

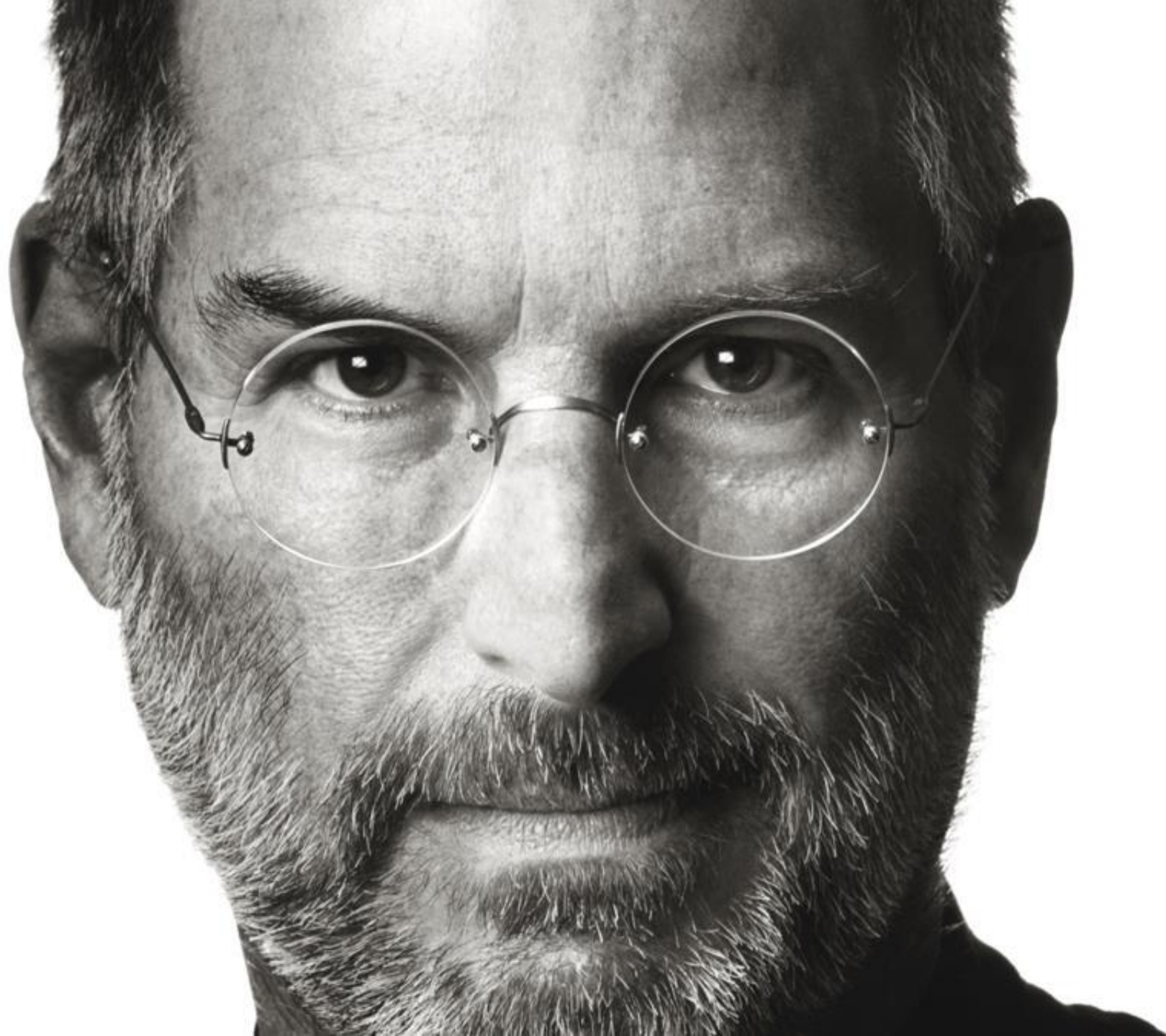
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how to create railway digitalisation unicorns in Europe



Stanislas Pinte

CEO at The Signalling Company - VP Signalling at Skoda Group



The railway industry asking for modularity



The shift from hardware to software

*and a change from an industry that updates by upgrading its hardware... 'I hope that in the future, **if they need to evolve they will upgrade the software'...**"*

Carlo Borghini – former executive director of Shift2Rail, currently Assistant Secretary General at NATO.

Quote suggested by Jemylia Raimbault

Dream #1

A platform



PLCs for a monitoring system in the pharmaceutical industry

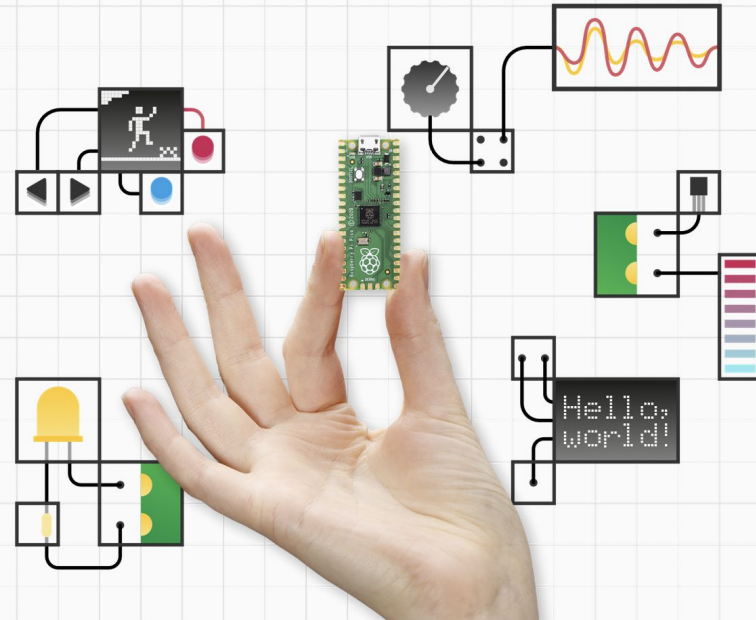
A platform = using same computer for (all) different apps

Dream #2 Off-the-shelf hardware

Raspberry Pi Pico

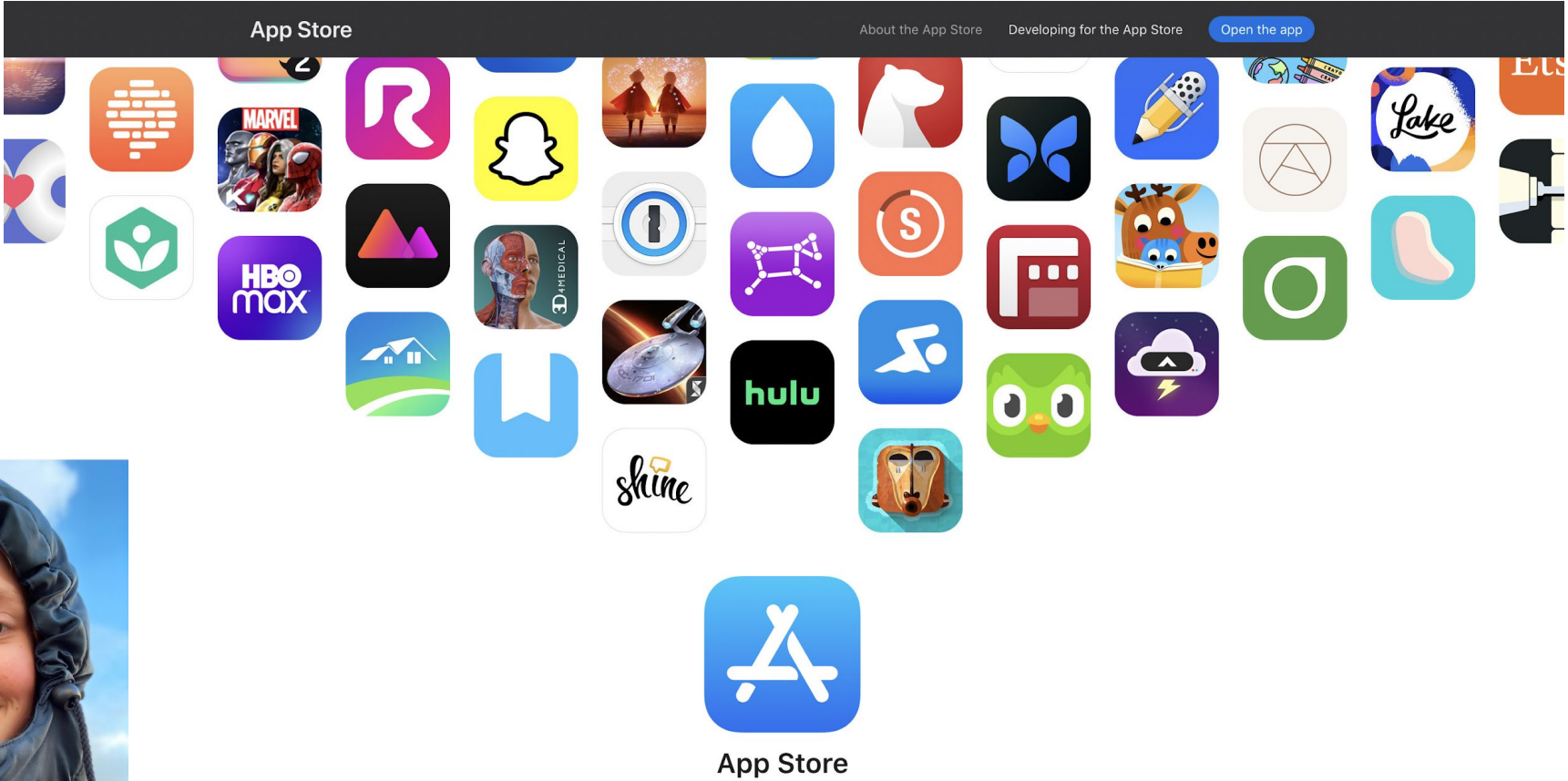
The new flexible \$4 microcontroller board from Raspberry Pi

Raspberry Pi Pico is a tiny, fast, and versatile board built using RP2040, a brand new microcontroller chip designed by Raspberry Pi in the UK.



Dream #3

A RailAppStore



Sève, Iphone 5S user



Stan, Iphone 5S user

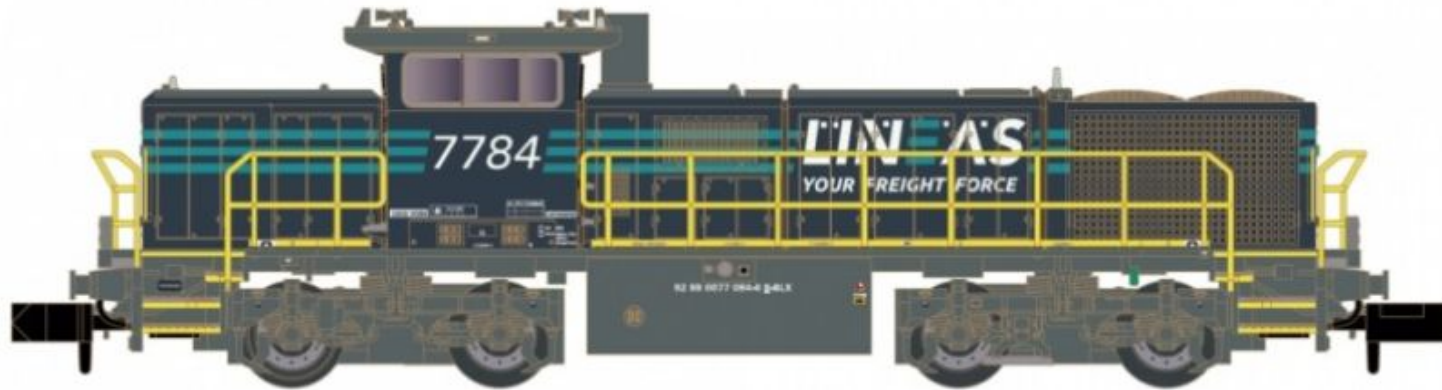
Same phones, very different needs and set of applications



The Signalling Company

A better ETCS onboard, no more no less

Software Development · Brussels, Brussels · 3,570 followers · 37 employees



Next milestones:

- iEVC platform with TBL1+ App commissioned in locomotive – October 2023
- TBL1+ App certification by DEBO Belgorail/CERTIFER – December 2023
- Locomotive authorized with TBL1+ Class B App - June 2024
- Locomotive authorized with with ETCS - June 2025

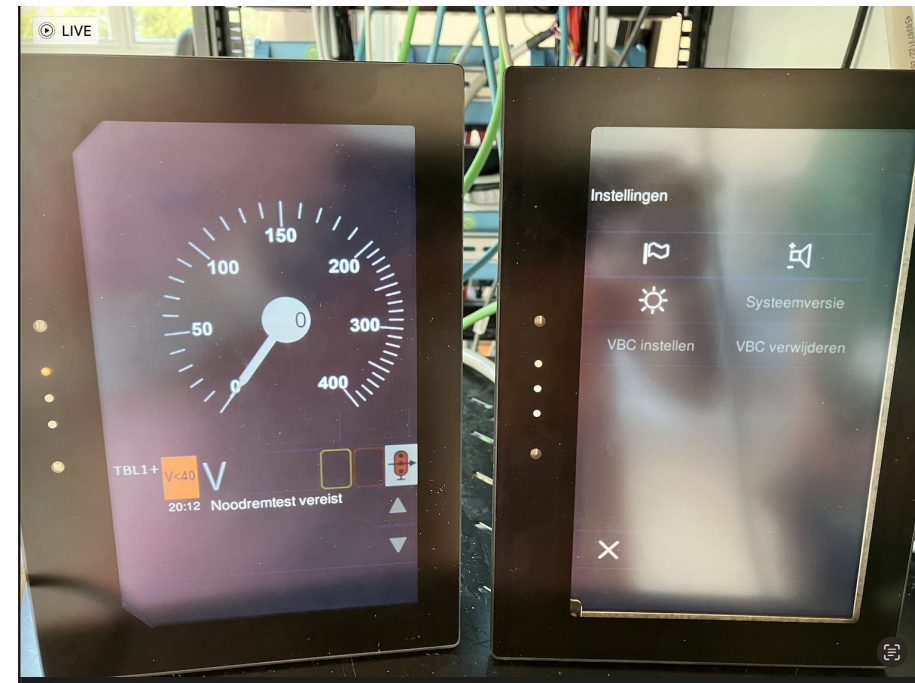
Key market facts:

Market size: 33.000 vehicles to be equipped by 2031 in TEN-T corridors

Market value: 5 Billion € for onboard equipments in TEN-T corridors

41% of market demand is unsatisfied

Source: First Work Plan of the European Coordinator Matthias Ruete May 2020



Modularity -> 25%

faster digitalization of the EU single rail area with adequate support



How to get modularity from the technology vendors?

- 1/ Ask for long-term maintenance in your contracts
- 2/ Ask for subscription contracts where there is software (don't buy a box, buy a service)
- 3/ Ask to demonstrate modularity with concrete examples (example 1: how do you support an easy transition to FRMCS)
- 4/ Ask for open platforms, not boxes. Open = the possibility of anyone to develop Apps on the platform