Readly

Climate impact from reading digital magazines on Readly

- a study by Ethos International
January 2022

Introduction

Readly is a digital subscription service that lets customers have unlimited access to approximately 7,500 national and international magazines and newspapers - all in one app.

Our purpose is to bring inspiration and insight into people's daily lives and unlock meaningful moments of relaxation. Through this we aim to create value for all our stakeholders - subscribers, publishers, partners, shareholders, employees, the society and the environment.

We have taken it upon us to lead the digital transformation of the magazine industry, and we want to combine it with environmental responsibility. This study outlines the climate impact of reading digital magazines on Readly and what we as a business can do to lower the carbon footprint as digital reading on Readly increases.

Our recent user survey shows a substantial degree of climate consciousness and a high interest for the positive effect of digital reading among our subscribers. In our global survey 6 out of 10 respondents across Europe said that it is important to them that their reading habits are as climate friendly as possible. The research conducted by Ethos International on our behalf confirms that digital reading is a climate friendly alternative to the print equivalent.

Readly has partnered up with 1,200 publishers worldwide, and we collaborate with many companies in different sectors such as telcos, travel, food and finance. Many industries are trying to reshape their business models, products and services as quickly as possible in order to lower their climate impact and contribute to a sustainable future. In many cases digitalisation is part of that process. With this calculation we can provide insights about sources of carbon emissions coming from digital reading and statistics to support the argument that digital reading is a climate-friendly way of consuming magazines.

Last but not least, the study is valuable for everyone working for Readly. Many colleagues have joined us because they want to make a positive impact through their work. We now use the insights from this study for future business decisions and reporting. Managing our environmental impact and fulfilling our responsibilities to the planet is important to us.

We look forward to receiving any input from all of you who read this report and to discuss further measures to increase digital readership and thereby contribute to a more sustainable future, not only from a climate perspective, but also from a societal point of view. During 2021 about 120 million magazines were read on our platform - content that among many things enhances civil engagement, nourishes an open and critical mind, sparks creativity and is both educational and entertaining.

/ Mats Brandt, interim CEO Readly

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Foreword by Dennis Pamlin

We live in exciting times. For the first time in human history, it's possible for anyone with a smart phone or device to get an endless amount of information, art and entertainment at their fingertips. Over the last 20 years, with innovations such as the internet and search engines, online music streaming and movies, huge amounts of knowledge and cultural heritage is accessible in a way that no previous generation has seen before. Even the richest person on the planet wouldn't have access to that 100 years ago.

We tend to take our connected life for granted. Take a minute to really think about that device in your pocket. For many of us, it is a camera, a photo album, a GPS and a map. It holds our music collection and our movie library; it allows us to host virtual meetings and it facilitates our banking. If we look at these functions as the separate entities they once were just a few decades ago, rough estimations put the collective value of them at millions of dollars. Further back, it would have been called magic.

From Tesla to Spotify, Uber to Google, we have seen companies grow from humble beginnings to world leaders at a pace that would astound our ancestors. Now we watch as magazines explode onto the digital stage.

This digital transformation is necessary. It's evident that we are consuming far more than the planet can provide. And it's estimated that over the next few decades, the world population will grow by about 50%; the global middle class by 300%. With consumption at an all time high - and growing - it calls for fundamental changes to the way we are delivered what we want and need. Besides putting a halt to it altogether, one of the most environmentally-friendly changes we can make is the move from physical to digital, from bricks to bits.

But while digitalisation is fast becoming a key player in sustainability, it's important to note that it can be a catalyst in increasing overconsumption and inequality. It's our responsibility to use it as a force for good - creating solutions that allow us to live in harmony with nature and to build an equal society.

Readly is part of a new generation of companies, using digital infrastructure to provide sustainable solutions. Providing magazines in their digital form offers endless opportunities when it comes to the environment, and with rapid growth, Readly could be one of the next digital sustainability success stories.

This report shows how digital magazines contribute to a sustainable lifestyle - perhaps more so than the print product - using well-established life-cycle assessments. Interestingly, the latest research suggests that these traditional assessments actually underestimate the environmental savings of going digital, when you factor in everything from the warehouses and paper mills, to the shelves you use to store your print copies. Though not immediately apparent, these factors all add up. By going digital-first, we reduce the amount of industrial infrastructure needed when it comes to distributing physical things.

Obviously the digital landscape is not guilt-free; it too has an impact on the environment. But when it comes to providing for a population of 10 billion people in a way that is fair, low-impact and efficient - it's a digital solution we need.

However, it's not just the tangible benefits of digital magazines that are important. What makes Readly so relevant for global sustainability is the content it provides and how that content is presented.

Magazines are one of the few platforms in modern society with the ability to reach mass audiences. They're a tool for exploration, education and investing in a passion. A means of learning more about an area of interest. This is where Readly really fits in; providing quality information and inspiration for the next generation of sustainability leaders. Our focus is on delivering solutions. We celebrate companies like Tesla for providing smart solutions, rather than those looking to merely reduce negative impact - the large polluters becoming slightly less polluting.

Together with the publishers, Readly has the potential to empower readers. Unlike a lot of sustainability campaigns telling people what they shouldn't do, the publisher's content and the way they present it provides inspiring guidance for living a sustainable lifestyle - not just for the planet now, but for generations to come. Social media is another platform with a mass audience,

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but what we often get is a fragmented reality that encourages us to click and scroll without thinking. Readly on the other hand, can build bridges between groups of passionate individuals - stimulating widespread curiosity and dialogue. It provides the focal point from which meaningful meetings can stem, inviting people to learn from each other.

In a world where knowledge is power, Readly has an opportunity to help people learn more about important issues as they use the platform to explore individual passions.

With mobile devices now in almost half of the world population's hands - up from about 30% only five years ago - the role as a digital magazine platform and curator has enormous potential. Looking at the measures of climate change as an example, Readly's potential positive impact could be in the order of 100 million tonnes of greenhouse gases by 2030. This is more than twice that of Sweden's current emissions. And that's just an estimate from a modest growth scenario. A rapid growth will put Readly on the path to becoming a leading 21st century sustainability company.

Enjoy reading this report, hopefully in a digital format, and keep your eyes out for Readly - I'm sure that this report is the beginning of a very interesting journey.

About Dennis Pamlin

Entrepreneur Dennis Pamlin has worked as Global Policy Advisor for WWF and as the Director for the Low Carbon Leaders Project under the UN Global Compact. He is currently CEO at 21st Century Frontiers, a Senior Associate at Chinese Academy of Social Sciences, Senior Advisor at RISE, Accelerator Digital Sustainability at Cybercom, a visiting research fellow at the Research Center of Journalism and Social Development at Renmin university, and advisor to Centre for Sustainable Development at Confederation of Indian Industries (CII).

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About the study

Readly, together with sustainability consultant Ethos International, has explored the level of greenhouse gas emissions that are avoided by reading a digital magazine on Readly's platform - from the publishers' production of magazines, to Readly's digital distribution and subscribers' reading on their consumer devices, compared to the result of a printed equivalent.

Method

The methodology is based on the Greenhouse Gas Protocol Corporate Standard and the Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Standard.

- Environmental databases (such as DEFRA and Ecoinvent)
- Readly's internal data
- Data from suppliers
- Academic research

Ethos International has not conducted a value chain analysis of printed magazines. Instead, a previous academic study of the value chain of printed magazines has been used as a reference[1]. This study is a value chain analysis that includes all the main phases, from production to waste management.

Example of data used that is specific for Readly:

- User data (device used, info about reading session and user country)
- Energy consumption from our operations and data centers
- The number of computers used at our offices
- Business travel

The value chain analysis and the calculation of the levels of greenhouse gases emitted from reading a digital magazine was done in two steps. First, the average number of magazines that were read during a session was calculated, and then the amount of greenhouse gases emitted during one session was calculated. From the results from these two steps, it was possible to calculate the greenhouse gas emissions generated from reading a digital magazine on Readly's platform.

When the greenhouse gases emitted from one session were calculated, it had to consider that the device and internet infrastructure are also used for other activities. Therefore, the time the device and internet infrastructure was used for reading a digital magazine on Readly's platform served as a basis for calculating the share of the total climate impact that is caused by reading a digital magazine.

Furthermore, when calculating the emissions per session, it had to be considered that customers are using their devices, and hence electricity, in markets with an electricity mix that emits different levels of greenhouse gas emissions. This was done by calculating the amount of energy used on each market and using emission data for the market-specific electricity mixes to derive the greenhouse gases emitted from each market.

Apart from the different electricity mixes, we've also accounted for the difference in carbon footprints between smartphones and tablets by breaking down the number of sessions between the two formats.

These differences in electricity mixes and reading behaviours might lead to minor yearly differences in emissions avoided per read magazine. However, avoided emissions in total will continue to increase as we expand.

[1]Reference: Achachlooei, M A. & Moberg, Å. 2015. Life Cycle Assessment of a Magazine Part II: A Comparison of Print and Tablet Editions. Journal of Industrial Ecology. Vol.19. No.5. pp 590-606.

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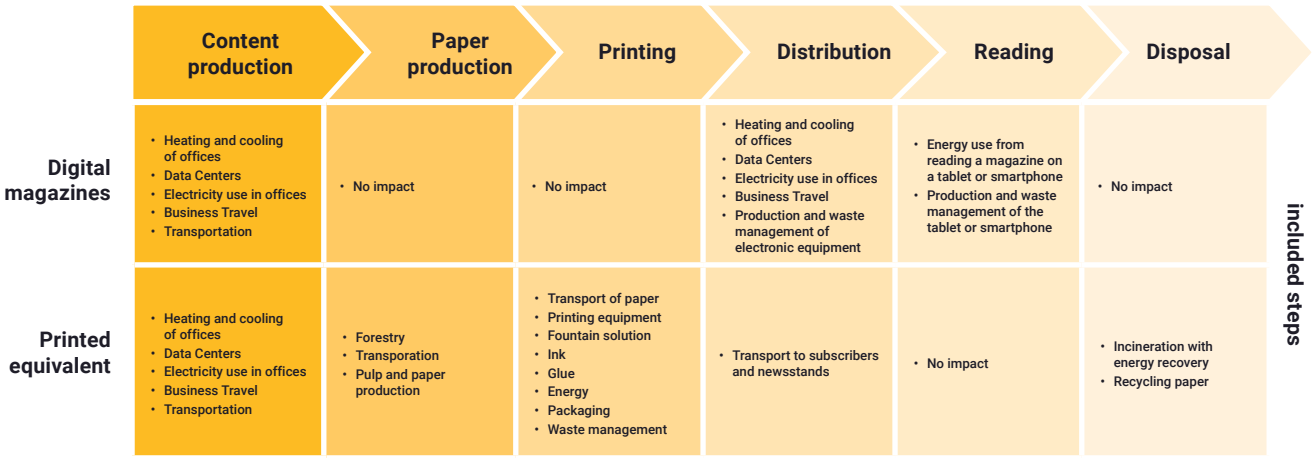
Climate impact from magazines | Method



Picture 1: Phases included in the calculation of carbon emission from reading digital and printed magazines.

The greenhouse gas emissions from the content production phase, before being printed or digitally available, are based on the same study for the printed and digital magazine. All other phases in the digital magazine's value chain are based on Readly's business and user activities.

Data showing yearly emissions that is emitted from Readly's use of AWS is unavailable, so Ethos International has made an estimation of 14 tonnes of greenhouse gas emissions based on the amount of data Readly stores.

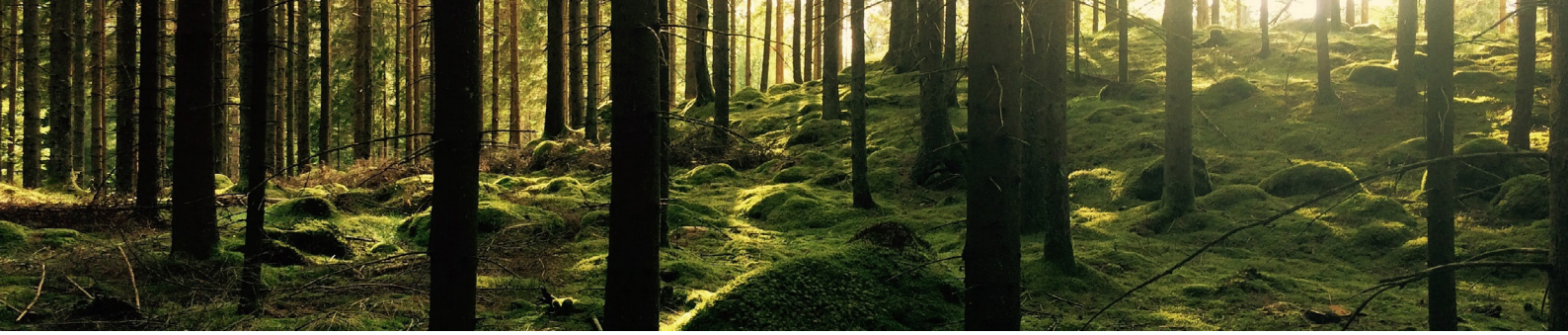
Some parts of the above described phases are not included due to data unavailability. This estimate includes both energy consumption but also production and disposal of ICT-equipment needed.
The following have been excluded:

- Electronic waste generated from Amazon web services, such as obsolete data servers
- Waste generated at Readly's offices, such as food waste
- Paper used at Readly's offices
- Other kinds of office supplies and furniture used at Readly's offices
- Delivery, commuting and other kinds of travel association with Readly's operations other than business travel.

Assumptions

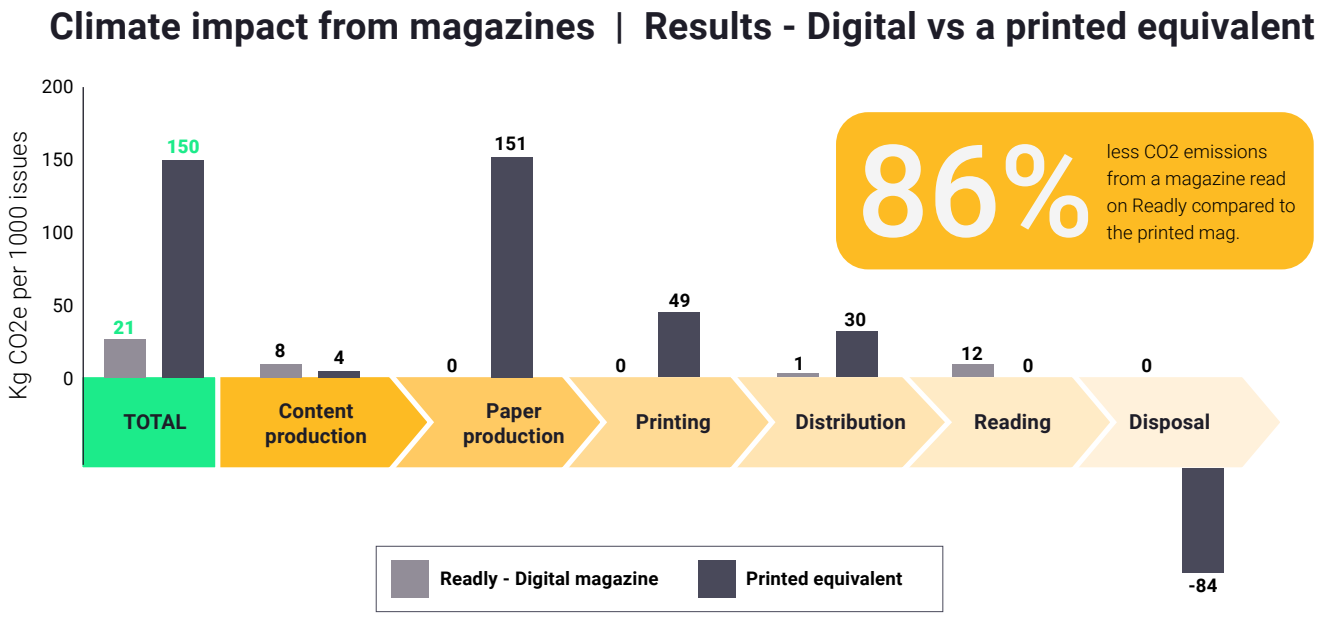
Ethos International made these main assumptions due to the unavailability of data. All the assumptions are made based on current knowledge and best practices.

- The amount of time an electronic device is used for reading a digital magazine compared to other activities conducted on that device: the average reading time per session on Readly is 20 minutes, but we had to use external research to calculate the relation to other activities that the device is used for.
- The type of electronic devices that are used by the reader: Readly data shows that approximately 70% use a tablet vs 30% that use a smartphone. However, Ethos International had to make an assumption around the type of models and brands.
- A digital magazine is read once by a unique user, whilst one copy of a printed edition is read several times by different readers - aligned with previous studies: we have been conservative in this assumption in order to not risk overestimating the climate benefits of digital reading.
- A specific Swedish case, based on previous academic research, is used for the content production phase for all markets.



Results & Conclusions

One should always be careful when comparing the results from studies that have used different methods. The studies of printed magazines are life cycle assessments while the analysis of the digital magazine is a value chain analysis. The studies can be compared, according to Ethos International, since the same phases are included.



Picture 2: amount of emissions from each stage of the value chain

The comparison indicates that reading a digital magazine on the Readly platform has 86% less climate impact than reading a printed equivalent.

The use of digital technology is what many predict could cut emissions significantly in many industries and the result from this study confirms what other companies also see as they replace a physical product or service with a digital solution. Video conferencing and virtual concerts are two recent areas, which have boomed as a result of the corona pandemic, cutting large amounts of both emissions and waste.

Avoided paper production and printing are the main reasons why reading digitally is better for the climate.

There are several energy consuming processes behind printing which can be avoided by digitalising magazines. Paper production is one of these processes, including forestry, pulp- and paper production and transportation of wood and paper. Other processes are printing and distribution of the final product to subscribers and newsstands.

Paper from raw material is a renewable resource but it takes time to grow trees and the need for wood for other industries will most probably increase, hence why decreasing unnecessary use of wood is good. Many publishers in the magazine sector have already committed to increasing the share of recycled and certified paper.

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Disposal of print cuts emissions.
The waste management of printed magazines is shown as a negative value of emissions since this phase has a positive environmental impact. This is because the paper is recycled, which avoids the extraction of virgin resources to produce paper, and therefore avoids some additional greenhouse gas emissions.

The production and waste management of the subscriber's device accounts for the most emissions from reading a digital magazine, followed by the subscriber's access to and use of the internet's infrastructure.
Ethos International have not included the whole climate impact form producing and disposal of a customer's devices since the proportion of time used for digital reading is low compared to other activities. 19 minutes is the average reading time per session on Readly, but external research had to be used to calculate the relation to other activities that the device is used for.

The percentage of climate savings per read digital magazine is affected by whether the reader has used a tablet or mobile where the latter has a higher climate impact than the former.

It is relevant to also highlight that producing electronics does not only cause carbon dioxide emissions but also has a large social and environmental impact. The latter is primarily from the mining and processing of virgin materials and from the assembling of the products. The process of extracting metals is polluting the local environment and some of the minerals needed are sourced in mines controlled by armed groups, financing conflict in several parts of the world (called conflict minerals). The production has also other challenges such as the use of hazardous substances such as flame retardants and softeners.

Business travel and selection of data centers is under Readly's own influence and material areas.
Readly encourages video conference calls instead of travel, and any travel and transport should be as far as possible by environmentally friendly alternatives to minimize environmental impact.

Amazon Web Services (AWS) is used by Readly for storing data and has servers in Ireland. Readly's operations are fully powered by renewable power from AWS's wind power farms located in Donegal and Cork. There is also an ongoing discussion between Readly and Amazon about what measures can be done to further optimize energy efficiency related to data storage and distribution.

130 kg emissions is avoided per every 1000 digital issues read.

120 million magazine issues were read digitally on Readly's platform during 2021. As digital reading has lower climate impact than printed equivalents a total of nearly 15,400 tonnes of greenhouse gas emissions have therefore potentially been avoided.
This is equivalent to the emissions of producing and recycling over 240,000 iPhones.

Please visit **https://corporate.readly.com/about-us/sustainability/**
to find out more about sustainability at Readly.

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About Readly

Readly is a digital subscription service that lets customers have unlimited access to more than 7,500 national and international magazines and newspapers - all in one app. Founded by Joel Wikell in Sweden in 2012, Readly is today one of the leading companies in digital magazine subscriptions in Europe with users in 50 markets. In collaboration with around 900 publishers worldwide, Readly is digitizing the magazine industry. Our purpose is to bring the magic of magazines into the future, enabling the discovery and survival of quality content. During 2021 Readly distributed more than 210,000 issues of magazines that have been read 120 million times.
www.readly.com

About Ethos International

Ethos International is a consultancy bureau founded in 2007 that specialises in sustainable business development. We offer expertise in the sustainability areas of human rights, labour rights, environmental impact and anti-corruption. We offer a wide range of services such as strategic advisory, sustainability reporting and data analysis, ESG due diligence, as well as supplier audits and training.