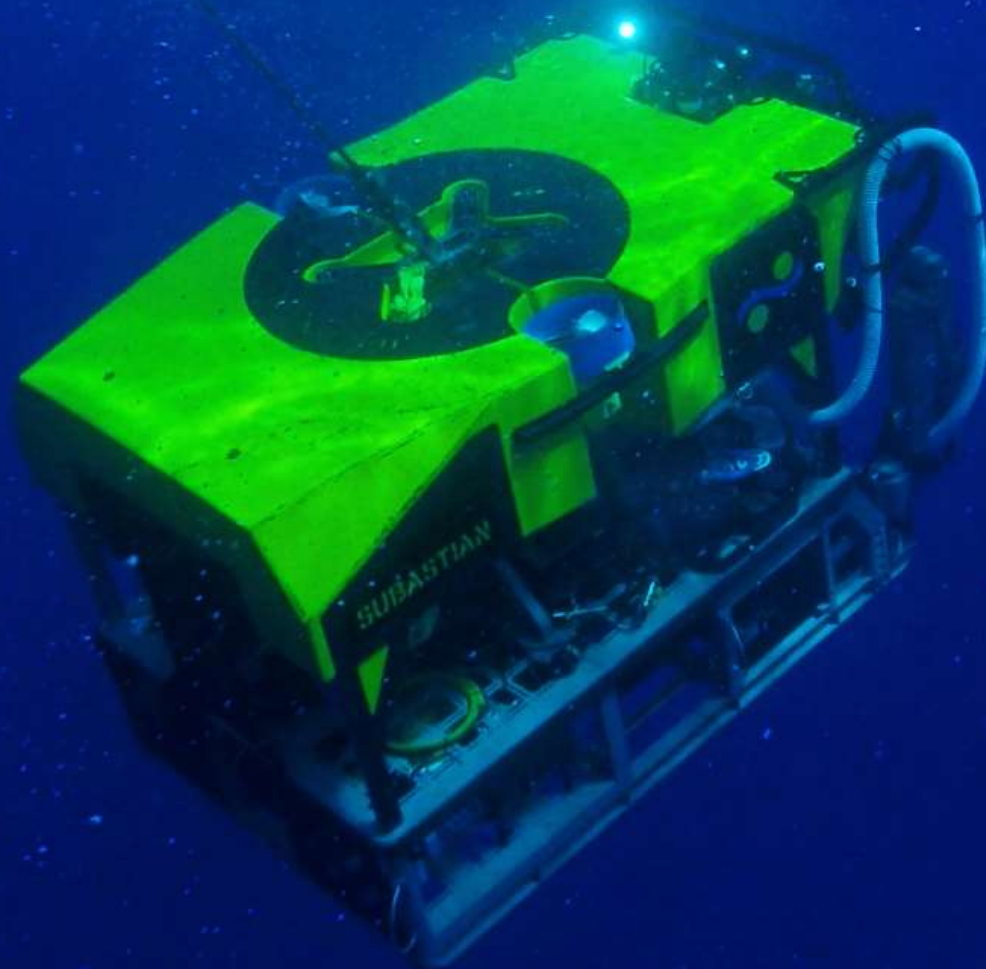




ROV SuBastian a New Free-to-Use 4500 m ROV for the Scientific Community





Brief History of Schmidt Ocean Institute



Schmidt Ocean Institute was founded in 2009 by Eric and Wendy Schmidt to advance the frontiers of ocean exploration and research through innovative technologies, intelligent observation, and open sharing of information

- 2009** – SOI founded, R/V *Falkor* purchased
- 2010** – Dept. of Marine Operations established
- 2011** – Initial Strategic Plan developed
- 2012** – *Falkor* refit and sea trials completed
- 2013** – First year of *Falkor* research cruises,
First datasets shared with the public
- 2016** – Completed construction of 4,500 m ROV



Vision and Mission



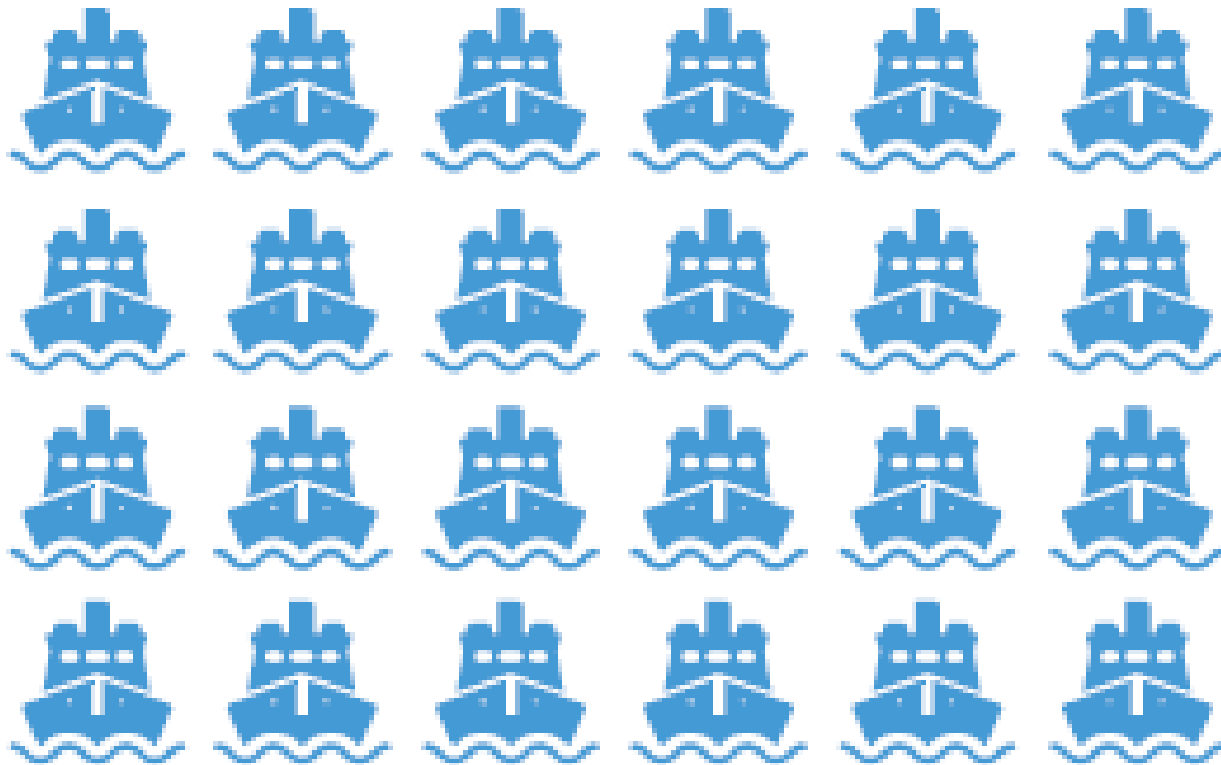
Vision: The world's oceans understood through technological advancement, intelligent observation, and open sharing of information.

Mission: We combine advanced science with state-of-the-art technology

- to achieve lasting results in ocean research,
- to catalyze open sharing of the information,
- and to communicate this knowledge to audiences around the world.



Schmidt Ocean Institute



SINCE 2012

36

MISSIONS INCLUDING

727

SCIENCE DAYS



SINCE 2013 FALKOR'S MULTIBEAM AND ECHO SOUNDER SYSTEM MAPPED

388,631

SQ. KM OF OCEAN FLOOR

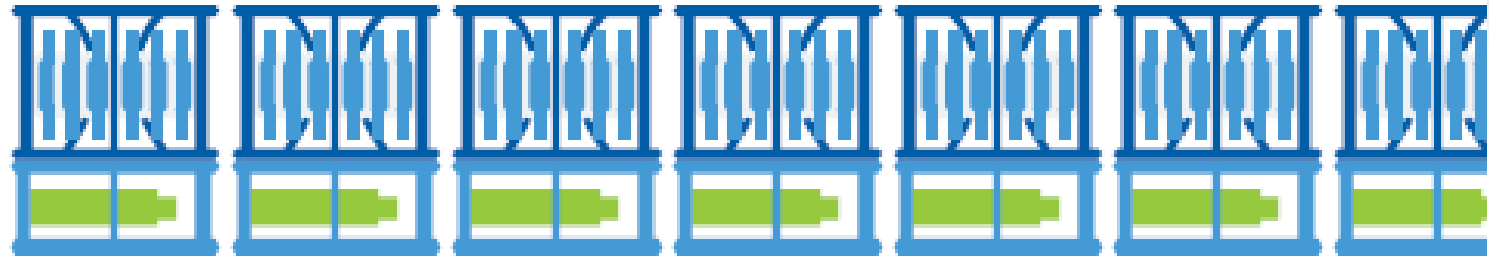
AN AREA LARGER THAN MOST EUROPEAN COUNTRIES.

Schmidt Ocean Institute



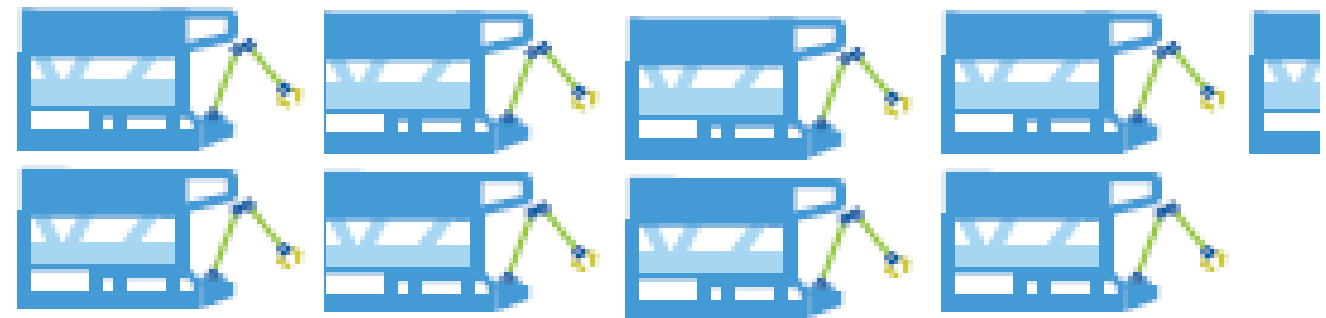
685

CTD CASTS



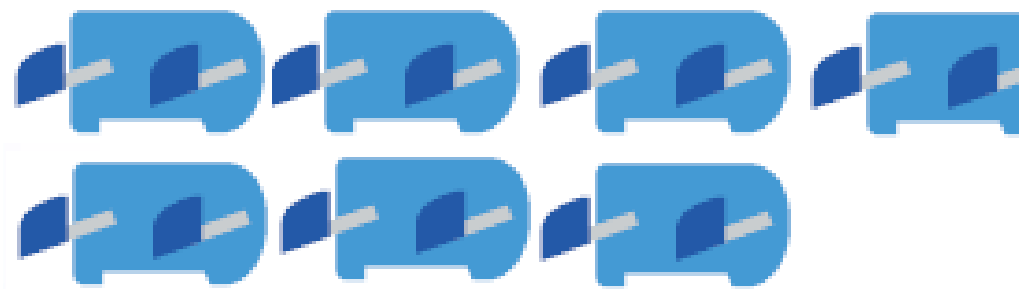
208

ROV DIVES



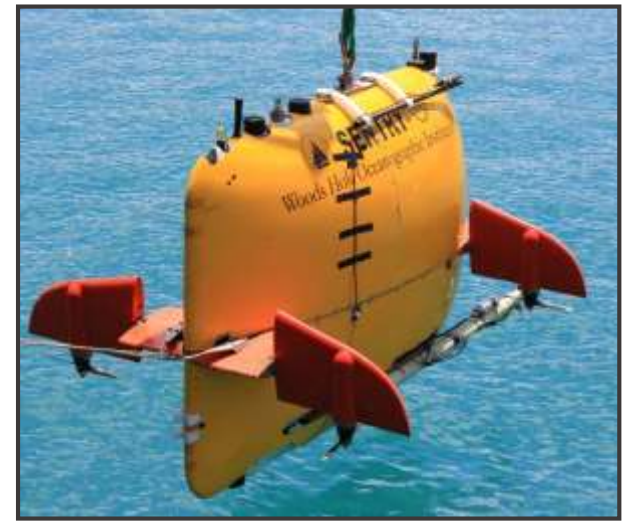
68

AUV DIVES



 = 100  = 25  = 10

Previous Underwater Vehicles



ROV SuBastian Overview



- Designed, built & depth rated tested by SOI in 18 months
- Designed around constraints of *Falkor*
- Designed to be modular
(can be installed on ships-of-opportunity)



- System designed to be maintainable shipboard by SOI ROV Techs
- Outfitted with a suite of sensors and equipment to support data & sample collection, interactive research, experimentation, & technology development

ROV Engineering Team



David Wotherspoon

Vehicle & Technology
Development Manager



Jason Williams

Lead Mechanical Engineer



Nic Bingham

Lead Electrical Engineer



Scott McDaid

Electrical Engineer



Sam Carrick

Systems Engineer



James Cooper

Marine Technician



Daniel Cormany

ROV Supervisor



Russell Coffield

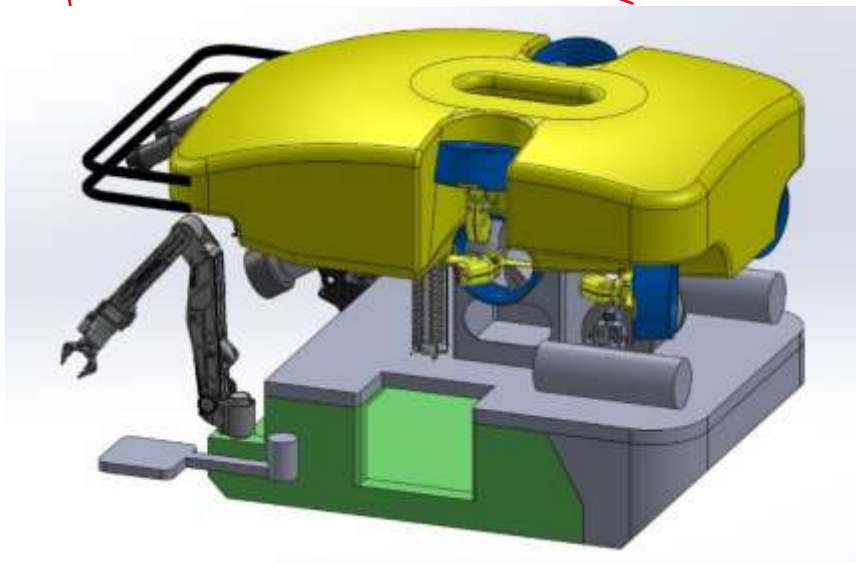
ROV Pilot

ROV SuBastian Concepts



Bumper Bar

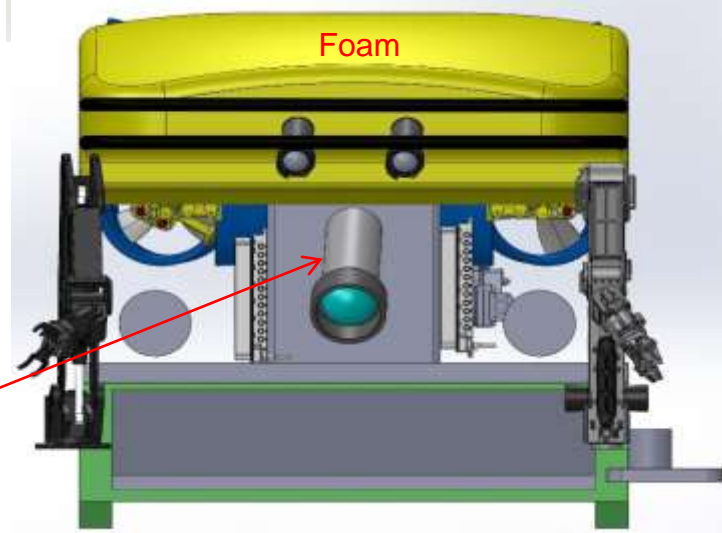
Thruster



Swing Arm

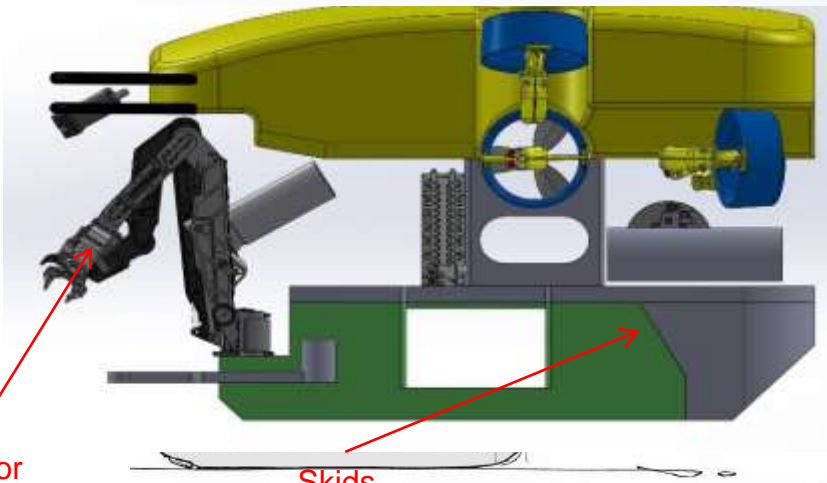
Pressure Housing

Science Camera

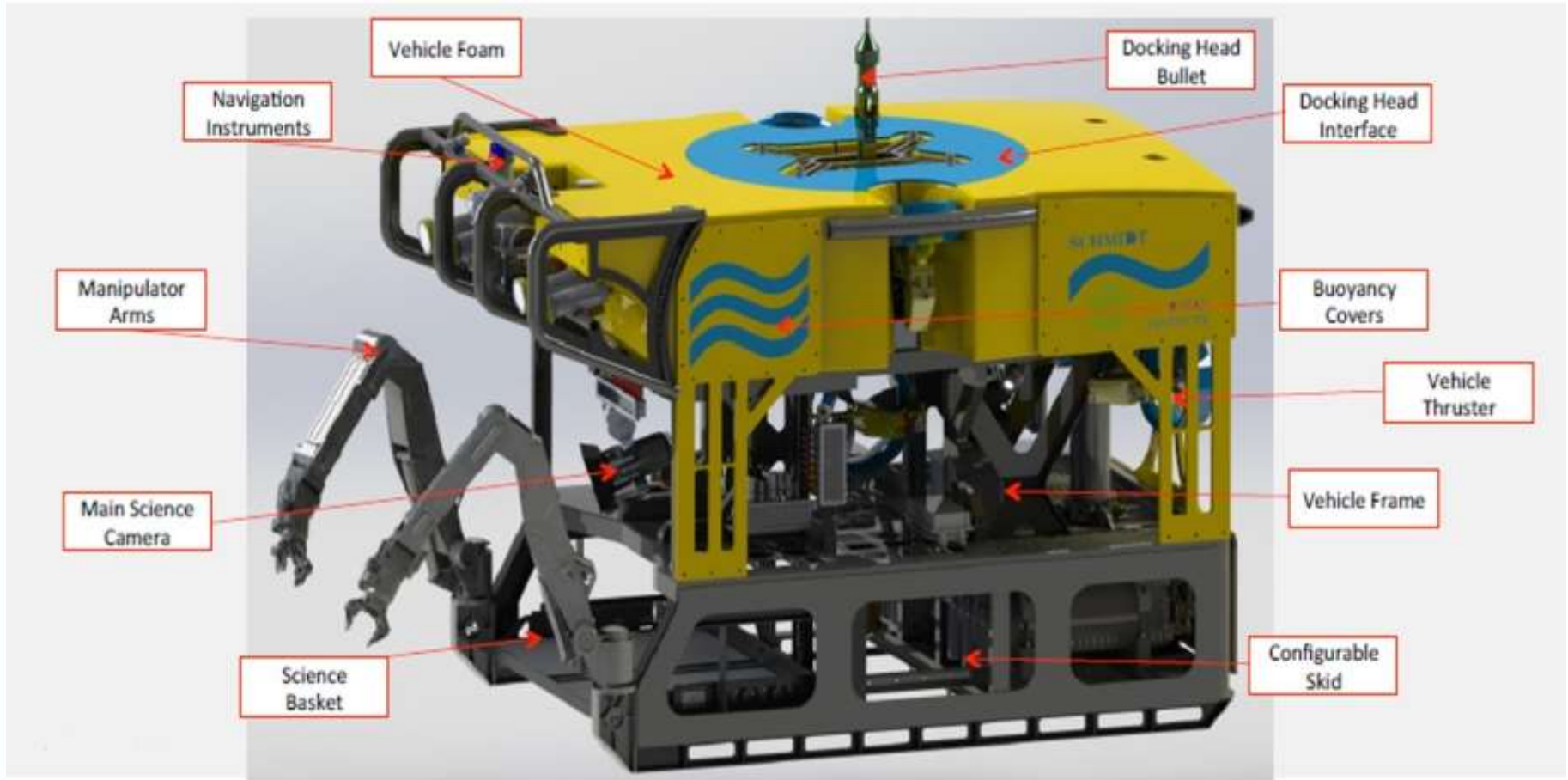


Manipulator

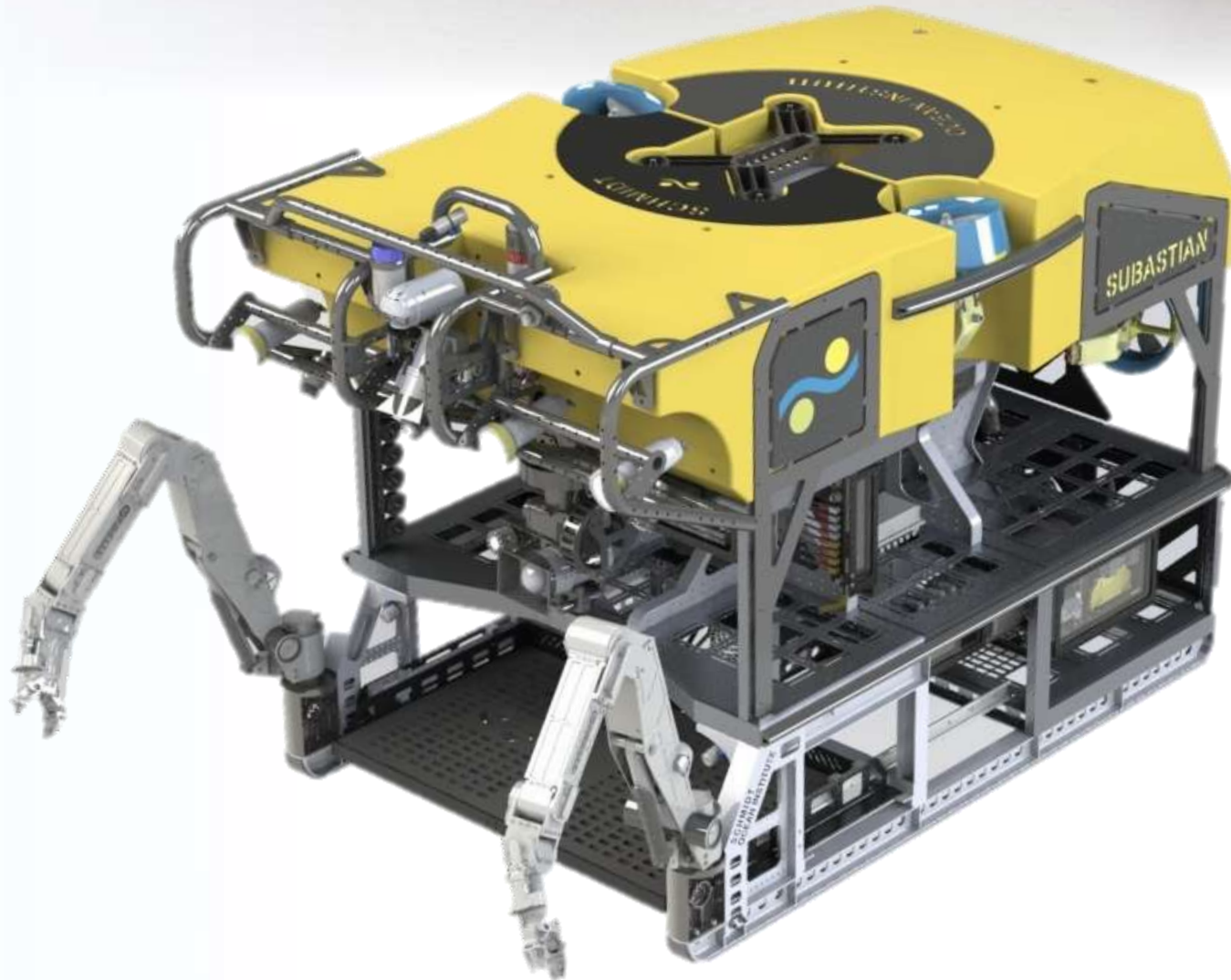
Skids



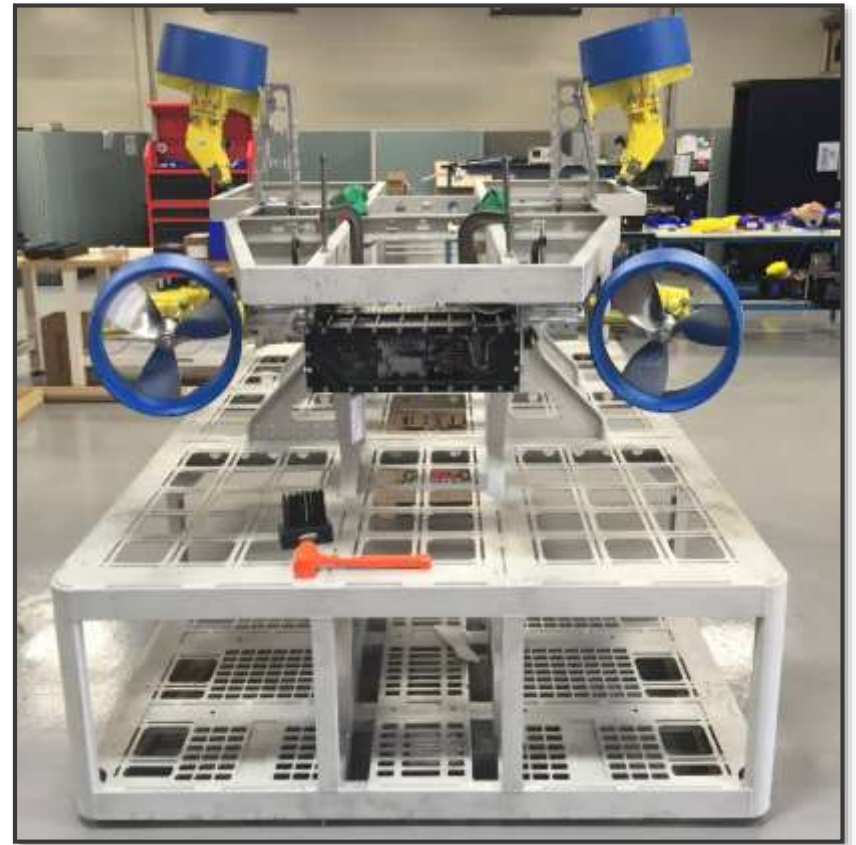
ROV SuBastian Detailed Arrangement



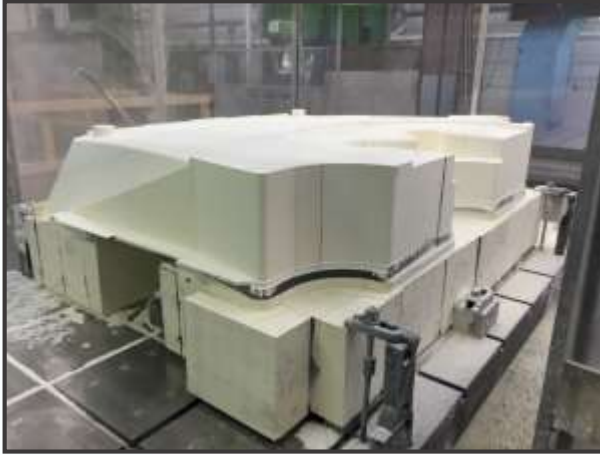
ROV SuBastian Detailed Arrangement



ROV SuBastian Frame



ROV SuBastian Floatation



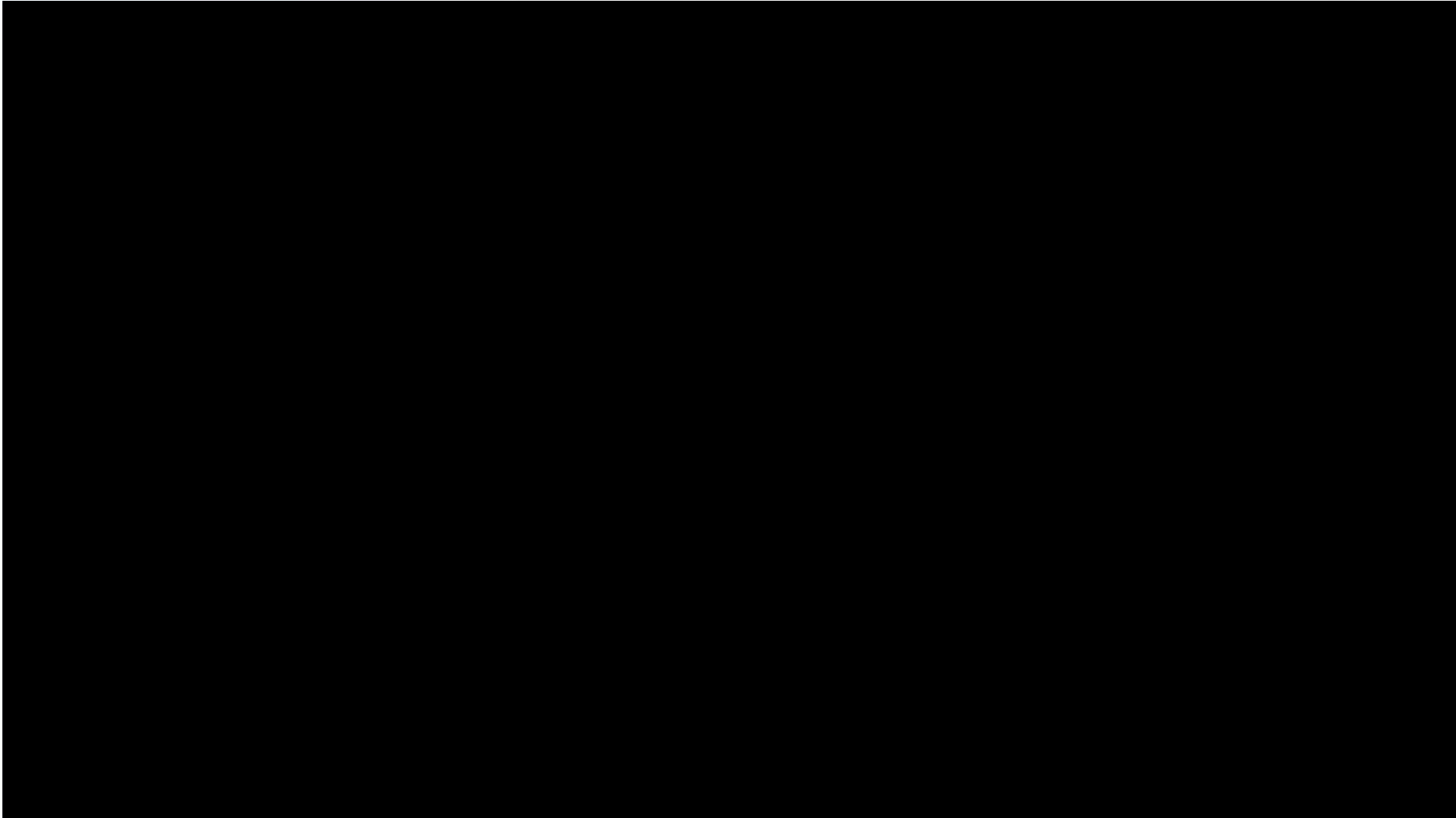
ROV SuBastian Cans "Brains"



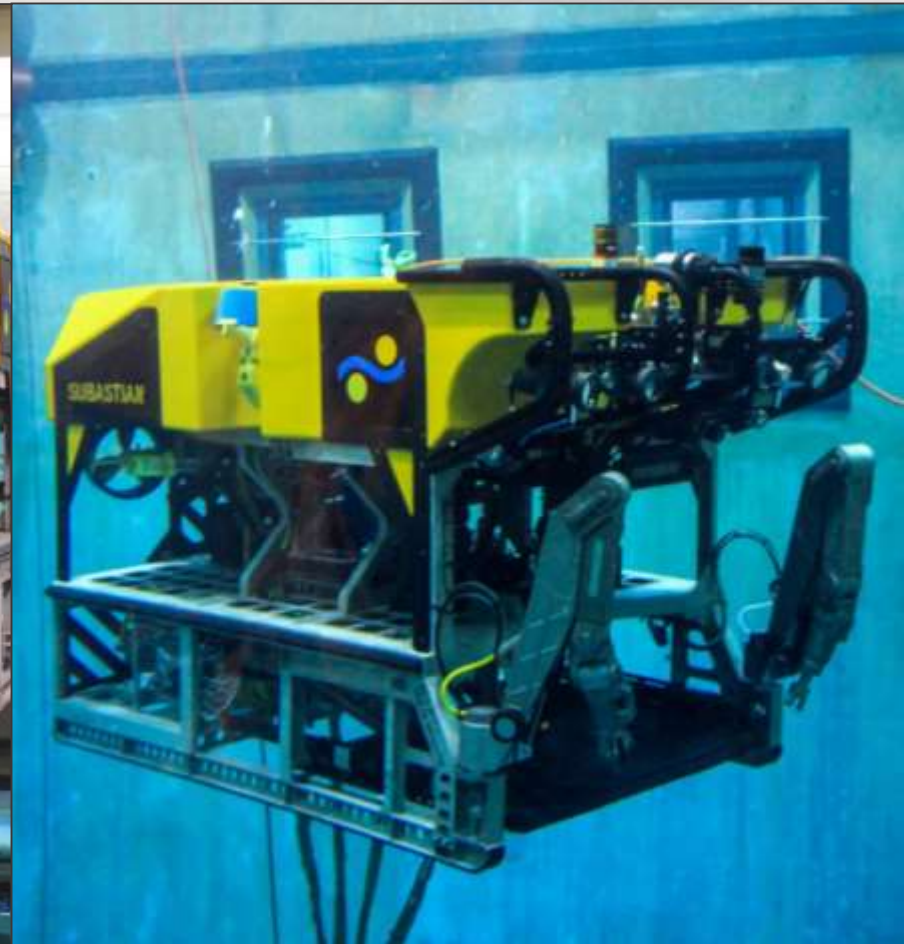
ROV SuBastian Controls



A tour of ROV SuBastian



ROV SuBastian Tank Testing



ROV SuBastian Mobilization



ROV SuBastian Integration



ROV SuBastian Sea Acceptance Trials



ROV SuBastian Night Dives



Next Steps



- Nov 2016, Guam – testing & training
- Dec 2016, Guam Hydrothermal Hunt in Mariana Back-arc



Questions?

