B2B IT Studies in France and the UK

European Commission & Digital Europe Workshop on All WEEE Flows

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Introduction

• A study to give a clear understanding of the current market for end-of-use B2B IT in France and the UK
• The focus was the market itself, how it operated and to what scale
• The report presented flows and estimated quantities of collections for recycling, reuse and export and then related them to the WEEE Directive collection targets
• At the time, a general methodology was shared for potential inclusion in the United Nations University WEEE generated target
Approach

• Desk based research and interview data from key industry players were used to inform the study.
• The desk based research included publicly available databases of mandatory reporting, academic studies, policy and private sector literature.
• Interviewees were chosen based on their position in the reuse supply chain.
• Seven French organisations from across the recycling and reuse supply chain for EEE were interviewed. This included an industry association, representing 48 reuse organisations (representing a third of B2B IT equipment arising), and two of the largest WEEE recyclers in France.
• 12 organisations, accounting for 15 Kt B2B IT collection and treatment (circa 15% of B2B IT sold in 2010) were surveyed in the UK, as well as a large metals recycler. Six brokers of reuse IT were also surveyed. The interviews are representative of the most active market segments for IT reuse.
FRANCE

Study outputs and analysis
Market structure

- **WEEE reported under the WEEE Directive**: 14 Kt
- **Recyclers**: 50.7 Kt
- **International materials market**: 37.5 Kt
- **Energy recovery**: 13.5 Kt
- **Domestic reuse**: 17.6 Kt
- **Europe**: 7 Kt
- **Africa**: 3 Kt
- **Rest of world**: 0.4 Kt
- **Landfill**: 11 Kt

**B2B IT arising (2013)**: 90 Kt

**WEEE not reported under WEEE Dir.**: 35.6 Kt

**Reuse Collection**: 29.4 Kt

**Reuse**: 28 Kt

**Export**: 10.4 Kt

**0.3 Kt**
**Market structure**

- B2B IT was either collected for recycling or reuse, inadvertently landfilled (or illegally exported) or disposed via energy recovery

- Overall 42% (37.5 Kt) of B2B IT was recycled as WEEE
  - Approximately 16% (14 Kt) of B2B IT was recycled as WEEE reported under the WEEE Directive
  - Approximately 26% (23.5 Kt) of B2B IT was recycled as WEEE not reported under the WEEE Directive (22.4 Kt is sent directly for recycling and 1.1 Kt is sent as rejects from reuse organisations)

- Overall 31% (28 Kt) of B2B IT was reused
  - Approximately 19.5% (17.6 Kt) were reused domestically
  - Approximately 11.5% (10.4 Kt) were exported for reuse; 7 Kt were exported to Europe and 3 Kt were exported to Africa.

- It is estimated that 15% (13.5 Kt) of B2B IT was disposed via energy recovery, this flow comprised units rejected for reuse and sent for treatment by recyclers

- There were no published estimates of accidental landfill or illegal exports of B2B WEEE in France, however such practices had been documented and it was assumed to have a comparable rate to the UK (12% or 11 Kt)
Reuse

- 29.4 Kt of units were collected for reuse and 5% of these were rejected (these units were either recycled or disposed via energy recovery)
  - Units that were beyond repair or deemed unsaleable were rejected
  - There were 48 reuse organisations in France, operating regionally
  - Many reuse organisations operated as social enterprises or as part of rehabilitation programmes
- Recycled materials were sold on the international materials market
- 63% (17.6 Kt) of reuse units were sold or donated in France, either to consumers or businesses and 37% (10.4 Kt) were exported
  - Markets for B2B IT in France included second hand shops, computer shops, consumers (often via the internet) and brokers (who focus on domestic sales)
  - 67% of exports were to destinations within Europe, 30% to North Africa and the remaining 3% to the rest of the world
- Exports accounted for 37% of reuse activities and 12% of B2B IT arising in France, this was lower than the UK (there were fewer reuse based operators and they were more regional)
Implications for collection targets

• Official reporting at the time suggested that 14 Kt of B2B IT were collected as WEEE in France and 92 Kt of EEE were put on the market (2012 data relevant to 2014 compliance)
  • Approximately 76% of B2B IT arising was collected for reuse in France, or as WEEE for recycling
  • \( \frac{37.5 \text{ Kt WEEE recycled} + 17.6 \text{ Kt domestic reuse} + 13.5 \text{ Kt energy recovery}}{90 \text{ Kt arising at end-of-use}} = 76\% \)
  • This is greater than the 16% that was officially reported for the conventional WEEE system (14 Kt)
• A further 12% of B2B IT arising was exported for reuse
• As 92 Kt were put on the market, the recovery rate was 75%, exceeding the 65% target for 2019
• 10.4 Kt of B2B IT exported for reuse were unavailable for collection or treatment, so 79.6 Kt were actually generated in France
  • \( 90 \text{ Kt B2B IT arising} - 10.4 \text{ Kt exports} = 79.6 \text{ Kt actually available} \)
  • 86% of available B2B IT arising was collected in France, exceeding the 85% WEEE arising target by 1%
  • \( \frac{37.5 \text{ Kt WEEE recycled} + 17.6 \text{ Kt domestic reuse} + 13.5 \text{ Kt energy recovery}}{79.6 \text{ Kt}} = 86\% \)
UK

Study outputs and analysis
Market structure

• B2B IT was either collected for recycling or reuse, inadvertently landfilled (or illegally exported) or disposed

• Overall 31% (31 Kt) of B2B IT was recycled as WEEE
  • Approximately 4% (4 Kt) of B2B IT was recycled at UK AATFs as obligated WEEE
  • Approximately 27% (27 Kt) of B2B IT was recycled as non-obligated WEEE at UK AATFs. 24 Kt of this was equipment collected, but then rejected, by reuse organisations. 3 Kt of this material was directed to AATFs by businesses or local authorities directly.

• Overall 56% (56 Kt) of B2B IT EEE at end of use was reused
  • 39% (39.2 Kt) was reused domestically
  • 17% (16.8 Kt) was exported for reuse.

• Approximately 13% of all B2B IT EEE was sent to landfill. It is possible that a proportion of this tonnage was illegally exported for landfill outside of the UK.
Reuse

- Approximately 80 Kt of B2B IT EEE at end of use were collected for reuse
  - 32 Kt of the units were processed by the 4-5 largest reuse organisations, while the remaining 48 Kt were processed by small reuse organisations and charities
  - 24 Kt of the units collected for reuse were actually rejected by these organisations, either because they were beyond repair or because there was no perceived market for them
- It was estimated that half of reuse equipment was sold or donated directly by the reuse organisations to business and household users
  - 90% of this equipment was reused in the UK, markets were accessed by companies own websites, eBay and similar or via direct sales (the remaining 10% was exported for sale or donation outside of the UK).
- The other half of the reuse equipment was sold to intermediary brokers, who then resold the equipment both in the UK (estimated to be 50% sales) and internationally (also estimated to be 50% sales)
  - These brokers also imported units for re-export, with even small organisations working internationally
  - Exports from reuse organisations and brokers accounted for approximately 30% of reuse activities, or 17% of total B2B IT collected at end-of-use
  - Markets for exports included Spain, Italy, Eastern Europe, Africa and South America
**Implications for collection targets**

- Official reporting at the time suggested that 4 Kt of B2B IT were collected in the UK as WEEE, none were exported by Approved Exporters and 101 Kt were put on the market.
- Approximately 70% of B2B IT arising was collected, for either reuse or as WEEE for recycling, in the UK.
  - \( \frac{(31 \text{ Kt WEEE recycled at AATFs} + 39.2 \text{ Kt domestic reuse})}{100 \text{ Kt end-of-use arisings}} = 70\% \)
  - This was much greater than the 4% in the official reporting for the conventional WEEE system (4 Kt).
  - The collection of B2B IT for recycling or reuse exceeded the 2019 collection target of 65% of WEEE put on the market by 4-5%.
  - A further 17% of B2B IT arising was exported for reuse.
- 16.8 Kt of B2B IT were exported for reuse, approximately 83.2 Kt of B2B IT was actually available for collection and either reuse or treatment in the UK.
  - \( 100 \text{ Kt arising at end-of-use} - 16.8 \text{ Kt exports} = 83.2 \text{ Kt} \)
  - 84% of available B2B IT arising was collected.
  - \( \frac{(31\text{Kt WEEE recycled at UK AATFs} + 39.2\text{Kt domestic reuse})}{83.2 \text{ Kt available for collection}} = 84\% \)
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