

# SortFlow AI Mapper

Innovate UK has helped take an idea that could increase profitability and decrease emissions in the recycling sector from a spreadsheet to an AI-powered digital twin.

SortFlow AI Mapper is a user-friendly [app](#) that monitors recycling plants using live data so operators can see in real time how they can improve the efficiency of their plants. The software is designed for material recovery facilities (MRFs, pronounced 'murfs'), where recyclables are sorted and processed, ready for sale on commodity markets.

There is a financial incentive for MRFs to operate as efficiently as possible: the more material recovered, the more they stand to earn from selling their recyclables. The environment benefits too, as recycling produces fewer carbon emissions than if the material was sent to waste.

Not surprisingly, recycling companies are already adopting SortFlow's technology. And the industry is recognising its value: in November 2023, Materials Recycling World magazine granted SortFlow and its project partner Greyparrot its Innovation in Recycling Equipment and Vehicles award for SortFlow AI Mapper.

The accolades are even more impressive considering the app's modest beginnings, as an Excel spreadsheet on founder and CEO Luc Mallinger's laptop.

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Luc Mallinger

Luc said: “What we have now is a digital twin that takes data from optical sorters and AI vision cameras in MRFs and shows not only how efficiently the plant is working but also how profitable it is minute by minute. One of the plants we worked with used AI Mapper to identify a problem in its process that was costing the operator thousands of pounds per shift. Most of that was through losing material that could have been recovered.”

[Biffa](#), a UK leader in sustainable waste management, took part in a pilot study as part of the project. Malcolm Bussey, Biffa's Engineering Director, said: “We were keen to support this project as it gives us unparalleled visibility into our operations, improving our understanding and the performance of the processes involved.

“We expect to realise further efficiencies and improve the quality of the products we are producing off the back of the pilot. With further development the project could lead to the real-time information being used to control the processes of the future.”

Innovate UK's support, through a Smart Grant, was crucial in providing funding when more traditional routes such as venture capital seemed difficult, given the project's niche nature.

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