

ESMT Case Study

Turn the ship around! (A)

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Introduction

This case study is based on the events on board a nuclear submarine.¹ Readers do not need special knowledge about the operation of nuclear submarines but should be aware of some basic facts. The US Navy operates different types of nuclear submarines. In principle these are either ballistic-missile submarines, which are capable of executing nuclear strikes as part of strategic deterrence, or they are attack-submarines, whose main role is to hunt other submarines and which may carry attack weapons such as cruise missiles. Both submarine types are powered by a nuclear propulsion system and typically operate in depths between 200 and 400 meters for three to six months.

A nuclear submarine is a very complex system operated by specialized and highly trained crews of 12 to 14 officers and 120 to 150 enlisted men and women. The commanding officer (CO) or captain is in charge of the submarine and supported by an executive officer (XO), who is second in command. The crew is assigned to tasks in one of four departments and within the departments to a specific division:

¹ The case is based on the book *Turn the Ship Around!* (Marquet 2013).

This case study was prepared by Professor Jan U. Hagen of ESMT Berlin and L. David Marquet, Captain, US Navy (Ret.). Sole responsibility for the content rests with the author(s). It is intended to be used as the basis for class discussion rather than to illustrate either effective or ineffective handling of a management situation.

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- Operations department
 - Navigation
 - Communication
- Weapons department
 - Sonar
 - Fire control
 - Torpedo
 - Missile
- Engineering department
 - Auxiliary (non-nuclear mechanical)
 - Electrical
 - Mechanical
 - Reactor controls
 - Reactor laboratory
- Administrative department
 - Yeoman (office and administrative support)
 - Supply
 - Mess specialist (cook)

Each department is headed by an officer. The divisions are headed by a junior officer and a “chief” – a non-commissioned officer – in charge of the enlisted men.

Voyage into the unknown

Engineer officer Louis David was observing the concentrated operation in the control room of the nuclear-powered submarine the *USS Will Rogers*. Already submerged, this huge 8,000-ton ship was scheduled to commence a deep dive into the eastern Atlantic Ocean in 30 minutes. Each crew member was a specialist for his station and, collectively, they all collaborated under the eyes of an experienced captain. They were prepared and eager to demonstrate their capabilities.

David was in charge of the ship’s nuclear reactor and auxiliary equipment. Sixty men from an overall crew of 140 reported directly to him. Since his assignment to the *Will Rogers*, David had been determined to introduce a new leadership style that would empower his men to make decisions regarding their tasks rather than just follow orders. During the past weeks, he had supervised extensive maintenance work on the crucial nuclear propulsion system. Now it was time for a final

check of the entire ship by the crew before deployment. It was the perfect opportunity to prove to his team and his superiors that his leadership style was right.

Aiming for a new approach

When Louis David graduated top of his class from the United States Naval Academy in Annapolis, he had a bright future as a young engineer officer in the US Navy. He decided to join the elite submarine force with the objective of becoming the CO of one of the nuclear submarines. His focus was not only on the ships' technical aspects; he also displayed a keen interest in leadership.

During his first assignment as a junior officer responsible for the sonar on the USS *Sunfish*, a nuclear-powered attack submarine, he experienced two leadership styles. His first CO was practicing the traditional leader–follower model, giving orders and expecting the crew to execute them. He was a technical expert who led the crew through highly successful deployments. Then the command changed to the new CO, Commander Marc Pelaez, who displayed a very different attitude regarding leadership. Pelaez encouraged initiative from the crew and was open to their suggestions.

One example: During a training exercise in the Atlantic, David observed a merchant ship through the periscope. The sonar operator was listening to the noise of the ship, but the crew was not sure how far away it was. By using an active sonar ping on the target ship – or “going active on sonar,” as it was called – they would be able to determine the distance, but this was not authorized during normal operations, as it would reveal the location of the submarine itself.

While David was following the merchant ship through the periscope, he mentioned to the sonar operator how helpful it would be if he could ping the ship, despite everything. “Why don’t you ask me?” asked Pelaez, who just passed by and heard his remarks. “Why don’t you just say, ‘Captain, I intend to go active on sonar for training?’”

David was stunned. Then he said: “Captain, I intend to go active on sonar for training.”

“Go ahead,” said Pelaez and moved on to the next station in the control room.

For the first time, David felt in charge. For the next half hour, he and his team used all kinds of sonar pulses to test and explore their sonar equipment. He and his colleagues loved the experience. From then on, while on watch, David practiced this newly learned initiative of asking his captain directly. Instead of the leader–follower model that he had been introduced to in the Navy, he now felt that he was operating within a leadership model that was intent-based, provided him with a new level of freedom to explore new opportunities, and gave him greater flexibility. He could act as a leader and decided he would practice this leadership approach himself when he became department head – his next step.

The crucial assignment

After serving on the USS *Sunfish*, David moved on to assignments and trainings on land for several years. But his intention was to return to sea. Finally, he was assigned to serve as an engineer officer on the USS *Will Rogers*. This submarine had just returned from its previous tour and required maintenance before it could be redeployed. David would be responsible for the nuclear reactor and the auxiliary equipment as well as for 60 men – almost half of the ship's crew. He wanted to excel in his new job and had learned every technical aspect of the submarine. But he was also determined to break away from the top-down leadership practiced in the Navy. His focus would be to inspire and empower his team, just as he had experienced it himself on the USS *Sunfish* under Commander Pelaez.

However, on the USS *Will Rogers*, things were very different. The CO practiced a clear command-and-control leadership style that was copied by the XO. Furthermore, the engineer officer who David replaced had been very involved in details and keen on directing and controlling his men. David, by contrast, intended to give more decision-making power to his team members and just supervise their actions. He wanted them to be passionate about their jobs and to take initiative, as during his time on the *Sunfish*. Instead of providing task lists to the officers and senior enlisted men, he described the objectives and told them to prepare the lists of their tasks themselves. He also decided that, rather than telling them what to do, he would ask questions pertaining to a job and start an open discussion. Rather than being at the center of coordinating activities, he wanted the non-commissioned officers, also known as chiefs, to discuss their tasks and potential problems among each other and then assign the necessary tasks among themselves.

Things did not go as expected. Errors were frequent and work had to be redone. They fell behind schedule. More than once, David could hear his men wishing his predecessor was back to tell them what to do. With the pressure to get the ship deployed back to sea increasing, David realized that even he fell back into the old behavior of barking orders, just to get things done. But despite some doubts regarding his new approach, he continued on his course to empowerment.

When the scheduled maintenance period came to an end, things finally seemed to be okay. David's men finished their tasks on time. Not having any immediate duties in the control room, David decided to have a final look at the submarine's equipment and check its systems. He walked past the tubes for Poseidon missiles and the nuclear reactor compartment to the engine room. Suddenly, he stopped and stared. The nuts for a seawater heat exchanger were not sufficiently grabbing the threads on the bolt. Somebody must have been careless when installing the nuts. As the heat exchanger would be exposed to full pressure when submerged, any leak would result in seawater being sprayed into the ship, with potentially fatal consequences. David had no option but to immediately inform the officer of the deck in the control room to cancel the planned deep dive.

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The sloppy work was a major blow, both to his department and to his credentials as a leader in the US Navy. While walking through the ship to make the humiliating report to the captain, David reflected on what might have gone wrong.