THE LANGUAGE OF HUMAN CENTERED SAFETY
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The Language of Human Centered Safety

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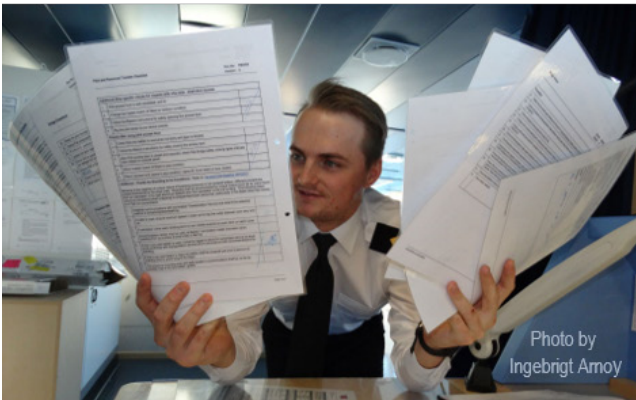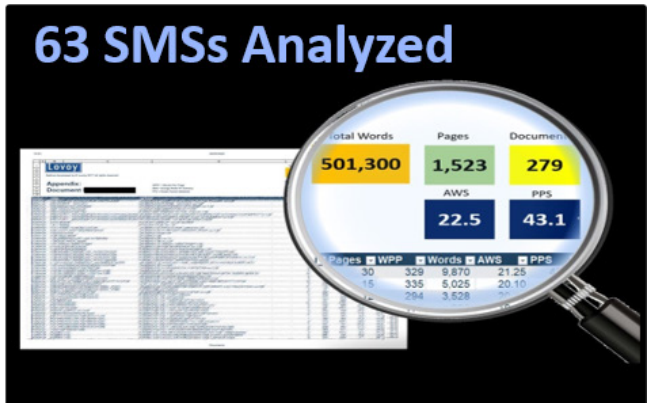**About the Author:** The author's background is available at https://lovoy.info/

Photo by Ingebrigt Arnoy

63 SMSs Analyzed

IMPA's Annual Congress

The International Maritime Pilots' Association (IMPA) represents more than 8000 licensed pilots. IMPA brings together pilots' associations from around the world to share concerns and experiences. Operational safety is a vital part. A relevant topic is, therefore, how to write procedures and management systems to meet each country's regulations for pilot operations. National regulations may refer to different standards, but all try to achieve the same safety objectives. Regardless of the chosen standard, it is essential to ensure the text is user-friendly enough to meet its objectives. IMPA welcomed pilots from around the world to the 26th IMPA Congress from 21-26 April 2024 in Rotterdam.

What is the Language of Human Centered Safety?

IMPA invited Lovoy to share experiences from making maritime management systems more user-friendly. This article captures essential parts of Terje Lovoy's presentation. It explores common assumptions about writing regulatory-compliant text. The Language of Human Centered Safety shares the real root causes for

why SMSs often become overly complicated. It is relevant for anyone involved in writing any kind of text to meet regulations and improve safety.

We, the Lovoy Team, will discuss these questions:

- Why do we make procedures unnecessarily complicated?
- How to make procedures user-friendly?
- Who should write your procedures?

Are Complicated Procedures a Problem or Potential?

Most Safety Management Systems (SMS) have become too big, too complicated, and lost sight of the user – the seafarer. An overly complicated SMS is a problem but also a potential for improvement.

More than 1,000 seafarers worldwide completed our SMS Usability Survey. Most of them replied that the problem was too much information and that:

- It is difficult to locate info
- Instructions are not following our workflows
- It uses difficult language – we must read several times
- As a result, we often don't read at all, we transfer the knowledge verbally

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20 Years of Experience or One Year's Experience 20 Times?

Verbal communication is valuable. But in today's high-tech world, it should not be the only way to capture and share knowledge. Some may say it is like having 20 years of experience rather than one year's experience repeated 20 times. It is about learning from past mistakes. Companies handling risk must have procedures stored in a management system. The questions should not be if we need to document it. The question should be how to do it because there is no point in having text if our people do not use it.

Root Cause Analysis

Many shipping and marine insurance companies engaged us in root cause analysis of why people did not use procedures. We used the "ask why five times" method. The first answer was often failure to follow procedures. When digging deeper, the answer was usually that the text was not user-friendly. Why? Because it was too complex and complicated. Next, they claimed the complexity was a deliberate strategy to pass audits. However, we found a different answer: The writers only know how to write complicated text because that is what we learn in school. Asking why the fifth time, we see that this is not a deliberate strategy; it is a lack of strategy. One of the root causes was that there are no writing standard, training, and ways to measure if the management system is user-friendly enough to achieve its purpose.
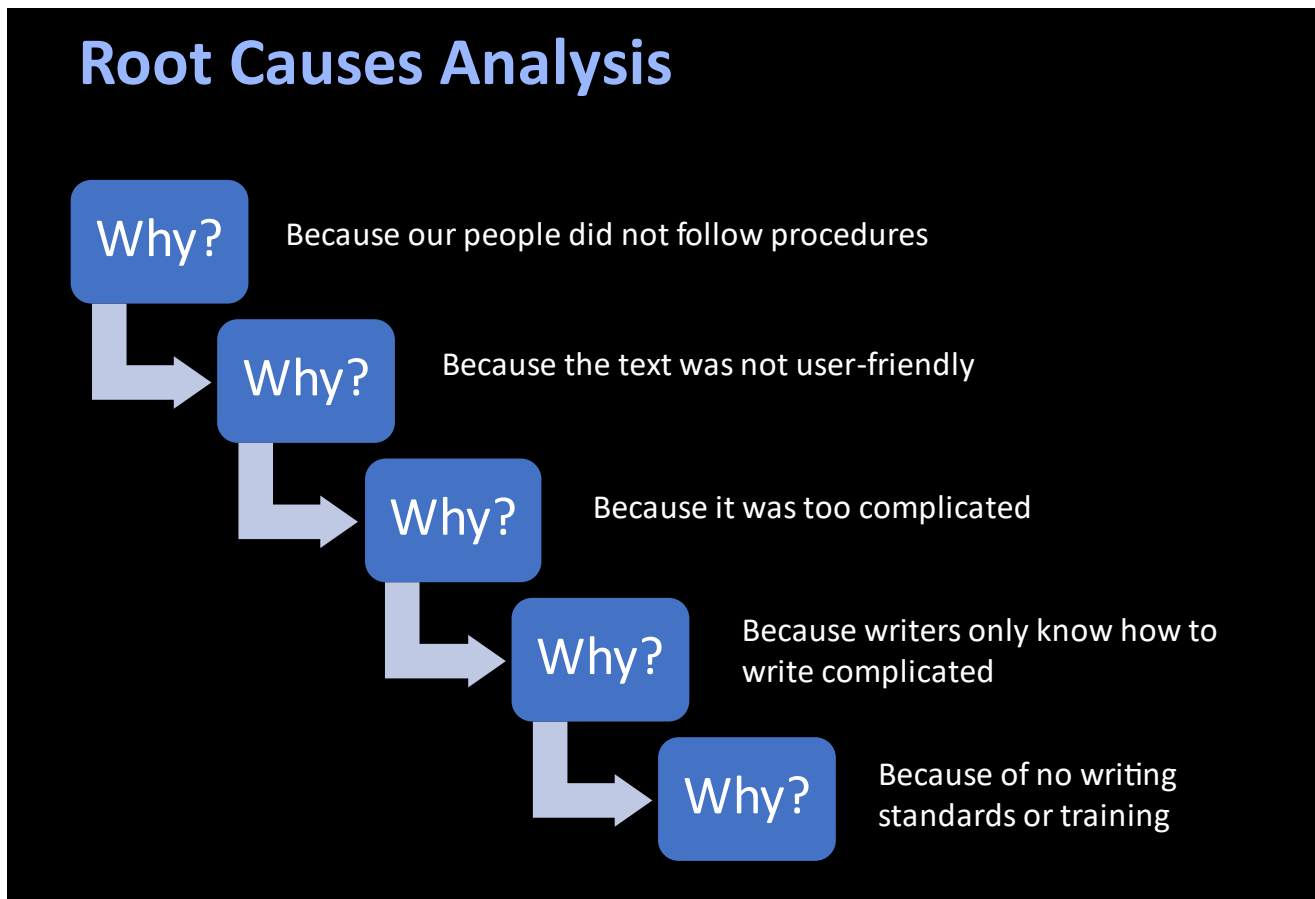
**Challenging Assumptions: Is Too Much Info Really one of the Problems?**

There is usually a link between how well we understand problems we are trying to improve and the results we get. We, therefore, wanted to investigate if most SMSs actually have too many facts and details. Since 2009, the Lovoy Team analyzed 63 SMSs, many with around half a million words.

Contrary to common assumptions, our research revealed a surprising but crucial truth: the challenge does not lie in an overload of facts, but rather in how we present the information. The unnecessary complexity came from various factors, including duplications, contradictions, excessive cross-referencing, and poor overall SMS architecture. These findings underscore the critical importance of not just the quantity, but the quality and clarity of information presentation. To address these issues, we made a text washing method to streamline processes, enhance understanding, and produce more concise text without losing facts.

Simplicity Meets Compliance

Most companies want to simplify and make their SMS more user-friendly. But they often conclude that there are too many obstacles to navigate. Surprisingly, many believed it was impossible for a SMS to comply with audit standards and at the same time be user-friendly.

We followed 23 shipping companies who simplified and improved their SMSs using their own people. They simplified by washing out filler words, double talk, and changing from passive to active sentences. They used the Lovoy Text Washing Method to simplify without removing facts or dumbing down the text. They replaced overly complex words such as "elucidate" with more commonly used words such as "explain" or "make clear". They continued using maritime terms such as "enclosed space", "forecastle", and other IMO standard marine phrases. You can read more about text washing methods on https://lovoy.info/
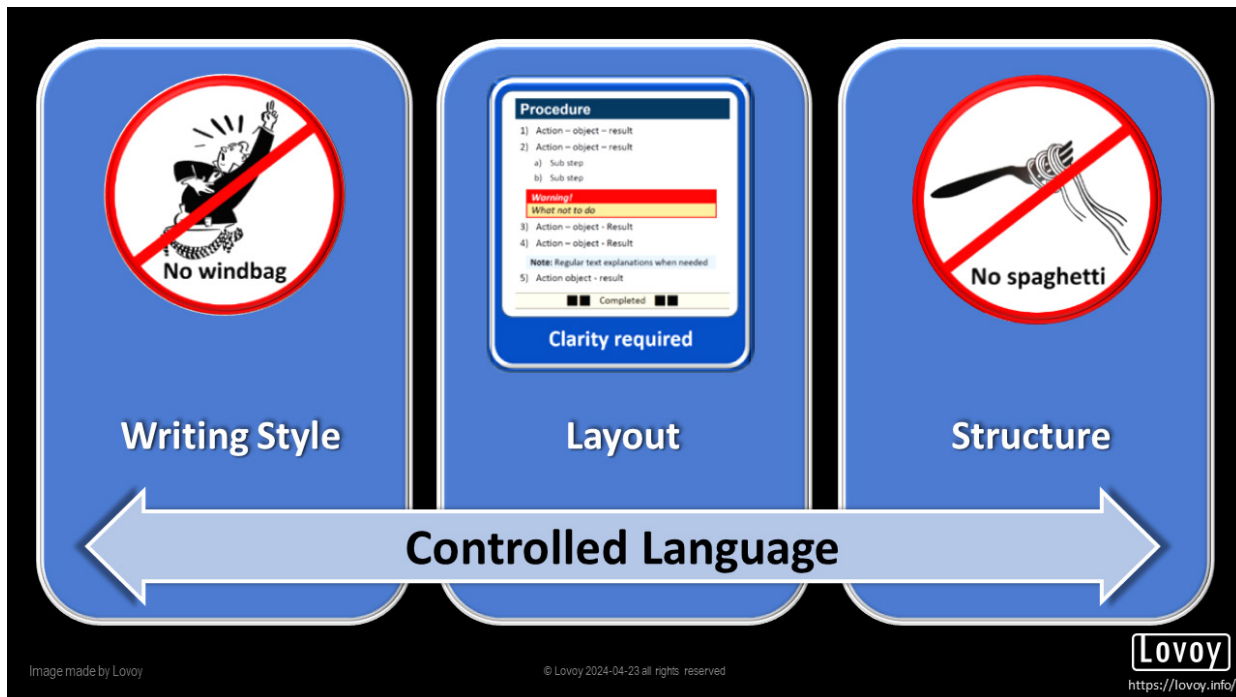
Risk of Oversimplification

If someone believes the solution is to remove the "excessive" details, they may end up removing facts needed by inexperienced users and for audits. They risk losing years of company experience. We call this oversimplification.

Spaghetti SMS Structure

We found a bigger problem than overly complex text. We called it spaghetti SMS structure. It is a result from copying and pasting text blocks from codes and guidance material without adapting to the seafarer's real-life workflows. How well we succeed with restructuring is our single most important success factor.

Results

Untangling spaghetti combined with text washing allowed the companies to simplify and improve their SMSs without oversimplification. Feedback from their seafarers and auditors was positive. Surveys typically showed around 70% increased perceived usability. The audit results were better. It was easier to prepare for audits and adapt to new standards. When the SMS is more concise and clearer, it is easier to notice if something is missing. The companies reduced the word count but added more facts. Less became more.

Who Should Write the SMS?

Should we use a writer with good English writing skills but little knowledge of the content, or should we use a subject expert? We tested both options and found that:

- True simplicity comes from thorough understanding.
- People without a good understanding of a subject often insist on unnecessary complexity.
- Simplification without understanding is difficult.

Based on this, we decided to test if we could train seafarers to write good SMS procedures. Today, most seafarers come from countries where English is not the native language. We decided to include what language scientists call a controlled language in the Lovoy Method. It is English but with strict rules for grammar, vocabulary, layout, and structure. When used correctly, it reduces complexity without losing facts. It makes it easier for both native and non-native English speakers to write user-friendly procedures.

SMS Writer Training
We designed an online training program to train seafarers to become SMS writers. We tested it with seafarers and office staff in different parts of the world. With training and practice, most writers produced high-quality procedures. We got good results from non-native English-speaking nations. The controlled language allowed shipping companies to use their own people to reduce large volumes of complex inconsistent text to clear, easy-to-use text.

Conclusions
The answer to our first question is that writers make procedures unnecessarily complicated because they only know how to write complex.

The answer to our second question is that to make procedures user-friendly, we need to simplify. To simplify successfully, we need good tools. Good tools are half the job; knowing how to use them is the other half. We, therefore, need both a method and training. Without a good method and training, writers tend to either write complicated or oversimplify.

The answer to our third question is that our experience shows that using your internal staff and seafarers is the most effective way to write your procedures.

Lovoy Training and Support
Lovoy offers training and support to shipping companies wishing to use their own people to simplify and improve their SMSs. For more information contact terje@lovoy.info

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Resources

The following is available at https://lovoy.info/

- Get Ready for SIRE 2.0
- BIMCO Webinar – Simplify Your SMS (Video)
- Simplification Wins Safety Award (Video)
- Offshore Production SMS (Video)
- BSM Navigation Procedures (Video)
- New Teekay Nav Procedures (Video)
- User-Friendly Procedures are Used More (Video)
- Simple Word Dictionary