



# CloudEdge Open Software Platform

**railSTACK** *Orchestration Platform*

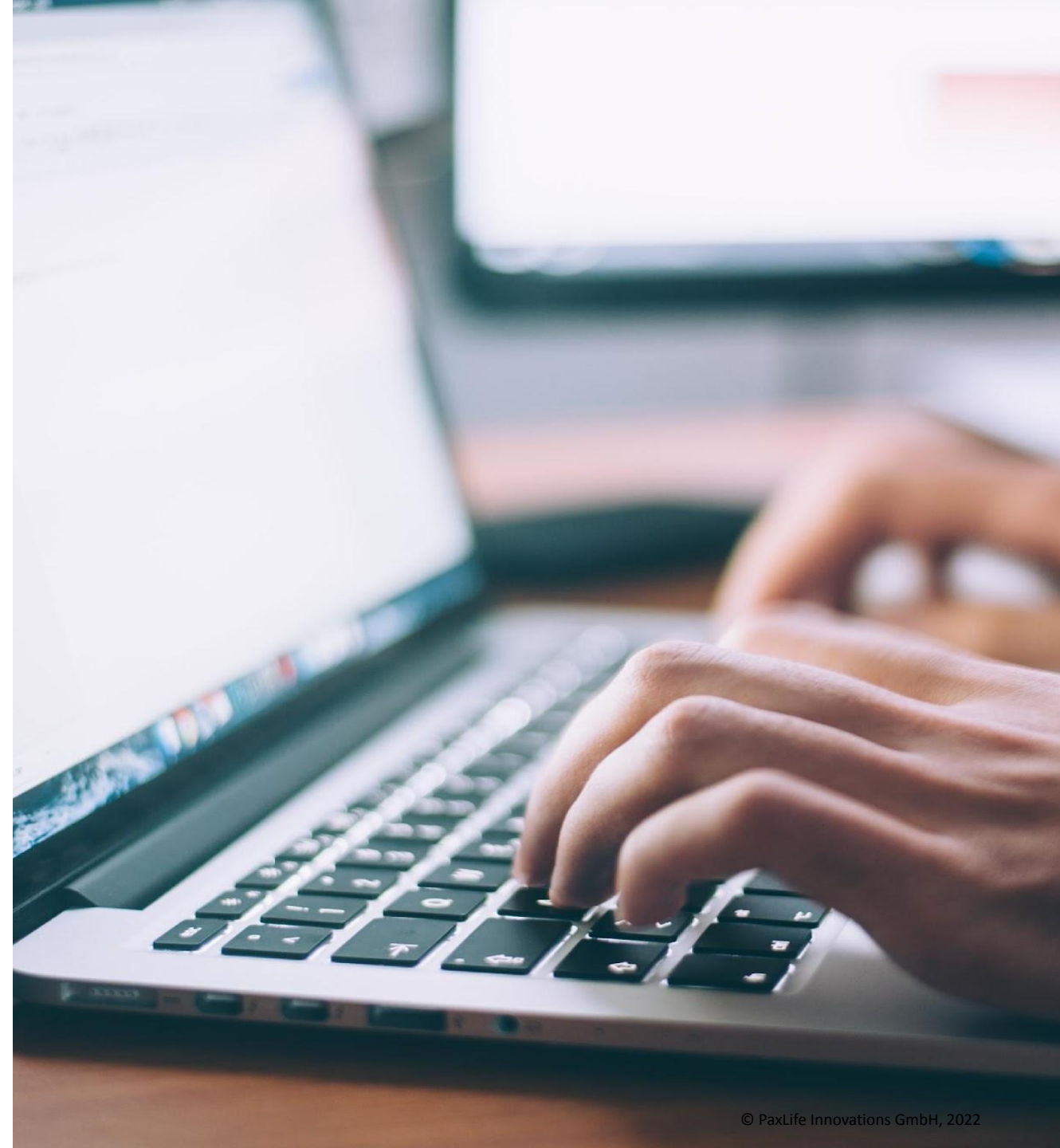


# A CloudEdge Open Hosting Platform

Digitalization brings challenges to operators and system integrators: passengers looking for reliable connectivity, operators willing to benefit from in-service data, online companies trying to reach customers on the go. Upgrading and managing in-vehicle systems should be as easy as installing an app on your smartphone.

PaxLife has therefore established the game-changing digital architecture **railSTACK** :

A **cloud-edge open hosting platform** to create, deploy and manage *any* applications that run on rail, buses or trams, allowing the simple and efficient set up of new services for passengers or for operators, while streamlining operations and creating value for all stakeholders.



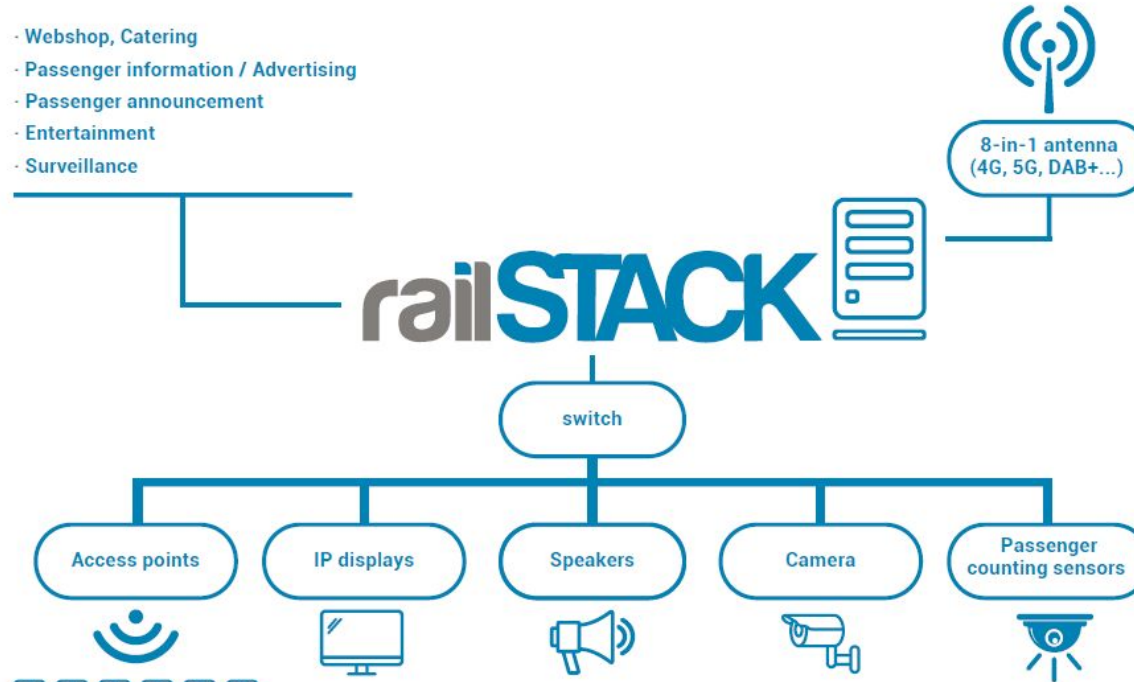
# Turning all passenger-related functions into a single, open software service



Functionalities

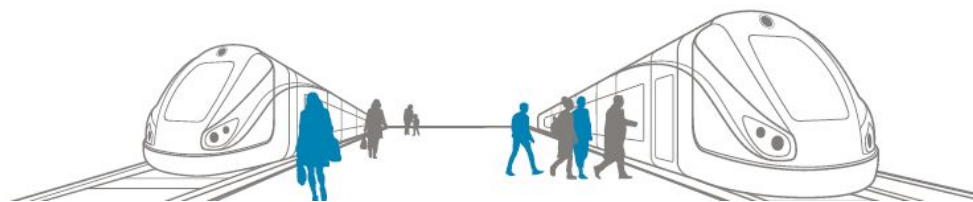
- Webshop, Catering
- Passenger information / Advertising
- Passenger announcement
- Entertainment
- Surveillance

Vehicle's backbone Equipment



Passengers' devices

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

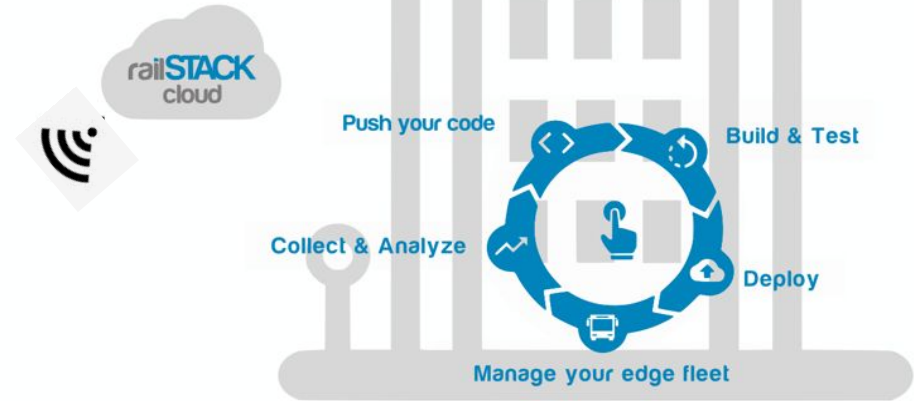
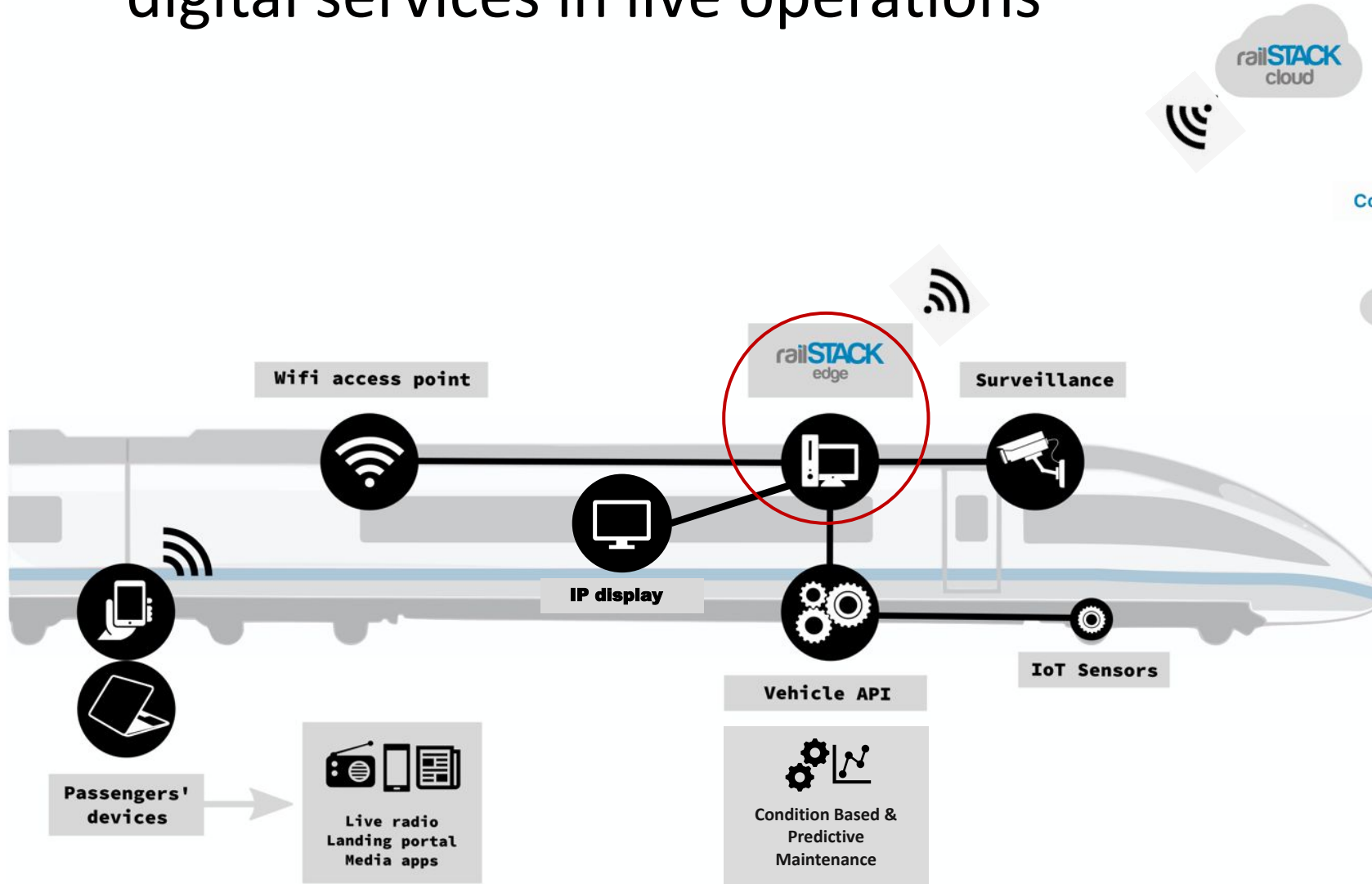


Direct access information from the best source



Only one software runs on all "edges" (=vehicles), abstracted by the API - and serves all passengers directly

# Simplified and unified deployment of digital services in live operations



The platform is composed of the railSTACK cloud - a webservice - and the railSTACK edge – hosted on a server onboard. railSTACK edge connects both to the vehicle's systems and to the railSTACK cloud.

railSTACK edge provides the hosting capability to run multiple software/apps onboard, and the transmission of the vehicle's bulk data to railSTACK cloud (**up to 1TB per train per day**).

Transmission of content/data are setup via high-speed connections (4G, 5G or else) available at selected locations along the train route - initially at train stations.



# A single tool to develop and manage your project life cycle



railSTACK has brought together a cloud to edge architecture and a software development paradigm.

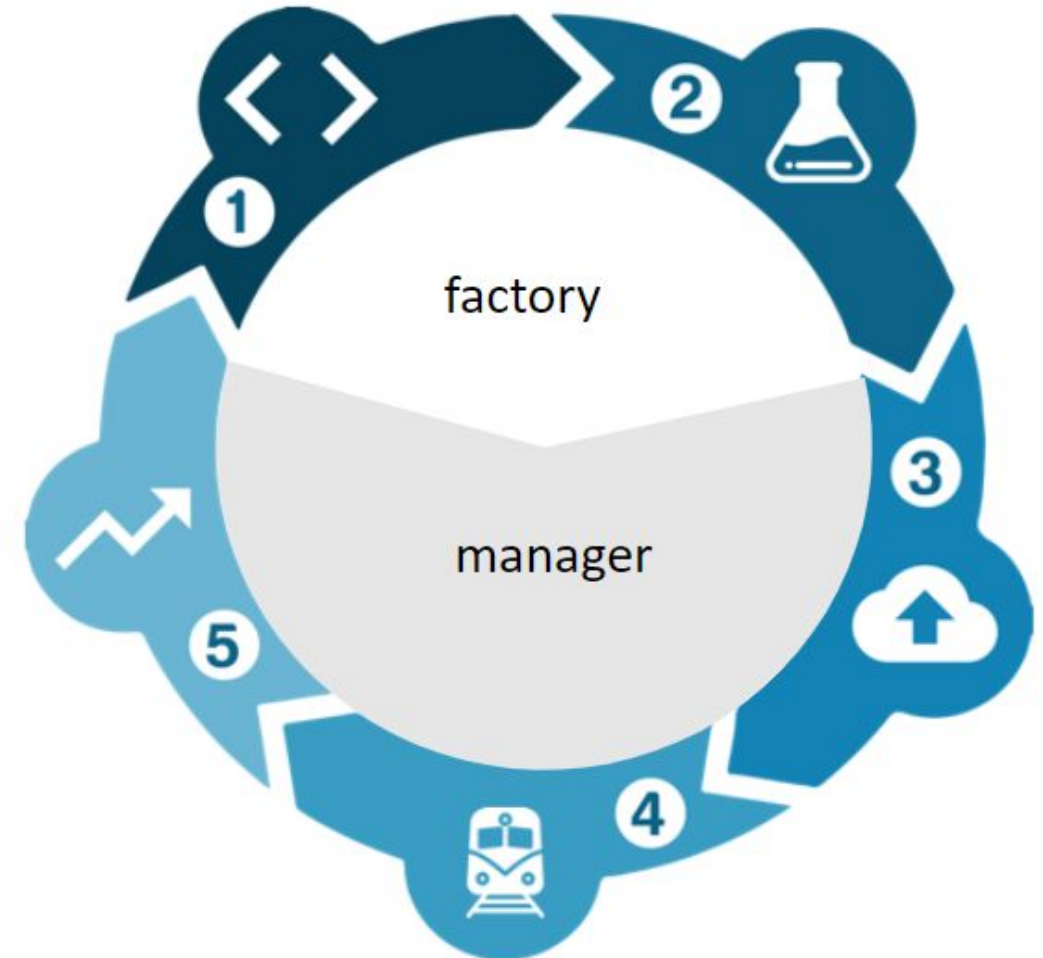
Benefits: multi-modal deployment, cost & time-efficient updates and agile development

Factory:

1. Push your code
2. Build & Test your project in virtual environment, build project apps automatically, manage content assets libraries

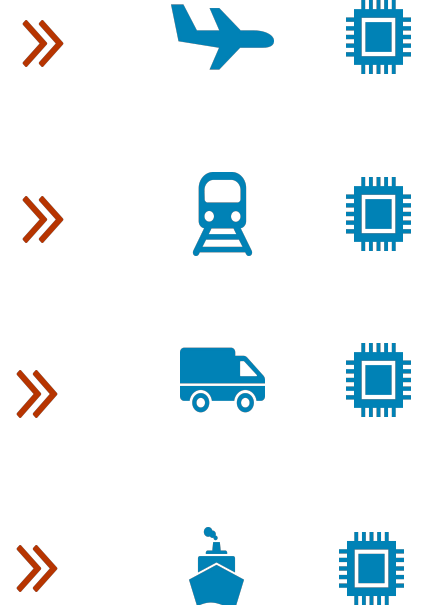
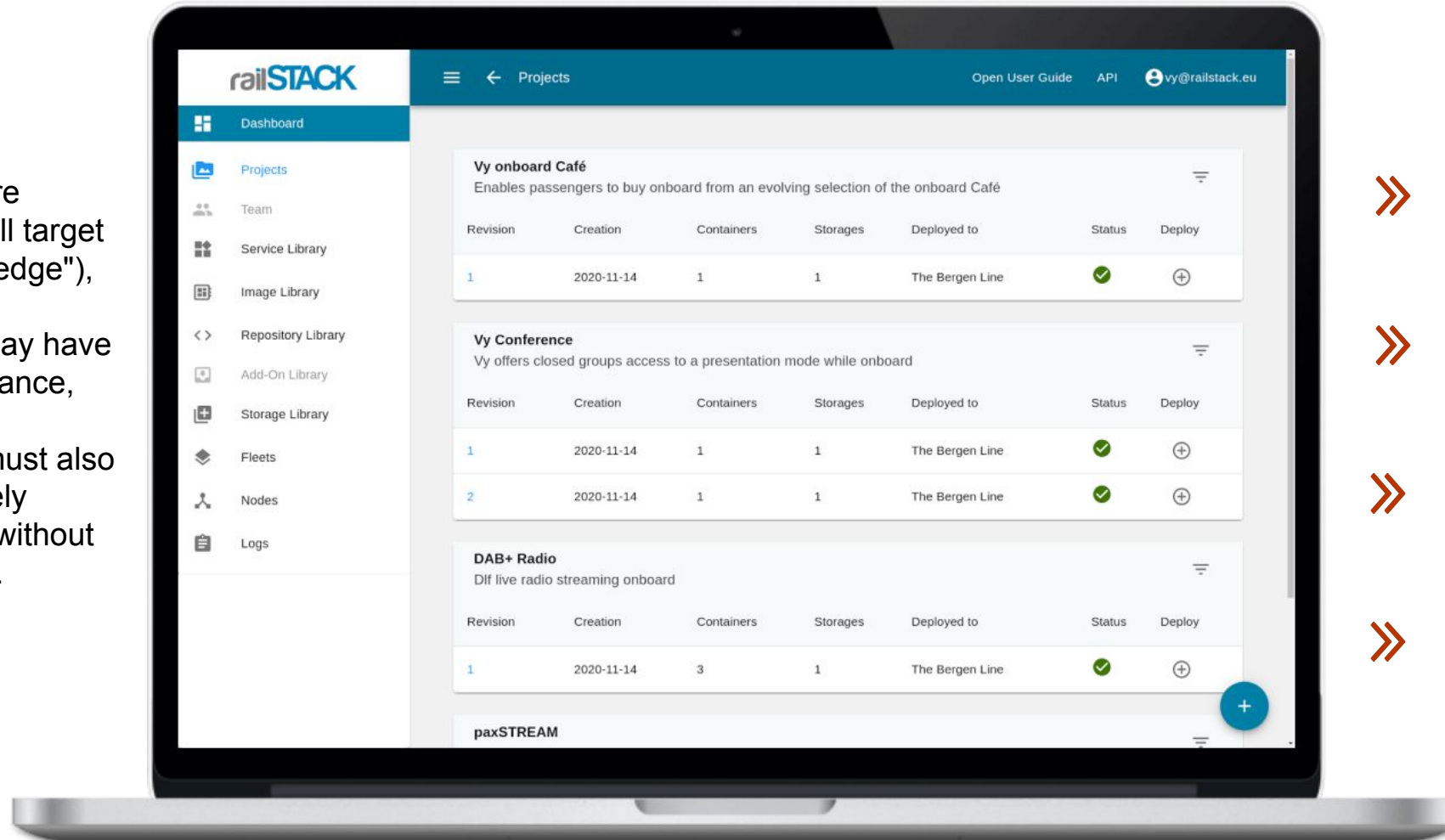
Manager:

1. Deploy your project fleetwide with mouse click
2. Manage your fleet, control and monitor vehicle
3. Collect and analyse data



# railSTACK dashboard, for your IT/admin team to deploy, update and manage any services to your selected fleet

- 1) One software ("app") for all target platforms ("edge"),
- 2) The edge may have low performance,
- 3) The "app" must also be completely executable without "always on".



# A platform empowering in-house development

railSTACK brings together a **cloud to edge architecture** and a **software development paradigm**.

This powerful combination empowers transport operators, vehicle manufacturers and engineering experts to **develop, iterate, validate, implement, and continually improve**, in a very simple and efficient way, the new engineering models or applications they need, **saving tremendous time, cost and efforts** in comparison with usual projects.

About maintenance strategy for example, new **predictive models leveraging AI compute engine** can be simulated and evaluated by railway engineers in-house, and now in days.





# Expanding services today and in the future

**railSTACK platform hosting capability** enables the support and integration, at a **single point onboard**, of **multiple applications** that can come from various domains, providing, for example, a better experience to passengers or better services to operators.

Applications can be provided by any independent third party or developed in house by the customers' engineering services or IT department, as they see fit to their specific needs and planning.

**Infotainment, entertainment services, upgrading video surveillance system with AI capability... anything is possible**





# PaxLife Innovations

PaxLife Innovations GmbH originally started out by connecting aircraft passengers to the digital world.

To answer the challenge of bringing onboard information, content and passenger services in a modern fashion, PaxLife developed a cloudedge architecture that is at the heart of its infotainment solutions today.

PaxLife Innovations brought its cutting-edge technology and media expertise to rail and public transit in 2019.

Our business philosophy:

“We do not write the applications, but we do the integration into the actual vehicle.

We behave similarly to a small data center in the vehicle on behalf of our partners”





# PaxLife in a nutshell

PaxLife Innovations GmbH originally started to connect aircraft passengers to the digital world.

Based in Potsdam, Germany, PaxLife now brings its cutting edge integration technology to rail and public transport.

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Check what we do [www.paxlife.aero](http://www.paxlife.aero)