Position Paper

Plastics Europe views on how digitalisation can improve plastics circularity

Plastics Europe believes that increasing the use of digital technologies is among those innovations that could significantly improve plastics circularity by supporting and simplifying waste collection and sorting systems and by increasing the transparency of material flow in the value chain. These digital tools may help provide the required information that are needed to reach the highest collection and recycling rates of plastics materials.

Several digitised technologies are under development that have the potential to increase sorting efficiencies as well as communicating with all parties in the supply chain through web-based and "cloud" interfaces. Developments in this area include for example, digital watermarking, bar coding, etc that are currently being trialled at a consumer level by brand-owners, retailers, waste management companies and municipalities. Although such technologies are new to market, they are generating considerable interest as they can allow for the rapid identification of the article's material, their application, and compliance (e.g. food contact). Some of the technologies will also be able to provide information on the date of manufacture/sale as well as informing the end-user if and where the article can be recycled in their community. Digital watermarks / bar code labelling approaches are typically read by high resolution cameras (such as those found in modern phones and other devices) and are able to provide real-time information. They may be deployed as visible or UV readable watermarks on product labels or indeed on the articles themselves and are now entering the market through consumer pilot launches.

1. *Plastics Europe supports the use of digital tools to improving consumers information and increasing communication and transparency along the value chain and in particular for waste management operators and recyclers to improve collection, sorting and recycling*
2. *To prevent misuse of such technologies, there must exist the capacity for independent overview and verification*
3. *There is huge potential for the use of such technologies to provide customer related information which can be further enhanced by geo-tagging the location for information requests, e.g. if and where to recycle, etc. Any such technologies must comply with GDPR with the options for customers opt-in if data of an identifiable information is sought, e.g. if used to reclaim a container deposit that was automatically credited to a bank or store account*
4. *When the Commission establishes mandatory reporting obligations for specific products categories, e.g. via the product passport, it is key that these provisions also consider digital*

solfrom; both, the ones to be introduced in the future and those which are already entering the market. These digital technologies provide the means to minimise business administrative and economic burdens as well as preventing duplication in reporting information.

5. The information provided by such labelling greatly enhances the information available to sorting facilities informing them of the type of material, its application, food/non-food use, brand and retailer. Such information will allow for materials to be increasingly sorted as recycling infrastructure becomes available e.g. flexible packaging, PS, etc.

6. Such digital information will follow the material all the way through to individual bales so a recycler, through the use of a digital code, will be able to track the provenance of the material they are buying, and identify the origin of the recycled and/or bio-based content in a specific item. A digital tool can also provide information on the chain of custody model used to trace the flow of recycled/biobased material through the value chain resulting in the associated environmental claims. Plastics Europe call for the use of the Mass Balance with credit method as reporting methodology and such digital products can further strengthen the chain of custody for chemically recycled plastics.

7. These technologies can provide the real-time reporting of waste data that can easily be interrogated and verified. However, this must be congruent with each stakeholder or party in the supply chain and other digital labelling schemes thereby allowing chain of custody and waste reporting to be delivered efficiently to a common platform. It is important that in the spirit of free enterprise that such information platforms can accommodate new technologies in the future that provide similar functions

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November 2022