Pro-Circular Behaviours and Refrigerated Display Cabinets: Supporting Resource Efficiency in the Retail Refrigeration Sector

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Survey
What do you think about remanufactured RDCs?

PART 1
Please, complete it now

PART 2
Please, complete it after
Outline
What this presentation is about.

Circular Economy
Remanufacture
Remanufacturing examples
Benefits of remanufacturing
Refrigerated Display Cabinets

Background.

Long-life materials
70% steel
500kg

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>NEW RDC CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galvanised steel</td>
<td>277.5 kg</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>77.68 kg</td>
</tr>
<tr>
<td>Polyurethane</td>
<td>27.6 kg</td>
</tr>
<tr>
<td>MDF</td>
<td>44.8 kg</td>
</tr>
<tr>
<td>Glass</td>
<td>44 kg</td>
</tr>
<tr>
<td>Copper</td>
<td>11.5 kg</td>
</tr>
<tr>
<td>Aluminium</td>
<td>18.2 kg</td>
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</tbody>
</table>
Circular Economy
Why is it important?

Waste reduction
Embodied Carbon
Rемануфактура
Как она отличается от рефабрishment?

На месте рефабрishment:
Косметическое обновление
Технический улучшение
75% частей продолжают
Часто практикуется
Remanufacture
How is it different from refurbishment?

Factory-remanufacture:
Manufacture
Technical upgrade
Increased efficiency by 40%
68% parts remain
Very rarely practiced

old & broken RDCs
are taken to a factory
are remanufactured
are ‘as-good-as-new’

RCUK Centre for Sustainable Energy Use in Food Chains
1st International Conference on Sustainable Energy & Resource Use in Food Chains
Examples of remanufactured cabinets.

11 year old before recoated, new lighting, fans, coil after
Examples
Which RDC is new and which one was remanufactured?
Benefits of remanufacture in the UK.

**FACT#1** **3,050 new jobs** could be created to annually remanufacture 58,000 RDCs.

**FACT#2** In 2016, UK retailers spent **£72.4 million** on RDCs imported from outside the UK (EU and non-EU). This represents the purchase of **250,000 units**.

**FACT#3** In 2015 there were **81,000 RDCs** in the UK at their end-of-life available to be remanufactured. Due to a low demand for remanufactured RDCs, they were disposed of and generated **51,000 tonnes of waste**.
Benefits of remanufacture in the UK.

**FACT#4** Buying remanufactured RDCs can help the retailers to achieve their Corporate Social Responsibility goals.

**FACT#5** Remanufactured RDCs are indistinguishable from new ones and can cost up to 30% less.

**FACT#6** The production of 50 new RDCs can generate 21,100 kg of CO$_2$e. While carbon emissions associated with remanufacture of the same type RDCs are 10,250 kg CO$_2$e. Remanufactured RDCs have 51% less carbon footprint than new ones.
Survey
What do you think about remanufactured RDCs now?

PART 2

Please, complete it now