THE MARRIAGE OF COMMERCIAL AND MILITARY UNDERWATER SYSTEMS FOR THE GOOD OF DEFENCE

Chris Lade UDT May 2019

AIM

- In many respects the commercial world has overtaken the military in its work in the underwater environment.
- Commercial Demands on an Underwater System are very similar to the Military.
- Two examples firstly of how advanced commercial operations are and then how a commercial concept can translate into a military solution.

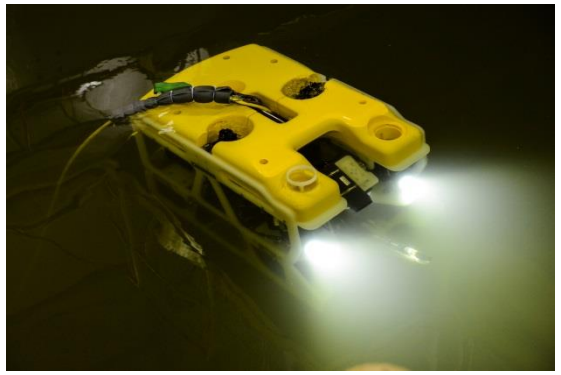
COMMERCIAL **VISION**

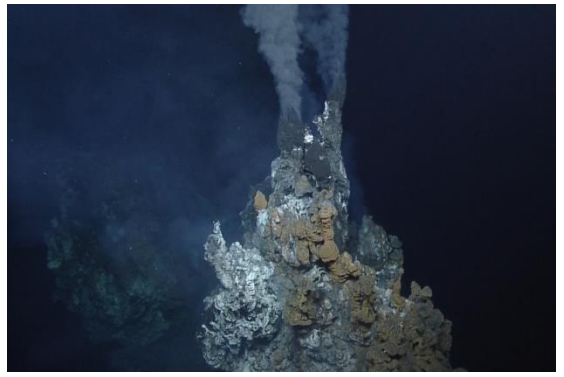
1. ROV’s hosted from surface (Platforms, FPSO, USV) - operator and related personnel located onshore. Vehicles located on seabed for extended periods

2. Tetherless ROV/AUV (hybrids) systems capable of performing all inspection / monitoring tasks (with and without man in the loop), Further steps to increase capability to include routine light intervention.

3. Subsea resident autonomous vehicles capable of routine field support tasks

FIELD PROVEN TECHNOLOGY





THE DIFFERENCES

- Commercially 24/7 operations essential
- Operator/Maintainers have one role ROV pilot
- The Range of Commercial and Military Underwater Systems
- Depth
- Commercially little requirement for training
- Infrequent use by military
- Multifunctional roles of military operators
- Commercial world driven by profit and reduction in cost is key
- The Commercial world has the choice to opt out

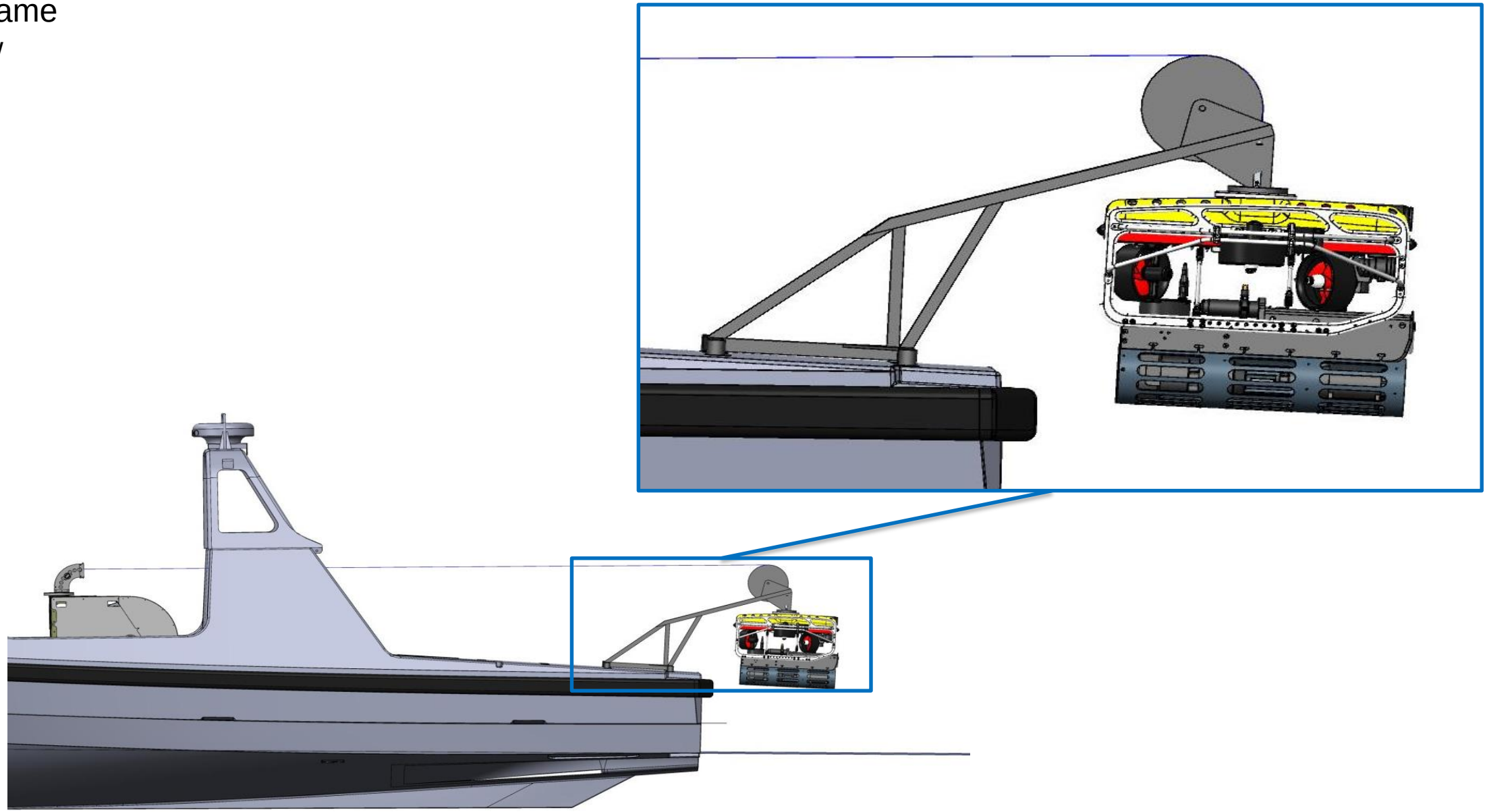
THE SIMILARITIES

- Efficiency and Effectiveness profit and operational tempo are closely linked
- Maintenance should be simple and defect rectification straightforward
- Resilience, systems must be able to operate from sub-zero temperatures to 40C in the Arabian Gulf
- Navigational Accuracy

Falcon
TEST
SEAEYE
12 71

Fixed Frame

Side View




SAAB
Seaeye
SeaOwl-XTi

How Operator – Manufacturer Interaction can work