THE CLEAN TRAIN OF TOMORROW

CORADIA iLINT

Born of a global movement to reduce greenhouse gas emissions coupled with the desire to offer silent, green alternatives to diesel on non-electrified lines, iLint is the world's first low-floor, fuel cell train.

THE PRINCIPLE

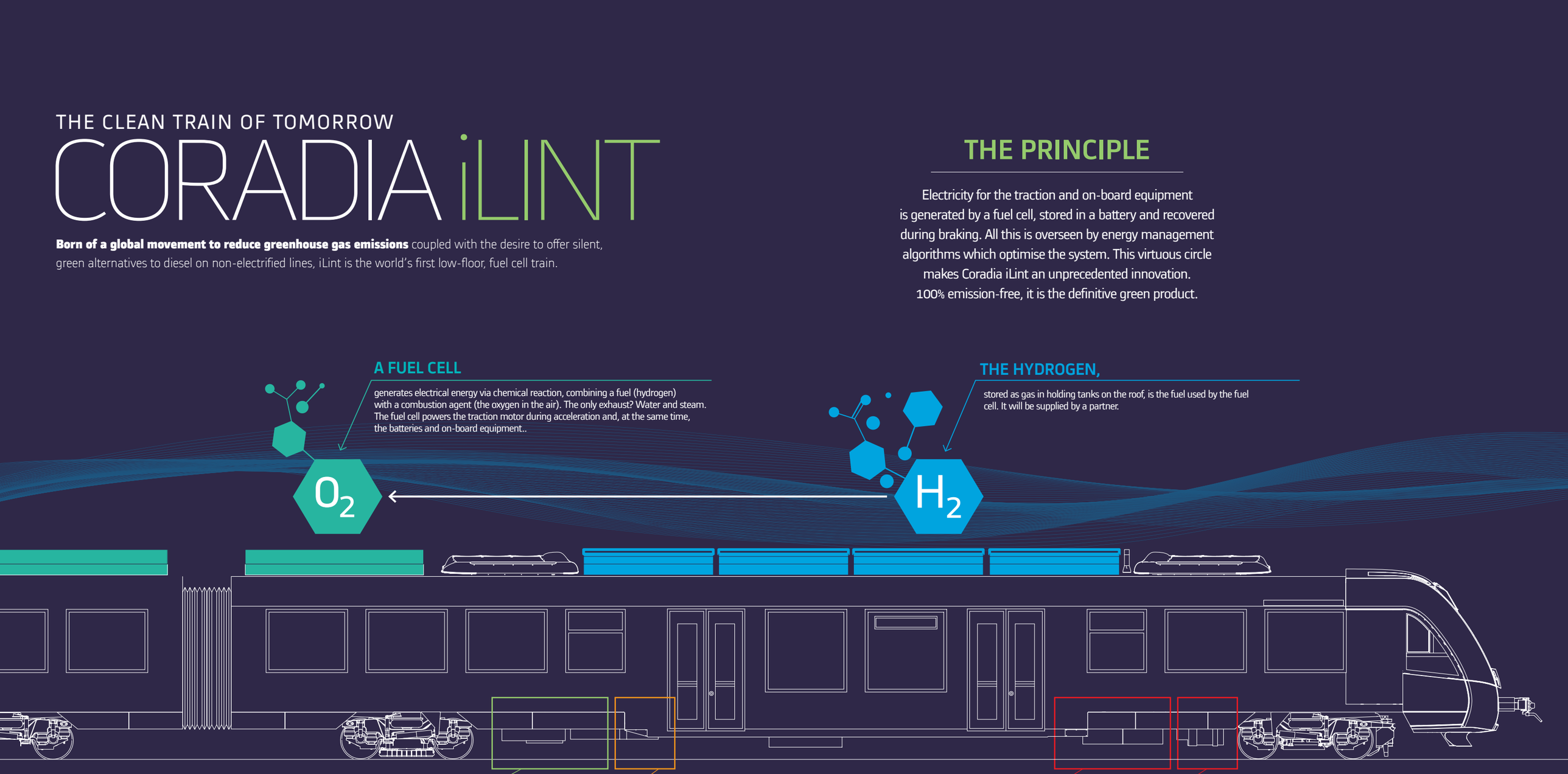
Electricity for the traction and on-board equipment is generated by a fuel cell, stored in a battery and recovered during braking. All this is overseen by energy management algorithms which optimise the system. This virtuous circle makes Coradia iLint an unprecedented innovation. 100% emission-free, it is the definitive green product.

A FUEL CELL

generates electrical energy via chemical reaction, combining a fuel (hydrogen) with a combustion agent (the oxygen in the air). The only exhaust? Water and steam. The fuel cell powers the traction motor during acceleration and, at the same time, the batteries and on-board equipment..

THE HYDROGEN,

stored as gas in holding tanks on the roof, is the fuel used by the fuel cell. It will be supplied by a partner.



LITHIUM-ION BATTERIES

store part of the extra energy produced by the fuel cell as well as kinetic energy recovered during braking. The batteries supply the train under normal operation and can be used to boost the acceleration of the train when necessary.

THE AUXILIARY CONVERTER

converts electrical energy received from the fuel cell or the battery to adapt it to the various on-board equipment (air conditioning, doors, passenger information displays, lighting...)

THE TRACTION INVERTER/ CONVERTER

ensures that the appropriate energy is transmitted between the fuel cell, the battery and the traction motor. It also collects energy generated by the movement of the train during braking, redistributing it to the auxiliary converter and the batteries.

THE TRACTION MOTOR

drives the wheels for acceleration and braking.