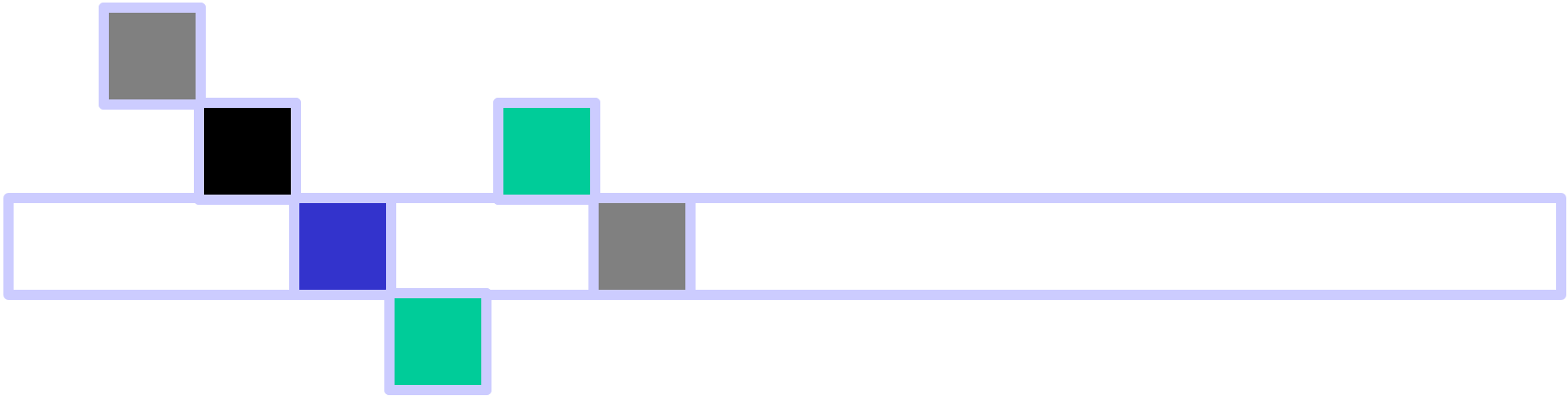


Research Vessels and ISM





ISM and the Research Fleet

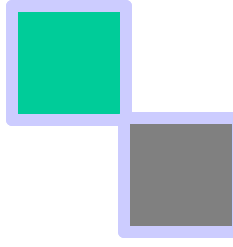



Capt. Morgan Turrell, U.W.





Today's Presentation

- 
- Advice
 - Planning
 - How to Start
 - The ISM Code
 - Policies/Procedures
 - Examples
 - Impact on Science
 - Procedures written, now what?
 - Auditing
 - Where are we now?
 - Learning Curve
 - Available Information
 - Recommendations
- 





Advice

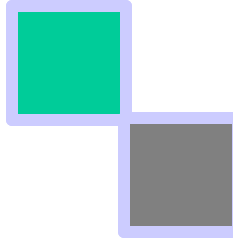



- Have Crew Help
- ISM will help
- Will share some info
- Help to get organized
- Start earlier
- How much detail?
- Science Impact?
- Maintenance program
- Ship availability
- Made us think
- Perception of ISM
- ISM improves safety
- 1 FTE
- Costs, hidden/real



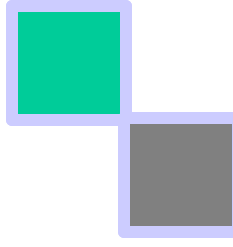



Planning, Implementation

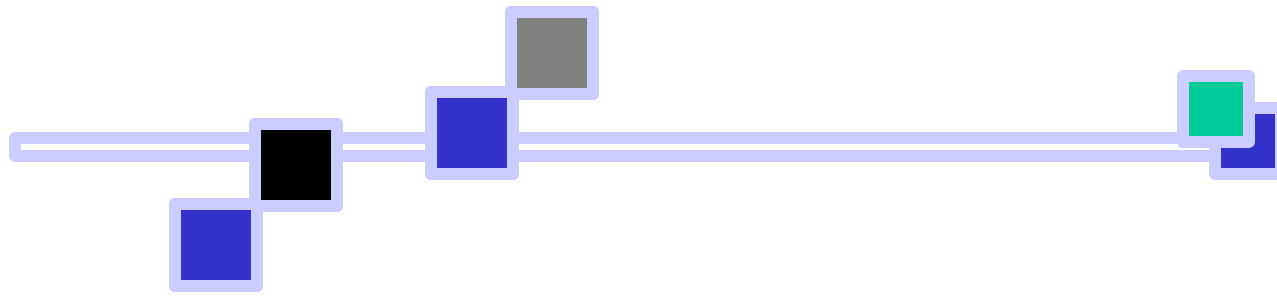
- 
- July 1, 2002 Deadline for Class I Vessels
 - RVOC 2000 Recommended other operators follow suit
 - What do you need to do?
 - Have a system and improve it
 - Will Lead to Fleet Standards
- 



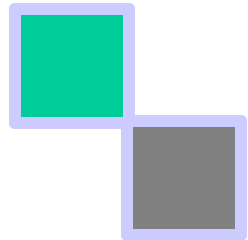
How to Start your ISM process

- 
- Get your People Together, Committee
 - Collect all Manuals, Procedures
 - Set a Timeline
 - Learn from Class I operators
 - Allocate Manpower
 - Implement/Audit/Certify
 - Don't Fear Change, Improve
- 





ISM Code 13 elements

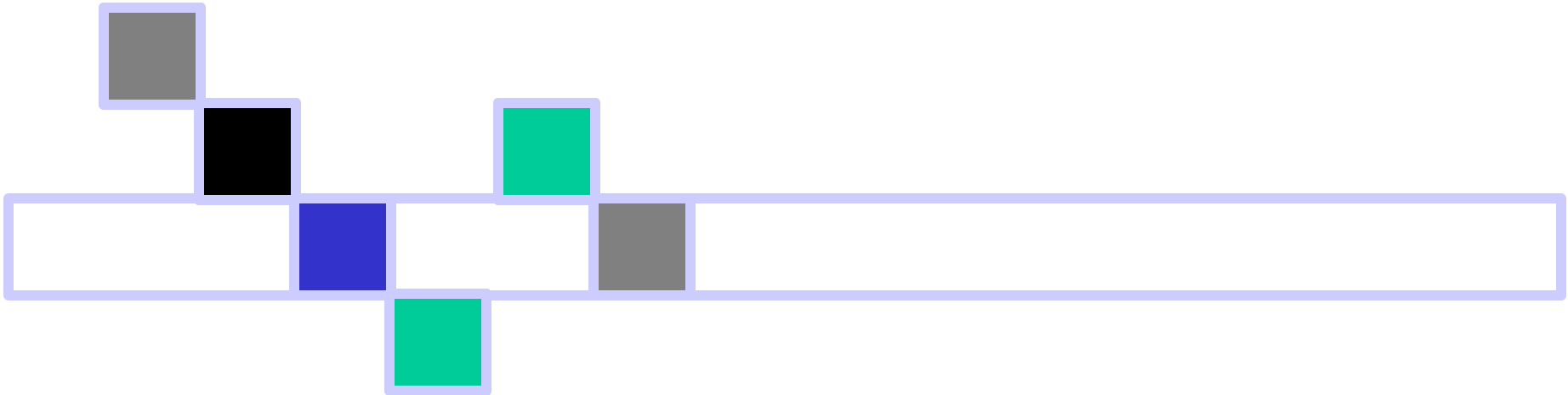


- Creating SMS
- Safety&Environ Policy
- Company Role
- Designated Person
- Master's Authority
- Resources/Personnel
- Ship Ops
- Emergency Plans
- Non Conformities
- Maintenance
- Documentation
- Company Review and audits
- Certification



Policies, Procedures, Documentation and Auditing



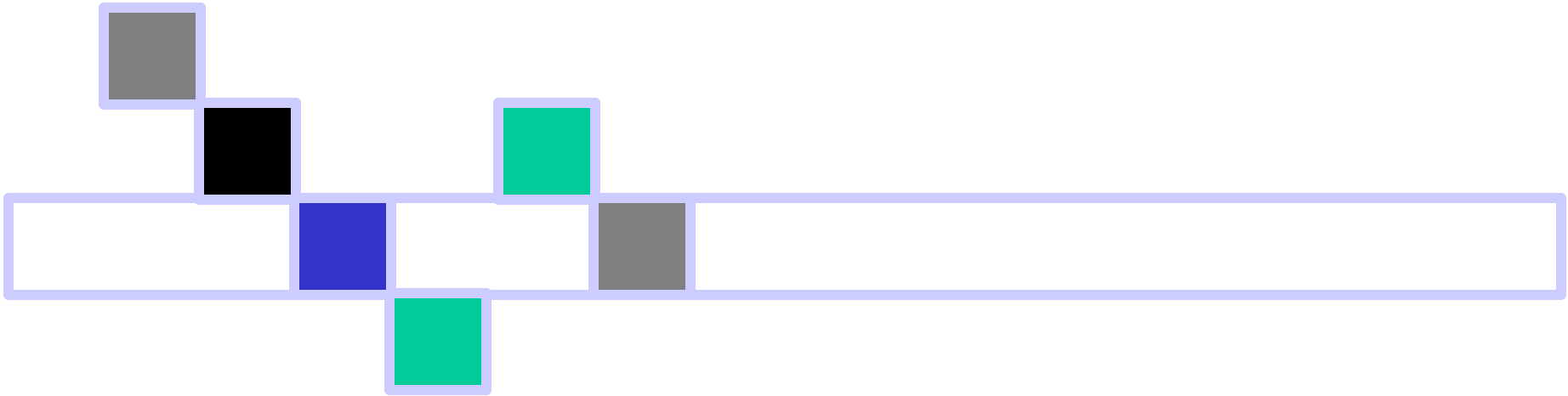


POLICIES



Mission Statements, Limited Number





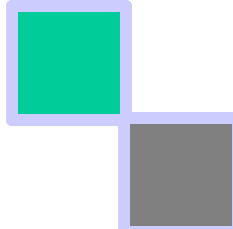
Operational Procedures



Science, Deck and Engine



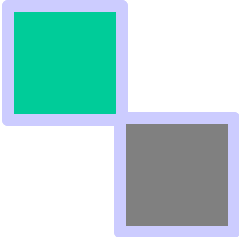

Ship Operations

- 
- Deck
 - Engine

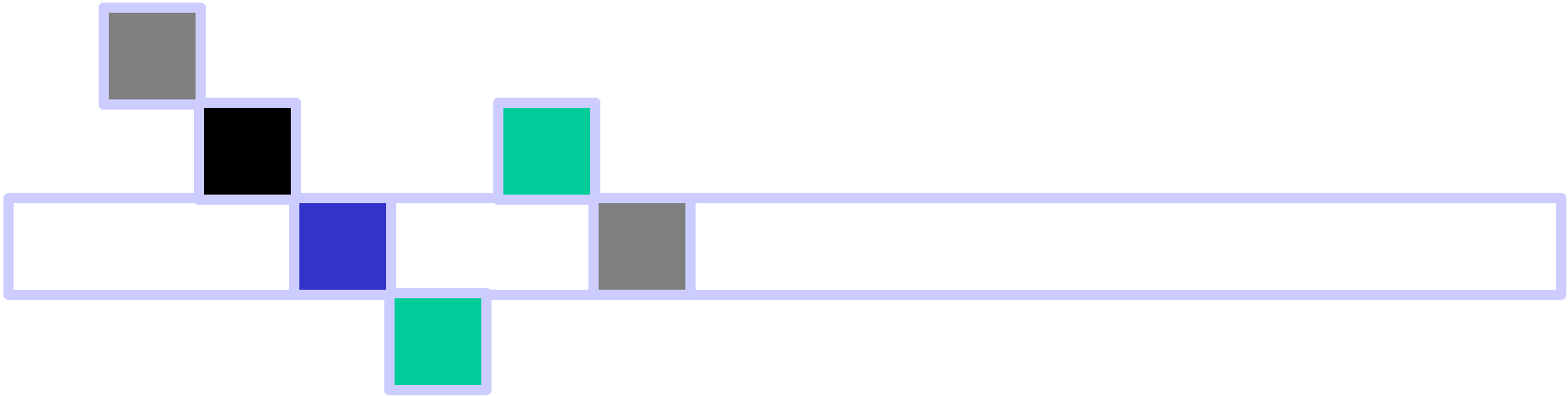




Science Operations

- 
- Proper Prior Preparation
 - Pre Voyage Questionnaire, Meetings
 - Pre Voyage Training
 - Specialty Procedures—Jason, AUVs, etc
 - Procedures that apply to everyone
- 

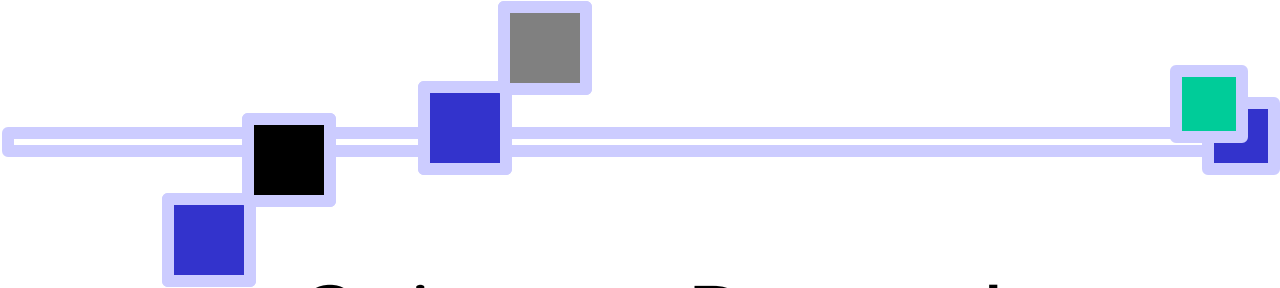




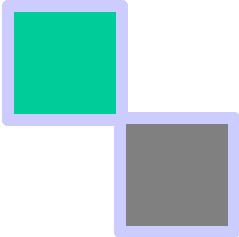
Examples of Procedures

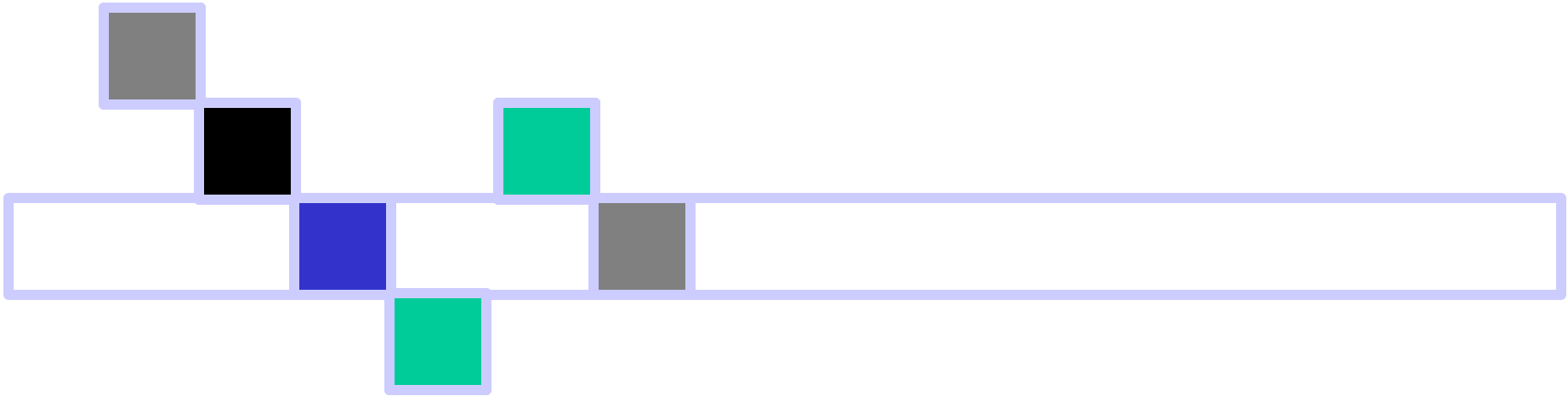


Scripps, Woods Hole, U.W.



Science Procedures, Impact on Science Community





I've written policies and procedures...



Now what?

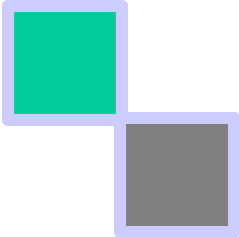


The Audit Process





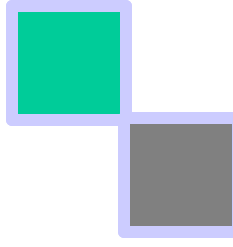

UW Audit Process

- 
- Voyage Audits
 - Internal Audits
 - External Audits
 - Agency Inspections





Voyage File Audit

- 
- Pre-Cruise Questions
 - All Checklists
 - Copy of Logbooks
 - Crew Lists
 - Cargo Manifests
 - Maintenance Done
 - Change of Command
 - Medical Inventory
 - OFI/CAR Catalog
 - SMS Correspondence
 - Training Conducted
 - Safety Meet Minutes
 - Cruise Reports
 - Other info
- 



Highly Trained Audit Team

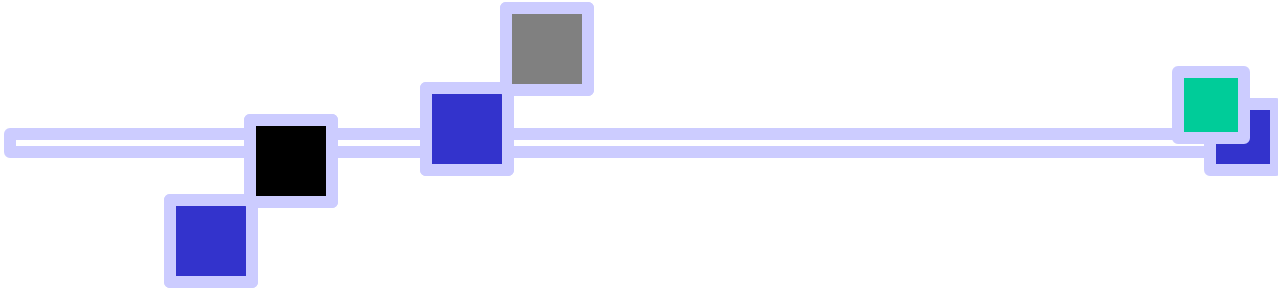
- Check all 13 elements of the ISM code
- At least once per year



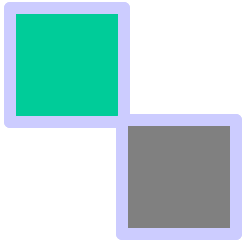
External Audits

- ABS only as required.
- May call in an external auditor in off years. To show ABS that we are exceeding their requirements.

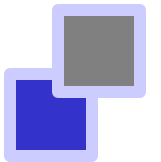


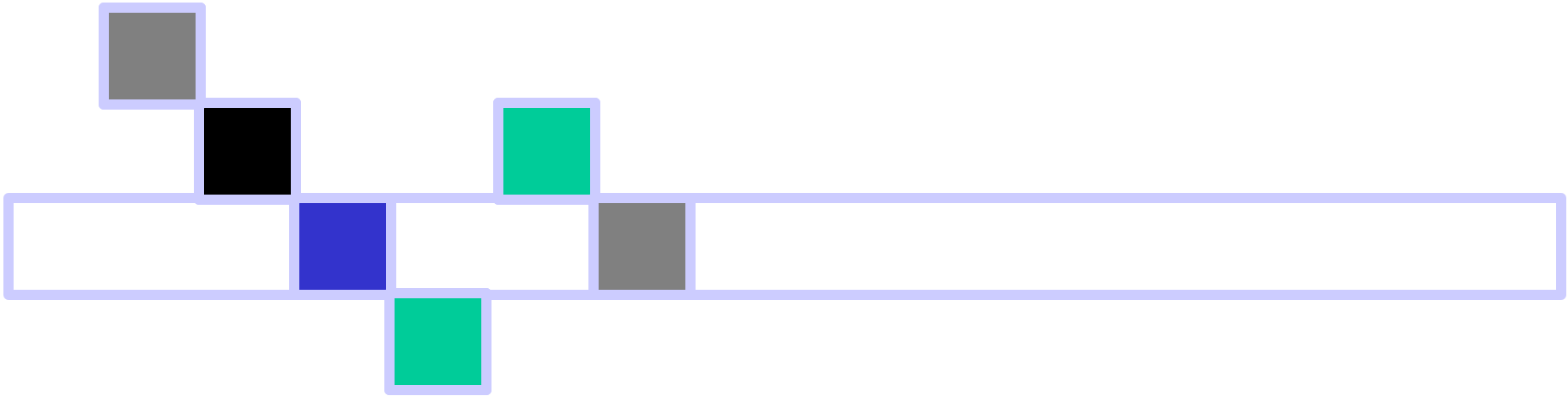


Agency Inspections



- INSURV/NSF
- USCG
- ABS
- FCC

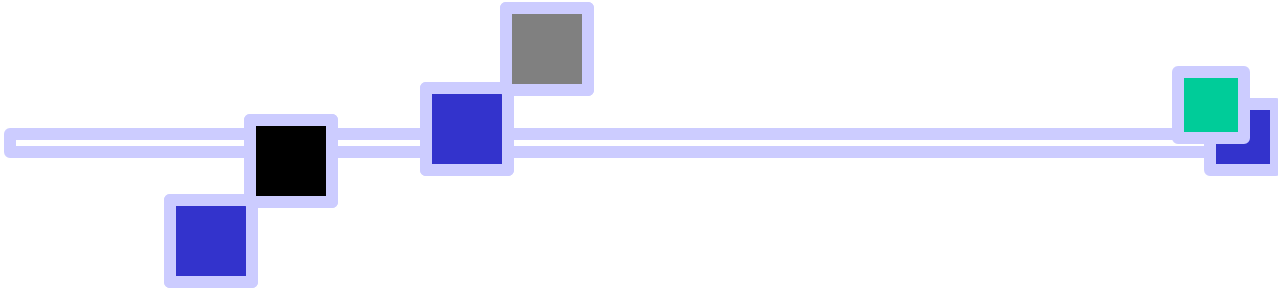




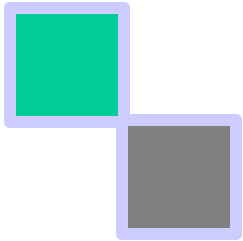
Where are we now?



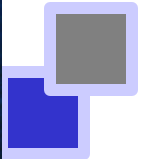
Status report

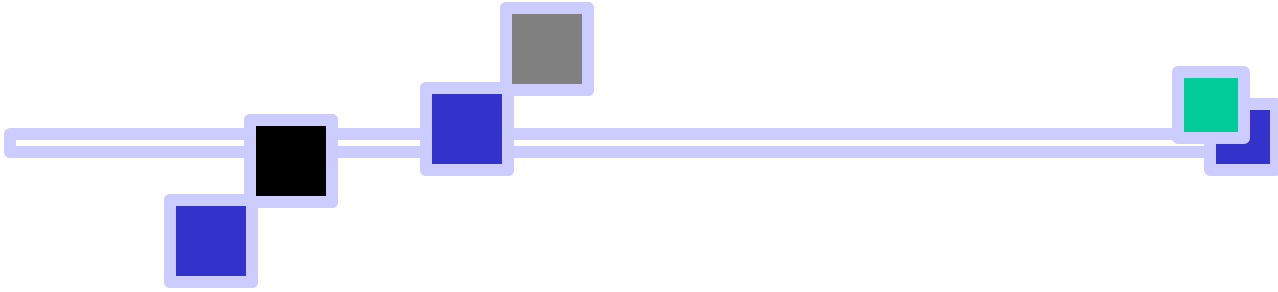


Class I Status

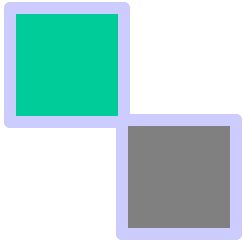


- Scripps
- Woods Hole
- U.W.
- LDEO



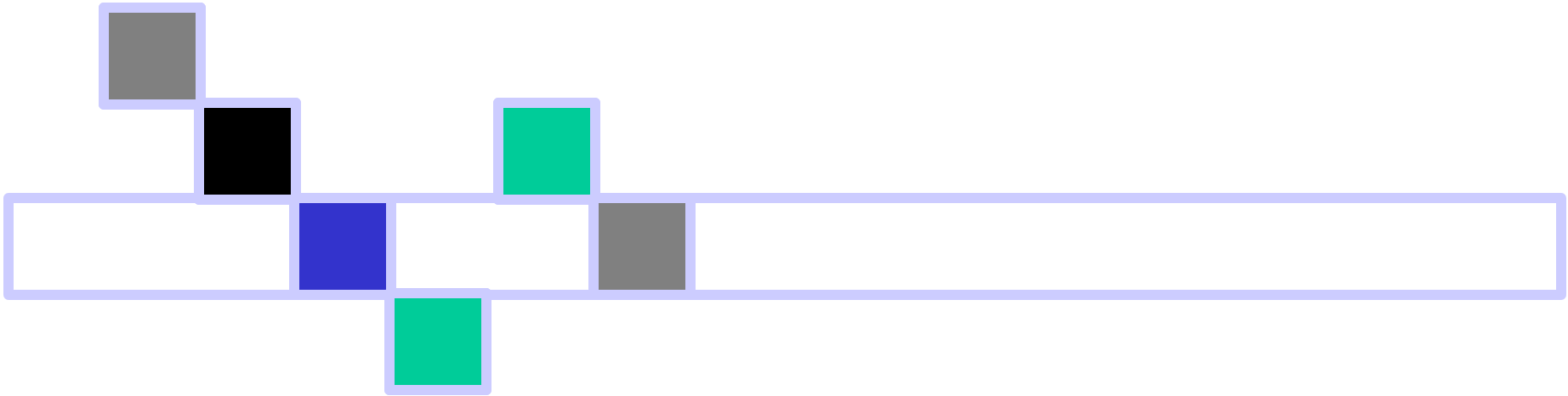


Status



SIO	WHOI	LDEO	UW
Doc. Implement Final	Doc. Implement Final	Doc. Implement Final	Doc. Implement Final

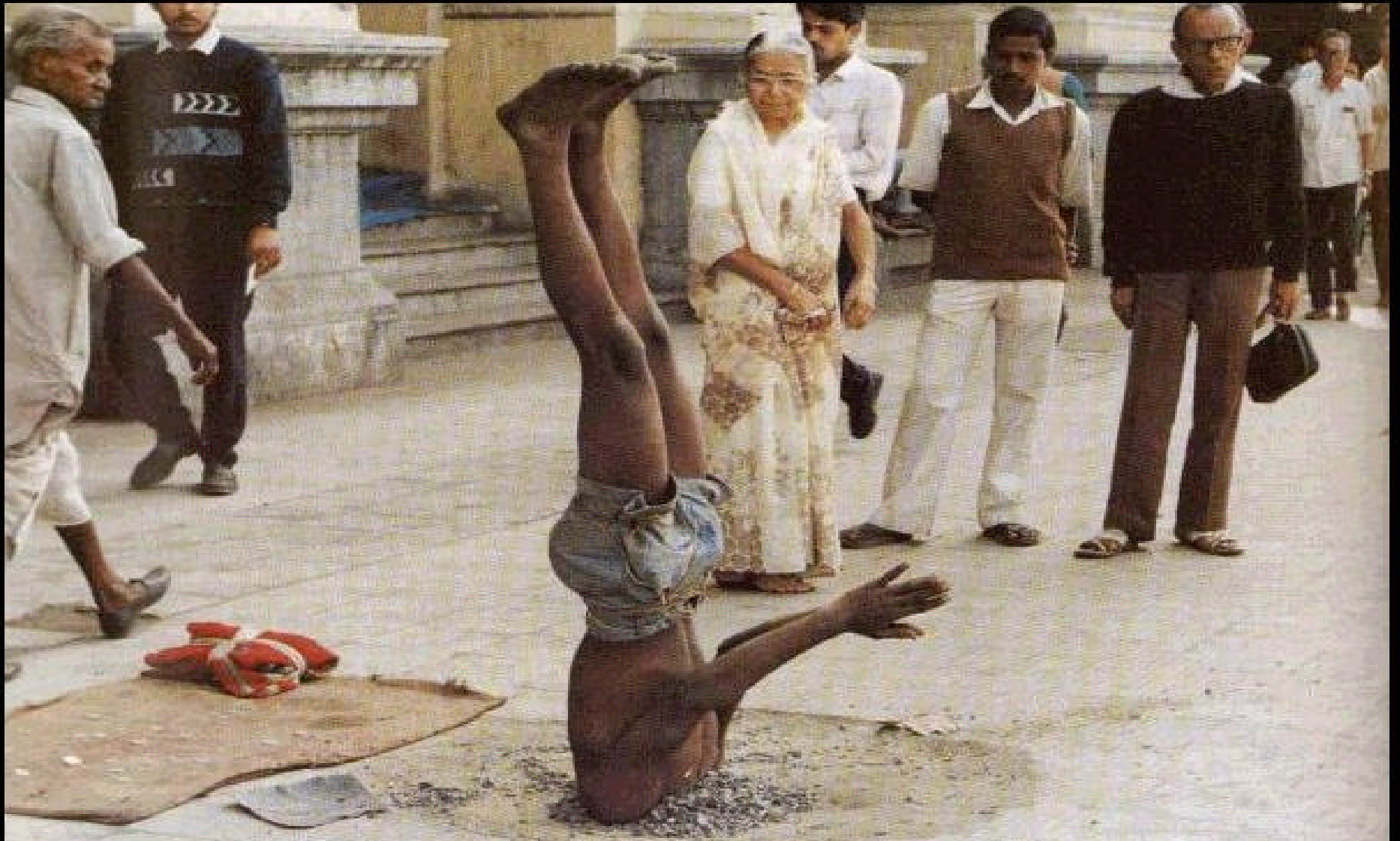




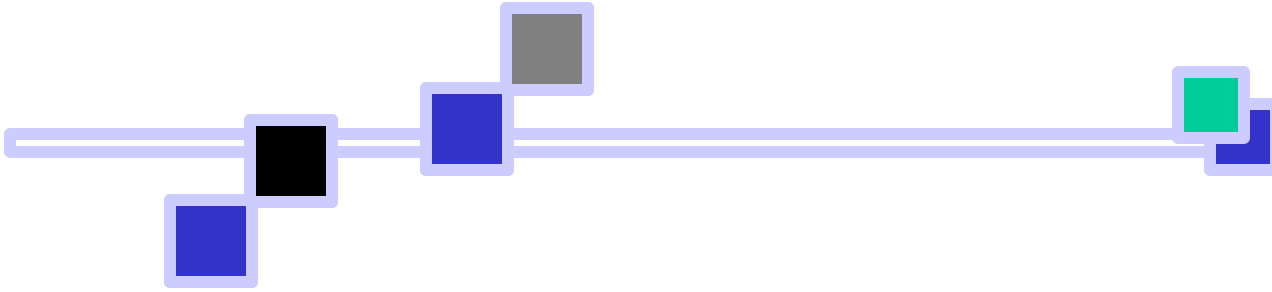
What we now know!



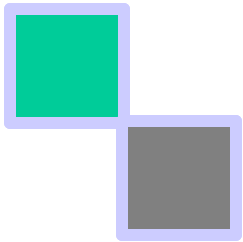
Hints to the unconverted



The Learning Curve



Our Learning Curve?



- Big Picture
- Lessons Learned
- Continual Learning
- Benefits
- Assumptions, Fears



Benefits

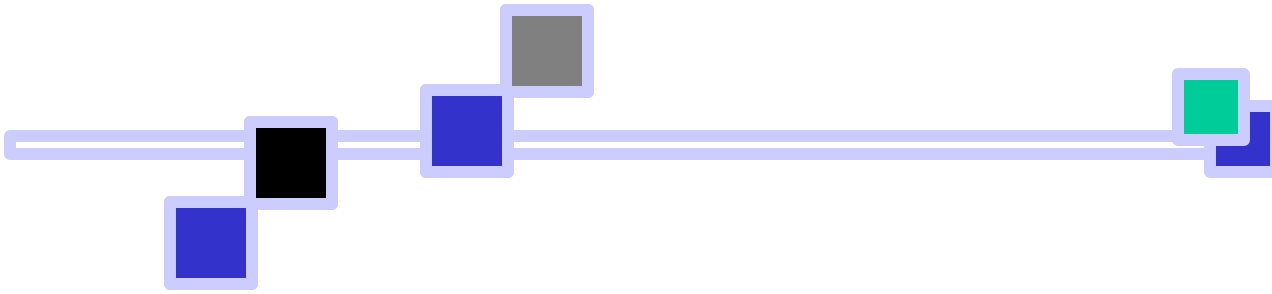


- Improved Safety
- Increased Crew Part.
- Smooth Info. Flow
- Better Recordkeeping
- Timely Maintenance
- Formal Process
- Creates improvement
- Possible Savings
- Improved Workplace
- Fewer Accidents
- Insurance premiums
- Fleet Standards
- Easier Management
- Computerization

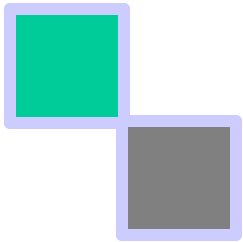
Problems



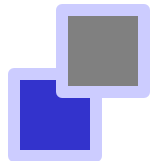
Alan Diaz, POOL/AP

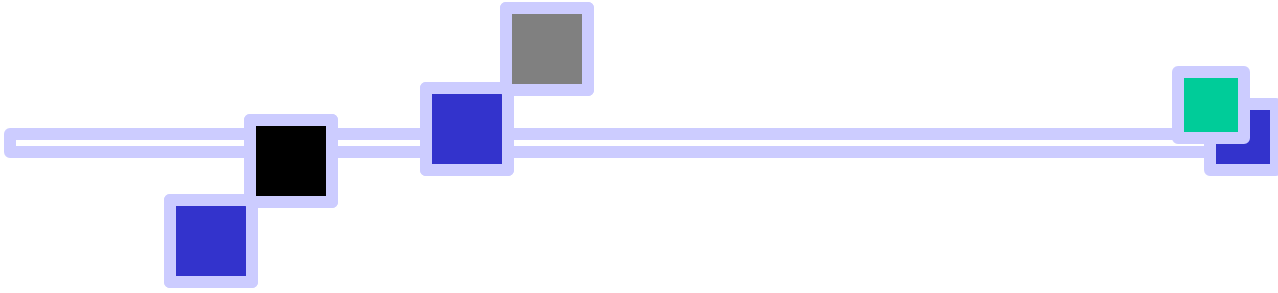


Problems

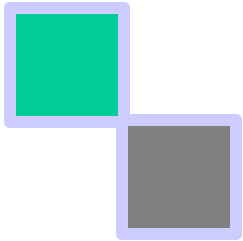


- Initial Paperwork
- Increased Manpower
- Higher Expenditures
- Possible Delays
- Confusion
- Additional Regulations.
- More Inspections
- Old Practices Banned
- More coordination
- Paperwork
- Audit Trail
- Foreign Scrutiny
- 3rd Party Difficulties
- More Training

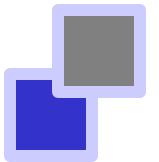




Information Available



- Ask us, we'll offer you help 🗣️
- Materials, Websites, advice

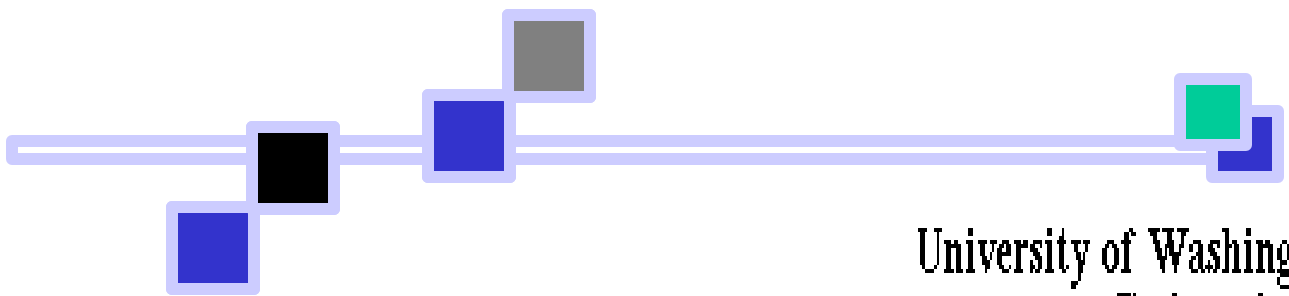




Final Recommendations and Conclusion

- 
- Get Started build on what you have
 - Get Help
 - Be Realistic

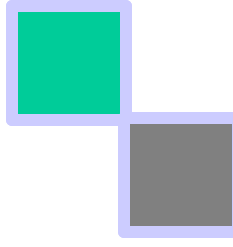




University of Washington

O School of
ceanography

Thank you!

- 
- Capt. Althouse, Eric Buck and Chris Curl of SIO for their advice and leadership and SMS materials.
 - Joe, Theo, Sherry & Marjorie of WHOI for their input, assistance and SMS materials
 - Paul Ljunggren of Lamont for his input
 - Capt Schwartz, George White, & UW.
 - Steve Rabalais of UNOLS
 - ABS, for Safenet information
- 