

Company CEO: _____

Company Name

Product demonstration station officials: _____

Check here if the company presented you with a JSA (Job Safety Analysis)

Safety Check and Set-Up (up to 10 points)	Points	
Company presents signed safety inspection sheet.	0	5
Vehicle and control system present no safety hazards.	0	5
Examples: <ul style="list-style-type: none"> o All power cords, power bars, pressurized cylinders, etc. are secured. o No hazardous materials are leaking onto the pool deck. o Vehicle is hand-launched by team members in a safe manner. 		
Company is cleared for demonstration: _____ (official's initials)		
Total Safety Check and Set-Up (out of 10)		Total
<i>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.</i>		

Organizational and Operational Effectiveness (up to 10 points)	Points	
Up to 2 points – Organization		
Chain of command evident	0	1
Roles clear and executed well	0	1
Up to 2 points – Task Plan		
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 – Time Management		
Awareness of time	0	1
Adjusting timeline to adapt to situations	0	1
Up to 2 points – Team Cooperation		
Composure under pressure	0	1
Supportive of each other and communicate well with each other	0	1
Up to 2 points – ROV Deployment and Control		
ROV deployed	0	1
ROV deployed and under control to perform tasks	0	1
Total Organizational and Operational Effectiveness (out of 10)		Total

Bonus points for size and weight	Points	
Size bonus (up to 20 points)	0 5 10 20	
ROV is less than 48 cm – 20 bonus points		
ROV is within 48.1 cm and 54 cm – 10 bonus points		Judge initials: _____
ROV is within 54.1 cm and 60 cm – 5 bonus points		
ROV is within 60.1 cm and 75 cm – 0 bonus points		CEO initials: _____
		Total
Weight bonus (up to 20 points)	0 5 10 20	
ROV is less than 11 kg – 20 bonus points		
ROV is between 11.01 kg and 12 kg – 10 bonus points		Judge initials: _____
ROV is between 12.01 kg and 14 kg – 5 bonus points		
ROV is between 14.01 kg and 20 kg – 0 bonus points		CEO initials: _____
		Total

Penalty Points:

Tether Pulling: Teams cannot pull on the tether to assist in moving or turning the vehicle. Issue a warning for the first infraction. Begin deducting points AFTER the first infraction.

Illegal Communication: Company members at the side of the pool may not communicate visual evidence of the ROV status such as location, need to turn, etc.

Debris: Companies that leave debris (e.g. parts of their ROV, including weights and flotation) in the pool such that a diver must retrieve the debris will receive penalty points. Product demonstration props are NOT considered debris. A company constructed collection basket is considered debris if it is still in the water when product demonstration time ends.

Diver assistance: Diver assistance will be available at the international competition, contact your regional coordinator about diver availability at your regional competition. Any diver assistance must be requested by the company. Diver assistance will result in a 5 point penalty per assist.

Fuses: If a vehicle blows the MATE power supply in-line fuse, the company is allowed one spare. If the vehicle blows the second MATE fuse, the product demonstration performance period is over. The company will receive points for the product demonstration tasks that they have completed up to that point but will not receive a time bonus score.

Task # 1: Commerce: Hyperloop Construction (up to 60 points)	Points			
Judges' Notes: Companies must complete the steps of this task in order and cannot skip any steps.				
1.1 up to 10 points (5 points each) – inserting two rebar rods into position in the steel baseplate	0	5	10	
1.2 20 points – installing the frame onto the baseplate	0		20	
1.3 5 points – removing a pin to release the chains holding the frame	0		5	
1.4 10 points – transporting and positioning the hose for pouring concrete into the frame	0		10	
1.5 up to 15 points (5 points each) – retrieving the three positioning beacons and returning them to the surface	0	5	10	15
Total Task # 1 (out of 60)				Total

Task # 2: Entertainment: Light and Water Show Maintenance (up to 60 points)	Points			
Judges' Notes: Disconnecting power and stopping the flow of water tasks must be done before disengaging the locking mechanism and removing /installing the fountain. Reconnecting the power and restoring the flow of water must be done after installing the new fountain and re-engaging the locking mechanism. The old fountain can be returned to the surface at any time after removing it from the platform.				
2.1 5 points – disconnecting the power cable from the platform	0		5	
2.2 10 points – turning the valve to stop the flow of water to the platform	0		10	
2.3 5 points – disengaging the locking mechanism at the base of the fountain	0		5	
2.4 5 points – removing the old fountain	0		5	
2.5 5 points – installing the new fountain	0		5	
2.6 5 points – re-engaging the locking mechanism at the base of the fountain	0		5	
2.7 10 points – turning the valve to restore the flow of water to the platform	0		10	
2.8 10 points – reconnecting the power cable to the platform	0		10	
2.9 5 points – returning the old fountain to the surface, side of the pool	0		5	
Total Task # 2 (out of 60)				Total

Task # 3: Health: Environmental Cleanup (up to 60 points)	Points		
Judges' Notes: Companies must determine which area is contaminated before collecting samples or capping the contaminated area.			
3.1 5 points – using a simulated Raman spectrograph to determine if contaminants are present in two areas	0	5	
3.2 up to 10 points (5 points each) – returning two clam samples to the surface	0	5	10
3.3 up to 30 points – collecting and returning a sediment sample to the surface	0	10	30
<ul style="list-style-type: none"> o 30 points – 100 ml or more of agar o 10 points – between 10 ml and 99.9 ml of agar o 0 points – less than 9.9 ml of agar 			
3.4 15 points – placing a cap over the contaminated area	0	15	
Total Task # 3 (out of 60)			Total

Task # 4: Safety: Risk Mitigation (up to 80 points)	Points				
Judges' Notes: Companies may complete the steps of Task #4 in any order.					
4.1 5 points – locating the four cargo containers	0	5			
4.2 up to 20 points (5 points each) – inserting the sensor into the port to activate the RFID	0	5	10	15	20
4.3 up to 20 points (5 points each) – using the RFID data to determine the container's identification number, contents, and if the contents are high risk	0	5	10	15	20
4.4 10 points – attaching a buoy marker to the highest risk cargo container	0	10			
4.5 up to 15 points (5 points each) – determining the direction and distance from the highest risk cargo container to the other three cargo containers	0	5	10	15	
4.6 10 points – using the distance and direction to make a survey map	0	10			
Total Task # 4 (out of 80)					Total

Penalty Points (deduct 5 points for each infraction)	No. of Infractions		
Illegal Tether pulling: Issue a warning for the first infraction. 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 (location, need to turn, 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 also receive penalty points. Product demonstration props are NOT considered debris. A company constructed collection basket is considered debris.	c		
Diver Assistance: Diver assistance may or may not be available during regional product demonstration time. Any diver assistance will result in a 5 point penalty. At the international competition diver assistance will be available and will result in a 5 point penalty.	d		
Total Penatly Points	(total a + b + c + d)	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: _____