The Storm Trysail Club
Offshore Sailing Leadership Symposium
November 14, 2020

Overview, Findings, Best Practices, and Training Recommendations

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Table of Contents

Executive Summary
Offshore Sailing Leadership Symposium

Recognizing the essential role of Leadership as the foundation of all safety-at-sea, and the general absence of specific Leadership training in current Safety-at-Sea training and education, the Storm Trysail Club convened the Offshore Sailing Leadership Symposium in November 2020. Our objective was to better understand the elements of good Leadership in offshore sailing, develop a set of Leadership best practices, and make recommendations for improved Safety-at-Sea training and education.

The Symposium began with a keynote interview with Sir Robin Knox-Johnston, followed by panels featuring the advice and counsel of diverse Leaders, including America's Cup sailors, around-the-world racers, military commanders and pilots, merchant mariners, mountain climbers, technology experts and public health professionals. Leveraging this advice and their experiences, over 90 highly experienced offshore sailors broke into groups to focus attention on eight Leadership topics. The groups identified 42 best practices, 20 behaviors to avoid, and made 52 training recommendations to improve offshore safety through better Leadership skills and practices.

This report summarizes the Symposium discussions and findings, including highlights of the keynote interview and panel discussions, detailed best (and worst) Leadership practices, and proposals for improved Safety-at-Sea training and education.

During the Keynote, Panel, and Breakout Group discussions, several themes emerged as best practices critical to successful Leadership:

- The Skipper/Owner is Ultimately Accountable
- Leading with High Character
- Selecting and Training the Team
- Planning and Preparation
- Establishing Clear Roles and Responsibilities
- Placing Team Before Ego
- Promoting Open Communication
- Maintaining Situational Awareness
- Adjusting Goals and Plans as Conditions Require
- Remaining Calm in an Emergency
- Instilling Optimism
- Never Giving Up!

Using Storm Trysail Club's existing activities for "beta-testing," the proposed training changes include refinements to Storm Trysail Club's Junior and Adult Safety-at-Sea Seminars, Intercollegiate Offshore Regatta, Block Island Race, and Block Island Race Week. The Report also describes significant new initiatives for web-based Leadership resources, sailing-focused bridge resource management training, joint sailing club Leadership education programs, and a new approach to Safety-at-Sea training utilizing on-the-water training events. The proposal concludes with ideas for expanding these initiatives, after testing, to the sailing community at large, and working with US Sailing and World Sailing to incorporate Leadership training into offshore certification.

Storm Trysail Club's hope is that this Report represents a significant step forward in offshore safety. Storm Trysail Club thanks all the sailors, Leaders, and organizations that made this Report possible and looks forward to working collaboratively to further improve safety-at-sea.

The Storm Trysail Club was established in 1938 to foster offshore sailing, and in particular SAFE offshore sailing.

The Storm Trysail Foundation is a 501(c)(3) charitable organization dedicated to effecting, promoting and enhancing (i) the education of young sailors, (ii) safe and knowledgeable transitioning from dinghy to big boat racing, particularly through intercollegiate big boat racing, (iii) safe boat handling in all conditions for all sailors, (iv) safe blue water racing and passage making for all sailors, (v) Leadership, seamanship, and navigation, and (vi) environmental stewardship.

The Storm Trysail Foundation supports a national program of events, including Junior Safety-at-Sea Seminars, Hands-On Safety-at-Sea Seminars for adults and juniors alike, regattas, and other on-the-water training, while also offering grants to other institutions to foster similar education and training.

Cover photo courtesy of the Rolex Fastnet Race

OPENING REMARKS

Richard du Moulin, veteran offshore and America's Cup sailor, past STC Commodore, founder of Junior Safety-at-Sea, and head of STC's Adult Safety-at-Sea (SAS) seminars, was the driving force behind the symposium. His opening remarks, below, set the stage for the day's work.

"The sinking of the *Titanic* in 1912 was the most traumatic and famous event in maritime history. Even today, if you walk down the street and ask someone to name a ship, odds are they will respond '*Titanic*.' The loss of the *Titanic* was such a shock that in 1914 the largest international conference in history convened: The International Convention for Safety of Life at Sea. Their output became known as SOLAS and is the foundation of the body of maritime safety regulation as we know it.

In 1979, yacht racing had its own *Titanic* – the Fastnet Race – where the loss of 18 lives shocked our sport. Our response included major revisions to organizing ocean races, measuring yacht stability, and providing formalized Safety-at-Sea training.

Just as the loss of *Titanic* was intimately tied to a failure of Leadership, so were most of the losses in the Fastnet Race and many of the fatal sailing incidents in the ensuing years.

The father of the U.S. Nuclear Navy, Admiral Hyman Rickover, correlated Leadership with accepting responsibility:

> "Responsibility is a unique concept. It can only reside and inhere in a single individual. You may share it with others, but your portion is not diminished. You may delegate it, but it is still with you. You may disclaim it, but you cannot divest yourself of it. Unless you can point the finger at the man who is responsible when something goes wrong, then you never had anyone really responsible. Responsibility can be shared; accountability cannot. Being accountable not only means being responsible for something but also ultimately being answerable for actions."

The accountable person in offshore sailing is the Owner, Skipper, or Person-in-Charge.

Our Club and other leading sailing organizations, such as CCA and US Sailing, have long been in the vanguard of developing new methods of training sailors to venture offshore. However, the concept of 'Leadership' has been largely ignored while use of safety-related equipment and specific evolutions such as Crew Overboard (COB) Recovery have been emphasized. Hands-On Safety-at-Sea training, initiated by the Storm Trysail Club and United States Merchant Marine Academy at Kings Point in 2006, and now offered by the Cruising Club of America, New York Yacht Club and many leading clubs, barely touch on Leadership. Yet Leadership is the key factor that ensures safe offshore sailing.

Without Leadership, the unsafe situation is more likely to occur, and even more likely to have a bad outcome.

Leadership is the glue that holds it all together. To quote from the *Lord of the Rings*, "Leadership is the Ring that Binds all the other Rings." Good Leadership minimizes the chance of a dangerous situation, and when something goes wrong offshore, good Leadership maximizes the chance for a satisfactory outcome.

For the Symposium, we have brought together a variety of experts with different backgrounds to venture into the subject of better understanding Leadership in an offshore sailing context. Our objective is to better define the role of Leadership in offshore sailing, the characteristics and actions of good Leaders, enumerate best practices, and develop specific actionable plans to educate, train and develop offshore Leaders.

Our fundamental premise for this Offshore Sailing Leadership Symposium is a deeply held belief that Leadership is the core competence required to achieve our goal of safe and rewarding offshore sailing. This implies that Leadership can be learned and improved, that good Leaders can be developed into excellent Leaders, and uninformed or poor Leaders can be acquainted with their responsibilities and seek training.

It is the objective of Storm Trysail to explore Leadership in a collaborative manner and make all outputs available to all organizations involved with educating, preparing and training sailors who venture offshore, and organizing authorities of offshore events."

In addition to this report, there is a 70-minute video recap of the OLSL that can be viewed at www.stormtrysail.org.

CLOSING REMARKS

"During the Keynote, Panel, and Breakout Group discussions, several themes emerged as best practices critical to successful Leadership:

- The Skipper/Owner is Ultimately Accountable
- Leading with High Character
- Selecting and Training the Team
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- Establishing Clear Roles and Responsibilities
- Placing Team Before Ego

- Promoting Open Communication
- Maintaining Situational Awareness
- Adjusting Goals and Plans as Conditions Require
- Remaining Calm in an Emergency
- Instilling Optimism
- Never Giving Up!

In the panel discussions, the distinction between being the "Leader" and "Leadership" became clear. At sea, as in many life circumstances, there needs to be one Leader who is the person responsible for the safety and success of the venture. The Leader must ensure proper preparation of the boat, selection and training of the crew, planning the voyage, maintenance of situational awareness, and provide the ultimate Leadership when a crisis develops and possibly changing the plan as needed. As Admiral Rickover, father of the U.S. nuclear navy, noted, "The Leader is the person who cannot abdicate the ultimate responsibility for a vessel and crew, and who is held accountable."

The Effective Leader

An effective Leader must select a team with the best balance of skills, strength and attitude, and capitalize on these resources. The designated Leader (Skipper/Owner/Captain) should ensure that each member of the team is engaged with planning and preparations, assigned responsibility for specific systems or functions (electronics, damage control, safety equipment, medical, navigation, sails, rigging, engine, food), and active in the operation of the boat whether on a race or passage. This sharing of responsibility energizes the entire team. Of course, each of the crew can also demonstrate elements of Leadership – a sharing of responsibility – enhancing the level of performance of the entire team. Nevertheless, as noted, the primary responsibility remains with the Leader who is ultimately accountable.

Shackleton

One of the greatest examples of "offshore" Leadership, demonstrating key traits and skills, happened over 100 years ago. In 1914, while World War I raged in Europe, Sir Ernest Shackleton's exploration ship *Endurance* was crushed in the Antarctic ice. Shackleton and his 27 men were stranded in Antarctica. As their situation deteriorated, Shackleton was honest with his men, and adjusted the goals of the
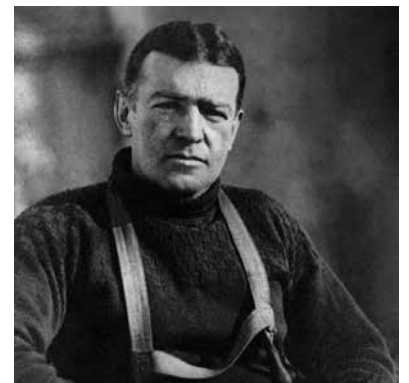
expedition from crossing the Antarctic continent via the South Pole, to surviving and reaching Elephant Island at the edge of the Antarctic continent. Then, with five of the crew, Shackleton sailed one of the small boats 900 miles across the Drake Passage to South Georgia for help. Shackleton was empathetic with his men, which is often attributed to growing up in a household with a mother and sisters. He was always willing to share in tough jobs yet maintained situational awareness of the big picture. He acted confident in the group's survival and used humor to keep up spirits. In the end, all 28 men made it safely back to England.

Perhaps the most striking proof of the powerful Leadership impact Shackleton had on his men's survival comes from their private diaries. Despite the crew's desperate circumstances, these entries exhibited a high degree of optimism that they would prevail over their incredible challenge:

> "No matter what turns up, he is always ready to alter his plans and make fresh ones, and in the meantime laugh, joke, and keep everyone's spirits up. He inspires optimism in everyone." – Captain Worsley of the *Endurance*

> "Shackleton makes many contingency plans in great detail, while still remaining flexible. He isn't afraid to change his mind as the situation warrants." – First Officer of the *Endurance*

On behalf of Storm Trysail, I want to thank our generous Sponsors, hard-working Organizing Committee, terrific Facilitators and Scribes, and all attendees for your contributions to this Report. Together we have helped define Offshore Leadership, enumerate Best Practices, and come up with an Implementation Plan. There is a lot of work before us, but by our continuing collaboration, I believe that we can make great progress with educating and training our Offshore community in the most important practice of excellent Leadership."

> Acknowledge turbulence, embrace its opportunities, and meet its challenges with confidence and effect. – Professor Nancy Koehn, Harvard Business School regarding the lessons of Shackleton.

Opening Keynote
Sir Robin Knox-Johnson

Sir Robin Knox-Johnston, the first person to solo-circumnavigate the globe non-stop under sail (1968-69), kicked off the symposium sharing his unique story from his home in the United Kingdom. Sir Robin defined Leadership as "Getting the most out of everyone around you." Interviewer Rich du Moulin and Sir Robin discussed the qualities it takes to be a good Leader, with Sir Robin concluding, "It's my view that Leadership can be developed, no matter your background. You have got to have ambition, the right experience, and the right attitude."

Knox-Johnson also noted, "When I was going around the world alone, and things were getting tough, I might lose my temper and tell myself to bloody well get the job done. This anger is not the way to deal with a crew; humor and being positive is better." He continued, adding, "If you are the Leader, do your men trust you? If you are not the Leader, do you trust the Leader?"

Even a great mariner such as Sir Robin had to assert some "self-Leadership" during a particularly awful part of his 1968-69 circumnavigation alone in the Southern Ocean. du Moulin quoted from Sir Robin's book *A World of My Own*:

"For some irrational reason I also thought of poetry and the words of Robert Service's ballad, 'The Quitter' came to mind:

> When you're lost in the wild and you're scared as a child,
>   And Death looks you bang in the eye,
> And you're sore as a boil it's according to Hoyle
>   To cock your revolver...and die.
> But the Code of a Man says: 'Fight all you can...
>   And self-dissolution is barred.'
> In hunger and woe, oh, it's easy to blow...
>   It's the hell-served-for-breakfast that's hard.

Hosted by:

I think that saved me. It brought me up with a jolt. What was I doing getting the life raft out? The boat hadn't gone yet; I had not really tried everything. I went back on deck and stood watching the sea for a while. Its character was slowing changing. The huge southwest seas were dominating now, and the old northeasterly seas had been knocked flat by the wind. *Suhaili* was lying beam on to this large sea, and if I could get her round to lie with the sea she might be all right."

When asked what he thought of the OSLS he participated in, Sir Robin replied, "That Leadership Symposium was a great initiative, and I stayed on because I was enjoying it. It's always nice to get a different point of view on subjects like this. Having trained people in the Merchant Navy as Instruction Officer on a Cadet Ship, the Royal Navy as First Lieutenant to try and get University Officers to understand that their rank had to be earned, not assumed, the Sail Training Association, as President, where we put 2-3,000 young people through a square rig experience, not to make seamen of them, but to push them to realize they can do more than they thought, and lastly with Clipper, I have done this all my life. I told you about sailing with Bob Papp when he was Captain of the *Eagle*. That was fascinating. The USCG system was different to ours, but I thought very effective. It's a huge subject, but, at the end of the day, when you put people into a situation which is frightening, most of them come out of it more confident." – RKJ
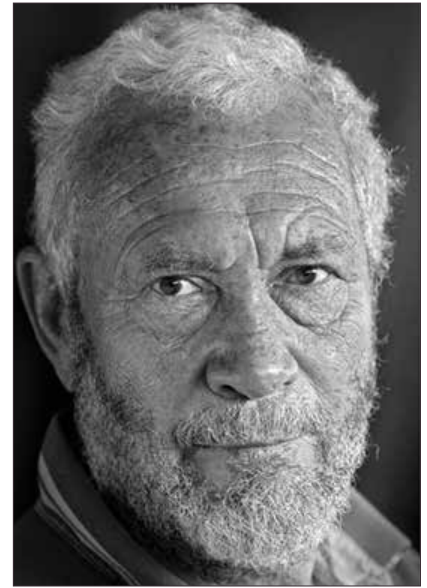
Leadership Beyond Sailing – Panel 1

Hosted by

Bonnell Cove Foundation

The first discussion panel, "Leadership Beyond Sailing," presented six speakers, each providing their views of Leadership from non-sailing perspectives ranging from the military to healthcare to corporate America:

John de Regt – Moderator – A Storm Trysail member for more than 45 years and a life-long sailor, John and his wife Joan cruise their Cambria 46 *Starlight*. Following combat service as a Surface Warfare Officer in the US Navy, John spent 35 years in executive Leadership training. Facilitated by John, each panelist brought a unique perspective to the concept of Leadership with the following outtakes indicative of their engaging presentations. Graduate - Dartmouth College, SUNY Maritime, and NYU

Susan Blank – MD, MPH, CAPT, USPHS (ret.) – Capt. Blank recently retired after 30 years of active duty as a Commissioned Officer with the United States Public Health Service. Her career included extensive public health and multiple collateral duty assignments such as serving as deputy incident commander in NYC, CDC and USPHS, plus deployments in such varied circumstances as 9/11, Anthrax, COVID-19, and Super Storm Sandy in NYC. Graduate - Massachusetts Institute of Technology, University of Pittsburgh, Columbia University

Susan addressed Leadership from the public health perspective. Organizing an effective response to the outbreak of COVID in New York City demanded a massive effort which in turn required extraordinary Leadership. Leadership requires clarity of mission, communication, transparency, honesty, and mutual respect, she said. She emphasized that while the team members focused on assigned tasks, the Leader assures coordination across tasks, and maintained situational awareness in order to direct modifications as needed. For her, the art of leading requires "soft skills": A positive attitude, humility (clearly owning your mistakes) and a sense of humor, as well as the science of critical thinking, checking and rechecking inputs and outputs. In practice, it incorporates frequent drills, building-in redundancies, including redundancy of skills.

- "Leadership is the art of motivating a group of people to achieve a common goal."
- "Women tend to be less over-confident than men, perhaps because they are used to questioning themselves. When you feel confident, don't rest on it. Go back to your checklist of what's important and what are your goals."
- "You have to be constantly identifying and developing Leaders. Organizations need redundancy of skills."

Walker Potts – Walker began his career as a Marine with multiple combat deployments as an infantryman and a Recon Marine in a special operations unit. After his service was complete, he participated in mountain helo-rescue operations. Walker has since returned to ocean racing as a rescue swimmer and professional sailor covering over 40,000 miles. Graduate – University of Connecticut

Walker brought the perspective of intense combat to the conversation. He emphasized that Leadership is not just for the Leader. "In our combat teams, everyone, from most senior to most junior, had the responsibility to say something if you see something." He used the term "deep in the grind" to describe long-duration intense periods, such as days in combat or rough weather at sea. Walker discussed transforming potentially negative emotions, such as anger, into positive outcomes.

- "Loyalty to those below you is just as important as loyalty to those above you."
- "Whether in combat like Fallujah, or at sea after days of heavy weather, it might be necessary to channel anger or other emotions into a useful purpose."
- Walker, a former U.S. Marine, shared the Corps' acronym for their 14 Leadership characteristics: JJDIDTIEBUCKLE. (See image below)

Capt. Stephen Polk – A professional master mariner, Stephen has over 10,000 hours watch standing experience on ocean-going tugs and a wide variety of commercial vessels. A U.S. Navy combat veteran of Operation Iraqi Freedom, Captain Polk now supervises the Seamen's Church Institute Center for Maritime Education. Graduate – Texas A&M at Galveston

Stephen discussed the importance of smooth functioning of the team on a ship's bridge, and the critical importance of trust between the Leader and the team. He began with the interesting example of a harbor pilot, who may be female, in charge of bringing a ship safely to its berth, when the captain and crew come from ethnicities in which women never give orders. Leadership in that circumstance requires knowledge, confidence, tact, and authority. He also emphasized the importance of clear, easily understood communication in any situation.

- "What happens when the Leader is not who you expect."
- "A good Leader puts the crew first."
- "A good Leader has humility: none of us is as good as all of us."

Eric Simonson – Eric has been a professional mountain guide since 1973 and personally conducted over 100 major expeditions around the globe, including over 30 to the Himalayas. His climbing resumé includes expeditions on every continent of the globe, including ascents of the "Seven Summits" and eleven expeditions to Mt. Everest, reaching the summit in 1991 via the North Ridge. Graduate – Carleton College

Eric brought the perspective of mountain climbing to the discussion. Having vast experience as a mountaineering guide, he made the interesting observation that the entire team has the responsibility to check each other, which echoed the comment of Walker Potts. Eric compared the sea and mountains by commenting, "Both the sea and mountains are awesome, beautiful places, which can turn deadly with no warning. Enjoy them but be ready. You can teach technical skills, but it's the personal skills that are tough."

- "Whether you are in the mountains or on a boat, you are far from home in an unforgiving environment."
- "We're always watching each other for safe practices. We normalize this so no one takes it as a personal affront."
- "A Leader must understand individuals' personal limitations, and know what people bring to the table."
- "Don't be afraid to change your mind as circumstances change. It's not a matter of losing face."

James Childs, Capt., USN (ret.) – A career nuclear submarine officer, James commanded the USS AUGUSTA (SSN 703) and two submarine squadrons. After several significant shore tours, he retired from active service yet continues to work with the Submarine Force as a senior tactical and mariner skills trainer, advisor and mentor for submarine officers at all levels. Graduate – United States Naval Academy

James emphasized that one of a Leader's prime responsibilities is to develop Leaders, a comment also made by several panelists. He echoed Todd Gautier's point that Leadership style is situational. Being an empathic, caring, humble Leader when the situation is normal gives the Leader the standing to give orders when the situation demands. He spoke these points:

- "Good Leaders develop other good Leaders."
- "Are you a mentor or driver? There's an appropriate time for each."
- "Humility allows a Leader to be self-aware and empathetic, to get the team where they want them."
- "Know yourself and know your people."
- "A Leader needs confidence, to allow subordinates to fail and learn."
- "Good Leaders develop their replacements. Bad Leaders don't. If the Leader goes down, things can go into a death spiral."

Todd Gautier – Todd is president of the Aviation Systems Segment of L3Harris Technologies – the sixth largest defense company in the U.S. with 50,000 employees. Previously, he flew for United Airlines. While in the U.S. Navy, Todd flew F/A-18 strike fighters in combat operations, was an instructor and was responsible for standardizing Naval Aviation Strike Warfare Tactics. Graduate – Southern Methodist University

Todd discussed Leadership from the perspectives of naval officer, airline flight crew, and senior corporate executive. He likened Leadership to being a craftsman who has a bag filled with many tools, each of which has a specific use. Sometimes Leadership demands that the Leader allow a subordinate to fail, in order for that person to learn. In that example, Todd said, the Leader needs great patience. At other times, for example in airborne emergencies, crisp orders are necessary to save lives. He repeatedly talked about the importance of the team, and the Leadership mandate of constantly developing the next generation of Leaders, making these points:

- "Different manners of Leadership skills are required for the three types of operations: 1) normal/low-risk operations, 2) ambiguous operations, and 3) emergency/high-risk/time critical operations."
- "I am a recovering poor Leader." Todd always strives to identify what it takes to be a better Leader."
- "The key for me is knowing that although I may not be the smartest person in the room, my team makes that up for me."
- "I've learned more from bad Leaders than good Leaders."
- "Bad Leaders don't know what they don't know."
- "If you are not in danger, let an over-confident subordinate try and fail. It's a great way to both teach and learn."
- "It's a Leader's job to plan for succession in case the Leader goes down."
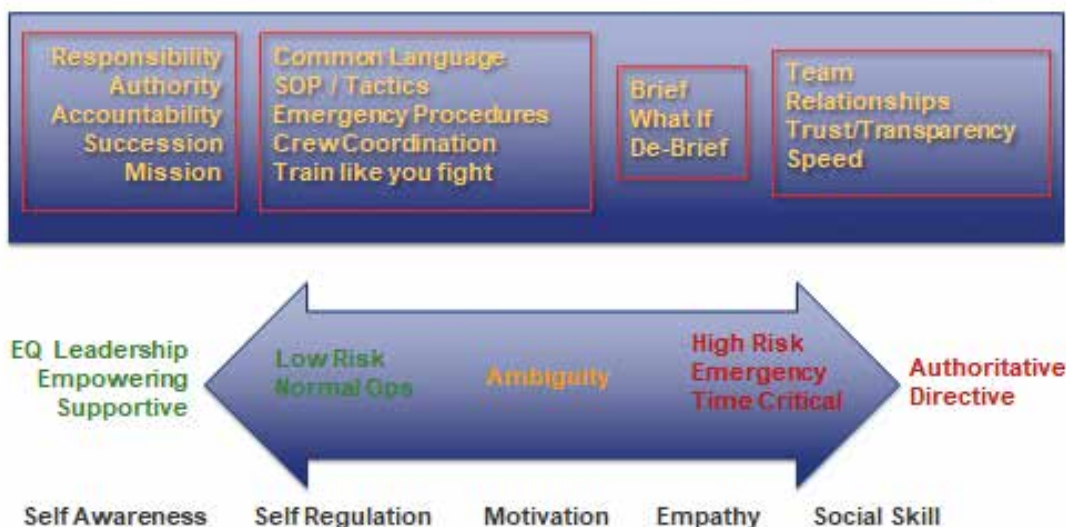
Low or No EQ

Todd also noted that 75% of careers are derailed for reasons related to emotional competencies, including inability to handle interpersonal problems, unsatisfactory team Leadership during times of difficulty or conflict, or inability to adapt to change or elicit trust.

Hosted by:

This panel of five experienced offshore sailors discussed Leadership from a yachting perspective based on actual experience in positions of Leadership.

Gary Jobson – Moderator – STC member, experienced offshore sailor, winning America's Cup tactician, winner of many offshore races including 1979 Fastnet Race, author of 21 books on sailing, commentator for nine America's Cups and six Olympic Games, Graduate - State University of New York Maritime College.

Gary opened the panel's discussion with the following thoughts: "For many sailors, serving as a Leader is the essence of life. Taking command is a big task and sometimes it can be lonely being the person-in-charge. All Leaders understand that you can delegate authority but never responsibility. Setting clear goals and communicating the mission to the entire team is the first step. Use the lessons of the past as your guide. Unforeseen circumstances may dictate that a plan may change throughout the mission. In the end, everyone will learn from the experience and be better prepared for the next adventure." Gary also shares his further thoughts on Leadership in Appendix 1.

On the panel with Gary were a quintet of offshore sailing legends.

Ken Read – STC member, Collegiate Sailor of the Year, Rolex Yachtsman-of-the-Year, Skipper in two Volvo Ocean Races and two America's Cup campaigns, World Champion - Etchells Class and J 24 Class, Skipper, Maxi-yachts *Comanche* and *Rambler*, President of North Sails, Tactician Challenge, Twelve Meter World Champion. Graduate - Boston University.

Ken Read's key recommendation was to surround yourself with people better than you, not necessarily better sailors, but better teammates. His philosophy rang true when he spoke about composing a crew of first-class sailors, but they struggled with teamwork. "It's not about competence, rather it's more about character. You can learn sailing/seamanship skills, it's harder to learn teamwork and mutual care. I have used this practice my whole life - surrounding myself with successful people - in many area: spiritually, financially, physically, and intellectually - and I have grown tremendously."

Read went on to make the following comments:

- "Leaders always try to become better Leaders."
- "Talent without working as a team cannot succeed."
- "A Leader should be able to put up his/her hand and say, 'It's my fault.'"
- "Don't fear change. Try something new."

Dawn Riley – STC member, Skipper of *Heineken* and crew on *Maiden* in Whitbread Round the World Races, Rolex Yachtswoman-of-the-Year, crew, captain and CEO of America's Cup campaigns, Author: *Taking the Helm*, Executive Director of Oakcliff Sailing. Graduate - Michigan State University.

Dawn's emphasis was on readiness. "Seventy-five percent of the race is won before it begins. Preparation, planning, and anticipation cannot be emphasized enough. This is paramount. Just ask Navy SEALs or NASA Astronauts and they will tell you about the importance of training, drills, and planning. They train years for a mission, testing responses to all possible situations that may occur. As smart as they are, they know – if there is a mistake it could be them next. They understand human failure." She concluded her presentation saying:

- "If there's time, try to engage the team in decision making."
- "A Leader has to be the 'Chief Worrier,' always thinking ahead."
- "A Leader needs to balance toughness and empathy."

Larry Huntington – STC member, Past Commodore of New York Yacht Club, sailed in eight Transatlantic Races, campaigned his yacht *Snow Lion* in many off-shore races, retired CEO of Fiduciary Trust, Mountaineer (two assaults on Mount Everest) Graduate - Harvard University.

Larry emphasized that the ideal captain should 'work himself (herself) out of a job, hiring people who are more experienced, smarter, and more talented than he is. Larry doesn't hold back when training them. "I want them to be as good as me at the various tasks at work. Then I focus on supporting them and keeping them as happy and fulfilled as possible. I want a crew composed of as many Leaders as possible." (Similar to David Marquet's philosophy expressed in *Turn the Ship Around*).

Larry also described his experience attempting to scale Mt. Everest twice with Eric Simonson as team Leader. Larry was aware of the personal traits, especially willingness to take risks, of the other climbers. For the final assault, Larry made sure that he was teamed with like-minded climbers.

Renee Mehl – STC member, Director of Offshore Sail Training at United States Naval Academy, crew on *Heineken* in Whitbread Round the World Race, past committee member World Sailing - Special Regulations, frequent speaker on Safety-at-Sea, Graduate - Michigan State University.

Renee shared her thinking on the repeating loop of learning Leadership. It starts with some form of training. It could be a formal safety-at-sea seminar, or more informal on-the-job training with more experienced mentors. Training must be reinforced by practice to gain proficiency in newly learned skills. Continued practice helps Leaders gain experience in different situations and the muscle memory to know how to react in emergencies in all conditions. Mistakes are usually made while gaining experience. Reflection on mistakes helps us learn what not to do or what to do better the next time. Reflection can also help us recognize actions and behaviors that led to a positive outcome.

Pre-briefs and debriefs are a critical part of sharing knowledge of mistakes and the lessons learned from them with the rest of the crew. It often helps if the Leader critiques his or her own role first. Clear communications are one of the more important behaviors of a good Leader.

- "Leadership improvement is a four-step loop: Training, Practice, Mistakes, Reflection," she says, "Train the way you fight. Fight the way you train."

Stan Honey – STC Member, Rolex Yachtsman-of-the-Year, Winning Navigator in Volvo Ocean Race and multiple Transpac Races, Navigator on recording-setting circumnavigation, created innovative on-screen graphics for America's Cup and many other sports including football. Graduate – Yale University and Stanford University.

Stan Honey addressed Leadership from three perspectives: Skipper, navigator, and crew. When preparing to present strategic decisions to the Skipper, as navigator Stan asks himself: "What mood is the Skipper in? Is this a curious Skipper who asks lots of questions, or a hurried Skipper who just wants to make a quick decision? Or is the Skipper the argumentative type? If the last case, I don't give an opinion, I just present the facts, and usually the Skipper will come around."

Stan recommends: "Play the long game, not the short game." This reminded some of Jocko Willink, a retired U.S. Navy Seal, who talks about the difference between the short game and the long game. "People concerned about the short game may win the battle but not the war," noted Wilink. "They are micro-focused on being fastest, first, best, biggest, whatever – BUT people who win the long game understand that they will have bad days, and there will be challenges." Simon Sineck refers to the "Finite vs. infinite game." Leaders focused on the long game/infinite game mindset will persevere in spite of difficulties. As Stan Honey says, "Sometimes you may need to go 100 miles off course after reading the weather fax, but by doing so you have more favorable weather later on."

Honey also focused on being a communicative Leader. As a world-class offshore navigator, he would regularly brief the on-watch members as well as the on-coming watch and watch captains. By keeping everyone up-to-date on what to expect in the next few hours, situational awareness was enhanced, and overall performance and tactical maneuvers could be better anticipated.

Stan's principal points included:

- "The Navigator acts in a supporting role to the Leadership to help them do well."
- "Briefing the crew in advance gets their heads into the game. Briefing each on watch increases their situational awareness and helps them prepare."
- "Keeping the crew informed prepares them for tough tactical decisions that may need to be made. They have to see it coming."
- "If the Skipper is argumentative, better for the navigator to present the facts rather than a recommendation, enabling the Skipper to arrive at the correct conclusion."
- "Accident reports must be available to the public so lessons can be learned."
- "A Leader's absolute faith in his well-trained crew became apparent during a round-the-world race. "The fires had been extinguished, but the electric system had melted down, the leeward steering wheel was ripped out, and water was flooding the cabin. The Skipper, Mike Sanderson, said: 'I'll drive. The rest of you get on with it.' The problems were resolved, and the boat won that leg of the Volvo Race."

Breakout Sessions
Defining and refining key Leadership skills

In the afternoon, everyone, including the panelists and Sir Robin, actively engaged in breakout group sessions to focus on eight specific Leadership topics that are relevant to offshore sailing. The goal was to explore, dissect, define, and learn from each of the subject areas.

The breakout groups' discussion Leaders were given a core concept statement from which to work, a list of group members, a "scribe" to help capture the group's work, and a template for reporting their findings. It should be noted that these "scribes" tended to be younger sailors who brought to their respective committees a fresh perspective and energy in recording and recapping the discussions. Each group communicated in the weeks prior to the OSLS to explore their subject and prepare for the formal breakout meetings. The output of these groups provided deeper understanding of the fundamentals of good Leadership, including a detailed explanation of the specific core Leadership topic, key findings, and a comprehensive list of best practices, things to avoid, and training recommendations. Links to each group's more detailed descriptions of best practices (see Appendix 2) and training recommendations (see Appendix 3) are provided in each group's summary.

Hosted by:

Breakout Group Topics

Foundational Leadership Skills	Facilitator	Scribe
A. Character	John Storck	John Storck III
B. Responsibility & Accountability	David Tunick	Erik Storck
C. Team Leadership & Followership	Ralf Steitz	Taylor Walker & Lindsay Gimple
D. Communication	Ed Cesare	Erica Lush
E. Preparation & Anticipation	Sheila McCurdy	Justin Bauer
F. Sail the Way You Train, Train the Way You Sail	Renee Mehl	Jake Kiggans
G. Situational Awareness	Dick York	Don Poirer
H. Emergency Management	Jack Cummiskey	Ariel Nechemia

Each group was tasked with three goals:
- Clearly and concisely define the assigned Leadership topic,
- Identify and explain best and worst practices (recapped separately in Appendix 2 with links provided at conclusion for each topic), and
- Recommend improved training techniques for the respective topic (recapped separately in Appendix 3 with links provided at conclusion of each topic and consolidated in a separate Chapter: Proposed Training Changes.

The recap of each group includes:

- A description of the concept being discussed.
- An overview of key findings.
- Topline best practices.
- A brief list of things to avoid.
- Topline recommendations.
- Links to the respective Appendices with detailed descriptions of every best practice and recommendations stemming from the respective group.
- Breakout group rosters with the Facilitator and Scribe noted.

For purposes of this Report, the terms "Skipper" or "Owner" should be considered interchangeable. If a yacht Owner cannot make the voyage, and designates someone else to be Skipper, that Skipper must act in full in that role. If there is a mishap, it may take a judge to unwind legal liability. If the Owner is aboard but is not the Skipper, there must be a very clear assignment, and acceptance, of responsibility between the Owner and Skipper as to who is the Person-in-Charge. In commercial situations such as merchant marine or charter yachts, the Skipper (captain) is probably not the Owner, but that distinction is not the focus of this Report.

A. Character

The Concept
Leadership behavior in any situation, emergency or otherwise, is a direct reflection of the Leader's character.

The Findings
"The true test of a man's character is what he does when nobody is watching." – John Wooden

"Character is difficult to teach and is more developed through individual commitment over time. Short-term, transactional Leadership is possible without high character. However, if one aspires to transformational Leadership, high character is critical. Transactional Leadership may help a crew survive an offshore crisis. Transformational Leadership may help to prevent it." – John Storck, Jr.

Traits of high character in offshore Leadership: the list could be as long as the creator wishes. Our group chose a streamlined list taken from S*ailing True North: Ten Admirals and the Voyage of Character,* by Admiral James Stavridis. The traits are: Integrity, Empathy, Humility, Decisiveness, Resilience, and Self-Awareness (described in full in detailed best practices).

John Storck, Jr.

Definitions of Leadership Character, adopted from, *Leadership: Theory & Practice*, 7th Ed., by Peter G. Northouse

Transactional Leadership: refers to the bulk of Leadership models, which focus on the exchanges that occur between Leaders and their followers. In simple terms, this is a relationship that only exists to accomplish a task.

Transformational Leadership: the process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the Leader and the follower.

Some additional thoughts**:**
- Character cannot be taught in a day. Rather, it is something developed through a commitment of self over time.
- There are numerous categorizations of Leadership. Not all require high character. However, Leaders operating with high character have more potential to lead in more elevated ways.

Key Best Practices
- Employ the traits of high character in offshore Leadership (Integrity, Empathy, Humility, Decisiveness, Resilience, and Self Awareness).
- Establish a culture of open communication.
- Take on every job.
- Commit to self-awareness.

"I have often compared ocean racing with being a prisoner of war, an environment with which, unfortunately, I have had some experience. Hard conditions, cramped quarters, bad food (really bad on boats stocked by midshipmen) and diverse personalities. Instead of the guards beating you, Mother Nature takes over. You can't get out so you make the best of it. It's a character builder."
(Captain Ned Shuman, a Storm Trysail member, spent five years as a POW in North Vietnam)

Things to avoid
- Arrogance.
- Ignoring or shutting out information.
- Failing to take command when Leadership is needed.

Recommended changes to improve Safety-at-Sea training and education
- Include identification of the six elements of high character in offshore Leadership in SAS training.
- Develop a specific character assessment program.
- Consider adding an overnight component to SAS.
- Develop a new video or set of videos that portray example scenarios that display both good and bad Leadership character.

Click HERE for detailed Best Practices on Character, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)

John Jr Storck, Jr. - Facilitator, STC
John III Storck, III - Scribe, STC
Todd Gautier - L3, F/A-18 Pilot
Barry Gold - STC, NYYC, American YC
Sally Lindsay Honey - STC, US Sailing

Bill Ketcham - STC, NYYC, American YC
Mark Lenci - CCA
Dan O'Connor - U.S. Marine Safety Assn.
Jim Praley - STC, Annapolis YC
Lee Reichart – STC

Capsize of a Korean passenger ferry with loss of over 800, including 500 high school students on a trip. The Captain told passengers to remain in their cabins, while he abandoned ship. Lack of character and integrity; panic in an emergency. The Captain is now serving a life sentence.

B. Responsibility & Accountability

The Concept:

The Leader bears ultimate responsibility and accountability for safety, success, and failure, and should embrace this willingly. The opposite of a Leader taking responsibility is blaming others. Those being led look to the Leader for guidance and expertise, and they rely on the Leader's judgment. A positive, realistic attitude is also essential, since morale is so important.

A Leader must be willing to learn from mistakes and successes. Continuous learning through self-evaluation and team-evaluation is critical, continuously adapting and updating based on an objective, dispassionate, and critical analysis of what went wrong, as well as what went right.

The Findings

"Responsibility & accountability are the essence and foundation of good Leadership, prerequisite in ensuring that a vessel and her crew are prepared for all contingencies. It is imperative that responsibility and accountability are assigned and understood in every respect." – David Tunick

David Tunick

Key Best Practices
- Ensure responsibility & accountability are understood by the crew.
- Clearly establish the chain of command and delegated responsibilities.
- Establish that Owner/Skipper's responsibility is to the crew, the boat, and the voyage (in that order).
- Be enthusiastic and positive.
- Be ready and willing to admit fault without "shooting the messenger." When a crew member brings information, the Leader must hear it willingly and act on it to create a culture of openness.

Things to Avoid
- Over-confidence: Thinking too highly of one's own abilities, a lack of understanding of their crew's abilities, or an over-confidence in the ability of the boat is irresponsible and arrogant and may lead to negative outcomes.
- No clear chain of command: In a disaster situation, everyone must know their job so that communication can stay focused. If and when commands are required, it must be clear as to where the commands are coming from.

Recommended changes to improve Safety-at-Sea training and education
- Include a session on responsibility and accountability in Adult Safety-at-Sea sessions.
- Include a component of responsibility and accountability in Junior SAS. Identify Leaders early.
- Develop a separate Leadership course and course book specifically for Skippers and watch captains.
- In the Leadership component of SAS training, have students formulate a list of ideal characteristics in a Leader.

Click HERE for detailed best practices on Responsibility & Accountability, and HERE for Detailed Training Recommendations.

Panel Watch Bill (Group Members)

Dave Tunick - Facilitator, STC, NYYC, SYC
Erik Storck - Scribe, STC
Juan Corradi - STC, NYYC
Matt Gallagher – STC, Chicago YC, Chair US Sailing
   Offshore Committee
Ernie Godshalk - CCA, NYYC

Larry Huntington - STC, NYYC
Brenda Lewis - STC
Chris Reyling - STC
Leonard Sitar - STC, AYC
Andrew Weiss - STC, NYYC, Larchmont YC

George David ensured that all 23 crew took hands-on survival training and were equipped with the best drysuits, inflatable PFDs and safety equipment. He carried a personal EPIRB that was instrumental in notifying rescue forces that the boat had capsized with its EPIRB trapped below.

C. Team Leadership & Followership

The Concept
We tend to think of Leadership as a singular responsibility of the Skipper, while in reality, nearly every member of a successful team is a Leader in their own right and area of responsibility: Skipper, navigator, watch captain, foredeck, cook, medical. Each member of the crew needs to be able to lead well, and the ability to step up to new Leadership roles during an emergency (e.g. injury) is critical. It is important at all times – but especially in an emergency – to know who is in charge, and to support the Leader of the moment. Each member of the team must understand how to follow, to accept direction and provide respectful feedback and forceful back-up when warranted. Any member of the crew at any time must be willing to immediately dive into any supporting role for the benefit of the vessel.

The Findings
"Identifying the right Leader in the right situation is critical to successfully handling emergency situations at sea." – Ralf Steitz

Key Best Practices
- Establish a culture of incident analysis.
- Define team success in terms of the mission and situation.
- Identify and recognize the right Leader for different situations.
- Delegate and communicate specific responsibilities throughout the crew.

Ralf Steitz

Recommended changes to improve Safety-at-Sea training and education
- Integrate Tabletop Exercises into SAS training.
- Incorporate discussions on delegation of Leadership roles and identifying subject matter experts within a team into SAS training.
- Include a practical exercise on making a Station Bill into SAS training.

- Consider making a Station Bill a mandatory document for certain offshore events.
- Demonstrate incident reporting into SAS Training to encourage a culture shift towards self-analysis and sharing lessons learned.
- Challenge male STC members and seminars to think critically of their actions and responses to women in Leadership roles.
- Work to identify women with strong experience and potential to include in planning, teaching and development of others.
- Work to ensure we have women coaches at Jr/Sr SAS events.

A good Leader selects a crew that has the right balance of experience, skills, and personality. A good Leader is clear about the mission, and truthful about the challenges.

Click HERE for detailed best practices on Team Leadership & Followership, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)
Ralf Steitz - Facilitator, STC, USMMA
Taylor Walker - Scribe, STC, MudRatz
Lindsay Gimple - Scribe, MudRatz
Sue Blank - NYC Dept. of Health
Stan Honey - STC, NYYC, World Sailing
Jonathan Kabak - CO *Oliver Hazard Perry*
Joey Moffitt - STC, NYYC

Ron O'Hanley - NYYC, RORC
Christopher Otorowski - STC, NYYC, CCA
Steve Minninger - STC, NYYC
Ken Reightler - USNA
Bill Strassberg - CCA
Brook West - STC

D. Communication

The Concept

Clear, direct, simple orders and responses are required. Avoid shouting, except to make oneself heard. Be open to ideas and suggestions. Communication is a two-way street. It is essential that the Leader give clear, simple orders, use standard nautical terminology, and ensure that their message has been received and understood. It is also essential that the Leader listen to those being led, alert for, proactively seeking and being receptive to new information, suggestions, and ideas. Efficiency of language is important and does not come naturally to most. Thinking before issuing orders can also be essential to avoid confusion, differentiating between analyzing alternatives and communicating a decision.

The Findings

"Nearly every accident at sea in both commercial and recreational contexts can in part be attributed to poor crew resource management. By the same token, the 'quiet boat,' one in which a crew communicates meaningfully and with ease, is emblematic of success." – Ed Cesare

Ed Cesare

Key Best Practices
- Know your audience
- Establish trust
- Be aware of and employ non-verbal communication
- Employ deliberate and skillful delivery and execution
- Be clear, succinct, specific
- Be conscious of tone; listen actively
- Speak the person's name before giving the command to make sure they pay attention to what you are saying. ("Bob, trim the jib an inch," rather than "Trim the jib an inch, Bob.")

Loss of US flag Ro-Ro/Container-ship El Faro *with all hands (33) in Hurricane Joaquin.*

Significant factor was lack of open communication between Captain and officers

Things to Avoid
Committing Sender Errors. A response of "What do you mean?" is a good indicator that the receiver has missed the sender's message. There are a variety of reasons why this occurs. The most frequently encountered problems are:

- Not establishing a frame of reference. If the receiver is not on the same page as you, miscommunication occurs.
- Omission of information. The sender leaves out pertinent details that affect a receiver's ability to comprehend what is being said. "Pull that line" leaves quite a few unanswered questions. "Stand by on the staysail sheet and trim it when the sail is hoisted," gives the receiver more direction and mission definition.
- Providing biased or weighted information. Inserting the sender's opinion when providing information.
- Assuming messages only depend on words. The sender underestimates the power and importance of tone and body language.
- Not willing to repeat information. We normally talk at about 125 words/minute and think at 500 -1,000 words/minute. Senders who only say something once run a very high risk of failure.

Committing Receiver Errors. A receiver can also make mistakes that interrupt the communication chain (remember, to err is human). Receiver errors generally fall into six categories.

- Listening with a preconceived notion. The receiver already has his/her mind made up before the sender can formulate a thought.
- Poor preparation. Receiving messages is more than just allowing the words to pass through your ears. Receiving a message is a conscious process.
- Thinking ahead of the sender. Extrapolating the sender's thoughts, putting words into someone's mouth, finishing sentences for a sender, formulating a response before the sender finishes (the trigger phrase here is "Hear me out," from the sender) are all examples of thinking ahead of the sender.
- Missing the non-verbal signals. Overlooking body language and facial expressions can be crippling when it comes to interpreting communications.
- Not asking for clarification. Failing to employ the old standby, "So what you are saying is," can be the death of good communication.
- Disrespectful communication. Want to slam the door shut on a message? Respond with an insult, demeaning/degrading remark.

Recommended changes to improve Safety-at-Sea training and education
- Develop and include a SAS seminar segment on communication.
- Train on the importance of clear goal-setting and pre-briefs, and when pre-briefs are relevant.
- Train on the importance of post voyage/race/event/maneuver debriefs

Click HERE for detailed best practices on Communication, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)
Ed Cesare - Facilitator, STC, NYYC, RORC
Erica Lush - Scribe,STC, Oakcliff Sailing Center
Betsy Alison - US Sailing, 5-time Rolex Yachtswoman-of-the-Year
Frank Bohlen - STC, CCA, Bonnell Cove Foundation
Chris Gasiorek - STC, Mystic Seaport

Jack Gierhart - Past-CEO US Sailing
Chuck Hawley - US Sailing
Gary Jobson - STC, NYYC, CCA
Ann Myer - STC
Ray Redniss - STC, SYC
Jon Wright - STC, USNA, CCA

E. Preparation & Anticipation

The Concept:

Preparation and anticipation, thinking ahead, and applying experience are essential components of Leadership. Being ready prior to going to sea, flying an airplane, or going into the mountains is essential to success and safety. Do you have the right people with the right mix of skills and experience? Do you have the right equipment, and do you know how and when to use it? Have you made a plan and discussed it with your group? Have you taken their input? Have you done your research, and anticipated all possible situations and environments that may be encountered? Involving the crew in the preparation can be important to team unity and preparedness.

The Findings

"Preparation and anticipation are key to Leadership. A prepared crew, proper gear, and forethought by all concerning the passage being undertaken covers the gamut of all the topics discussed in OSLS. Thorough preparation and constant anticipation by all aboard make the passage safer, easier, and more fun." – Sheila McCurdy

Sheila McCurdy

Key Best Practices
- The Skipper/Owner is ultimately responsible for preparation and organization.
- Preparation is the most effective path to maintaining confidence in an emergency.
- Pre-departure – Pay careful attention to crew selection.
- Pre-departure – Assess concerns for particular race or passage.
- Pre-departure – Assign and communicate specific preparations/functional responsibilities for crew members.
- Pre-departure – Create and post a "Station Bill" to establish and communicate chain of command (line of authority) and specific responsibilities.
- Pre-departure – Confirm that the boat and crew are ready.
- Underway – Develop and use written shared protocols.
- Underway – Encourage crew members to train for new skills, tasks, positions, and roles.
- Underway – Routinely use "what-if" exercises.

Things to avoid
- Bad communications: Lack of clarity, too bossy, or weak.
- Uneven responsibility and too little or too much control.
- Leaving everything to the last minute.
- Not involving the crew.

Recommended changes to improve Safety-at-Sea training and education
- Use scenarios, role playing, and lessons learned in SAS training.
- Use storytelling in SAS training to illustrate good and bad preparation and outcomes.

Click HERE for detailed best practices on Preparation & Anticipation, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)

Sheila McCurdy - Facilitator, STC, NYYC, CCA
Justin Bauer - Scribe, STC
Peter Fackler - STC
Eric Kreuter - STC, Riverside YC
Michael Moradzadeh – CCA, Chairman of Pacific Cup
Bill Pinckney - Former Capt. *Amistad*

Stephen Polk - Mariner and Trainer
Ken Read - STC, NYYC
Kelly Robinson - STC
Rose Witte - Former. Capt. *Amistad*
Patti Young - STC, NYYC

"Preparation includes organizing a complete damage control kit, training several crew to use all equipment, posting an emergency diagram (identifying all through hulls, fire extinguishers, safety gear, ditch kit), and an "Abandon Ship Bill."

The title of this session was derived from the US Marines, "Fight the way you train, train the way you fight." This means reacting to a situation in accordance with training, rather than trying to come up with an approach under duress as if the situation had never previously occurred. An emergency is best responded to by applying well understood and thoroughly practiced procedures. While emergencies often take unpredictable twists and turns, the Leader should give orders in accordance with standard practice as much as possible. It is critically important to practice as a crew!

The Findings

"Skippers need to invest in training their crew and practice emergency responses, so that they have the best possible chance of success in avoiding a bad outcome. Just learning about safety without practicing, multiple times, in a wide variety of conditions, will not prepare your team. It needs to be an automatic response. Train them, delegate, practice and hold them accountable. They are your greatest asset in an emergency."

"There are plenty of ways to incorporate training into your daily routine. Add in a crew overboard drill when you do a spinnaker set on the way to the racecourse, whether you're inshore or going offshore. Teach everyone on your crew how to make an emergency call on the VHF radio or satellite phone. Do some night-time flooding/fire/abandon ship drills for an added degree of difficulty. It's a Leader's responsibility to create a culture of safety onboard." – Renee Mehl

Renee Mehl

Key Best Practices
- Plan and practice for crisis management. Implement tough training in varied conditions, give a tough assessment and identify areas that need to be improved in the next practice session.
- Encourage training and practice for emergencies to delivery crews on pre- and post-race voyages. Review previous incidents' lessons learned.
- Review previous incidents' lessons learned with your crew to build their knowledge base.
- Train using all of your boat's equipment so you understand how it works before you need it.
- Know your crew, and how they react under duress; train, and practice and make assignments accordingly.

Things to avoid
- Neglecting maintenance on equipment and systems on your boat.
- Being complacent and just doing the bare minimum practice to get your boat through a safety inspection/fulfill NoR requirements before going offshore.
- The "snowball effect", or error chain of events, during an emergency. A series of small problems can quickly escalate into a larger issue. Identify problems as they're happening and stop them. Even inexperienced crew members can do this, if you give them the tools to do so. Teach them that a propane leak smells like rotten eggs and an off-watch cook can avert a bigger problem.

Recommended changes to improve Safety-at-Sea training and education
- Use actual cases in SAS Training. Planning, preparation, practice and critical thinking are key elements of safety in offshore sailing. The Leader needs to implement these elements as part of the safety ethos on their boats. Moderators could include this in the ethos portion of the course and work into other SAS topics. Teach Operational Risk Management. This is a process a Leader can implement to help prevent problems in the first place, and managing them when they do.
- Use fun and instructional training exercises like trying to speak with a mouthfull of a peanut butter and jelly sandwich to practice clear and concise for communications, and the marshmallow challenge to build for collaboration and teamwork during Jr SAS Seminars. Both of these exercises can be found online.
- Medical requirements should be scaled to the availability of nearby help.
- Safety inspectors/scrutineers for offshore events ensure compliance but can also be safety educators.
- Set training/practice goals using the SMART (Specific, Measurable, Attainable, Relevant, and Time-Based) methodology.
- Recommended Leadership reference books: *Sailing True North* by Admiral James Stavrides and *Call Sign Chaos* by General Jim Mattis

Click HERE for detailed best practices on this Training, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)

Renee Mehl - Facilitator, STC, CCA, USNA
Jake Kiggans - Scribe, USNA
Charlie Arms - US Sailing Board
James Childs - Submarine Commander USN
Robin Knox-Johnston - CBE, RN, Solo navigator
Tony Parker - STC, Annapolis YC, NYYC

Rick Royce - STC, Webb Offshore Sailing
Ron Trossbach - CCA
Rev. Mark Nestlehutt - US Navy, Executive Director,
    Seamen's Church Institute
Lou Sandoval - STC, Chicago YC

Sail the way you train; train the way you sail. Use heavy weather to test systems, sails and crew.

Situational Awareness

Low Speed Chase *got caught in surf rounding the Farallon Islands when she cut the corner, passing over water shallow enough to cause the ocean swell to break. Five of the eight crew were swept overboard and killed. This was a clear case of lack of situational awareness, compounded by an Owner handing over the role of Skipper to a visiting racer. Neither paid adequate attention to navigation, raising questions about responsibility and accountability.*

Volvo 65 Team Vestas *runs aground on reef in the Indian Ocean due to the navigator not zooming in along the route or cross-checking the electronic vector charts with paper charts. This is an example of lack of Situational Awareness and the Skipper and Navigator should have been double checking each other.*

G. Situational Awareness

The Concept

This means being aware of the conditions, occurrences, and influences in play during any situation. The Leader must be simultaneously leading and "looking around", so as to be able to understand and react to what is happening to maximize opportunities and be prepared for emerging challenges. While it is easy for the Leader to become absorbed in the details, this is a mistake. The Leader needs to be fully aware of how a situation is developing, focused both in the boat and out of the boat. Some call this "court vision," or an ability to "see around corners." Just because response to an issue started a certain way, the Leader must be aware that things might change, demanding an altered approach. As things change, often a new path forward must be developed, quickly and correctly.

The Findings

"Situational Awareness is:
* The perception of environmental elements and events in both time and space,
* The comprehension of their meaning, and
* The projection of their future status.
* Then, making proper decisions and take action.
* Repeat as needed.

"We called this the Situational Awareness Cycle." – Dick York

This group's case study was the 2013 Islands Race incident where the boat *Uncontrollable Urge* lost her rudder and ended up drifting onto San Clemente Island, with the loss of one crew. https://cdn.ussailing.org/wp-content/uploads/2018/01/2013-Islands-Race-Report.pdf

Dick York

Key Best Practices
* Use the principles of Bridge Resource Management (BRM); establish routine observation and communication involving all of the crew.
* Work consciously to observe accurately and avoid "observation bias" (disregarding observations that do not fit your prior experiences).
* Base decisions on good seamanship; avoid decision making that is not based on good seamanship, and be careful to exclude outside biases.
* In emergencies – consider the worst case/maximum possible loss and minimize the likelihood of that loss.
* Continuously update observations and consider whether you have to remake decisions.
* Rely on distributed functions and responsibilities (from the Station Bill).

Things to avoid
* Mental models and decisions based on overconfidence in you or your boat.
* Dismissing remarks from the newest or least experienced crew. Listen.
* Ignoring the possibility of a catastrophic loss because you think the probability of it happening is low.

Recommended changes to improve Safety-at-Sea training and education
* Use actual cases in SAS Training.
* Have boat crews together when training on Leadership.
* Practice onboard problem situations.
* Publish a model/standard Situational Awareness planning and decision-making mental flowchart.

Click HERE for detailed best practices on Situational Awareness, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)

Dick York - Facilitator, STC, CCA, Chair US Sailing SAS
Don Poirier - Scribe - Cap. USNA Varsity Offshore
    Sailing Team
Ty Anderson - STC, Riverside YC
John Browning - STC, Manhassett Bay YC, NYYC
Daniel Galyon - STC, NYYC
Richard Hersh – Yale University

Buttons Padin - STC, Larchmont YC
Dawn Riley - STC, Oakcliff, Whitbread
John Robinson - Chair of CCA Seamanship Committee
Eric Simonson - Mountaineer Guide
Jahn Tihansky - STC, CCA, Head Coach USNA

H. Emergency Management

The Concept

This concept applies to both the Leader and those led. Fear and panic are normal elements of emergency Leadership. The Leader must acknowledge when fear and panic are present and take steps to mitigate the impacts. To prevent fear from interfering with the crew responding effectively, the Leader must show confidence in the crew and proactively deal with the situation. If the Leader has adequately trained the crew and prepared the boat, then fear is less likely to contribute to a bad outcome. It is also important to keep people busy, rather than just being absorbed in their fear. The Leader must acknowledge their own emotions and be sensitive to the emotions of those being led. It is not appropriate to yell "Snap out of it!" to someone paralyzed by fear. Inherent in this is the ability to adapt to changing circumstances.

The Findings

"It is almost inevitable when sailing offshore that any number of emergencies will arise. Many Leadership qualities are necessary to safely complete each passage. But no aspect of a crew's performance will present a more significant barrier to resolving the emergency than the inability to mitigate fear and panic when facing an emergency." – Jack Cummiskey

Jack Cummiskey

Key Best Practices

- Stop. Think. Execute.
- Tackle critical items first; you cannot do all things at once.
- Watch people carefully
- Foster and enable Micro Leadership, calm group dynamics, heads down (and up) action - Awareness of focus on each individual crew member on their tasks
- Train for Emergencies: Sail the way you train; train the way you sail.

Things to avoid

- The Fearful Leader (the Leader exhibiting fear).
- Looking back; worrying about how you got into this situation.
- Losing Situational Awareness.

Recommended changes to improve Safety-at-Sea training and education

- Incorporate stories into SAS training.
- Teach the STOP. THINK. EXECUTE. mantra as a guiding principle.
- Teach micro Leadership, calm group dynamics, heads down (and up) action.

Click HERE for detailed best practices on Emergency Management, and HERE for Detailed Training Recommendations

Panel Watch Bill (Group Members)

Jack Cummiskey - Facilitator, STC
Ariel Nechemia - Scribe, Oakcliff Sailing Center
Peter Becker - STC, NYYC, American YC
Kristen Donelan - RORC
Scott Florio - STC, American YC

Gary Forster - NYYC
Walker Potts - STC, USMC
Butch Ulmer - STC, NYYC, Larchmont YC
Ron Weiss - STC, CCA , NYYC

In the 1979 Fastnet Race, *Grimalkin* was rolled 360 degrees, lost its rig, and two crew were apparently killed. The Skipper and remaining crew panicked and abandoned ship into the life raft. They were ultimately rescued, only to find out that *Grimalkin* had stayed afloat, and one of the crew left behind was still alive. (Photo: note the surviving crew sitting aft in cockpit, and the deceased crew forward in cockpit.)

Proposed Training Changes

The OSLS breakout groups and Organizing Committee developed over 50 specific recommendations for improving Safety-at-Sea training and education. These span a broad spectrum of Leadership skills. A synthesis of those recommendations, organized by how they might be implemented, follows. The complete recommendations can be found in Appendix 3. Implementing these recommendations will be a significant effort!

A. Improving Existing STC Offerings (Available to all clubs/organizers)

1. **Junior SAS**

   Preparatory Work:
   a) Provide access to the OSLS Leadership video and other support material; movie and book recommendations.
   b) Coordinate with Long Island Sound Junior Sailing Association (JSALIS) to increase yacht club junior committees' understanding of the value of big boat sailing and Leadership and expand Storm Trysail activities accordingly. Use this as a template with other regions.

   At the Seminar:
   a) Introduce juniors and their instructors to Leadership Responsibility and Practices.
      i) Leadership session to discuss Leadership roles, responsibilities, essential characteristics, and best practices.
      ii) Communication skills.
      iii) Followership instruction (Be conscious of gender-bias when interacting with crew).
      iv) Train the way you sail; sail the way you train.
      v) STOP, THINK, EXECUTE.
   b) Incorporate Leadership in Dockside Demonstrations and On the Water Practice. Define and rotate Leadership roles for each evolution.
   c) Ensure we have female instructors/speakers/coaches.
   d) Presentation by an inspiring sailor/Leader.

   Post Seminar:
   a) Continued access to Online resources: Video/PowerPoint/movie recommendations/real life stories.

2. **Adult Hands-On SAS**

   Preparatory Work:
   a) Required videos (OSLS video), articles, movies. (See Appendix 4).
   b) Pre-Seminar Meeting: Pre-assign and announce Hands-On groups two weeks in advance of seminar. Assign a Leader and schedule a 45-minute Zoom: group introductions, brief prep video, short work assignment (watch bills for the SAS events). Assign a SAS Coach 'mentor' to guide this process.
   c) Train STC coaches to teach Leadership.

   At the Seminar:
   a) Increased focus on Leadership, responsibility, accountability, essential characteristics, and best practices. (integrate into introductory session – possibly create a separate session in smaller groups).
   b) Integrate practical Leadership into each lesson plan: rotate defined student Leadership roles for each session and drill, utilize benefit of the team Zoom, reinforce good communication skills, practice situational awareness, pre-briefs and de-briefs.
   c) Integrate Bridge Resource Management; STOP, THINK, EXECUTE; Followership; Train the way you sail; Communication
   d) Moderator focused wrap-up/guest "Leader"?

   Post Seminar:
   a) STC Pamphlet already has Moderator discussion of Leadership and other material. Add pages to cover the eight key aspects of good Leadership, best practices, "Tool Box" of further sources, emergency templates.
   b) Quiz - add Leadership questions.

3. Level 200 Adult Hands-On SAS Training
a) Leadership training for advanced sailors who already have Hands-On Certification.
b) In-Depth session on Responsibility and Accountability.
c) Use of table-top exercises and on-the-water drills.

4. Intercollegiate Offshore Regatta
a) As teams sign up, send them link to OSLS Video and STC SAS library.
b) Prepare coaches/Owner reps: OSLS Video, coaches meeting, On Board check sheet (crew briefing, best practices)
c) Safety Briefing: include Leadership responsibility and best practices, followership, communication, "Train the way you Sail," Stop-Think-Execute.
d) Post IOR communications to sailors with links to STC SAS library.

5. Block Island Race (and other Storm Trysail distance events)
a) In NOR provide the links to OSLS Video and SAS materials.
b) As Owners enter, provide links to OSLS Video and SAS materials, including templates for emergency bills (COB, Abandon Ship, Fire & Flooding). Offer a free review of station/watch bills if submitted to STC.

6. Block Island Race Week
a) In NOR provide links to OSLS Video and SAS materials; emphasize Responsibility to Provide Assistance.
b) As Owners enter, provide links to OSLS Video and the STC library for their entire crew.
c) At the "tent' have Leadership and SAS resource information.

B. New Initiatives

1. Online (Web-based) Tools & Enhanced Website
a) Templates for Emergency and Crew Organization: Watch Bill; Abandon Ship, Fire & Flooding Bills, Emergency Stowage Diagram, Man Overboard, Damage Control Inventory, Damage Control Matrix, model/standard Situational Awareness planning and decision-making mental flowchart.
b) Template/Tools for Crew Practice Advice (how to run a drill) "Train the way you sail". Include guidance on how to conduct pre-brief, debrief, & track completion. Race Organizers may want to tap into this. TOPICS:
   i)   COB: Upwind, Downwind, Night, Lifesling, Mid-line Lift, recovering COB at mooring.
   ii) Emergency steering & damage control scenarios.
   iii) Letterbox-style spinnaker takedown.
c) Potentially develop a Mobile App or Web Form for the above to both prompt discussion and capture lessons learned.
d) Incident Reporting: Incidents and Near Misses:
   i)   Template to record information.
   ii) Provide links to Incident reports from World Sailing, US Sailing and MARS (Mariner Alerting & Reporting Scheme).
   iii) Develop a sailing-focused non-attribution incident reporting platform for sailing – analogous to MARS.
e) Develop or Identify a Leadership Self-Assessment tool to learn strengths and weaknesses of Skipper & crew. Employ this in preparation for appropriate level SAS seminars.
f) Storm Trysail Video Library additions:
   i)   OSLS Video: full length and short versions (completed)
   ii) OSLS Final Report
   iii) Gary Jobson interviews with great sailors
   iv) Rich du Moulin SAS Seminar moderator presentation

2. Bridge Resource Management

Develop educational and training content and/or module to translate Bridge Resource Management practices to managing a sailboat. This is explicitly using all the resources available to you at the moment, i.e., even listening to the most junior member of the team as he/she may see something no one else does, as recommended in the Panel Discussions from James Childs, Stephen Polk, and Todd Gautier.

3. Leadership Educational Programs

a) Zoom based presentations and guest speakers from STC and when appropriate, in cooperation with CCA, NYYC, US Sailing, others.

b) Tabletop exercises: integrate into SAS training both live and with Zoom. Example from Ralf Steitz: Mayday Crisis Management. https://drive.google.com/file/d/1UujJDgQHS2lDlSSH-auNAjJsE2BzIK9M/view

4. SAS On-the-Water Invitational Events

a) SAS Training Day: As boats register in advance, Skipper and crew automatically receive access to STC resources: OSLS and COB videos, emergency templates, and the SAS online library. STC provides recommended equipment list: reefable mainsail, storm jib and trysail, PFD/harness/tethers, jacklines, Lifesling, tallboy buoy, throw bag, personal AIS beacon.

Boats arrive with their regular crew. STC provides rotating onboard coaches, safety boats & coaches, video (handheld and drone).

   i) Tasks: reefs, storm sails, emergency steering, heaving to, emergency communications (with coach boats), COB (tallboy/AIS) – possibly one trained swimmer as COB with Gumby suit.

   ii) Zoom Debrief: mid-week with selected videos; run by moderator with support of coaches.

b) SAS Race Day: Box shaped course where boats do pursuit start (for separation), and must do X number of COB recoveries on a beat, reach and run, plus reefing, sail change to the storm jib, heaving to, and damage control maneuvers. Video from coach boats and mid-day Zoom debrief. On-water "Master of Ceremonies" and Judges to add fun and ensure correct performance of drills (reference "The Unregatta").

c) SAS Weekend with Training Day followed by SAS Race Day: see (a) and (b) above; two-day event provides opportunity for party ashore including video and debriefs. Prizes for accomplishments (humor, best COB recovery, improvement, creativity)

d) SAS Overnight Cruise. Possibly as part of a Level 300 course; practice full-scope Leadership skills with a coached overnight cruise.

C. Regulatory Acceptance

Leadership Training Requirement

a) Based on actual experience with all the above ideas during 2021, for the winter of 2021-2022, consider formulating an effective "module" that could become the 16th requirement in World Sailing Offshore certification.

b) Work with US Sailing SAS Committee (Dick York) and Offshore Committee (Matt Gallagher) to have US Sailing lobby World Sailing (Oceanic Committee – Stan Honey) to adopt the proposed module as a new requirement. Also work with Gary Jobson, retired Vice Chair – World Sailing.

c) Alternative: in lieu of (a) and (b), consider integrating Leadership into the other 15 modules.

d) Build Leadership into the US Sailing Level II instructor training.

Appendix 1 – Gary Jobson on Leadership

Gary Jobson's opening remarks he stated: "Leadership can be lonely, exhilarating, confusing. Taking command is a great responsibility. You can delegate authority, but not responsibility." His further thoughts follow:

1. Leadership
   - Once in charge - be in charge
   - Taking command is a big responsibility and sometimes lonely
   - Many people avoid being in charge - for others it's the essence of life
   - An organization can only go as far as a Leader's vision
   - You can delegate authority - but not ultimate responsibility
2. Plan in advance
   - Use lessons of the past to guide the future
   - Make lists
   - Seek advice
   - Pay attention to details
   - Set goals (mission statement)
3. Clear Communications
   - Let everyone know the plan and goal - hold group meetings
   - Forecasting situations in advance allows everyone to be mentally prepared
   - Avoid arrogance
   - Mold Opinions
   - Be accurate
   - Be enthusiastic
   - Be a good public speaker (practice)
   - Ask good questions
   - Listen carefully to what others have to say
4. Be Decisive
   - Go with your first instinct (at least consider it)
   - Follow plan (know when to adjust)
   - You can't have an "all hands" call every day
   - Don't tolerate second-guessing
   - During tough times remain calm - go back to a normal routine
5. Develop Your Team
   - Explain common goal(s)
   - Blend different talents
   - Encourage specialization - look for better methods, add value, new opportunities
   - Rely on others, but have a check
   - Compliment each other - say nice things
   - Build trust by not keeping secrets
   - Give attribution - make heroes out of the people you work with
6. Act like a Leader
   - Lead by example
   - Be consistent
   - Loyalties pay off in the long term
   - Take on challenges directly
7. Innovate
   - Use technology from other industries/sports/academia/government
   - Find a niche and try to do something no one else has done before
   - Better to do fewer things well, then to do too many things at once
8. Have Fun
   - Success brings more opportunities
   - Favorite words - excellence - essential - integrity - grateful

Appendix 2 – Detailed Best Practices

As each Breakout Group developed the Leadership Best Practices presented in the Breakout Group summaries above, they also produced a Description of the Best Practices and provided a Situation to help provide context at and help understand the Best Practice in action. The complete Descriptions and Situations follow:

A. Character

1. Employ the traits of high character in offshore Leadership

Description: The critical traits of good character in offshore Leadership include:

Integrity: The quality of a Leader's honesty and trustworthiness. People who adhere to a strong set of principles and take responsibility for their actions are exhibiting integrity.

Empathy: "Standing in the shoes" of another person and attempting to see the world from that person's point of view.

Humility: A modest view of one's own importance. Humble Leaders possess a willingness to admit mistakes and seek opportunities to assume accountability. Humble Leaders are not arrogant.

Decisiveness: The ability to make decisions quickly and effectively. Neither good decisions made late, nor poor decisions made early are helpful. Leaders must trust their judgment to make effective decisions efficiently.

Resilience: The capacity to recover from and adjust to adverse situations. It includes the ability to positively adapt to hardships and suffering.

Self-Awareness: The personal insights of the Leader. Not an end in itself, but a process in which individuals understand themselves, including their strengths and weaknesses, and the impact they have on others.

Situation: Leaders who act in opposition to these critical traits have, time and time again, produced ineffective teams and led to failure, if not disaster.

> The only thing more dangerous than ignorance is arrogance. - Albert Einstein

2. Establish a culture of open communication

Description: Good communication is the foundation upon which a team succeeds and bad communication is often to blame for the start of a series of incidents that leads to failure. Leaders with high character communicate honestly, transparently, and frequently. This builds a more transformational Leader-follower dynamic in which information flows freely. It is the responsibility for those in Leadership positions to establish a culture of open communications so that every person aboard trusts that his/her input will be taken and acted upon appropriately and without fear of retribution. All crew must feel comfortable and free to share concerns to those above them and "say what they see". It's what you don't know that hurts you.

Situation: The key to being a good communicator offshore is preparation. Provide information to the crew beforehand, define the mission and success, review the big picture details as a team, and be prepared for each situation.

Stan Honey describes his frequent reports to crews when he is navigating. This maintains full-crew engagement, and often leads to better information returning to him from up on deck. On the other hand, there are numerous examples of arrogant captains squashing or ignoring such upward information, intentionally or not, that have led to disasters at sea.

Another example - If a crew member hears something such as an uncommon pump sound and does not diagnose and/or repair whatever may be wrong, it could imperil the ship and all aboard. They must report it to the watch captain or another person in Leadership. Not to do so would be a failure of responsibility; both of the crew members involved and of Leadership aboard for not establishing a culture of open communication.

Open communication can avoid the snowball effect or error chain of events during an emergency. A series of small problems can quickly escalate into a larger issue. Identify problems as they're happening and stop them. Even inexperienced crew members can do this if you give them the tools and permission to do so. Teach them that a propane leak smells like rotten eggs and an off-watch cook can avert a bigger problem.

3. Take on every job

Description: Leaders earn the respect of their crew through a willingness to perform any task. Leaders that capitalize on opportunities to show this willingness build a transformative environment in which all step forward and take on any job. However, a Leader must not get lost in a task when dealing with a potentially risky situation.

Situation: When the weather has turned sour offshore, and the crew is struggling to shift gears, it speaks volumes to the crew when a Leader moves out of their safer position to assist in what needs to get done. Most crew members' willingness to perform jobs beyond their role, if needed, increases upon seeing this.

4. Commit to self-awareness

Description: Leading in alignment with elements of high character demands self-awareness. Leaders must understand their strengths, and more importantly, their weaknesses. They must leverage that awareness in decision-making. One cannot hope to operate with integrity at a time when needed if one has not practiced such behavior through self-awareness prior.

Situation: When deciding whether or not to start a race, delivery, or cruise with heavy conditions forecast, the Skipper (or Owner) is responsible for taking all factors into consideration, including the capabilities of himself/herself and the crew, and the fitness of the boat to safely take part. The primary goal must be a safe voyage, not meeting a schedule. A Leader who is informed about his/her own strengths and weaknesses can build a team to compensate, and work on amending their own behavior and improving themselves; both to compensate for the weakness. For example: if shortness of temper is a weakness, pick experienced watch captains who don't get easily offended and instruct them to talk to you quietly one on one if they think you are out of line.

5. Character - Things to Avoid

- Arrogance.
- Ignoring or shutting out information.
- Failing to take command when Leadership is needed.

> Ultimately, the essence of Leadership is the willingness to make the tough, unambiguous choices that will have an impact on the fate of the organization. – General Colin Powell

B. Responsibility & Accountability

1. Ensure responsibility & accountability are understood by the crew

Description: Awareness is critical. Lead and take responsibility by making those under you in the chain of command broadly aware as to what is expected.
- Responsibility - Having an obligation to do something, or having control over or care for other persons, a task, or a mission as part of one's role.
- Accountability – "Being accountable not only means being responsible for something but also ultimately being answerable for actions." – ADM Hyman Rickover.
- Leadership - the art and/or skill of motivating a group of people to act towards achieving a common goal.

Situation: The absence of understanding and full acceptance of Leadership Responsibility and Accountability can lead to risky behavior and loss of life and vessel.

Ancillary: It is important for crew (and students) to digest the difference between responsibility and accountability. Here is one suggestion for describing the difference: Responsibility can be shared; accountability cannot. Being accountable not only means being responsible for something but also ultimately being answerable for actions. Admiral Hyman Rickover said this: "If there is not one, and *only* one person accountable, then there is no accountability."

2. Clearly establish the chain of command and delegated responsibilities

Description: Responsibility and authority can be delegated, but accountability may never be. If certain roles are delegated by the Owner/Skipper, that responsibility must be clearly defined. Everyone on board should be aware of who substitutes and takes charge of a task should a crew member become incapacitated. Everyone must have clear roles, responsibility and accountability in the event of a catastrophic situation (e.g., fire, flood, dismasting, grounding, etc.).

Situation: If a paid Skipper is brought on, it is up to the Owner to thoroughly vet that the Skipper has the right qualifications, and then it must be clear who is ultimately responsible and accountable for decision-making with regard to every task on a boat from navigation to cooking. Ultimate accountability resides with the Owner as the individual who enlists someone else as Skipper (See the Farallones Race incident in 2012 https://cdn.ussailing.org/wp-content/uploads/2018/01/Farallones-Report-FINAL.pdf).

3. Establish that Owner/Skipper's responsibility is to the crew, the boat, and the voyage (in that order)

Description: The Owner/Skipper is responsible for: First, bringing all souls home safe; second to bring the boat home safe, and third, in a race, to compete. The crew should be able, in a race, to focus on winning, keeping in mind that good seamanship makes winning more likely. The crew must have the appropriate level of understanding of the responsibility for all onboard to maintain a culture of safety (see the excellent CCA *Culture of Safety* paper on the Storm Trysail website (link in Appendix 4). The Owner/Skipper should also ensure that the crew all know their respective responsibilities.

Situation: Example - The watch captains, having been given responsibility by the Skipper to competitively and safely race the boat during their watch, must make timely decisions to reduce sail at the right time.

> A good Leader inspires people to have confidence in the Leader. A great Leader inspires people to have confidence in themselves. -— Eleanor Roosevelt

4. Be enthusiastic and positive

Description: It is the responsibility of those in Leadership positions to be enthusiastic and positive in trying situations to maintain crew morale.

Situation: When in heavy weather with a relatively inexperienced crew, a positive watch captain sets a positive tone, ensures that safe practices are being employed and raises the performance level of those on board.

5. Be ready and willing to admit fault

Description: The accountable person should be ready and willing to admit fault and take the blame when things go wrong, then reorganize as needed to safely prepare to move on. The Leader needs to set the right expectations for their crew and establish an open culture.

Situation: When mistakes occur either in training or in offshore situations, it is the responsibility of the Leader to debrief with the crew to understand what went wrong and take positive corrective action for the future.

6. Responsibility & Accountability - Things to Avoid

- "Shooting the messenger": When a crew provides information, the Leader must hear it willingly and act appropriately to create a culture of openness. Remember: What you don't know is what hurts you.

- Overconfidence: Thinking too highly of one's own abilities, not understanding your crew's abilities, or overconfidence in the qualities of the boat are irresponsible, arrogant and can lead to negative outcomes.

- Failure to establish a clear chain of command: Everyone must know their job so that communication can stay focused. If and when commands are required, it must be clear as to where the commands are coming from, and to whom they are going. In a crisis, all this becomes crucial.

C. Team Leadership Roles and Followership

1. Establish a culture of incident analysis

> Leaders don't create more followers. Leaders create more Leaders. — Brian Tracy

Description: A good Leader admits a mistake and looks to make the team and themselves stronger and better from the experience. Ego and embarrassment hide this. This needs to be a part of the culture to improve safety – "Culture will eat policy for lunch". (Economist Peter Drucker). The sport lacks sufficient timely incident and near-miss reports that are openly shared.

Situation: A group member recounted a personal experience where a crew member went overboard during a high-speed gybe under what would normally be considered moderate sailing conditions. A series of seemingly small

errors contributed to a near-catastrophic outcome where the COB was almost lost. While the incident was critiqued within the confines of the crew, an opportunity was missed when a choosing to not openly share critical lessons learned about the circumstances with the larger sailing community.

2. Define team success in terms of the mission and situation

Description: As a team, define success with common, measurable and achievable goals and expectations.

> People acting as a group can accomplish things which no individual acting alone could ever hope to bring about. – FDR

Situation: A good Leader should communicate the objective – defining what success looks like – as they are building the team. It is then important that each drill, training session, delivery and race be accompanied by a goal describing what success looks like. Examples include: "This is a delivery - our objective is to arrive safely with no breakdowns," or "We've only been sailing together for a short time, our goal for this event is top half."

3. Identify and recognize the right Leader for different situations

Description: In offshore sailing, there must be good Leadership. Owners/Skippers must be aware of their strengths and weaknesses, and the strengths and weaknesses of their crew and the yacht. Owners/Skippers should delegate specific responsibilities to each member of the crew to take full advantage of individual strengths, and to promote engagement.

Situation: An Application for Entry may require details on the Owners/Skippers, navigator and watch captains to make sure the right experience is on board. This does not ensure that the Leadership will be well organized with appropriately and clearly assigned responsibilities. Unfortunately, not all Owners/Skippers are good Leaders or delegators. Utilizing tools such as templates and bills for watch standing, abandoning ship (e.g., fighting fire and flooding), and damage control is a way to improve this.

4. Delegate and communicate specific responsibilities throughout the crew.

> Good Leaders delegate and empower others liberally, but they pay attention to details, every day. – General Colin Powell

Description: With an understanding of individual strengths and weaknesses, delegate roles and specific responsibilities for preparation, routine operations and emergency situations. Primary and back-up responsibility must be considered and specified for each foreseeable situation, role, and crew member. This leverages the whole crew's talents, is a proven method of team building, distributes the Leadership responsibilities, and develops a team of Leaders in specific areas.

D. Communication

1. Know your audience

Description: The Leader must understand how best to communicate to the crew and to individual crew members. What kind of vibe permeates the vessel? Are we a "happy ship" or is there work to do? How can I best reach "Individual A"? Humorous Criticism? Praise/Support? Everybody has had that Skipper who is a "yeller", and understands this is a generally ineffective communication style.

2. Establish trust

Description: Have no agenda but the mission. Be a good listener. Encourage input and accept well-intentioned criticism. Act on same. When the time comes for a potentially controversial decision, the crew will react as one.

3. Employ deliberate and skillful delivery and execution

Description: Know and practice the technical elements of effective communication.
- Be clear: Speak slowly and clearly; agree on, and use, common nomenclature.
- Be succinct: Avoid filler words, redundancy.
- Be specific: "Come up three degrees" is better than "come up a little."
- Be conscious of tone and listen actively.
- Be direct: Start any "order" with the recipient's name (or position).
- Encourage simple "repeat backs" to ensure 'orders' have been understood.
- Think about what the recipient needs to know, wants to know, and how they need the information packaged.

4. Be aware of and employ non-verbal communication

Description: Be aware of these three elements: Body language, countenance, and actions. "Keep it light" or be the first to sponge the bilge - it lays a substrate for trust, which is essential for good communication.

5. Communication - Things to Avoid

Committing Sender Errors. A response of "What do you mean?" is a good indicator that the receiver has missed the sender's message. There are a variety of reasons why this occurs. The most frequently encountered problems are:

- Not establishing a frame of reference. If the receiver is not on the same page as you, miscommunication occurs.
- Omission of information. The sender leaves out pertinent details that affect a receiver's ability to comprehend what is being said. "Pull that line" leaves quite a few unanswered questions. "Stand by on the staysail sheet and trim it when the sail is hoisted," gives the receiver more direction and mission definition.

> If you have a yes-man working for you, one of you is redundant. Good Leadership encourages everyone's evolution. – Barry Rand, Xerox

- Providing biased or weighted information. Inserting the sender's opinion when providing information.
- Assuming messages only depend on words. The sender underestimates the power and importance of tone and body language.
- Not willing to repeat information. We normally talk at about 125 words/minute and think at 500 -1,000 words/minute. Senders who only say something once run a very high risk of failure.

Committing Receiver Errors. A receiver can also make mistakes that interrupt the communication chain (remember, to err is human). Receiver errors generally fall into six categories.

- Listening with a preconceived notion. The receiver already has his/her mind made up before the sender can formulate a thought.
- Poor preparation. Receiving messages is more than just allowing the words to pass through your ears. Receiving a message is a conscious process.
- Thinking ahead of the sender. Extrapolating the sender's thoughts, putting words into someone's mouth, finishing sentences for a sender, formulating a response before the sender finishes (the trigger phrase here is "Hear me out," from the sender) are all examples of thinking ahead of the sender.
- Missing the non-verbal signals. Overlooking body language and facial expressions can be crippling when it comes to interpreting communications.
- Not asking for clarification. Failing to employ the old standby, "So what you are saying is," can be the death of good communication.
- Disrespectful communication. Want to slam the door shut on a message? Respond with an insult, demeaning/degrading remark.

E. Preparation & Anticipation

Developing "the sense of insecurity which is so invaluable in a seaman." Joseph Conrad, *Mirror of the Sea*

1. The Owner/Skipper is ultimately responsible for preparation and organization.

Description: Responsibility and accountability begin long before a vessel leaves port. It includes preparation of the boat and crew, ensuring the right safety equipment and protocols are in place, and posting clearly written and drawn bills.

Situation: The Owner/Skipper (the ultimate person accountable) must ensure that his/her vessel and all crew have appropriate equipment, including those required for all safety contingencies. This may include providing personal safety equipment for every crew member: PFD, harness, tether, AIS/PLB beacon, whistle, and more. The Owner must ensure that everyone knows how to operate their own equipment and the boat's systems safely, as demonstrated and executed in safety briefings and practices prior to the start of a race, passage, or cruise. Finally, it is the responsibility of the Owner to ensure the boat is in good working order prior to crew arrival. The Owner cannot absolve himself or herself of the ultimate accountability for the safety of the crew and the boat; the buck stops with the Owner.

2. Preparation is the most effective path to maintaining confidence in an emergency

Description: Put 110% effort into preparing every aspect of the venture, including the boat, equipment, supplies, crew, and voyage plan.

> Good decisions come from experience. Experience comes from making bad decisions. – Mark Twain

Situation: Lessons from Tristan Jones: Proactive Efforts, Persevere, Be At Peace (from Peter Becker). Tristan Jones was a Welsh adventurer, author and mariner who spent most of his time at sea single-handed sailing small boats. Here's what Tristan says about fear during a 1989 NPR Interview – "If we know what we are dealing with we are not afraid." "Fear will prevent you from thinking clearly about what you should be doing. The best thing to do is to figure out if what you should have done is done, and once that has been figured out; that all those things have been done, then you can say I'm in the hands of God" "then you are at peace." Jones's simple themes:

- The only time to prepare is before departure. Jones would diligently use all of his resources to proactively prepare to the fullest of his ability in advance of going to sea.
- Persevere; put 110% into every and all actions to better your situation.
- After you have consumed all of your efforts and resources and know you have spared nothing to improve your situation, then, and only then, all you can do is enjoy and be at peace.

Jones is said to have found nirvana when in extremity, knowing he had done everything, and his fate was now in God's hands. (OSLS Chair Rich du Moulin's note: My interpretation is that even though it may be in God's Hands, God expects you to apply all your experience, training, and Leadership skills to overcome the obstacles and bring your boat and crew home safely!)

3. Pre-departure. Pay careful attention to crew selection

Description: It is the responsibility of the Owner/Skipper to select a crew capable of keeping themselves and everyone aboard safe. This does not mean having only the most competitive racing sailors, but rather the right mix of experience, skill, and seamanship which complement one another, and importantly, those who know the boat and each other's capabilities. It is also the responsibility of the Owner/Skipper and watch captains to have a clear understanding of the capabilities of each crew and their mental and physical condition throughout the voyage.

Situation: If someone is not a skilled downwind heavy air helmsman, the Skipper or watch captain is responsible to rotate the best crew onto the helm in those conditions. For that matter, an example of "followership" would be a crew asking to be relieved from the helm if they feel they are not adequate to the changing conditions. In a good crew, all this could be accomplished without any resentment.

4. Pre-departure. Assess concerns for that particular race or passage.

Description: Benefit: Develop a practical understanding of specific parameters and risks. Transition from general boat and crew preparation to focused needs or concerns related to the actual course or passage.

Situation: Be sure to evaluate navigation hazards, weather, marine traffic, etc.

5. Pre-departure. Assign and communicate specific preparation/functional responsibilities to crew members

Description: Delegation and distribution of boat and crew responsibilities (e.g. safety gear, provisions, rig, engine, electronics, navigation) inclusively leverages the whole crew's talents and distributes critical work. Assigning back-ups ensures redundancy in emergencies and prevents single points of failure. Publishing the assignments to the crew (see "Station Bill" below) ensures clarity of roles. Preparation responsibilities continue during the voyage as the crew has established subject matter expertise and Leadership areas.

Situation: The end result is making sure gear and equipment is aboard; catching the need for last minute maintenance, repair or replacement; and depth of expertise underway. Make sure you "put eyes on it" so you know it's there.

6. Pre-departure. Create and post a "Station Bill" to establish and communicate the chain of command (line of authority) and specific responsibilities.

Description: As mentioned previously, it is critically important that the whole crew understands who is in charge of the vessel at all times, to include Owner/Skipper, watch captains, and succession plans. It is also critical that each member of the crew understands their roles and responsibilities for both routine operations and emergency situations. Primary and back-up responsibility must be specified for each foreseeable situation, role, and crew member. A Station Bill (or "Watch Quarter and Station Bill") is an official list of the duties and posts assigned to all members of a ship's crew, from Skipper to Navigator to Cook to "Able Seaman" and which ensures clarity of roles. This encompasses the normal underway watch bill and bills for defined emergencies (flooding, fire, abandon ship). A Station Bill should be a mandatory document.

Situation: Developing a Station Bill supports delegating responsibilities. It also ensures that when an emergency is encountered, all crew know their responsibilities. It is critical that such bills reflect actual practice sessions held during pre-voyage preparations. This ties in to "Train the way you sail; sail the way you train."

7. Pre-departure. Confirm the boat and crew are ready

Description: Use checklists and briefings to confirm all is as it should be.

Situation: Conduct a crew meeting with pointed questions/reports from crew responsible for preparation of specific areas. It is best to have this meeting the day before departure so there is adequate time and focus. Departure days tend to be hectic, and there will not be time to remedy problems.

8. Underway. Develop and use written shared protocols

Description: Promote log-keeping, employ checklists for inventory and critical procedures, assign emergency roles/billets in a "Station Bill", write and use Standard Operating Procedures (SOPs). "Check Lists" used heavily in aviation and military operations have an important place at sea. These compensate for complexity and fatigue.

Situation: Use of written procedures and assignments help catch and track problems or aberrations before they become crises.

9. Underway. Encourage crew members to train for new skills, tasks, positions, and roles

Description: Encourage crew to broaden skills and learn other roles to establish backup and redundancy in case of sickness or injury.

Situation: In a Bermuda Race the navigator fell and broke several ribs. He had to stay flat in a bunk. Another crew took over and needed to know the instruments and software.

Carina's **2019 Transatlantic Race Station Bill**

ON WATCH

00- 0200	A	C	A = Rives & Eben
02- 0400	A	D	B = Rich & Bob
04- 0600	B	D	C = Barrett & Peter
06- 0800	B	C	D = Kyle & Gerard
08- 1000	A	C	
10- 1200	A	D	Navigator = Gary
12- 1400	B	D	Cook = Lee
14- 1600	B	C	
16- 1800	A	C	
18- 2000	A	D	
20- 2200	B	D	
22- 2400	B	C	

ABANDON SHIP (Fire or Flood)
ON WATCH: Douse headsails; Prepare Rafts & Ditch Kits; Spare water; EPIRB; VHF; other gear

OFF WATCH: Fight flooding or fire; send up gear

Raft #1: Rives, Barrett, Gerard, Bob, Gary
Raft #2: Rich, Kyle, Peter, Eben, Lee

Carina *uses a "rolling watch" - every two hours, half of the watch goes off for 4 hours. This avoids 4 crew trying to get dressed together, and then going on watch with no feel for conditions. This reduces risk and brings up two fresh crew every two hours, improving continuity and situational awareness. Every two hours- during the change- there are temporarily six crew available for sail changes.*

Carina's *Abandon Ship Bill logically deploys the On Watch and Off Watch to fight the fire or flooding. It recognizes that at sea there is always an On and Off Watch, so individual assignments may not work. However, for the two life rafts, specific assignments are necessary to avoid confusion and reduce the chance of leaving someone behind.*

10. Underway: routinely use "what-if" exercises

Description: Have the crew think and talk through first steps for handling potential problems.

Situation: Topics should include what each crew does in COB, Ffre, flooding, rig failure. An example would be increasing heavy air downwind: Discuss with the watch what to do if the halyard parts, or the tack or clew blows out, or COB.

11. Preparation & Anticipation - Things to Avoid
  • Vague responsibilities: Too little or too much control.
  • No anticipation: Leaving everything to the last minute.
  • Not involving the crew.

F.   Sail the Way You Train, Train the Way You Sail

1. Plan and practice for crisis management
Description: Plan and train for each situation as if you were in that situation as part of your preparation. This requires practicing in all conditions, day, night,

> Without training they lacked knowledge. Without knowledge they lacked confidence, Without confidence they lacked victory. – Julius Caesar

flat water, heavy wind and seas. Take advantage of heavy weather opportunities to test equipment, storm sails, and crew. Make primary assignments for each crew member for different emergencies but rotate all crew through each position so they know what to do if they have to fill in for someone. Figure out which COB method works for your boat type and crew including Quick Stop, use of sail and/or motor, various recoveries (alongside, Lifesling, Mid-line lift). Practice what you would do with an injured or hypothermic crew overboard to get them back on the boat including second crew in bosun's chair, drogue, net, ladder, use of halyard). Ensure each crew knows the location of all through hulls, use of the sat phone/SSB/VHF/DSC buttons, location of the damage control kit and how to use all contents. Discuss who has the authority to launch the life raft, how to launch, and where to find the ditch kit. Leaders should make training for emergencies part of the on-board culture.

Practicing for emergencies is more important than perfecting a fancy spinnaker drop. Make practice realistic, set standards, and give metrics for measuring improvement, i.e. timed reefing or COB drill contests between watch teams. Practice COB with a real person if safe, or a tall buoy, discuss and practice how to get them back on board. The benefit is that during an actual emergency, the crew can rely on muscle memory and pre-assigned roles and have their remaining brain bandwidth available to adapt to changing conditions.

Situation 1: Crew overboard in the Clipper Race. The crew were well trained, but still had issues returning to the COB. It was a downwind situation, and the engine wouldn't start. They got the kite down then sailed a reciprocal course for 20 minutes. They were able to spot the COB by noting where the albatrosses were circling, and – by lowering a crew in a bosun's chair – were able to recover the COB. Pre-race training enabled the crew to react without panic. In a real emergency there is always an element of stress and shock, which affects your ability to think clearly. Practice mitigates this challenge.

Situation 2: This crew of experienced racers only practiced a COB recovery once in the harbor, under motor, and with only a hat in the water (which they lost) so they could "tick the box" for race organizers on the way to the start line. They had a real COB incident 25 minutes after the start and were unable to recover the COB. They failed to provide timely flotation, fouled their jib, and eventually sailed over the COB on the third pass. This crew failed to practice and determine the best strategy for their boat's characteristics, so a proper COB Plan (bill) could be constructed.

2. Extend training for emergencies to crews for pre- and post-race voyages (i.e. deliveries)

Description: When sailing in non-racing situations (cruising, or race boat delivery) precautions should still be put in place to mitigate risk and prevent injury or boat damage. This includes safety training and practice similar to what a racing team undergoes. Ensuring your crew has enough experience is just as important on a delivery as on a race. The benefit is that the crew and boat make it to their destination safely. Experience indicates that boats on return deliveries seem to get in trouble more often than while racing, often due to smaller manpower and the presence of less experienced sailors.

Situation: A delivery crew can get into trouble when there are too few experienced offshore crew versus too many inexperienced crew, especially if the latter lack the necessary Safety-at-Sea training. Such a crew in adverse conditions can find itself short-handed. This can snowball into a series of small errors leading to a significant crisis.

3. Review previous incidents' lessons learned.

Description: Review previous incidents and make a comprehensive lessons-learned brief. Lessons can be pulled from racing, cruising, and other sources, such as the published accounts from the recent Navy incidents. Reading detailed accounts of mistakes others have made can be incorporated into your own boat's collective knowledge. US Sailing reviews of sailing incidents can be found on the US Sailing Website https://www.ussailing.org/competition/offshore/safety-information/safety-reports, and https://www.sailing.org/sailors/safety/reported-safety-incidents.php is the link to the World Sailing collection. Also of interest is the Mariners' Alerting and Reporting Scheme (https://www.nautinst.org/resource-library/mars.html) that provides accident and incident reports from actual past commercial marine incidents.

Situation: Learning how, why, when and where things fell apart in the sequence of events in an incident, such as all the different crew overboards, can help us focus and improve our own training. An example was in the US Naval Academy's basic offshore training: Based on lessons learned from the greater sailing community, the Academy learned what to do if someone fell overboard, still attached to the boat by their tether, and dragging through the water. The helm needs to immediately stop the boat by going head to wind or heaving-to so that the COB is on the high side. Sir Robin also recommends snapping a halyard on the tether and hoisting it as a fast remedy.

4. Train using all of your boat's equipment
Description: Training your crew how to use all the safety equipment and systems on board will help ensure they can do their assigned jobs quickly and efficiently during an emergency. Testing all your equipment during practice will also help you identify any potential maintenance problems prior to going offshore. Push your crew and your equipment during practice to simulate any worst-case scenario. As the Skipper, you should be an expert in everything on your boat and be able to do all the jobs on board. If you're not, but have an expert crew, have them train you.

Situation: An equipment failure during a short, intense microburst led to a serious injury. The crew was in the middle of a light-air gybe when they were hit by a 10 second microburst. The mainsail gybed violently, and broke a block at the gooseneck, which hit a crew member in the side of the head. The Skipper went to call for a medevac on the sat phone, but wasn't able to operate it, so had to rely on VHF, which was luckily in range. Post-race the Skipper replaced all components of the mainsail system, replaced all the standing rigging, and learned how to operate the satphone.

5. Know your crew, and how they react under duress; train and practice accordingly

Description: Knowing your team's strengths and weaknesses will help you assign them to the right job in an emergency situation. Frequent and realistic training will help you learn how members of your crew react under stress. This includes choosing your second in command.

At least two of your crew need to have medical training and experience, for redundancy if one gets injured or sick. This is

Calm seas never made a good sailor. – FDR

typically a requirement from offshore race Organizing Authorities in their Notice of Race but is good practice for deliveries or even local racing. Ask for volunteers from your crew to take the training.

Situation: An experienced offshore crew did not perform as expected during a medical emergency caused by a block hitting a crew member in the head. They were unable to take charge of the injured person due to shock and squeamishness. By assessing each crew member's strengths and weaknesses (e.g. can't deal with sight of blood), primary pre-assignments can be made that make the most of strengths and avoid weaknesses. For example, if a member of the crew has medical training, and/or has been in a situation where they had to deal with a medical emergency, they should be the Person-in-Charge. There should also be a backup trained medical crewmember. The injured person in this instance got medevac'd out, so the level of knowledge needed was stabilization, contain the bleeding and monitoring the patient for shock until professional help arrived. If a member of the team exhibits fear/panic/withdrawal during the emergency, assign them a lower stress task such as monitoring the VHF radio or checking for lines over the side before the Skipper starts the engine. Perhaps this crew member also needs extra training.

6. **Sail the Way You Train - Things to Avoid**

- Neglect: Neglecting maintenance of equipment and systems on your boat; failure to keep an inventory.
- Complacency: Being complacent and doing just the bare minimum to get your boat through a safety inspection before going offshore. "Tick the box" rather than prepare, practice, and draft a specific procedure (bill).
- Ignoring small problems: Avoid the snowball effect or error chain of events during an emergency. A series of small problems can quickly escalate into a larger issue.
- Identify problems as they're happening and stop them.
- Even inexperienced crew members can do this, if you give them the tools to do so. Teach them that a propane leak smells like rotten eggs and an off-watch crew or cook can avert a bigger problem.

G. Situational Awareness

1. Use the principles of Bridge Resource Management (BRM); establish routine observation and communication involving all of the crew.

Description: Ensure all crew know they are responsible for observing and communicating changing conditions. Make sure all crew understand the game plan for race or passage before departure, and under what conditions that plan may change. Update the game plan and communicate as necessary. DO NOT dismiss remarks from the newest or least experienced crew - Listen!

> A ship in the harbor is safe. But that is not what ships are built for. – Anonymous

Situation: Example: In the *Uncontrollable Urge* case (https://www.cruisingworld.com/how/us-sailing-releases-report-2013-islands-race-tragedy-southern-california), before departure they could have discussed the conditions for the race, and what wind speeds/wave conditions might be too much for the boat. The race started in fine conditions, 15 knots of wind, but the wind built. One panelist suggests that winds of 28, with gusts to 35, was too much for this style sportboat. We surmise the crew never had an initial mental plan for the top wind and wave conditions for the boat. Consequently, although they observed the wind building during the race they did not retire early, as they might have.

Or, as Dawn Riley said in her morning session, as "Chief Worrier," she reevaluates the goals regularly and restates them to the crew, at least daily.

2. Work consciously to observe accurately and avoid observation bias, especially those observations that do not fit your prior experiences.

Situation 1: We have all heard "How to cook a Frog", by putting him in cold water and heating it gradually. A very experienced Skipper was returning from Bermuda to New York with an experienced, but small crew. While running downwind, the wind gradually increased. The Skipper wanted to avoid reefing his fully-battened main, as he would have to luff up to do so. After coming up from an off watch, he realized the true wind had crept up to about 40 knots and the boat was unstable and in danger of losing control. The ensuing evolutions were a nightmare.

Situation 2: Another observation bias is that sailors can be lucky for a long time, which alters their perception of their abilities (overconfidence) and leads to a diverging trend between their perceived experience level and actual ability to deal with truly extreme situations. For example: "We've sailed through squalls without reefing" may not work if the next squall packs 50 knots, or a storm system brings 50 knots and breaking seas for three days.

3. Base decisions on good seamanship; avoid decision making that is not based on good seamanship and be careful to exclude outside biases.

Description: Make sure the inputs for assessing situations and consequent decisions are based on seamanship, not external factors. DO NOT use mental models and make decisions based on overconfidence in yourself or your boat. Another tool is to ensure you have "a reason" for each decision, i.e. mentally challenge your decision as if you were in front of a judge in court. What alternatives do you have, and why did you choose the one you did? Judges do not care per se what decision you made, only that you did it with forethought and good judgment.

Situation 1: A quick example: adhering to a schedule (despite changing circumstances) is a cruiser's worst enemy.

Situation 2: In the *Uncontrollable Urge* situation, the boat's designer or builder was on board, and this was one of the first races for the boat. He was likely in a role to affect decision-making. Did this affect the decision to continue to race as conditions deteriorated and to try to save the boat without outside help? Would an unbiased, neutral party have made a different decision about whether or not to race?

4. In emergencies – consider the worst case/maximum loss and minimize the likelihood of that loss.

Description: DO NOT ignore the potential for a catastrophic loss because you think the probability of it happening is low! In the *Uncontrollable Urge* example, once they lost their rudder and broadcast a call to the Coast Guard, they waved off offers of help by nearby boats. Their perception was they could sail without the rudder (but they had never tested this thesis). However, the downside if they could not steer was potentially catastrophic since they were only two miles above a lee shore. A better decision would have been to ask those offering help to stand by until they were able to prove they could sail without the rudder. Continuously update observations to inform or alter decisions.

Situation: In our case study of *Uncontrollable Urge*, to better balance the rig and steer without a rudder, the crew changed to the #3 jib. However, the #3 quickly blew out, foiling that plan. The loss of the jib certainly could qualify as an event to reconsider their prior decision to wave off assistance.

5. Rely on distributed functions and responsibilities (from the Station Bill).

Description: When a situation develops, the Owner/Skipper/Watch Captain has a lot to deal with. Having subject experts can develop a higher level of Situational Awareness at a lower level of detail. Distributed responsibilities and delegated decisions within the scope of those tasks is good Leadership; not all decisions should have to go through the Leader, except in an emergency.

6. Situational Awareness – Things to Avoid

- Overconfidence: Using mental models and making decisions based on overconfidence in yourself or your boat.
- Distraction: The Skipper and watch captains need to keep their heads "outside the boat" so they are aware of changing circumstances.
- Ignoring input: Dismissing remarks from the crew, even the least experienced crew. Listen. It's what you don't know that can hurt you.
- Ignoring potential for catastrophic loss: Ignoring the potential for a catastrophic loss because you think the probability of it happening is low.

> The watch teams should have had the necessary situational awareness. It all comes down to fundamental seamanship.
> – US Navy (regarding recent collisions)

H. Emergency Management

1. Stop. Think. Execute. These three fundamental actions, done in sequence, are required to respond effectively to an emergency.

Description: Stop - In the moment of crisis with possible panic emerging, make yourself stop. Take a deep breath. This reflects the Leadership characteristic of humility (listen, assess).

Think - Make a plan to deal with the situation (hopefully based on practice for such emergencies). Plan to deal with the problem in a series of tasks. Then do it again and again. This reflects the Leadership characteristic of empathy (consider the crew and help them build confidence).

> Fear is a reaction; courage is a decision.
> – Churchill

Execute - Put the plan into action, moving task by task until the situation is under control. Breaking down the situation into achievable tasks is a key to resolving the emergency. This reflects the Leadership characteristics of integrity & decisiveness (make a decision and have the conviction to keep the team on course for that decision).

2. Watch people carefully

Description: Keep an eye on each other. Help each other not to make mistakes. Notice when someone's behavior has changed and is out of norm.

> Procrastination in the name of reducing risk actually increases risk. – General Colin Powell

Situation: It may be as simple as observing your watchmate as they don foul weather gear and harness preparing to go on watch, noticing a missed buckle or a foul lead on a tether. It could also be more dramatic such as when a crewmate – on a dark night with a full moon rising – went forward to inspect the rig and check for chafe. The only other person on deck had just taken the helm. The crew on the foredeck suddenly started shouting but was not making any sense. The helmsman shouted for relief from below and turned over the helm as he quickly went forward to deal with the disoriented crew member. The end of the story was that the man was hallucinating after having applied two scopolamine patches earlier in the day. The watch captain had acted quickly because he had observed something not quite right as his watchmate was preparing to come on deck. He also realized that an immediate intervention was required. He knew that the relief helmsman would have to manage his role without being informed of the nature of the emergency because time was of the essence (From Gary Forster).

3. Foster and enable Micro Leadership, Calm Group Dynamics, Heads Down (and Up) Action - Awareness and Focus of Each Individual Crew Member on Their Tasks

Description: Responding to and resolving emergencies is best accomplished when each member of the crew focuses on their task(s). Understanding each person's skills and strengths establishes their "domain," sail handling, mechanical, rigging, navigation, etc.

> He who leads least, leads best. – Chinese Philosopher and Larry Huntington

Situation: The Young American Sailing Academy (YASA) youth team was training on the R/P 63 *Gambler* in preparation for the 2018 Newport Bermuda Race:

"It was a windy day in Newport RI and we were training inside the bay. After a successful spinnaker change, the next move was a spinnaker gybe which would take us under the Newport Bridge and away from the rapidly approaching Jamestown rocky shore.

The releasing spinnaker sheet jammed in the turning block and before we knew it the boat was sideways on her ear pressed by the now-fouled spinnaker. If there ever was a time to feel fear this would be it as we moved ever closer to the rocky lee shore.

None of the young crew had ever been in a situation this serious before, but the collective response was "we got this." The group dynamic was calm and focused with the 18 young crewmembers organically breaking into work groups tackling the various tasks. One group was focused on freeing the fouled sheet, another was retrieving the anchor and getting it ready for deployment, another was getting the propeller leg down and the engine on, while another was sending a crewman to the top of the mast ready to spike away the spinnaker (because, naturally, the halyard lock would not release!). All this action with no one barking orders in a central Leadership role. The young crew instinctively knew to turn their fear off and their brains on.

The small groups of teams exhibited micro Leadership. They simultaneously focused on staying in their zone with heads-down attention to getting their job done, while at the same time keeping a heads-up 360-degree situational awareness. It was this 360-degree situational awareness that powered their cognitive process and allowed for an organic assistance to other teams when needed.

The unplanned event served as a powerful lesson in the formation of the young sailors, who today are confident offshore sailors, and who are calm in the face of adversity and know the power of clear thoughts, focused efforts and teamwork" (From Peter Becker).

4. Train for emergencies

Description: More than just a crew member overboard or abandoning ship. Train for fire, rig failure, hull breach, loss of steering, injury/medical emergency, etc.

"Emotional drilling and reevaluating" in the Marines: As a Leader you should be conscious of other people's fear levels and also how much control they can or think they can exhibit over the situation. How familiar you are with the situation has a pretty direct correlation to levels of fear, and it does help to prepare mentally and emotionally for different things and experience, as well as risks. (From Walker Potts)

Military Leadership. Understand the level of experience and chain of command. The military does a really good job of letting individuals take charge and ownership on a micro level so that people can focus on their tasks, but also have a good understanding of the chain of command so that when situations change people know who to look for to take charge (from Seth Greenwald).

It is an essential quality of training for emergencies that we are allowed to make mistakes and learn from the experience (from Ariel Nechemia).

The more you practice, adjust emergency drills based on what you learn about your boat and crew, and repeat the exercise. Then, when the real event happens, the crew is more comfortable with the situation and more likely to react effectively without panic or unreasoning fear.

5. **Emergency Management - Things to Avoid**

- Fearful Leader: The Leader acknowledging and exhibiting fear. Butch Ulmer reported having been on both sides of the "I'm scared" syndrome while sailing and while at sea on a US Navy ship. He will tell you unequivocally that the cure for being scared isn't having the guy in charge step up and say, "Yeah, I'm scared too". The Leader needs to focus on the situation and lead the response.

- Looking Back: It's too late to worry about how you got into a situation. In the moment, the only thing to focus on is how to respond to and resolve the emergency, not the reasons for why you are in the situation. Hopefully there will be future opportunity to figure that out.

- Losing Situational Awareness: Don't forget to look around you, keep your head up, and maintain situational awareness. Maintain an understanding of the big picture so you can make timely critical decisions (such as abandon ship). Don't get lost in small tasks that should be delegated. Let the crew focus on each of the individual tasks required to resolve the emergency.

> A Leader is a dealer in hope. – Napoleon

> Perpetual optimism is a force multiplier. – General Colin Powell

Appendix 3 – Detailed Training Recommendations

Each of the Breakout Groups developed specific recommendations to improve safety-at-sea training and education. Following the OSLS, the organizing committee met with the Breakout Group Facilitators and Scribes to review the recommendations. That group produced an additional set of general recommendations. All of these recommendations are presented in full below. From these recommendations, the Proposed Leadership Training Changes, organized by deployment methods and venues, was produced.

General Recommendations

1. Develop a Bridge Resource Management module (web-based, classroom, and/or practical) to help translate commercial and military Bridge Resource Management practices to managing a sailboat.

2. For Adult SAS – pre-assign and announce groups about 1-2 weeks ahead of time. Assign a Leader and ensure introductions happen. A pre-event Zoom, if short, scripted, and to the point, would make the SAS day more effective – but much benefit could be derived even if you don't meet as a group. For the practical portions of SAS, have the group work out Station Bills as an exercise before arrival. Consider assigning a SAS Coach 'mentor' to guide this process.

3. Incorporate 5–10-minute Leadership segments into each of the seminar sessions, covering the eight Breakout topics. Include table-top group exercises for the Hands-On sessions. Practical Leadership could be incorporated into the survival swimming and life raft sessions in the pool. Consider assigning roles in advance (Zoom session) or hand out assignments and checklists on the pool deck. This would get the point across that an emergency evolution requires teamwork and pre-assigned tasks for each crew member. It would also make the exercise more realistic if the navigator grabs the EPIRB, tactician gets the grab bag, the cook retrieves the emergency food/water bag, medics get the first aid kit, and designated Leaders provide oversight and determine when to abandon ship.

4. The Culture of Safety ethos expressed in the Moderator's closing summary should stress that Leaders go back and practice what they've learned at SAS seminars with their own crew on their own boat.

5. Have a separate land session for Skippers/watch captains/navigators to discuss Leadership responsibilities and best practices in their roles.

6. Promote Safety-at-Sea Seminar attendance for race delivery crews when advertising the event. Organizing authorities can also promote this practice.

7. Develop/expand web-based multi-media reference material using existing or new training videos, checklists for Leaders and also for members of the team to practice in their assigned areas for different safety scenarios. Contents could include:
   - Planning and organization tools/samples. For example: Watch Bills, event-specific Station Bills, vessel damage control fittings/equipment locations aboard, stowage plan, check lists, "protocols", post-drill/post-emergency 'lessons-learned'/debrief summary.
   - Safety Scenarios and suggested Drills (rig failure, hull breach, COB, fire, flooding, abandon ship).
   - Compendium of OSLS-derived Best Practices.
   - Post-event lessons learned accident analysis. Develop an app for use afloat.
   - Leadership education material (books, articles, movies, instructional videos).
   - Other useful courses – NOLS, NOLS Wilderness Medical Training, Commercial Sailing Training Courses.
   - Sea Stories – record sailors telling stories.

8. Develop an app or web form that walks Skippers through the drills they should run with their crews following an SAS event with room to capture responses, pictures / videos, and timestamps to show completion.

9. Marketing: Remember we are doing it with amateurs and volunteers. Most people are here to have fun and therefore need to keep safety from being too complicated. Engage sailors with the message that safety is good for them, the crew and the boat.

10. Consider demographics as we look at changes. Check with US Sailing or our own post-course surveys. The vast majority of STC SAS course attendees are weekend sailors interested in improving their sailing skills; but who may also be preparing for a once-in-a-lifetime offshore experience. The usual attendee is not a professional sailor. In addition, most of the attendees are Leaders in some field other than sailboat voyaging or racing. Most sailors taking an SAS course want to improve their understanding of the mechanics of safety on their boats.

11. Course Modification Considerations. Attendees have other time commitments,, and we should be careful to make effective use of what we require prior to the seminar. Remember that the military academies employ an entire four-year program to attempt to develop Leadership in their students – we're hoping to do it in one day or weekend. Luckily our students are older, more seasoned individuals than a high school graduate and thus have a deeper life experience to draw upon.

12. Identify sailing Leaders very early and expose them to the Leadership skills that can be taught, such as: listening, communications, delegation, organization, respect, continuous learning, and positive mental attitude. It is hard to teach integrity, honesty, vision, resilience, courage, passion, humility, and empathy).

13. Teach the instructors (Leadership program for junior instructors, community boating and camp sailing instructors) how to identify and encourage students who have Leadership potential. This could entail building Leadership into the US Sailing Level II instructor training curriculum.

14. Develop a Leadership toolkit: short videos, papers, curriculum guides, and reading resources to assist sailing instructors.

15. Pre-SAS Seminar, provide 2-3 short videos on lessons learned from good Leaders.

16. Host a twice annual (Fall and Spring) On-the-Water Safety Event - Bring your own Boat and Crew

   - Boats sail around a pre-set course and need to execute specific maneuvers on each lap (e.g. COB, Abandon Ship).
   - Coaches on the water, videotape maneuvers.
   - Pre-briefing and post-briefing with a tent party afterward.
   - Give out prizes for some of the best executed maneuvers, most improved.

17. Give out a virtual (or paper) goody bag for offshore races including a post-race reflection guide for the Skipper and other roles. Include aspects of Leadership we focused on in the OSLS in the self-reflection form. Make it both a self-reflection form and a guided discussion document for crews to encourage Leaders (Owners/ Skippers) to take on the responsibility of having a meaningful conversation around improving safety for the next offshore venture.

18. Establish a peer-to-peer coaching culture/buddy system, a mentoring system, especially focused on newer Owners and Skippers getting into offshore races. Provide some structure to what those discussions might include, which would cover safety and preparation, but also Leadership topics more broadly.

A. Character

1. Include identification of the six elements of high character in offshore Leadership (presented in the best practices) in SAS training (Junior and Senior). These are Integrity, Empathy, Humility, Decisiveness, Resilience, and Self-Awareness.

2. Develop a specific character assessment program geared to help the SAS student (Junior and Adult) understand their own Leadership style as applied to sailing situations (and with respect to the six elements of high character). Such an assessment should be completed before the in-person SAS. This would allow the moderator's introductory remarks to be better understood in the context of SAS by the regular sailor.

3. Consider adding an overnight component to SAS to allow more intense Leadership training in a short period of time. While this may be impractical for the majority of SAS students, this could be a nice addition for the advanced level students. It could even be a small revenue stream for the College Offshore Sailing Circuit (COSC) boats where each student would pay part of a charter fee for the overnight session.

4. Develop a new video or set of videos that portray scenarios which display both good and bad Leadership. As we develop the character assessment program the script for a video should become more obvious and should include the six identified traits of high character. Videos and articles could portray example scenarios that display both good and bad Leadership character. This would be couched in terms of Transformational and Transactional Leadership traits as applied aboard a sailing yacht.

B. Responsibility & Accountability

1. Include a session on responsibility and accountability in Adult Safety-at-Sea seminars for all offshore participants. Agenda items could include:

   - How to prepare for emergency situations with respect to clearly identifying roles and responsibilities (i.e., fire, flooding, dismasting, etc.).

   - Responsibility for good navigation and preparation with respect to understanding the conditions, weather, and waters through which the race/voyage will be sailed.

2. Include a component of responsibility and accountability in Junior SAS providing a basic knowledge of the responsibilities of each person on the boat.

3. Develop a Leadership course and pamphlet specifically for Skippers and watch captains (Level 300?) that focuses on responsibility and accountability. Consider making this mandatory for certain events. Course could be "hands-on" and "bring your own boat and crew". Agenda items could include:

   - The range of responsibilities that an Owner/Skipper is accountable for when sailing offshore

   - Formulate a list of ideal characteristics in a Leader (see below)

   - Responsibility for crew selection

   - Responsibility for preparation of boat & crew, including the right set of briefings, delegation of authority, expectations for equipment, etc.

   - Defining a chain of command

   - Setting a culture of open communications and empowerment

   - Enthusiasm and positivity, especially in trying situations

4. As an exercise in the Leadership component of SAS training, have students formulate a list of ideal characteristics in a Leader. As a starting point, we liked a U.S. Marine PowerPoint slide from the first Panel entitled, "Lead with Honor". It lists 14 Leadership traits: JJDIDTIEBUCKLE: Justice, Judgment, Dependability, Integrity, Decisiveness, Tact, Initiative, Enthusiasm, Bearing, Unselfishness, Courage, Knowledge, Loyalty, Endurance.

   There are other such lists (try Wikipedia – not bad). It is important to recognize that no Leader is the whole package. If the entire crew is engaged, its strength may be greater than the sum of the pieces – loosely quoted from a presentation by Capt. Mark Lenci (USN, ret.). A principle for continuous improvement: "Do not make the same mistake twice" (Admiral Hyman Rickover).

5. Identify Leaders early. The sport of sailing could be improved by identifying Leaders early. We should urge Leadership training in junior programs and begin to be aware of potential future Leaders for further training as young people mature. This presumes that some people have more potential as Leaders, and mentoring them can spread the benefit to others as well.

C. Team Leadership Roles and Followership

1. Integrate Tabletop Exercises into SAS training. They can be done effectively remotely (e.g. via Zoom).

2. Within SAS training, incorporate discussions on delegation of Leadership roles and identifying subject matter experts within a team.

3. Within SAS training, include a practical exercise on making a Station Bill and identifying the roles on board in each emergency situation. Perhaps submitting a Station Bill for their team could be a part of the pre-work done by a crew before coming to a STC seminar.

4. Consider making a station bill a mandatory document for certain offshore events

5. Within SAS Training, demonstrate incident reporting (and near misses) from high level sailors and programs to help encourage a culture shift towards self-analysis and sharing lessons learned.

6. Challenge male STC members and SAS seminar participants to think critically of their actions and responses to women in Leadership roles. As an organization, work to identify women with strong experience and potential to include in planning, teaching, development, and mentoring of others.

7. Ensure we have women coaches at Junior and Adult SAS Events.

D. Communication

1. Develop and include an SAS segment on communication. A possible schedule for a 60-minute session:
   - 20 minutes to present core concepts (20-30 slides, information drawn from content in best practices)
   - 5 minutes to describe group project, assigning each team a situation that requires good communication. This could be done several ways. One would be to give the team a simple task, and then have them describe what is most critical about how the communication occurs. The other would be to give them an example of bad communication technique and ask the team to correct it.
   - 10 minutes for teams to meet and decide on a plan of action. Teams sized according to total number. Aim for 6 persons and about 6 teams. Adjust as necessary.
   - Don't give them too much time to work on this. We're focusing on concepts, not perfection.
   - 20 minutes to present to the class and get feedback.
   - What did they do well?
   - How might they improve? Did they miss anything?
   - If you had been the receiver, would you have gotten the information correctly?
   - 5-minute wrap-up.

2. Train on the essentials of clear "command/task" communication afloat – which include identification of message receiver (name/position), complete and clear language/sentences, use of boat/sport standard terminology, and use of repeat back/acknowledgments.

3. Train on the importance of clear goal-setting and pre-briefs, and when pre-briefs are relevant. Pre-race/voyage, weather/course updates, changes of plans, pre-maneuver. Discussion of appropriate communication skills for these events – to include clarity, honesty, and appropriate time for questions and feedback.

4. Train on the importance of post voyage/race/event/maneuver debriefs – to include openness to admit error and ability to look for improved procedures and processes.

E. Preparation & Anticipation

1. Use scenarios, role playing, and lessons learned from past accidents either as an individual challenge or a group task:
   - An example of an individual challenge: You get a last-minute call to join a crew on X race. You have never sailed on the boat before and you only know 1 other person on board. How do you familiarize yourself with the boat, the crew and the captain?
   - An example of a group challenge: The group plays out the key positions on a boat. You, as a crew, are getting a boat ready for a Bermuda race. What do you focus on? Now you are a quarter of the way through the race, the navigator sees the latest weather showing a storm is moving in. Who is told what, what does everyone do to prepare?

2. Use storytelling. Stories are effective means of communicating lessons. For example: "This is what I learned from X incident and why I keep X piece of safety equipment on the boat instead of Y piece of safety equipment."

F. Sail the Way You Train, Train the Way You Sail

1. Use actual cases in SAS Training. Planning, preparation, practice and critical thinking are key elements of safety in offshore sailing. The Leader needs to implement these elements as part of the safety ethos on their boats. Moderators could include this in the ethos portion of the course and work into other SAS topics. Teach Operational Risk Management. This is a process a Leader can implement to help prevent problems in the first place, and managing them when they do.

2. Use fun and instructional training exercises like trying to speak with a mouthfull of a peanut butter and jelly sandwich to practice clear and concise for communications, and the marshmallow challenge to build for collaboration and teamwork during Jr SAS Seminars. Both of these exercises can be found online.

3. Medical requirements should be scaled to the availability of nearby help.

4. Safety inspectors/scrutineers for offshore events ensure compliance but are also educators and need to make sure each team is prepared not just with equipment, but that they have trained and know what to do in specific emergencies. Sir Robin told the story of being a scrutineer for the Whitbread and asking if the crew knew how to steer without a rudder.

5. Set training/practice goals using the SMART (Specific, Measurable, Attainable, Relevant, and Time-Based) methodology.

6. Recommended Leadership reference books: *Sailing True North: Ten Admirals and the Voyage of Character* by Admiral James Stavridis. *Call Sign Chaos* by General Jim Mattis.

G. Situational Awareness

1. Use actual cases in SAS Training. In the past, we have been very reluctant to use actual cases, as we do not like to second-guess our fellow Skippers, especially when lives have been lost. Nonetheless our group felt that Leadership, especially situational analysis, is best taught through case studies of actual incidents. (See links to World Sailing, US Sailing, and Mariner's Alerting and Reporting Scheme (MARS) in Appendix 4, Resource References)

2. Leadership training: keep the crew together. Leadership, particularly situational awareness, relies heavily on good Bridge Resource Management, especially communication among the parties and the ability to speak up if something appears wrong, including a decision. For on-the-water training activities, urge sailors to practice in their own boats with their own crew.

3. Practice onboard problem situations, as actions done repetitively are shown to require significantly less brainpower to execute – especially in extremis – than new actions. This is essential because stress decreases one's ability to think and process information, thus practice/repetition will lead to better responses in actual situations.

4. Crews already have many tools for situational awareness and decisions, e.g., a polar showing the proper sail to select, or watch orders, such as "Call the navigator if the wind backs more than 10 degrees." Publish a model/standard situational awareness planning and decision-making mental flowchart like the one previously discussed. Include example decision gates, go/no go criteria, pre-planning assumptions and when to change decisions.

H. Emergency Management

1. Incorporate incidents and stories. Storytelling is a well-known means of effectively communicating a point or lesson. It is not new (think parables in the Scriptures) but it is often overlooked. Narrated "debriefs' on yachting accidents could be very effective. The Emergency Management Group offered this story from the 12/8 Vendee Globe news stream - *Fear Cannot Take Control (*https://www.vendeeglobe.org/en/news/20886/pip-hare-fear-cannot-take-control*)*. It is from Pip Hare aboard *Medallia*, as she skirted the Antarctic Ice Exclusion Zone at the longitude of The Cape of Good Hope. Pip Hare's account is a perfect example of the Emergency Management Strategy of STOP, THINK, EXECUTE when facing a situation of fear leading to potential panic. For the instructors, telling this story (or perhaps have a video of Pip telling it) allows the

participants to immerse their imagination in the potential for imminent disaster while hearing tangible steps to mitigate the fear, make a plan. and act on it until the situation is resolved.

2. Teach the STOP-THINK-EXECUTE mantra as a guiding principle in managing fear and mitigating panic. Details are in "Best Practices". Participants, working in small groups should create (or be provided with) an emergency scenario for which they must game-out a resolution using this technique.

3. Teach Micro Leadership, Calm Group Dynamics, Heads Down (and Up) Action - an awareness and focus of each individual crew member on their tasks while keeping an eye out and maintaining situational awareness. This could be taught/trained as a group exercise when the group size was similar to an offshore crew (8-12 people). Describe a scenario and devise a plan which includes "domain Leaders" (think foredeck vs. medical vs. mechanical) Let people sort themselves into subgroups and work on a portion of the plan while others attack other priority actions. See the example of *Gambler* in Best Practices.

Appendix 4 – Resource References

Websites

Storm Trysail Club	www.stormtrysail.org
Safety-at-Sea	https://stormtrysail.org/sas/
Storm Trysail Foundation	https://stormtrysailfoundation.org/
Cruising Club of America	https://www.cruisingclub.org/
New York Yacht Club	https://nyyc.org/
World Sailing	www.sailing.org
Incident Reports	www.sailing.org/sailors/safety/reported-safety-incidents.php
US Sailing	www.ussailing.org
Incident Reports	www.ussailing.org/competition/offshore/safety-information/safety-reports/
Bermuda Race	www. bermudarace.com
US Coast Guard (SAR)	https://www.dco.uscg.mil
MARS - Mariners' Alerting and Reporting Scheme	www.nautinst.org/resource-library/mars/mars-reports.html

Books

Sailing True North	Admiral James Stavrides	Leadership and ten admirals
South	Sir Ernest Shackleton	*Endurance* expedition
Heart of the Antarctic	Sir Ernest Shackleton	His first attempt at the South Pole
Endurance	Alfred Lansing	*Endurance* expedition
Team of Rivals	Doris Kearns Goodwin	Lincoln and his cabinet
Leadership	Doris Kearns Goodwin	Lincoln, the Roosevelts, LBJ
No Shortcuts to the Top	Eddie Viesturs	America's top mountaineer
Splendid and the Vile	Erik Larsen	Churchill: 1939-1941
World of my Own	Sir Robin Knox-Johnston	First solo circumnavigation
Call Sign Chaos	Gen Jim Mattis	Great modern US general
Turn the Ship Around	David Marquet	US Navy Leadership
Washington	Ron Chernow	America's greatest Leader

Movies

Greyhound	Tom Hanks, WW2 convoy, from C.S. Forester *The Good Shepherd*
The Cruel Sea	Battle of the Atlantic, Nicholas Monsarrat's WW2 novel
Finest Hours	US Coast Guard rescue of two tanker crews off Cape Cod
Everest	Definitive IMAX presentation of disaster on Mt. Everest
Maiden	First all-female around the world crew
Blue Angels	*A Year in the Life - Becoming Blue* – a study in Leadership, team building, and safety https://www.youtube.com/watch?v=osPWwQxMEJA

Articles - Except where noted, all articles can be found on Storm Trysail website (see above)

Culture of Safety	Cruising Club of America Recommendations
Ship Shape	Gary Jobson https://whatsupmag.com/culture/sports/ship-shape/
Seahorse article	Rod Davis
Mt Everest	Larry Huntington
How NYC Vaccinated 6 Million in Less Than a Month	https://www.nytimes.com/2020/12/18/nyregion/nyc-smallpox-vaccine.html?smid=url-share
Bonhomme Richard	Chief of Naval Operations letter to the US Navy

The Offshore Sailing Leadership Symposium (OSLS), the video summary, and this report were the result of a year's worth of planning, organizing, reflection, and writing on the part of a dedicated group of sailors devoted to improving Safety-at-Sea through Leadership training and education. The Storm Trysail Club thanks them for their dedication and service.

The Organizing Committee:

Richard du Moulin, Committee Chair and Chair, Storm Trysail Foundation

A.J. Evans, Commodore, STC, 2020

Ed Cesare, Commodore, STC, 2021

Bob Reichart, Committee Chief of Staff, STC

John de Regt, Moderator and Facilitation, STC

Jack Cummiskey, Chair, STC Seamanship Committee

Renee Mehl, STC Nomination Committee

Whitney Kneisley, Logistics, Executive Director, STC

Kate Wilson Somers, Technical Moderator, Social Media, and Web Developer

Richard Hersh, Facilitation Advisor

Ed "Buttons" Padin, Final Report Editor, STC

Gary Jobson, Panel Moderator and Video Producer, STC

Scott Shucher, Applecart, Video Editor

From the left: Bob Reichart, A.J. Evans, Buttons Padin, Ed Cesare,
Rich du Moulin, Jack Cummiskey, John de Regt