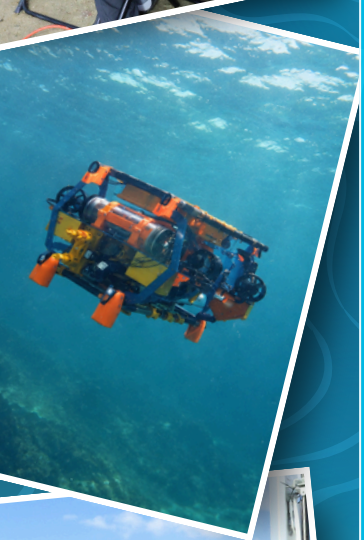
robotx

POWERED BY robonation







2026 STORM RESPONSE robotX

2026 MARITIME ROBOTX CHALLENGE

PROMONTORY AT MARINA BAY
09 - 14 NOVEMBER | SINGAPORE

WHAT IS ROBOTX?

The Maritime RobotX Challenge is an international competition where university teams design, build, and operate integrated autonomous systems to complete complex, real-world maritime tasks. Teams combine uncrewed surface vessels (USVs) with uncrewed underwater vehicles (UUVs) and/or uncrewed aerial vehicles (UAVs), using technologies such as perception, communication, and machine learning to demonstrate multi-domain autonomy and advance maritime robotics.

WHAT IS ROBONATION?

RoboNation, a 501(c)(3) nonprofit organisation, is on a mission to provide hands-on robotics education, empowering students to tackle global challenges. With a portfolio of nine educational programs spanning primary school to postsecondary education, we help students build technical skills, grow confidence, and connect their learning to real-world challenges.

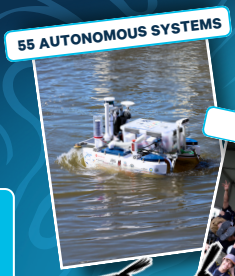
WANT TO KNOW MORE?

Scan to explore the teams, competition missions, and more about RobotX.

robotx.org

@robonation

TEAMS OF 2026





2026 STORM RESPONSE robotx

AUSTRALIA
Flinders University
University of Newcastle Australia

CHILE
Pontificia Universidad Católica de Chile

CHINA
Tongji University

INDIA
RMK Engineering College

INDONESIA
Institut Teknologi Sepuluh Nopember

JAPAN
Kyushu Institute of Technology

PERU
Pontificia Universidad Católica del Perú

SINGAPORE
Nanyang Technological University -Archimedes
Nanyang Technological University -Mecatron
National University of Singapore
Republic Polytechnic
Singapore Institute of Technology
Singapore University of Technology and Design

SOUTH KOREA
Korea Maritime & Ocean University

UNITED STATES OF AMERICA
Advancing Science Technology and Art
Embry-Riddle Aeronautical University
Florida Atlantic University
Georgia Institute of Technology
Lake Superior State University
University of Florida
University of Louisiana at Lafayette

10 COUNTRIES



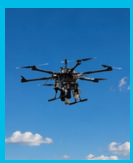
MEET THE VEHICLES



USV
Uncrewed Surface Vehicle
On the water



UUV
Uncrewed Underwater Vehicle
Underwater



UAV
Uncrewed Aerial Vehicle
In the air

ORGANISING PARTNERS

FSTD
OPS-TECH • FUTURE-READY

Office of Naval Research ONR Science & Technology

NUS National University of Singapore

RN robonation

robotx.org

ROBOTX SINGAPORE 2026

COMPETITION TASKS

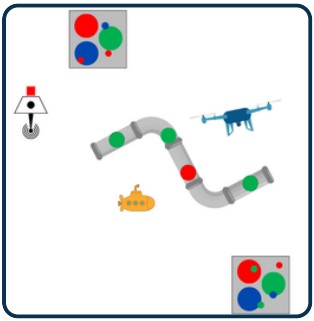
1 MISSION TASK

Safe Passage

Minimum Systems Required:
USV (or surfaced UUV), UAV



Teams must prepare an autonomous system of systems to identify hazards and determine a safe route entry point and path through a coastal recovery area. Autonomous surface and aerial vehicles must interpret coloured beacons, avoid obstacles, and navigate between designated entry and exit points while reporting the correct route. Advanced challenges require the systems to adapt to changing hazards, demonstrating coordinated decision-making and autonomous navigation.



MISSION TASK 2

Infrastructure Survey & Repair

Minimum Systems Required: UUV, UAV

Teams must use an underwater vehicle to locate and inspect a damaged harbour pipeline, identifying functional and damaged sections using colour-coded lights. The vehicle must report the pipeline's condition and can earn additional points by autonomously positioning a magnetic probe to repair the damaged section. Advanced challenges require the underwater vehicle to communicate with an aerial vehicle to request and coordinate the autonomous delivery of supplies to designated platforms, demonstrating multi-vehicle collaboration and responsive decision-making.

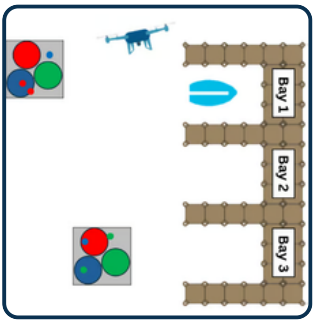
*UAV - Uncrewed Aerial Vehicle
*UUV - Uncrewed Underwater Vehicle
*USV - Uncrewed Surface Vehicle

MORE TASKS AND THEME ON REVERSE

robotx.org

3 MISSION TASK

Coordinated Logistics



Minimum Systems Required:
USV (or surfaced UUV), UAV

Teams must deploy a system of systems to identify a safe docking bay and complete a water delivery challenge by spraying water into a designated target. spraying water into a designated target. In the more advanced tiers, the surface vehicle (USV) must communicate with an aerial vehicle (UAV) to request and coordinate the delivery of relief supplies to specific locations. The task tests autonomous navigation, hazard response and communication between vehicles, demonstrating how coordinated robotic systems can support disaster relief and the delivery of essential resources.

MISSION TASK 4

Dynamic Incident Response

Minimum Systems Required: USV, surfaced UUV, UAV

robocommand

Teams must demonstrate the ability to adapt to unexpected changes by preparing their system of systems to respond to RoboCommand messages that redirect vehicles to new locations or alter mission priorities. Advanced challenges require vehicles to recognise and avoid designated hazard zones, while the most difficult tier introduces the interference of a moving object that vehicles must track and maintain a safe distance from. The task tests real-time communication, autonomous decision-making and coordination between uncrewed systems as they adjust their operations to changing conditions while maintaining mission safety.

The theme, **'Technology in Action for Recovery and Relief'**, explores how uncrewed systems can support disaster response, assess damage, restore critical infrastructure and help communities rebuild stronger following natural disasters. Teams will **autonomously coordinate aerial and underwater vehicles** through real-world-inspired missions simulating coastal port recovery, demonstrating their ability to assess hazards, repair infrastructure, deliver supplies and protect both public safety and the environment.

WANT THE FULL MISSION BREAKDOWN?

Explore the Team Handbook for complete descriptions of all RobotX 2026 mission tasks.

robotx
POWERED BY robonation