

The truth is any team assembled will —

1. have less information than you would like (which tends to drive people to study things to death)
2. have limited foresight
3. lack ability to make sophisticated calculations
4. accept a decision that “seems good enough” (often from what is perceived to be the most influential or most intelligent person or the boss)
5. let emotion and excitement affect judgment.

**You need to recognize and avoid each of these five pitfalls, using a team that follows the four essentials of a successful team.**



In one of our workshops, you may have heard about the May 1968 loss of a submarine, the US Scorpion, with ninety-nine men aboard. A team come together to do the nearly impossible. They located the submarine which had been running “silent and deep” through the Atlantic with no known course. But could they do it a second time?

The Soviet Golf-class ballistic missile submarine K-129 sank off Hawaii on April 11, 1968, approximately 750 miles northwest of Hawaii either due to a self-destruct device or missile malfunction. Evidence seems to support the former, while the official version is the latter.

Once again a team collectively worked out probabilities of all the factors they could determine (ocean noises, direction the sub had been traveling, speed, currents, etc.) Every field of expertise you could think of was enlisted. They came from various military services and corporations. The prize was again a valuable bottle of scotch.

The submarine was located in 16,500 feet of water by the US Navy.

Under the cover of a manganese nodules mining operation the Navy hired Howard Hughes to build the Glomar Explorer (for \$200M) which went to sea on June 20, 1974, found the sub, and brought 38 feet of the vessel to the surface. Later, Nixon summoned Soviet leaders to a secret meeting in Hawaii where they were asked to account for a maverick submarine which apparently was preparing a preemptive strike on Hawaii and were given back the bodies of eight sailors.



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On January 17, 1966, a B-52 bomber and a refueling airplane collided in midair while crossing the Spanish coastline. The bomber carried four nuclear bombs which fell from the plane.



Three bombs landed on shore and were immediately found. But the fourth bomb was lost in the Mediterranean and its rapid recovery was essential to national security. The Soviets and the US were actively searching for the lost bomb, so the race was on. At the height of the cold war this turned into quite a treasure hunt!

After a thorough search by the US Navy, the final bomb still could not be located. Even an “eye witness” fisherman’s description of where the bomb fell failed to locate it.

A group of scientists from diverse fields was collected. Each had a theory of where the bomb would be found...each was wrong. A Navy consultant, Dr. John Craven, had the team collectively work out probabilities of all the factors they could determine (velocity, speed and direction of the planes, wind, currents, weight of bomb, aerodynamics of bombs). Every field of expertise he could think of was enlisted. They came from various military services and corporations.

Craven went beyond just asking the scientists where the bomb would be found. He asked for multiple scenarios and their expert opinion on the probability of each scenario. He set up a ‘market’ with the prize being an expensive bottle of single malt scotch. The participants could “bid” (put down a small money wager) on their favorite scenario. When all the probabilities were put together, a composite estimate of where the bomb would be was generated. The composite estimate was approximately 1,000 feet from the location where the bomb actually came to rest (order of magnitudes closer than the closest individual estimate).

Craven had put together the four essential elements of a successful team:

1. Broad and diverse experience
2. Independence
3. Open mindedness
4. Invested participants.

**Can you find each of the four essential elements?**



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