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AUSTRALIA | USA | UK | EUROPE | ASIA

ABOUT US



A diversified global group of companies providing whole of life solutions to the maritime, military, infrastructure and resource sectors.

Established in 1977, Birdon is a proud and successful family-owned business dedicated to leadership within our chosen industry sectors.

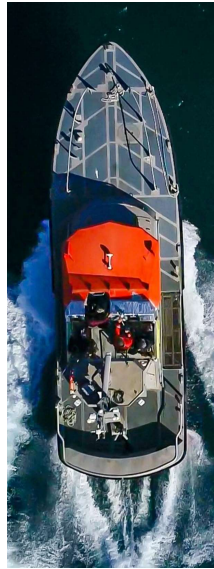
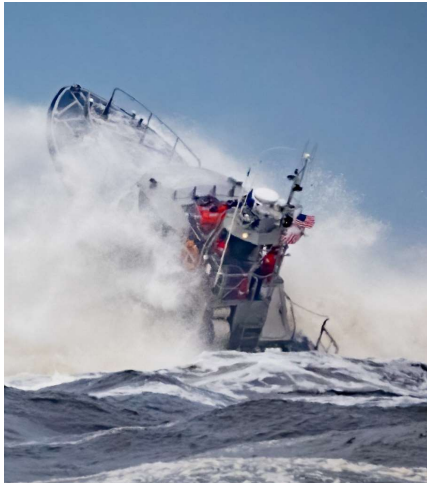




birdon 
make it happen

Bridge Erection Boat (BEB)





US Coast Guard MLB Program

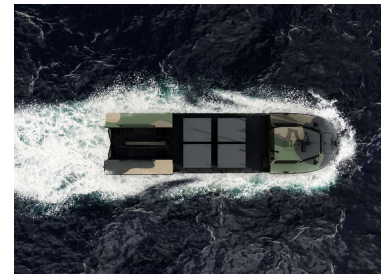


US Coast Guard WCC Program



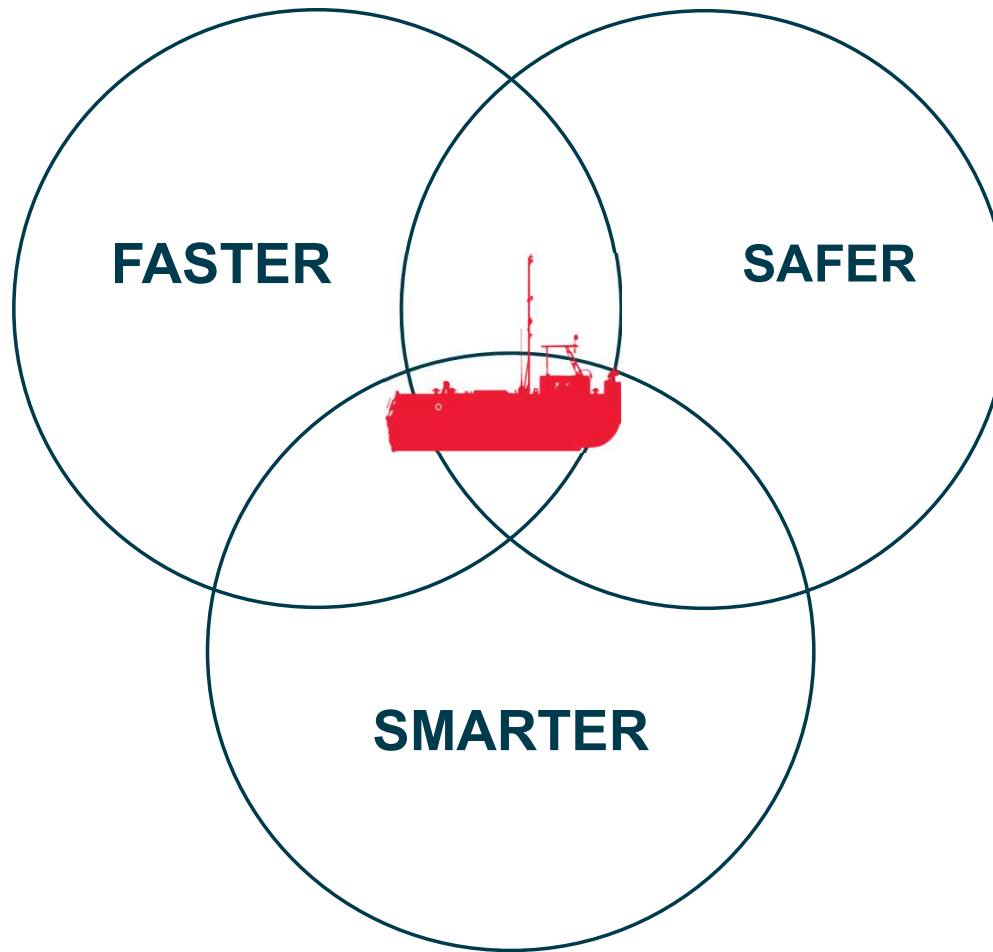


LAND 8710
LMV-M, LMV-H, LMV-A



- Analysis of current NATO wet gap crossing operational efficiency
- Integration of commercial systems into military bridging applications
- Magnetic capture technology integration for hands free ferrying and bridging
- Autonomy integration
- Variable scope WGC systems

Crossing Wet Gaps.. Faster, Safer, Smarter!



PROCESS

- FASTER
- SAFER
- SMARTER

DEPLOYMENT

LAUNCH

COUPLING

CROSSING

RECOVERY

OPERATIONAL READINESS

INTEROPERABILITY

PERSONNEL REQ.

ADDITIONAL ASSET REQ.



PROCESS

- FASTER
- SAFER
- SMARTER



PROCESS

- FASTER
- SAFER
- SMARTER

DEPLOYMENT

ENVIRONMENT

LAUNCH

WATER HAZARDS

COUPLING

WATER SPEED

CROSSING

AVAILABLE LIGHT

RECOVERY

EQUIPMENT EFFICIENCY

PERSONNEL REQ.

CAPABILITY LEVEL



PROCESS

- FASTER
- SAFER
- SMARTER



PROCESS

- FASTER
- SAFER
- SMARTER



DEPLOYMENT

ENVIRONMENT

LAUNCH

BANK HEIGHTS

COUPLING

WATER DEPTH

WATER SPEED

CROSSING

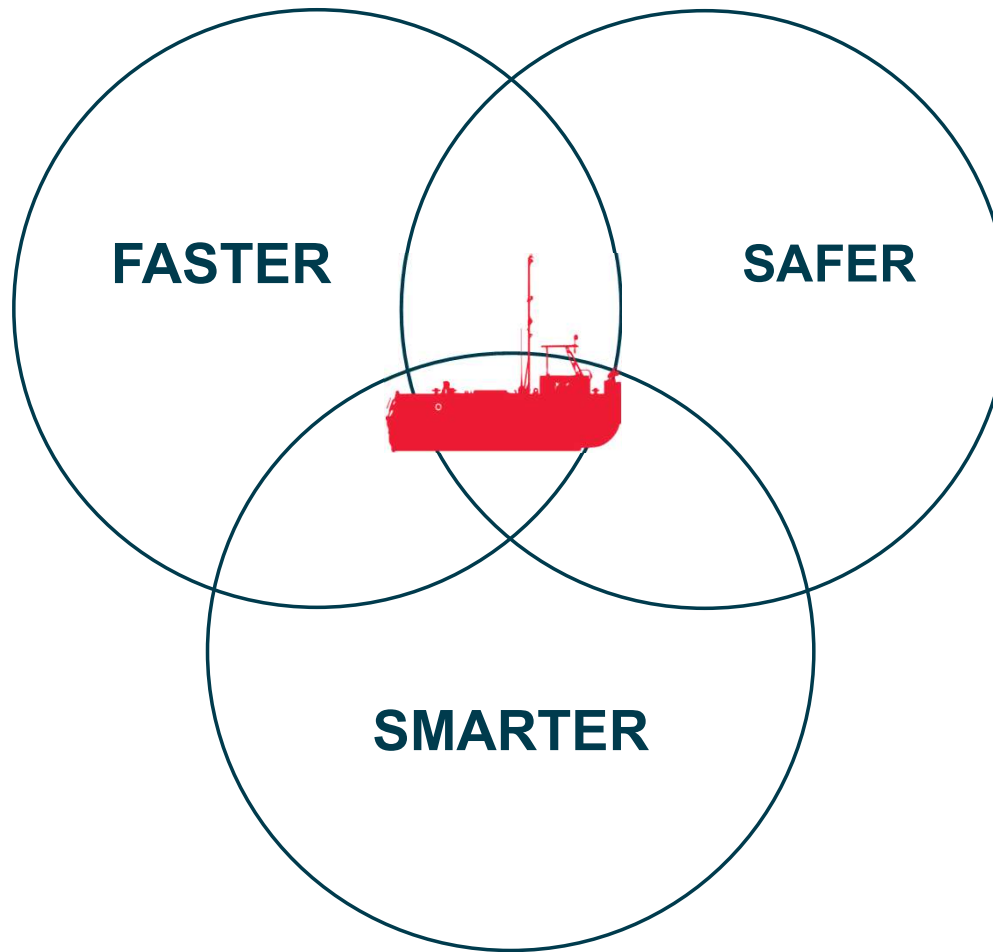
PERSONNEL REQ.

RECOVERY

PROTECTION LEVEL AND SECURITY



Crossing Wet Gaps.. Faster, Safer, Smarter!



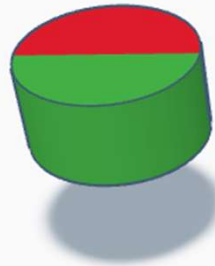
TECHNOLOGY INTEGRATION



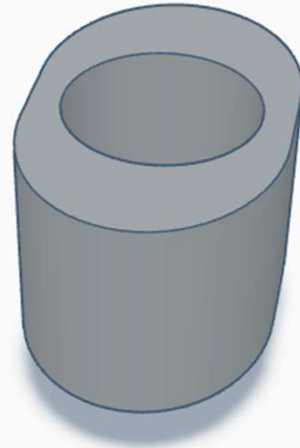
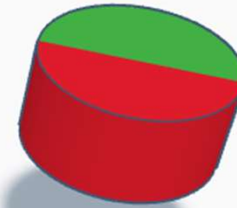
Remote Bridge Connection System

- Switchable Magnetic Technology
- Proven in Industry
- Patented Shallow Field Technology
- Failsafe to last set configuration (on or off)
- Power required only to swap configuration
- Can be operated by a local switch or remote switch for autonomous/remote control ops
- Manual override
- Improved operator safety
- Operational testing started in 2023

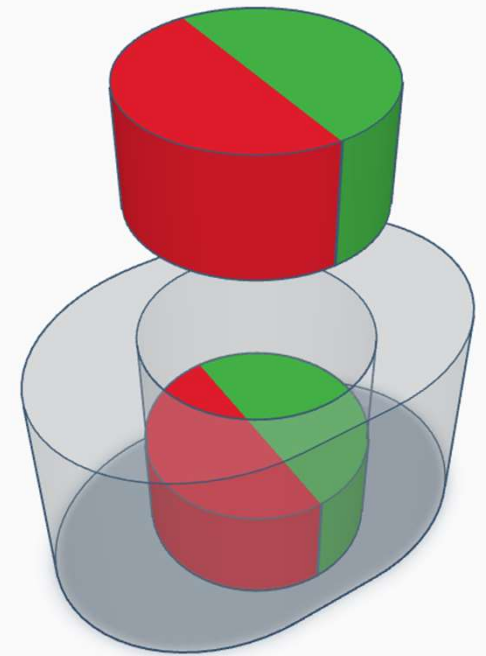
MAGNET I



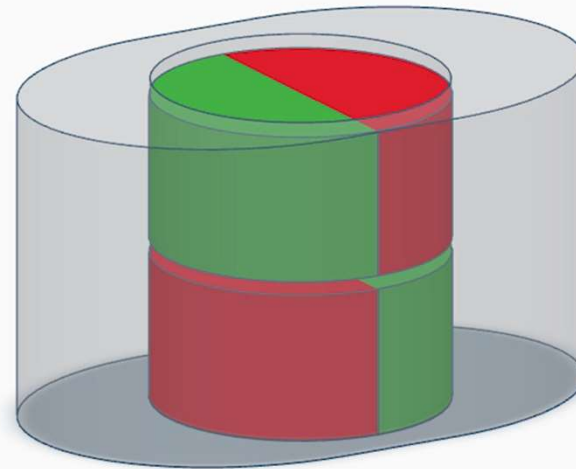
MAGNET II



FERROMAGNETIC
HOUSING

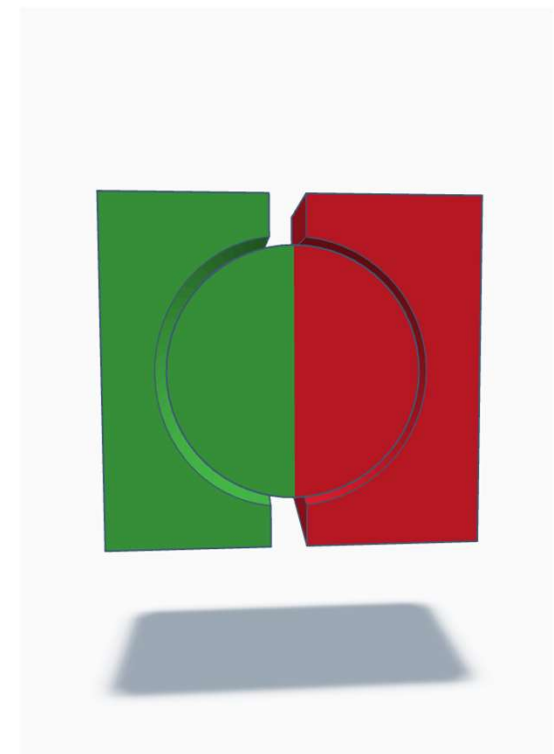
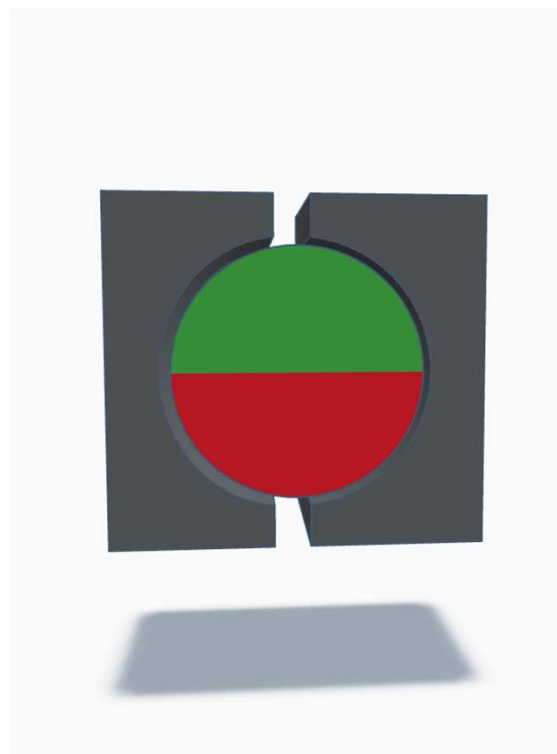


Rotating one magnet with respect to the other optimizes or collapses the magnetic field



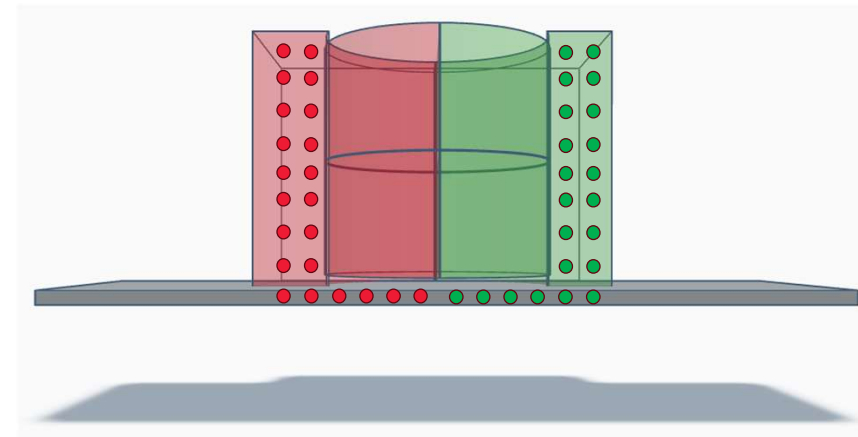
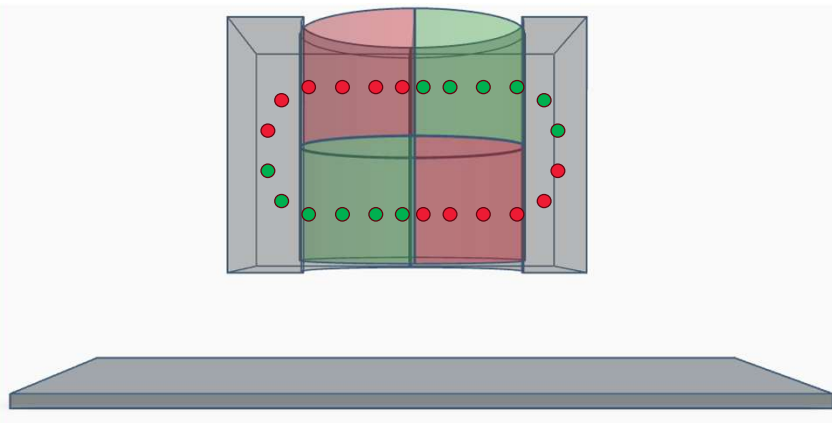
OLD TECHNOLOGY – PASSIVE SHUNTING

- HEAVY CONSTRUCTION
- POOR MAGNETIC FIELD
- DOESN'T FULLY TURN OFF
- DIFFICULT TO ACTUATE
- RESIDUAL FIELD ATTRACT PERMANENT “DIRT”

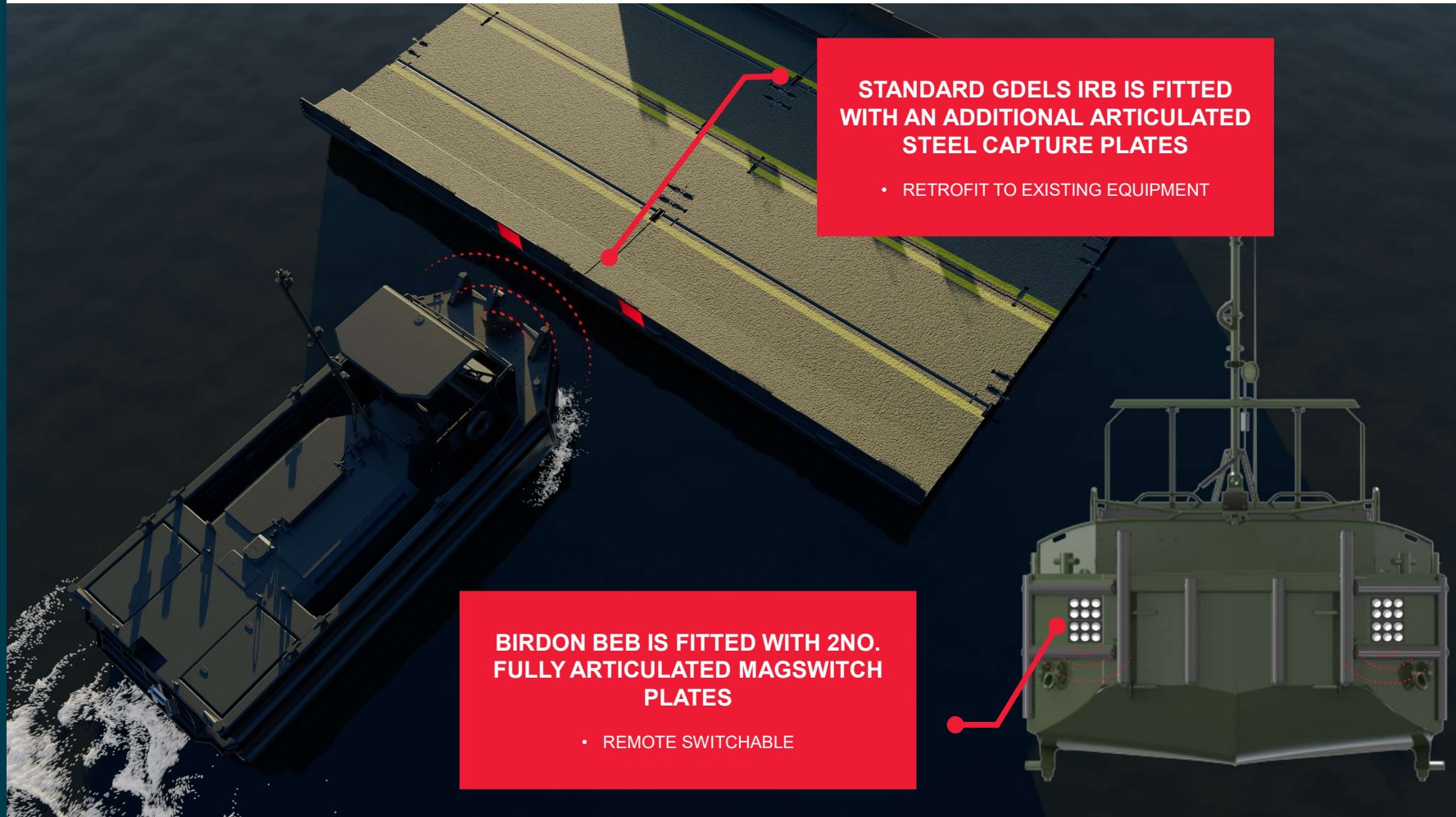


NEW TECHNOLOGY – ACTIVE SHUNTING

- 50%+ LIGHTER
- CONTROLLED MAGNETIC FIELD
- EASILY ACTUATED
- SHORT FIELD CAPABILITY
- BETTER HOLD ON THIN & COATED MATERIAL
- CAN BE MECHANICALLY ACTUATED
- TURNS OFF COMPLETELY FOR EASILY CLEANING



BRIDGING INTEGRATION



STANDARD GDELS IRB IS FITTED WITH AN ADDITIONAL ARTICULATED STEEL CAPTURE PLATES

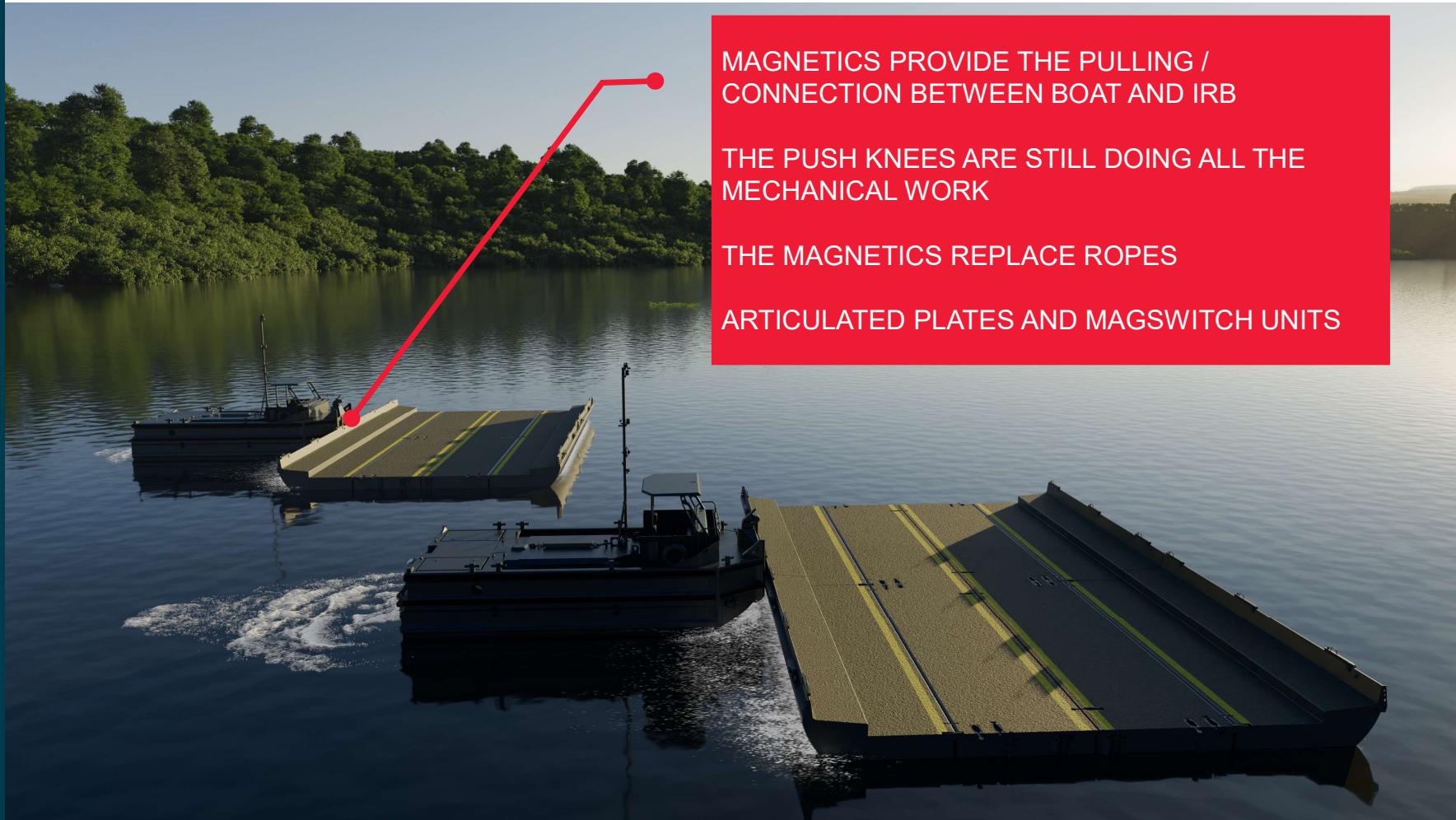
- RETROFIT TO EXISTING EQUIPMENT

BIRDON BEB IS FITTED WITH 2NO. FULLY ARTICULATED MAGSWITCH PLATES

- REMOTE SWITCHABLE



BRIDGING INTEGRATION



MAGNETICS PROVIDE THE PULLING / CONNECTION BETWEEN BOAT AND IRB

THE PUSH KNEES ARE STILL DOING ALL THE MECHANICAL WORK

THE MAGNETICS REPLACE ROPES

ARTICULATED PLATES AND MAGSWITCH UNITS

BRIDGING INTEGRATION

MAGSWITCH

MAGNETICS DESIGNED TO TOW 3no. IRB UP STREAM IN 2.5M/S CURRENT



2.5M/S FLOW

ADVANCED CONTROLS

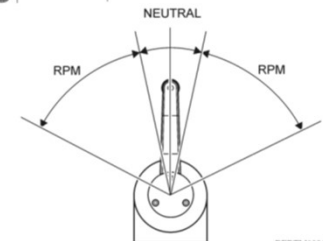
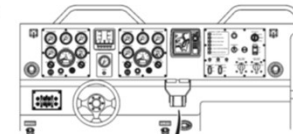
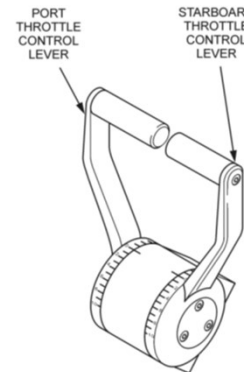
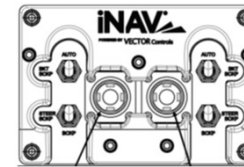


NAMJet's Intelligent Navigation & Control System called iNAV is a state of the art, fully integrated electronic control system.

The BEB can be configured with the basic system iNAV system to control engine throttles, transmission, waterjet bucket and steering.

Basic BEB iNAV system includes:

- Electronic E-Helm and Dual Thrust Levers
- Backup control panel
- Precision control and simplified docking
- Decreases learning curve for new operators
- Increased efficiency reduces fuel burn and increases range
- Reduced mechanical wear on engines, gearboxes, and jets



BEBTM1096

ADVANCED CONTROLS

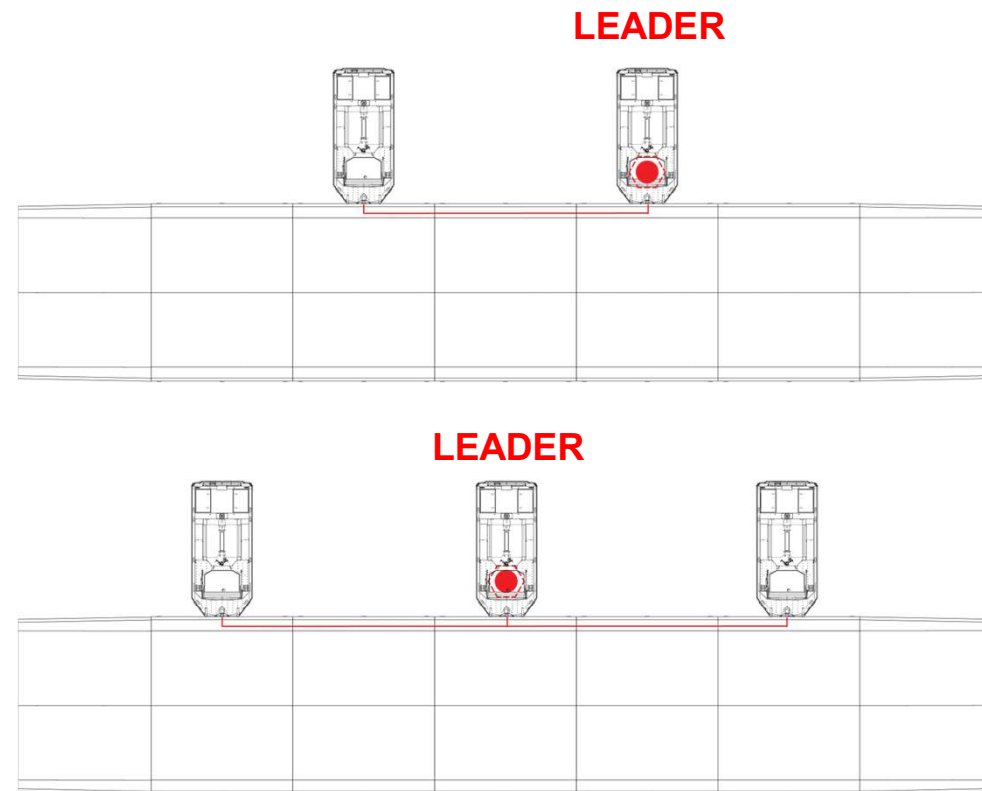
iNAV AUTONOMY



ADVANCED CONTROLS

Follow Me Mode

- Multiple vessels controlled by a single operator
- Wired or wireless connection options available
- Master vessel controls, daughter vessel(s) mirror control
- Reduces vessel operators in theatre
- Increases operational efficiency
 - Reduced fuel burn
 - Increases ferrying accuracy and speed
- Reduces risk of communication error
- Reduces operator learning curve



ADVANCED CONTROLS

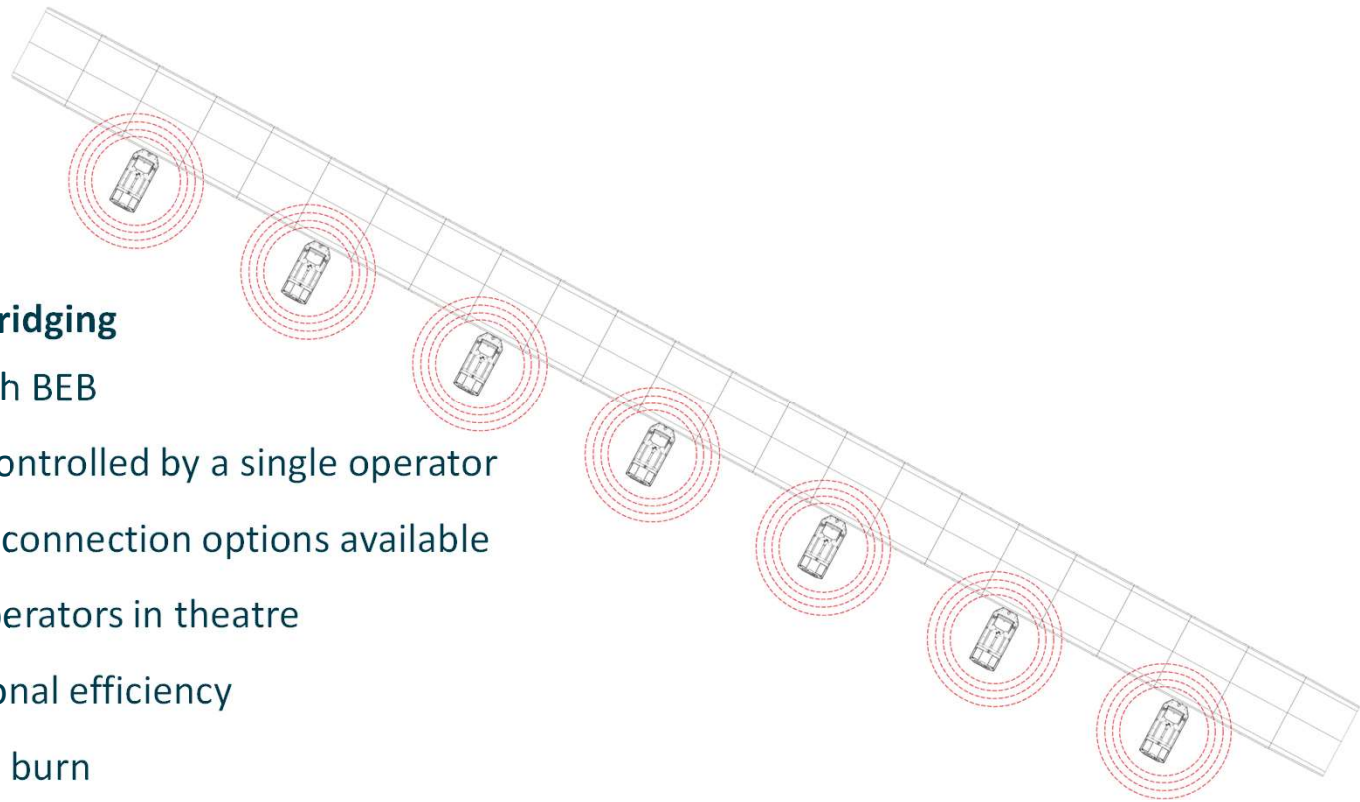


ADVANCED CONTROLS

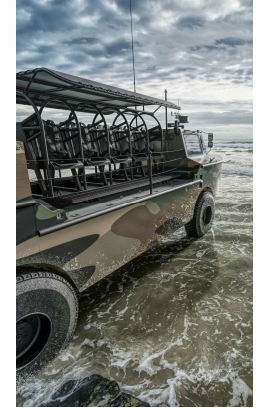
- Accommodating interoperability and varying requirements in WWGC solutions
- Supporting lifetime operations and easing the burden for engineers
- 'Future proofing' bridging products

Semi Autonomous Bridging

- DP System for each BEB
- Multiple vessels controlled by a single operator
- Wired or wireless connection options available
- Reduces vessel operators in theatre
- Increases operational efficiency
 - Reduced fuel burn
 - Increases ferrying accuracy and speed
- Reduces risk of communication error
- Reduces operator learning curve

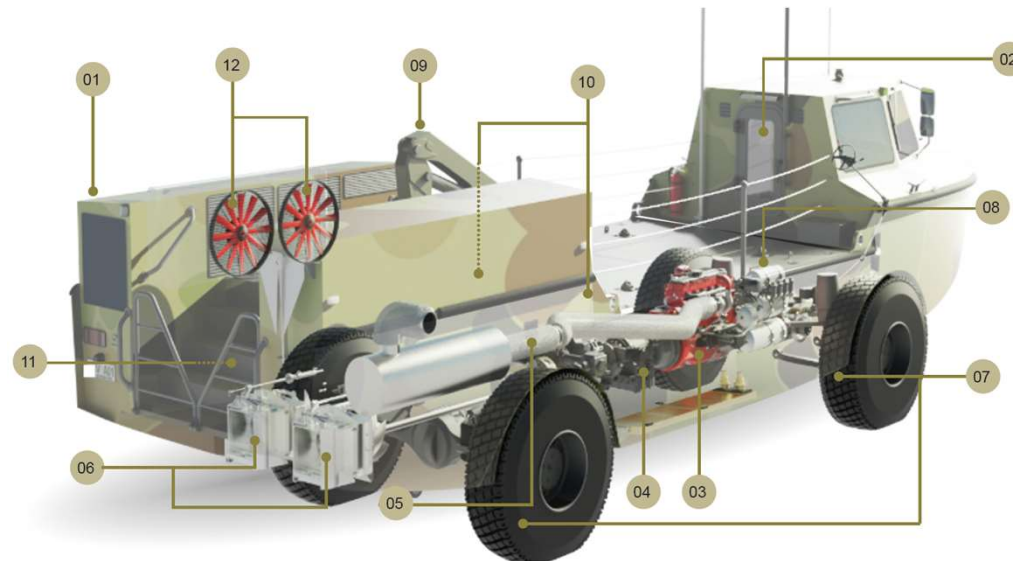


LIGHT, AMPHIBIOUS, MULTIROLE – VEHICLE (LAM-V)



LIGHT, AMPHIBIOUS, MULTIROLE – VEHICLE (LAM-V)

1. 5083 Aluminium construction
2. Chrome Moly Rollover Protection cage
3. 8.9 Engine, 298kW
4. Low-sump Transmission
5. 4-output Transfer case
6. NAMJet TJ 431HH Waterjet Propulsion
7. Milspec tyres
8. Anti-lock braking
9. Crane
10. 2 x 450L fuel tanks
11. 185L freshwater tank
12. Twin radiator & keel cooler cooling system
13. MIL-STD-209K tiedowns

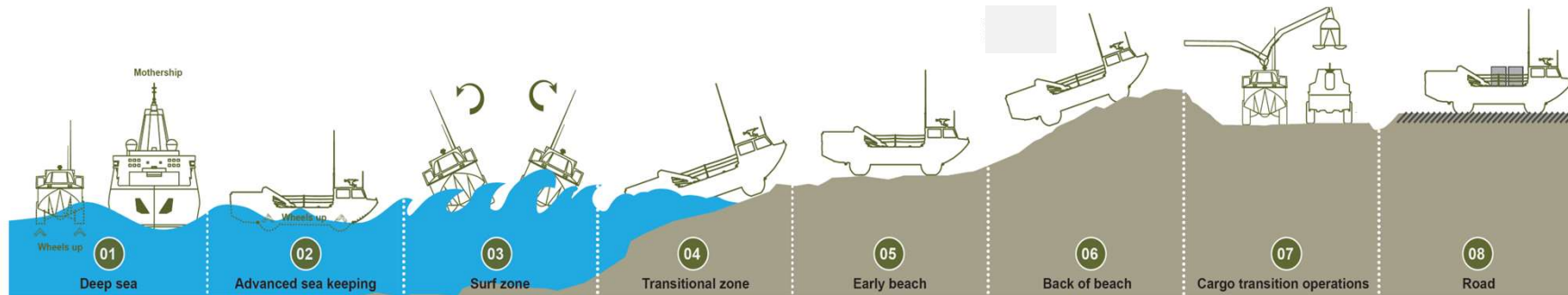


LIGHT, AMPHIBIOUS, MULTIROLE – VEHICLE (LAM-V)

Water speed	Payload	Stability	Turn and stop	Water range fully laden	Operation (Ops) & Sea state	Life of type
9.6kts	4,700kg	Superior to LARC-V	Within own length	80nm at top sea state 4	Ops capable in top sea state 5	25 years

GVW	Road speed	Turning circle	Cross country speed	0-48kph acceleration	Ground clearance
16,900kg	55kmh	11m	14kmh	13.2s	0.596-0.746m

Approach angle	Departure angle	Land gradient climb	Side slope stability	Land range fully laden	Crane
38-41 degree	26-29 degree	60%	68% Fully Laden	800km	1,030kg at 5.4m



**LIGHT, AMPHIBIOUS, MULTIROLE – VEHICLE
(LAM-V)**

AMPHIBIOUS BRIDGING SUPPORT



FUTURE WET GAP BRIDGING UNIT

IRB



IRB



M3



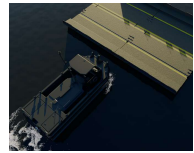
M3



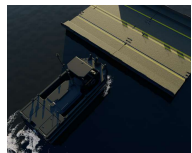
M3



BEB



BEB



IRB



BEB



LAM-V



LAM-V



BEB



LAM-V



LAM-V



SUMMARY

- Analysis of current NATO wet gap crossing operational efficiency
- Integration of commercial systems into military bridging applications
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 - Autonomy integration
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QUESTIONS