

Railway-News

M A G A Z I N E

Inside:

How Satellite Enables Nextgen Freight Rail

&

Green Loans in the Rail Sector

**When Will Rail Authorities Start Addressing
Active Fire Suppression for Rolling Stock?**

ISSUE ONE 2023

Netskrt Systems

Meeting Passenger Wi-Fi Expectations as Sustainability Drives Rail Travel

And Going Beyond, Giving Passengers the Video Streaming Services They Want



Demand for rail travel is growing, driven in part because rail is the sustainable choice.

As rail travellers return after Covid, they come with new expectations – developed as they filled time at home watching video streaming services. Rail operators can take this opportunity to re-invent the onboard experience, offering passengers the option of watching their favourite streaming services while they travel.

The global passenger rail transportation market is expected to reach **\$307 billion** in 2025, despite a recent **70%** average drop in ridership due to the pandemic. One of the drivers is the focus on choosing sustainable

modes of travel. A **recent report by the European Environmental Agency (EEA)** concluded that rail travel is the best and most sensible mode of travel, apart from walking or cycling. The report says that a shift from air to rail travel can play a key role in meeting the goals of the European Green Deal, which aims to reduce greenhouse gas emissions from transport by 90% by 2050 compared with 1990 levels. To support this shift, some European countries are banning domestic short-haul air travel when rail is an available alternative.

This presents a challenge and an opportunity for rail operators. If passengers are forced to choose rail, it will be all the more important to give them a satisfying travel experience. Two technology-driven trends combine to present a great opportunity for

rail operators: the consumer switch from TV to video streaming services, and new edge caching technology that can bring video streaming to consumers on trains and, at the same time, improve Wi-Fi performance.

Returning travellers are coming back with new entertainment desires. As far back as May 2021, Nielsen reported that streaming platforms pulled in a bigger share of viewers' time than broadcast networks. This switch was further fuelled while consumers stayed at home during Covid, and streaming providers pushed to deliver more and more new and exclusive content. In their [Media Nations: UK 2022](#), Ofcom found that "Subscription video-on-demand (SVoD) services like Netflix and Disney+ were used by 67% of UK households by Q2 2022." And while this was a slight decline from the height of the pandemic, "Collectively, these services have broadly retained their share of viewing after achieving a surge in take-up in 2020, accounting for 18% of total TV viewing in 2021 (19% in 2020), or an average of 58 minutes viewing per person per day." As consumers increasingly turn to their streaming subscriptions for entertainment – from Netflix to Disney+ to Amazon Prime, they are also expecting to be able to watch these subscriptions wherever they go. According to [Conviva State of Streaming report](#), video streaming time on mobile phones jumped 22% in 2022 over 2021.

Before this shift to streaming video, rail operators were already struggling to meet Wi-Fi expectations. According to the [2020 UK National Rail Passenger Survey](#) fewer than 40% of passengers were satisfied with the railway's internet connectivity on board. Onboard internet connectivity ranked dead last in terms of passenger satisfaction. Limited internet bandwidth means passengers accessing email share bandwidth with those browsing, and those watching their favourite streaming services. While emails may come in quickly, web pages are slow to load, and video watchers suffer from endless buffering and pixelated images. The walled-garden video-on-demand (VOD) services offered by some rail operators don't offer enough choices to satisfy customers, not to mention the substantial video content licensing fees. And blocking video streaming to protect email is a recipe for customer dissatisfaction. Rail operators need a new solution to improve internet connectivity and the onboard customer experience.

Intelligent edge caching presents a new, affordable,

and easy-to-deploy and manage solution. Content delivery networks already help video streaming service providers deliver quality viewing experiences to subscribers' homes, by caching content close to users. Netskrt's edge Content Delivery Network (eCDN) solution brings that same improved viewing experience to rail cars. With Netskrt on their trains, operators can encourage passengers to use their own devices and subscriptions to stream video content as well as select live broadcasts, such as sporting events.

Combining cloud-based machine learning with network-aware edge caching, Netskrt's eCDN delivers a high-quality video streaming experience – just like at home. Once in place, Netskrt's eCDN will also enhance onboard internet access for other services and improve passenger satisfaction, by minimising the use of precious train-to-internet cellular bandwidth.

Rail networks have seen substantial growth over the past ten years and technology will drive new innovation in the market in the years to come. With the climate crisis increasing customer demand and as the industry works to overcome new challenges brought on by the pandemic, operators cannot only restore passenger numbers to pre-pandemic levels but also offer an overall enhanced end-to-end rail travel experience. Internet connectivity is necessary for passengers and now is the time for rail operators to bring internet video streaming to the absolute edge with Netskrt's eCDN solution.

