

Metaspectral Wins Federal Contract to Recycle Plastic Film Using AI

Environment and Climate Change Canada has awarded Metaspectral a C\$150,000 contract to develop a solution to recycle plastic film

Vancouver, B.C. – April 25, 2024 – [Metaspectral](#), a remote sensing software company using deep learning and hyperspectral imagery to advance computer vision, has secured a six-month, C\$150,000 contract from Environment Climate Change Canada (ECCC) as part of the [Canadian Plastics Innovation Challenge](#). The initiative aims to enhance the collection and sorting of plastic film and flexible packaging.

Canada generated approximately [1.4 million tons](#) of plastic film in 2019; less than 4% of this material was recycled. Plastic film includes various flexible packaging materials such as shrink film, stretch film, bags, pouches, tubes, sachets, beverage containers, waste bags, and flexible foam packaging such as polyethylene foam. Plastic film-based materials are the most frequently collected litter on Canada's shorelines.

“Our technology can improve the accuracy and efficiency of sorting using hyperspectral imagery captured by specialized cameras placed over conveyor belts at recycling facilities. By using deep learning to process these images, we make it possible to identify the composition of materials at the polymer level in real-time,” said Francis Doumet, CEO and co-founder of Metaspectral. Historically, plastic film has been difficult to efficiently sort, meaning that materials have either not been recycled at all, or are baled together, creating contamination that results in a low market value for the recycled materials.”

Demand for quality post-consumer recycled plastic is set to grow, with The Government of Canada requiring plastic packaging in Canada to contain at least 50% recycled content [by 2030](#).

“Hyperspectral images make it possible to identify materials by using their spectral signatures, which include up to 300 unique spectral bands instead of the usual three that conventional cameras capture,” said Migel Tissera, CTO and co-founder of Metaspectral. “By using deep learning algorithms, we can use these spectral signatures to rapidly identify and sort materials more accurately than humans or other legacy sorting technologies, making plastic film recycling much more viable and scalable.”

Merlin Plastics, the largest recycling company in Canada, is [already using](#) Metaspectral's technology for advanced robotic sorting of consumer recyclables. Metaspectral has also previously been awarded funding from the [CleanBC Plastics Action Fund](#) for its technology to be used to better sort plastic homopolymer HDPE, which is used in plastic milk containers, helping to distinguish the material from other containers made of copolymer HDPE.

With better sorting, it is possible to keep more plastic out of landfills, and help Canada move toward a circular economy and net zero plastic waste future.

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About Metaspectral

[Metaspectral](#) is a remote sensing software company using deep learning and hyperspectral imagery to deliver the next generation of computer vision software, capable of remotely

identifying materials and determining their composition, condition, abundance, and other properties otherwise invisible to conventional cameras. It achieves this by leveraging hyperspectral sensors and analyzing the data captured in real-time using artificial intelligence (AI) via its scalable, cloud-based platform. The software is already deployed in a range of industries including aerospace, defense, agriculture, manufacturing, and more.

Learn more: <https://metaspectral.com/>