White Goods Repair for a Circular Economy

Irish Repair Data

June 2022

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Repair by numbers: white good sector repair data

- Study conducted by dss⁺ on behalf of WEEE Ireland, ERP, and the White Goods Association

- Methodology replicated from previous work at EU level with APPLiA (European home appliance manufacturers association)

- Survey administered in February/March 2022 to 22 companies, gathering 2020 data for the Republic of Ireland

- The survey completion rate was 54.5% which we estimate is around 65% of the LHHA and C&F Irish POM
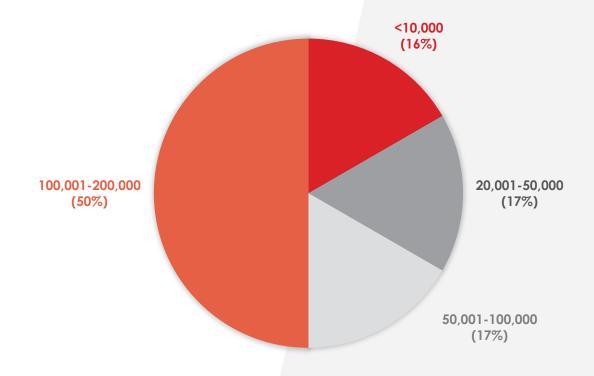
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Annual sales in 2020

- The total number of units placed on the market in 2020 reported by the companies who participated in the survey was around **1,114,880.**

- The number of units placed on the market was quite homogeneous between members, with 50% of the companies surveyed reported placing between 100,001-200,000 units.

NUMBER OF UNITS PLACED ON MARKET

<10,000 (16%)

20,001-50,000 (17%)

50,001-100,000 (17%)

100,001-200,000 (50%)
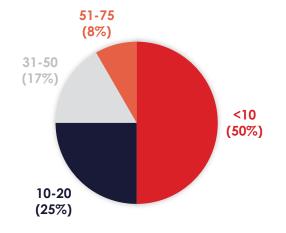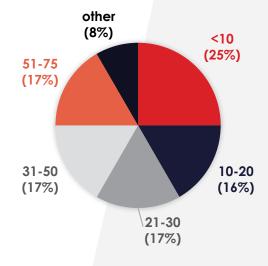
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Job creation in the repair & reuse sectors: staff employed

- The first section of the survey focused on the job creation and the partnerships with independent and non-exclusive after-sales repair and service functions
- Graph 1, shows the breakdown of staff directly employed by WEEE Ireland/ERP members in the sector; a conservative estimation of the 12 companies the participated in the survey adds up to close to **202 full time employees**.
- When looking at the total number of employees of external service providers (Graph 2), we have another **298 full time employees** (this figure does not consider potential double-counting in the case of non-exclusive partnerships).
- If we consider both figures, we can estimate approximately **500 full time employees** are engaged in repair and after-sales services across Ireland for the WEEE Ireland/ERP members interviewed.

Graph 1: STAFF DIRECTLY EMPLOYED (FTE)

51-75 (8%)
31-50 (17%)
<10 (50%)
10-20 (25%)

Graph 2: STAFF EMPLOYED BY CONTRACTORS (FTE)

other (8%)
<10 (25%)
51-75 (17%)
31-50 (17%)
21-30 (17%)
10-20 (16%)
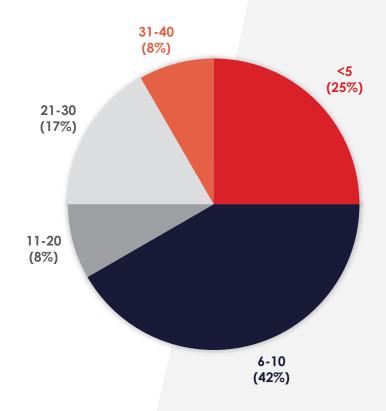
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Job creation in the repair & reuse sectors: partnerships

- Repair and after-sales services are also creating jobs and opportunities for other companies across Ireland, especially considering independent companies which are sometimes contracted or in partnership agreements with producers.

- The graph shows the breakdown of the total number of repair and after-sales partners, including exclusive partners as well as non-exclusive service centres, leading to an estimated **total 151 companies** involved (this figure does not consider potential double-counting in the case of non-exclusive partnerships).

PARTNERSHIPS WITH COMPANIES

31-40
(8%)

<5
(25%)

21-30
(17%)

11-20
(8%)

6-10
(42%)
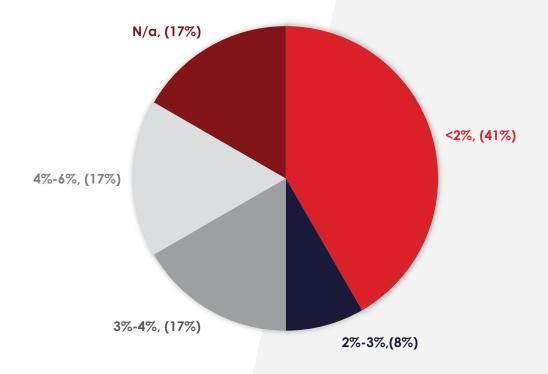
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Job creation in the repair & reuse sectors: turnover

- All the members reported a non-neglectable role for repair and service in the total turnover of the company. The weighted average is equal to **2.45% of the total turnover** and in few cases between 4%-6% of the total turnover (2 members, representing 17% of the total interviewed companies). Two companies did not disclose this data ("N/a" in the graph)

SHARE OF TURNOVER FROM REPAIR AND SERVICE

N/a, (17%)

<2%, (41%)

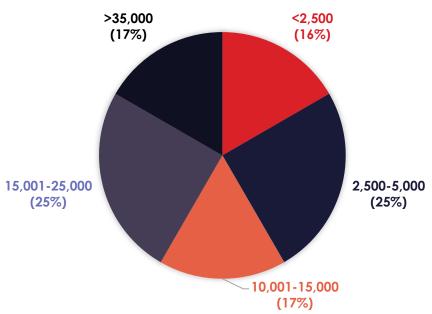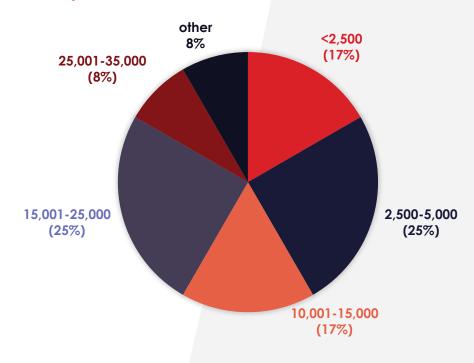4%-6%, (17%)

3%-4%, (17%)

2%-3%,(8%)

Repaired products

- The second section of the survey focused on the products repaired in 2020. Graph 1 below shows the total number of products (in and out of warranty) that had required repair in 2020. The total estimated number of products that requested repair from the companies surveyed in Ireland amounts to **138,746.**
- Out of the total number of repair requests received, Graph 2 shows the breakdown of how many products were actually repaired by each member. The number is estimated to be, in total, **132,767** and **represents 95% of the actual requests**.

Graph 1: NUMBER OF PRODUCTS WITH REPAIR REQUEST

>35,000 (17%)
<2,500 (16%)
2,500-5,000 (25%)
10,001-15,000 (17%)
15,001-25,000 (25%)

Graph 2: NUMBER OF PRODUCTS REPAIRED

other 8%
25,001-35,000 (8%)
<2,500 (17%)
2,500-5,000 (25%)
10,001-15,000 (17%)
15,001-25,000 (25%)

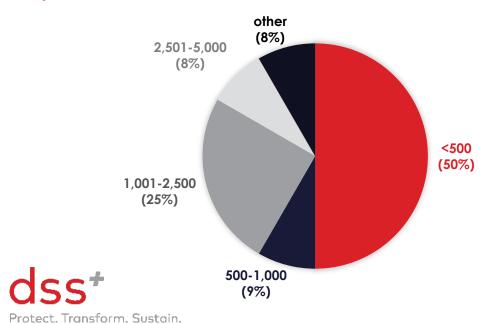**dss⁺**
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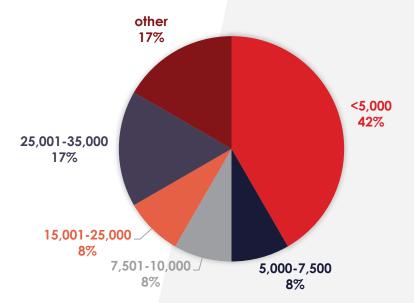
Replacements & spare parts shipped

- Graph 1, shows the number of repair requests interventions that led to replacement in 2020 (excluding recalls)

- The proportion of requests for repairs that lead to replacement represents only a small fraction of total requests **(5%)** and amounts to approximately **9,800 products.**

- As shown in Graph 2, almost half of the members interviewed shipped less than 5,000 spare parts, but 2 companies (17%) shipped between 25,000 and 35,000 spare parts

Graph 1: NUMBER OF REPAIR REQUESTS LEADING TO REPLACEMENT

other
(8%)

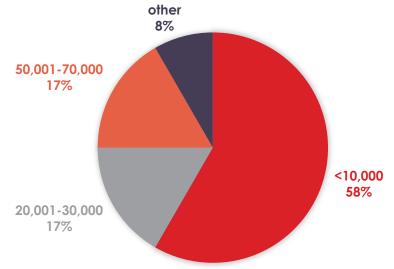2,501-5,000
(8%)

<500
(50%)

1,001-2,500
(25%)

500-1,000
(9%)

Graph 2: NUMBER OF SPARE PARTS SHIPPED FOR REPAIR

other
17%

25,001-35,000
17%

<5,000
42%

15,001-25,000
8%

7,501-10,000
8%

5,000-7,500
8%

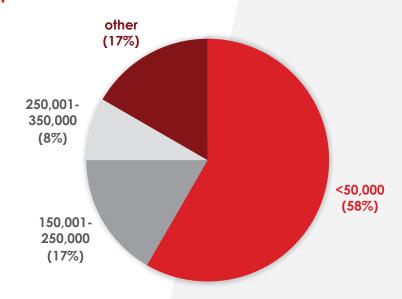**dss⁺**
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Stock Keeping Units (SKU)

- WEEE Ireland and ERP's members handled or kept in stock spare parts for current and old models of their products. The number of different types of spare parts handled or stored varies greatly between companies, ranging from less than 10,000 units (for 58% of members) up to over 70,000 units per member (Graph 1).
- The total number of types of Stock Keeping Units (SKUs) handled or stored as inventory was reported by members at **197,851 units**, with each member stocking on average 17, 986 different types of units. In terms of the total number of units of spare parts handled or stored as inventory, the average value is **86,575 units**, while the numbers per company vary widely and range up to 350,000 units (Graph 2).

Graph 1: NUMBER OF TYPES OF SKU HANDLED OR STORED
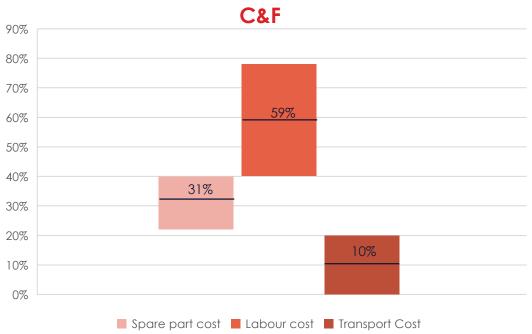
other
8%

50,001-70,000
17%

20,001-30,000
17%

<10,000
58%

Graph 2: TOTAL NUMBER OF SKU HANDLED OR STORED

other
(17%)

250,001-
350,000
(8%)

150,001-
250,000
(17%)

<50,000
(58%)

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Repair costs

- The last section of the survey focused on the cost breakdown for repair activities, distinguishing between cost for spare parts, labour costs, and transport cost.

- The data has been aggregated to represent as a minimum 3 companies' data points for each cost component.

- Each member who filled in the survey provided % values for the cost components of their specific types of appliances, which we proceeded to group by 3 types (C&F/LHHA/SHA). Given that the % values for each cost component were varying considerably, the figures below shows the **minimum, maximum, and weighted average cost**.
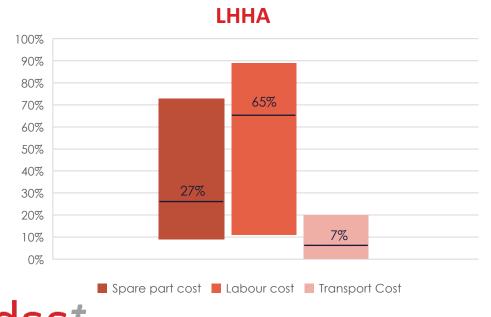
C&F

For **Cooling and Freezing (C&F),** the cost of spare parts, labour, and transport varies significantly, with labour costs representing on average the biggest component (59%) and transport costs the lowest (10%).

Legend: ▪ Spare part cost ▪ Labour cost ▪ Transport Cost

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Repair costs

- For **large household appliances (LHHA),** the products considered included dishwashers, ovens, washing machines and cookers. The cost component having the major impact is labour (average of 65%), followed by the cost of spare parts (average of 27%), and finally transport (average of 7%).

- For **small household appliances (SHA),** labour's cost contributed the most to the total cost (45% on average), followed by transport cost (35%) and spare parts cost (20%).

LHHA

100% | 90% | 80% | 70% | 65% | 60% | 50% | 40% | 30% | 27% | 20% | 10% | 7% | 0%

■ Spare part cost ■ Labour cost ■ Transport Cost

SHA

60% | 50% | 45% | 40% | 35% | 30% | 20% | 20% | 10% | 0%

■ Spare part cost ■ Labour cost ■ Transport Cost

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Repair costs

- The chart shows the breakdown of costs for **washing machines, cookers, and dishwashers**. The average costs were calculated using average data from all companies that supplied information about each appliance type. For all 3 appliance types, **labour costs tent to represent the highest share of total costs** (between 65% and 79%), followed by spare parts costs (relatively homogeneous between the appliances), and transport costs (on average representing less than 10%).

BREAKDOWN OF REPAIR COST PER APPLIANCE

Chart data:
- Washing Machine: 7% transport, 67% labour, 26% spare parts
- Cooker: 1% transport, 79% labour, 21% spare parts
- Dishwasher: 11% transport, 65% labour, 25% spare parts

Legend: ■ Share spare parts cost ■ Share labour cost ■ Share transport cost

Conclusion: general remarks

- The survey results shows the importance of repair & reuse sectors in job creation in Ireland in 2020, with a total **500 full time employees** engaged in repair and after-sales services across Ireland, and 151 partnerships created.

- Of the total number of products with a repair request, **almost all (95.6%) where actually repaired**, with less than 10% of repair requests interventions that led to replacement.

- For C&F and LHHA, **labour costs tended to be the largest contributors** to the total cost of repair, followed by spare parts costs and transport costs. For SHA, labour costs were again the highest, but were followed by transport costs and lastly by spare parts costs.

- The **Covid-19 pandemic** influenced the repair activities compared to previous years:
    - 40% of companies surveyed experienced an increase in repair activities explained by increased used of appliances as people where working from home or lost jobs and had no option to return the appliance to the retailer
    - 30% of companies surveyed experienced a reduction of repair activities due to lockdowns forcing companies to close, concerns over health and safety, supply chain issues, and delayed response times

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Conclusion: extrapolation to the Irish market

- Based on the total number of large home appliances put on the Irish market in 2020, we proceeded to extrapolate the survey results to the full size of the Irish market.

- Projecting the survey findings to the Irish market gives the following results:

Total number of job created in the repair & reuse sectors	Total number of repair and after-sales partners	Total number of products with repair requests
790	240	218,900

Total number of products repaired	Total number of types SKUs handled or stored as inventory	Total number of SKUs handled or stored as inventory
209,400	312,000	1,366,000

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Conclusion: comparison to European market

- To understand how survey findings compared with European data, we confronted survey results with 2019 findings from APPLiA (Association for Home Appliances in Europe) survey (data from 2018).

- We used the total number of units placed on the market as reference data point for the comparison and confronted the results for selected findings (number of jobs, partnerships, number of repair requests, and products repaired)

- Compared to EU data, in Ireland we found:

Total number of job created in
the repair & reuse sectors

2.5 times higher

Total number of repair
and after-sales partners

Almost equivalent

Total number of products
with repair requests

2.5 times higher

Total number of products
repaired

2.6 times higher

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- Stakeholder Engagement

Focus on implementation and building capabilities for execution. Training, organizational journeys and the technology capabilities to accelerate

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Contacts

Federico Magalini
Director, Sustainability Services UK & Italy
federico.magalini@consultdss.com

Marco Meloni
Senior Consultant
marco.meloni@consultdss.com

Sofia Fedato
Project Manager
sofia.fedato@consultdss.com

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