



Unmanned Maritime Systems Update

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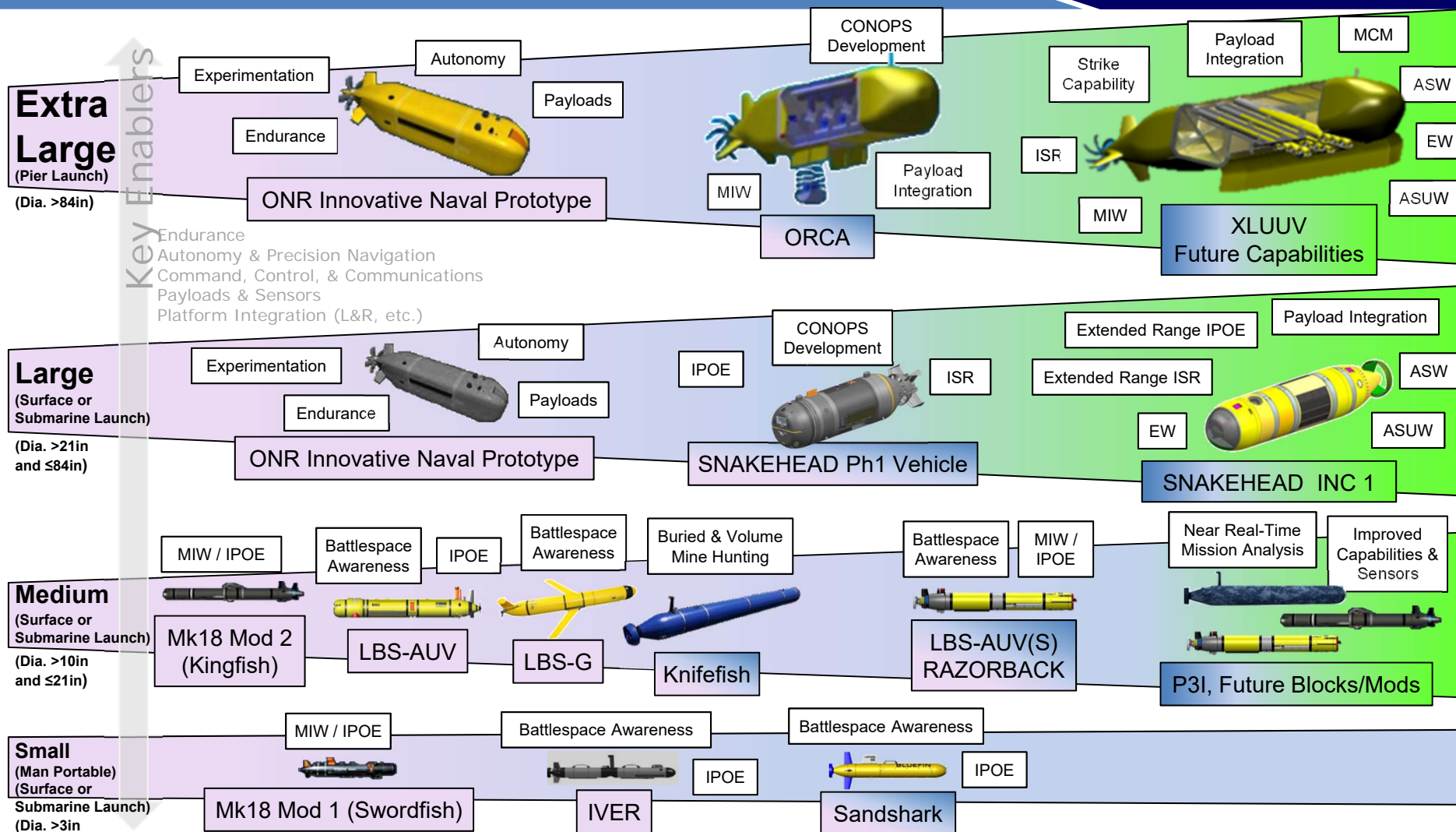


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UUV Systems Vision

Enhanced, Efficient Capabilities

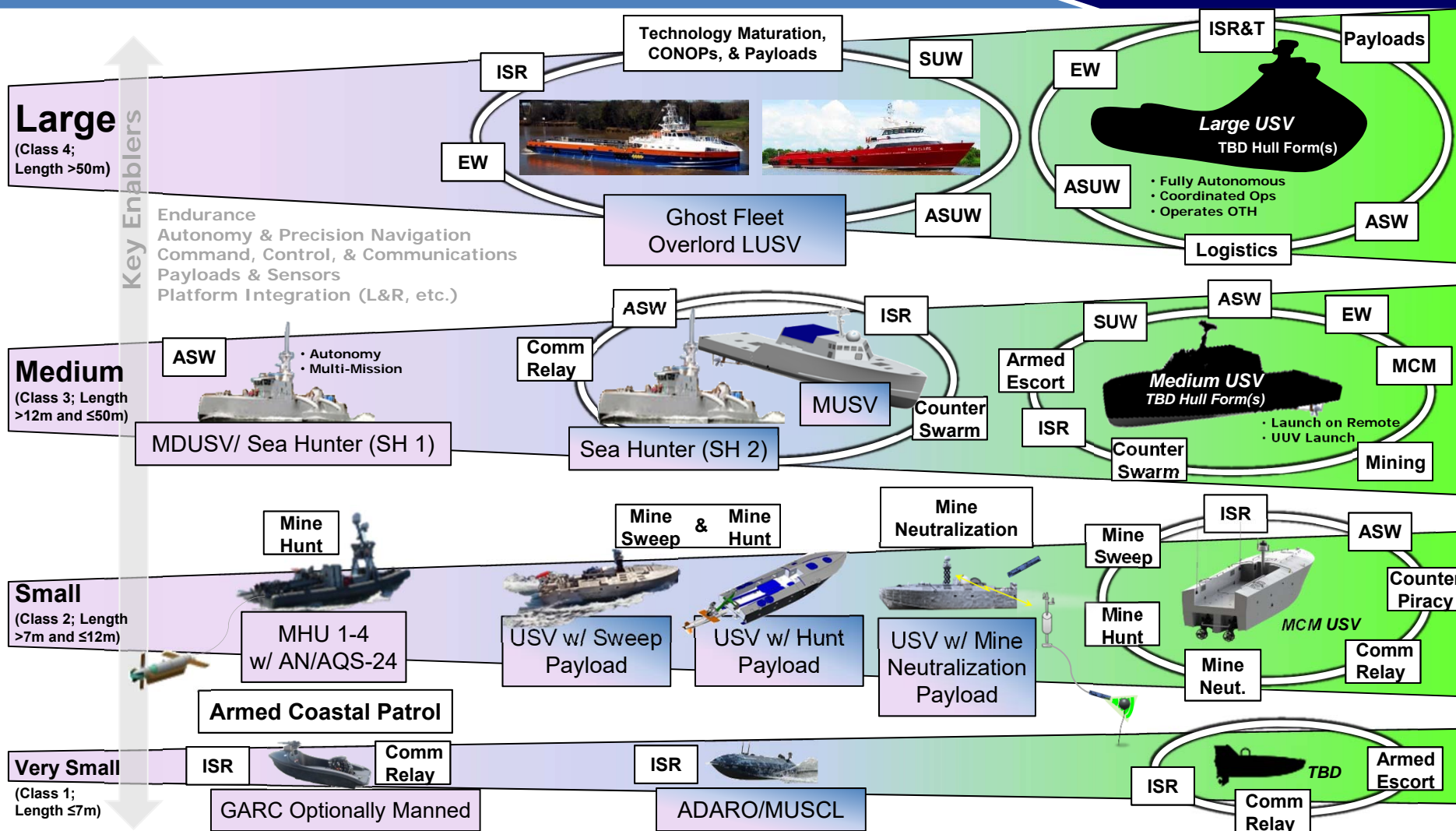


Efficient, Executable Progression of Capabilities through Various UUV Systems



USV Systems Vision

Enhanced, Efficient Capabilities



Efficient, Executable Progression of Capabilities onto Common USV Hull Forms



Core Technology Enablers

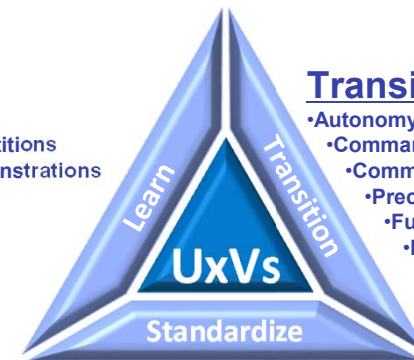
- **Endurance**
 - Improved reliability & safety
 - Increased endurance & range
 - Support additional & more capable sensors
- **Autonomy & Precision Navigation**
 - Increased levels of autonomy & decision making
 - Increased accuracy & reliability
- **Command, Control, and Communications**
 - Safely, autonomously & reliably launch and recover
 - Standard Command, Control, and Communications
- **Payloads & Sensors**
 - Increased capacity for sensors and payloads
 - Increased capability
- **Platform Integration**
 - Increased capability to launch and recover
 - Increased coordination with host platforms

Learn

- Fleet Exercises
- Industry Competitions
- Capability Demonstrations

Transition

- Autonomy
- Command and Control
- Communications
- Precision Navigation
- Future Payloads
- Endurance



Standardize

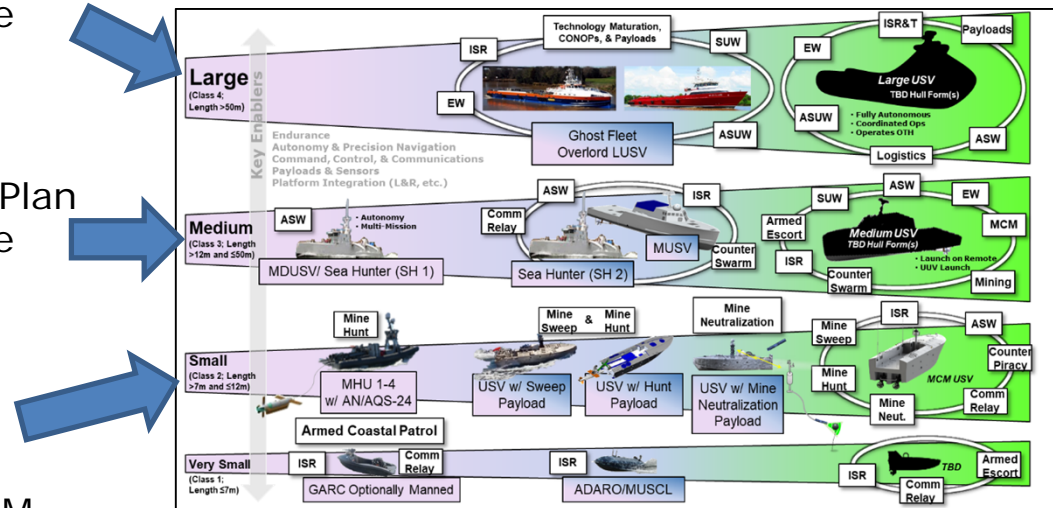
- Common Autonomy Architectures
- Common C2
- Payload Integration Group
- Li Ion Battery Certifications

Increasing the Maturity of Critical Technologies is Integral to Success



USV Platforms

- **Large USV (LUSV)**
 - Part of Surface Capability Evolution Plan and Future Surface Combatant Force
 - Provides distributed fires
- **Medium USV (MUSV)**
 - Part of Surface Capability Evolution Plan and Future Surface Combatant Force
 - Provides distributed sensing and communications relays
- **Mine Countermeasures USV (MCM USV)**
 - Modular USV to support Modular MCM Force from LCS or Vessel of Opportunity
 - Sweep (UISS configuration)
 - Hunt (incorporates towed sonar)
 - Neutralize (incorporates neutralizer round)





MCM USV

