

Reaching Net Zero



We have set an ambitious Net Zero commitment which has been validated by the Science Based Targets initiative against a 1.5°C warming scenario. We have made meaningful progress towards our ambition in 2022.

Our roadmap

We have harnessed our ethos of clarity and precision measurement to set our Net Zero target. In 2021, we measured our current emissions footprint across our value chain and modelled the reduction levers available to us to set robust targets, which are stretching but achievable. Our approach is clearly detailed in our Roadmap to Net Zero. In 2022, heavy focus was placed on improving our reporting functionality with plans approved to monitor real time energy use at key manufacturing sites. A further exercise was undertaken to replace estimations in our Scope 3 calculations for PMS, Red Lion and Servomex with actual data. This workstream supported the creation of targeted individual roadmaps for our businesses that replicate the approach already in place at Malvern Analytical and HBK. The deployment of these targeted roadmaps within each of our businesses, aligned to our Group roadmap, will drive our progress. We have committed a minimum of £3 million per annum to fund our ambition.

Our ambition:

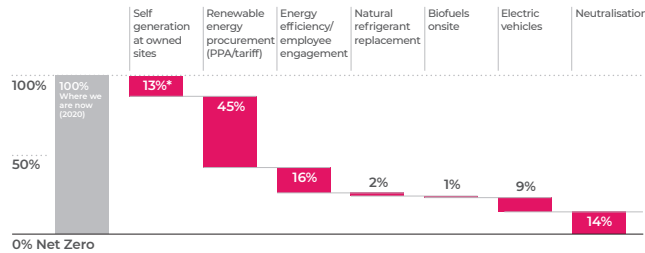
Spectris operations
Net Zero by 2030
(Scope 1 and 2 emissions)

Our value chain
Net Zero by 2040
(Scope 3 emissions)



Read our full Net Zero roadmap at www.spectris.com/netzero

Scope 1 and 2 – Our Roadmap



* In addition to existing self-generation at Malvern and Eindhoven

In 2022, we have made significant progress in the identification and planning of key actions to deliver our Scope 1 and 2 roadmap. With the support of Schneider Electric, we have undertaken a series of detailed energy and emissions efficiency assessments at our key manufacturing sites. These assessments have identified the potential to save over 4,000 tonnes CO₂e and the findings have been turned into site-based action plans with budget approved to take first actions in 2023.

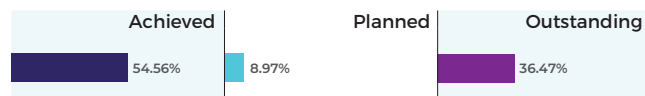
Key activity in 2022

- EV100 membership achieved
- Schneider Electric-led energy and emissions efficiency assessments completed at material emitting sites
- Darmstadt employee and fleet EV charging stations installed
- Renewable energy procurement at key manufacturing sites in Germany and the UK
- Solar capability installed at the PMS site at Wattwil, Switzerland
- PMS owned sites moved to renewable energy contracts. LED replacement programme progressed at Malvern Analytical with 60% of potential lighting now covered by LEDs

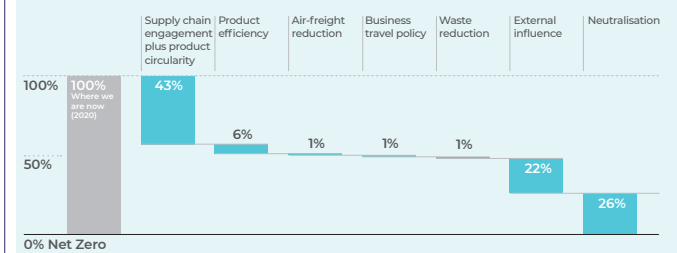
Planned activity for 2023

- Progressing onsite renewable energy generation at HBK (Royston, Darmstadt, Suzhou and Marlborough) and Malvern Analytical (Almelo)
- Energy efficiency plans at HBK Darmstadt including LED motion sensor lighting; oven heat reuse in Darmstadt, and outside air to augment air conditioning
- Installing real time energy monitoring at key sites
- Intelligent lighting installation at Servomex UK

Our progress against our scope 1 and 2 (market-based) emissions as set out in our roadmap



Scope 3 – Our Roadmap



In 2022, we have focused on progressing two key levers of our Scope 3 roadmap – supply chain and product sustainability.

For our supply chain we are partnering with EcoVadis to engage with our suppliers on their transition to a low carbon economy. This work began in Malvern Analytical where in 2022 43.1% of purchasing spend was through suppliers engaged in the EcoVadis programme. In 2023, HBK and PMS will move their supply chain ESG assurance activity to EcoVadis.

For product sustainability, we have projects underway within HBK and Servomex to review different elements of the sustainability of our products. At Servomex we have developed a sustainable product taxonomy with the support of Finch and Beak and we have employed two year in industry engineering students who have now deployed this taxonomy across the whole product range.

“This exercise has provided us with a means of quantitatively assessing the cradle to grave environmental impact of all our manufactured products – including carbon emissions, human toxicity, ecotoxicity, and consumption of scarce mineral resources – from Scope 1, 2, 3 (upstream) and 3 (downstream) perspectives. This will enable us to formulate a granular product roadmap to meeting our Net Zero ambitions.”

Mike Proctor,

Director of Sustainability and Strategic Projects Director, Servomex

HBK have partnered with EcoAct to undertake detailed Life Cycle Assessments on key products and services to better understand how we are supporting our customers Net Zero ambitions and the improvements we can make to optimise this support. The first two assessments were undertaken in 2022 covering the VI-grade simulator and the impact associated with the production and operation of the HBK eDrive Power Analyzer. The case study on the opposite page details the findings of the VI-grade simulator Life Cycle Assessment.

Sustainability continued

Case study

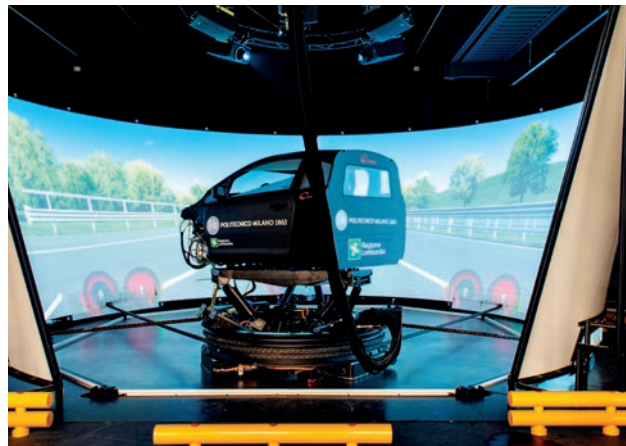
VI-grade driving simulator avoided emissions


EcoAct conducted a Life Cycle Assessment (LCA) to measure the GHG emissions of the VI-grade simulator compared to the avoided emissions from production and operation of physical prototypes.

What is a Life Cycle Assessment?


A LCA is a tool to calculate the environmental impacts of products and services. The LCA approach taken is as defined in ISO 14040 and 14044.

The methodology extends through the product lifecycle – from raw materials, production, distribution, use and end of life.






Save hours



Save tyres



Reduced prototypes

Maximum potential annual avoided emissions:

14,000 tCO₂e

(based on 35 avoided prototypes, 3,500 avoided tyres and 2,200 hours avoided operations developed over 2.5 years)



Avoided operational time

2,200 hrs



Tyres avoided

3,500



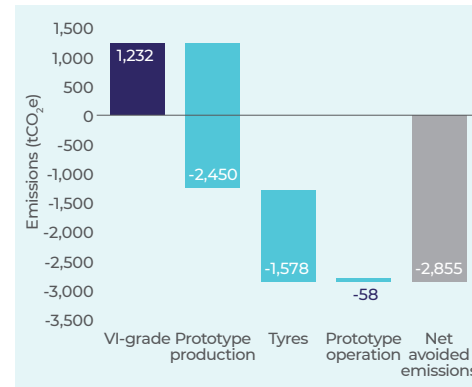
Avoided prototypes

35

Overview

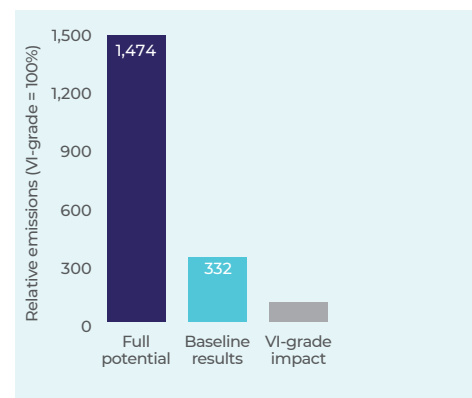
The VI-grade simulator can, at a maximum, avoid emissions by our customers of over 1,474% of the emissions required to produce and operate the simulator.

Net avoided emissions



At full reduction, one developed vehicle model could avoid up to 14,000 tCO₂e

Relative emissions



Methodology

The study covers the production, operation, distribution and disposal steps necessary to create the data required to develop and validate vehicle design. This covers both the VI-grade simulator and avoided prototype production and use.

Source data

In this assessment, EcoAct relied on secondary data from ecoinvent 3.7 for the production and driving of an average medium sized electric or petrol car. For tyres, EcoAct used Dong et al 2021 to estimate emissions.

Key assumptions:

- 30-40 prototypes are traditionally created to produce data for a new vehicle model.
- 2-3x driving time of the simulator at average 50 km/hr speed.
- 3,500 tyres can be consumed during prototype operation.

Potential improvements

While showing the significant avoided emissions present in our current solution, the life cycle assessment also highlights the possible ways to further improve the environmental credentials of our solution. These include optimising the use of compressed air; ensuring the use of renewable energy to power the simulator and reviewing the use of green steel technology. These ideas have been fed back to the R&D team within VI-grade for further exploration.