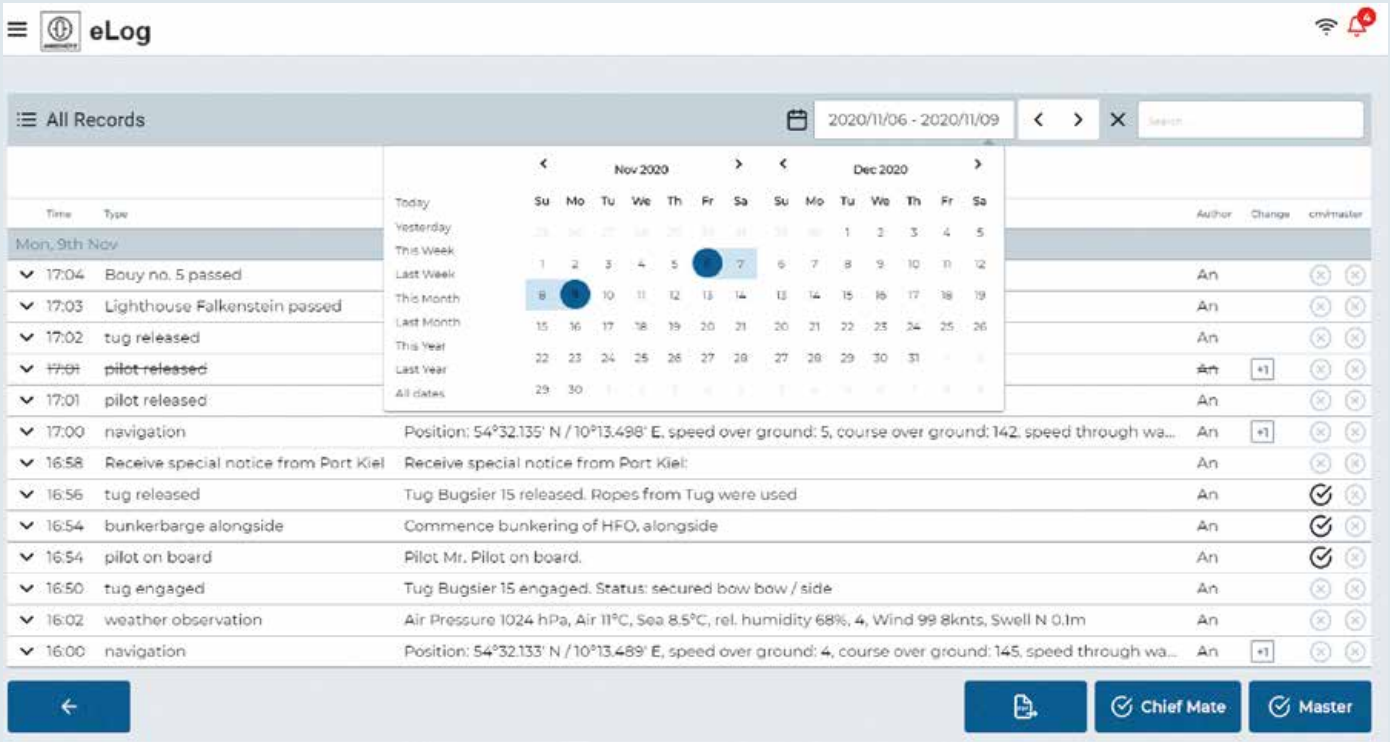


The electronic logbooks promises accurate record-keeping with less human effort

Source: Raytheon Anschütz

# The electronic logbook as a data Service

**The electronic logbook provides high-quality, secured documentation of data, eliminates the risk of incomplete or improperly filled logbooks and reduces the workload of the crew on board the ship. Further, transforming numerous manual data processes into a digital chain of data for exchange, processing and analysis could deliver valuable voyage insights in real time for ship owners, managers or even authorities, ports and logistic companies.**

The amount of documentation and paperwork associated with traditional logbooks are highly time-consuming for the crew on board the ship and relate to time-pressure and human effort.

Related risks are improper documents, which are vulnerable against authorities, and distraction of the crew, which imposes risk of human error. Ashore, a lot of effort is required to transform analog data to digital to re-use them in other IT systems or reports.

Electronic logbooks increase efficiency of (on board) processes and make shipping paperless.

No crew needed

Source: Raytheon Anschütz

## Anschütz eLog as the new electronic logbook

The Anschütz eLog is a digitised logbook that eliminates the cost and effort of paper logbook logistics while guaranteeing high data quality and global data access via a cloud solution. The eLog complies with ISO 21745:2019 "Electronic record books for ships" and holds several flag state approvals.

As experts for navigation equipment and bridge systems integration, Raytheon Anschütz teamed with the Formularus Verlag when designing the eLog. Formularus has an international reputation for logbooks and reports required in maritime shipping, covering all aspects of documentation on board including environmental and ISPS matters.

## Automated data entries and workflow-guided templates

The eLog collects automatic navigational sensor data entries at an user-defined

time interval: position, speed and course over ground, heading. If connected to the bridge network, in addition environmental and own ship navigation data is collected automatically.

Where needed, it simplifies and fastens manual data entries of users on board the ship by easy-to-operate templates with pre-defined values, workflows and links to related events that guide the user to complete the entries (e.g. tugs, pilots). Entries can be made from multiple devices connected to the ship's ethernet or wifi. Each entry is subject to plausibility checks.

## Integrity and security of logbook data

A key requirement for logbooks is to ensure that entries are made tamper-proof and that non-authorised access and change to the data is excluded. eLog achieves transparency through the use of personalised, role-based accounts. Changes to the entries and the current state of approvals are continuously documented, supporting data integrity. The electronic approval workflow implements the traditional signature of master and chief mate. All data are stored secured and tamper-proof using Blockchain. Providing a "single view on the truth", Blockchain can be seen as the ideal network to record and track logbook data entries.

## Use of digital logbook data ashore

Digital logbook data can be easily evaluated by using simple, time-saving search and filter functions. Beyond this, eLog has also established connections with SOFeXchange to allow the data to be used in real time for statement of facts as well as with the Podium5 voyage informatics platform.

Records entered into the eLog can be automatically captured on the statement of facts and provided to voyage stakeholders in real time. Using the digital data provided by eLog saves time and guarantees high-quality port documentation and simplified demurrage claims with substantially reduced work for the crew on board. Moreover, using the digital logbook data then for data analytics enables a broader, more reliable picture of voyage performance, efficiency and other use cases, compiled to guide decisions made by stakeholders like shipowners, ship managers and charterers. The range of connected services and companies is continuously growing.

## Six major benefits of eLog

- Reduce operational risk
- Full control about a high-quality documentation, at any time
- Leverage the possibilities from digital data usage ashore
- Relieve the crew in stressful situations
- Save effort and cost for paper logbook logistics
- Use a sustainable solution on the way to paperless shipping

The eLog is a modular product. Moderate initial cost applies for the small gateway computer and the on board installation and licensing. The installation is kept easy and can be done by any technician aboard a ship. Worldwide technical support can be provided as needed.

The basic application is available for an annual subscription fee, as well as any module for the books or reports. Updates are provided as a continuous service.

## Free demonstration at SMM and on the internet

Visitors to the booth of Raytheon Anschütz can experience a live demonstration of the eLog. A free demo access is also provided on the internet via:
www.raytheon-anschuetz.com/eLog

Raytheon Anschütz at SMM:
Hall B6 / Stand 304

Digital Logbook data can be easily evaluated by using simple search and filter functions
Source: Raytheon Anschütz