2026: Pushing Performance: Science, Technology, Discovery In Harsh Environments

PIONEER CLASS SCORE SHEET
World Championship - Flume Tank

Company CEO: _____

Product demonstration station officials: _____

Company Name

Safety		
Check here if the company has their PASSED safety inspection card **Companies without their safety inspection PASSED card cannot participate in the product demonstration.**		
Check here if tamper seal on fuse is still intact **Companies with a broken tamper seal on their fuse must see the safety inspectors before their ROV enters the water.**		
Check here if the company presented you with a JSEA (Jobsite Safety Environmental Analysis)	JSEA Points 0 5	
Check here if vehicle matches photo taken at safety inspection **Companies must use the same vehicle, float, and other devices that went through the safety inspection.**		
Total Safety (out of 5)		**Total**

Organizational and Operational Effectiveness (up to 10 points)	Points	
Up to 4 points - Teamwork/Collaboration & Communication		
Chain of command evident	0 1	
Roles clear and executed well	0 1	
Composure under pressure	0 1	
Supportive of each other and communicate well with each other	0 1	
Up to 2 points - Project Management		
Task plan is well thought out to maximize score	0 1	
Alternate plans available and all team members are aware of the plan	0 1	
Up to 2 points - Problem Solving & Ability to Deal with Obstacles		
Awareness of time	0 1	
Adjusting timeline to adapt to situations	0 1	
Up to 2 points - System Design & Control/Electrical		
ROV deployed by the end of the 5-minute set-up period	0 1	
ROV is under control of pilot and prepared to perform tasks	0 1	
Total Organizational and Operational Effectiveness (out of 10)		**Total**

Fuses: ROV systems are allowed one replacement fuse during the product demonstration. In the event that the ROV system blows the second fuse during the demonstration, time will stop, the demonstration run will be over, and no additional points will be earned. Companies should have adequate replacement fuses on hand, MATE will not provide replacements.

Task # 1: Seabed 2030: A Kaleidoscope of Corals in Cold Water (up to 85 points)	Points				
1. 1 up to 30 points – Collect species from a coral garden					
5 points each, 10 points total – collect two basket stars		0	5	10	
up to 20 points – collect two coral species					
10 points each, 20 points total – collect coral species by the substrate only **5 points each 10 points total** – collect coral species NOT by the substrate	0	5	10	15	20
1. 2 up to 40 points – Coral Garden Ridge Modelling					
up to 40 points – via photogrammetry, autonomously create a scaled 3D model of the coral garden					
up to 20 points – create a 3D model of the coral garden					
20 points – model shows all 8 targets					
15 points – model shows 4 to 7 targets	0	5	10	15	20
10 points – model shows 1 to 3 targets					
5 points – model is created but shows no targets					
10 points – measure the length of the coral garden within 5 cm		0		10	
5 points – scale the 3D model using the length of the coral garden		0		5	
5 points – using the properly scaled model, estimate the height within 5 cm		0		5	
or					
up to 30 points – manually (CAD) create a scaled 3D model of the coral garden					
10 points – measure the length of the coral garden (within 5 cm)		0		10	
10 points – measure the height of the coral garden (within 5 cm)		0		10	
10 points – create a scaled 3D model of the coral garden displaying the length and height measurements		0		10	
or					
up to 20 points – manually (paper) create a 3-view technical drawing of the coral garden					
5 points – measure the length of the coral garden (within 5 cm)		0		5	
5 points – measure the height of the coral garden (within 5 cm)		0		5	
10 points – create a technical drawing on paper of the coral garden including measured length and height with at least 3 views (top, front, and side)		0		10	
1. 3 up to 15 points – Fly a Transect Over the Coral Garden					
15 points – maintain position over the coral garden in a current		0		15	
					Total
				Total Task # 1 (out of 85)	

Task # 2: SmartAtlantic (up to 55 points)	Points			
2.1 up to 20 points – Mitigate Invasive Species				
up to 15 points – determine the number of invasive European Green crabs				
15 points – using image recognition **5 points** – manually	0	5	15	
5 points – upload the data to the invasive species form	0		5	
2.2 up to 35 points – Iceberg Tracking				
up to 10 points – survey the iceberg at 5 points around its perimeter				
10 points – survey all five points **5 points** – survey one to four points	0	5	10	
up to 10 points – measure the keel depth of the iceberg within 10 cm of true depth				
10 points – within 5 cm of true depth **5 points** – within 5.01 to 10 cm of true depth	0	5	10	
up to 15 points – use the location, heading, and keel depth to determine the threat level of the iceberg to the four area oil platforms				
up to 10 points – determine the threat level to the offshore platforms				
10 points – correctly report the threat level to all four platforms **5 points** – correctly report the threat level to only three platforms	0	5	10	
5 points – determine the threat level to the offshore platform's subsea assets	0		5	
				Total
			Total Task # 2 (out of 55)	

2026: Pushing Performance: Science, Technology, Discovery In Harsh Environments

PIONEER CLASS SCORE SHEET
World Championship - Flume Tank

Penalty Points (deduct 5 points for each infraction)	No. of Infractions
Safety: Product demonstration officials may deduct points for safety violations. Minor violations are a 5 point penalty. Major violations may be 10 or more points. Product demonstration officials may also disqualify a company for extreme safety violations. **Note: An official's decision to disqualify a company due to safety concerns is final. If there is a safety concern, please contact the lead safety inspector or competition coordinator.**	
Tether Pulling: Company members cannot pull on the tether to assist in moving or turning the vehicle. Judges should issue a warning for the first infraction and begin deducting points AFTER the first infraction.	a
Illegal communication: Company members at the side of the pool may not communicate visual evidence of the ROV status such as location of vehicle, need to turn, that the vehicle is stuck, etc.	b
Debris: Companies that leave debris (e.g. parts of their ROV, including weights and flotation) in the pool at the end of the product demonstration time, or leave debris that a diver must retrieve will receive penalty points. Mission props deployed into the pool **ARE NOT** considered debris. Unless otherwise noted, mission items to be recovered or replaced **ARE** considered debris. A company constructed collection basket is considered debris if it is still in the water, not under control of the ROV, when product demonstration time ends.	c
Assistance: Any diver or MATE ROV assistance (if available) must be requested by the company and will result in a 5 point penalty. The clock does not stop during diver assistance.	d
Total Penalty Points	(total a + b + c + d) plus safety violations **X 5 =**

Total

TIME BONUS (1 point for every minute and 0.01 point for every second under 15 minutes)

Duration of Product Demonstration: _____

Minutes under 15 remaining: _____ X 1 point = _____

Seconds remaining: _____ X 0.01 point = _____

Time bonus

Total

Grand Total

TOTAL PRODUCT DEMONSTRATION SCORE

Official's initials: _____

Company CEO's initials: _____