



Project HolyGrail2.0

PIONEERING DIGITAL WATERMARKS FOR SMART PACKAGING RECYCLING IN THE EU

Packaging can be made intelligent with Digital Watermarks

P&G packaging expert Gian De Belder led a coalition of 30+ companies under Ellen MacArthur Foundation's New Plastics Economy Pioneer Projects to solve one of the largest obstacles facing (plastics) recycling: ineffective sorting at Material Recovery Facilities and/or Recyclers

- HolyGrail tested the use of **digital watermark technology** to turn packages into “intelligent objects,” and accomplish sorting benefits deemed impossible for the recycling industry to achieve alone, such as:
 - distinction between food and non-food packaging
 - identifying opaque and difficult to recycle items, including black packaging
 - ability to properly identify multi-layer packaging materials
- Faster, more accurate sorting means more plastics enter the circular economy and offer higher quality recycled material

Benefits beyond efficient sorting

Widespread adoption of harmonized digital watermarking technology has the potential to enable improved packaging waste sorting AND provide additional “smart package” benefits like:

- Inventory and quality management for warehousing, distribution and selling
- Faster check-out at retail
- Scannable product information (ingredients, how to use, etc.) for easy consumer access
- Tracking materials recovery at recyclers

EFFECTIVE SEPTEMBER, 2020, HOLYGRAIL2.0 IS SUPPORTED BY 85+ COMPANIES UNDER THE AUSPICES OF AIM.

The Digital Watermarks Initiative HolyGrail 2.0—facilitated by AIM, the European Brands Association—is a pilot project and the next iteration with the objective to prove viability of digital watermark technologies for accurate sorting and consequently higher-quality recycling, as well as the business case at larger scale. The member companies include many of the world’s biggest brand owners* who believe this collaboration can bring real solutions to market. De Belder is chairing the Leadership Team of the Initiative, that plans to use a 3-phase market entry approach with the aim to enter European test market(s) by late 2021/early 2022.

***You can find all current members listed [HERE](#)**

FOR MORE INFORMATION

[BBC News Story](#) | [Packaging Europe Sustainability Award Story](#) | [NPEC Pioneer Project Report](#)
[Digital Watermarks Initiative—website](#) | [INTRODUCTORY VIDEO](#)



DIGITAL WATERMARKS AS SEEN BY THE CAMERA, NOT THE HUMAN EYE



LOOKS LIKE THIS

The same information contained in the 2D barcode is difficult for humans to see and is replicated hundreds of times across a package.

PERFORMS LIKE THIS

This illustration shows an idea of the replicated code performance, but there would be minimal to no visible impact to an average consumer.

