

IUMI 2017 TOKYO



The Elephant On The Ship

Roderick Johnson FNI MIIMS
Marine Risk Management Director
RSA

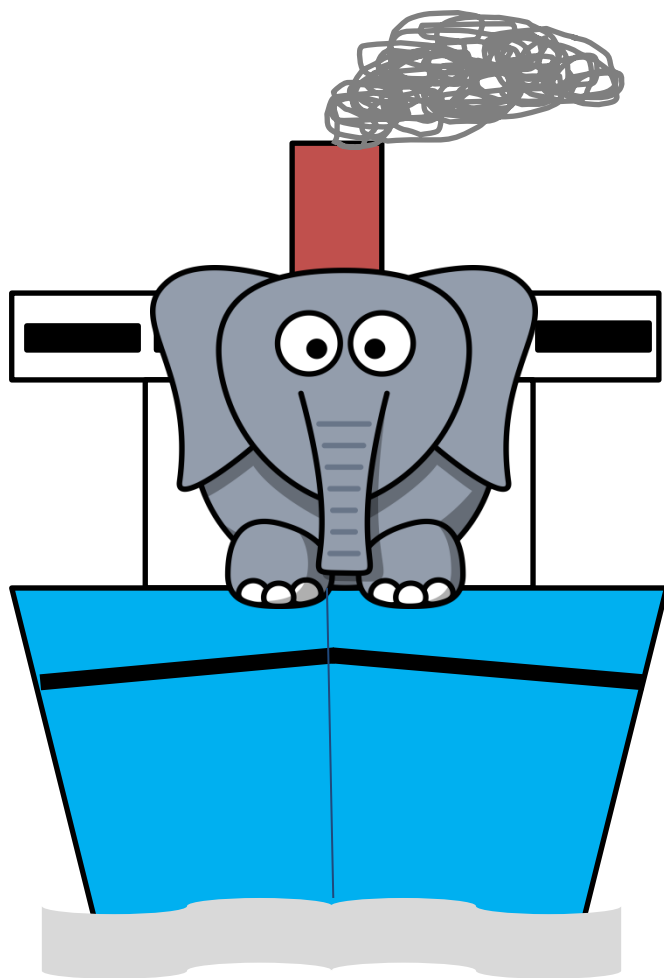


Coming up.....

**Three issues we should be thinking about
(instead of hoping they will go away)**

Some ways to approach these issues

Can you see the elephant?



- The obvious problem that nobody wants to talk about
- Groupthink
- Orthodoxy

Three elephants.....

Drone and Robot Ships

2020

Reduced crew with remote support and operation of certain functions



Remotely operated local vessel



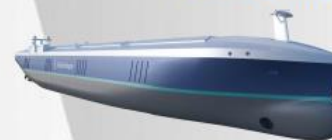
2025

Remote controlled unmanned coastal vessel

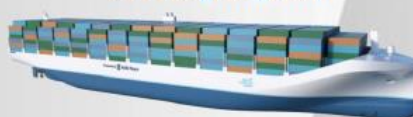


2030

Autonomous unmanned ocean going ship



Remote controlled unmanned ocean going ship



2035



Rolls-Royce

Enabled by technology and driven by value

Exist in reality and in cyberspace

Legal orthodoxy increasingly inapplicable

Underwriting principles based upon agreed uncertainty

will no longer apply

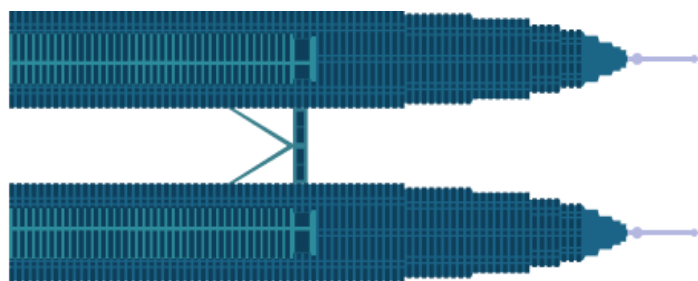
Increasing Size of Ships

Salvage

Fire

Structural failure

Safe manning



Environmental Impact of Ships



**Ballast water
exchange**

Emissions control

Alternative fuels

Shaping the debate

Drone and robot ships

- **There will be almost no uncertainty between the risk carrier and the assured.**
- **The current model of ship ownership may give way to an “aviation” model.**
- **Underwriting will require a detailed understanding of the technical issues.**

Increasing Size of Ships

- **All of the control measures are regulatory.**
- **International regulations are a minimum standard, not best practice.**

Environmental Impact of Ships

- **There are even more activists and agendas than there are regulators.**
- **Regulations are based on science and the science is moving fast.**
- **Underwriters will have a social responsibility forced upon them.**

- **To remain relevant, risk carriers must increasingly challenge orthodoxy.**
- **Regulation does not control risk, it merely provides a context.**
- **Risk carriers will be increasingly identifiable to citizens.**
- **There is no “do nothing” option.**

**Roderick Johnson FNI MIIMS
Marine Risk Management Director
RSA Global Risk Solutions**

