"e-Rules - Modeling and potential delivery of rules in electronic format to support automated compliance management"

Theodosiou Dimitris Konstantinos
Danaos Management Consultants SA.
www.danaos.gr

danaos *Your Information Technology Partner*

Flagship project conclusions:

e-Rules

- ***Are technically feasible.***
- ***Justified.***
- ***Acceptable by the shipping industry.***

EDI, XML,UML, E-forms, Internet & Web services, communication etc.

Market requirements

Vessel Masters require:

- *automation in preparation of paperwork (forms certificates etc.)*
- *reminders on tasks to be performed*

Vessel Managers and operators require:

- *To be alerted in the case of non compliance*
- *Assistance to mitigate the non compliance*

Inspection Authorities require:

- *Information about the compliance status of each vessel*
- *Alerts on non compliances for immediate action*

Ruling Bodies require:

- *Conflict alerts for new or existing rules/regulations*
- *Information about the compliance status of each vessel*

Sub-project B5 : Rule compliance

e-rules contribution to Flagship goals:

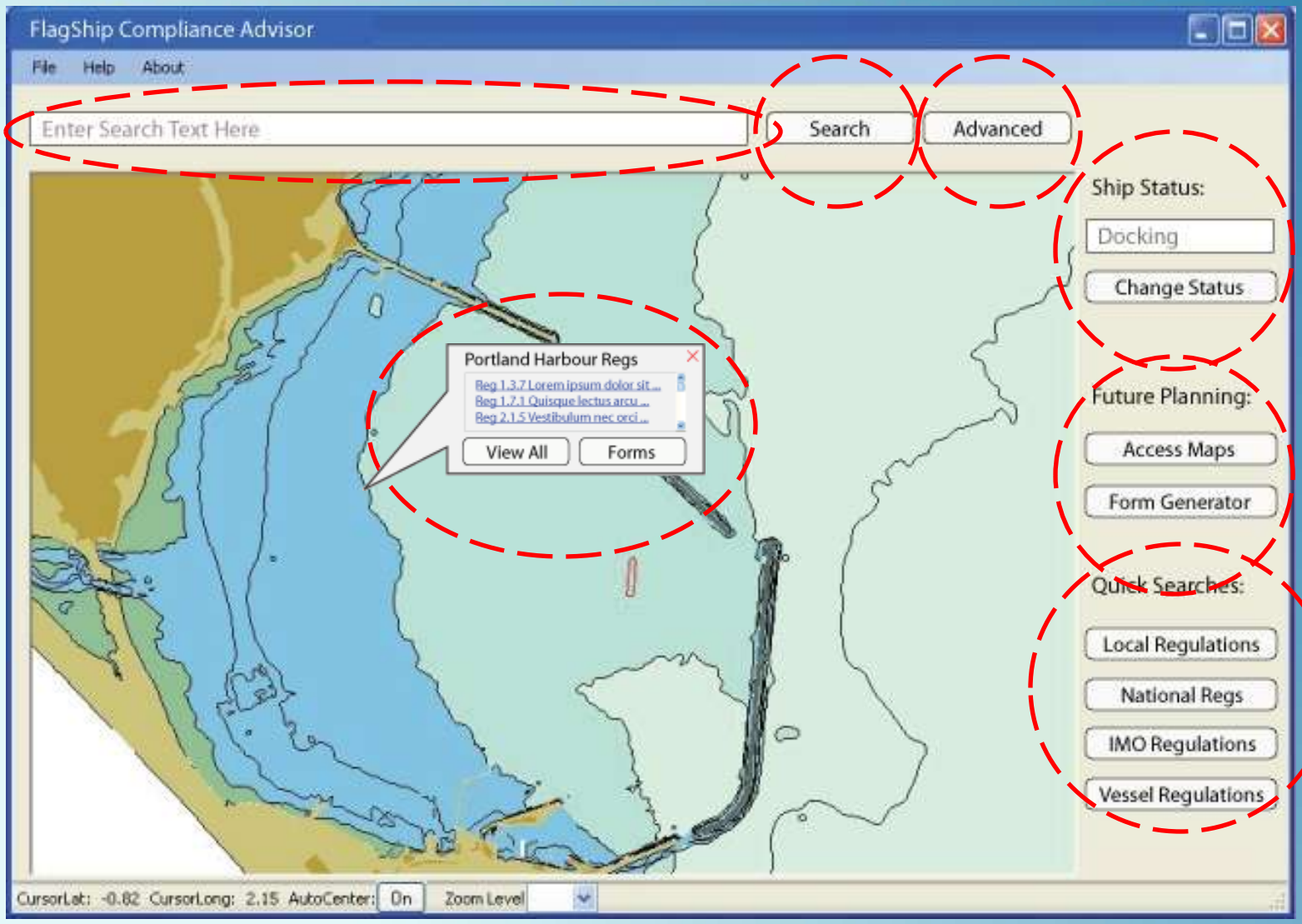
1. **increased energy efficiency and reduced emissions**
2. **better decision support tools, grounded in a human factors understanding of the operators' needs**
3. **improved nautical operation and bridge decision support**
4. **enhanced alarm filtering**
5. **automatic support for rule compliance**
6. **improved cargo-handling**

Lagship

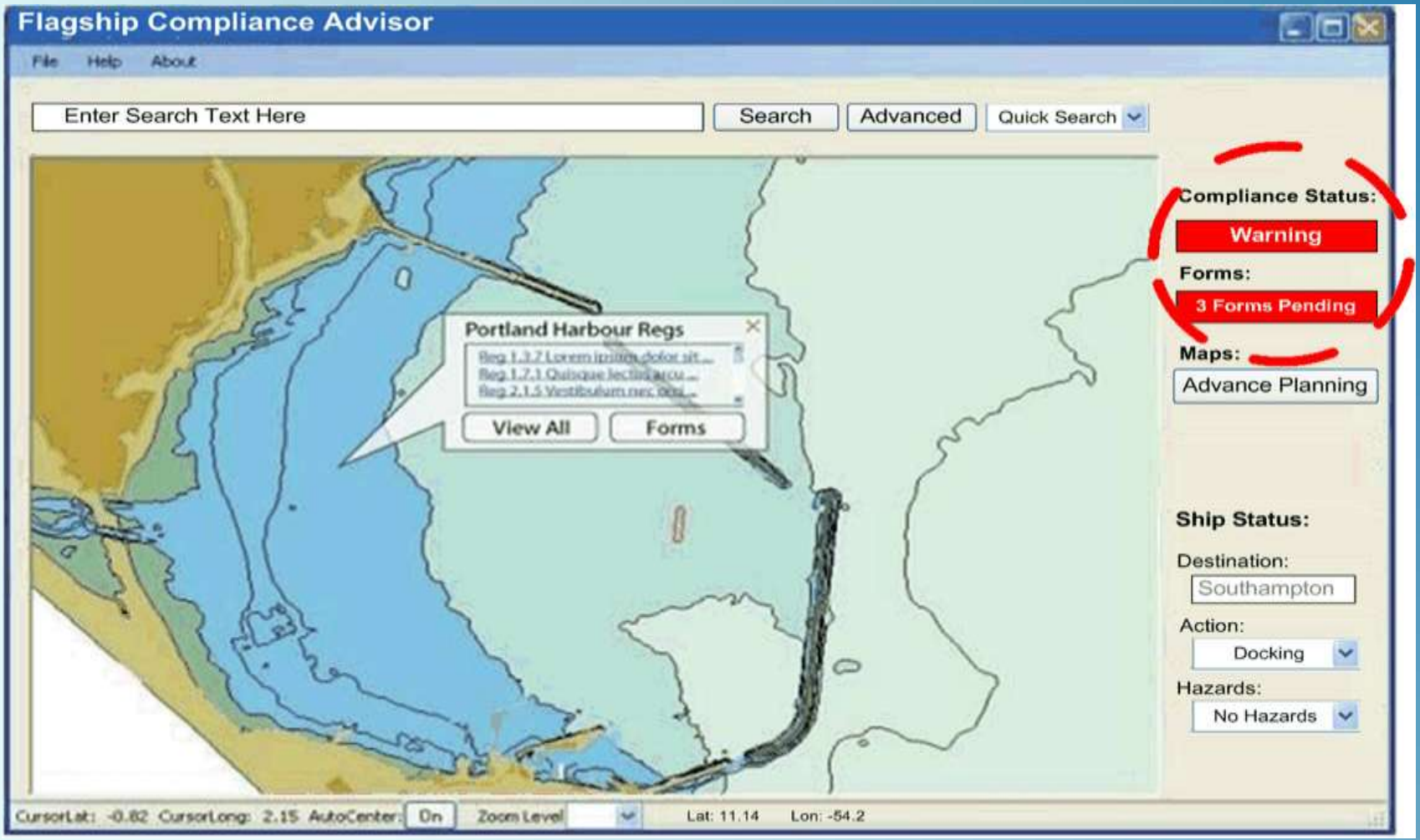
Mapping Repository

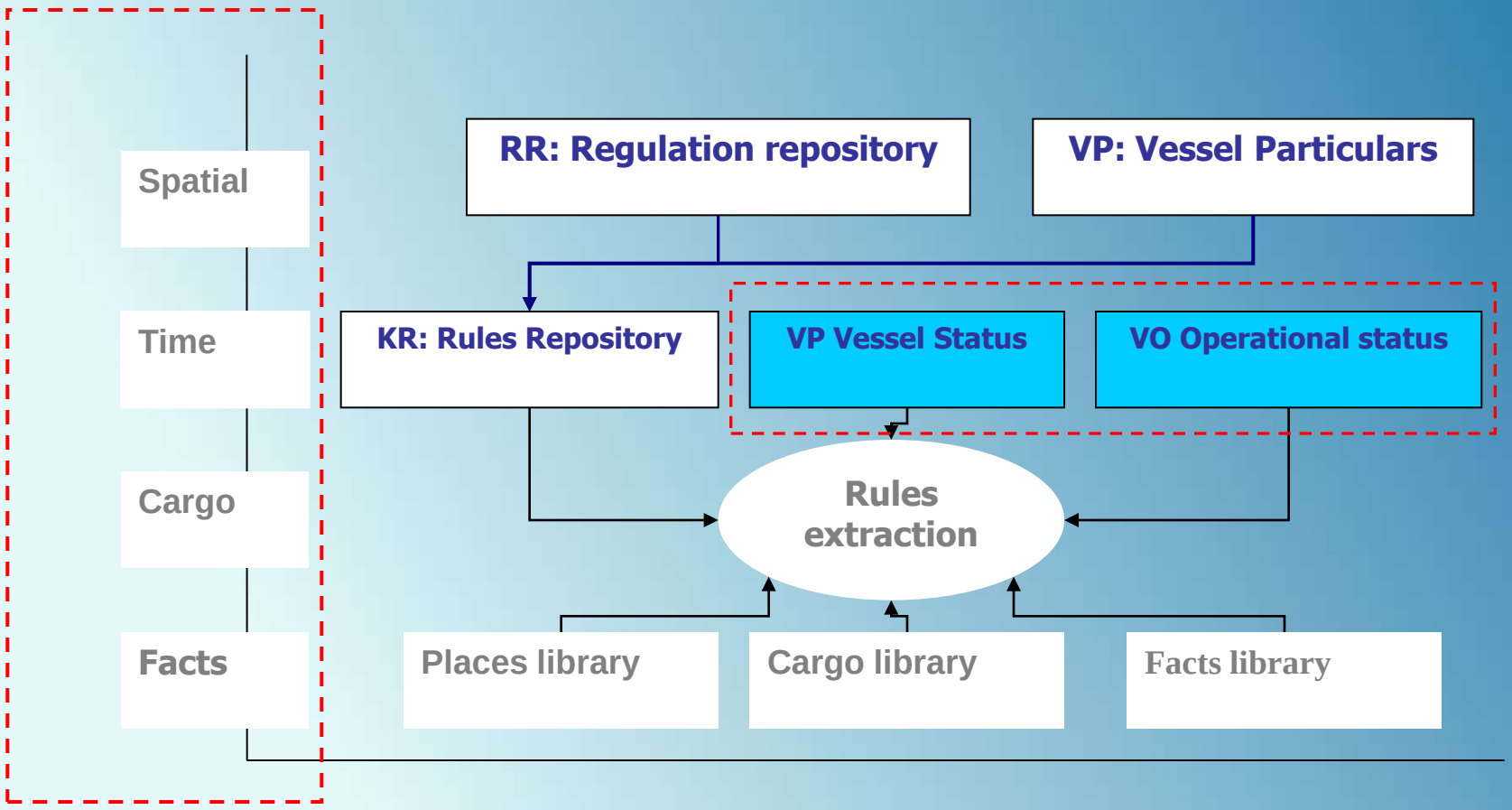
	A	B	C	D	E	F
1	**RuleId**	13.8				
2	**RuleName**	ISM Certificate				
3	**RuleType**	Normal				
4	**RuleDescription**	13.8.3				
5	**RuleUpdated**	11/7/2008				
6	**Dependence Rule ID**	13.8.1				
7	**Results**					
8	**Actions**	Warning (6)				
9						
10						
11	**Variable**	**Operand**	**Value or Variable**	**Value**	**Value1**	**Connection**
12	Result (1)	=		FALSE		AND
13	Current_Date	<	Verification_Date + 1 year			AND
14	Current_Date	>	Issue_Date + 2 years			AND
15	Current_Date	<	Issue_Date + 3 years			

Lagship


FlagShip Compliance Advisor
File
Help
About
Enter Search Text Here
Search
Advanced
Ship Status:
Docking
Change Status
Portland Harbour Regs
Reg 1.3.7 Lorem ipsum dolor sit ...
Reg 1.7.1 Quisque lectus arcu ...
Reg 2.1.5 Vestibulum nec orci ...
View All
Forms
Future Planning:
Access Maps
Form Generator
Quick Searches:
Local Regulations
National Regs
IMO Regulations
Vessel Regulations
CursorLat: -0.82 CursorLong: 2.15 AutoCenter: On
Zoom Level

Lagship


Flagship Compliance Advisor
File
Help
About
Enter Search Text Here
Search
Advanced
Quick Search
Portland Harbour Regs
View All
Forms
Compliance Status:
Warning
Forms:
3 Forms Pending
Maps:
Advance Planning
Ship Status:
Destination:
Southampton
Action:
Docking
Hazards:
No Hazards
CursorLat: -0.82 CursorLong: 2.15 AutoCenter: On
Zoom Level
Lat: 11.14
Lon: -54.2


Spatial
Time
Cargo
Facts
RR: Regulation repository
VP: Vessel Particulars
KR: Rules Repository
VP Vessel Status
VO Operational status
Rules extraction
Places library
Cargo library
Facts library

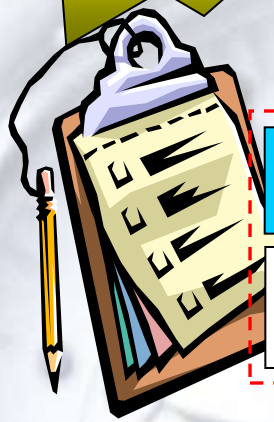
The big picture

Regulatory authorities

Consistent rules

Focused Inspections

Inspection authorities



Lexicon of variables

Set of values

Rules Repository

Officers onboard

Non compliance

Effectiveness in operation

Shipowners Operators

Potential Benefits: For regulatory authorities

- **Consistent rules**
- **Automatic rule compliance verification**
- **Objective Audits**
- **Standards for e-rules**
- **Verification of rule delivery to involved parties**
- ***Cost reduction***

Potential Benefits: For Shipping Community

- **Verified rule delivery**
- **Automatic rule compliance verification**
- **Effective Audits**
- **Standards for operational data recording and distribution**
- **Higher Quality**
- ***Administrative costs reduction***

The EU e-Maritime Initiative

Recognizes:

- *a number of underlying problems affecting efficiency, performance and quality of services related to maritime transport.*

Aims to:

- *to enable seamlessly and effortlessly interchange of information between all relevant stakeholders*
- *based on the EU directives and international regulations information exchange between businesses and administrations*
- *facilitate decision making and information exchange between different stakeholder groups*

Will support:

- *compliance to and enforcement of regulations*
- *proactive or remedial operations*
- *effective and coordinated controls and inspections*

e-Rules & e-Maritime Initiative

"e-Rules can offer the common language to support the information exchange and the interoperability"

Thank you ! !

danaos

Your Information Technology Partner