

Orion Littoral Maneuver Vehicles

Lighter Faster Agile

Introducing Jederzeit Bereit LLC

JZB is transforming littoral maneuver operations through the development of advanced amphibious vehicles and innovative solutions. With a focus on enhanced capabilities, mobility, and effectiveness in coastal, riverine environments and humanitarian operations, JZB aims to provide strategic advantages, cost-effective solutions, and continuous innovation to meet the evolving needs of our customers.

Vision

To be the leading provider of innovative solutions, transforming littoral maneuver operations and empowering organizations with enhanced capabilities, mobility, and effectiveness in coastal and riverine environments.

Mission

To develop next generation amphibious vehicles that address the evolving challenges of littoral maneuver operations. We strive to leverage advancements in technology to deliver versatile, and high-performing solutions. Through strategic partnerships we aim to provide our customers with capability they need to excel in littoral environments, enhancing their operational effectiveness and securing a competitive edge.



What Amphibious Operations Looks Like Now... Pickett's Amphibious Charge





➤ Large footprint on land with long logistics tail

Current Options:

- Large Slow Vehicles
- Short Range
- Frontal Attack Only



→ 6 MPH in water; 35-45 MPH on land



➤ An amphibious ship - in <u>5,000</u> meters offshore



> Movement in successive waves and on line



Orion Littoral Maneuver Vehicles Derived from Executive Level Requirements



The Marine Corps Commandant's Guidance and Force Design directly addresses rethinking the military's amphibious operations and vehicles.

"We will equip our Marines with mobile, low-signature sensors and weapons that can provide a landward complement to Navy capabilities..." – General Berger

"A mix of crewed and uncrewed vessels to support multi-domain reconnaissance and scouting, counter-reconnaissance and screening operations, small unit maneuver, and lethality in support of sea denial and sea control." – General Berger

"Maritime maneuver is of supreme importance. Littoral mobility remains a significant gap, a conclusion repeatedly validated across Campaign of Learning activities." – General Berger



Our Solutions For a Range of Littoral Problems





Bulky and slow vehicles hinder maneuverability.



Limited operational range restricts capabilities.



Frontal attack limitations hinder tactical flexibility.



Large footprint on land with long logistics tail.



Insufficient versatility and adaptability.





Hydroplaning design for increased speed and maneuverability.



Enhanced range capabilities for extended operational reach.



Multi-directional attack capabilities for increased tactical flexibility.



Lighter footprint and streamlined logistics for improved efficiency.



Integrated manned/ unmanned systems for enhanced adaptability.

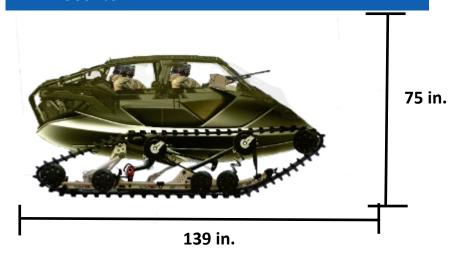


Our Revolutionary Products



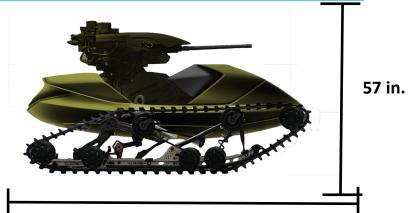
The Orion Manned: Command and Control

- Up to 4 Combat Loaded Troops
- Command and Control suite for Canis
- High-speed Low-signature Amphibious craft
- Same Capabilities on Land and Water
- 25-50 miles at sea in under an hour
- 300 mile total range on land and sea
- Smaller, capable, attractable, vehicles
- Transportable inside a V-22, CH-53E/K, CH-47
- ~2500 lbs.



The Canis **Unmanned: Speed & Firepower**

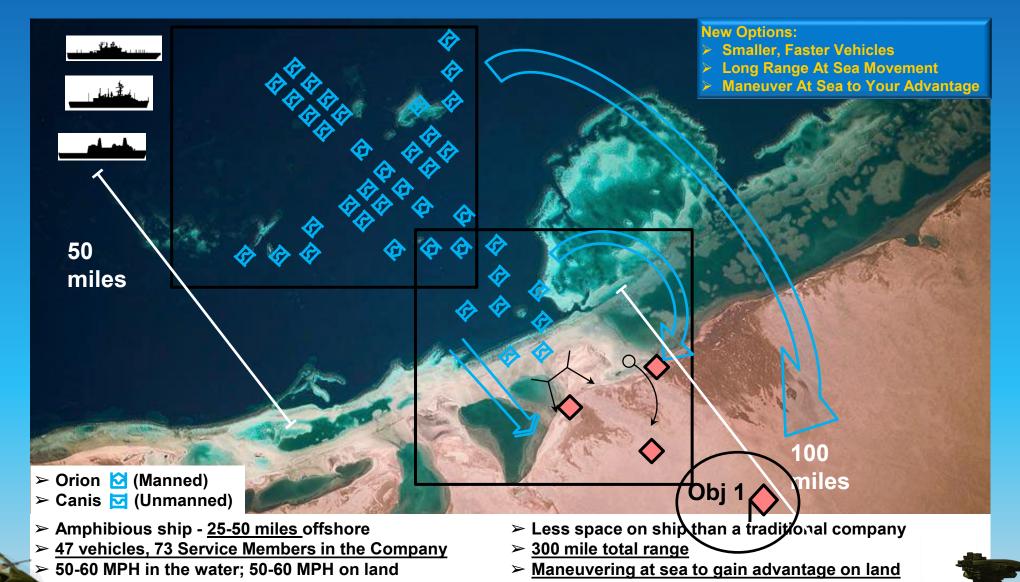
- Medium, Heavy Machine Gun, Anti-Tank Missile
- Thermal Optics for Long Range Identification
- Configured to be air dropped
- Operates up to a Sea State of 3
- Small Powerful Diesel Engine achieves speeds excess of 60 MPH on land and water
- Transportable / can launch off of a LHD/A, LPD, LSD, LCU, LCVP, Roll On – Roll Off shipping
- ~2000 lbs.



139 in.

What Amphibious Operations Could Be. Maneuver Warfare in an Amphibious Domain

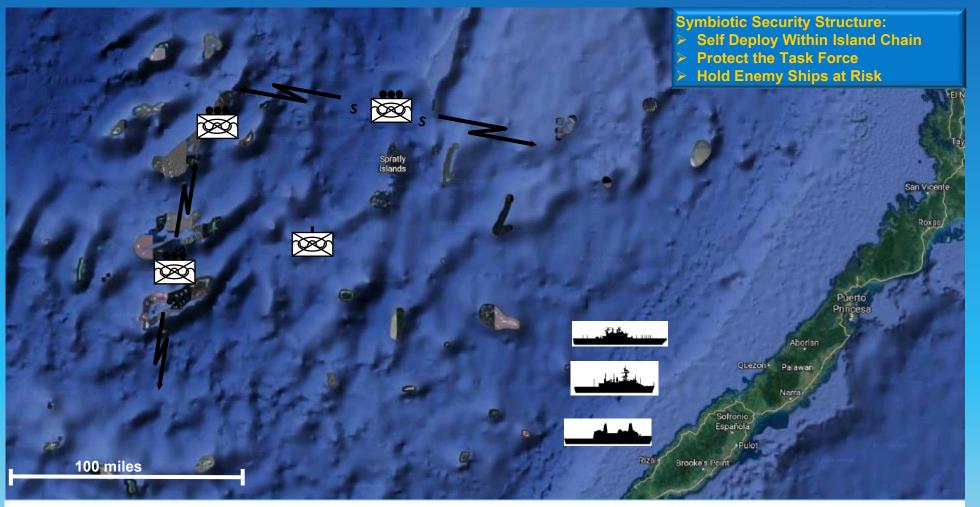






Reconnaissance & Counter-Reconnaissance for Amphibious Task Force

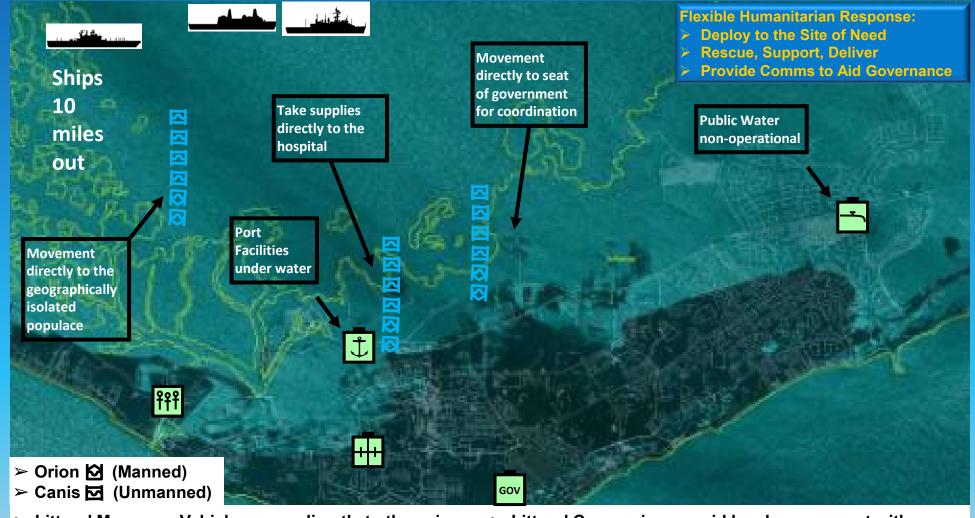




- ➤ Many of the island chains in the South China Sea are less than 50 miles away from each other.
- > Once deployed from the Naval Shipping a Littoral Company will island hop to extend their range.
- ➤ The compact nature of the LMVs reduce the signature of the screen line rendering it low observable.

Humanitarian Aid / Disaster Relief Support





➤ Littoral Maneuver Vehicles move directly to those in need, delivering much needed supplies.

Smaller footprint means LMVs move easily through smaller streets of poorer countries.

➤ Littoral Companies can aid local government with communication and movement of supplies until heavier transportation can be landed or water recedes.



Littoral Maneuver Vehicles & ACV / AAV comparison

(Images to Scale)

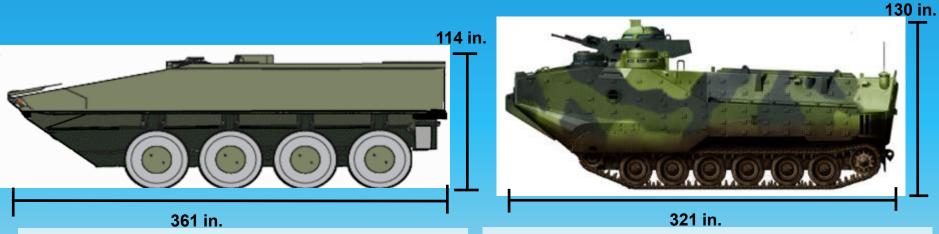


Compliments Current Inventory

- Lighter Weight
- Higher Speed
- > True Over-the-Horizon

- 0 to 4 Combat Loaded Troops
- ➤ Height / Length / Width: 57 in. / 139 in. / 60 in.

- ➤ Weight: ~2500 lbs.
- > Top Speed on land/water: 67 mph (governed)



ACV

- > 3 crew members with 10-13 combat load troops.
- **➤** Weight: 67,500 lbs.
- > Top Speed on land/water: 8.2 mph / 55 mph
- > LMV are roughly 1/8th the size with less than 5% the weight

AAV-P7

- > 3 crew members with 21 combat load troops.
- Weight: 64,000 lbs.
- > Top Speed on land/water: 6.9 mph / 45 mph



Competitive Landscape



Competitors	Land Speed	Water Speed	Cost	Pictures
Fast Track by Fast Track Amphibians	60 mph	40 mph	\$80,000	
Quadski by Gibbs Sports	45 mph	45 mph	\$40,000	quadski
EMAV by QinetiQ/ Pratt & Miller	45 mph	N/A	N/A	00000
Rampage by Polaris	60 mph	5 mph	N/A	
Titan by QinetiQ North America (QNA)	15 mph	N/A	N/A	



Relevant Markets





The OrionTM has commercial value in multiple markets. All three markets are projected to see a ~5% (average) CAGR. Multiple market verticals helps avoid single market fluctuations.

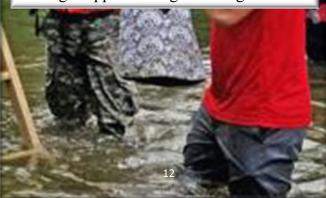


Military Markets

- ➤ Immediate Research & Development Funds available
- ➤ Bulk Sales
- ➤ Continued R&D available
- ➤ Long Term Relationship through maintenance and updates.
- ➤ Market Value of ~\$35M annually in vehicles and parts.

First Responder Markets

- ➤ Long Term Relationships in maintenance and replacement.
- ➤ Climate change indicates increase of flooding worldwide.
- ➤ Humanitarian support.
- ➤ Market Value of ~\$17.5M annually in vehicles and parts.
- ➤ Plus contract for maintenance and surge support during an emergent crisis.





Commercial Markets

- ➤Immediate Sales
- ➤ 962,000 new vehicles annually in power sport global sales.
- ➤ JZB taking 1-2% (10,000-20,000 units) of the Market.
- >\$25,000 per unit \$250M \$500M

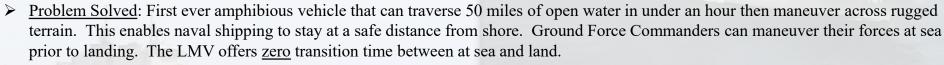




The Orion and Canis

Littoral Maneuver Vehicles (LMV)

Military Markets



➤ <u>Long Term Relationship</u>: Government sales will include additional maintenance contracts.

Customer		Global Annual Sales	
		(in units sold)	
	U.S. Military	500	
	Non-U.S. Sales	500	

US Military markets

U.S. Marine Corps

Operational Maneuver from the Sea

Ship to Objective Maneuver

U.S. Navy

Defense of Naval Ships

USSOCOM

Amphibious and Arctic

All of the services will be interested in the initial capabilities of the Orion. The majority of sales will come from unmanned versions.



Non-U.S. Military Sales

Canada

(Light Over Snow Vehicles Competition)

<u>Japan</u>

Is growing its military with a focus on the defense of the Senkaku Islands. They are growing their amphibious force and are looking for places to invest.

Scandinavia

Has a small but well funded amphibious force. They also have a very capable and well funded arctic force. Their Navy also uses the Jeune Ecole doctrine which utilizes small craft to strike larger craft.

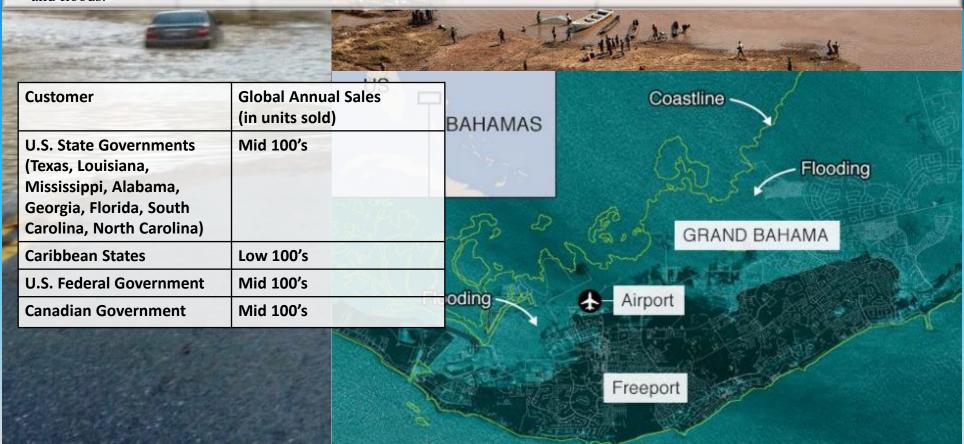




The Orion and Canis Humanitarian Markets



- Problem Solved: First purpose built natural disaster vehicle able to provide transportation for first responders, government officials, and relief organizations through flooded areas at an affordable price. There is currently no alternative.
- ➤ <u>Customer Base</u>: Government Officials and NGOs can get out to the affected areas, interact with their people, and see the damage first hand, without the restrictive cost of operating a helicopter.
- ➤ Long Term Relationship: Government sales will likely include on going maintenance contracts.
- ➤ <u>Increase in Demand Signal</u>: The demand increases with the effect of climate change due to the increase in number and strength of storms and floods.





The Orion

Commercial Markets

(Utility, Sport, and Recreational)



Problem Solved: First single commercial vehicle that offers year round off-highway transportation at an affordable price point. For the farmer/rancher, powersport enthusiast, and head of family, it replaces three different vehicles consolidated into one. Consolidating trailer space, garage space, and upkeep costs into one spot.

Customer Base: 18-34 year old singles who will purchase a vehicle or 35-54 year old heads of family who will purchase two vehicles.



Way Forward





Phase II – Developing a Prototype

- · Develop a working prototype that can be tested
- Initial proposal for unmanned version
- Initial proposal for low-rate production











Phase I – Engineering Study

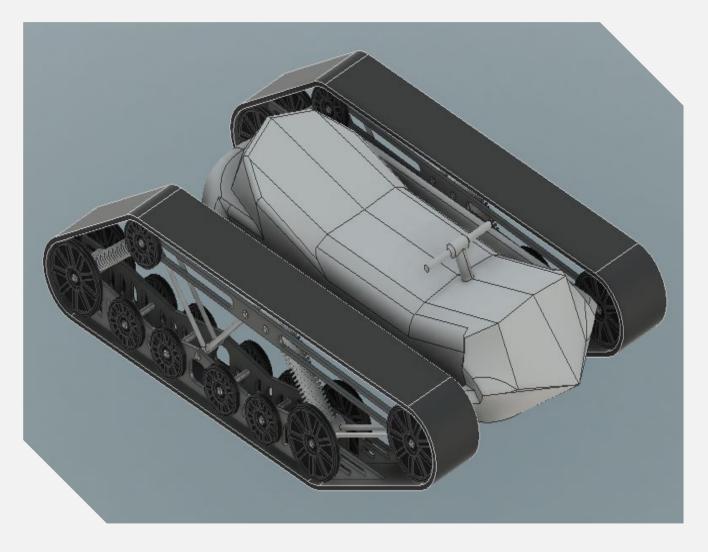
- · Kick off meeting
- Feasibility Study.
- · Conceptual Design Review.
- Initial proposal for developing a working prototype.

Phase III – Low-Rate Production

- Run low-rate production
- Develop working prototypes of unmanned version
- Develop working prototype of updated version of the craft.

The Orion – Our MVP





The proof of concept demonstrates:

- Speeds of 50+ MPH on land and water
- Maneuvers across the water in the same manner as on land
- Operates in a wide breath of environments
- Can handle the weight of a combat load
- MVP design is to prove the concept of the manned and robotic versions
- Early milestones are focused on ensuring the vehicles will achieve the advertised speeds and planning in open water.
- MVP 1 will be 50% the weight of the production model





Littoral Maneuver Vehicles "Amphibiousity with Speed"

Lighter
Faster
Longer Range
More Agile



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Backup Pages

Next Generation Mobility Littoral Maneuver Vehicle (LMV)

Proposed Vehicle (Orion)



Description

The Orion Littoral Maneuver Vehicle (LMV) is a small, fast off-highway vehicle that can be manned or unmanned, capable of travel in littoral zones. The Orion is amphibious and can maneuver at sea (at 50-60 MPH), seamlessly transition to shore, and continue to maneuver while on land (total range of 300 miles).

Follow-on Unmanned Vehicle (Canis)



Dimensions

- First Viable Product (1/2 scale) in production for Summer 2024 testing at Dahlgren, VA: Land and Sea Trials (TRL 5)
- If fully funded, a manned version could be ready in two years with an unmanned version ready in one additional year.
- Dimensions:
 - Orion 75" tall, 139" long, (size of family sedan), ~2500 lbs. dry.
 - Canis 57" tall, 139" long, ~2000 lbs. dry.



Mission Sets

- The Orion and Canis are the premier combination for manned and unmanned teaming in a reconnaissance and counter reconnaissance role. Their small size, limited electronic & thermal signature make them ideal for a near peer fight in coastal regions.
- The Orion & Canis combination easily scales to support larger combat operations.
 They can launch from a wide range of shipping to include L-class, LSMs, and non-traditional shipping. Their smaller form factor means more systems in more spaces on naval ships, supporting the full range of amphibious operations.
- In contested logistics, the Canis (unmanned) can be launched with crucial supplies and sent autonomously to the point of need.
- The low price point of the Canis makes it viable as a low cost, long range, one way attack system in littoral regions.
- Additional possible missions: FAC/FIAC defense, autonomous ISR-T, loitering munitions launcher, surface borne anti-ship, counter amphibious assault.

Technical POC: Ted W Schroeder, 571.275.6116, ted@JZBalwaysready.com



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7 Caval Cade Lane, Stafford, VA 22556



Orion Littoral Maneuver Vehicles

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Technical POC: Ted W Schroeder, 571.275.6116, ted@JZBalwaysready.com Seeking further development funding for full scale prototype