MODYN

design that moves

IAA Transportation & Innotrans 2022 Trend Report

Introduction

As mobility designers, we take a special interest in everything that moves. So we were especially excited to head to two of the biggest transportation conferences of the year, Innotrans 2022 in Berlin and the IAA transportation 2022 in Hannover. Boy, they did not disappoint!

IAA and Innotrans are where all the major brands of road and rail transport show their newest designs — think thousands of square meters filled with the latest developments. We had smart, inspiring conversations with many people from many different sectors while we were there. And best of all, we saw one of our latest designs out driving — The New Gen Citea city bus from our friends at VDL. In this report, you'll find a summarized selection of everything that inspired us at these tradeshows.

New Gen Citea

New Gen Citea

How could we start without mentioning the **VDL New Gen Citea**? We were super excited to finally see this bus in real life. Many hours went into designing the exterior and interior of this bus, so to be able to step inside and see it go was amazing. Of course, big congratulations go to the talented team at VDL who did an incredible job developing this bus.

Did you know? The New Gen Citea won the Red Dot Award, iF Design Award and G100 award this year.

The original Modyn - sketches

Much of the original design has stayed intact, and that is not always the case.

New Gen Citea

The interior was completely redesigned for this bus.

Design trends

The fight for weight loss

Trains, trucks, and buses are all trying to limit weight gain by keeping their components as light as possible. But, the new electric drivetrains in buses and trucks are much heavier than internal combustion engines. And the more elaborate train interiors — with more screens and better seats — make trains heavier. Since there is a maximum weight allowed on train tracks, and a heavier truck or bus minimizes their load capacity, manufacturers are trying to lose as much weight as possible in different areas. This allows for the use of, expensive, composite materials such as **carbon fiber** panels.

Lighting

Lighting solutions are becoming more **affordable**. It is easier and cheaper to design a custom lighting system and the prefabricated solutions are more distinctive than before.

This allows bus and truck manufacturers to design a **unique lighting** signature for their vehicles. Therefore, the design quality of these vehicles is more and more on par with the automotive industry

Cheaper lighting allows (smaller) transportation manufacturers to design more elaborate lighting.

Seating

Often, peak commuting hours are very busy, forcing people to stand. However, during off-peak hours, the train is much less crowded, and people prefer to sit. This year, we saw some simple yet **smart seating solutions** that provide both sitting and standing comfort while **optimizing the interior space**.

Motel Hippie Caviar (Renault)

The name itself is a work of art. This car represents **Renault**'s vision for basic luxury. Bold, flamboyant colors accentuate this one-person campervan. However, the functionality remains a large question mark. But we don't mind when camping can be this cool.

Iveco Tigrotto

We thought the trend was over but Retro design seems to be on its return. Not only did we see an electric delivery vehicle modelled after the famous BMW Isetta, we found this: the **Iveco Tigrotto**. A truck reminiscent of golden era; the 50s and 60s.

Image: https://www.cammaertnv.be/

Image: https://www.omnifurgone.it/news/611727/iveco-tigrotto-leoncino-daily-speciale/

Electric technology

eActros LongHaul

Mercedes presented its newest electric truck at IAA this year – the eActros LongHaul. And it has great promise: **500 km range** on a single charge and a charging time of 20 minutes to go from 20% to 80%. This could be a game-changer for the electrification of trucks. We are curious to see where this truck takes us...

Image: https://insideevs.com/news/611359/mercedes-eactros-longhaul-concept-prototype/

Charging stations

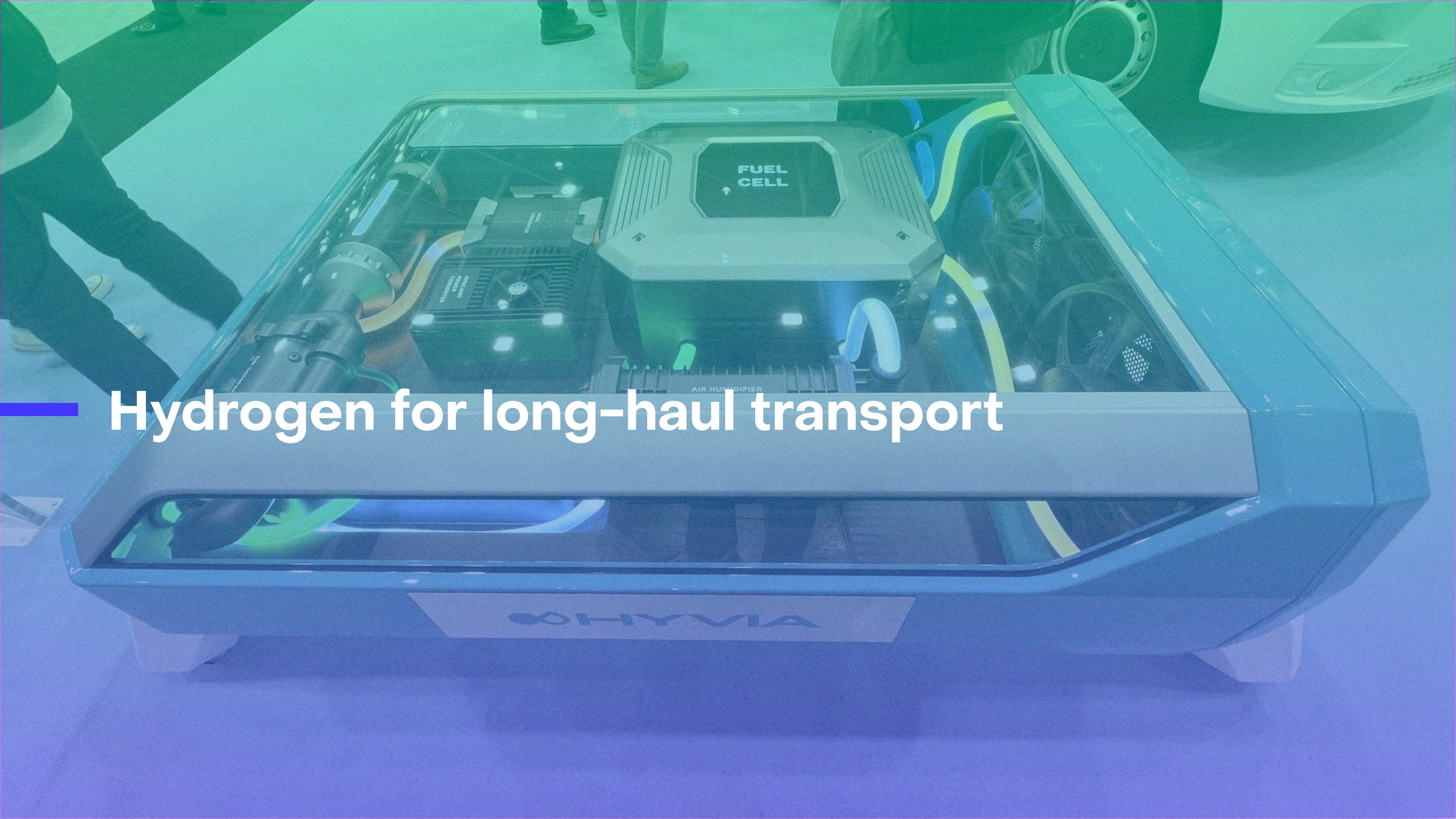
The rise of electrification calls for **charging infrastructure**. At both the IAA and the Innotrans tradeshows, charging stations were featured in abundance. What stands out is that most of these charging stations do not have a distinctive design language. Most of them are steel, straight boxes.

Go big or go home seems to be the motto at Ford. Let's hope this is a mockup ;)

Ultra-thin solar panels

At both Innotrans and the IAA tradeshows we saw ultra-thin solar panels. These panels can be placed on vehicles, as well as surfaces that aren't perfectly straight, because they're **thin and malleable** enough to be incorporated into complex shapes. It is a super interesting technology, which, paired with other innovations in electric technology (like long-haul batteries and fast charging) could revolutionize electric transportation. The solar panels in the pictures are made by **Sono Motors**, one of the leading companies in solar technology.

Images: https://sonomotors.com/



Hydrogen for long-haul transport

Hydrogen technology

While the general automotive sector the focus is now totally sharpened on electric driving, the transportation sector is heavily invested in hydrogen solutions. Many different companies offer hydrogen powertrains for their buses, trucks and even trains. The reason is that hydrogen offers significantly **more range**, and at a lower weight, than electric powertrains with batteries. Of course, the infrastructure is still a challenge. But the **abundance of hydrogen solutions** at the tradeshows predicts that we will see more hydrogen fuel stations in the future.

Hyzon's hydrogen fuel cell

Shell's hydrogen fuel station

Hydrogen Trucks

The **Tevva** truck is a light commercial hydrogen vehicle. They show a common problem — hydrogen technology is eating away cargo space.

Nikola's hydrogen truck looks promising. Their design is on point and the technology seems well-fitted. The truck looks clean and well-engineered.

Hydrogen locomotive

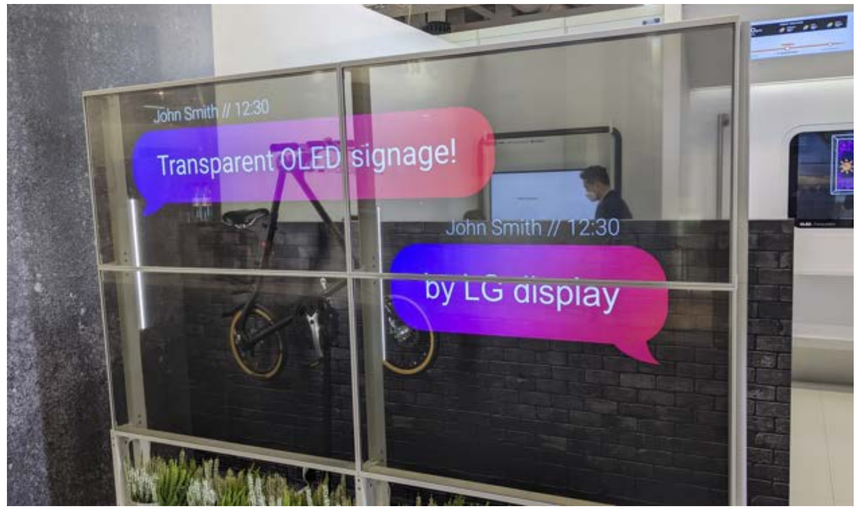
This is a hydrogen-powered locomotive by **Pesa**, and it looks impressive. Other than, well, all other trains on display outside, this vehicle looks like it is from the future. We could even climb inside. To be honest, the engineer's cabin is a lot less futuristic and looks pretty standard. We do love the dedicated spot for a kettle, for some much-needed hydrogen-powered tea.

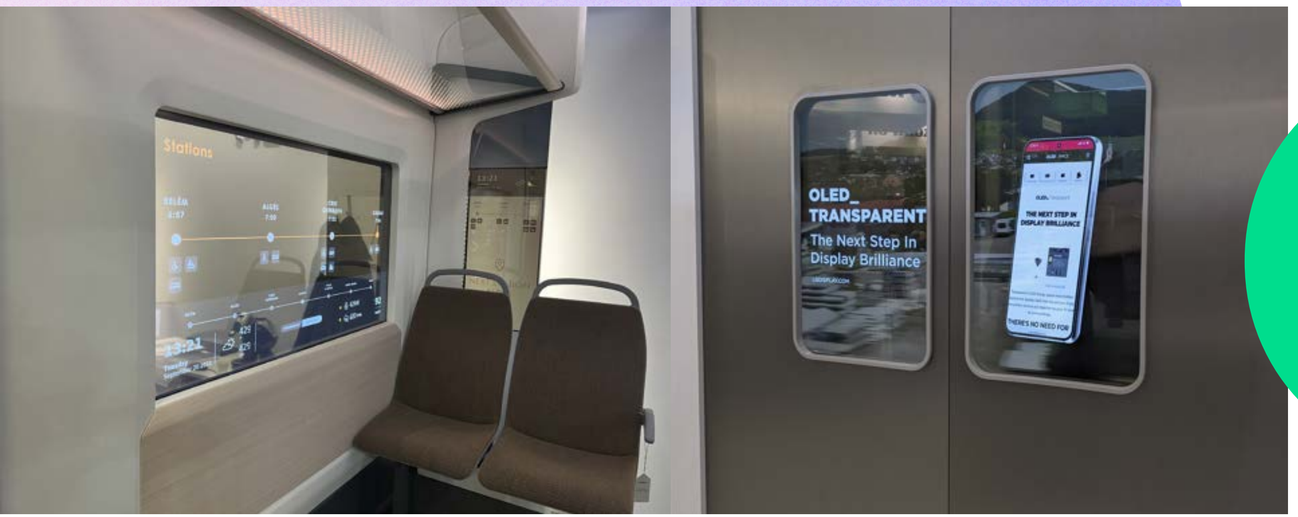
Hydrogen Buses

Interesting innovations

Windows as screens

A major innovation in the train interior, these **high-tech windows** will allow people to stay up to date on their trip, or show advertisements. Screens are already featured on trains and buses, however, now there is the option for transparent screens that provide endless possibilities. **Every window now has the potential to inform or be marketable**. Furthermore, these screens eliminate the need for separate tv screens in the train or bus, which could clean up the interior, providing a calmer environment.





Aside from the ridiculously large wheels, could these driving screens be the future?

LG is testing its screens across multiple forms of transport.

Image: https://www.formtrends.com/designer-fashions-bus-cloaked-lcd-screens/

Autonomous transport

Although they weren't featured particularly heavily, autonomous vehicles are part of the future of transportation. **Einride** is an example of an autonomous transport solution for larger freight. While **Unicaragil** focuses on last-mile delivery. This project is the brainchild of the German government and German technical universities.

Einride

Unicaragil

Sustainable materials

There is still a long way to go to make transportation fully sustainable. But sustainable materials could help to limit the carbon footprint of transport. This Dutch company, **VEAP SHIELD UNITED**, offers roof spoilers made from bio fibers. It would be great to see more companies thinking about sustainable materials, as this was one of the few examples from both tradeshows.

Maglev trains

While everyone is talking about the very promising Hyperloop, maglev trains are offering similar advantages. Tracks are cheaper to build, and while their speed isn't quite as high as the hyperloop, they still manage to be around 3 times quicker than regular trains. An interesting solution comes from the company **Nevomo**, who has created a **maglev train track** solution that can be fitted **alongside normal rails**. Thus, regular and maglev trains could use the same infrastructure.

Picture: https://mobile.twitter.com/FlywheelMedia1/status/1572174587265163266

IAA/Innotrans class of ‘22’

Buses


CITEA


Iveco Bus E-Way 12
100% ELECTRIC
E-WAY


Quantron Cizaris
QUANTRON
CIZARIS
QUANTRON CIZARIS 12 EV


KIEPE ELECTRIC
Test now!


OTOKAR


Polish hydrogen!
NESOBUS


HYDROGEN


CITIVOLT 12
WORLD PREMIER
ISUZU
CITIVOLT 12


LD SB E

Trucks



AUTOMATED AND CONNECTED MOBILITY
BOSCH

TIEVVA

FORD

ETH8

DAF

F-MAX

VOLTA
PROTO 20

BIG

CAPTAIN EV45


NIKOLA

Fuel cell
HYZON
HYZON

CMG
P9
CMG

Trains


BIENVE
SNCF


777 140


4238
Rotem


2405


CAF


H10


22101


DB
563 101-9


KEV
Liepā
262


cargo
ALSTOM

Thanks for meeting with us!

These two days were filled with awe-inspiring designs and innovations that left us feeling totally inspired and grateful we work in such a cool industry. Plus, we had the chance to chat with so many interesting people about everything on show. We can’t wait for next the time!

See you in the future!