



Fractal

Rail 4.0

Member of
APPAU

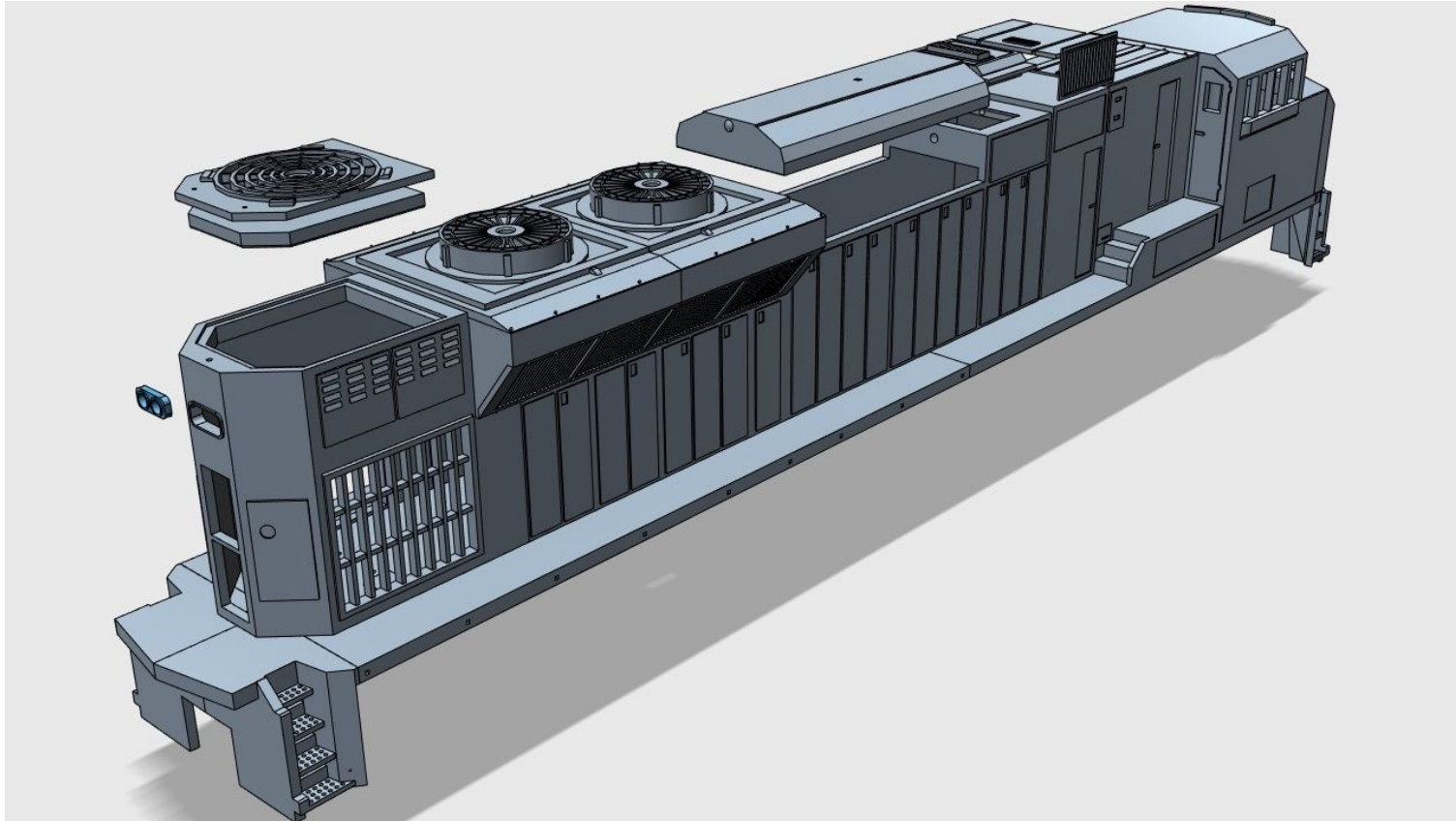
Yevhen Lokhmatov

CEO & Co-founder

Industry 4.0



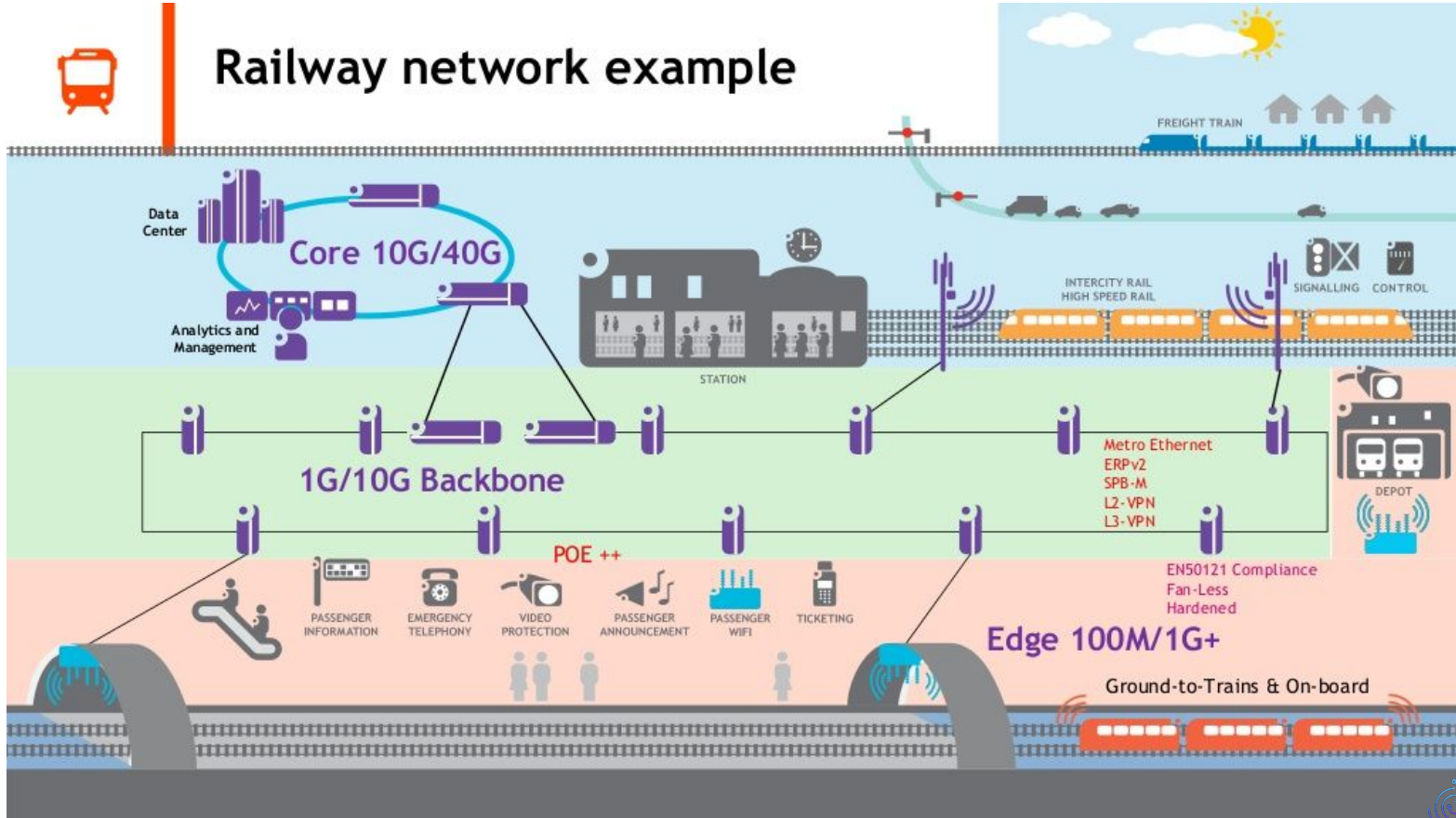
Modeling and Simulation



Smart Infrastructure



Railway network example



Smart Train

① HVAC management

② Temperature

③ Passenger Information System

④ Diagnostics, crew HMI management

⑤ Lighting management

⑥ Water tanks, toilets

⑦ CCTV system management

⑧ Battery charge monitoring

⑨ Door control

⑩ Emergency communications

⑪ Event recorder, legal recording unit

⑫ Train-to-wayside communication

⑬ Pantograph control

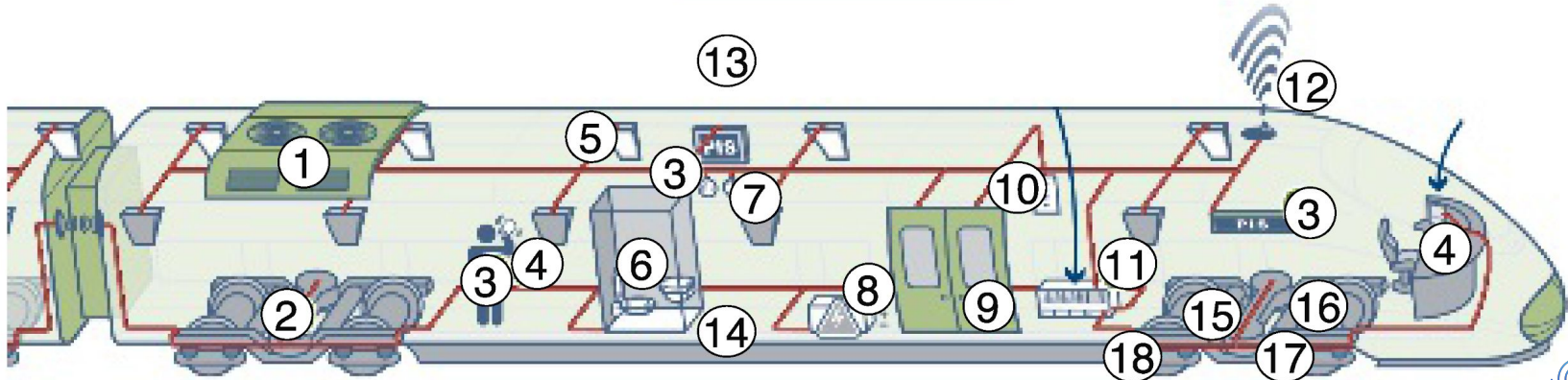
⑭ Remote input/output module

⑮ Speed measurement

⑯ Lateral vibration

⑰ Brakes

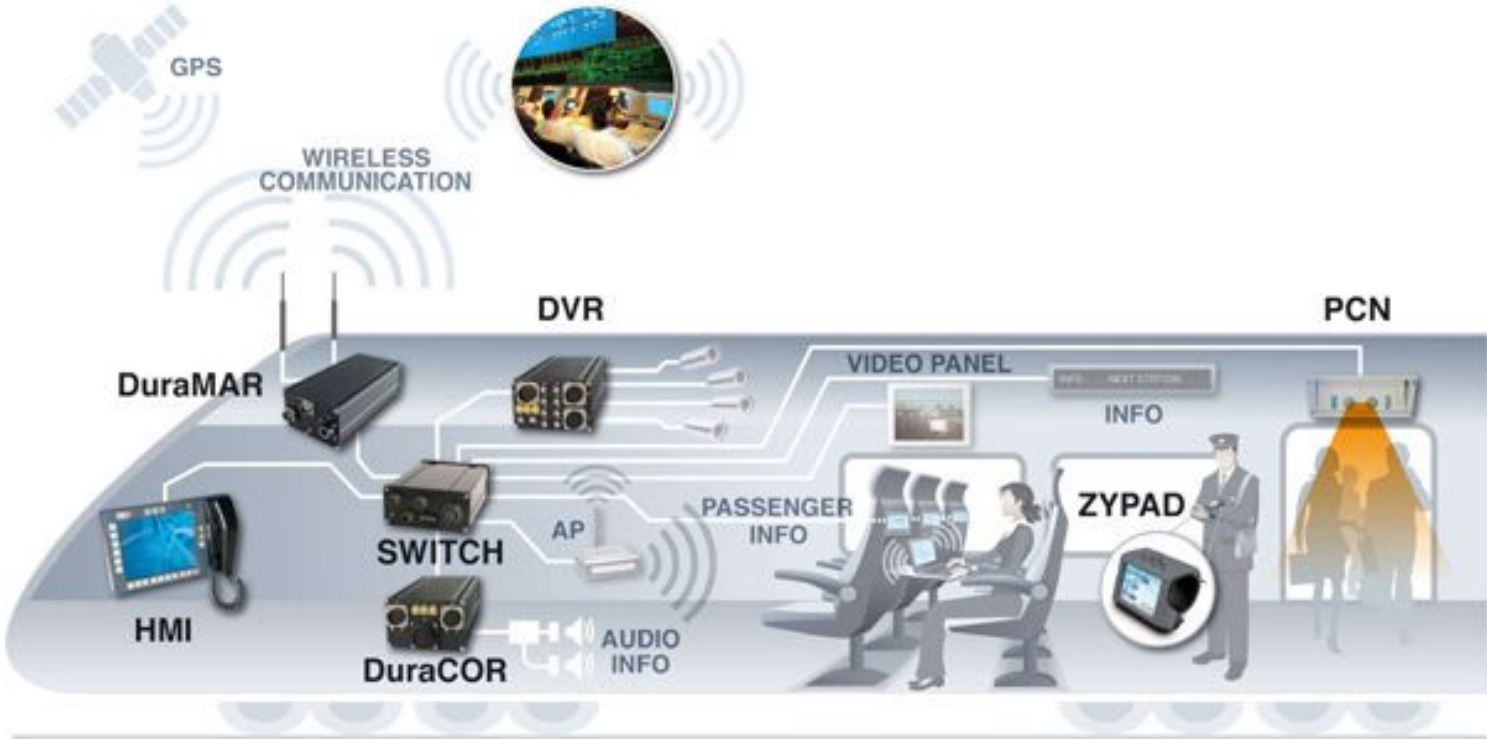
⑱ Traction



Smart Wagon



Smart Carriage



IoT software development issues



Meet headline product

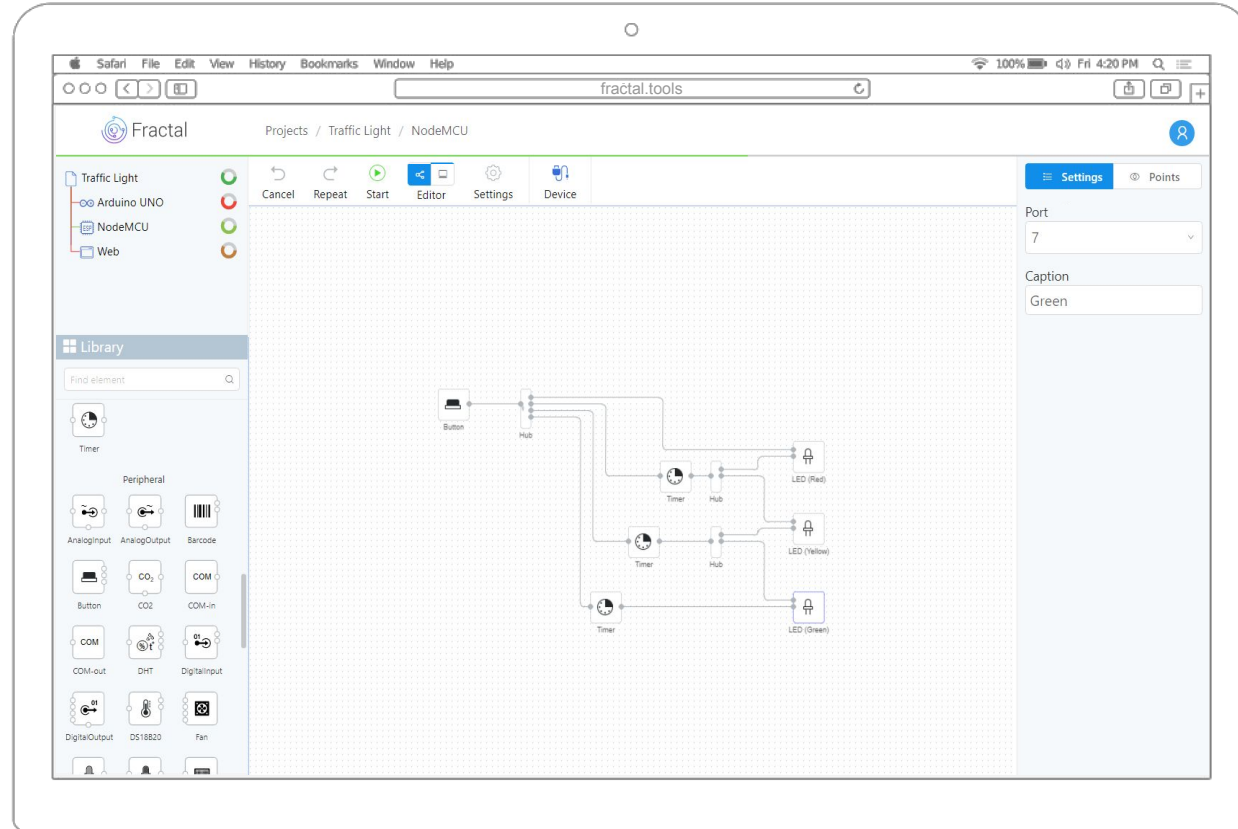
Fractal is:

- Simple web application
- End-to-end IoT platform
- Visual programming IDE

That makes you able to:

1. Setup logic for controllers
2. Create user interfaces
3. Connect third-party services

Without single line of code.



Key features of Fractal



Interoperability

Simple tool for building logic and UI for IoT systems of any kind



AI-ready

Ready for large-scale projects with usage of Data Science



Decentralization

Ability to deploy local and cloud IoT platforms for specific applications



Digitalisation

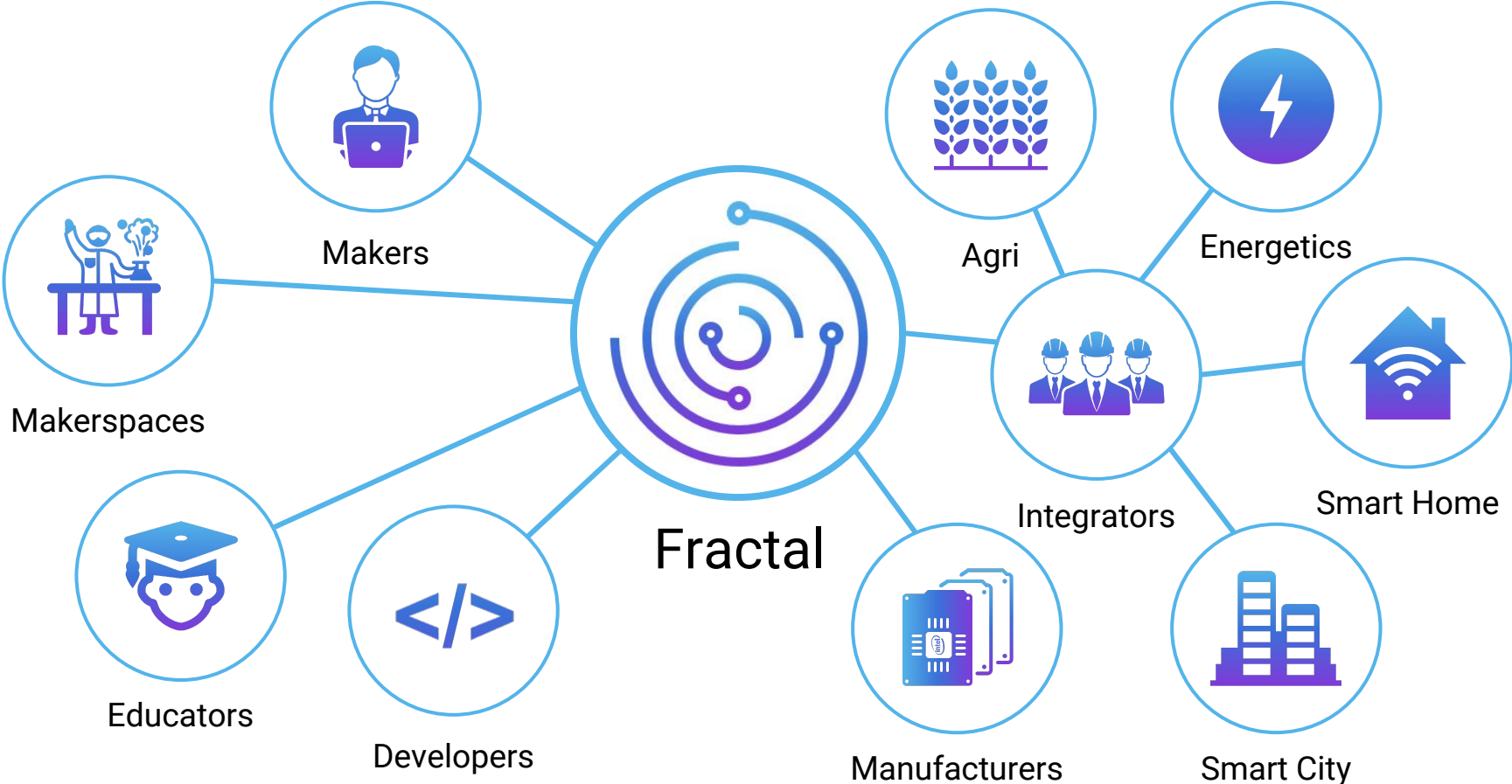
Aggregate raw data to valuable information and visualise it in Digital Twins



Over-the-air

Firmware update of devices or networks can be done wireless in one click

Let's build IoT ecosystem together



Thank you for attention!

Yevhen Lokhmatov

CEO & Co-founder

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