Contents

Synopsys

Rail-Onboard retail – Leveraging technology to improve profitability and customer experience

- Preparing for the next 5 years of rapid changes in passenger buying behaviour, banking and payment tech, at seat / pre ordering and, of course, the impact of AI

- Changes in mobile communications infrastructure mean that we have to be more defensive if we are to ensure we can offer a reliable timely digital payments without a an internet connection..

Slide 1 – Introduction

Good afternoon, I am Jon Hall CEO at Novo Onboard Retail Limited, Novo provides a software suite to Rail companies and their concessionaires, for managing their onboard retail, from products, price lists, stock plans, journeys, the onboard sales and analytics to monitor and manage the operation.

Today I just wanted to look at how we have used our technical skills and knowledge of onboard retail to radically improve sales throughput and the payment success rate.

First of all, we need to look at the consumer trends driving onboard retail innovations.

Slide 2 – Retail Buyer Behaviour

First of all, we need to look at the consumer trends driving onboard retail innovations.

Over the last few years consumer buying behaviours have changed are now able to Purchase goods online at any time of the day, from wherever we are in the world and by any means be that from our mobile, tablet or laptop or In-Store and have them delivered to anywhere we specify, it has become engrained in our daily lives.

Payment technology is well embedded in our general day to day purchasing, we expect to tap to pay with our cards and electronic wallets, without the need to insert our cards and indeed it is predicted that physical cards will start to be phased out as consumers are asked if they want to go plastic-less.

Slide 3 – e-Commerce Growth
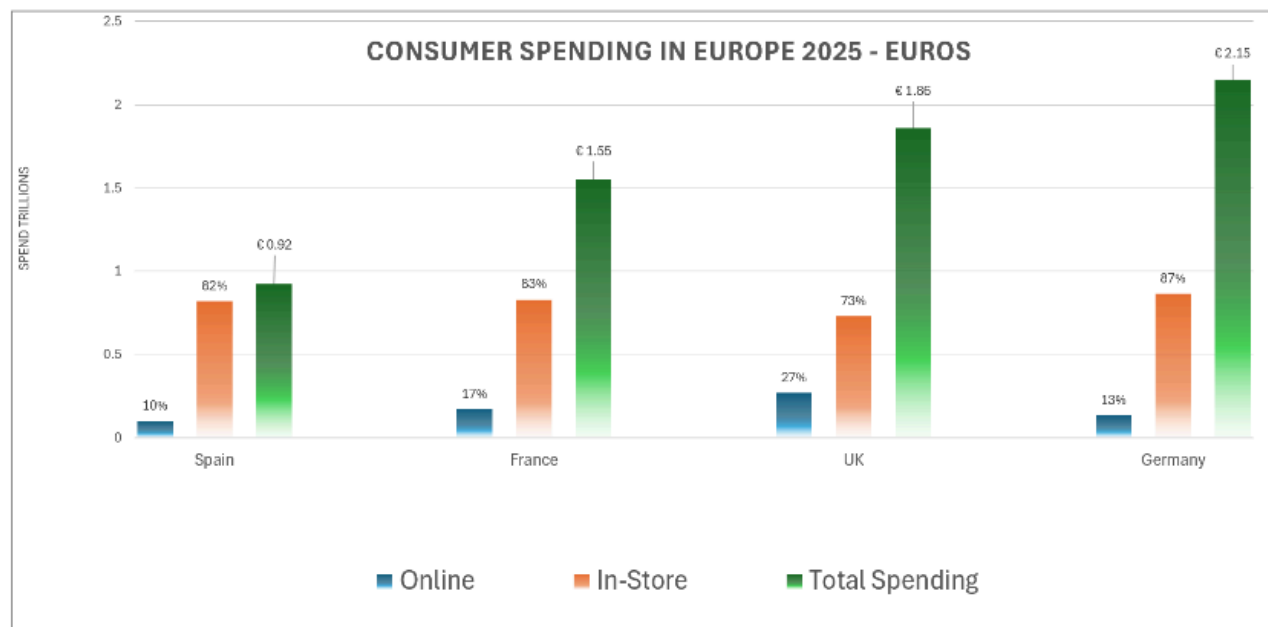
As a technology company in the retail sector, understanding the universal e-Commerce trends in all retail sectors is critical in helping us to predict the impact on passenger buying behaviours in the rail market. We can then adapt our onboard retail services provide the features as demanded by the passengers and the rail companies.

I was surprised when researching for this presentation that the move away from in-store shopping, to online, was slower than predicted in 2023, although the linear advance is as predicted...... albeit less steep. The **Green columns** are the total consumer expenditure per country, The **Orange**, In-Store and **Blue** online.

You can see from the graph that there is a disproportionate uptake of online versus in-store shopping in each country which we need to be aware of when implementing our onboard retail strategies in each country.
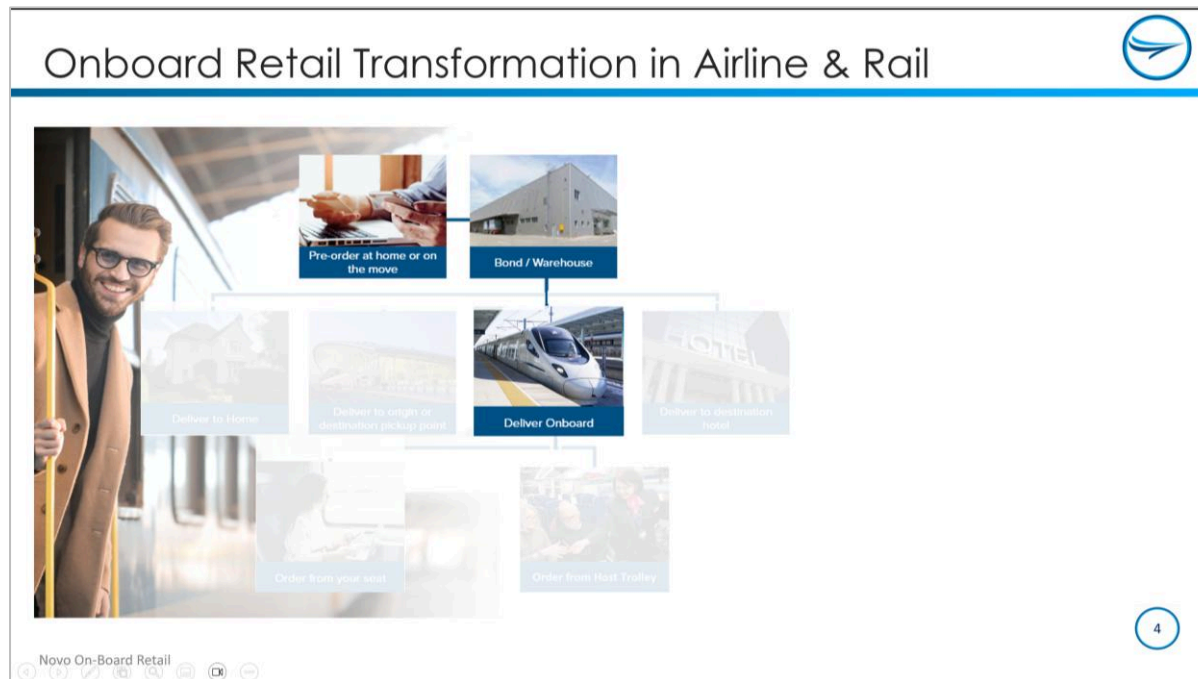
I think we underestimated human nature, we are social beings that love to congregate ……. Looking at the level of UK online sales @27% ….. Not quite sure what that says about the Brits!!

Bricks and mortar stores are fighting back in every way they can focussing on becoming more experiential.

Onboard trains we need to take the lead and focus on our passenger experience making their journey positive experience and meet their expectations so that we can compete with planes and automobiles who are competing to erode our markets.

Slide 4 – Onboard Retail Transformation in Rail

Pre-Order

As a software provider we are working with rail companies to improve the range of shopping experiences for their passengers.

The continual growth Online shopping underpinned our decision to heavily invest in development of the NovoConnect omnichannel system. So, what does this mean for the Onboard Retail?

Engaging with the passenger at the point of booking their ticket is an excellent way of increasing onboard sales.

Passenger could enter their journey and then select the goods and pay in advance,

Pre-packaged in the warehouse

And delivered to seat either at discretion of the host or during the trolley service.

This can help waste reduced wastage with respect to perishable goods.

Because the pre-order website is integrated directly with the onboard retail system products pricelists journeys are all maintained in one system. Cut off times for orders prior to the journey departure time can be set in the system and orders delivered as prepacked Top Offs from the Service Centres along the route in real time.

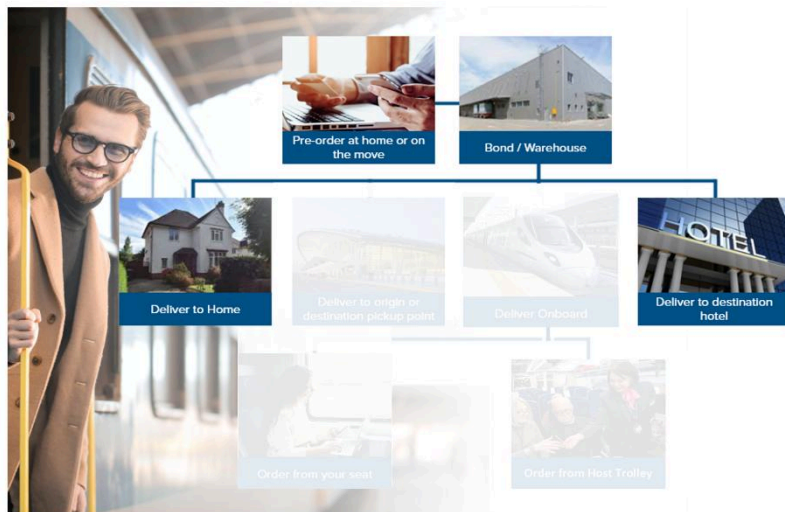## Deliver to Origin or Destination Station

Novo On-Board Retail

We were asked to provide a mechanism to deliver preorders to passenger pickup points at the departure and destination stations. This was relatively easy to develop as we just used a designated pickup point in the station, passengers just present their tickets to redeem their orders.

This works well for rail companies and concessionaires as they can allow passengers to order products directly from their retail franchises in the station.

Deliver to Home or Work or Destination Hotel

We can also offer the ability for the Rail company to deliver products directly to the customers home or destination hotel.

So why would you want to do that?

Historically rail companies and their concessionaires have focused on the in-journey catering.

However, with a huge customer base and a pre-order mechanism we can offer a much wider range of products that may not have been practical to offer onboard due to space limitations.

Train operators are often reluctant to sell more expensive items onboard such as Perfumes, Cosmetics, Watches and Sunglasses because there is more of an opportunity for shrinkage.

Delivering to Home or a Destination point negates these concerns as we don't have to hold stock onboard. This does mean that we have to change our mindset form just being caterers to retailers.

Click & Collect – Click & Deliver

At seat ordering allows passengers to fully engage with the onboard retail e-commerce platform using their own devices.

How do you make At-Seat Click and Collect or Click and Deliver ordering a positive Passenger and Host experience?

- Ensure that the actual onboard stock position is synchronised in real time for both the passenger and the crew alike, otherwise the passengers are going to be disappointed if their goods are out of stock and an embarrassed host must deliver the bad news.
- Ensure that the customer is update with the status of their delivery at every point in the delivery cycle. Received in progress, available for collection / out for delivery, Delivered.
- Manage the start of service and last order cut-off time.
- Choice of payment at seat or Payment on collection

Trolley and Buffet Car Service

We must be inclusive in our service and cater for those who aren't Tech Savvy or who have mobility issues or just cater for those who's buying preferences are to just buy from a person rather than trusting their fate to a machine, so whatever we do we shouldn't forget the Trolley service and the Buffet Car.

Slide 5.   Friction Heat Map
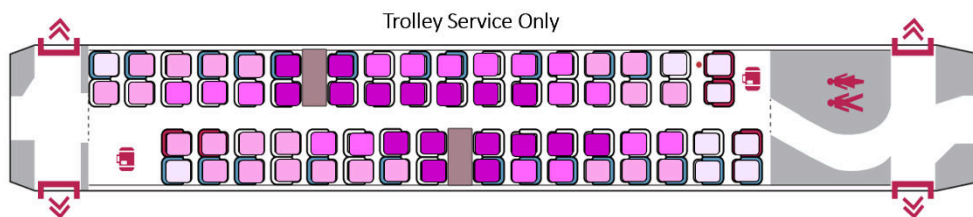
I showed a similar study for an Aircraft but now we have some data from a trial carried out earlier this year for trains. Here we are looking at Trolley Sales and then comparing this with the when we add At- Seat and preordering.

The buying behaviour heat map was created by aggregating the sales data over a number of Journeys to show a clear picture of how people's propensity to purchase relates to where they are sitting.

The lighter coloured seats showing the fewest sales and the darker coloured seats the higher sales.

You can see that a clear purchasing behaviour pattern emerges showing where friction occurs in a service trolley orientated retail setting.

So what's the logic behind this pattern:

Some passengers are reticent to stop the trolley feeling to embarrassed don't want to make a fuss or

- Their money is in their coat pocket on the luggage rack
- They haven't made a decision
- Don't want to disturb the people sitting with them
- Asleep

You can see that where people set a precedent others follow their lead.

Trolley Service + At-Seat Ordering + Preorder

Increases passenger purchasing by 25%
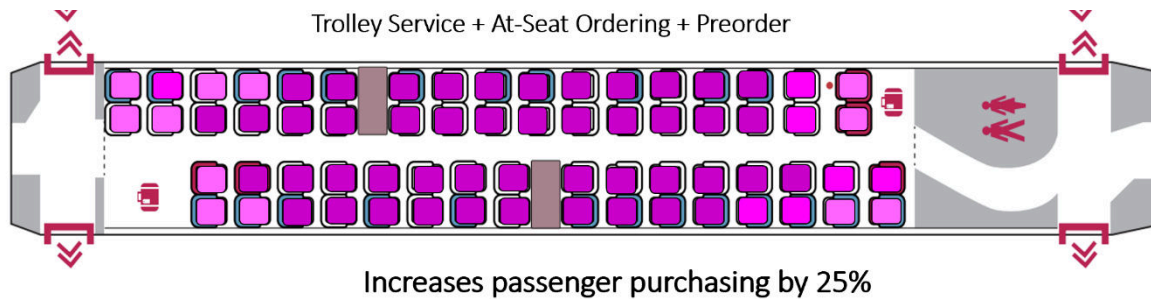
When At-Seat ordering is implemented, you see a totally different distribution of sales, flattening the distribution map, with an indicative increase of more than 25% in sales.

So why is that?

We found that the friction points are removed. Passengers don't have to worry about causing a fuss and they can prepare at their own pace throughout the Journey.

The opportunity to purchase is available throughout the journey not just when the trolley service is operating.

The other option is to have a collection from the buffet car.
So, in summary how does this benefit the Rail company/concessionaire.

- o Meets the customer's expectations
- o Increases revenue

Slide 6 – Card Payments Anytime, Anyplace, Anywhere

Card Payments - Any Place Any Time Anywhere

Connectivity in Rural Geographies

- Trains moving at high speed between 4G/5G cell towers
- 900 data hungry passengers compete for bandwidth.
- Exaggerate signal level changes from a **strong** to **weak** in milliseconds.

If we are to offer an excellent onboard retail service and maximise sales we either need good internet connectivity or the ability to work… and crucially, take payments offline to ensure passengers can order… and crew deliver.

Connections on a train are exacerbated because for a majority of the Journey we are in rural locations with

- Very few radio masts
- 800 data hungry passengers
- Travelling at speed so the signal can fluctuate between strong and weak. Managing that fluctuation and ensuring we get as many online transactions as possible is what Novo have mastered.

Slide 7 – Connectivity in Rural Locations Reduced
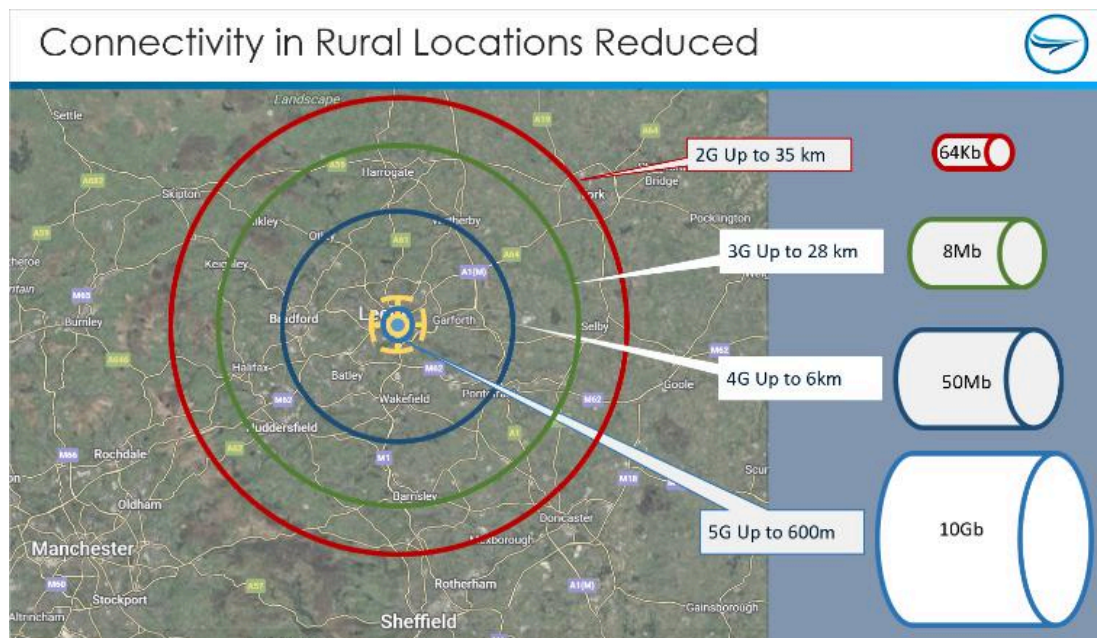
Over the last 12 months we have seen a marked increase in offline transaction and general availability of the internet in rural locations…. and I just want to quickly look at why?

2G Launched 1991 – covered a large area but was extremely slow by todays standards

3G Launched 2002 - phones had evolved to be mobile media centres so the we needed more bandwidth fasted downloads but this came with a lower range so more masts were required to achieve the same coverage. wanted Myspace and Facebook

4G Launched 2012 - phones had evolved phenomenally in the 10 years since 3G was so the we needed more bandwidth fasted downloads but this came with a lower range so more masts were required to achieve the same coverage.

5G Launched 2019 – this yields huge bandwidth but has an extremely poor range so we can discount this medium as a useful means of gaining internet coverage in rural settings as the cost of installation would be too high.

We can also discount **2G** because it is too slow and has been allocated to other applications such as monitoring remote gas tanks for example.

The combination of **3G** and **4G** was adequate in most rural settings, **however** during the last 12 months all **3G masts are being removed**. This has seriously reduced coverage and has underlined the importance of having an **offline payment capability** to ensure we have a seamless onboard service for our passengers.

Slide 8 – Online/Offline - Specialised Expertise

Online/Offline - Specialised Expertise

• Online transactions are more secure

• Passenger cards can be validated with the bank in real-time.

• Make a decision in favour of Online...... but make a decision quickly.

Online payments are more secure than offline so it is important to be online as much of the time and only offline when absolutely necessary.

Many companies can do online or offline but providing both at the same time is something that Novo have perfected.

Card Payments - Any Place Any Time Anywhere

Offline – (Deferred Auth – Store & Forward)

- Great Passenger Experience – Fast payments – passenger gets their goods

- Great Crew Experience – no embarrassing explanations / wait for payments

- No loss of income –20% increase in revenue through reliable card payments

Ensuring that you have a fast seamless payment solution is absolutely critical for both the passenger who isn't suddenly embarrassed because their card doesn't work and the crew don't have that embarrassing wait for the payment to go through. Not mentioning the delay in getting through the carriages.

Getting this right has increased sales throughput by 20%.

Slide 10 – Impact of AI on Onboard Retail

According to the Turing Test, the real meaning of AI is the ability of a machine to converse with a human being without the Human being able to tell whether they are interacting with a machine or another human being. In reality, AI is a tool to help us with deriving accurate information from Big Data.

Where we humans don't have the capacity to research, absorb and compile, huge amounts of data into a meaningful output in a short space of time, AI does.

So how can we use the power of AI to help us deliver a better more reliable and secure onboard retail service

1. Payment Security – Banks are using AI to combat card fraud and keep up with the criminals who will no doubt use AI as a tool to commit fraud.
2. We can use AI to improve our product mix onboard based on various factors by using real-time data feeds from many sources such as
3. Historic Sales based on
4. Time of year
5. Route
6. Number of passengers
7. Weather at Origin & Destination
8. Events in Origin & Destination – sporting events, Attractions,
9. Passenger Demographics – Stag & Hen party's, Football supporters

Top 5 Considerations

Top 5 considerations when implementing an Onboard Retail system

1. Understanding the universal e-Commerce trends and the impact on passenger buying behaviours
2. Embrace technology to provide an experiential environment for passengers improving the Passenger Experience
3. Implement a payment system capable of taking payments throughout the journey to maximise revenues and avoid passenger and crew frustration.
4. Integrated systems are key
   a) Real time inventory status with order cut off times
   b) Multimodal Logistics
5. Ensure we are inclusive so not to alienate the non tech savvy and disadvantaged.

Any Questions

Novo On-Board Retail

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Slide 12 - Thank you for listening

If you would like to discuss any of the points raised in the presentation and or want to see the at-seat onboard retail system in action, please feel free to contact me directly

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