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Following the launch of the Amazon Kindle in 2007, the popularity of e-ink displays has exploded with much of the projected growth due to come from outside of e-reader products.

Given the huge benefits of delivering content digitally, digital signage requirements have grown considerably in recent years, and with an increased focus on sustainability businesses are looking for ways to deliver their vital content efficiently.

In this article we explain the technology behind [e-ink displays](#), why they are so versatile and some typical use case examples as we continue to see impressive growth in the popularity of these displays.

What is e-ink and how does it work?

E-ink, also known as “electronic ink”, is a type of display technology known for its visual similarities to ink on paper and low power consumption.

Whereas traditional digital displays comprise individual pixels that each display a colour, e-ink displays are made of a thin film on top of millions of small capsules filled with particles floating in a clear fluid. This means that e-ink

displays only consume power when the arrangement of particles on the display needs to change, in contrast to LED displays which require powered coloured light at all times. As a result, e-ink displays are highly efficient – taking virtually no power and boasting a great battery life.

E-ink technology has further evolved recently to deliver high-quality colour imagery as well as the traditional monochrome the technology is already known for.

Who is using this technology?

Increasingly, we are seeing e-ink displays being deployed in environments where signage in public areas has traditionally been paper-based and has required manual updates. E-ink solutions on the other hand allow for immediate updates – saving time and resources.



Available as fixed or portable units, e-ink displays can be positioned wherever and whenever they are needed most. We’ve seen increasing traction in the transportation market where being able to communicate important public information in real-time and keeping passengers informed is key.

E-ink displays are replacing notification boards in railway stations and transport hubs to impart information regarding delays, changes to routes and security risks and in airports where fixed and portable displays help to improve passenger flow and the departure and arrival experience.



Another popular use for e-ink is at bus stops to display real-time bus arrival and journey times. Providing up-to-date, accurate information helps passengers plan their trips and minimises waiting times, improving the overall customer experience significantly.

Road traffic signs are increasingly becoming a popular use case for e-ink displays, as they can be used to show up to date information to drivers during special events or to warn them of upcoming hazards.

Why do you think e-ink is becoming increasingly popular?

There are many benefits of e-ink technology, but to summarise some key strengths:

- **Display quality** – e-ink displays are completely visible in direct sunlight, with no glare. Their paper-like quality appears as clear as if you were looking at a printed page when you read them outside.
- **Power consumption** – e-ink screens are 36 times more efficient than LCD screens. They draw much less power and can last for weeks on a single charge, making them an attractive option from a cost and environmental perspective.

- **Cost-effective** – given their low power requirements and highly efficient design, e-ink displays can save you money in the long-term, especially when replacing paper signage that needs to be regularly updated.
- **Customer Experience** – e-ink fixed and portable displays are extremely effective at displaying real-time content to keep people updated and improve their customer experience.
- **Easy on the eye** – unlike other digital displays, e-ink reduces eye strain with anti-glare technology. In sunny conditions content on e-ink displays is easier to see, so your eyes don't have to strain to keep it in focus.

E-ink displays have very much established themselves as an effective digital signage solution, outperforming traditional digital displays in many areas. Their low power consumption, easy readability and minimal glare makes them a practical and sustainable solution for a wide range of indoor and outdoor applications.

Melford provides a complete range of eco-friendly e-ink display solutions. If you would like to discuss how e-ink technology could increase your efficiency and improve your customer experience, [contact us today for a chat.](#)



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Click below to find out more about Melford's range of outdoor eco-friendly and highly efficient e-ink displays.

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