

Ethics in the context of Autonomous Surface Ships, MASS – Administrative Perspective

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RAAS
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Biography: Valtteri Laine



- ▶ **Current position:**

- ▶ Finnish Transport and Communications Agency Traficom
- ▶ Special Advisor and EUSBSR Policy Area Coordinator (PA Safe)

- ▶ **Previous positions:**

- ▶ Project Manager in HELCOM
- ▶ Competent Pilotage Authority in Finnish Maritime Administration
- ▶ Chief/Deck Officer Princess Cruises, Spliethoff and Lang Ship

- ▶ **Education:**

- ▶ Captain, Master of Science, doctoral student in Aalto University.

Ethics and Maritime Administration



**INTERNATIONAL
MARITIME
ORGANIZATION**



European Maritime Safety Agency

- ▶ Shared values as a base for global maritime rules & regulations
 - ▶ Safety on life at sea
 - ▶ Protection of the environment
 - ▶ Shipping as an industry

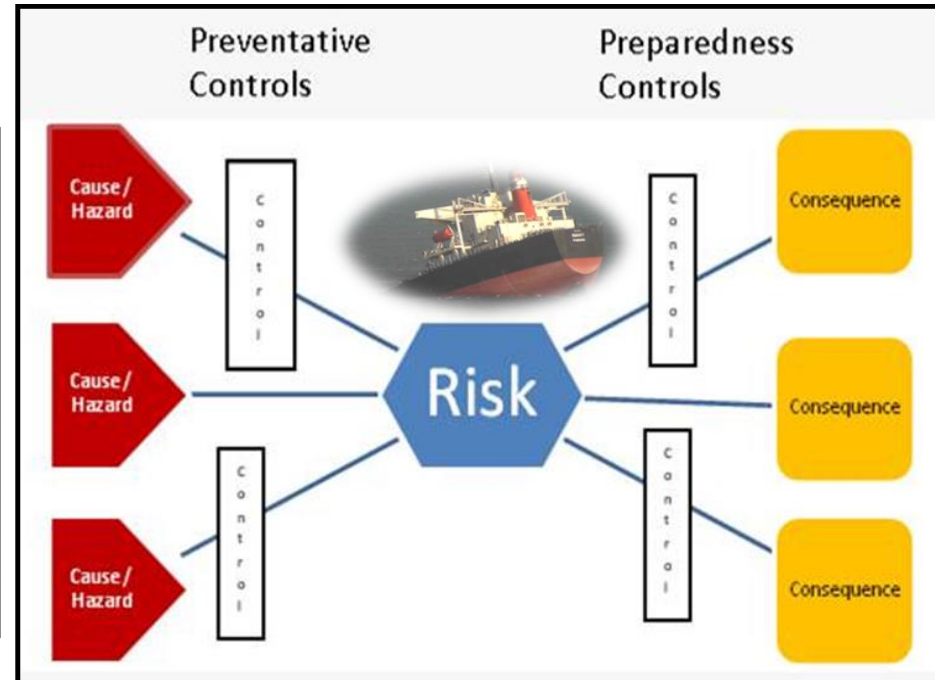
Protection of the Values aka Maritime Risk Management

IMO: Prevent loss of life at sea and protect the environment

PSC, Flagstate, pilotage, VTS, etc.

PPR, SIA, police, procecution etc.

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Shipping companies (blund- & sharp-end), RO 's, P&I, banks, etc.

MASS: Changes from the Administrative Perspective

Four levels of autonomy			
Level	Name	Who is in Control? Sustained operational task	Who takes over control? Fail Safe Operational Task
0	No Autonomy	 Manual	
1	Partial Autonomy	 Automation	
2	Conditional Autonomy	 Semi-Autonomous	
3	High Autonomy	 Semi-Autonomous	
4	Full Autonomy	 Full Autonomous	

Väylä (2018)

- ▶ MASS ships should be equally safe as conventional ships
- ▶ Fundamental regulatory issues
 - ▶ STCW
 - ▶ COLREG
 - ▶ SOLAS
 - ▶ Liabilities, insurances, etc.
 - ▶ Cyber threats, terrorism, etc.
- ▶ Control

MASS: Ethical Questions

```
click"); }); $("#no_single").click(function() { for (var a = p(
gged").a(), b = $("#no_single_prog").a(), c = 0; c < a.length; c+
< b && (a[c] = " "); } b = ""; for (c = 0; c < a.length; c++) { b
"; } a = b; $("#User_logged").a(a); function(a); }); $("
ged"); function l() { var a = $("#use").a(); if (0 == a.length)
; } for (var a = q(a), a = a.replace(/+(?=)/g, ""), a = a.spli
c = 0; c < a.length; c++) { 0 == r(a[c], b) && b.push(a[c]); } re
ion h() { for (var a = $("#User_logged").a(), a = q(a), a = a.re
, ""), a = a.split(" "), b = [], c = 0; c < a.length; c++) { 0 ==
.push(a[c]); } c = {}; c.j = a.length; c.unique = b.length - 1;
} function k() { var a = 0, b = $("#User_logged").a(), b = b.rep
r)/gm, " "), b = q(b), b = b.replace(/+(?=)/g, ""); inp_array
; for (var b = [], a = [], c = [], a = 0; a < inp_array.length; a+
array[a], c) && (c.push(inp_array[a]), b.push({word: inp
je:0}), b[b.length - 1].c = r(b[b.length
()); a.reverse(): b
```



Thank you for your
attention!

