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THINKING (A) TOMORROW'S SUBMARINE TO FACE
OPERATIONAL CHALLENGES IN A CONSTRAINED
ENVIRONMENT

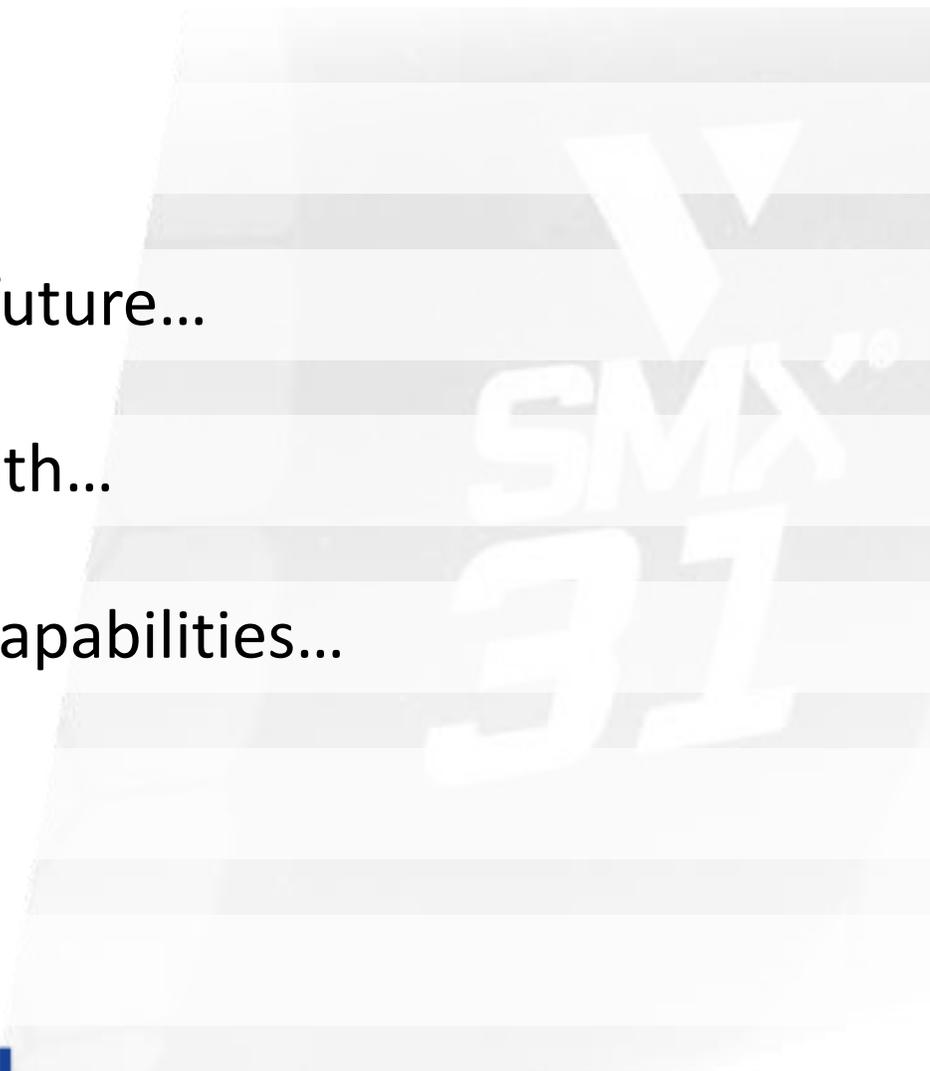
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THE ELECTRIC



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THINKING (A) TOMORROW'S SUBMARINE TO FACE OPERATIONAL CHALLENGES IN A CONSTRAINED ENVIRONMENT

- Here is the point.
- Operational constraints in the future...
- ...mean seeking ultimate stealth...
- ...and enhanced operational capabilities...
- ...in a smart sub.
- This is how SMX 31 orients R&D



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PIONEERING

Objectives may not shift.

Environment does.

And threats change.



- Introduction
- Operational constraints
- Ultimate stealth...
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- Conclusion

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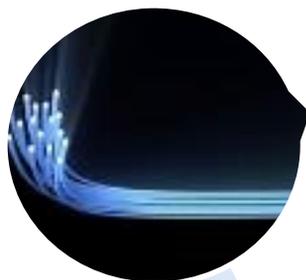
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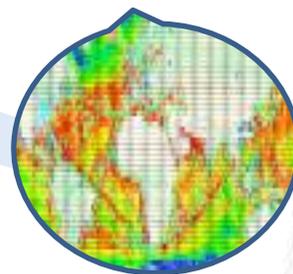
TOMORROW.

PIONEERING

Subsea



Demographics



Traffic

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ONE OBJECTIVE. 3 PILLARS.

Sovereignty

Informational superiority

Superiority at engagement

Resilience at sea

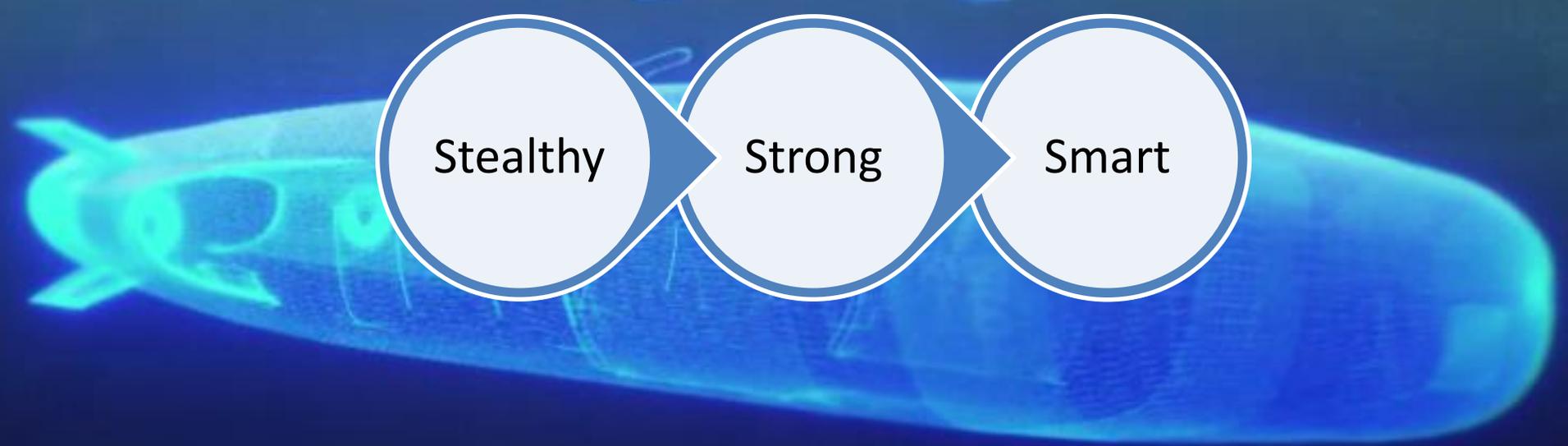
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TOMORROW

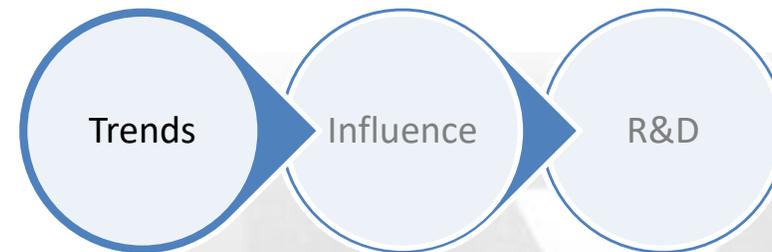


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STEALTHY



Extremely low &
monitored
signatures

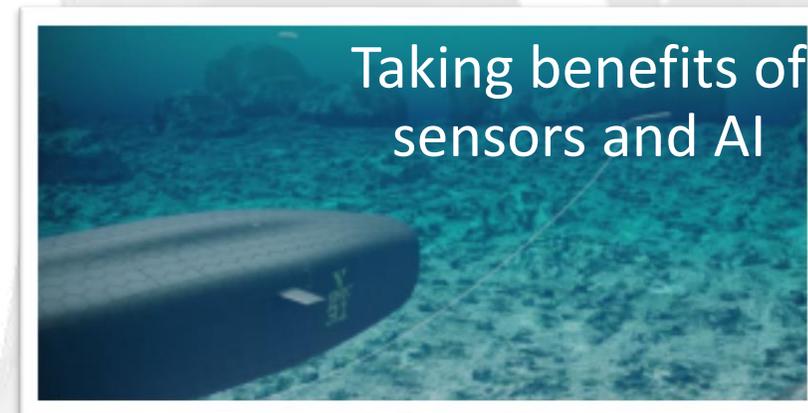
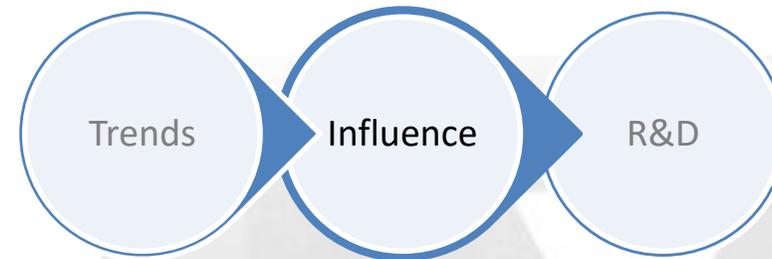
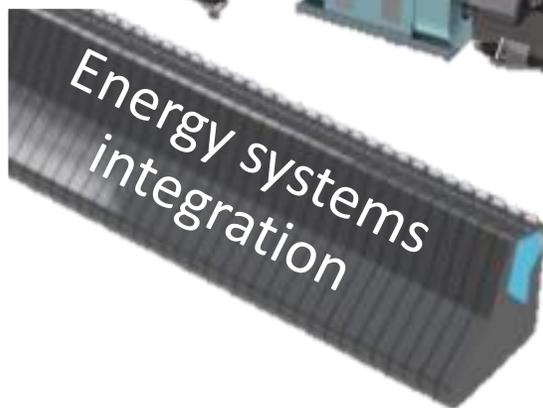
Submerged
endurance

To be one with it's
environment

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STEALTHY



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STEALTHY



- **Endurance and mobility thanks to powerful energy capacities**

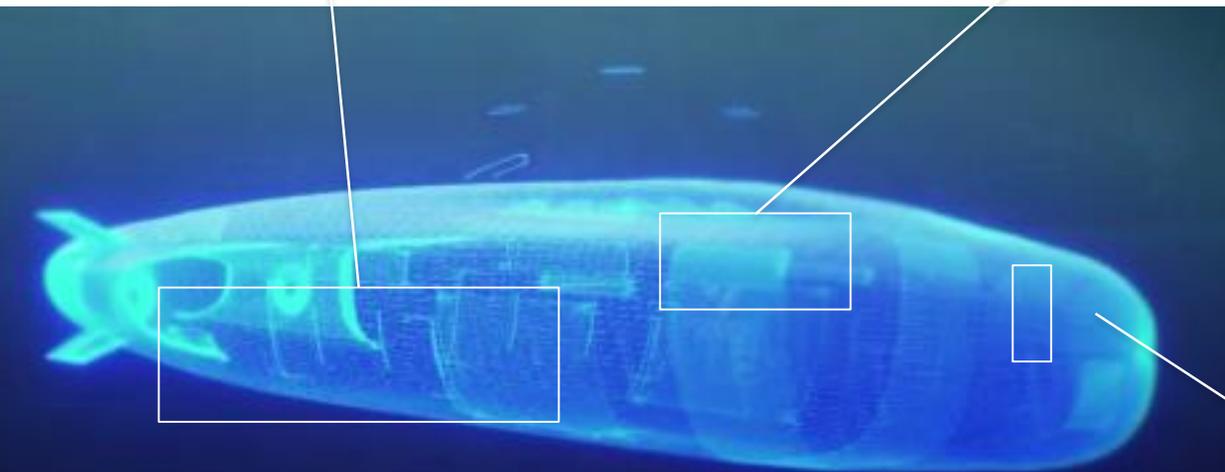
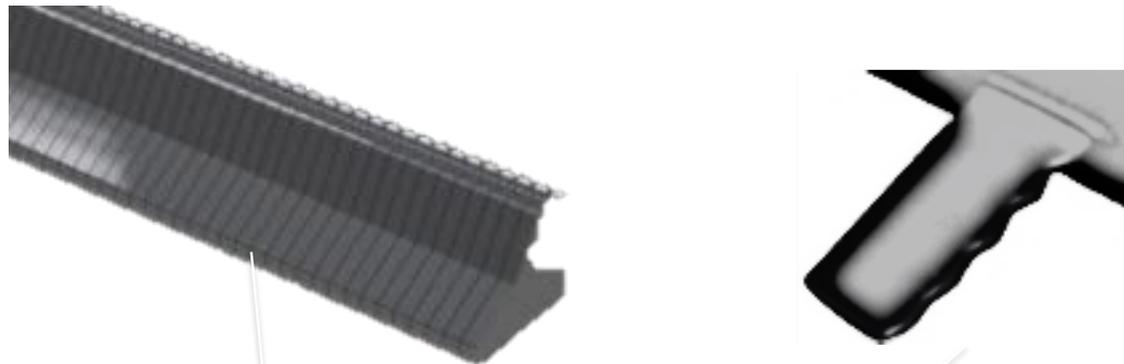
- Super high efficiency batteries
- Gas turbines for fast charging
- Smart energy management system

- **Extremely low signatures**

- Shapes inspired by biomimicry
- Hydrodynamic design
- Multifunction skin covering

- **To be one with it's environment**

- Monitored signatures
- Use of AI to maximize stealth



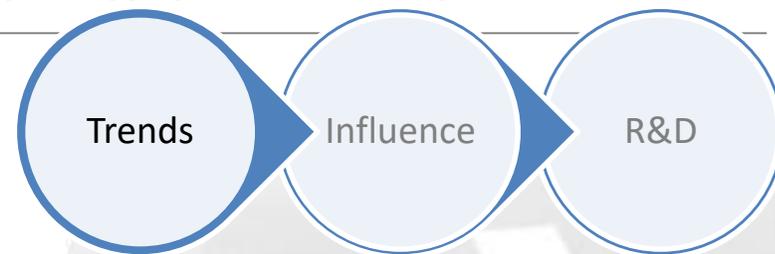
POWER AT SEA

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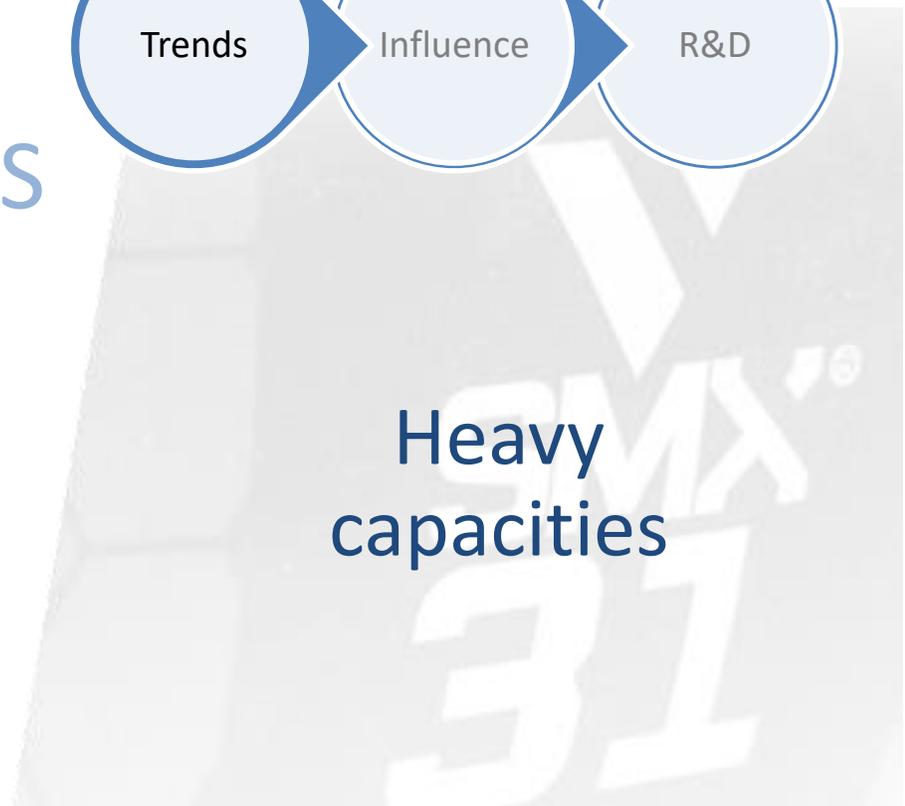
Strong ▶ ENHANCED CAPABILITIES



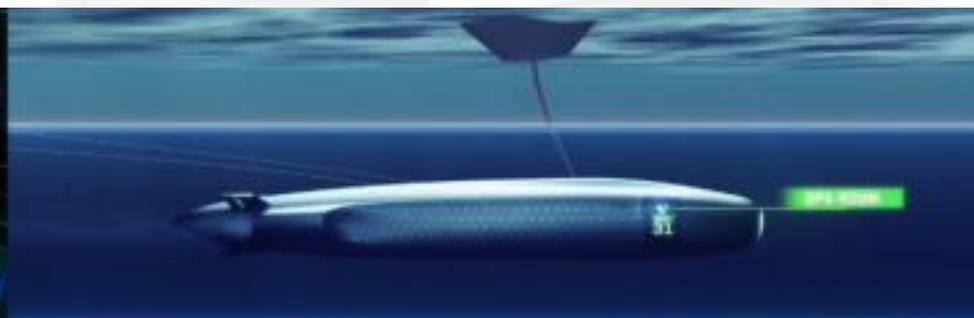
Extended

Evolutionary

Heavy capacities



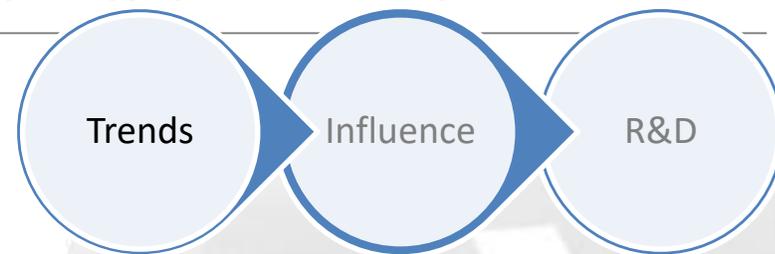
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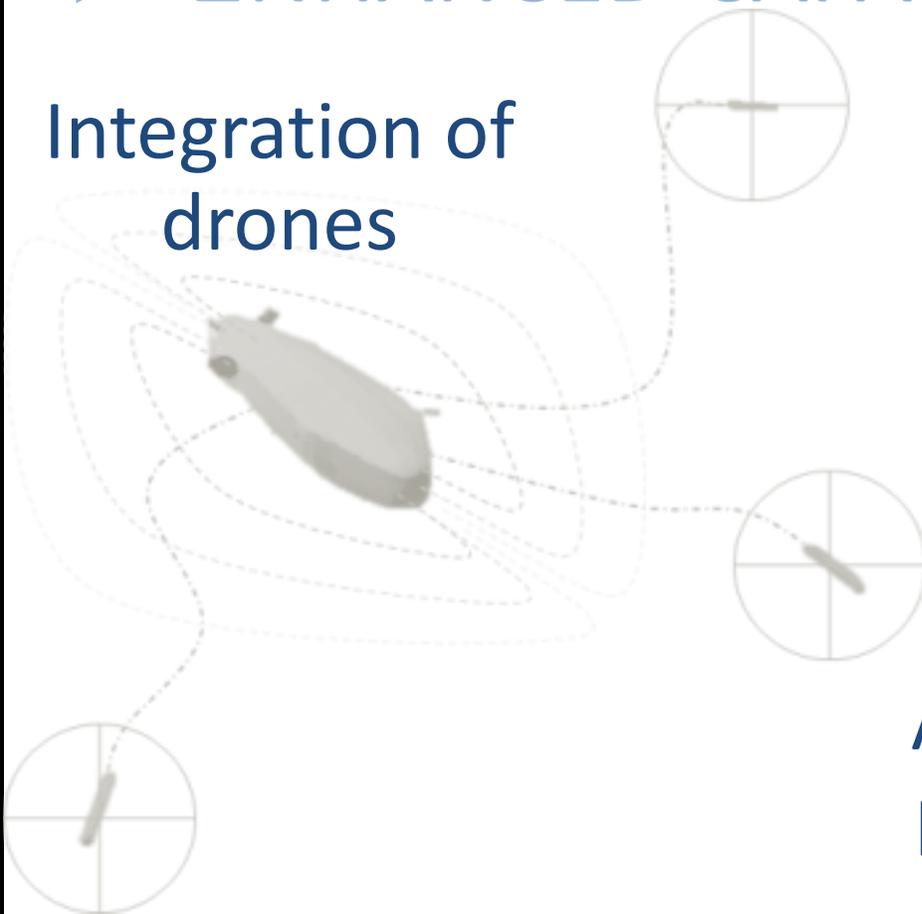
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Strong ▶ ENHANCED CAPABILITIES



Integration of
drones



Think over
propulsion

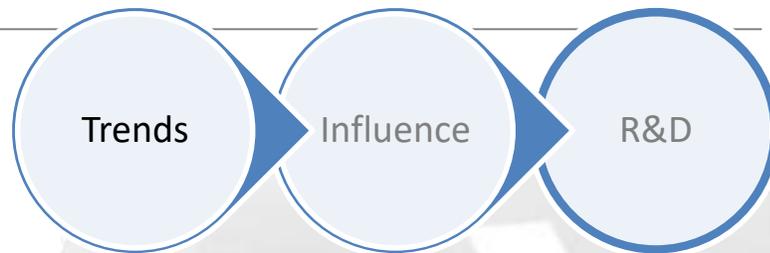


Adaptive
platform

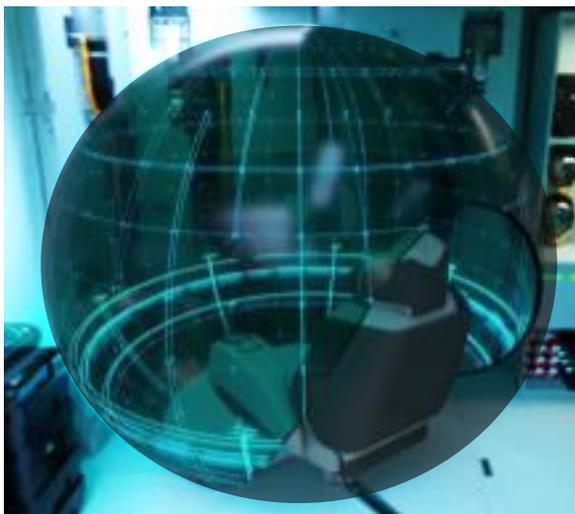
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Strong ▶ ENHANCED CAPABILITIES



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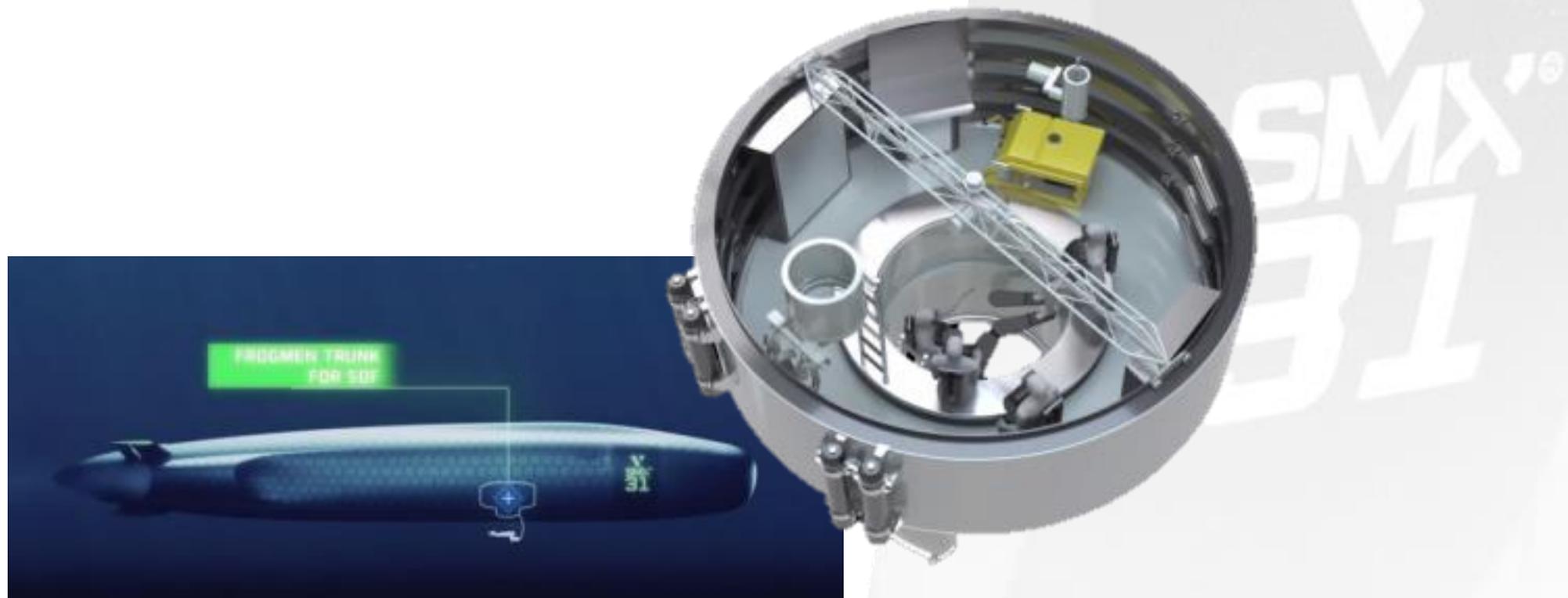
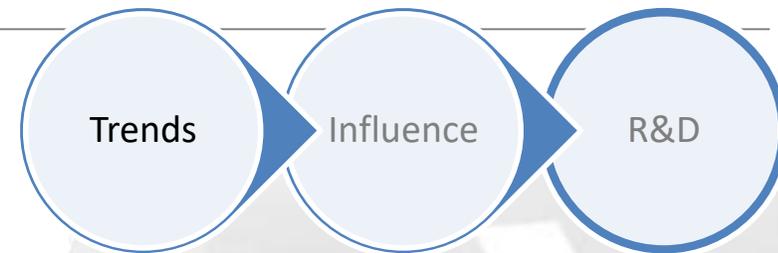
UDT
Undersea Defence Technology
13-15 May 2019
Stockholmsmässan, Sweden

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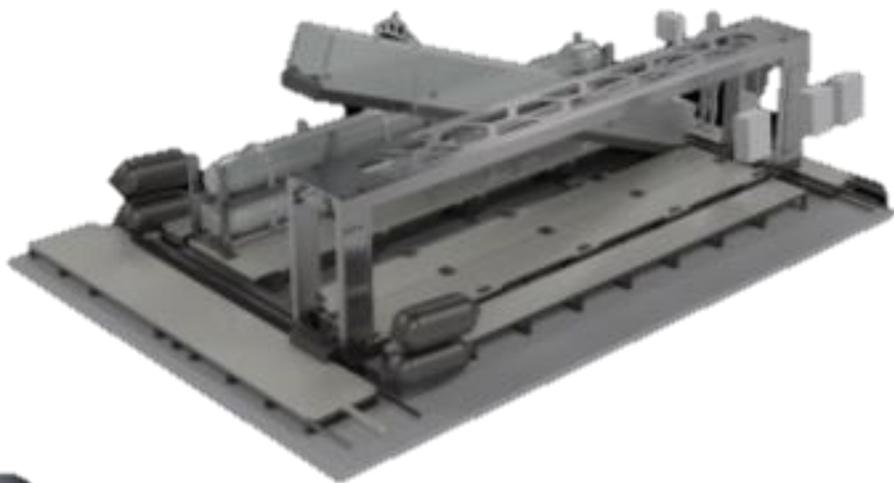
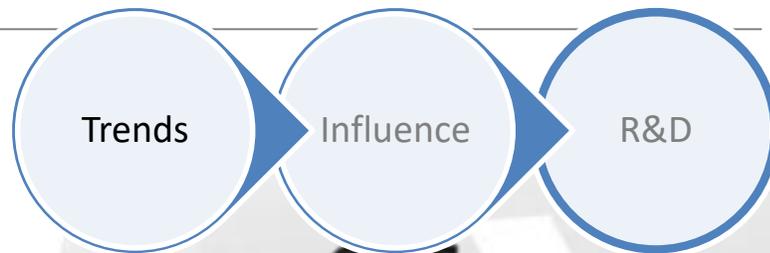


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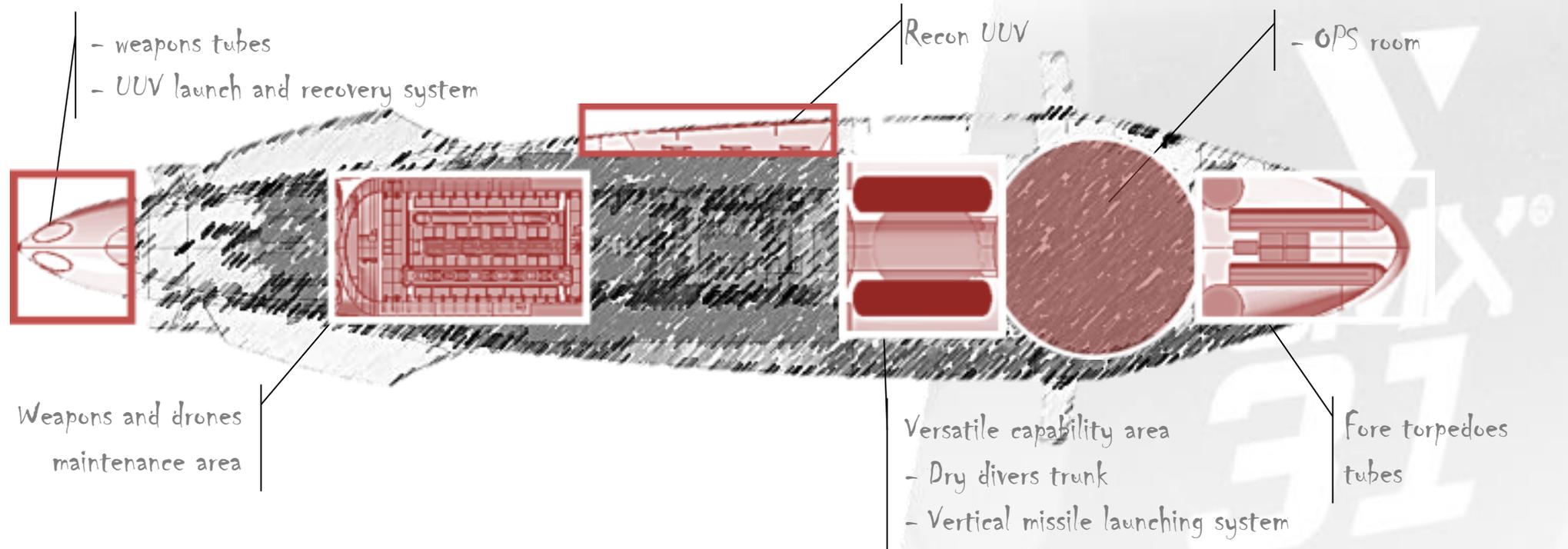


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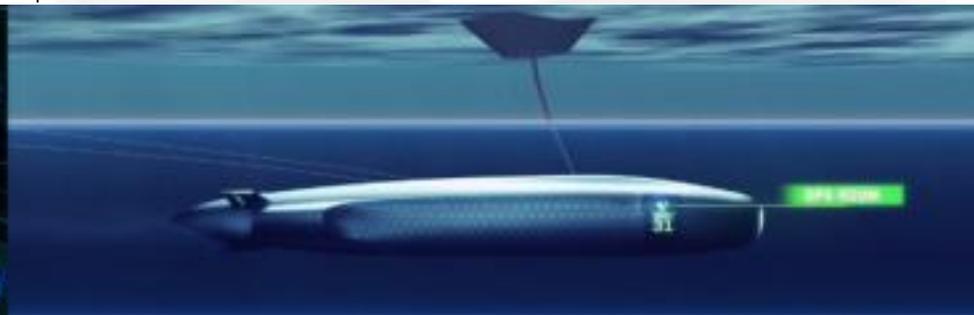
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ENHANCED CAPABILITIES

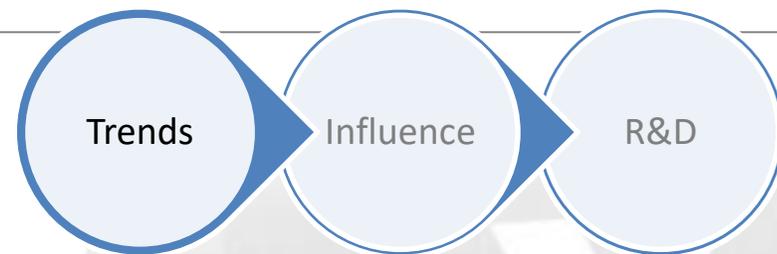


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Remote
sensors

Artificial
intelligence

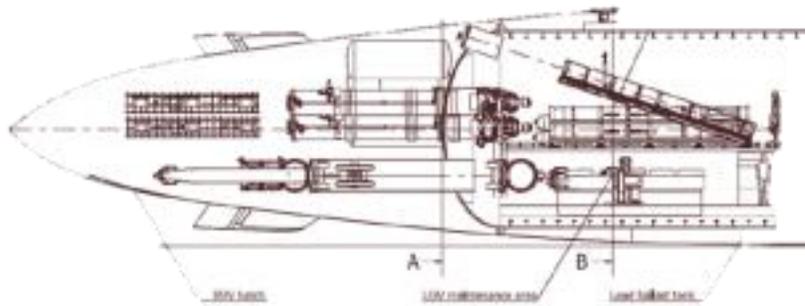
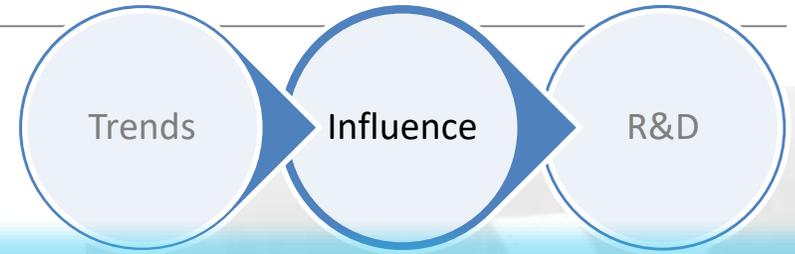
Cognitive
comfort



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Effectors
integration

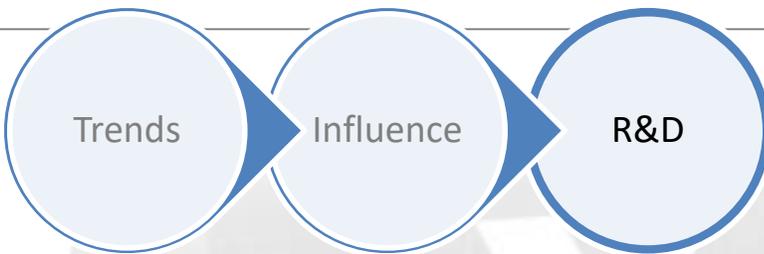
Control
Room



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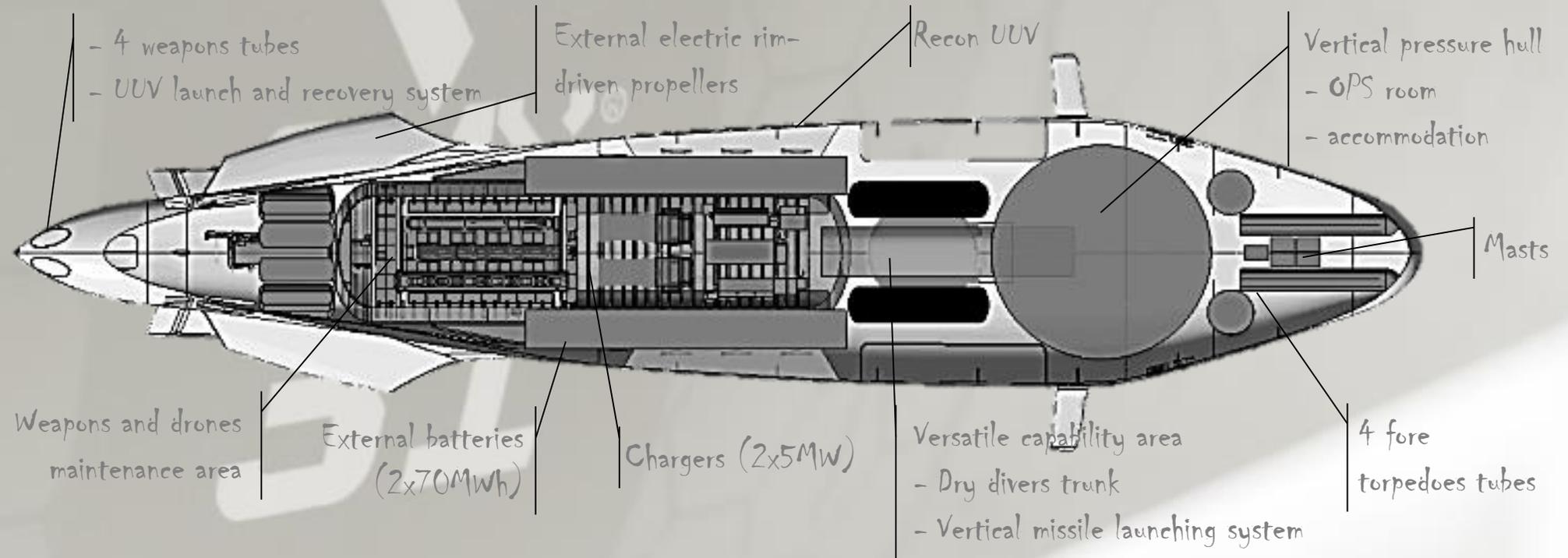
- Signatures monitoring
- Navigation assistance
- UxV integration
- Future control rooms



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Arrangement & characteristics




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NAVAL
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POWER AT SEA