



# MIT Sailing System

Adam Traina, MS, MS, MBA

# My Background - Designing High Performance Systems

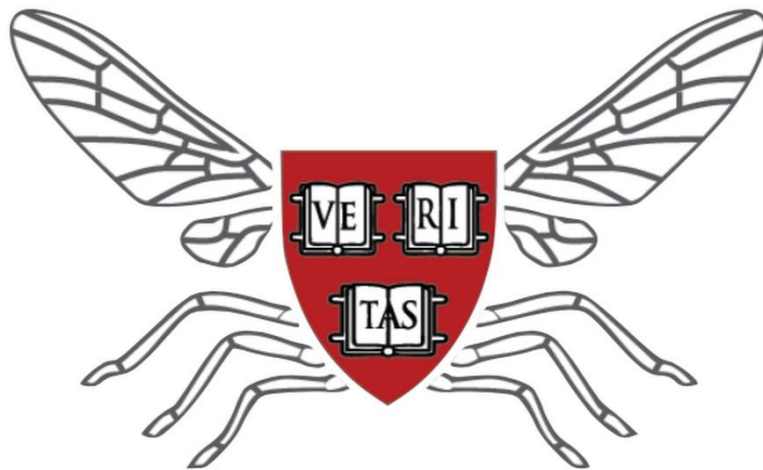


Beth Israel Deaconess  
Medical Center

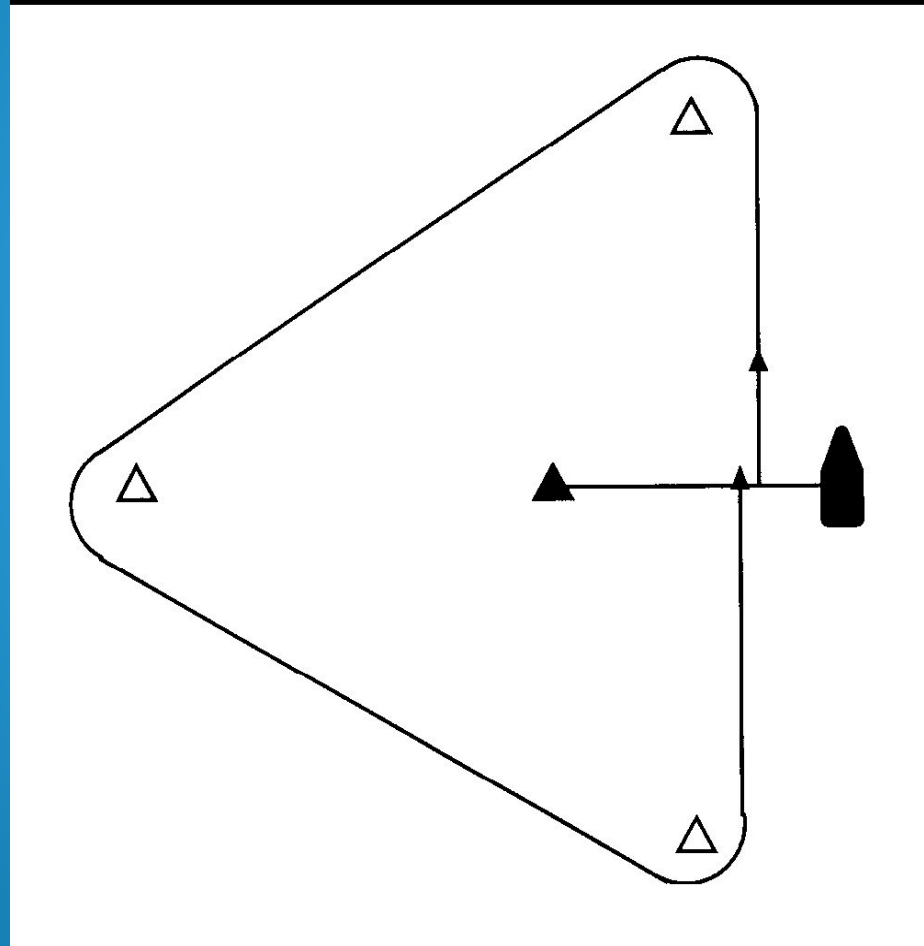
---



HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL



# Competitive Environment: Triangle Course



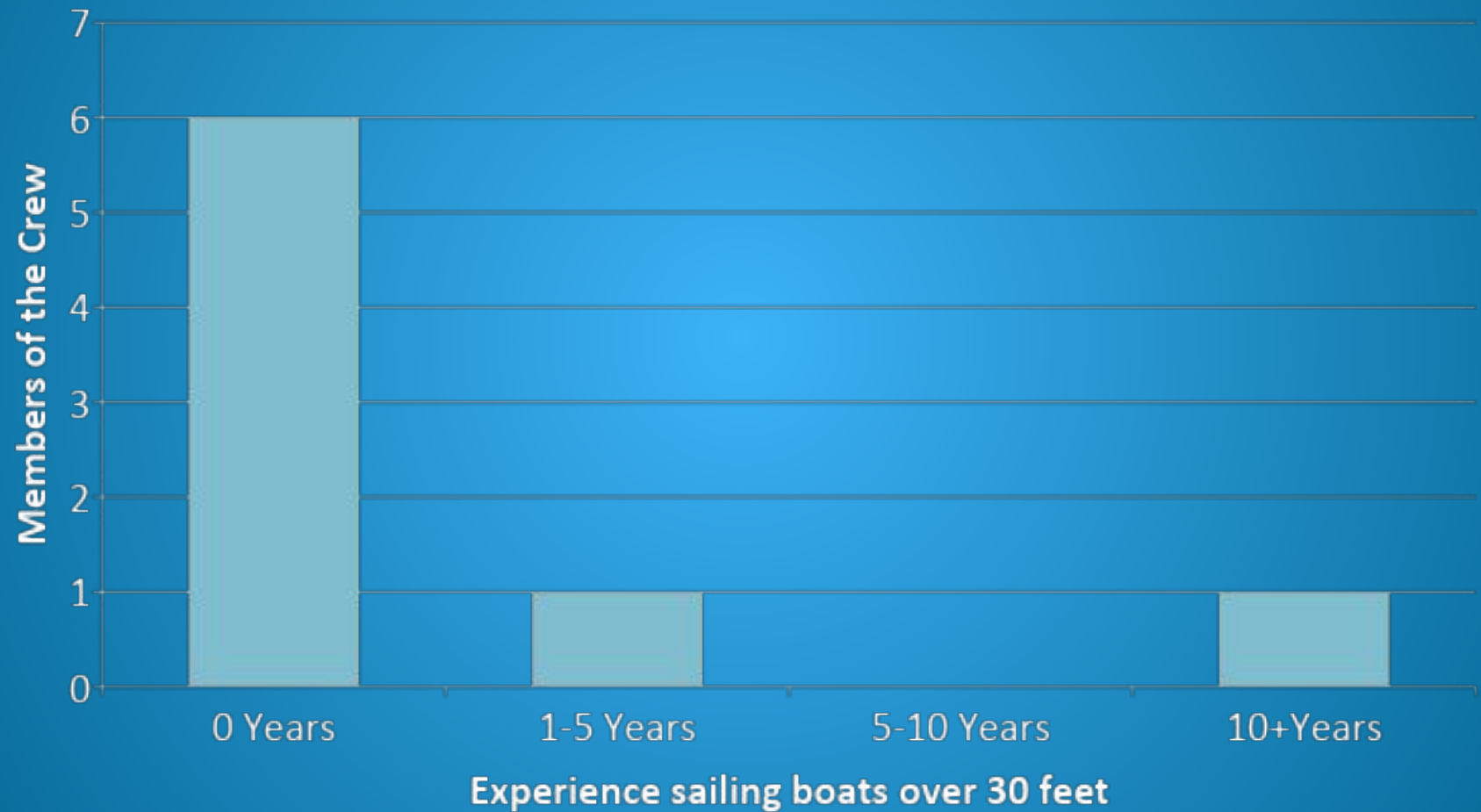
# Management Environment

- Dynamic situations
- Many variables
- Few repeating situations

# Year 1

## Learning the Ropes

# Team Skills

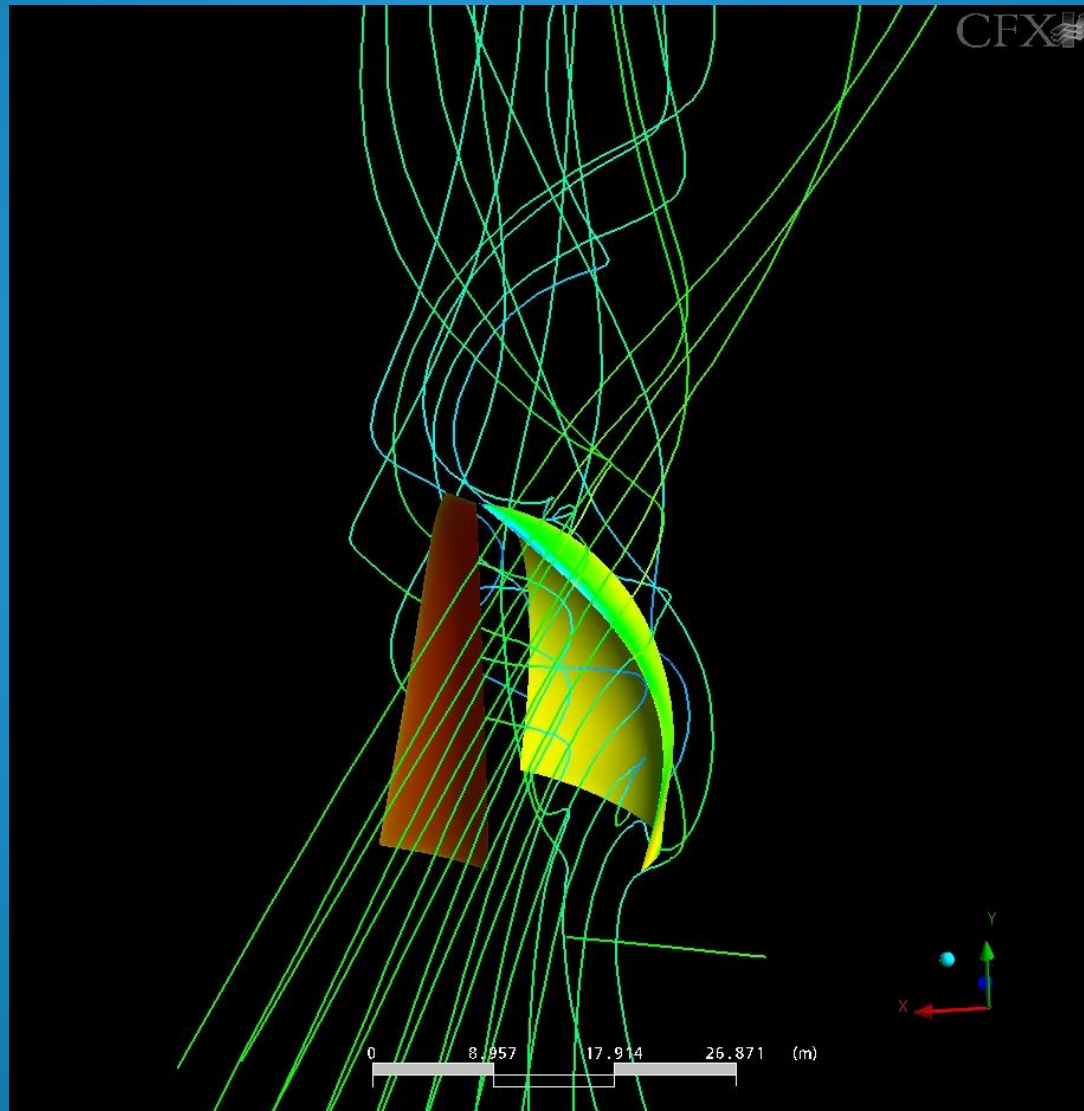




# Fundamentals

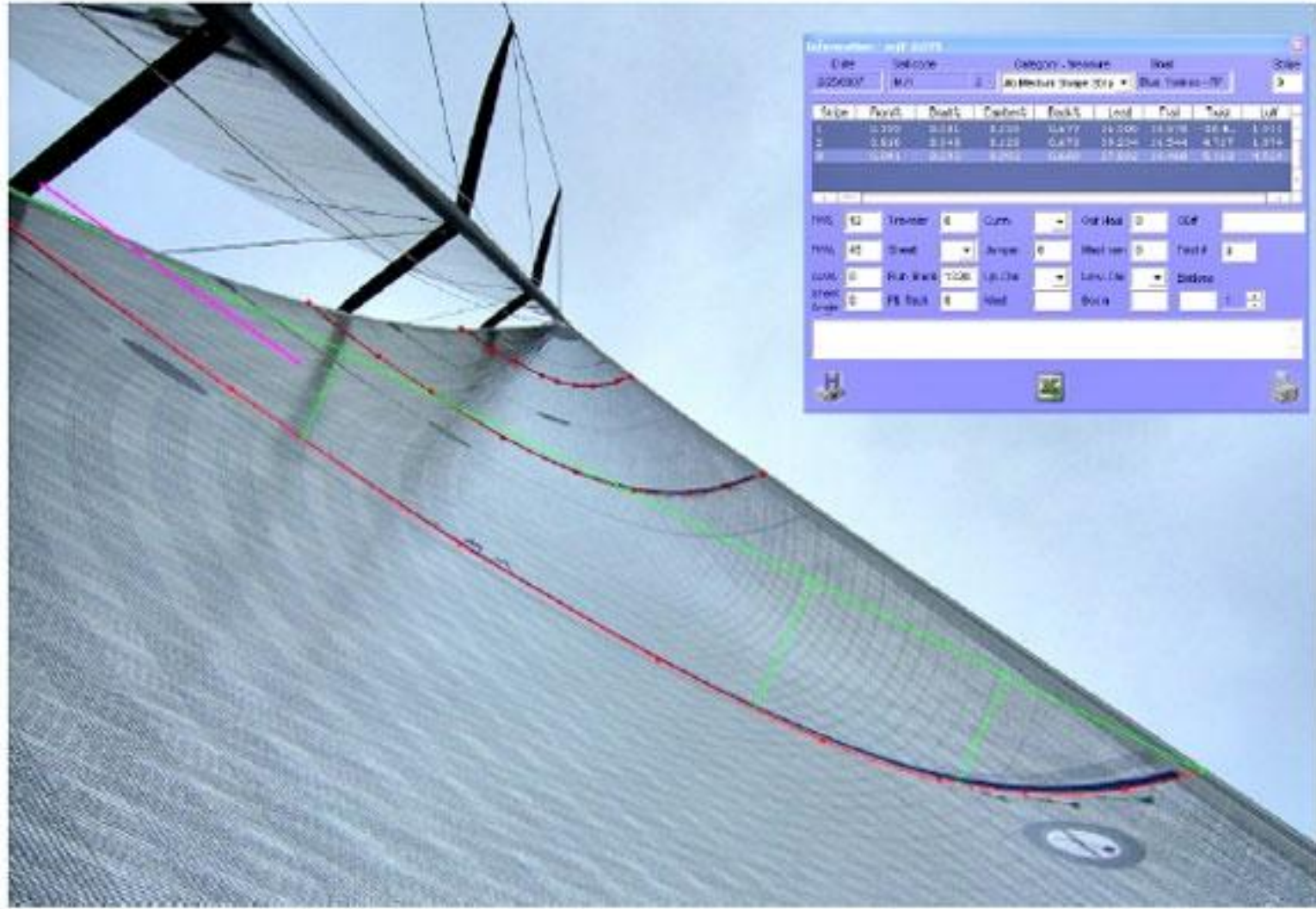


# Sailing is complex





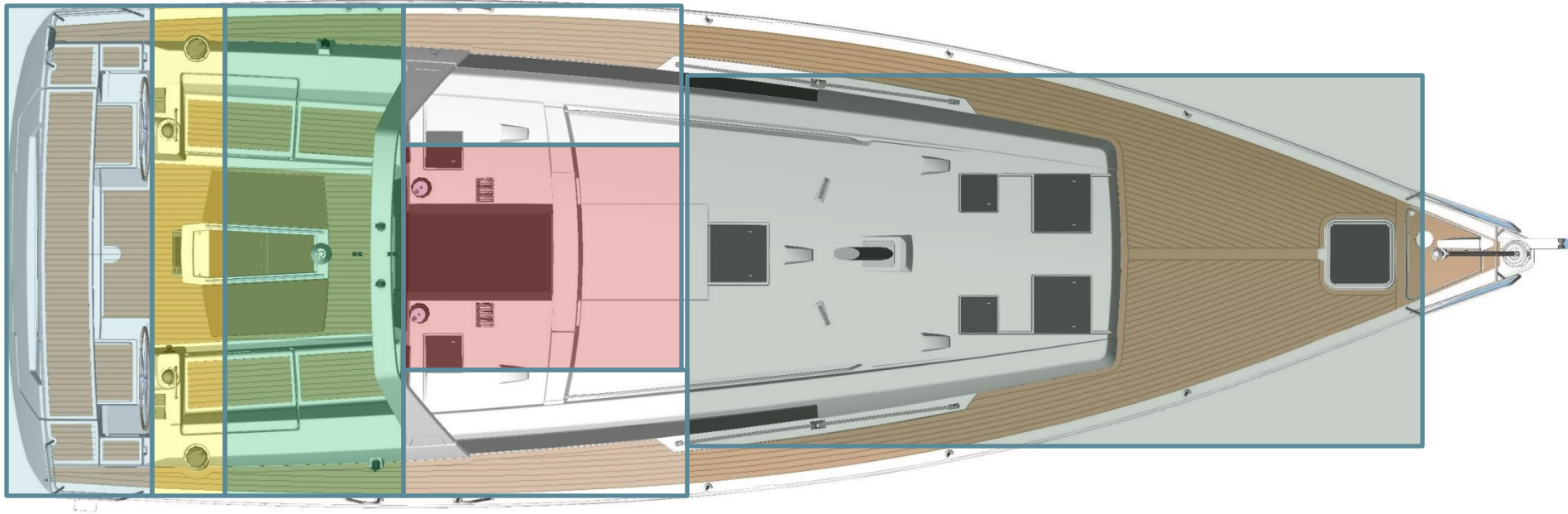
# Noisy Indicators



# One Shot Deployment



# Distribute Responsibility





# Getting Started



# Expectations

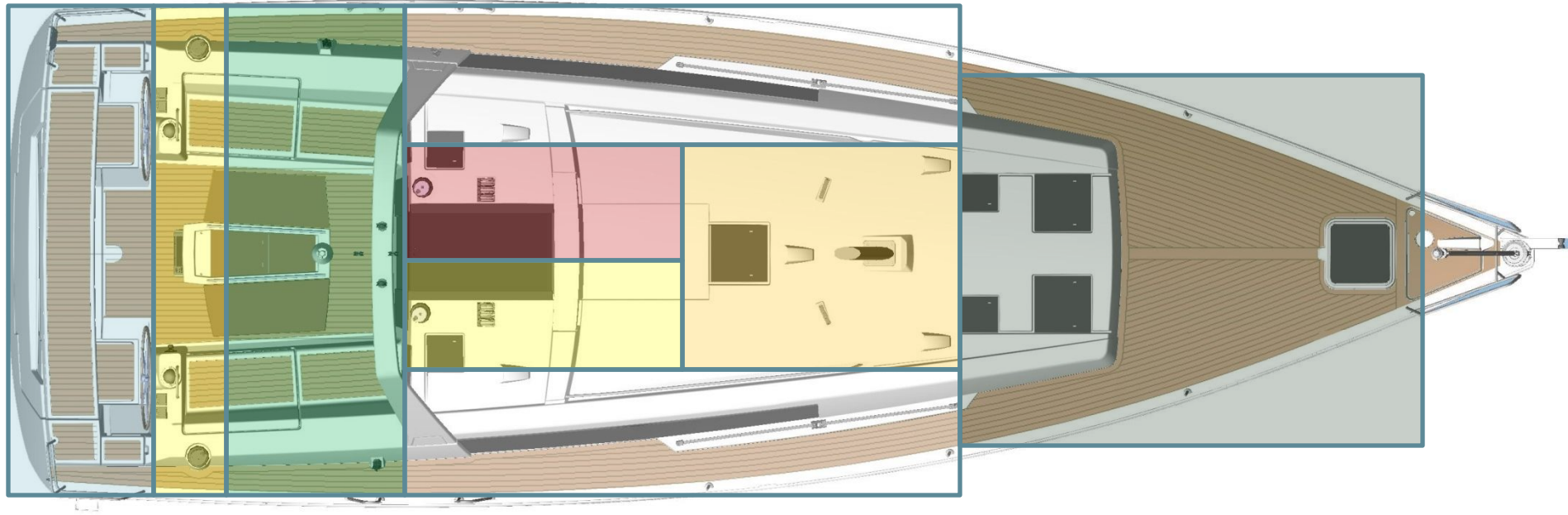




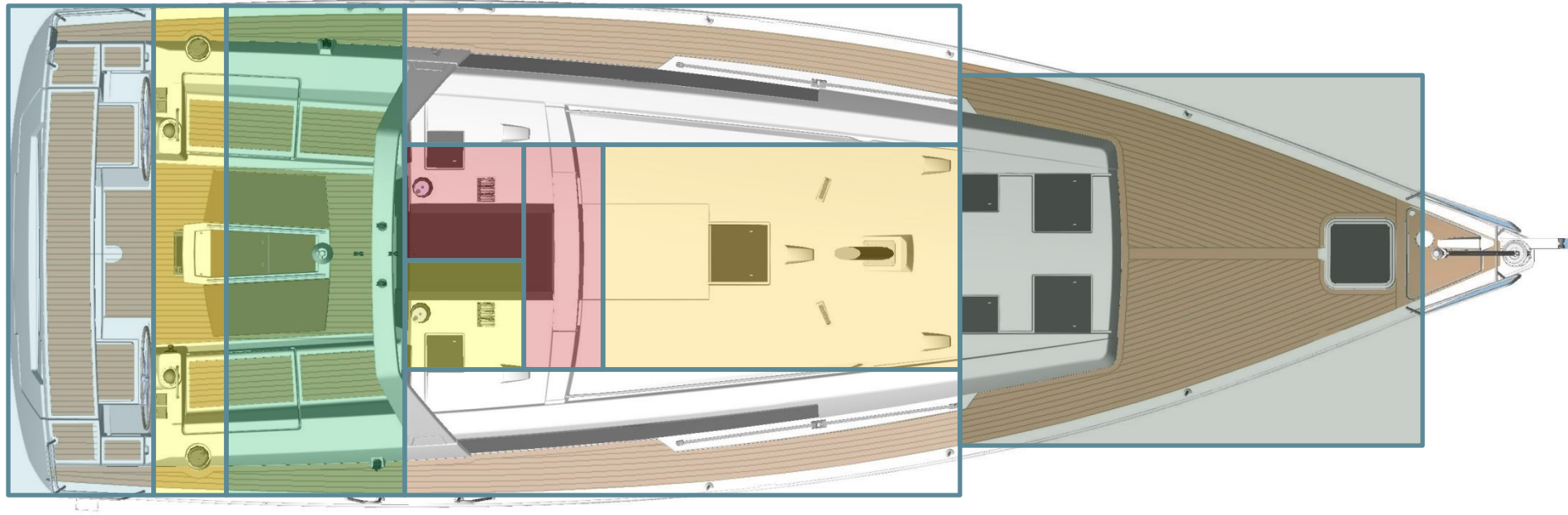
# Actual



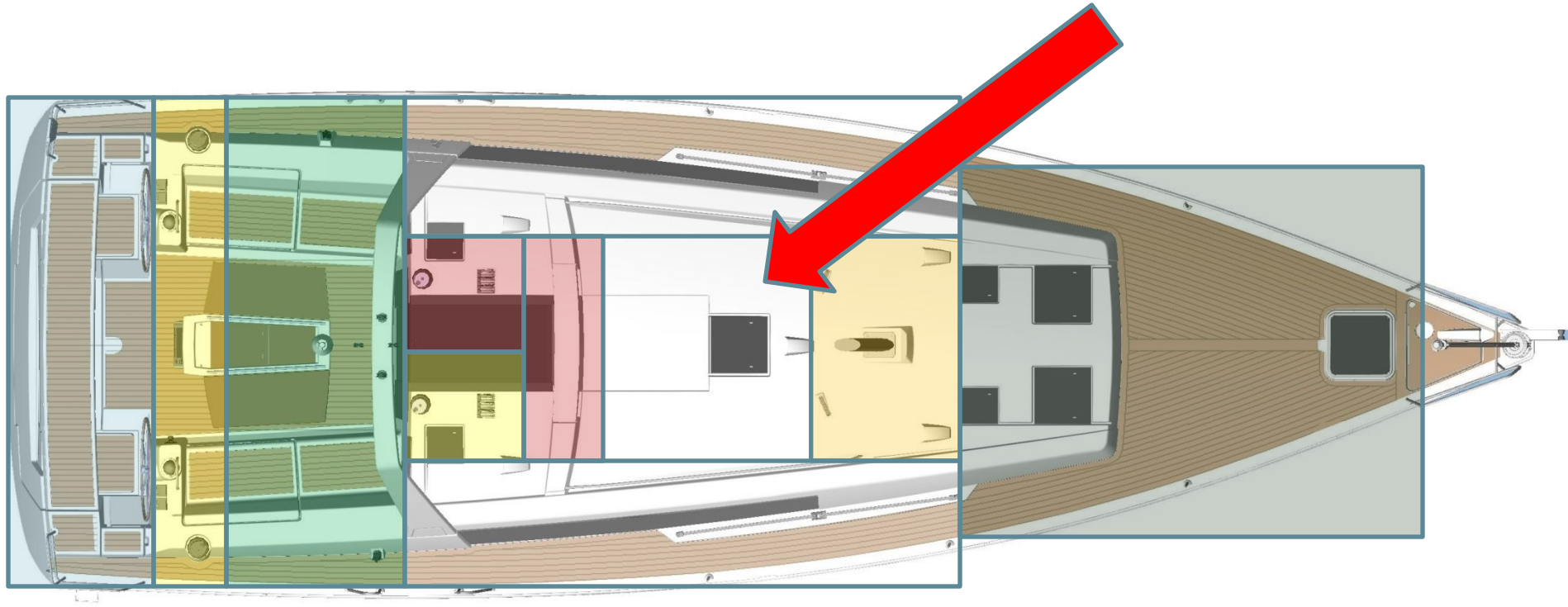
# Re-Distribute Responsibility



# Add Responsibility, Closed feedback



# Safety and Lookout

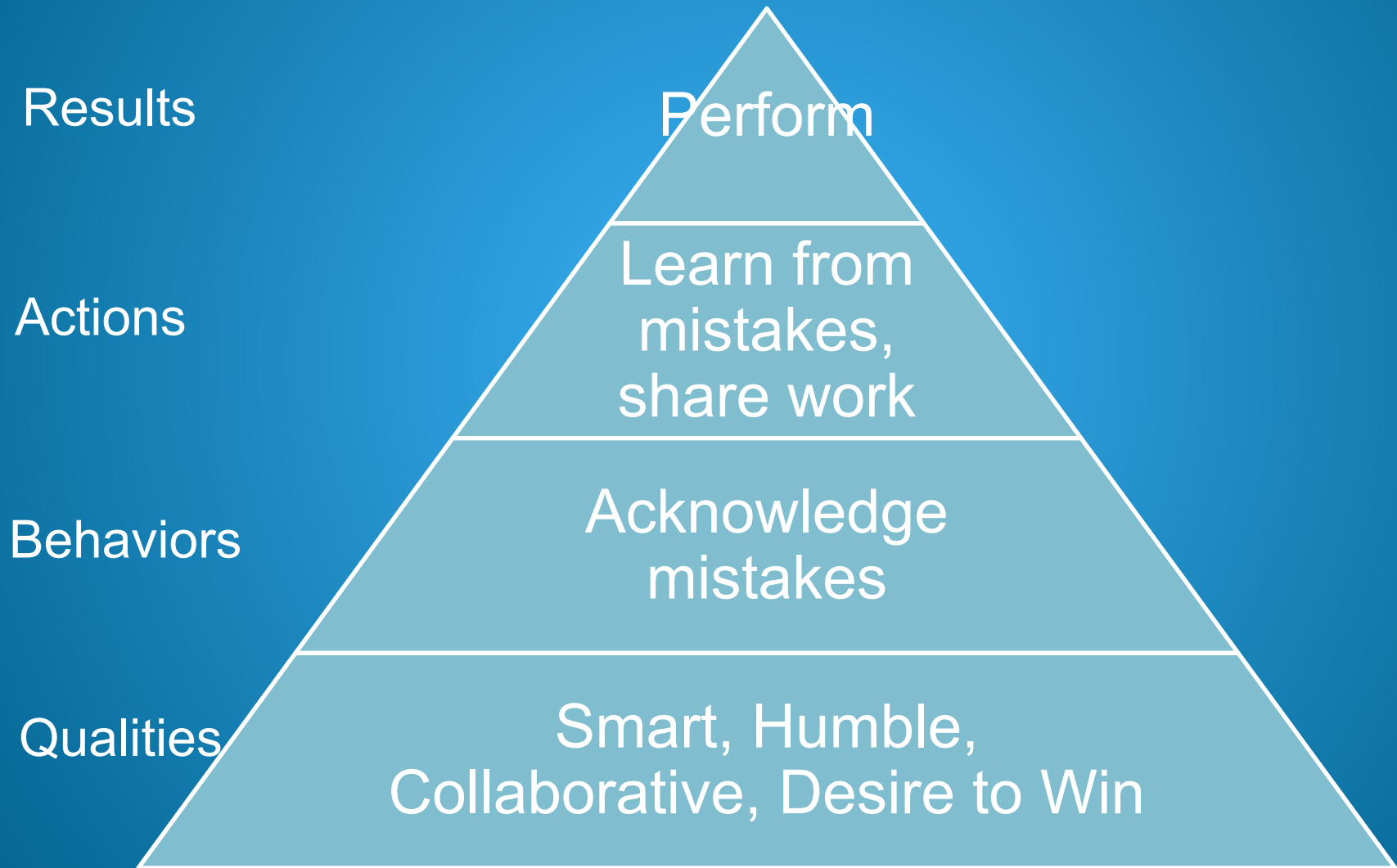


# Year 2

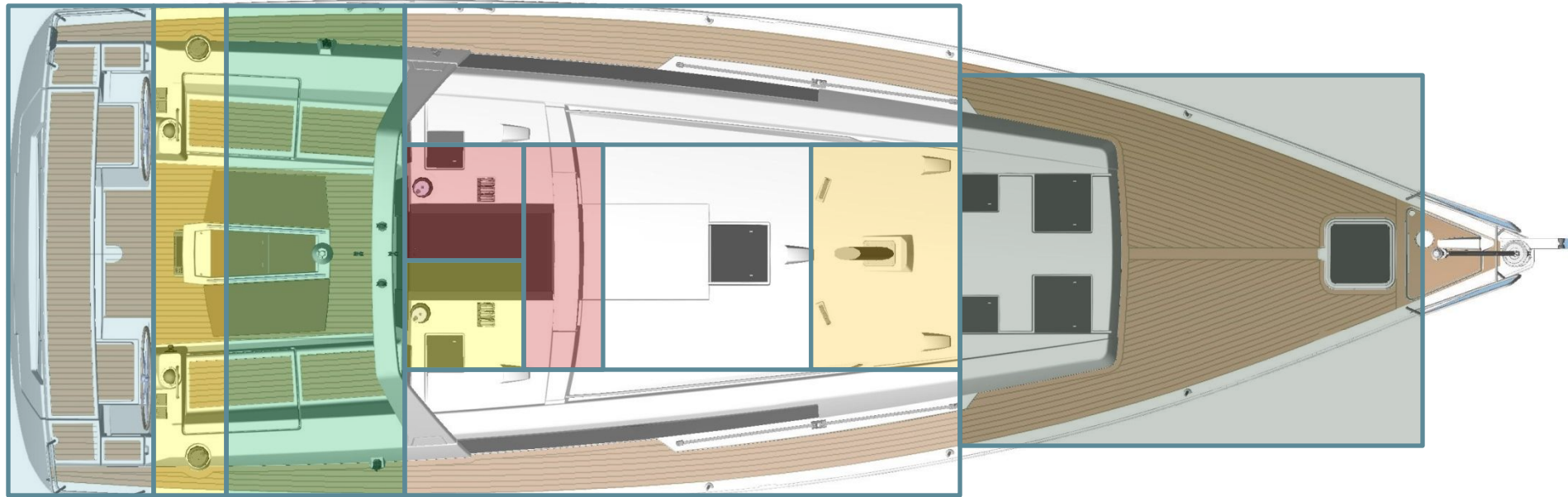
Mission: Return home with more  
friends than we left with



# Team Alignment



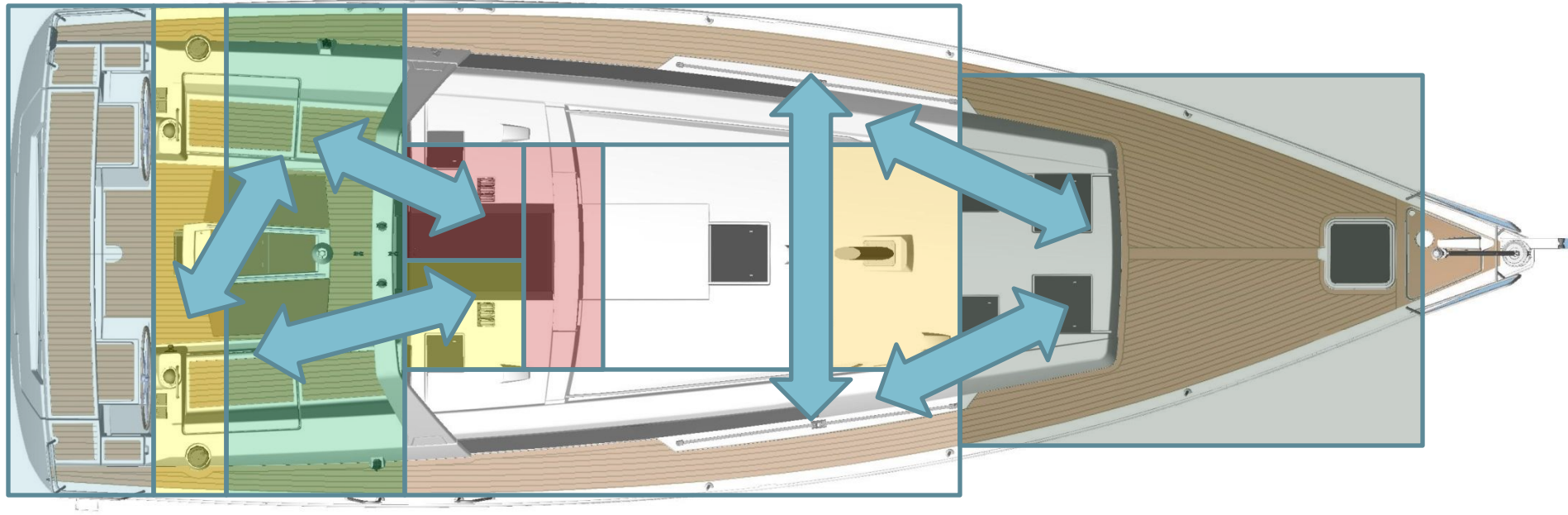
# Traditional Communication



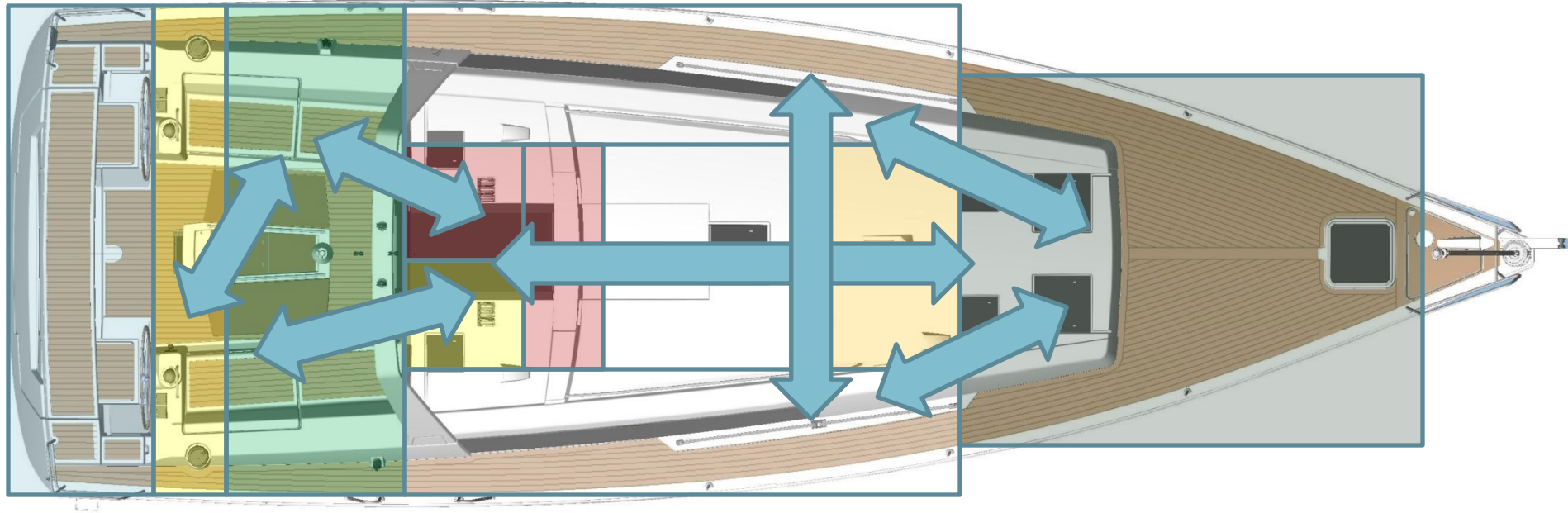
Flow of Information

Flow of Directions

# Local Communication



# Distributed Communication





# Agile



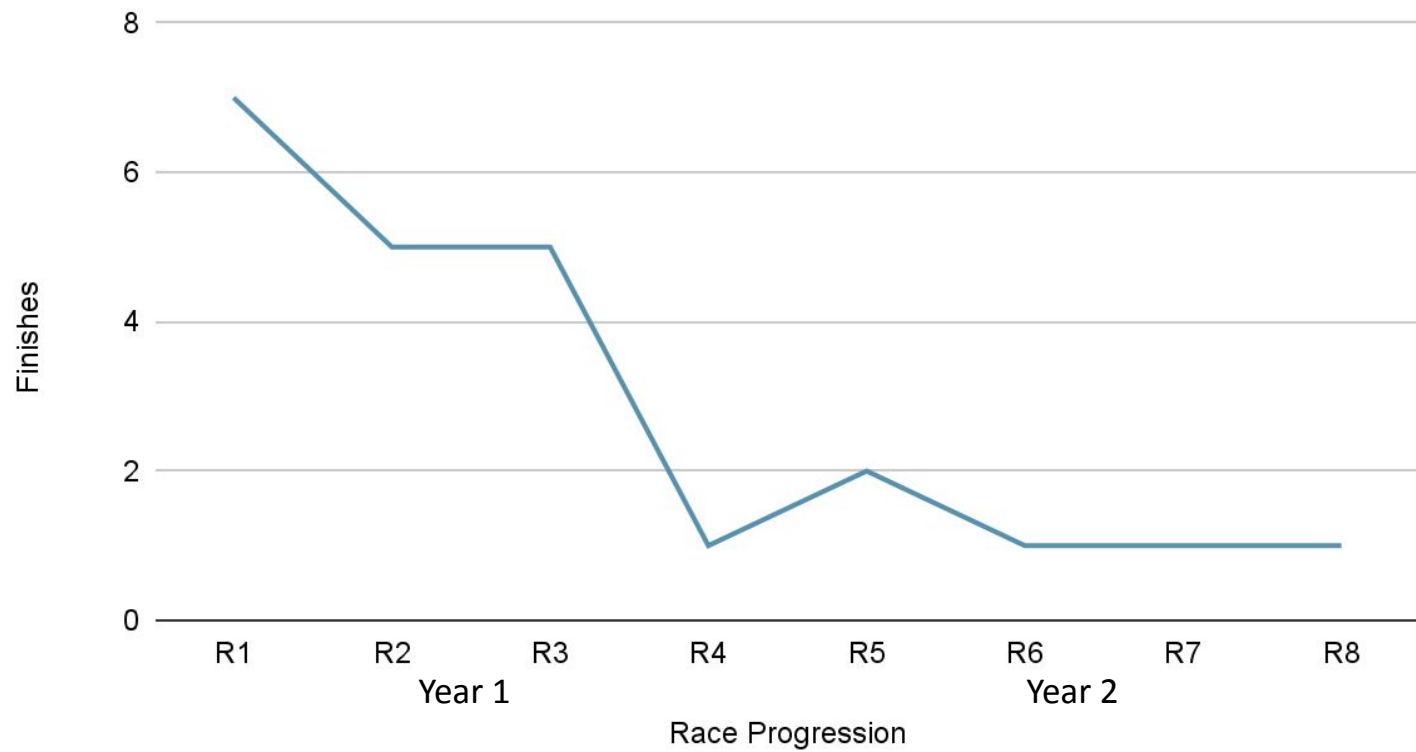


# Stop The Boat



# Rapid Improvement

Team Performance





# The Finals



# Results





# Repeatability



New Boat



New  
Skippers



New Crew



# High Performance System



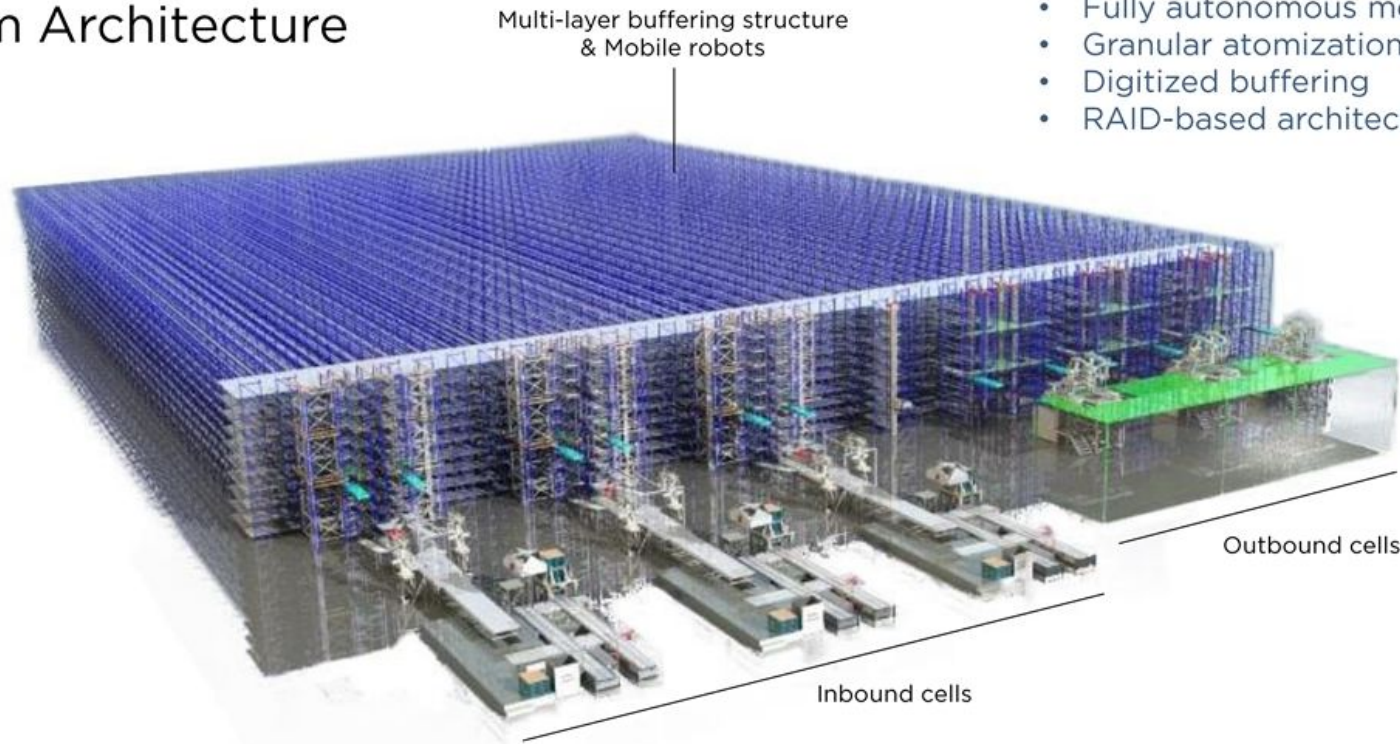


2023 Pursuit Champions



# Recent Work - AI Driven Teamwork

## System Architecture



A typical system has...

~400  
autonomous EV  
mobile robots

5-10  
inbound &  
outbound cells

Proprietary  
software

A.I.  
logic

Complete  
autonomy & modularity

# Quantitative System Design and Performance Optimization

Contact: [adam@trainathoughtllc.com](mailto:adam@trainathoughtllc.com)