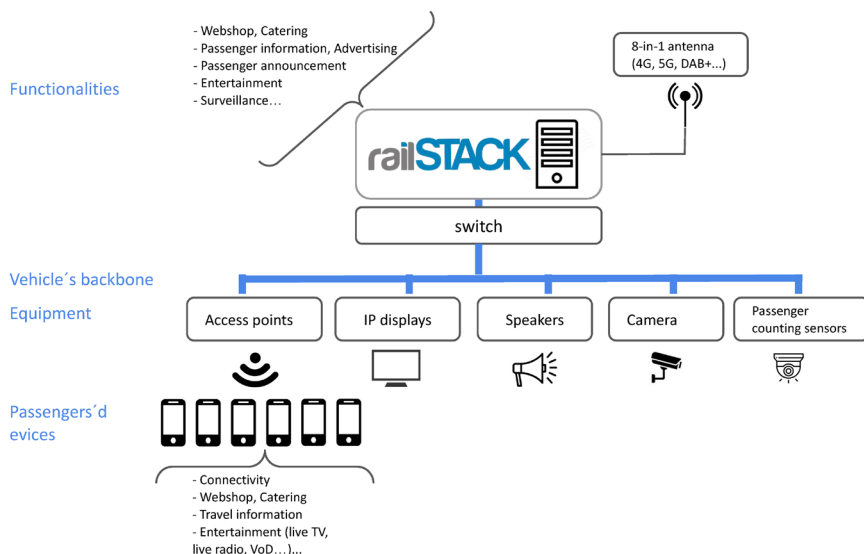# PaxLife Innovations

Welcome The Digital Train

railSTACK: Turning All Passenger-Focused Functionality into One Open Software-Based Service

According to the German Federal Statistical Office (Destatis), passenger numbers using railways, trams and buses in Germany in 2021 are still down one third compared to 2019 before the pandemic. Therefore, getting the public back to using public transport requires intelligent strategic thinking and pragmatic, creative solutions, supported by super-flexible infrastructure, whether it is for providing up-to-date travel information and data for traffic flow management or to improve the onboard travel experience for all users.

If they are travelling less, passengers expect more from fewer trips; they expect to enjoy a 'digital journey' comparable to what they have at home or in the context of other services: to stream media, just like at-home, treat themselves with good digital services or potentially book new activities, regardless of the vehicle's facilities, and view real-time travel information for a smooth and relaxing time, all while onboard.

However, meeting customer expectations and market needs in a simple, affordable, and timely manner remains a challenge for most transport companies. Industry trends require increasing levels of systems integration, and today's systems are still mostly isolated from each other, specific to hardware equipment and quite difficult to upgrade with a new feature or even update. Upgrading system functionality will normally result in a significant time and capital investment. For example, a typical infotainment system will still be implemented in difficult-to-maintain firmware that is specific to the original system vendor.

Functionalities
- Webshop, Catering
- Passenger information, Advertising
- Passenger announcement
- Entertainment
- Surveillance…

8-in-1 antenna
(4G, 5G, DAB+…)

railSTACK

switch

Vehicle´s backbone

Equipment

| Access points | IP displays | Speakers | Camera | Passenger counting sensors |

Passengers´d evices

- Connectivity
- Webshop, Catering
- Travel information
- Entertainment (live TV, live radio, VoD…)...

Future-Proof Architecture, Powerful Backbone, Fitting Existing Equipment

railSTACK enables the abstraction of vehicle equipment, transforming the current fenced vehicle architecture into an open, future-proof and cost-effective backbone for the deployment of any function. **Transform all passenger-focused functionality into an open, software-based service, thanks to railSTACK**.

We are happy to discuss this further,
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Click here for our railSTACK explained video

**Contact us at
sales@paxlife.aero
or visit us at the following
exhibitions and conferences:**

InnoTrans 20–23 Sep 2022

**World Passenger Festival
16–18 Nov 2022**

Simple, Unified, Efficient, Affordable

In order to make a real difference, digital services and passenger-oriented functionality integrated and deployed onboard have to evolve in a simpler, more unified and more efficient way, while remaining affordable. An operator should have the ability to assign any preferred vendor, or even leverage its own teams to enhance and extend, at the time it is needed, any functionality that is passenger-focused.

Decouple Passenger-Oriented Functionality from Vehicle Equipment

Modern digital architectures are mostly driven by software. A rail vehicle will typically see several digital system upgrades during its life; passenger-oriented functionalities, which are evolving, and vehicle equipment, which remains stable, must therefore be decoupled. It is with this concept in mind that we have designed

railSTACK – a powerful software hosting platform, integrated into the vehicle server.

railSTACK is an open platform that hosts, at a single point in the vehicle, and orchestrates passenger-focused functionality and digital services organised by the transport operators: infotainment or advertising content is delivered to IP screens, passenger-counting information coming from sensors is sent to operators, digital entertainment services (such as at-seat ordering for catering, media streaming apps or digital radio etc.) are exposed via the vehicle's wifi to the passenger devices. Applications (the digital services) hosted on board can be sourced from any independent third party or provided in-house. Digital services and functionalities – because they are software – can be quickly updated or easily upgraded, at the time they are needed, with new features to answer passenger expectations and ultimately better business outcomes. All this while saving tremendous cost, time and effort in comparison with the way projects are currently being implemented.