LOGIIT IS

reliable
innovative
responsible
sustainable

Logiit contributes to a more **sustainable & environmentally responsible** industry.

logiit.co

LOGIIT

TABLE OF CONTENT

1. A word from the team
2. Introduction
3. Our Mission
4. Environmental Impact of Paper Logbooks per ton
5. Our Commitment and How We Achieve It
6. Digital Logbooks Key Challenges
7. Paper vs Digital Statistics
8. Conclusion

“We are on a purposeful journey to do our part and help build a more sustainable future.

Transforming the industry from paper to digital is instrumental” - Lino Brogneri, CEO

A WORD FROM THE TEAM

LOGiiT

“As the CEO of LOGiiT, I believe that sustainability is at the heart of our vision for the future. From the very beginning, our goal has been to enhance the efficiency of commercial diving operations and to do so in a way that minimises our environmental footprint and maximises positive impact. We believe that innovation and sustainability go hand in hand, and our digital logbooks are designed to streamline processes while reducing waste and paper consumption. Our commitment to sustainability extends beyond technology—it reflects our values of responsibility, transparency, and continuous improvement. We are excited to be part of a global movement that seeks to create a better, more sustainable world for future generations.” - Lino Brogneri

“At LOGiiT, sustainability is woven into the fabric of our operations and decision-making processes. As a company that drives innovation in the offshore industry, we are committed to ensuring that our solutions are not only efficient but also responsible. In my role as COO, I am proud to lead initiatives that prioritize environmental stewardship, social responsibility, and sound governance. Our team is dedicated to creating a future where digital advancements contribute to a more sustainable, ethical, and inclusive industry. Together, we are building a foundation that supports long-term growth while respecting the planet and the people we serve.” - Lindi Brogneri

LOGiiT

INTRODUCTION

At LOGiiT, ***environmental sustainability*** is not just a ***responsibility***—it's at the ***core*** of who ***we are*** and ***what we*** do. The increasing impact of industrial activities on our planet, from resource depletion to rising carbon emissions, makes it imperative for companies like ours to act. By reducing the reliance on traditional paper logbooks and embracing innovative digital solutions, we aim to significantly cut down on waste, deforestation, and greenhouse gas emissions.

Our mission is clear: to lead the offshore industry into a more sustainable future, one where technology not only enhances operational efficiency but also minimises environmental impact. We believe that sustainability is an ongoing commitment, and as we grow, we are dedicated to continuing this journey by setting ambitious goals that address key environmental challenges.

This document outlines our commitment to sustainability, our current impact, and our future goals.

OUR MISSION

Our mission is to create innovative, eco-friendly solutions that replace outdated, resource-heavy practices in the offshore industry. We strive to reduce carbon footprints, minimise paper waste, and ensure that sustainability is integrated into every aspect of our operations.

Goals for the Future

1. **Reduction of Carbon Emissions:** By transitioning from paper-based logbooks to digital platforms, we aim to reduce the CO_2 emissions associated with paper production and transportation by 80% over the next five years.
2. **Resource Conservation:** Our goal is to contribute significantly to global efforts to combat deforestation through our digital offering.
3. **Energy Efficiency:** We are committed to using data centres powered by renewable energy, ensuring that our digital solutions contribute to a greener planet.

At LOGiiT, sustainability is not just a target—it's our commitment to future generations. We are proud to be part of a global movement toward environmental stewardship and are excited to continue building a future where technology and nature can thrive together.

Environmental impact of paper logbooks per 1 ton of paper

1. Deforestation

- Wood Required: **Producing** 1 ton **of paper requires around** 24 trees **(assuming each tree yields about** 42 kg of paper**). This means** 1 ton of paper **contributes to the loss of roughly** 24 mature trees**, which can absorb up to** 1 ton of CO_2 **per year while alive.**
  (Our World in Data).

2. Water Consumption

- Water Used: **The production of** 1 ton **of paper consumes between** 10,000 and 20,000 litres of water**, depending on the type of paper and production methods(UNFCCC).**

3. Energy Consumption and CO_2 Emissions

- Energy: **It takes about** 17 gigajoules (GJ) **of energy to produce** 1 ton of paper**, equivalent to the energy needed to power a typical home for nearly** half a year**(UNFCCC).**
- **CO_2 Emissions: Producing** 1 ton of paper **results in approximately** 2.7 tons of CO_2 **emissions, with variations depending on energy sources (renewable vs fossil fuels) used in the production process(IEA).**

4. Soil Degradation

- Impact: **Clear-cutting** trees for paper **production can lead to** soil erosion**, though it is difficult to quantify per ton of paper.** Replacing natural forests **with plantations for** 1 ton of paper **contributes to the** reduction of soil **quality and biodiversity over time, but the direct impact per ton is complex to measure.**

5. Chemical Pollution

- Chemicals: 1 ton of paper **can generate up to** 15 kg of sulfur dioxide (SO_2) **and other harmful pollutants if** non-sustainable **bleaching methods are used. These** chemicals **contribute to air pollution and** acid rain **(Our World in Data).**
- Dioxins: **Chlorine** bleaching **can also release dioxins, which are** toxic **and persistent in the** environment**, though precise quantities per ton are hard to measure.**

6. Waste Generation

- Landfill Waste: **If paper is** not recycled**, 1 ton of paper in a** landfill **can decompose anaerobically and** release methane**, a potent** greenhouse **gas.** 1 ton of paper **can produce about** 690 kg of methane **if not properly managed (Our World in Data).**
- Recycling: **Recycling** 1 ton of paper **saves approximately** 3 cubic meters **of landfill space (UNFCCC).**

7. Non-Renewable Resource Use

- Inks and Additives: **The** ink **and other** non-renewable **additives used for printing on 1** ton of paper **can generate an additional** 0.2 to 0.3 tons of CO_2**, depending on the ink composition (most ink is petroleum-based)(UNFCCC).**

8. Transport Emissions

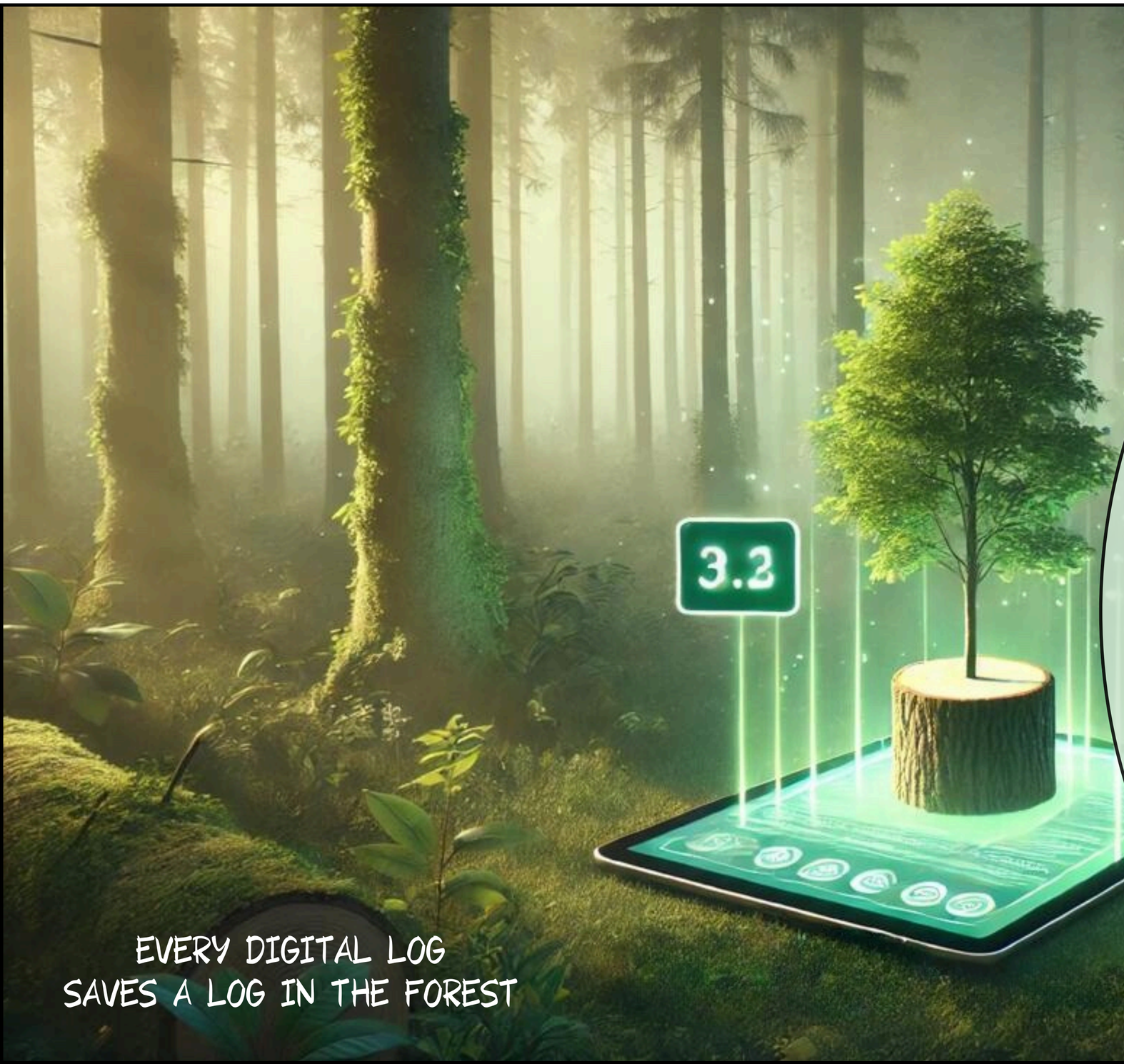
- CO_2 from Transportation: **Transporting 1 ton of paper** over long distances **can result in an** additional **0.1 to 0.3** tons of CO_2**, depending on the mode of transport (**road, sea, air**) and the distance covered (UNFCCC).**

9. Ecological Impact from Plantations

- Biodiversity Loss: **For every** ton of paper **produced from tree plantations, there is a** reduction **in** biodiversity **due to** monoculture practices**. Quantifying this per ton is challenging, but** biodiversity loss **is a known issue in** large-scale **plantations used for paper production (Our World in Data).**

Summary of Quantified Impacts for 1 Ton of Paper:

LOGIIT



24 trees *cut down*
10,000 to 20,000 litres *of* ***water*** *used*
17 GJ *of* ***energy*** *consumed*
2.7 tons of CO_2 *emitted*
690 kg of methane *potentially released in* ***landfills***
0.1 to 0.3 tons of CO_2 *from* ***transportation***

These estimates illustrate the considerable **environmental footprint** of **paper production**, especially when scaled to **global consumption** levels.

LOGIIT

OUR COMMITMENT AND HOW WE ACHIEVE IT

Transitioning from paper logbooks to digital logbooks can significantly reduce carbon emissions in several key ways: ⟶

1. Reduced Paper Production

- **Elimination of Paper Manufacturing:** Digital logbooks **eliminate** the need for **paper**, **reducing** the environmental **impact** of paper production, which includes **deforestation**, water consumption, energy use, and CO_2 emissions. Each ton of paper produces about **2.7** tons of **CO_2 emissions**, so eliminating paper usage **directly cuts** these emissions.
- **Fewer Trees Cut Down:** By **reducing** or eliminating **the demand** for paper, **fewer trees** are harvested, **preserving** their role as carbon sinks that **absorb CO_2**.

2. Lower Energy and Water Consumption

- **No Physical Manufacturing:** Digital logbooks **bypass** the energy-intensive processes of pulp, paper, ink, and binding production. Each ton of paper requires about **17 GJ of energy** and **10,000–20,000 litres of water**, all of which are **saved** by going digital.

3. Reduced Waste and Methane Emissions

- **No Paper Waste:** Paper logbooks that are **discarded** after use contribute to **landfill waste**. In landfills, **paper decomposes** and **releases methane**, a greenhouse gas with **25 times the global** warming potential of CO_2. Switching to digital **eliminates** the potential for **methane emissions** from discarded paper.

4. Reduced Transportation Emissions

- **No Physical Distribution:** Paper logbooks need to be **physically transported** from manufacturing facilities to **various locations**, contributing to **transportation emissions**. Digital logbooks, on the other hand, are **distributed electronically**, reducing **CO_2 emissions related to transport** (which can range from 0.1 to 0.3 tons of CO_2 per ton of paper transported globally).

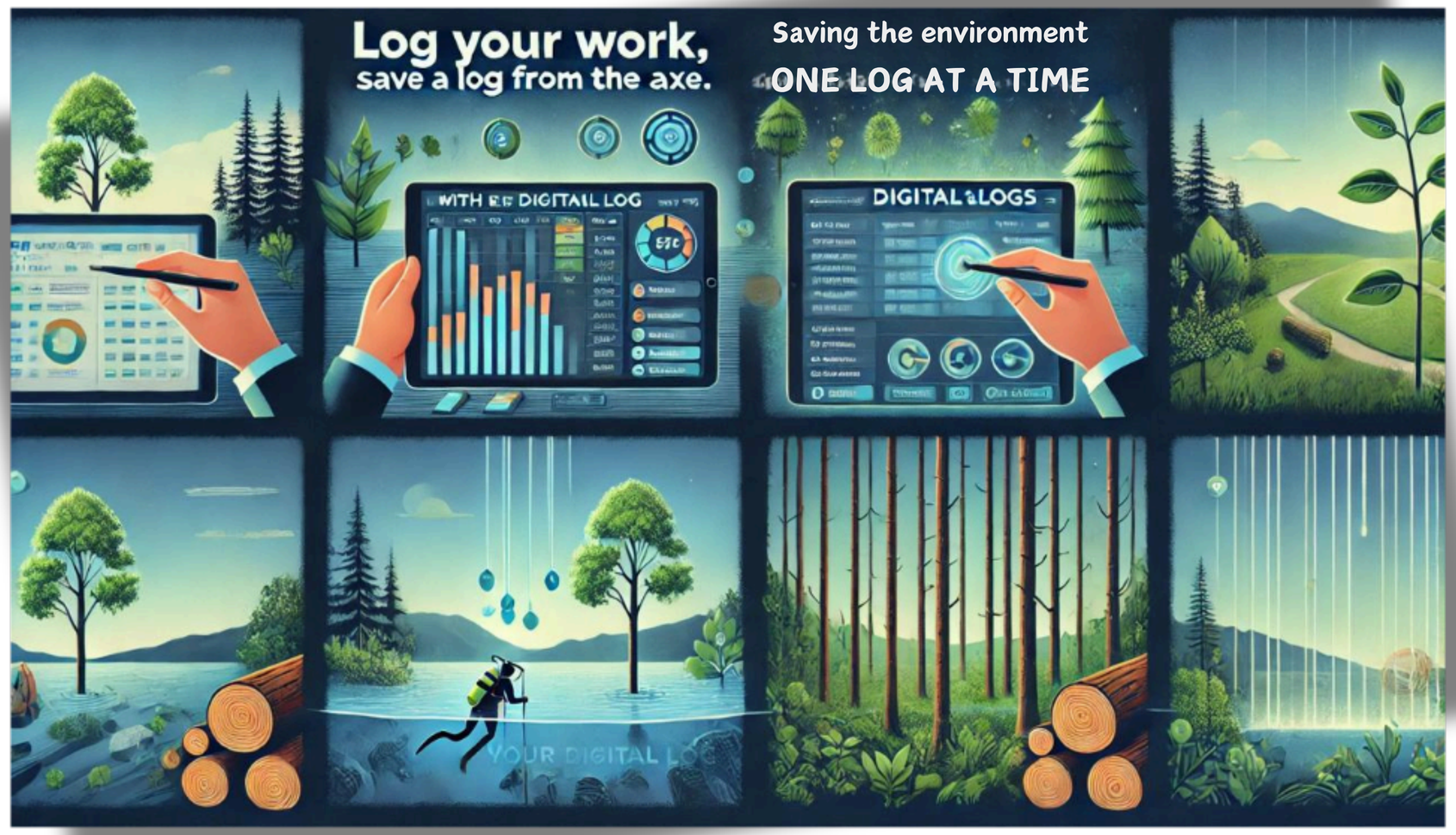
5. **Energy Efficiency in Digital Systems**
   - **Data Storage and Devices:** Although digital logbooks rely on electricity for **data storage and access** (servers, data centres, devices), modern data centres are increasingly powered by **renewable energy** and are designed to be highly **energy-efficient**. The energy required for **cloud storage** and **electronic use** is generally far **less** than the full lifecycle emissions of **paper production**.
   - **Long-Term Use:** Digital logbooks, **once created**, can be **reused** and **accessed multiple times** with **negligible** additional **energy costs**, unlike **paper logbooks** that must be **physically reproduced**.

6. Scalability and Reduced Material Usage
   - **Sustainable Scaling:** As the **need for more** logbooks **increases**, the environmental cost of **additional pape**r logbooks **grows exponentially.** Digital logbooks **can scale without** the corresponding **increase** in resource use and emissions, **offering a sustainable solution** for large-scale **data recording**.

7. Longer Lifespan and Reusability
   - **No Need for Reprinting:** Digital logbooks **can b**e **updated**, **archived**, and **referenced** without needing new physical copies. This **reduces** the **material wast**e and **emissions associated** with reprinting and re-distributing **new versions** of logbooks.

Summary of Carbon Savings:
Lower Resource Use: No deforestation, **energy**, or **water** for paper production.
No Waste: Reducing **methane emissions** from discarded paper.
Minimal Transportation: No need for **CO_2 emissions** from shipping.
Efficient Data Storage: Low energy requirements for **maintaining digital records**, especially with energy-efficient data centres.
Carbon Savings Example: *CO_2 Emissions per Ton of Paper:*
Eliminating **1 ton of paper** (e.g., 2,500 logbooks) saves around **2.7 tons of CO_2 emissions**, plus an additional 0.1–0.3 tons of **CO_2 from transportation** and **690 kg of methane** if the paper were to be landfilled.

LOGIIT



DIGITAL LOGBOOK KEY CHALLENGES

**Digital logbooks provide an eco-friendly alternative,
significantly reducing the carbon footprint associated with traditional paper logbooks.**

While digital logbooks offer many environmental and operational benefits,
they also come with certain **downsides that need to be considered.**

Below are some key challenges associated with using digital logbooks:

LOGIIT

1. Energy Consumption from Data Centers and Devices

- **Server and Cloud Storage Energy:** While digital logbooks eliminate paper production, they rely on cloud servers and data centres, which consume significant amounts of energy. Although modern data centres are increasingly energy-efficient and often use renewable energy, they still contribute to CO_2 emissions.
- **Device Power Use:** Digital logbooks require electronic devices (such as computers, tablets, or smartphones) to access and update information, which consumes electricity. The cumulative energy used for powering these devices can be significant over time.

2. E-waste and Device Lifecycles

- **Electronic Waste (E-waste):** The use of digital logbooks typically requires electronic devices, which, when they become obsolete, contribute to the growing issue of e-waste. Improper disposal of these devices, which often contain hazardous materials, poses a significant threat to the environment. However, our app doesn't require a dedicated device. Instead, it shares the environmental impact of the existing electronic device already in use, minimizing the need for additional hardware that would contribute to e-waste.
- **A Device Manufacturing Impact:** The production of digital devices like computers, smartphones, and tablets involves the extraction and use of rare earth metals and other non-renewable resources. The mining and processing of these materials come with considerable environmental and human costs, including energy consumption, pollution, and social disruption. By utilizing existing devices, our app helps reduce the need for new manufacturing, further lessening the environmental footprint.

3. Data Security and Privacy Concerns

- **Cybersecurity Risks:** Digital logbooks can be vulnerable to hacking, data breaches, and other cyber threats. Ensuring the security of sensitive data requires continuous updates, robust encryption, and secure networks, which can be resource-intensive.
- **Data Privacy:** Managing user access and ensuring that sensitive information in digital logbooks is not exposed to unauthorised parties is an ongoing challenge.

4. Reliance on Technology

- **Technical Failures:** Digital logbooks are reliant on functioning hardware and software. If a device fails or a system crashes, access to vital records could be disrupted. Regular backups are essential, but even these can fail or be lost due to technical issues.
- **Internet Connectivity:** Digital logbooks often rely on cloud storage, which requires a stable internet connection. Logbook access can be interrupted in areas with poor connectivity or during internet outages, potentially causing delays.

5. Initial Setup and Transition Costs

- **Cost of Devices and Software:** Transitioning to digital logbooks requires the acquisition of electronic devices, software, and potentially cloud storage services. This can be a significant upfront cost for organisations with a large number of employees.
- **Training and Learning Curve:** Employees need to be trained on how to use digital logbooks effectively, which can take time and resources. For organisations that have used paper-based systems for years, this can be a significant cultural and procedural shift.

6. Data Storage Costs

- **Ongoing Cloud Storage Fees:** While physical storage space is not an issue, cloud storage solutions often come with recurring costs. As more data is generated and stored in digital logbooks, these costs can increase over time.
- **Data Management:** Organising, categorizing, and archiving digital logbooks requires systematic management. The sheer volume of digital data can become difficult to manage if not handled properly.

7. Access and Usability Issues for Certain Users

- **Digital Literacy:** Not all users may be comfortable with or proficient in using digital tools. This is especially true for individuals or industries that have traditionally relied on paper-based systems. For these users, adopting digital logbooks could be cumbersome or inefficient.
- **Accessibility Concerns:** For people with disabilities, ensuring that digital logbooks are accessible (such as providing screen readers for the visually impaired) can be challenging. Not all digital platforms are designed with accessibility in mind.

8. Dependence on External Vendors:

- **Vendor Lock-In:** Using proprietary digital logbook software or platforms can create dependency on external vendors for updates, support, and maintenance. This could result in long-term costs and limitations on customisation.
- **Software Compatibility:** If software providers change or discontinue their products, organisations could face challenges migrating data to new platforms or maintaining compatibility with other systems.

9. Environmental Impact of Data Centers

- **Energy-Intensive Data Centers:** Despite the overall lower emissions of digital systems compared to paper, data centres can still contribute significantly to energy consumption. If data centres are not powered by renewable energy, the carbon emissions from storing and processing large volumes of data can undermine some of the environmental benefits of going digital.

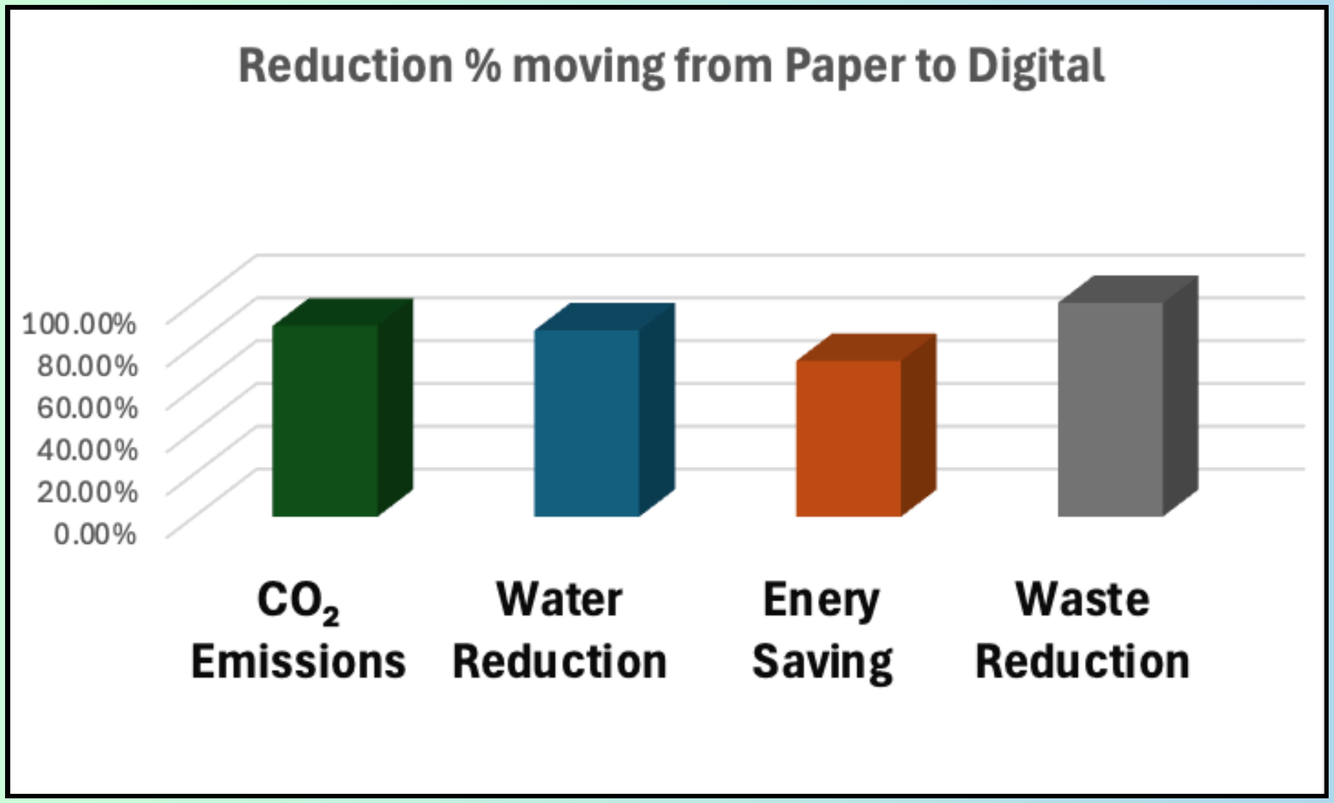
10. Data Retention and Legal Compliance

- **Compliance with Regulations:** Digital records may be subject to various laws and regulations regarding data retention, security, and accessibility. Meeting these compliance standards can require additional resources and legal oversight.
- **Risk of Data Loss:** If proper backups and data redundancy measures are not in place, there is a risk of losing important data due to technical failures, cyberattacks, or natural disasters.

"While digital logbooks offer numerous advantages, it's important to weigh these against the potential challenges to ensure a smooth transition and effective implementation."

Summary of Challenges:

- **Energy and e-waste concerns:** Digital logbooks **reduce paper** use but **shift the environmental load** to energy consumption and **e-waste**.
- **Technical risks:** System failures, cybersecurity, and internet dependence **could disrupt access** to **critical records**.
- **Cost and learning curve:** High **upfront costs** for devices, software, and training.
- **Data management:** Ongoing cloud **storage costs** and the complexity of managing **large amounts** of **digital data**.



LOGIIT

Total Environmental Impact Summary
(Per 1 Ton of Paper Replaced):

1. ***CO_2 Emissions Reduction:*** **2.5 to 2.7 tons** of CO_2 **saved**.
2. ***Water Savings:*** **8,720 to 18,720** litres **saved**.
3. ***Energy Savings:*** **3,442 kWh saved**.
4. ***Waste Reduction:*** **1 ton of waste** and **690 kg of methane emissions** prevented.

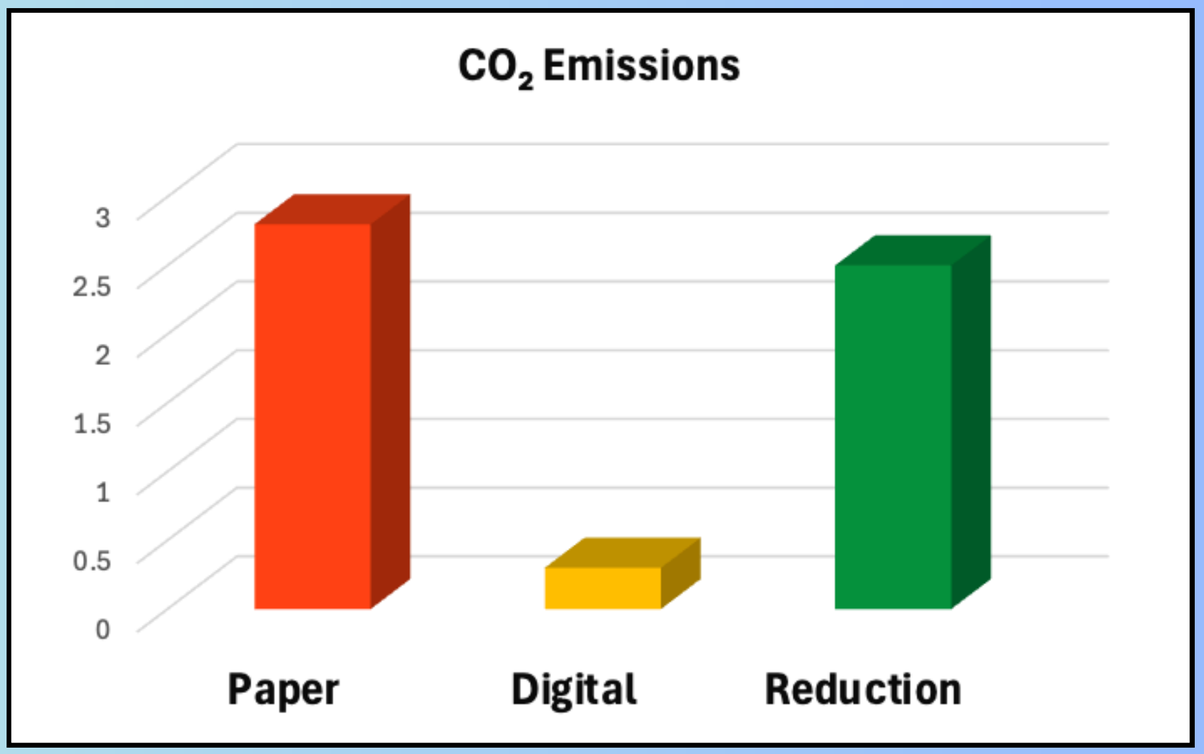
This quantification shows how transitioning to digital logbooks can lead to significant environmental benefits in terms of reduced CO_2 emissions, water usage, energy consumption, and waste.

Key Assumptions:

- **1 ton of paper** equals approximately **2,500 paper logbooks** (each weighing 400g).
- A **digital logbook** usage involves **data storage** and **device energy consumption** but avoids the environmental **impacts** of paper production, distribution, and disposal.

LOGIIT

1. CO_2 Emissions Savings



Paper Logbooks:

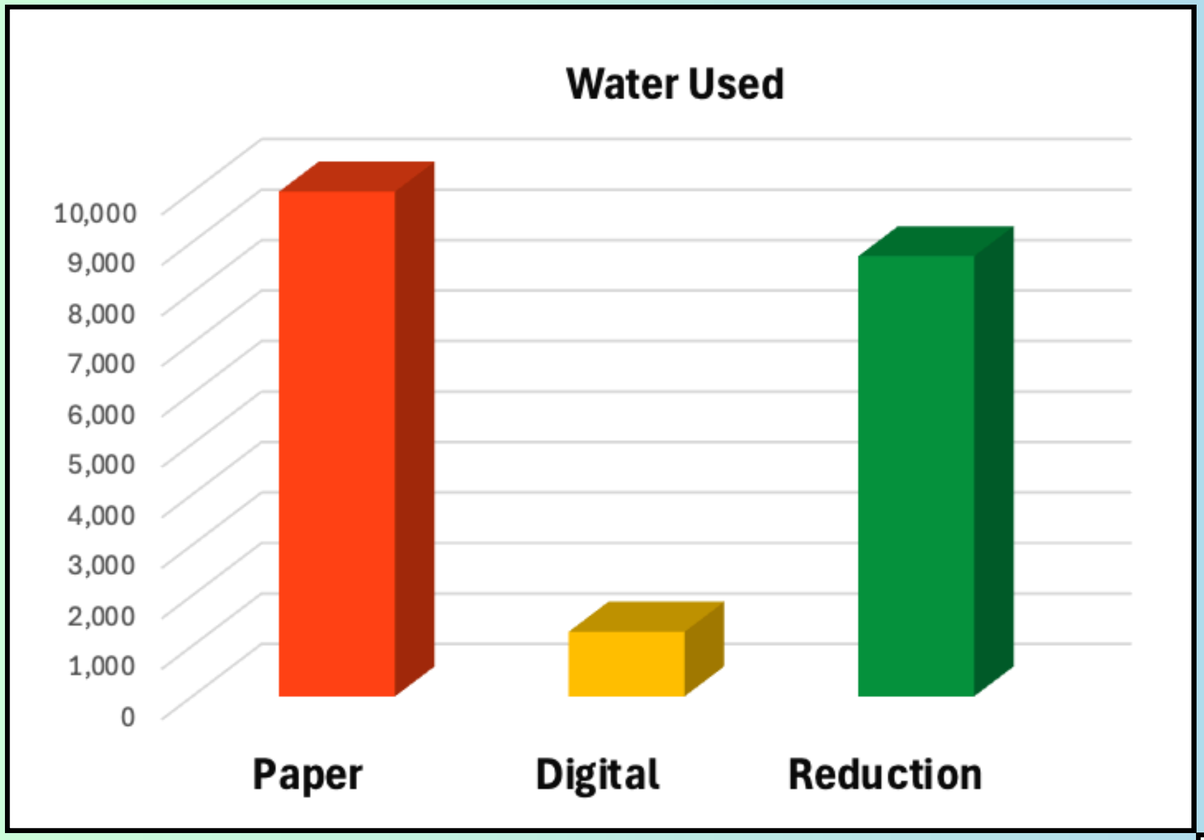
- **CO_2 from Paper Production: 1 ton** of paper produces approximately **2.7 tons of CO_2**.
- **Transportation CO_2:** Transporting **1 ton** of paper globally adds **0.1 to 0.3 tons of CO_2**.
- **Total CO_2 for Paper Logbooks:**
  - **Total CO_2 emissions** for **producing and transporting** 1 ton of paper: **2.8 to 3.0 tons of CO_2.**

Digital Logbooks:

- **Energy Use for Digital Logbooks:** Data storage and device usage **contribute to CO_2 emissions**.
  - Average **data centre** energy **consumption per GB stored**: **~5.12 kWh per year**.
  - Assume each **digital logbook** is about **0.1 GB in size** (e.g., including data, backup, etc.), **storing 2,500 logbooks** results in **250 GB**.
  - **Annual energy use** for storing 2,500 logbooks = 250 GB × 5.12 kWh = **1,280 kWh**.
  - **CO_2 emissions** from **energy use** depend on the energy mix. Assuming an average of **0.233 kg CO_2 per kWh** (global average), the **annual CO_2 emissions** for storing these logbooks would be:
    - 1,280 kWh × 0.233 kg CO_2/kWh ≈ **298 kg CO_2** (~0.3 tons of CO_2 annually).
- **Total CO_2 for Digital Logbooks:**
  - **0.3 tons of CO_2 annually** for digital logbooks, primarily from energy consumption.

CO_2 Emissions Reduction:

- By **replacing 1 ton** of paper logbooks with digital logbooks, you could **save** between **2.5 to 2.7 tons of CO_2 emissions** (with minimal CO_2 from digital storage).



2. Water Usage Savings

Paper Logbooks:

- **Water Used in Paper Production:** Producing **1 ton** of paper consumes between **10,000 to 20,000** litres of water.

Digital Logbooks:

- **Water Use for Data Centers: Data centres** use **water for cooling**, but the **water footprint** is much **lower** compared to paper **production**.
- The estimated **water usage** for data centres is approximately **1 litre** per kWh of **electricity used**.
  - For **1,280 kWh** (for storing 2,500 digital logbooks), this **equals** around **1,280** litres of water **per year**.

Water Savings:

- Replacing **1 ton** of paper logbooks with digital logbooks **saves 8,720** to **18,720** litres of water **annually**.

3. Energy Consumption Savings

Paper Logbooks:

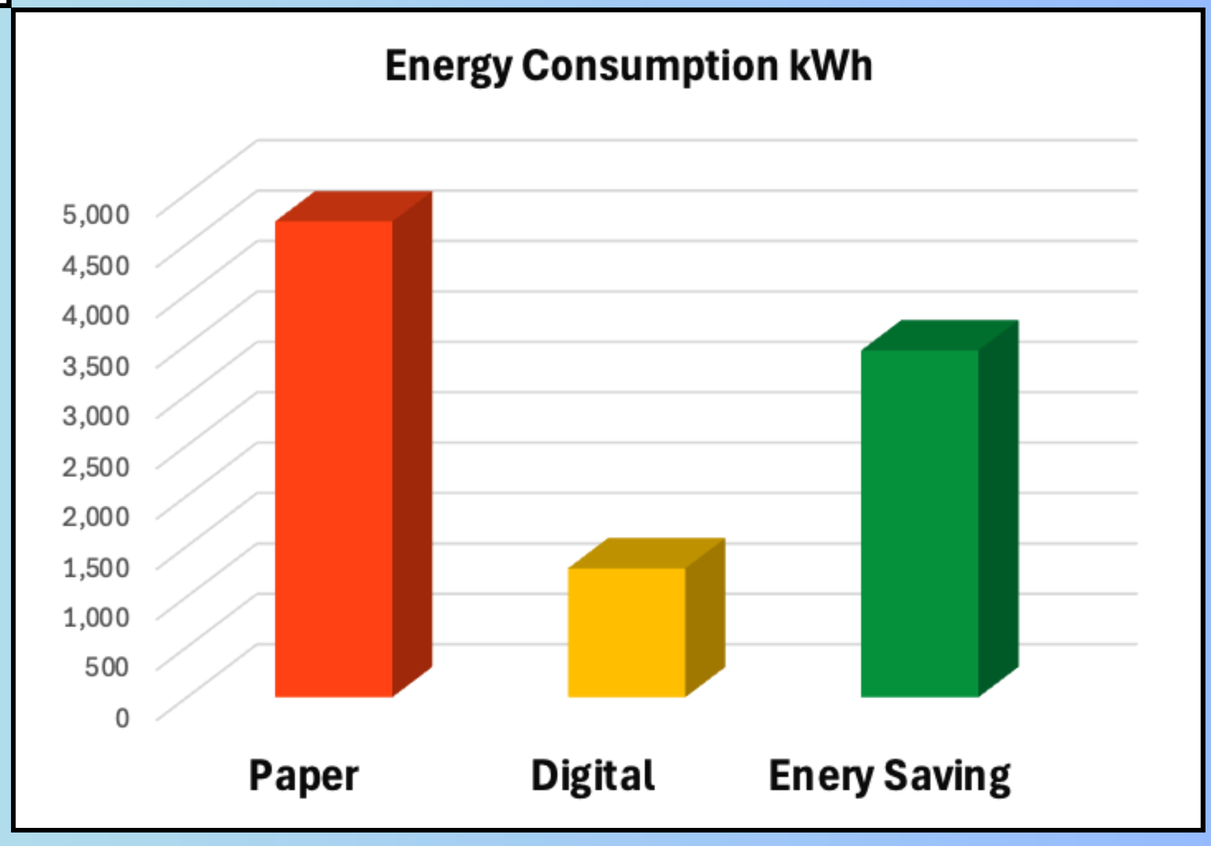
- **Energy for Paper Production:** Producing **1 ton** of paper requires about **17 gigajoules** (GJ) of energy, which is equal to **4,722 kWh**.

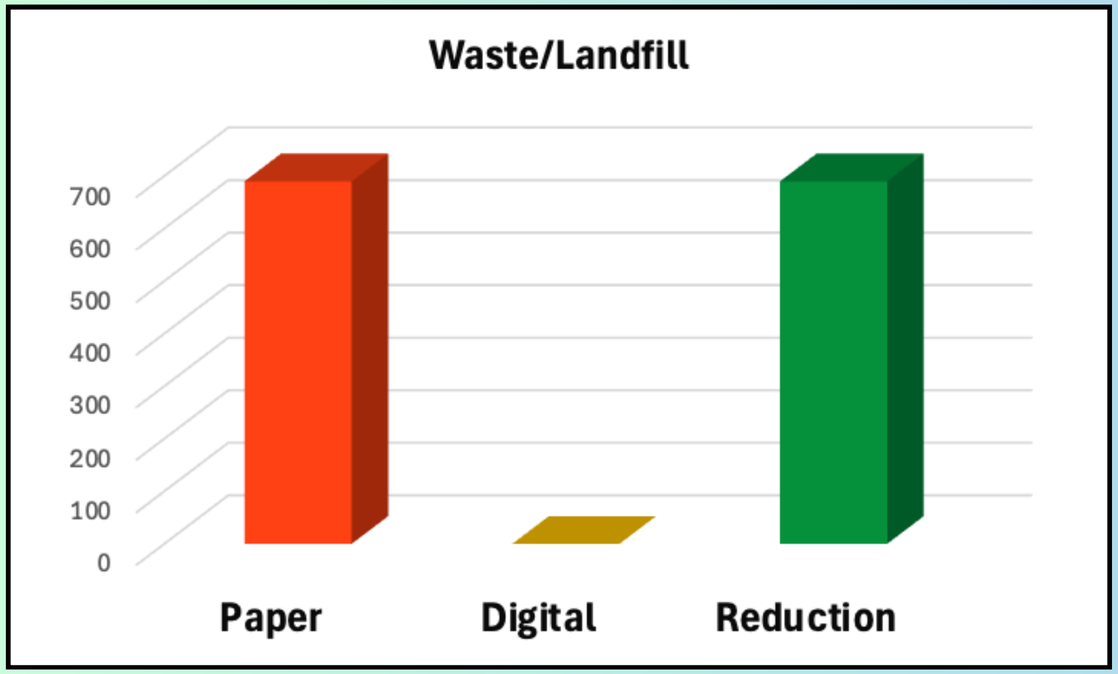
Digital Logbooks:

- **Energy for Data Storage:** The **energy** consumption for **storing 2,500** digital logbooks is about **1,280 kWh annually**, as calculated above.

Energy Savings:

- By **switching to digital** logbooks, you **save** around **3,442 kWh annually** in **energy consumption** (4,722 kWh for paper vs. 1,280 kWh for digital storage).





4. Waste Reduction (Landfill and Recycling)

Paper Logbooks:

- **Landfill Waste:** If paper logbooks are **not recycled**, 1 ton of paper **contributes** to 1 ton of **waste in landfills**.
- **Methane Emissions from Landfills:** 1 ton of paper can **produce** about **690 kg of methane** (which has 25 times the global warming potential of CO_2).

Digital Logbooks:

- **E-waste:** The **primary waste** concern for digital logbooks is **e-waste** from **electronic devices**, but the **waste generated** per digital logbook is **negligible** compared to paper waste. **E-waste becomes a concern only when devices reach end-of-life.**

Waste Reduction:

- **Replacing** 1 ton of paper logbooks **eliminates** 1 ton of **waste** and **prevents 690 kg of methane emissions**.

LOGiiT

LOG YOUR WORK AND
SAVE A TREE FROM THE AXE

M THE AXE

CONCLUSION

LOGiiT

At LOGiiT, sustainability is a core part of our mission.

We believe that by transitioning to digital solutions, we can reduce the offshore industry's environmental impact and create a more sustainable future.

We invite all stakeholders - whether industry partners, employees, or the public—to join us on this journey toward a greener, more efficient future.

We are committed to continuous improvement, and we will keep striving to be leaders in sustainability and innovation.

..."Log in with us to log off deforestation."

LOGIIT