


≡ restart ⏻ ≡





**We are a people-powered social
enterprise fixing our
relationship with electronics**

**We have collected data
on barriers to repair —
over 15,000 repairs**

Impact across the Restart network



18,584

participants



34,407

hours volunteered



1,382

parties thrown



22,020 kg

waste prevented



333,906 kg

CO₂ emissions prevented

OPEN REPAIR ALLIANCE

restart 

REPAIR CAFE


anstiftung

 FIXIT
CLINIC

 IFIXIT



Open Repair Data Standard

We collect repair data

At community repair events



Name	Item	Problem	Resolution	Fix
Catherine	iPad	Digitiser Cracked	Force	⊖
Mike	Toshiba Laptop	Screen image problem	Screen/Force	⊖
Patrick	Printer	No lights - nothing	Check/Force	⊖
Anna	Food Processor	Lights work but no start	Advice given	⊖
Rebecca	Alkon TV	Possibly blown capacitors (lost brought photos)	Advice given	⊖
Rebecca	Antique lamp	Ring broken	Advice given	⊖
Rebecca	iPhone 7s	Cracked screen	John	⊖
Stefanie	Laptop Sony Vaio	Not working	Unlocked it!	⊖
Tasha	Vax Vacuum	No suction	Rebuilt/Force	⊖
Andy	Touch lamp	Turns on/off randomly	Advice given (empty lamp used)	⊖
Paul	Toaster	Bread left hot	Re-visit!	⊖
Paul	Fairy lights	Lights half working, advice on how to solve other lights not working	Advice given	⊖
Naomi	Touch Light	Internet Cuts out	Reboot, reset	⊖
Kit	iPad (not gas)	Big chunky	Reboot, reset	⊖
Mandy	Food Processor	Possibly cooked!	Reboot, reset	⊖
Farah	Panasonic Lumix	Temperature!	Reboot, reset	⊖
Rain	Phone	Crackly	Reboot, reset	⊖
Tina			Reboot, reset	⊖

Edit ▲ 0 Misc

OralB

electric toothbrush

5

battery replacement

Fixed



Category:

None of the above ▼

Brand:

OralB ▼

Model:

electric toothbrush

Age:

5

Repair status:

Fixed ▼

Spare parts required?:

Yes - from 3rd party ▼

0.3

kg

Description of problem/solution:

battery replacement

- ☐ Could the solution comments help Restarters working on a similar device in future? Or is it a fun case study?

Save device

URL of useful repair information used:

Enter URL here

Source of information:

Please select ▼



Add image:



Add device images here

Device images:

Open data

- We want to encourage more open data on repair
- “Open data” is data that can be:
 - freely used
 - re-used
 - distributed
- Facilitates sharing and collaboration
- Can be used to push policy on **Right to Repair**

Open Repair Data Standard - current version

Dataset with **30,000+ repair attempts** from partners. The primary modules included are as follows:

- **Product related:** Information about the product/device that someone has attempted to fix. Required fields: Product category; Brand; Model; Year of Manufacture
- **Repair related:** Information about the attempted fix and its outcome. Required fields: Problem; Repair Status
- **Session related:** Information about when the repair took place and through which community repair group. Required fields: Group Identifier; Date

More info at: <https://openrepair.org/open-data/open-standard>

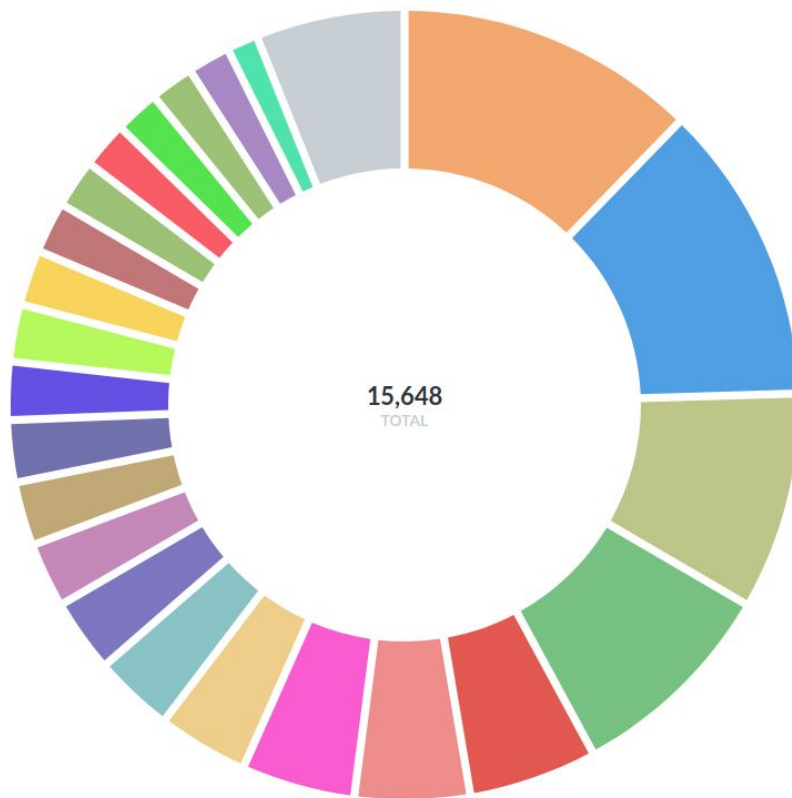
Publisher	Summary	Last updated	Structure	Licence	Downloads
Anstiftung	<p>Community repair data collected in the Reparatur-Initiaven platform from June 2018 onwards.</p> <p>Product categories mapped to working set of ORDS categories – these may be remapped in future.</p>	09 September 2019	ORDS v0.1	CC BY-SA 4.0	Zip
Fixit Clinic	<p>Data collected via the Broken Item Report form as part of Fixit Clinic's community repair events.</p> <p>Product categories mapped to working set of ORDS categories – these may be remapped in future.</p>	09 September 2019	ORDS v0.1	CC BY-SA 4.0	Zip
Repair Cafe Foundation	<p>Community repair data gathered using the Repair Monitor platform.</p>	09 September 2019	ORDS v0.1	CC BY-SA 4.0	Zip
The Restart Project	<p>Data gathered at community repair events and recorded in the Fixometer module of Restarters.net.</p> <p>This dataset is periodically created as an export of the full dataset available from Restarters.net.</p>	30 March 2020	ORDS v0.1	CC BY-SA 4.0	Zip

Open Repair Data Standard - Next Steps

- definition of fault types to categorise problem field (for key categories)
- removal of model information (focus on brand only)
- definition of shared set of product categories and mappings
- definition of shared set of repair statuses and mappings
- addition of provider, language and country fields

Restart data: type of products

Laptop medium	12.9%
Misc	12.8%
Mobile	9.20%
Small kitchen item	9.02%
Lamp	5.32%
Portable radio	4.74%
Hi-Fi separates	4.66%
Tablet	3.67%
Vacuum	3.20%
Power tool	2.91%
TV and gaming-related accessories	2.54%
Headphones	2.49%
Hair & Beauty item	2.40%
PC Accessory	2.24%
Toaster	2.20%
Toy	2.12%
Handheld entertainment device	1.94%
Hi-Fi integrated	1.83%
Printer/scanner	1.74%
Kettle	1.66%
Desktop computer	1.62%
Decorative or safety lights	1.57%
Digital Compact Camera	1.06%
Other	6.21%



Crowdsourcing Data Analysis

Restart is testing analysis of data with volunteers. We plan to extend this to data from other partners. An example: <https://restarters.net/faultcat>

FaultCat



Laptop

Apple

Repairable

keyboard and track pad not working. Needs new battery

Translate

Is the fault type

Integrated pointing device ?

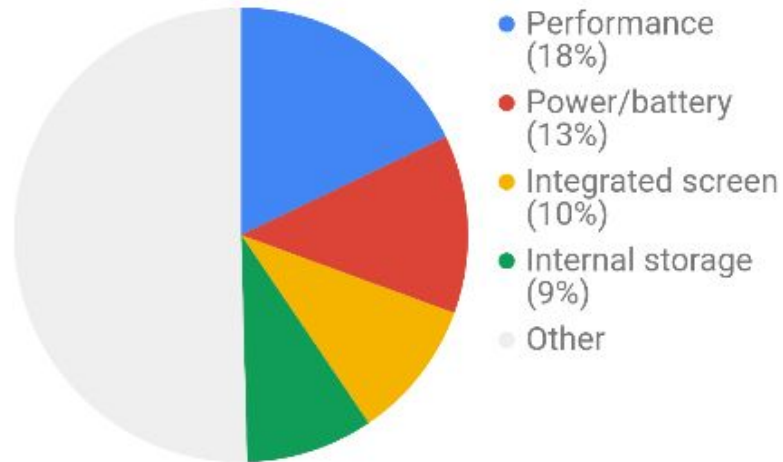
Yes / possibly

I don't know, Fetch another repair

Nope, let me pick another fault

An example of our findings on laptops

Top 4 faults we see (= 50% of all faults)



Success rates

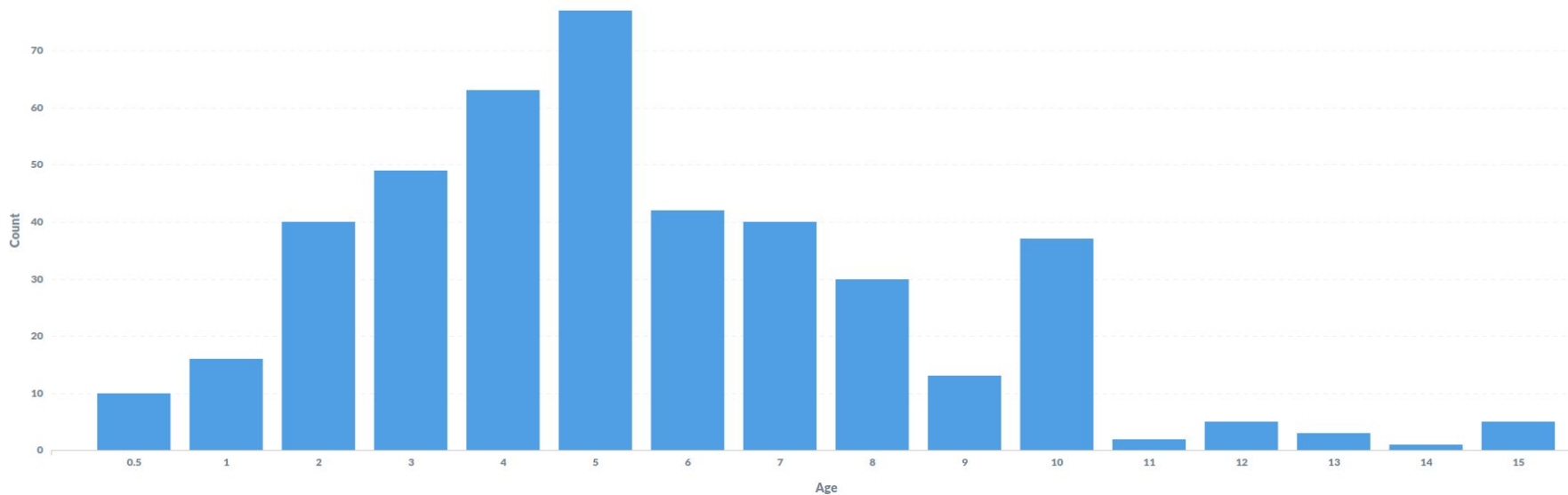
Type of fault	Success rate
Performance	73%
Power/battery	36%
Integrated screen	33%
Internal storage	74%

(Average success across all fault types = 54%)

Barriers to repair

Available and affordable spare parts, standard connectors, access to repair information and easier disassembly would keep our fix rates up and keep more laptops lasting longer.

40% laptops at Restart Parties are 6+ yr old



Opportunities for community repair data

- Engaging community groups in advocating for Right to Repair
- Increasing collection across platforms (only 26% of 2019 Restart events uploaded data)
- Linking analysis to Right to Repair priorities, starting with smartphones
- Improve quality of the data collected, focusing on key barriers and product age



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