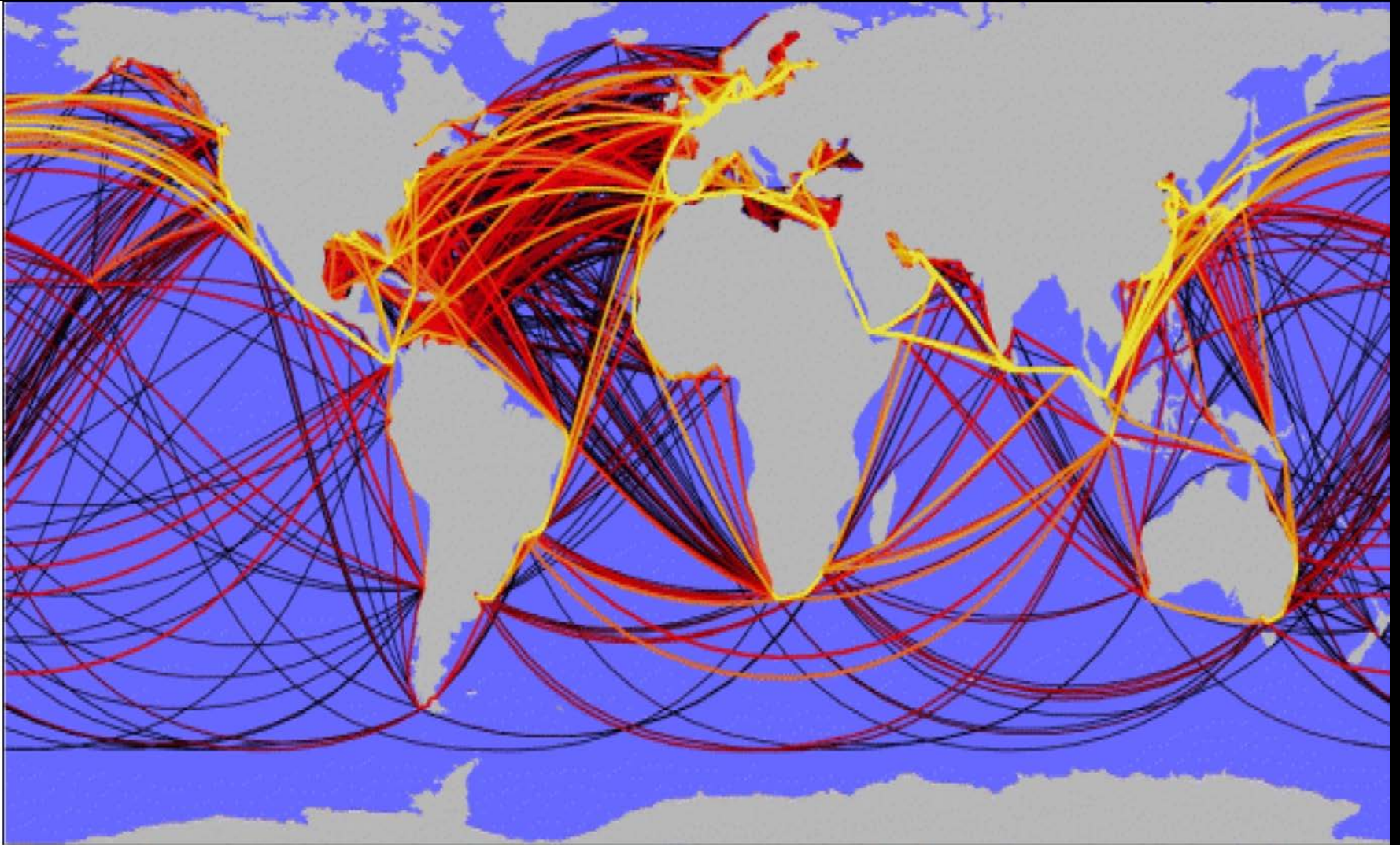
## **4 Examples**

**Bryan Bjorndal**  
**PBWG April 2017**

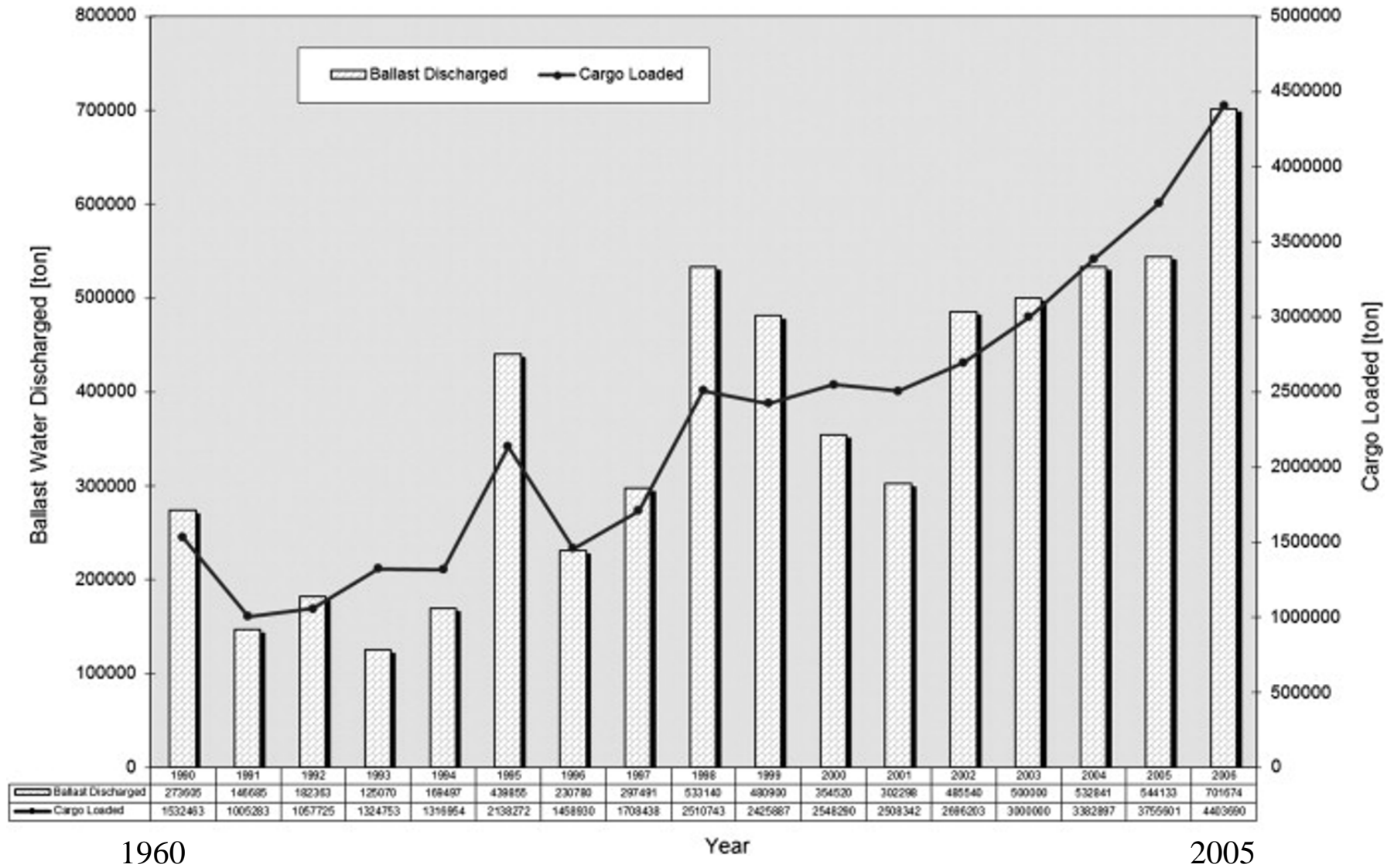


Country	Ratified BWC?	Maritime Organization	Environmental Organization	Coastal Authority	Ports & Harbors	Military, misc	1 to 10 rank
USA	no	USCG Laws	EPA & State Agencies	US Coast Guard	State Agencies	US Navy	10
FRANCE	yes	IMO-MARPOL	Dept D'Affairs de Maritime (DAM)	DAM	DAM	small Navy, but influential	6
UK	no	IMO-MARPOL	Marine Maritime Organization (MMO)	Marine Costal Admin (MCA)	MMO, MCA, Regional PSC	strong Navy, not influential	5
Nigeria	yes	IMO-MARPOL	Nigerian Maritime Authority (NMA)	NMA	Nigerian Port Authority (NPA)	??? Navy, influenced by UK	3
Organization of American States (OAS)	50%	IMO-MARPOL	Varies widely, if anything exists	Varies widely, if exists	Private and Govt	????	2

> 90 % of Everything Manufactured is Shipped on the Ocean



# Ballast Water is Proportional to Cargo Loaded





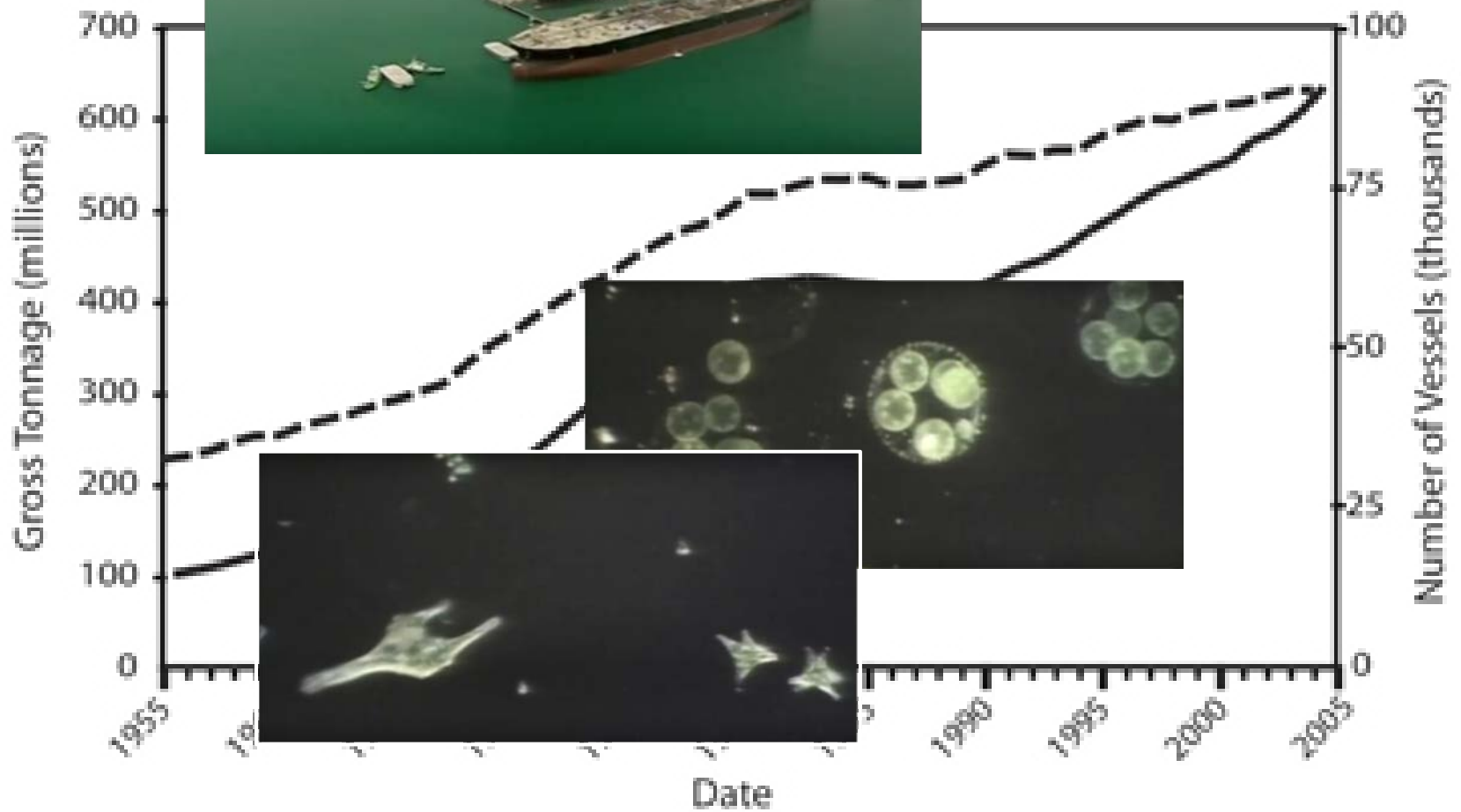


# **Ships' Ballast Water: A Major Vector**



- **5 to 7 billion tonnes per year**
- **7000 species at any time**

Number of Vessels  
Commercial Fleet



1960

2005





**International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM), 2004**

**Global**



**Ballast Water Management for Control of Nonindigenous Species in Waters of the United States 33 CFR 151, VGP 2013**

**Local**



Press Briefings

Archives

Meeting Summaries

Secretary-General

IMO Maritime Ambassador  
scheme

What's New

In Focus

IMO News Magazine

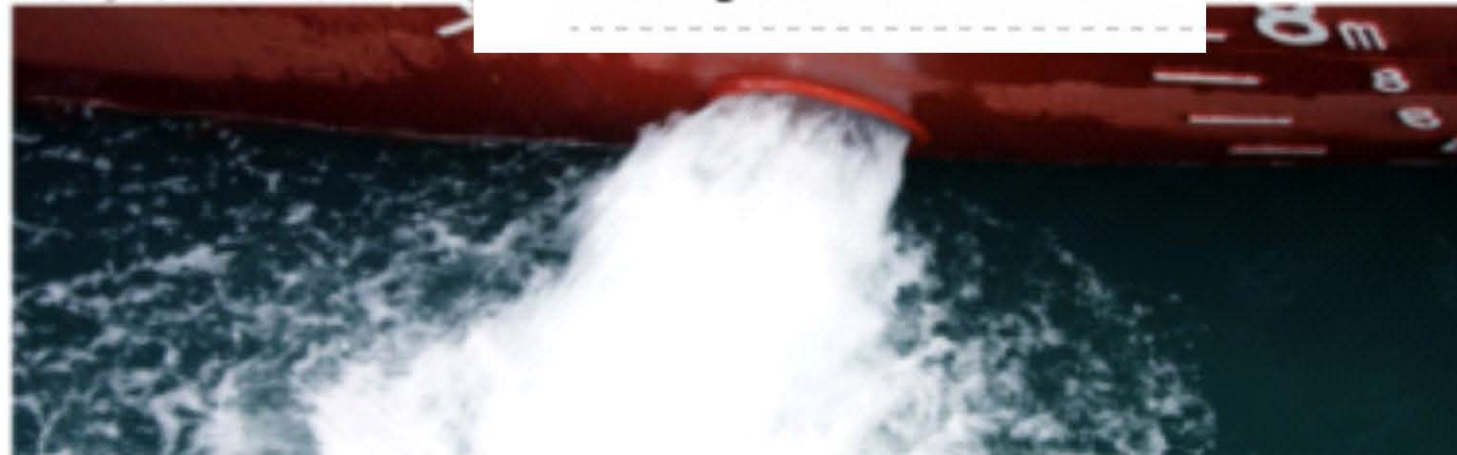
Multimedia

Attending IMO meetings

IMO Events

IMO / English / Media Centre / Press Briefing

Briefing: 22 08/09/2016



## Global treaty to halt invasive aquatic species to enter into force in 2017

Briefing: 22 08/09/2016

1.4k 1.3k

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222

Accession by Finland has triggered the entry into force of a key international measure for environmental protection that aims to stop the spread of potentially invasive aquatic species in ships' ballast water.

The International Convention for the Control and Management of Ships' Ballast Water and Sediments ([BWM Convention](#)) will enter into force on 8 September 2017, marking a landmark step towards halting the spread of invasive aquatic species, which can cause havoc for local ecosystems, affect biodiversity and lead to substantial economic loss. Under the Convention's terms, ships will be required to manage their ballast water to remove, render harmless, or avoid the uptake or discharge of aquatic organisms and pathogens within ballast water and sediments.

"This is a truly significant milestone for the health of our planet," said IMO Secretary-General Kitack Lim.

"The spread of invasive species has been recognized as one of the greatest threats to the ecological and the economic well-being of the planet. These species are causing enormous damage to biodiversity and the valuable natural riches of the earth upon which we depend. Invasive species also cause direct and indirect health effects and the damage to the environment is often irreversible," he said.



Her Excellency Mrs. Päivi Luostanen Ambassador Extraordinary and Plenipotentiary, Permanent Representative of Finland to IMO, handed over

## Lack of Legislative Harmonization

### Emotional and Organizational Effects

- ☐ Causes confusion
- ☐ Undue complexity
- ☐ Not a level playing field
- ☐ Lack of trust

### Financial and Implementation Effects

- ☐ Impacts capital costs
- ☐ Increases operational costs
- ☐ Instills fear due to uncertainty
- ☐ Severe hindrance to acceptance and implementation





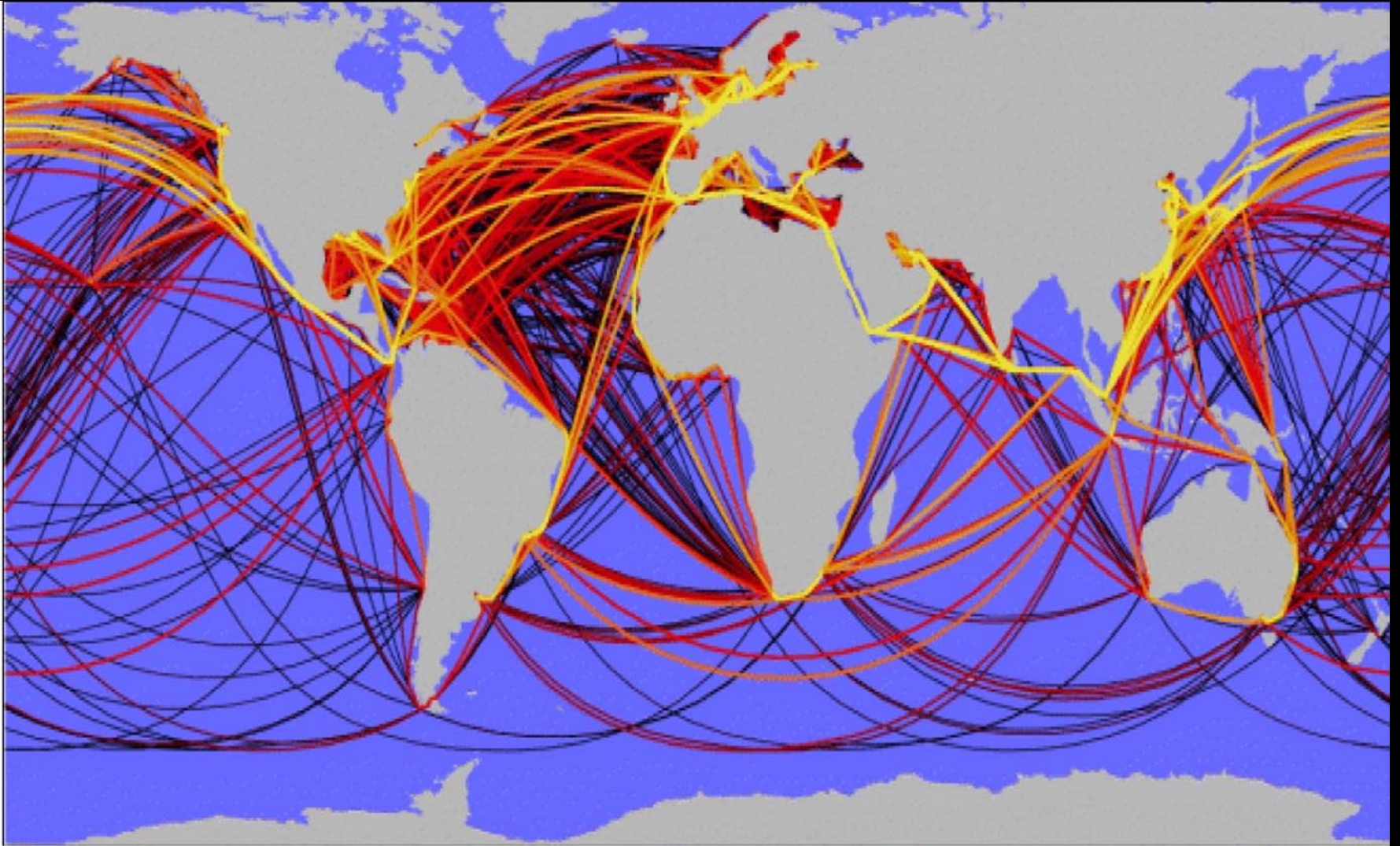


# IMO Technical Guidelines

- Guidelines for sediments reception facilities (G1)
- Guidelines for Ballast Water Sampling (G2)
- Guidelines for ballast water management equivalent compliance (G3)
- Guidelines for Ballast Water Management and Development of Ballast Water Management Plans (G4)
- Guidelines for ballast water reception facilities (G5)
- Guidelines for Ballast Water Exchange (G6)
- Guidelines for Risk Assessment under Regulation A-4 (G7)
- Guidelines for approval of Ballast Water Management Systems (G8)
- Procedure for Approval of BWM systems that make use of Active Substances (G9)
- Guidelines for approval and oversight of prototype ballast water treatment technology programmes (G10)
- Guidelines for Ballast Water Exchange Design and Construction Standards (G11)
- Guidelines for sediment control on ships (G12)
- Guidelines for additional measures including emergency situations (G13)
- Guidelines on designation of areas for ballast water exchange (G14)
- Guidelines on PSC under the BWM Convention

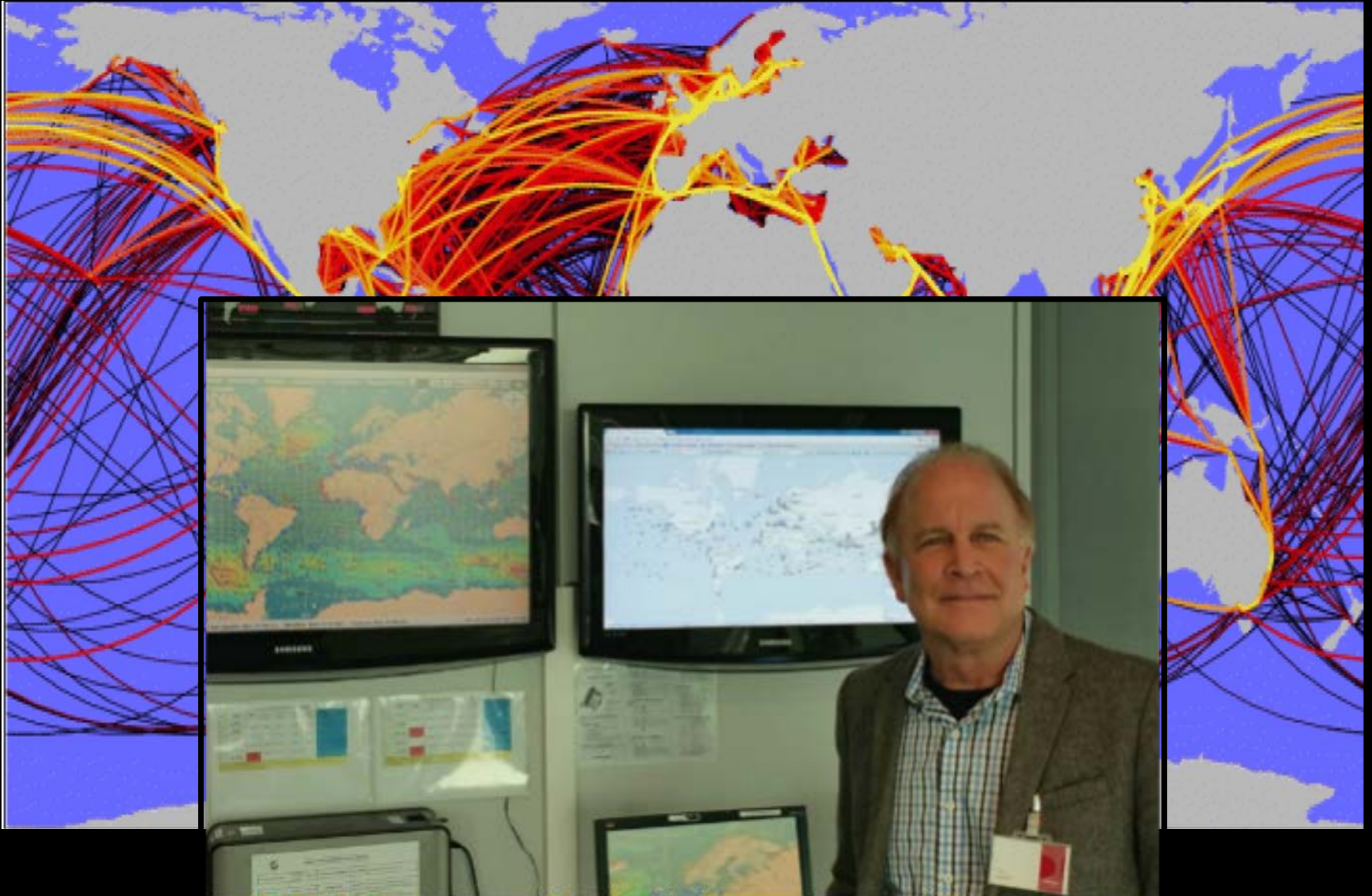
+ a number of resolutions, circulars, etc.

> 90 % of Everything Manufactured is Shipped on the Ocean





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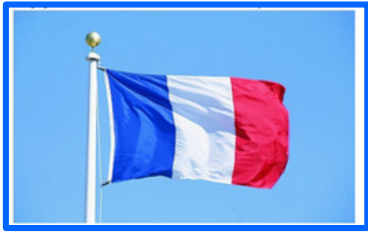
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Marseilles, Toulon, Lorient

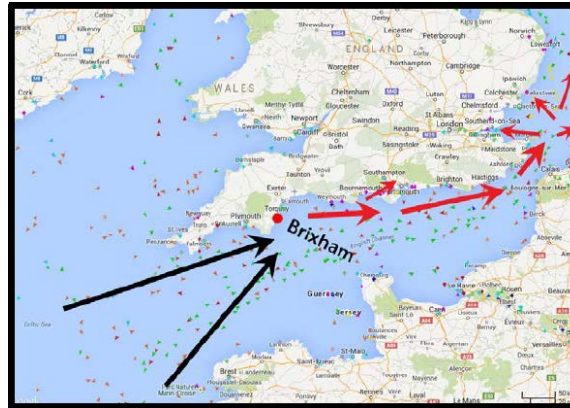






# UK

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World-class facility and equipment gifted by  
AstraZeneca to the University in 2014

**BRIXHAM  
LABORATORY  
WITH  
PLYMOUTH  
UNIVERSITY**  
THE BLUE ENVIRONMENTAL HUB

**MARINE  
INNOVATION  
CENTRE  
WITH  
PLYMOUTH  
UNIVERSITY**





- Fate & Effects labs for Commercial Research Organisations





- Laboratory space & equipment for high growth companies



# UK



## Certificate of Incorporation on becoming a Community Interest Company

Company No. 10291685

The Registrar of Companies for England and Wales hereby certifies that under the companies Act 2006:

**CONSORTIUM FOR INVASIVE SPECIES MANAGEMENT  
LBG LIMITED**

having changed its name; is now a Community Interest Company; and is incorporated under the name of:

**CONSORTIUM FOR INVASIVE SPECIES MANAGEMENT CIC**

Given at Companies House on 17<sup>th</sup> August 2016



Companies House



## Consortium for Invasive Species Management CIC

### Rationale:

- Environmental and maritime focus for key organisations to leverage efforts
- Ballast water (BW) regulation implementation/optimisation is the focus
- Shipping industry requires a neutral setting to share experiences and best practices
- Project based collaborations amongst members allows multiple benefactors
- Technology Innovation, Maritime Training, and Environmental Stewardship Objectives
- UK and International Agencies have means to participate with industry in a neutral setting
- BW related companies have means to participate with agencies and academics in a neutral setting
- Grants and Proposals can be pursued
- UK and Global Agencies can use CISM as a positive example
- International cooperation and pursuit of projects and proposals
- Workforce Education, Involvement

### Mission Statement:

Recognizing the challenges of regulatory and statutes-setting organisations to be both the Educator and the Enforcer; the members agree to proactively measure and understand the effects of ballast water management, which include shipping operations, port state monitoring and enforcement, and environmental consequences. The members believe that positive sustainable practices and technologies exist today, and are in development; to address this marketplace.

### Members of the CISM agree to:

- Participate in at least half of the meetings called by the Board (in person or by conference call).
- Contribute to one or more Programs that are developed or defined by the members, and put forward by the Steering Committee.
- Inform others in the maritime industry, and related neighbouring market sectors, to the significance of Invasive Species as both an ecological and environmental challenge that requires proactive changes.
- Promote environmental stewardship and sustainable practices in ocean and coastal businesses of all types.
- Promote education of the mariner and those professions related to the supply chain of shipping, fishing, and transportation by vessels.
- Promote independent studies and reviews of regulatory or statutory practices to ensure they can be accomplished by the stakeholders affected.
- Promote and distribute best practices that are based on operational experience of the mariner's vessel and crew.
- Engage with elected officials (local and international) at all levels to increase their understanding of the economic significance of the ocean economy.
- Support research endeavours with academic partners to improve the transfer of technology to commercial solutions, and to embrace both scientists and students to partner on unmet needs.
- Solicit new members to the CISM that will help further the mission and goals of the consortium.
- Be fair and equitable business partners in collaborations, on both public and commercial programs.
- Pay any membership fee that may be agreed between members.
- Participate, as appropriate, in Advisory Committees that are set up by agreement of members,

Company No. 10291685

Registered Office: Flat 2, Beech Court, Courtland Road, Wellington, Somerset, TA21 8NE



# UK



## Draft-Organizations Brixham Environmental Hub



### Mission Statement:

Recognizing the challenges of regulatory and statutes-setting organisations to be both the Educator and the Enforcer; the members agree to proactively measure and understand the effects of ballast water management, which include shipping operations, port state monitoring and enforcement, and environmental consequences. The members believe that positive sustainable practices and technologies exist today, and are in development; to address this marketplace.

#### Consortium Members- initial list

- ☐ Multiple benefactors
  - ☐ Environmental and maritime focus
  - ☐ BW regulation implementation/optimization
  - ☐ Project based collaborations
  - ☐ Technology Innovation, Maritime Training, and Environmental Stewardship Objectives
  - ☐ UK Agenc(ies) participate
  - ☐ Grants and Proposals
  - ☐ Innovate UK
  - ☐ EU Projects and Proposals
  - ☐ Workforce Education, Involvement
- Assure Controls, (San Diego, US)
  - Blue Tech Expert Team, (Brixham, UK)
  - Gremco sas (Toulon, France)
  - Blue Ballast Solutions (Toulon, Marseilles, France)
  - Chelsea Technologies (London, UK)
  - Plymouth University (Plymouth, UK)
  - Mayor of Torbay (Torbay, UK)
  - Business Services, Marine Services (Brixham Harbor)
  - (MTS) Marine & Towage Services, (Brixham, UK)
  - South Devon College
  - Pole Mediteranean, (Toulon, Marseilles, France)
  - The Maritime Alliance, (San Diego, US)





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Organization of American States (OAS)
<p>2 confidential surveys  Part 1 &amp; 2, spaced by 60days  35 Ports  15 Countries  4,830 (ave) vessel visits  4,140 (ave) size (TEUs)</p> <p>85% not aware of IMO BWC  70% of those aware, had no BW plan  44% knew PSC was involved  22% felt ready for implementation</p>

★ PDF of Survey



# Nigeria

February 7, 2017

Country	Ratified BWC?	Maritime Organization	Environmental Organization	Coastal Authority	Ports & Harbors	Military, misc	1 to 10 rank
Nigeria	yes	IMO-MARPOL	Nigerian Maritime Authority (NMA)	NMA	Nigerian Port Authority (NPA)	??? Navy, influenced by UK	3



Presentation to Nigerian Ports Authority

Company No. 09990373

Registered Office:  
2, Beech Court, Courtland  
Road,  
Wellington, Somerset, TA21  
8NE  
Tel: +44 1823 661647 & +44  
7746185431

February 7, 2017

National Maritime Authority and  
Nigerian Port Authority representatives

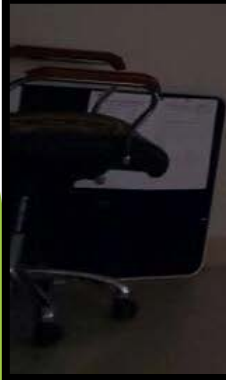
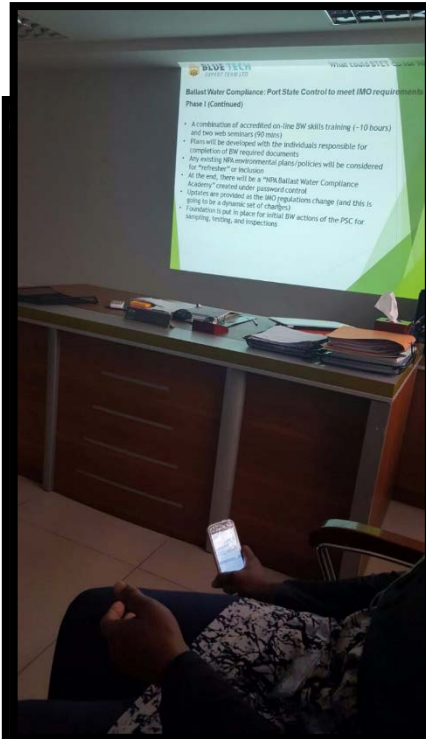


Our proposal being arranged by  
the IT department.



# National Maritime Authority and Nigerian Port Authority

21 attendees



Our proposal



BLUE TECH  
EXPERT TEAM LTD.

## What will BTET do for the NPA?

- ▶ BTET will design an implementable BW management plan tailored to strictly suit the terrain, operational peculiarities and overall port management philosophies of the NPA.
- ▶ BTET will train NPA officials on the entire gamut of Ballast Water Management technicalities including its administration
- ▶ BTET will in conjunction with its Nigerian partners put in place a BW management system on a Private Partnership model with the NPA to kick start the operations
- ▶ BTET will, as a development partner to the NPA in the BW management systems put in place conform to international best practices and are readily available in the public domain for the benefit of port users and the entire maritime industry
- ▶ BTET will help the NPA develop Ballast Water Management Regulations for the Control of Invasive Species in Nigerian Waters



HIS IMPERIAL MAJESTY  
OONI ADEYEYE ENITAN OGUNWUSI  
OJAJA II, OONI OF IFE

*Historical visit to  
United Kingdom*

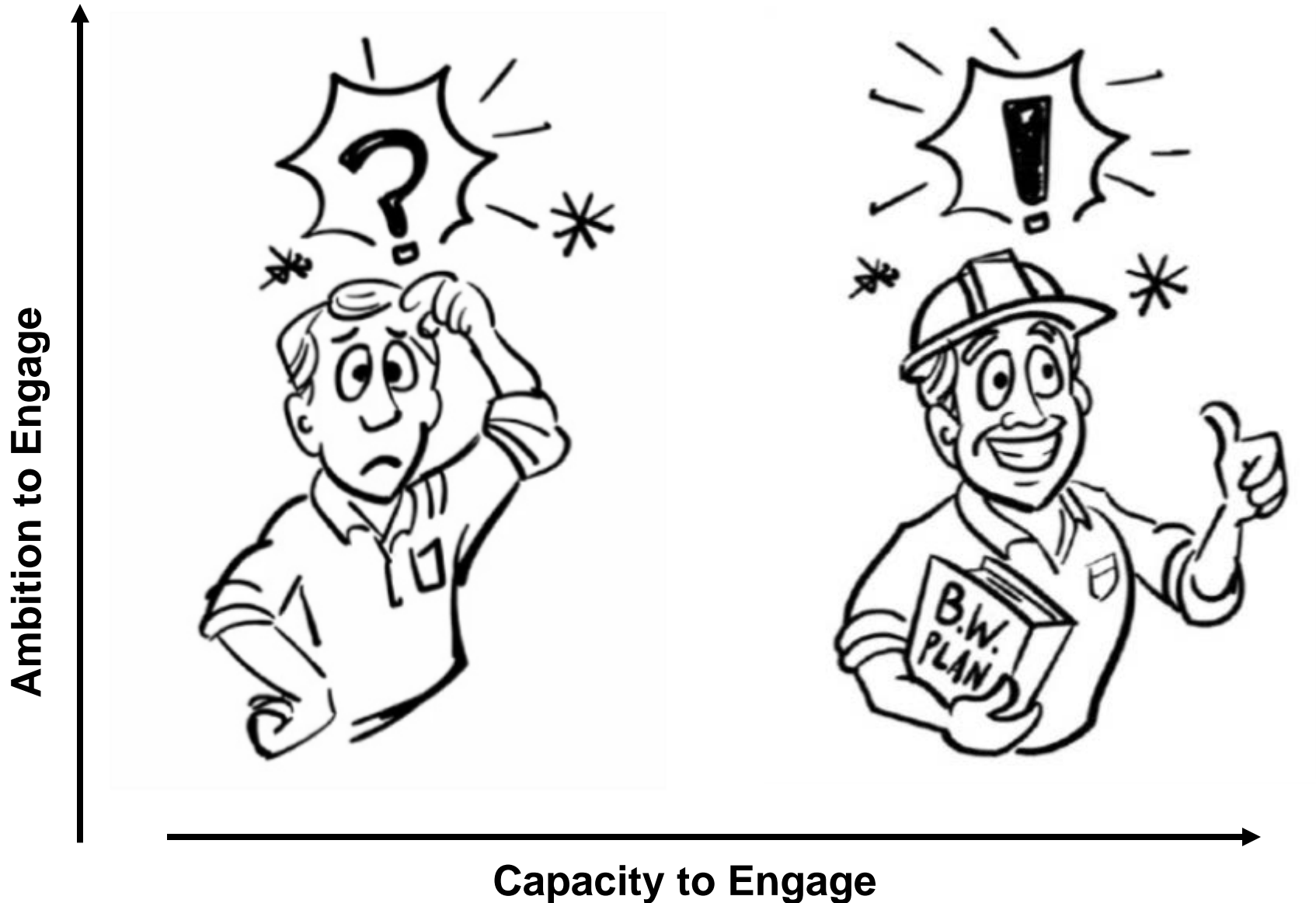
- Commonwealth Day Celebration ●
- Business Leaders Luncheon with Chambers ●  
of Commerce Leaders
- Visit to Nigeria High Commission, London ●
- Official visit to British Museum ●
- Visit to "The Black Cultural Archives" ●
- Performance of Moremi Opera by the ●  
Royal College of Music, London
- Visit to the House of Commons ●
- International Trade Development Discussions ●  
with MP's and Business Leaders
- Lecture at Oxford University ●
- Visit to the old Royal Palace of the Queen Elizabeth ●
- 24th March, 2016: An Evening with Ooni of Ife ●  
(Gala Dinner & Awards Night) featuring  
Cultural Troupe, Yinka Ayefele & Royal DJ Nuff Jamz

enquiries: [info@ooniofifego.com](mailto:info@ooniofifego.com) [www.ooniofifego.com](http://www.ooniofifego.com)  
Rotimi Osobemekun (+44 744 816 4465)  
Princess Dr. Toyin Kolade (Iyalaje of Apapa - Lagos)

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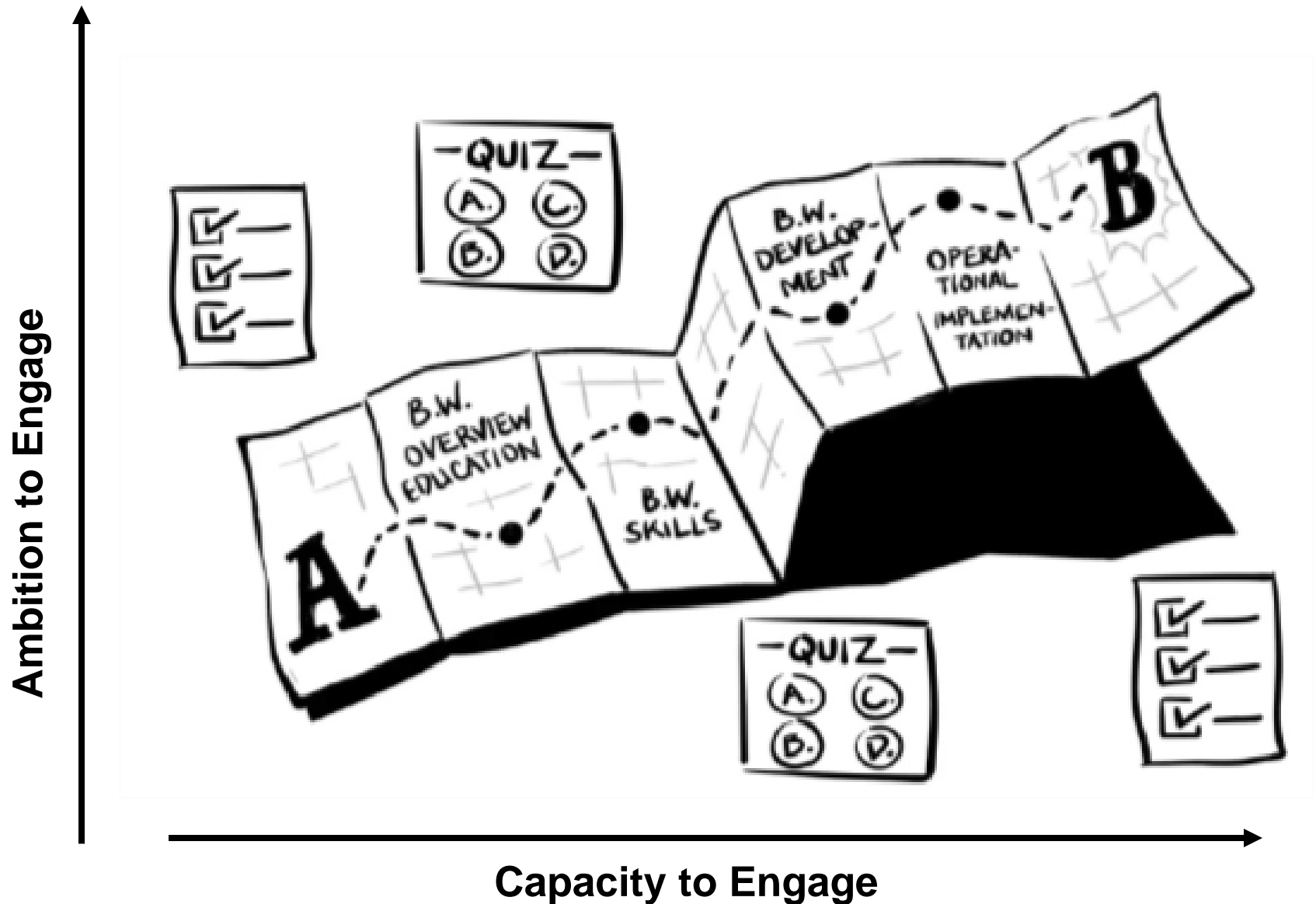


# Lots of Factors in BW Implementation

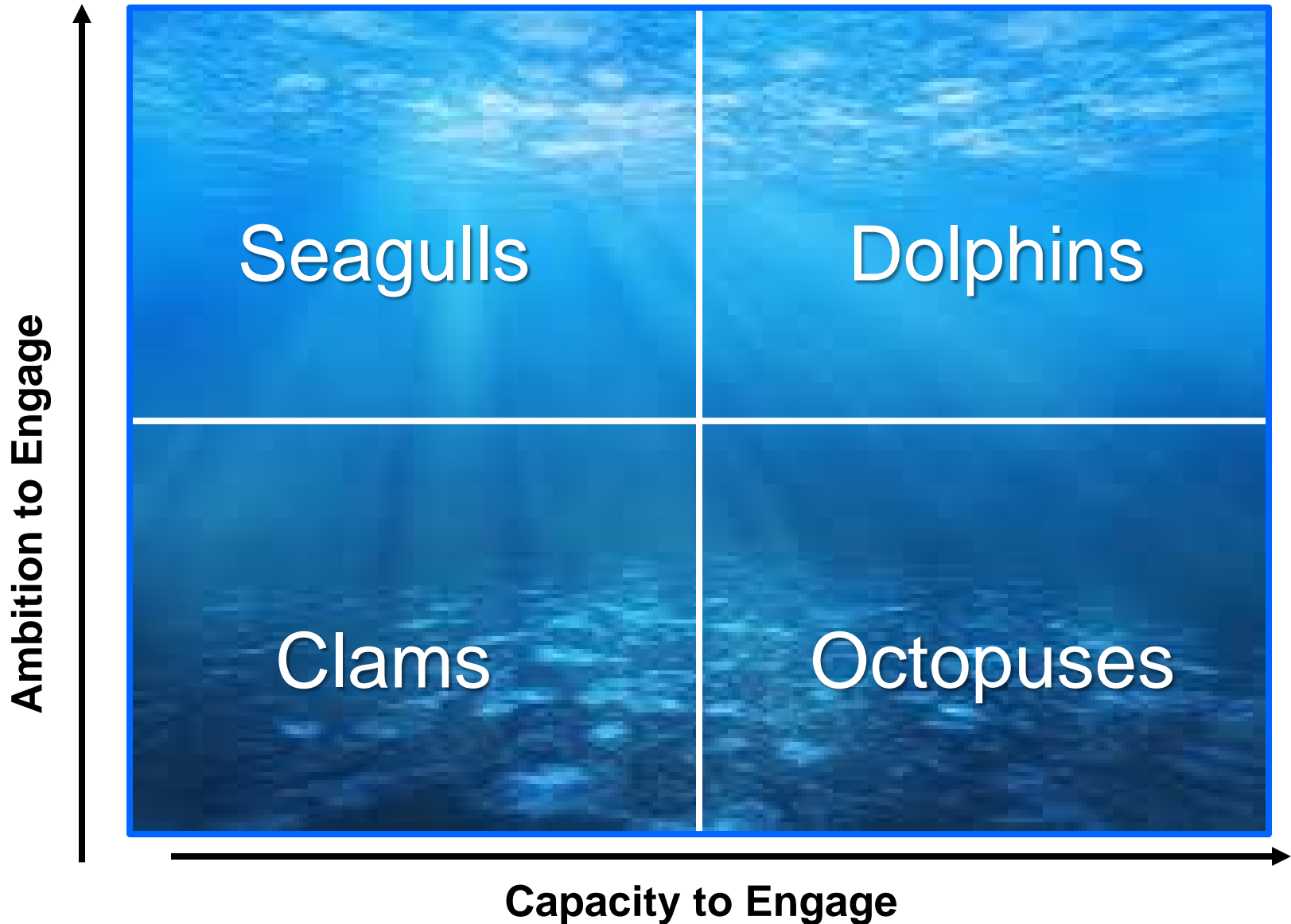




# Lots of Factors in BW Implementation



# It's About People (concept credit to Dr. Simon Gerrard, Southampton UK)







# THANK YOU

Bryan Bjorndal  
Assure Controls, Inc.

[Bryan@assurecontrols.com](mailto:Bryan@assurecontrols.com)  
760.696.0300

