

## Use Case Study - EEE recyclers

# Improved granularity/dismantling in consumer electronics recycling

<b>Primary Actor</b>	Recyclers of electronic and electrical equipment
<b>Secondary Actors</b>	
<b>Existing Practice</b>	<p>In the consumer electronics sector, companies already have well established systems for obtaining information on presence of SVHCs in articles/components e.g. through positive declaration systems where articles are declared to be SVHC-free, or through negative declaration systems where suppliers must request permission to use certain substances.</p> <p>Some companies operate take-back systems for their own products. Their existing systems allow them to identify where SVHC are present and to dismantle products to a large degree, identifying and separating those containing SVHC as appropriate.</p> <p>However, information on the presence of SVHC is rarely passed on to consumers and recyclers. One stakeholder interviewed indicated that in 10 years of experience they had never seen communication on safe use instructions for SVHC in articles, because the presence of SVHC in their products would not be acceptable to consumers.</p> <p>The consumer electronics industry largely has a production base that is located outside the EU.</p>
<b>Challenges related to substances of (very high) concern in waste</b>	For recyclers, the input streams are usually mixed, in terms of types of products and the manufacturers from whom they originate. It is therefore very difficult to identify which components may contain SVHC, leading to processes where there is little dismantling, and only e.g. shredding of plastics. This limits the quality and value of recycle produced.
<b>Future Practice with the new database</b>	<ul style="list-style-type: none"> <li>Consumers should be able to identify the presence of SVHCs in specific products and components within them (e.g. if internal or external with potential for exposure).</li> <li>Recyclers will need more detailed information to set up their electronics recycling process taking into account the incoming waste stream. Companies will hopefully be able to consider a whole stream e.g. household electronics, and then identify the specific SVHCs they can expect to be present.</li> </ul>
<b>Potential benefits of this use</b>	<ul style="list-style-type: none"> <li>Recyclers should be able to <b>plan and adapt</b> their <b>treatment technologies</b> to identify SVHC-containing components, and to <b>separate products with a greater degree of disaggregation. This should realise greater value from the recovered materials</b> (due to greater purity and product quality).</li> <li>This should also lead to <b>increased potential for automation of recycling processes, leading to reduced worker exposure</b> to SVHCs and other hazards linked to the recycling process.</li> <li>For consumer electronics firms, there could be a benefit from having information from other companies in the sector more readily available e.g. to determine whether other original equipment manufacturers (OEMs) report the same SVHC when they use the same suppliers for common components (e.g. products such as batteries are often the same across different brands and companies). This will help to <b>identify the validity of information being passed through the supply chain.</b></li> </ul>
<b>Incentives and barriers for this use</b>	<ul style="list-style-type: none"> <li>An incentive for consumer electronics OEMs to provide information to the database is linked to the administrative burden currently faced through responding to automated requests from consumers on the presence of SVHC in articles. For example, barcode scanning apps which either identify an SVHC or generate a letter to the manufacturer to request information lead to significant time expenditure in some cases..</li> </ul>

- There would be benefit in that, provided the products are linked to the ECHA database, the question could be answered automatically, rather than requiring an individual response by the OEM, hence reducing the associated administrative burden.

#### **Presentation of information in the database to support his use**

- A recycler may want to look at e.g. 'computers' in information from the database (regardless of manufacturer), and then to identify common components across different computers that have been known to contain SVHCs.
- Linking information present to existing systems e.g. IPC 1752 has been suggested as useful (this is a standard reporting format for data exchange between supply chain participants).
- For this sector, it would be of benefit to be able to search the database by product category, then by component, and possibly also according to which OEM or supplier is relevant. At each of these levels, identification of specific SVHC would be useful.
- It would be useful to summarise some of the TARIC categories at a higher level e.g. tax codes and tariff lists can be quite detailed so a quick means to get to e.g. "consumer electronics" would facilitate data entry, rather than requiring people to scroll through hundreds of categories (i.e. a text search function would be important).
- A summary view at the product level, with information shown on 1 page for a given product would be useful. This could include what component the SVHC is found in, as well as which material category, and safe use instructions, if any.

This use case is an extract of a report that has been prepared under contract ECHA/2018/338. Further background is provided in the full report.

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