TeamTime #3
Tuesday, July 2, 2024 | 7:00 PM Eastern Time
robosub 2024
BY ROBONATION

GET STARTED

1. Edit your name to "Name | Team Name"
2. Let us know in the chat:
   How has water testing gone?

AGENDA

[19:00-19:05]	Welcome
[19:05-19:15]	On-Site Reminders & Venue Layout
[19:15-19:25]	Logistics (Shipping, Accommodations, Parking)
[19:25-19:40]	Logarithmic Spiral
[19:40-19:50]	RoboSub Data Sharing
[19:50-20:00]	Questions?

REC

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ROBOSUB

IRVINE, CALIFORNIA | AUGUST 5 - 11, 2024

Organizers

robonation
Robotics Community

Premier Sponsors

Office of Naval Research
ONR
Science & Technology

MathWorks

FREE Licenses!

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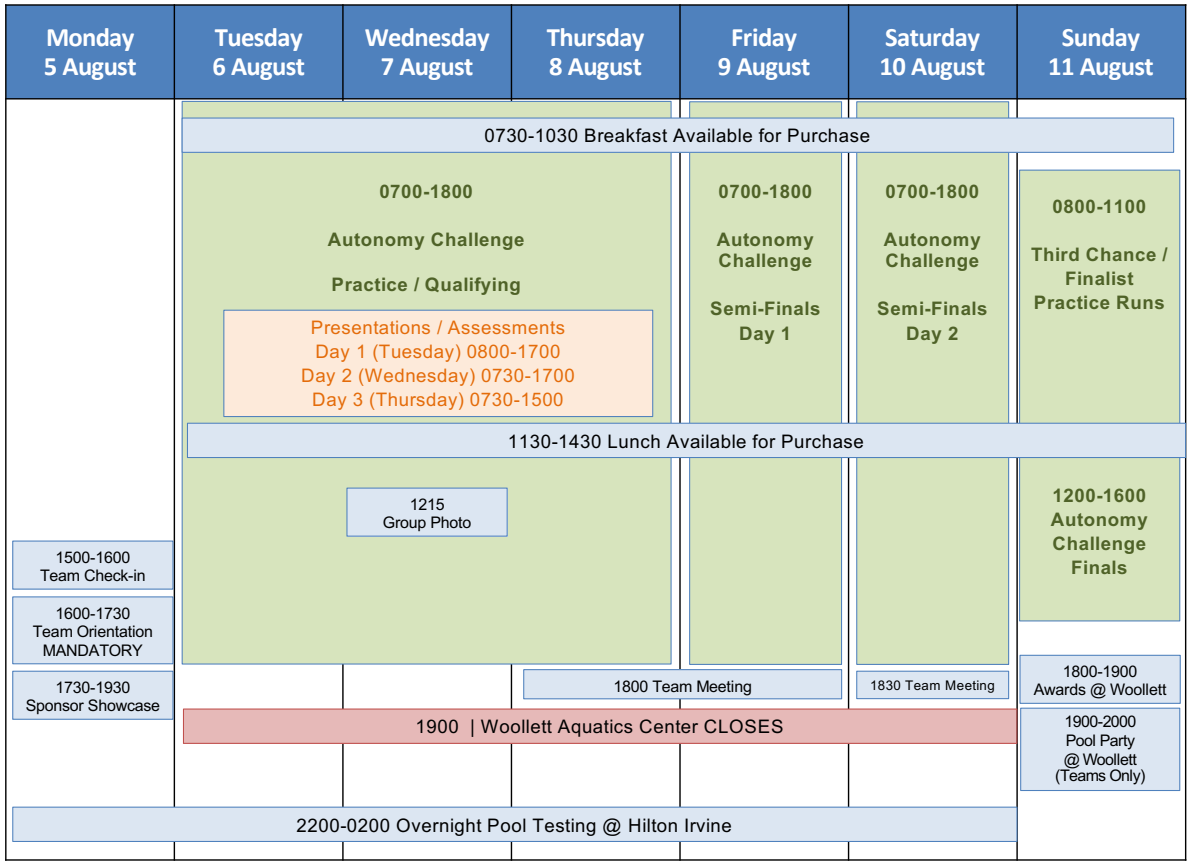
Check out the latest perks from our sponsors

ROBOSUB

Schedule

robosub.org/2024

Schedule At-A-Glance



ROBOSUB

Schedule

robosub.org/2024

DAY 1 – Monday, August 5

Hilton Irvine/Orange County Airport Hotel

- 3:00 pm – 4:00 pm | Team Check-in
- **4:00 pm – 5:30 pm | Team Orientation (MANDATORY)**
- 5:30 pm – 7:30 pm | Sponsor Showcase
- 10:00 pm – 2:00 am | Overnight Pool Testing

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ROBOSUB

Schedule

robosub.org/2024

PRESENTATION & ASSESSMENT SCHEDULE
Tuesday – Thursday, August 6-8

Design Presentations

Teams are assigned a 15-minute time slot. Teams are invited to prepare visual aids and have the option to bring their vehicle(s). The presentation time slot is broken down to:

- Team Presentation – 10 minutes
- Judges' Question & Answer – 5 minutes

System Assessments

Following the presentation timeslot, teams will proceed to their assigned 15-minute assessment time slot.

Team Photos

Team photos to follow the System Assessment.

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ON-SITE REMINDERS

Cheri Koch

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On-Site Reminders

robosub.org/2024

ON-SITE CONTACTS

- Cheri Koch, Senior Events Manager
  - (850) 642-0536
  - ckoch@robonation.org
- Julianna Smith, Director of Program Operations
  - (571) 239-9345
  - jsmith@robonation.org

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RoboSub 2024 | VENUE

August 5– 11, 2024

Woollett Aquatics Center, Irvine, CA

On-Site Reminders

robosub.org/2024

VENUE LAYOUT

Overview Site Map

1 – Competition Pool
2 – Team Pit Area
3 – Presentations / Judges' Ready Room
4 – RN Staff Office
5 – Award's Ceremony / Party
6 - Loading Zone
7 – Team Parking
8 – Staff/ADA Parking
9 - Food

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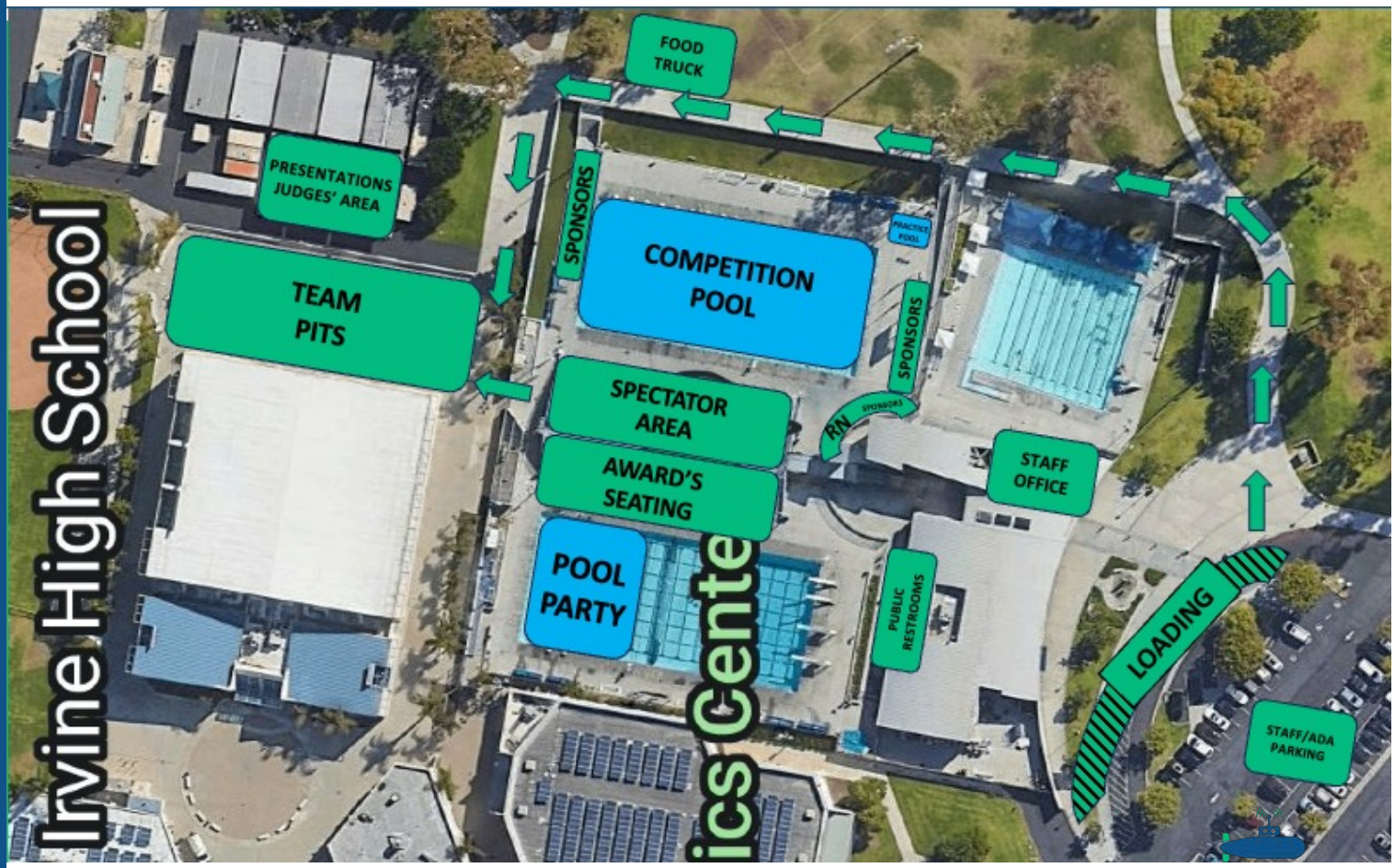
On-Site Reminders

robosub.org/2024

TEAM PARKING & LOADING ZONES



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On-Site Reminders

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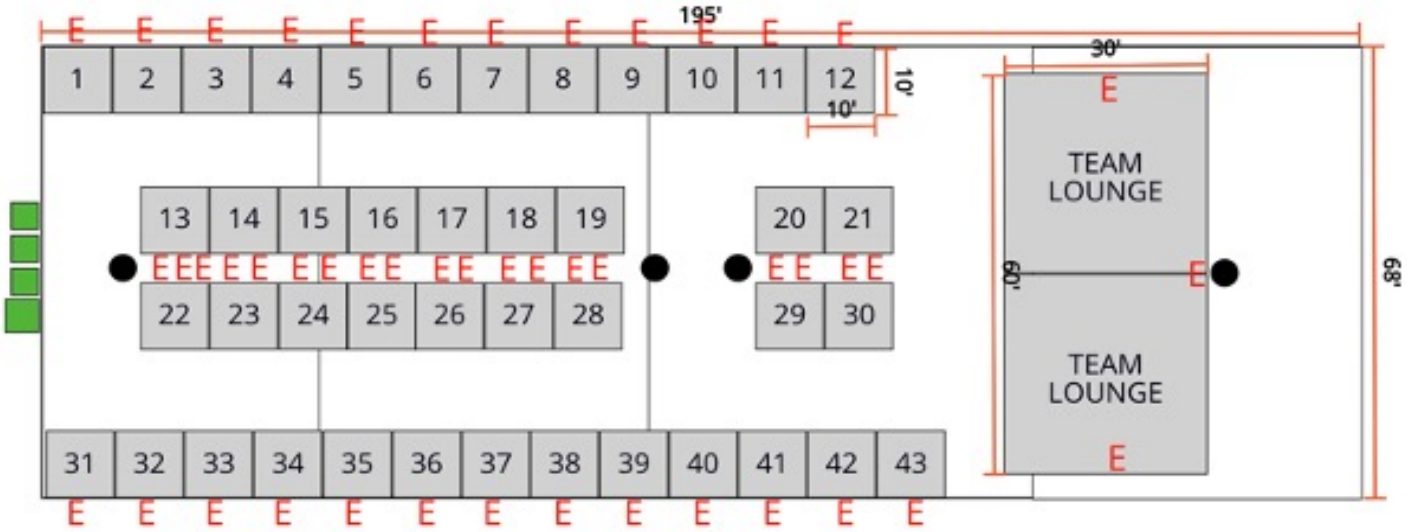
TEAM VILLAGE LAYOUT



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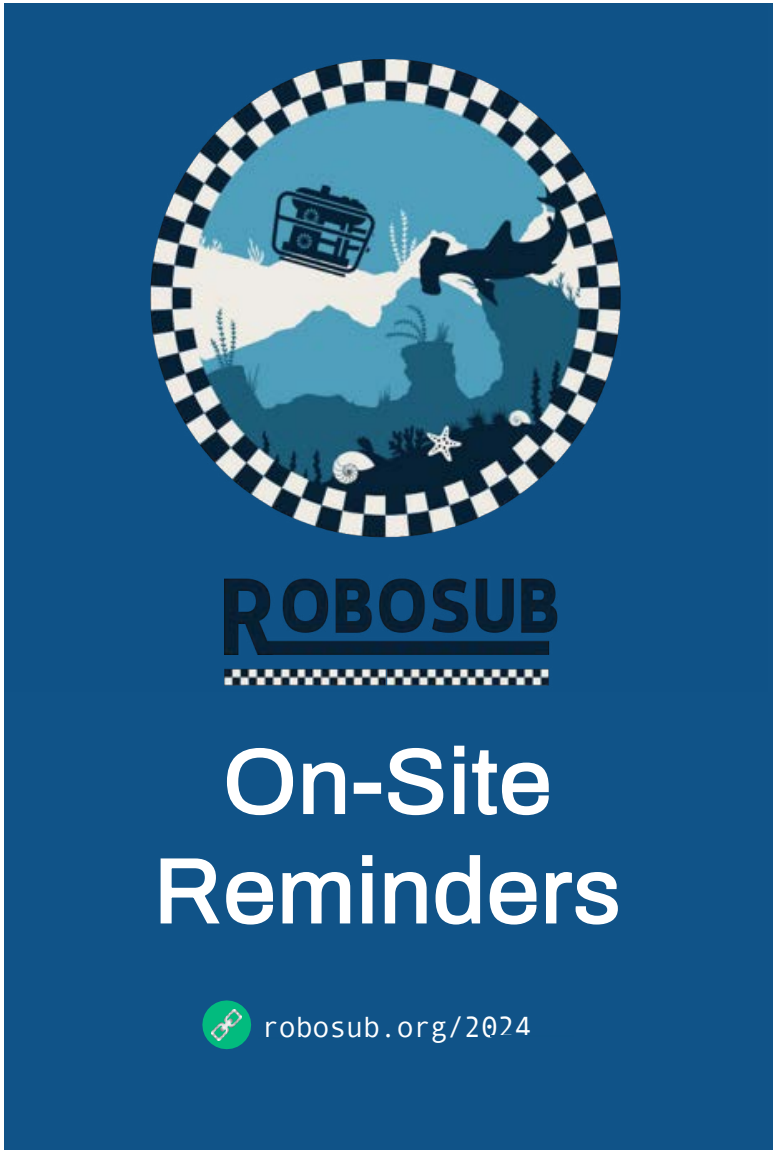

ON-SITE REMINDERS!

Be Prepared!

- Pack a jacket. Dress in layers.
- Wear shoes with sturdy soles.
- Avoid SUNBURN - Bring sunscreen, hat, and long-sleeved shirt.
- Hydrate, hydrate, hydrate! Bring your own water bottle – water will be provided.

Food Trucks

- Food truck will be available for breakfast and lunch. Menus and prices will be posted on Discord.

Venue Closure

- Woollett Aquatics Center will close at 1900.

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Overnight Testing

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Hilton Irvine/Orange County Airport

- 18800 Macarthur Blvd, Irvine, California 92612
- Monday, August 5 – Saturday, August 10
- 10:00 p.m. – 2:00 a.m.

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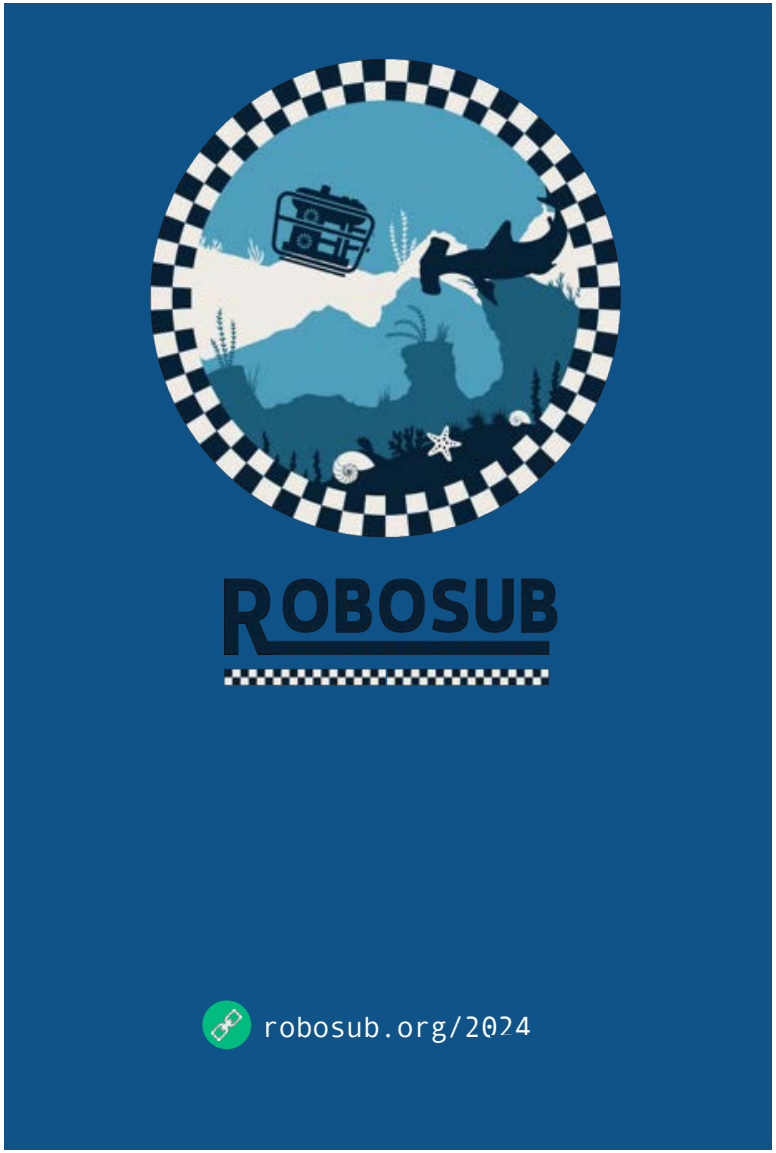

SHIPPING

Review the Shipping Guidelines: robosub.org/handbook

- Teams may ship their equipment to the conference hotel (Hilton Irvine / Orange County Airport).
- **IMPORTANT DATES**

  JULY 29 – Shipments cannot arrive at hotels prior to July 29.

  AUGUST 5 – All shipments must be picked up by August 5.

  AUGUST 14 – Shipments must be shipped out before the team leaves California (no later than August 14).
- Use the Inbound Shipping Label (in the Shipping Guidelines) for the hotel where you have a reservation.
- Use the Outbound Shipping Label (in the Shipping Guidelines) using the address of the hotel where you have a reservation or drop your crate off with your shipper directly.
- **Start now on planning on your outbound shipping arrangements now! Batteries are exceptionally difficult to ship.**
- Consult the Shipping Guidelines for Shipping Outlets in Irvine.

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SHIPPING

Inbound Shipping Label:

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FROM: School Name

Address
City, State, Zip
Country

Hilton Irvine/Orange County Airport
Attn: RoboSub / School Name – Guest Name
18800 MacArthur Blvd.
Irvine, CA, USA 92612

On-site Team POC Name: Phone:

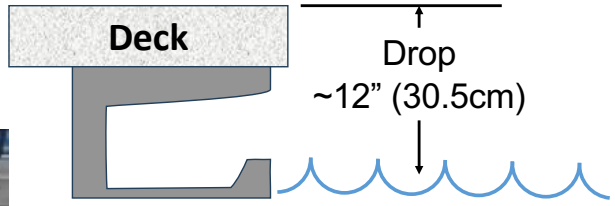
LOGARITHMIC SPIRAL

Daveman

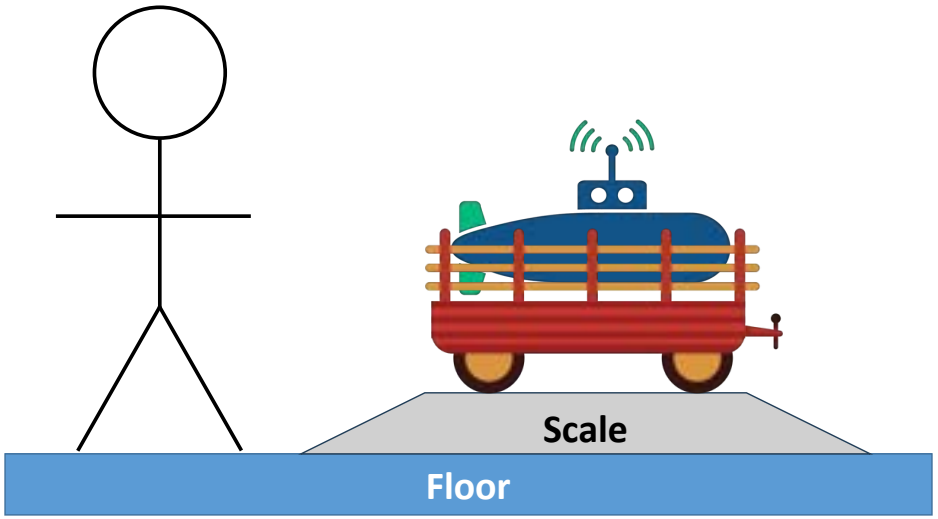
Woollett Aquatics Center, Irvine CA

Vehicle Entry & Exit from Pool

7ft (2.1m) Deep

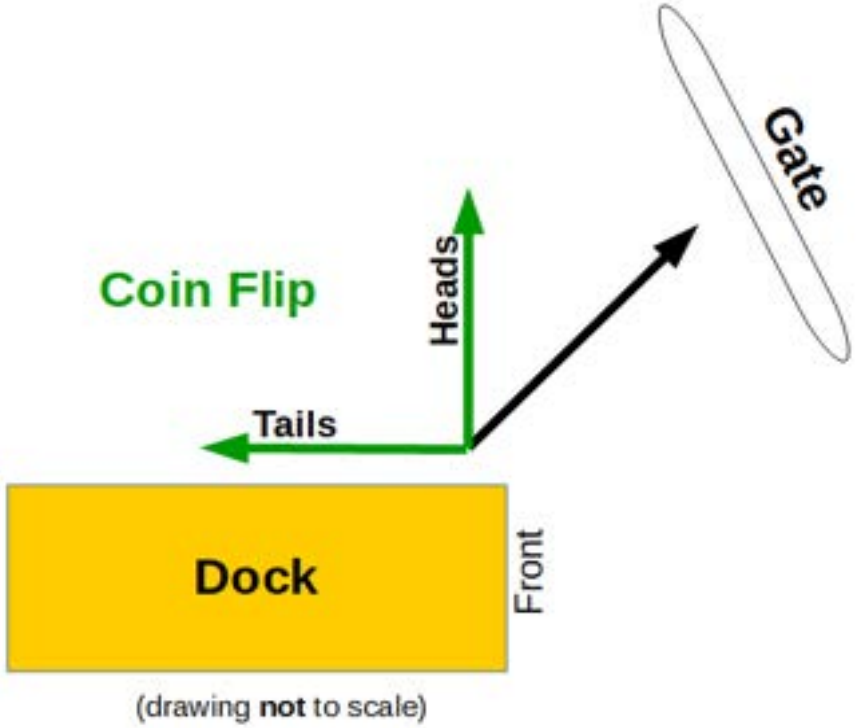


Vehicle Weight



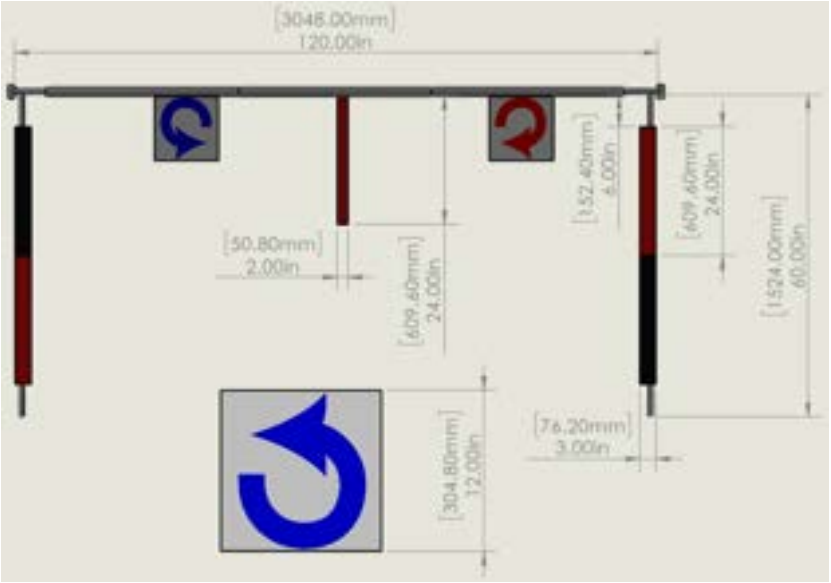
(drawing **not** to **scale**)

Rough Seas | Coin Flip



- Random orientation
  - 90° or 180° from dock

Enter the Pacific | Gate

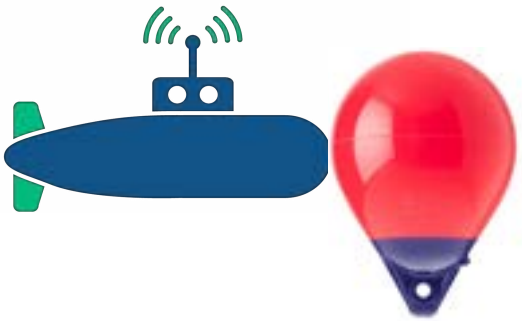


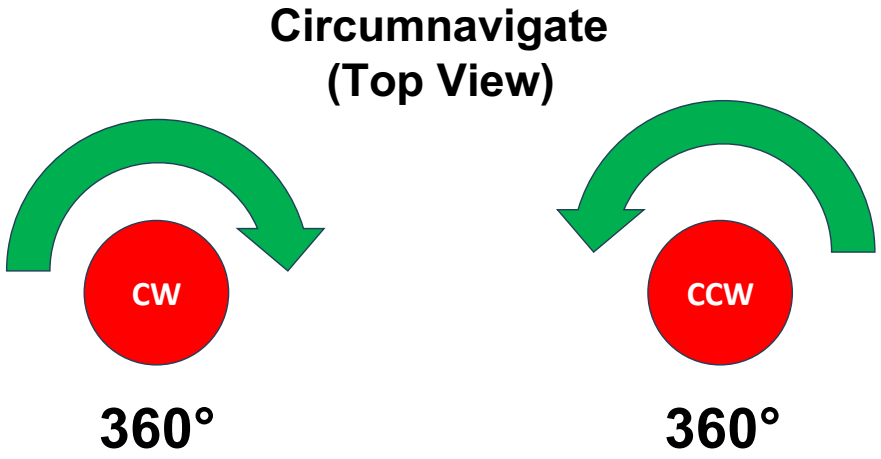
- Choose direction and ocean temperature
  - Clockwise (CW) / Hot (**Red**)
  - Counter clockwise (CCW) / Cold (**Blue**)
- Extra points for staying with your choice for the remainder of the tasks

- With Style
  - 10 ft/3 m before/after gate
  - Extra points
    - Every 90° change in orientation
      - Yaw: +100
      - Roll/Pitch: +200
    - Up to 720° rotation
      - Yaw: +800
      - Roll/Pitch: +1600

Hydrothermal vent | Buoy

- Single **RED** buoy (Polyform A0)



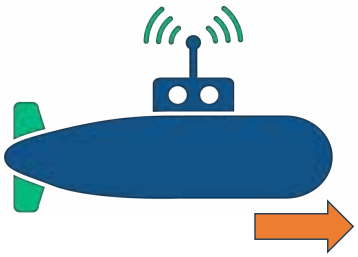


Floor

(drawing **not** to scale)

Hydrothermal vent | Buoy

- Single **RED** buoy

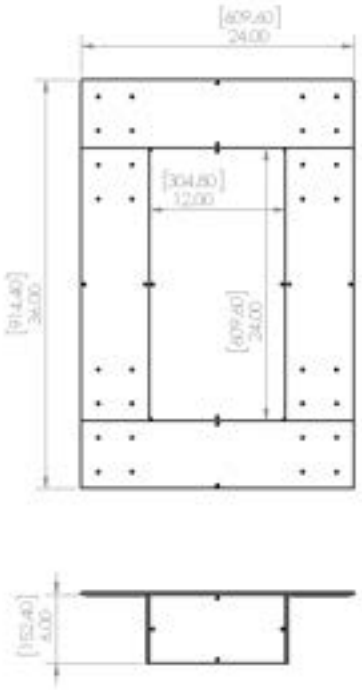


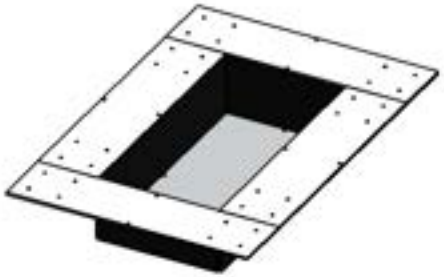
- Fire torpedo for extra points

Floor

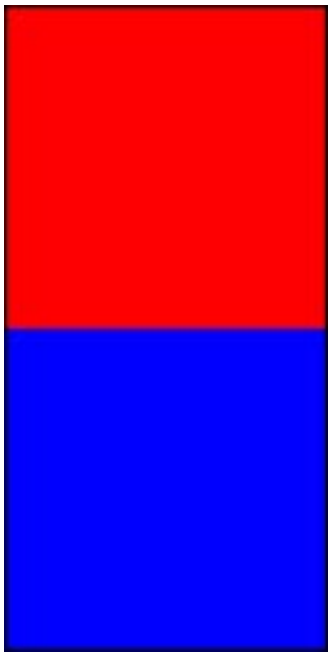
(drawing **not** to scale)

Ocean Temperatures | Bins

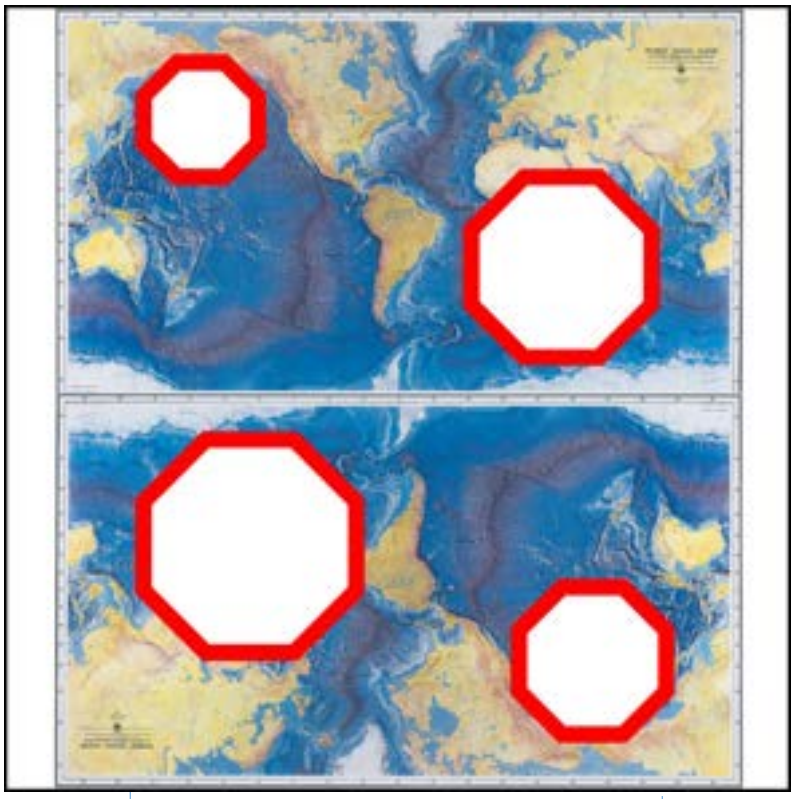




- Single bin
  - ½ **Red**, ½ **Blue**
- Divider in the middle (not shown)
- Place marker in correct side based on your choice



Mapping | Torpedoes

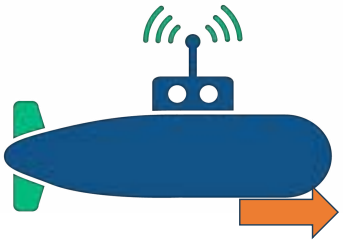


Floor

(drawing **not** to scale)

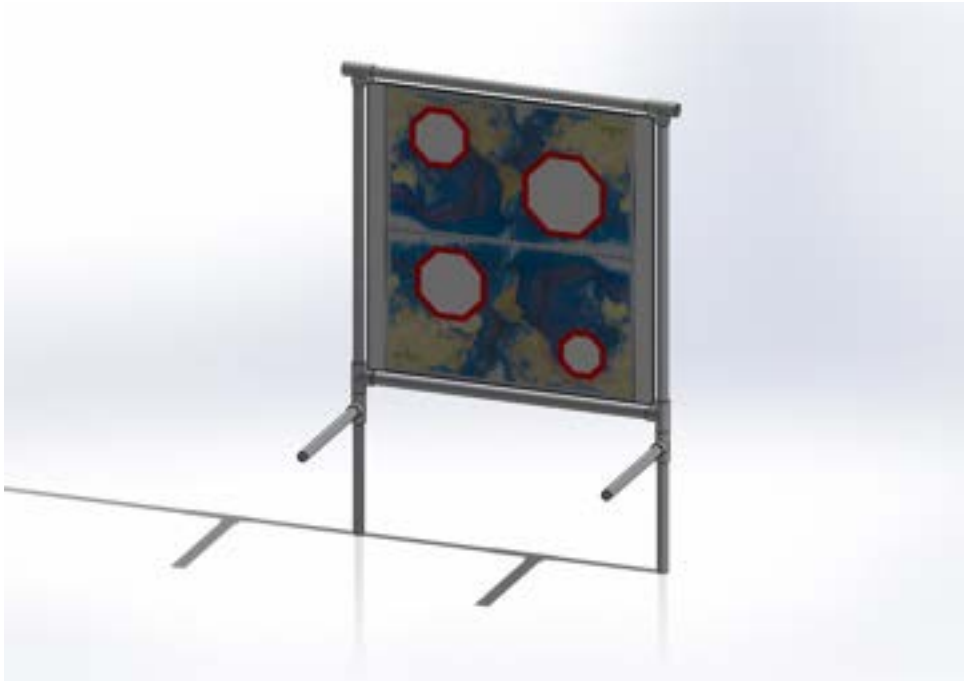
- The panel has four different openings
  - Smaller opening = more points
  - Can not obtain points twice on same opening

Mapping | Torpedoes



$

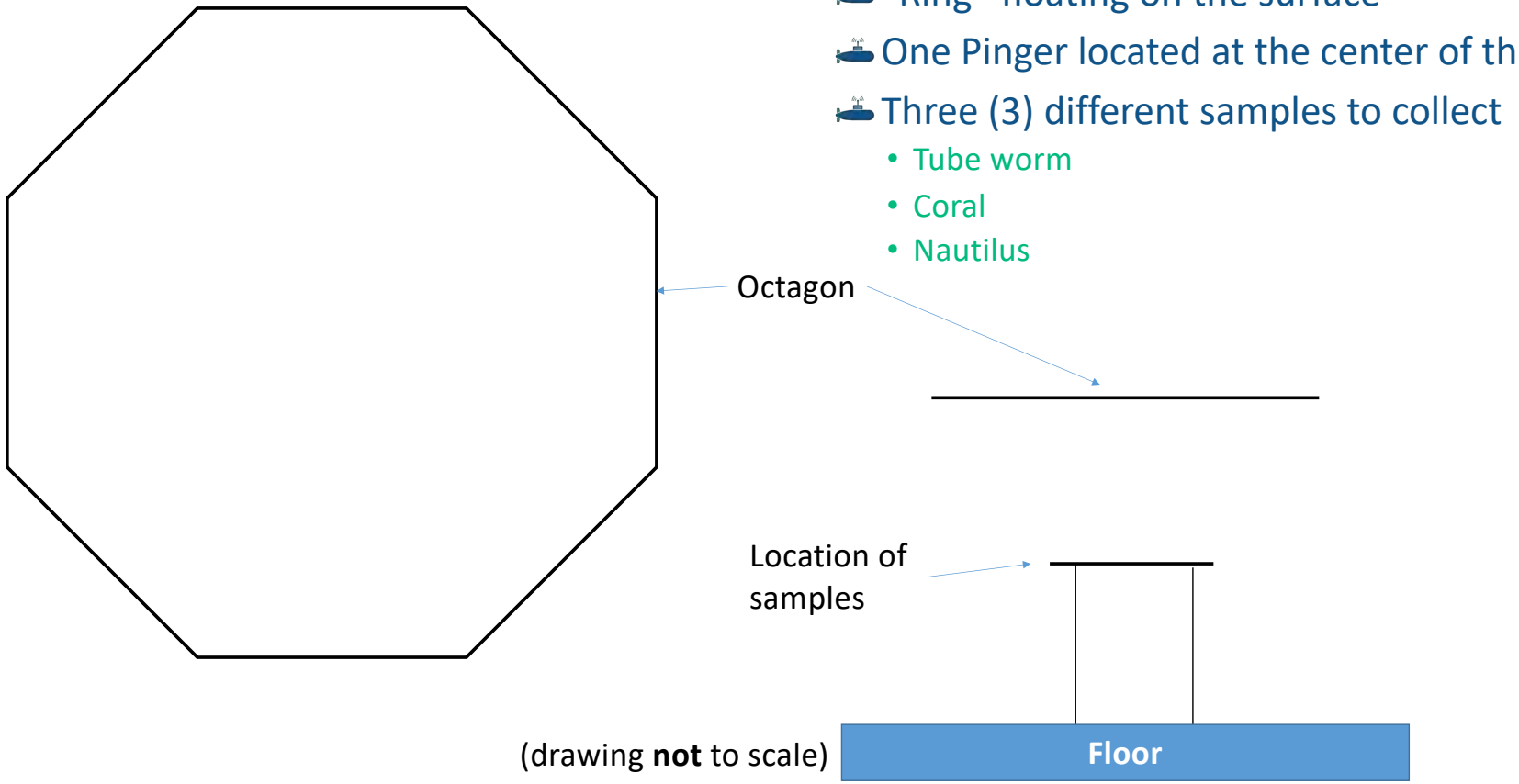
12”
(305mm)



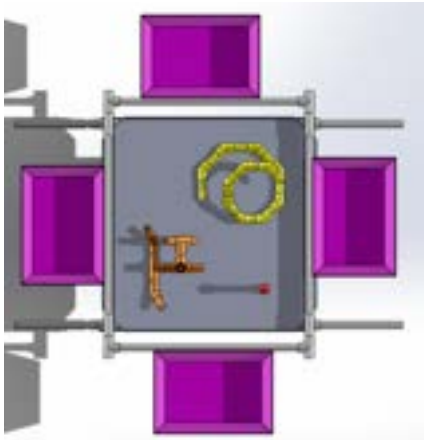
>12” (305mm) more points

Collect Samples | Octagon

- "Ring" floating on the surface
- One Pinger located at the center of the octagon
- Three (3) different samples to collect
  - Tube worm
  - Coral
  - Nautilus



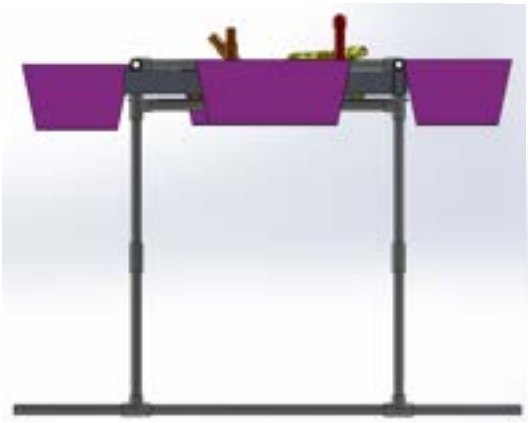
Collect Samples | Octagon



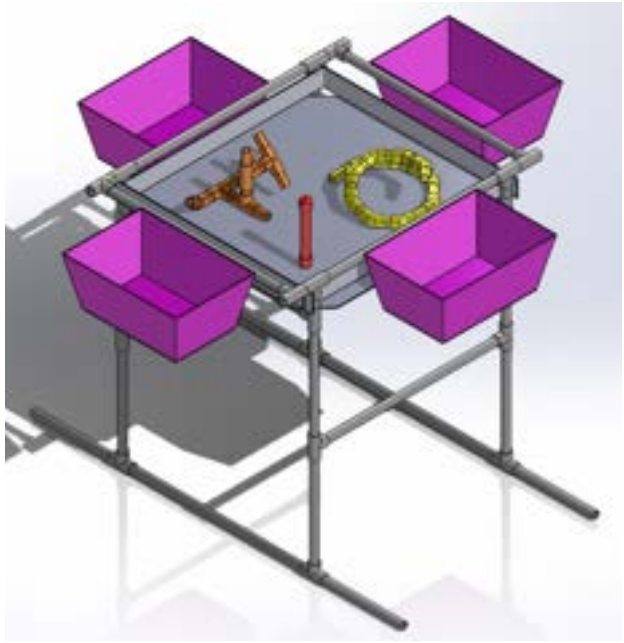
Tube Worm

Coral

Nautilus



- 3 samples in the center (PVC structures).
  - Tube worm
  - Coral
  - Nautilus
- Place each one in a collection bin



Collect Samples | Octagon

Krylon Fusion
Matte Red Pepper

Krylon Fusion
Gloss Sunbeam

(6) 3/16” - 16

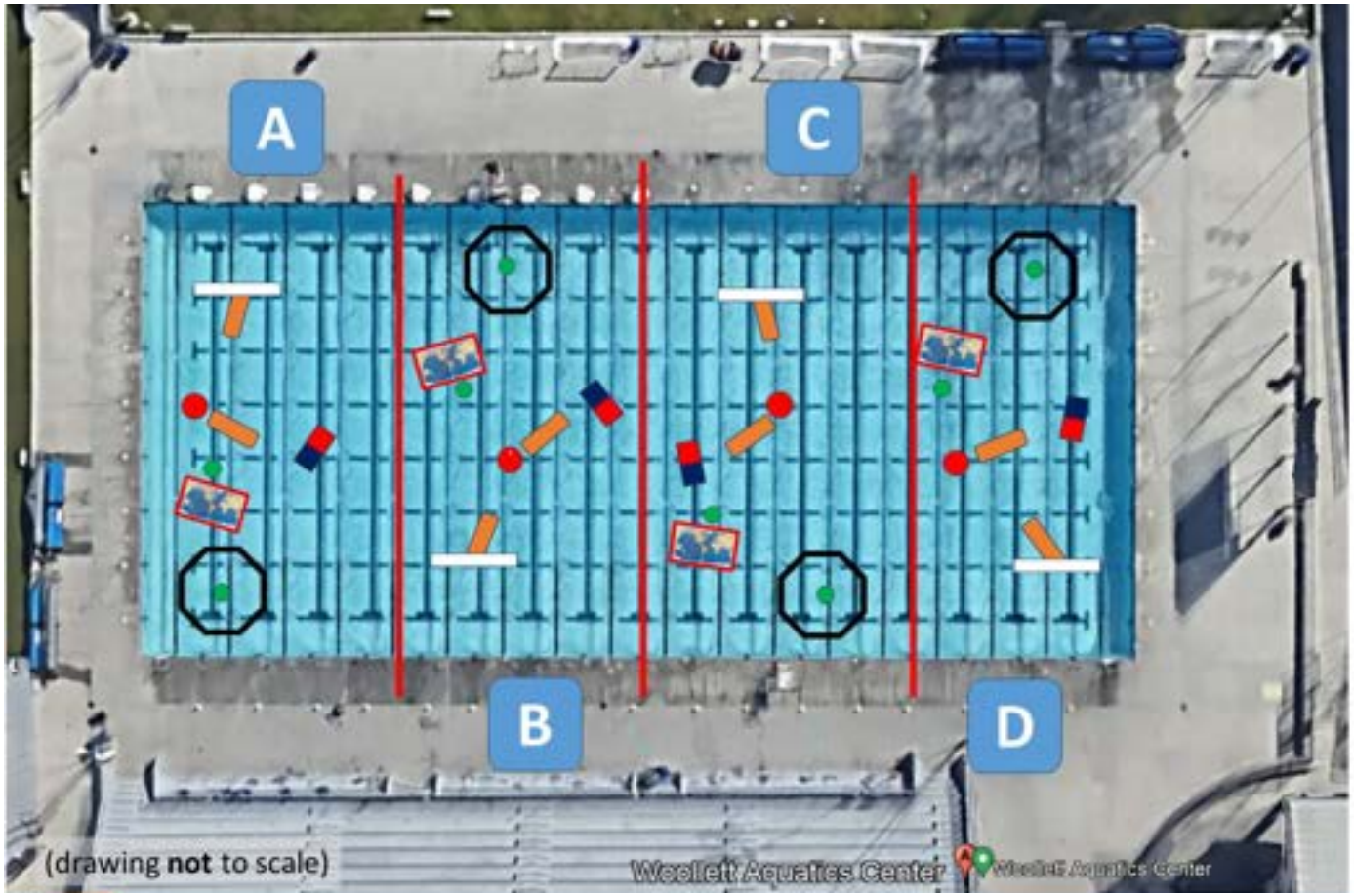
Krylon Fusion
Gloss Popsicle Orange

Collect Samples | Octagon

Finding the tasks

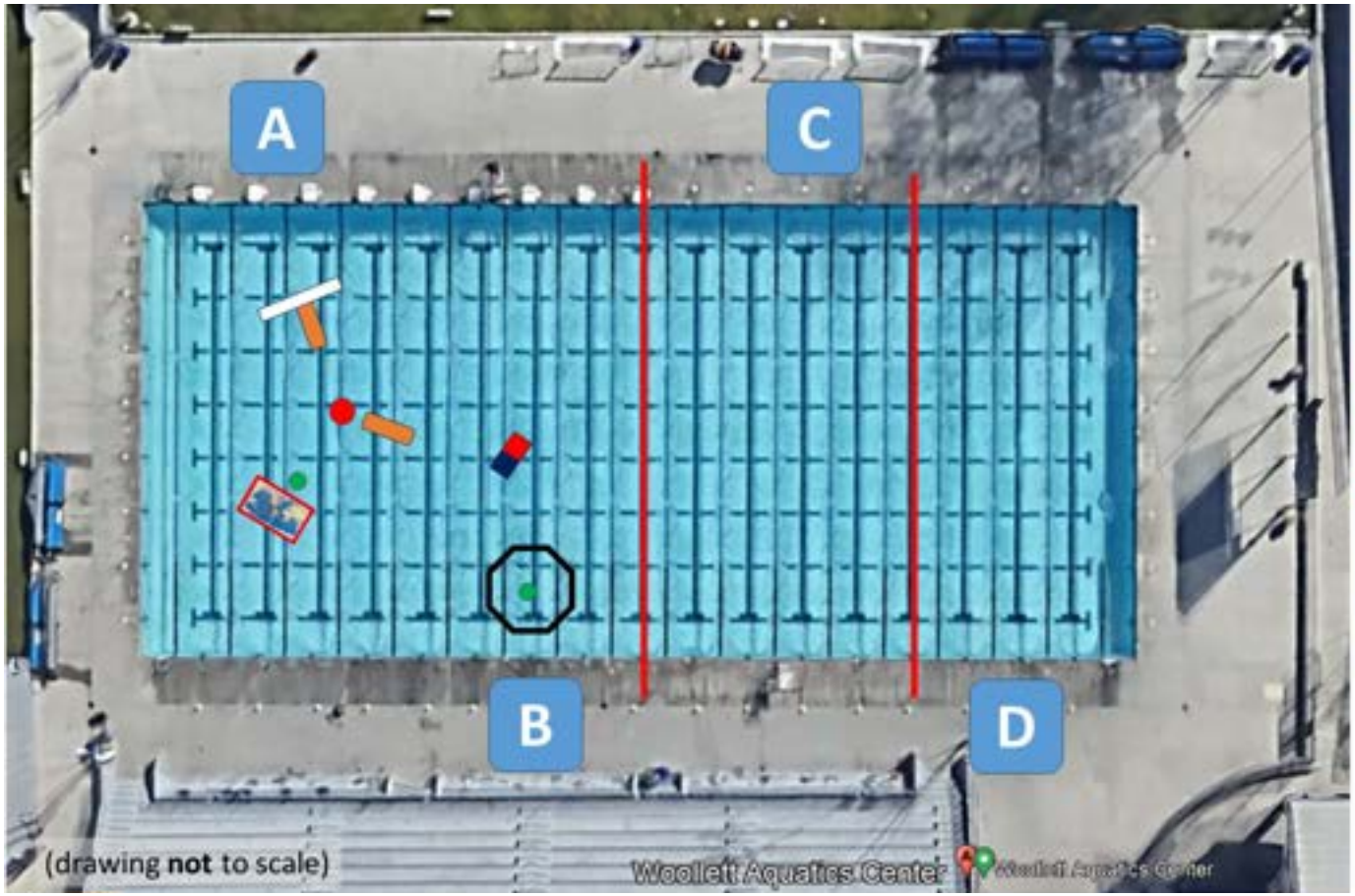
- Path
  - One from Gate to Hydrothermal vent (Buoy)
  - One from Hydrothermal vent (Buoy) to Ocean temperature (Bins)
- Pinger
  - One located at Mapping (Torpedoes)
  - One located at the center of the octagon

Practice & Semi Finals



Symbol	Item
	Gate
	Path
	Pinger
	Hydrothermal Vent
	Ocean Temperature
	Mapping
	Collect Samples

Finals



Symbol	Item
	Gate
	Path
	Pinger
	Hydrothermal Vent
	Ocean Temperature
	Mapping
	Collect Samples

The following teams pre-qualified!

- Carnegie Mellon University (TartanAUV)
- Cornell University (Polaris)
- Duke University (Oogway)
- ETS SONIA (AUV7 & AUV8)
- IIT Bombay (MATSYA 6D)
- The Ohio State University (Talos)
- University of Alberta (Arctos)

There's still time to pre-qualify! We're accepting videos until July 22nd.

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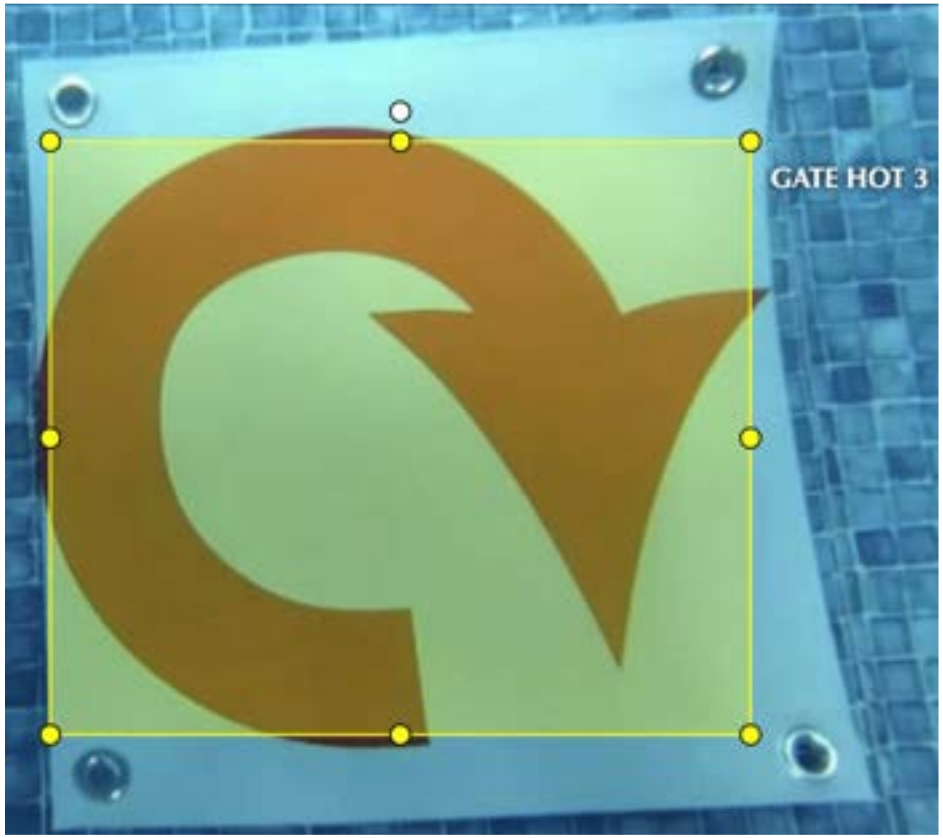
DATA SHARING

Segmented and Bounding Box Labels

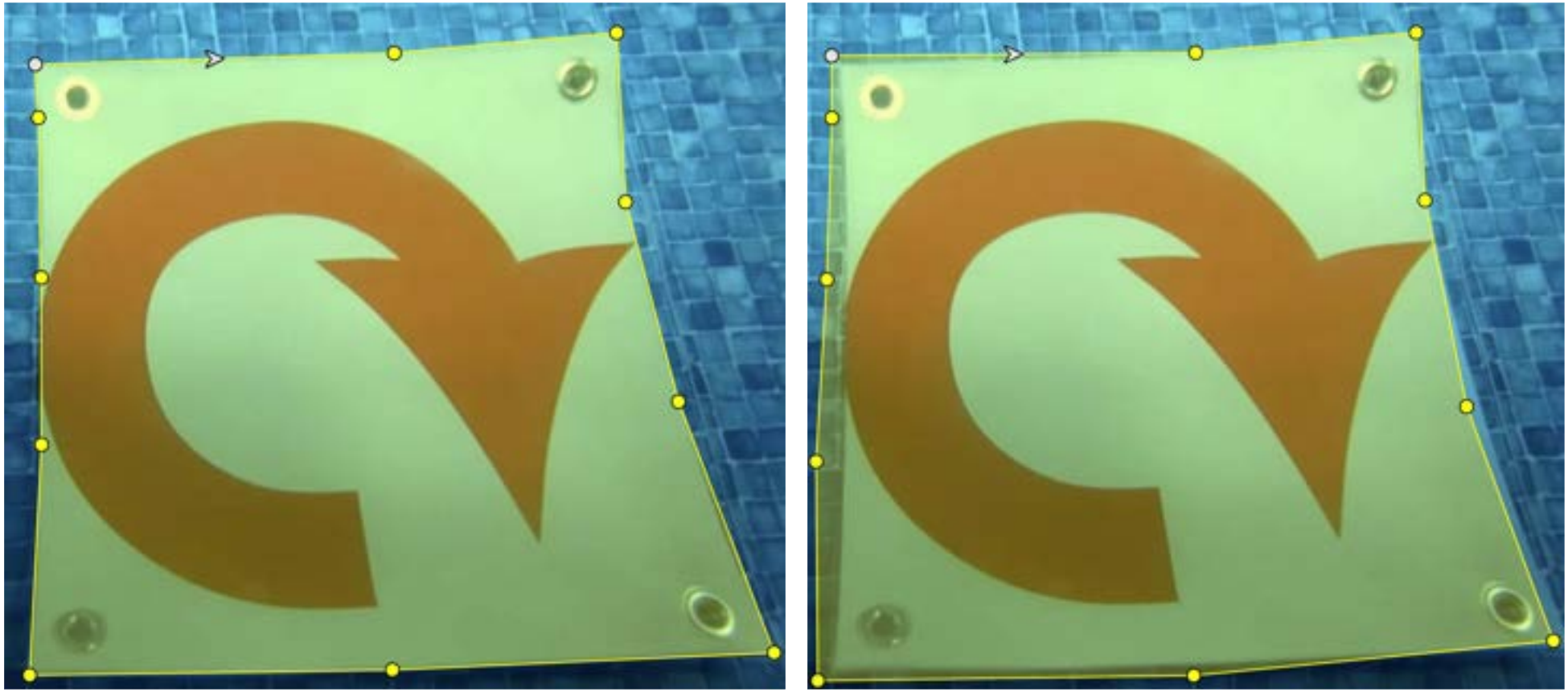
Different Styles

Good vs Bad Labels (Bounding Box)

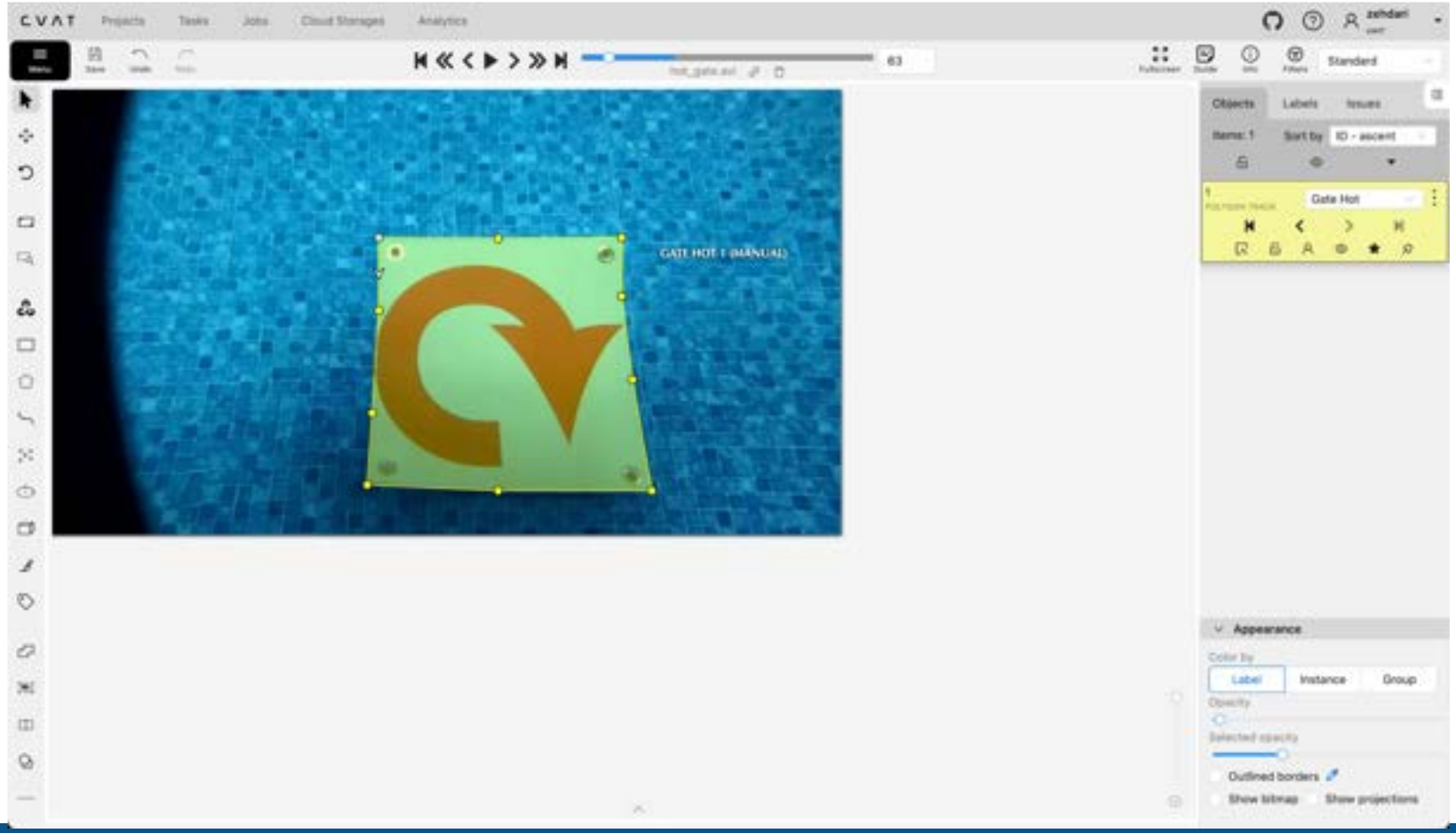
Good vs Bad Labels (Bounding Box)



Good vs Bad Labels (Segmented)



CVAT


CVAT
Projects
Tasks
Jobs
Cloud Storages
Analytics
Standard
Objects
Labels
Issues
Items: 1
Sort by
ID - ascent
Gate Hot
GATE HOT 1 (MANUAL)
Appearance
Color by
Label
Instance
Group
Opacity
Selected opacity
Outlined borders
Show bitmap
Show projections

On-Site Communications

Discord

All on-site communications will be posted on Discord.

JOIN TODAY!

- Scan the QR Code
- Select the RoboSub24 role
- Turn on notifications

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ROBOSUB

IRVINE, CALIFORNIA | AUGUST 5 - 11, 2024

Checklist

RoboSub.org/2024

Have you:

- ❑ Reviewed the Handbook?
- ❑ Tested your AUV in the water?
- ❑ Figured out your batteries?
- ❑ Secured your Outbound Shipping arrangements?
- ❑ Prepared your Design Presentation?
- ❑ Started your packing lists?
- ❑ Turned on your Discord notifications?

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ROBOSUB

IRVINE, CALIFORNIA | AUGUST 5 - 11, 2024

Checklist

RoboSub.org/2024

GOT QUESTIONS?

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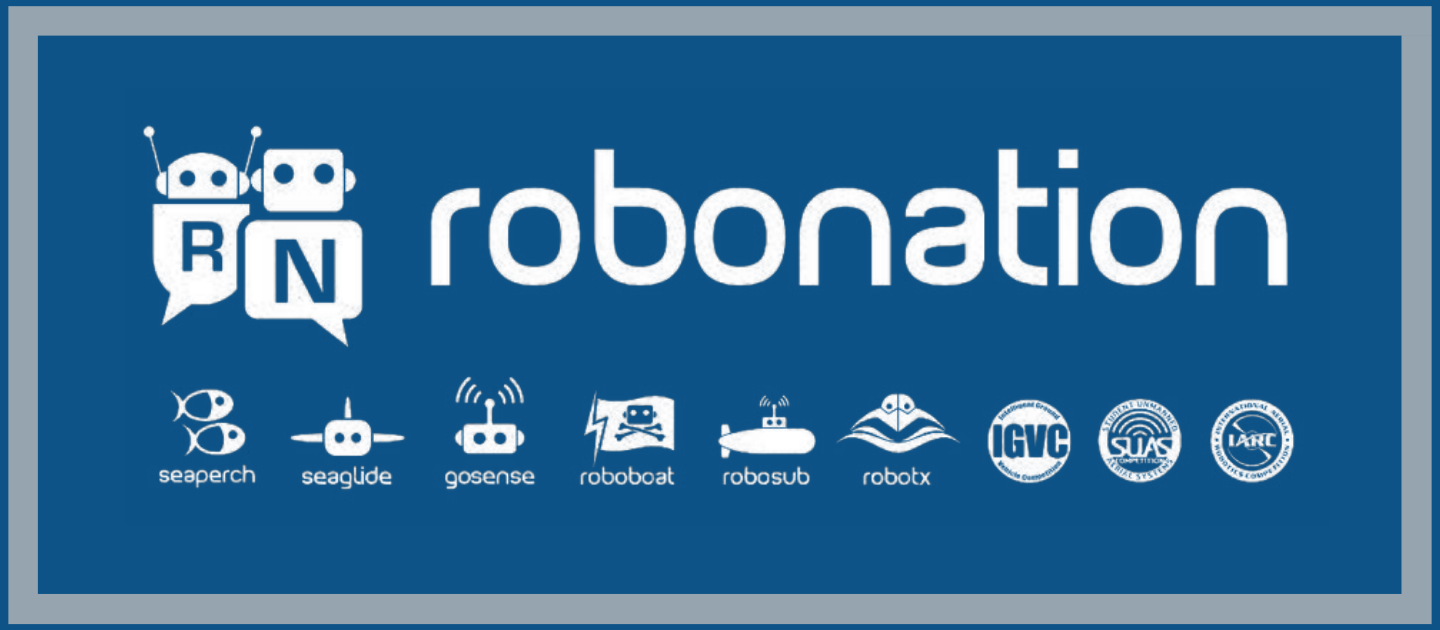

RoboNation is a 501c3 nonprofit organization whose mission is to provide a pathway of hands-on educational experiences that empower students to find innovative solutions to global challenges. Working together with the industry, research and educators, we have grown to include over nine student competitions and programs and engage more than 250,000 students per year.

For more information contact autonomy@robonation.org