



LNG Port Facility Security

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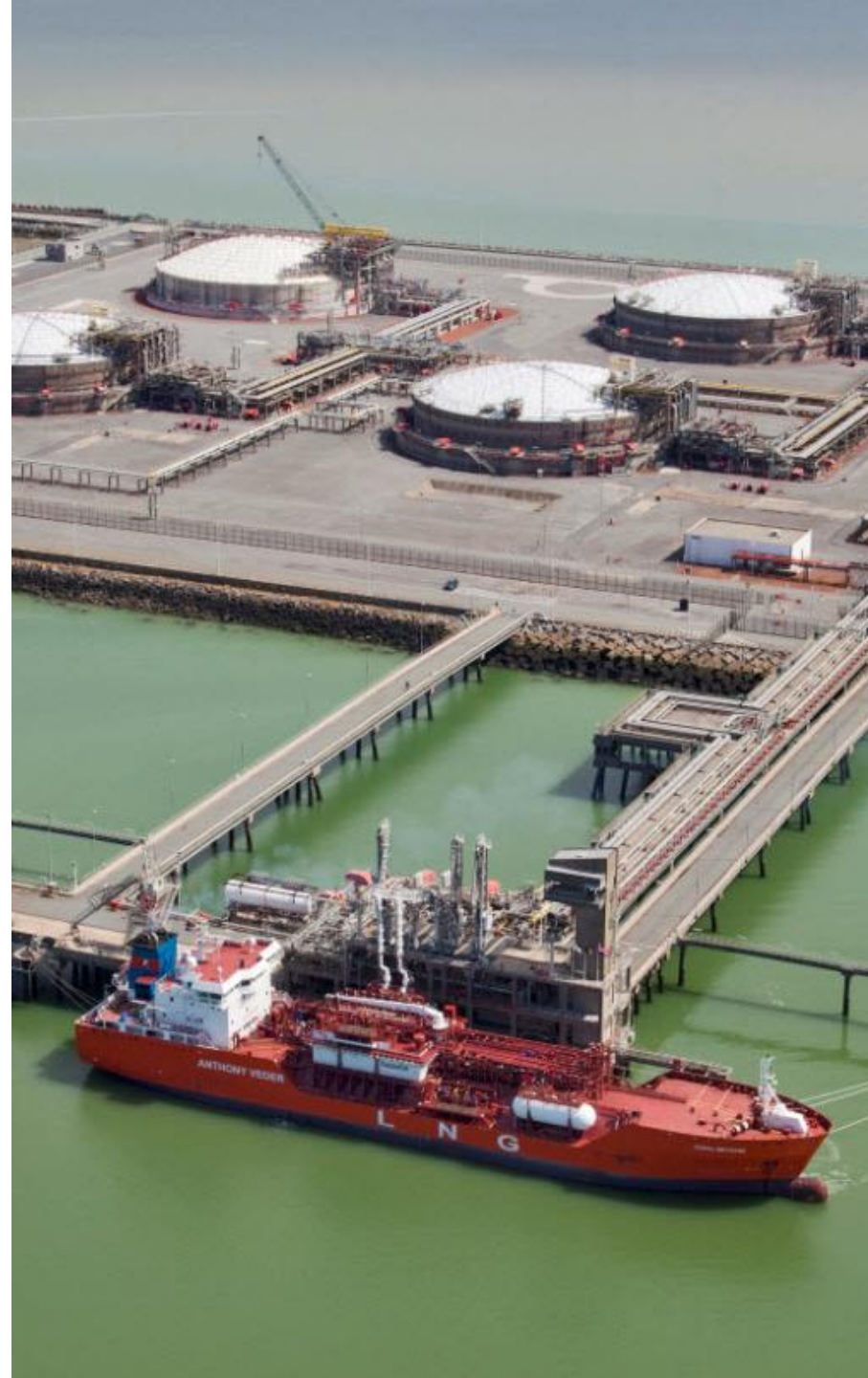


Outline

- The Challenge of Security for Ports
- Regulations
- Boots on the Ground!
- Transition to Technology
- Effective use of Technology
- The Bottom Line

Facility Security

- Complex Locations
 - Shore
 - Maritime
- What is secure enough?
 - USCG Regulation
 - Understanding Risk
 - Safety
 - COOP



USCG Regulations

- LNG has special requirements
 - USCG Policy Navigation & Vessel Inspection Circular
- Letter of Intent
 - Submitted by the developer
 - Submitted to USCG for any LNG facility



USCGC Regulations

- Waterway Suitability Assessment (WSA)
 - USCGC Sector / COTP
 - Area Maritime Security Committee
 - Safety & Security Assessment
 - Best practice to engage the community!



USCGC Regulations

- Security Zones
- Security Measures
 - Surveillance
 - Boats
 - Patrols
 - Navigation
 - Etc.



USCG Regulations

- USCG Letter of Recommendation
- WSA

The developer implements end-to-end solutions that meet the risk mitigation requirements of USCG.



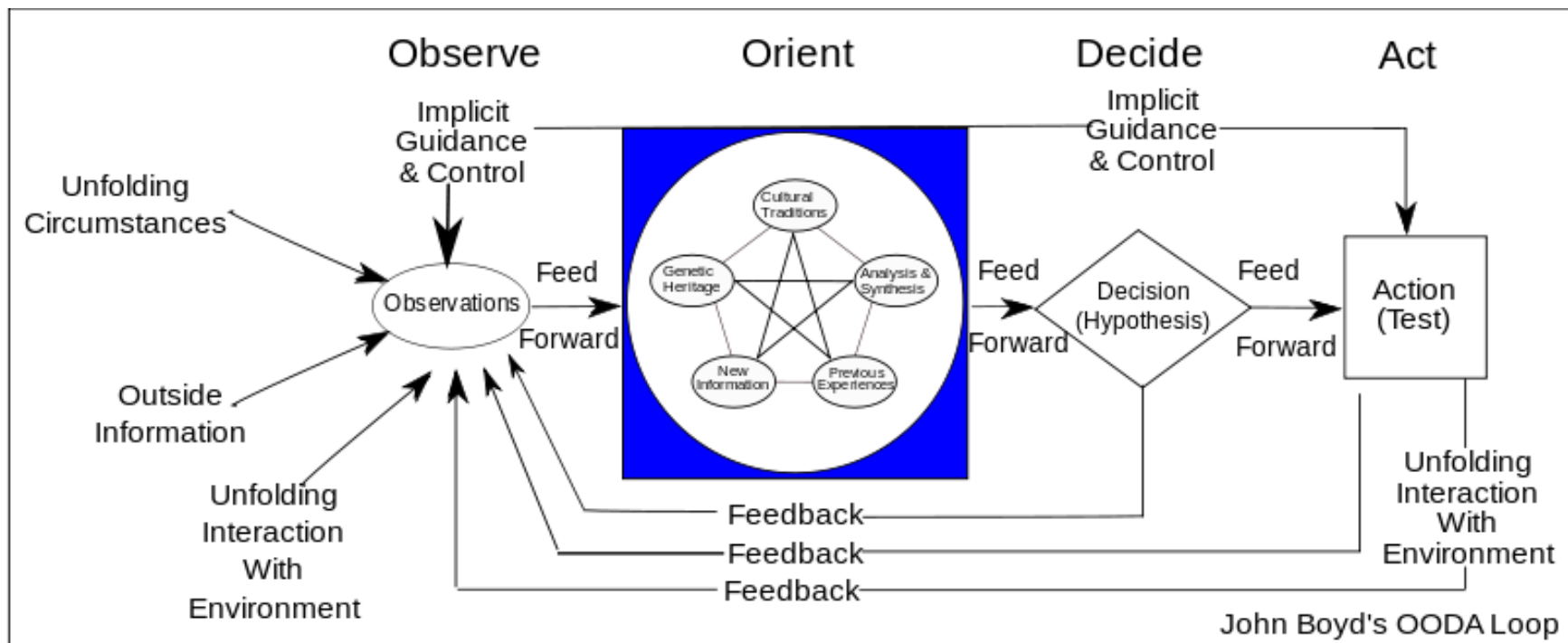
Boots on the Ground

- Watchstander capability is paramount
 - Command and Control
 - Situational Awareness
 - Decision Making



Boots on the Ground

OODA



Observation Feeds OODA

- Sensors
 - Video
 - RADAR
 - SONAR
 - Environmental
 - Cyber
- Systems
 - Common Operational Picture
 - Computer Aided Dispatch
 - Communications

Transition to Technology

Analog Solutions

Information Silos

Many Personnel

Physical Threats
Local Threats



Digital Solutions

Integrated Information

Few Personnel

Physical Threats
Digital Threats
Global Threats

Integrated Information

- Common Operational Picture
 - Single World View
 - Multiple sensors
 - Dispatch
 - Communications



Multiple Sensors

- Video
- RADAR
- SONAR
- Environmental
- Cyber

Communications

- Radio
- Telephone (mobile)
- Network
- Integrated Communications



Cyber Security

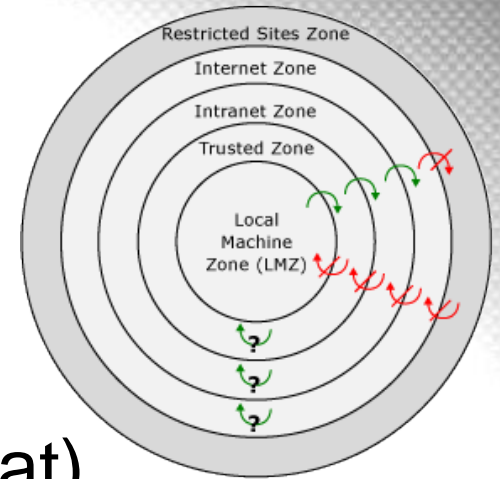
- Integrated systems increase capability
- Integrated systems utilize networks
- Integrated solutions bring new threats



Cyber Security

- Threats

- Social Engineering
- APT (Advanced Persistent Threat)
- Internal
- BYOD
- Cloud Security (your data is only as safe as your service provider)
- HTML5
- Botnets
- Targeted Malware



It all comes back to Boots on the Ground

- Watchstanders must execute OODA
 - Observe
 - Orient
 - Decide
 - Act
- Technology can:
 - Increase capability
 - Improved OODA loop
 - Increased observation
 - Provide ROI