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What is print's place in a digital world?

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Introduction and problematic

Firstly, I would like to express my sincerest gratitude for providing me with the opportunity to express my ideas on the relevance of print media in a digital world. Intergraf organization's commitment to fostering an environment of open discourse and exploration is truly commendable. I am grateful for their continued support in empowering the youth and fostering meaningful discussions that contribute to the advancement of our society.

Without a doubt, landscape of communication and media in the 21st century are changing. With the increasing use of digital media, print media has faced significant challenges in maintaining its relevance and influence. "What's print place in a digital world" raises several issues that are important to consider. First, it raises the issue of the value of print media in a digital age. Print media has traditionally been a primary means of communication, but with the rise of digital media, the role of print media has been challenged. Second, the question highlights the changing habits of media consumption among the public. As more people shift to digital media, it is crucial to understand how print media can continue to play a role in this changing landscape. Third, the question raises the issue of the environmental impact of the print industry. In today's digital age, the role of print is a multifaceted and intricate matter that has significant implications for businesses and the environment. As the world increasingly embraces digital technologies, printing companies need to contemplate the environmental consequences of their activities. Print may be traditional, but its place in our digital world is anything but obsolete!

Print still has a valuable place

Print still has a significant place in the digital world. While many forms of communication and information sharing have moved online, print materials such as books, newspapers, and magazines continue to be widely used and consumed. Additionally, print advertising and marketing materials, such as brochures and flyers, are still commonly used by businesses. In fact, "The Value of Paper and Print" study surveyed over 10,700 consumers and found that a majority of respondents preferred printed materials for certain types of information [1]. Specifically, 72% of respondents said they preferred to read books in print, 69% preferred to read newspapers in print, and 67% preferred to read magazines in print. The study also found that 63% of respondents believed that paper-based communications were more trustworthy than digital communications (more data on page 5).

Another important aspect of print in the digital world is its ability to reach audiences that may not have access to or be comfortable with digital technologies. For example, older adults or individuals living in rural areas may not have access to high-speed internet or may not be as comfortable using digital devices. Print materials can be a more accessible option for these groups, allowing them to access information and resources that they may not have been able to access otherwise. A study by Pew Research Center, titled "Digital Readiness Gaps" [2] found that while the majority of Americans now have access to the internet and own digital devices, there are still significant digital divides among certain groups, such as older adults and those living in rural areas. According to the study, "Older

adults, those with less education, and those with lower incomes are less likely to have broadband service at home" and "Rural residents are less likely than suburban or urban residents to have home broadband or a smartphone."

Additionally, print materials can also be used in combination with digital technologies in ways that enhance their value. For example, QR codes can be used to link print materials to digital content such as videos or websites. Many books and magazines also have companion apps that provide additional interactive features.

Finally, it is worth mentioning that print materials can be more sustainable than digital materials. While digital materials can be easily stored and shared electronically, they have a short lifespan. In contrast, print materials can be more durable and have a longer lifespan. Additionally, paper and other print materials can be recycled, which is not possible for most digital materials.

Overall, print still has a valuable place in the digital world, both as an alternative to digital technologies and as a complement to them. Print materials can be used to create unique and beautiful artwork, to create personalized gifts, to learn and teach new information, and to provide an escape from digital distractions. Additionally, print materials can be more accessible and sustainable than digital materials. As technology continues to evolve, it is likely that print materials will continue to play a key role in our lives.

Environmental aspect

The role of print in a digital world is a complex and multifaceted issue that has implications for both businesses and the environment. As the world continues to shift towards digital technologies, traditional printing companies must consider the environmental impact of their operations.

The myth that paper is damaging the environment has persisted for many years, despite evidence to the contrary. The truth is that paper is a sustainable product that can be produced in a way that is environmentally responsible. One common misconception is that paper production leads to deforestation. However, the vast majority of paper products are made from trees that are grown specifically for this purpose in managed forests. These forests are carefully monitored to ensure that they are being sustainably managed, and that biodiversity is being protected. Furthermore, paper is a recyclable material, meaning that it can be used repeatedly. In fact, recycled paper accounts for a significant portion of the paper used globally, and helps to reduce the demand for virgin wood pulp.

In Europe, for example, forests have grown significantly over the last 15 years, expanding by an area larger than Switzerland. This equates to a growth of 1,500 football pitches every day [3]. Furthermore, the paper industry has implemented certification programs to ensure that most paper products are sourced from sustainably managed forests. The Forest Stewardship Council (FSC) is the most well-known of these programs, recognized globally.

To have traditional printing with an even lower environmental impact than digital media and appeal to environmentally conscious consumers, several points could be addressed. Firstly, the use of environmentally friendly materials such as recycled paper, vegetable-based inks, and biodegradable coatings could be prioritized to reduce the environmental impact of the printing process. Secondly, traditional printing techniques could be optimized to minimize waste and reduce energy consumption. For instance, the use of computer-aided design software and printing on demand can help reduce paper waste and minimize the need for energy-intensive printing processes. Thirdly, promoting responsible forestry practices and the use of sustainable paper sources could significantly reduce the

environmental impact of traditional printing. This could include using paper from certified sustainable sources such as the Forest Stewardship Council (FSC).

The importance of environmental considerations cannot be overstated in today's world, where sustainability awareness is continually growing. Traditional printing companies have a particular responsibility to the environment, as their activities often involve handling potentially hazardous chemicals that can have negative impacts on human health and the environment.

In a world that is increasingly digital, it is crucial that traditional printing companies take into account their environmental impact and seek sustainable solutions. For example, in France the future ban on the use of mineral oils in certain inks, as stipulated in Article D543-213[4], is an important step in reducing the environmental risks associated with printing. There are equivalent regulations in other countries, although they may vary in terms of scope and specificity. For example, in the European Union, the REACH [5] (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulation has established requirements for the use of certain substances in printing inks, including mineral oils, in order to protect human health and the environment. In the United States, the Toxic Substances Control Act (TSCA) [6] of 1976 allows the Environmental Protection Agency (EPA) to regulate the use of potentially hazardous chemicals, including in printing inks. Similarly, in Canada, the Chemicals Management Plan (CMP) [7] regulates the use of substances, including mineral oils, to minimize risks to human health and the environment. Some regulations may be more stringent or less restrictive than others, but the common goal is to protect the environment by limiting the use of these harmful substances in printing inks.

By adopting alternative inks, such as vegetable-based or water-based inks, printers can significantly reduce their environmental impact. While print continues to play an important role in marketing and communication, it is imperative that the industry adapts to changing technologies and customer demands in a way that is sustainable and environmentally responsible in order to remain a viable solution.

Unusual use of printing processes

In today's digital age, it is undeniable that the use of digital devices has become ubiquitous. From smartphones to laptops, digital devices have become an integral part of our daily lives. With the rise of digital media, there is a growing concern that traditional printing processes are becoming outdated and less relevant. However, there are still many unconventional and creative ways to use printing processes that can compete with the digital world.

One unconventional use of printing processes is in the realm of 3D printing. 3D printing has been around for a while, but it is still a relatively new technology that is continually evolving. This technology allows for the creation of physical objects from digital designs. While 3D printing is often associated with industrial manufacturing, it can also be used for artistic and creative purposes. Many artists are using 3D printing to create intricate and detailed sculptures and installations that push the boundaries of what is possible with traditional printing processes.

Another process that is not well known is screen printing, it is a versatile printing technique that can be used to produce a wide range of objects with high-quality and long-lasting prints. Such as clothing by printing designs onto t-shirts, sweatshirts, hoodies, etc. Screen printing can be also used to create custom designs on glassware and ceramics. It can be used to produce electronic displays, such as touchscreens, OLEDs, and photovoltaic cells. It's a precise and cost-effective method for printing conductive inks onto a variety of substrates.

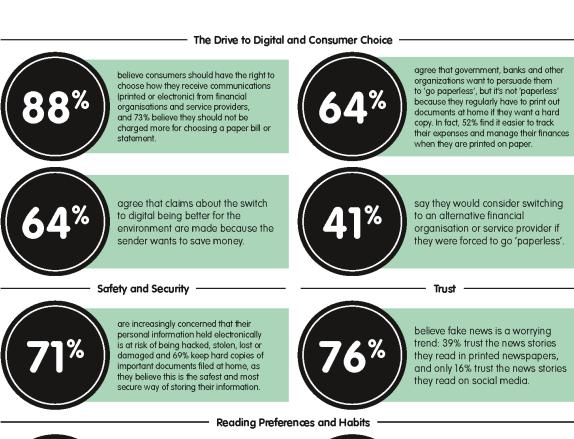
The field of printed electronics holds great potential for innovation, particularly in the production of transparent conductive inks using screen printing. Among the many applications of printed electronics are radio frequency devices, including RFID tags and antennas, which enable wireless communication and tracking. These devices have a wide range of uses, including inventory management, supply chain tracking, and asset tracking. Radiofrequency applications have become ubiquitous in both the consumer and industrial sectors, with major applications in defence and security, the Internet of Things, smart buildings, health, telecommunications, packaging, and sensors. However, functionalizing transparent surfaces, whether flexible or rigid, remains a challenge. While products currently on the market offer some degree of transparency and conductivity, there is a need for further innovation to ensure a perfect fit for the RF needs of these surfaces. [8]

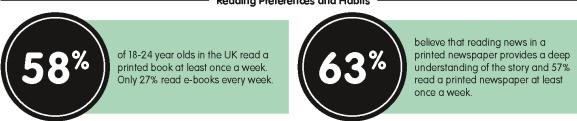
In conclusion, while it may seem that traditional printing processes are becoming less relevant in today's digital world, there are still many unconventional and creative ways to use these techniques. 3D printing allows for the creation of physical objects from digital designs, and many artists are using it to push the boundaries of what is possible with traditional printing processes. Screen printing is also a versatile printing technique that can be used for a wide range of applications. The field of printed electronics holds great potential for innovation and has already found widespread applications in various sectors. Therefore, while digital media has become ubiquitous, traditional printing processes still offer unique and valuable opportunities for creativity, innovation, and practical applications.

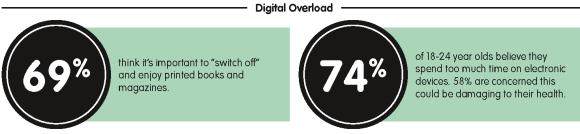
Conclusion

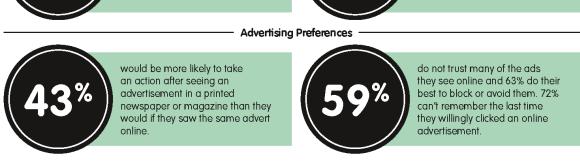
Amidst the proliferation of digital media, it's easy to question the relevance of print. However, print remains a powerful and timeless medium that continues to hold its place in our increasingly digital world. Books, newspapers, and magazines are still widely consumed and valued for their reliability, accessibility, and ease of use. Similarly, printed advertising and marketing materials, including brochures and flyers, remain an important tool for businesses to reach and engage with their target audience, and they can be used in combination with digital technologies to enhance their value. Furthermore, traditional printing companies have a responsibility to consider their environmental impact and seek sustainable solutions to minimize their footprint. As technology continues to evolve, it is likely that print materials will continue to play a key role in our lives, and it is important that we prioritize sustainability and responsible practices in the printing industry.

In light of these considerations, it is evident that print still holds a significant place in the digital age. As such, it is essential for individuals and organizations to recognize the continued value and relevance of print materials in our rapidly evolving technological landscape. So while the world may be going digital, let's not forget the value and importance of print.









Two Sides Print and Paper In A Digital World: Key findings [9]

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