

RMIT PlaceLab's Flatpack Research Project investigated how residents of the City of Melbourne furnish their homes, the opportunities to minimise waste, and the potential to rethink furniture lifecycles.



What We Explored

Flatpack: Repacked explored the lifecycle of furniture in the City of Melbourne, determining the mechanisms and motivations that shape the purchasing and disposing of furniture in urban settings. Utilising a circular economy framework, we narrowed in on potential short- and long-term interventions to help to reduce furniture waste in the city.

Introduction

The disposal of hard rubbish in the City of Melbourne has increased from 230 tonnes in 2009-10 to 940 tonnes in 2016-17¹

'Fast furniture' has resulted in an increase in short-lived furniture items ending up in hard rubbish², with cheaper materials, such as reconstituted woods and plastics being used over solid woods and metals, significantly shortening the lifespan of the item³.

The City of Melbourne has developed the Waste and Resource Recovery Strategy 2030⁴ which prioritises the Circular Economy interventions of "reuse, recycling, and recovery" with the goal of diverting 90% of waste from landfill by 2030.

Circular Economy

An economic system that aims to increase the sustainability of products and materials by minimising resource consumption and waste.

Unlike a traditional linear economy that follows a 'take, make, dispose' approach to products, a Circular Economy aims to close the loop of life cycles by encouraging interventions that involve the continuous use, recycling, and regeneration of materials.

Recycle and Recover have not been considered in this study as data is not currently available on the recycling of materials disposed in hard rubbish for the City of Melbourne, and recover is an intervention undertaken by manufacturers, not consumers. These have been replaced by the more relevant furniture interventions of Refuse and Repair for this project.

The below outlines the Circular Economy interventions applied in Flatpack: Repacked, as well as those interventions not included, as they relate to consumers and producers⁵.



Research Questions

- How do City of Melbourne residents acquire, maintain, and dispose of their furniture?
- How do these activities complement or contrast with the Circular Economy interventions of Reuse, Refuse and Repair?
- How can the circulation of furniture products and materials be increased through the interventions of Reuse, Refuse and Repair in the City of Melbourne?

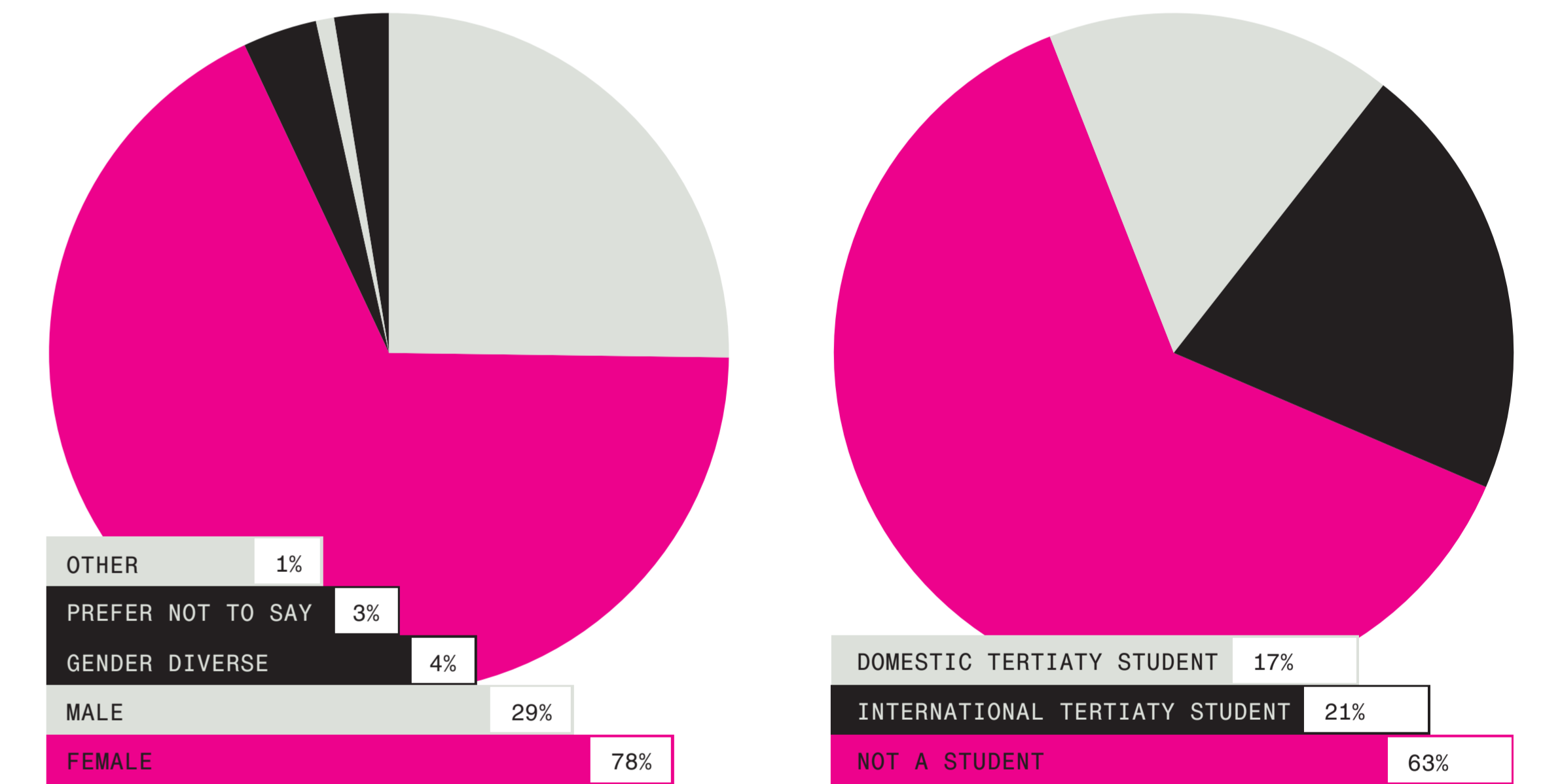
What we did

Our research activities

5 Jul > 4 Sep

Surveys

115 City of Melbourne survey respondents answered questions examining their experiences and motivations when acquiring, maintaining, and disposing of furniture.



Aug > Sep

Interviews

13 interview participants were recruited from the survey sample for a more in-depth discussion of their furniture.

11 Sep > 23 Oct

Field Study

Four field studies were conducted on Carlton's designated hard rubbish collection days, which occur every second Monday. Data collection included the volume of hard rubbish piles and the materials used in the production of items.

	CONSUMER	PRODUCERS
REUSE	Reusing a product that is still in a functional condition and continues to serve its original purpose	Reuse as an economic activity (second-hand sales) or reuse materials of unsold/returned damaged items.
REPAIR	Having a defective item repaired or maintained by themselves, a repair company, or at a 'repair cafe'.	Send recollected products to repair centres
REFUSE	Choosing to buy fewer products	Refuse the use of new materials.
RECYCLE	Dispose of materials in separate waste streams	Using technological processes to convert disposed materials back into pure materials
RECOVER	-	Capturing the energy involved in waste.
REFURBISH	-	An item's overall structure remains intact but damaged components being replaced or repaired.
REMANUFACTURE	-	An item is disassembled, then checked, cleaned, and defective items replaced.
REPURPOSE	-	Reusing disposed items for another purpose.
RE-MINE	-	Retrieving disposed materials from landfill.
REDUCE	Use items less frequently	Use items less frequently

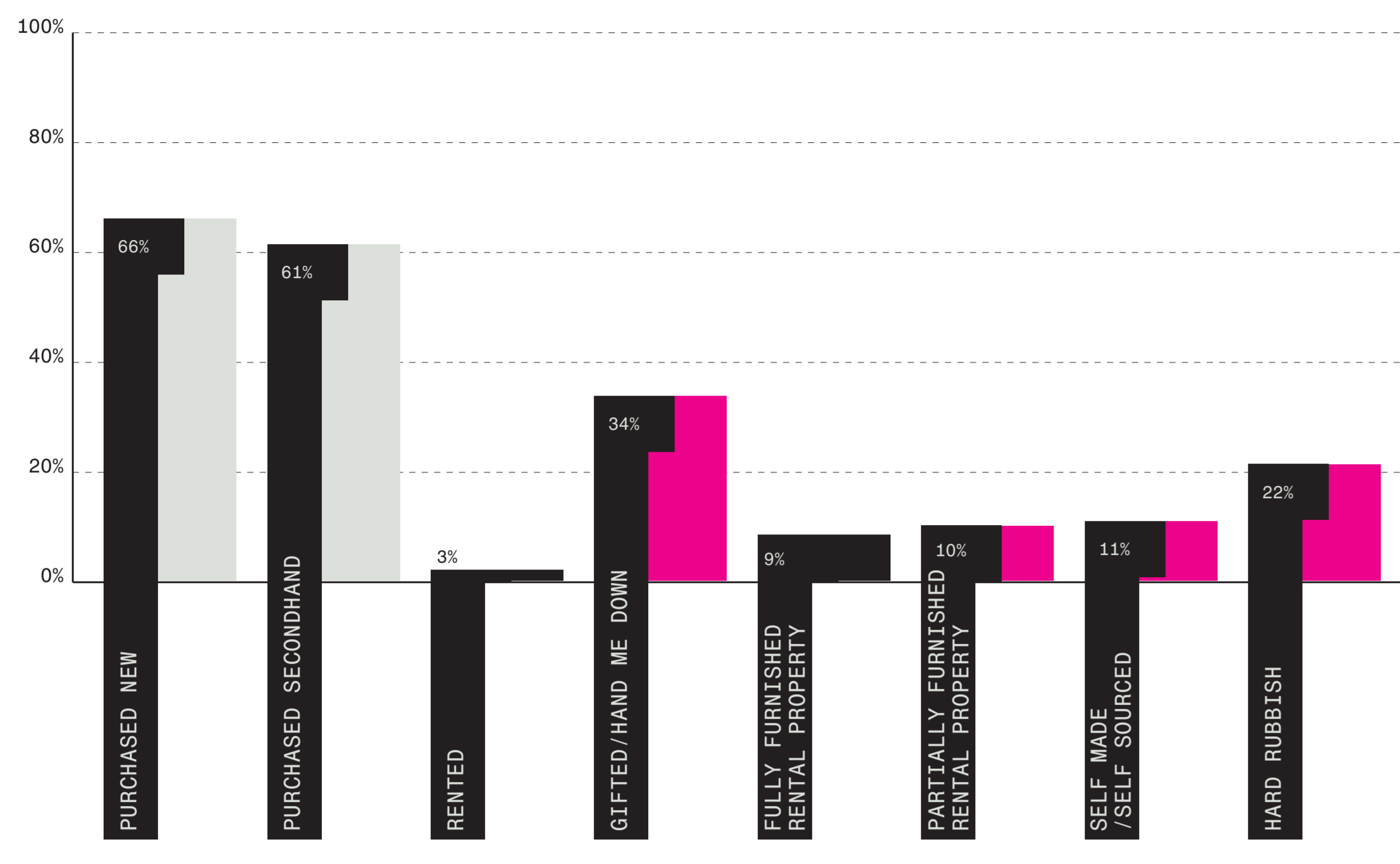


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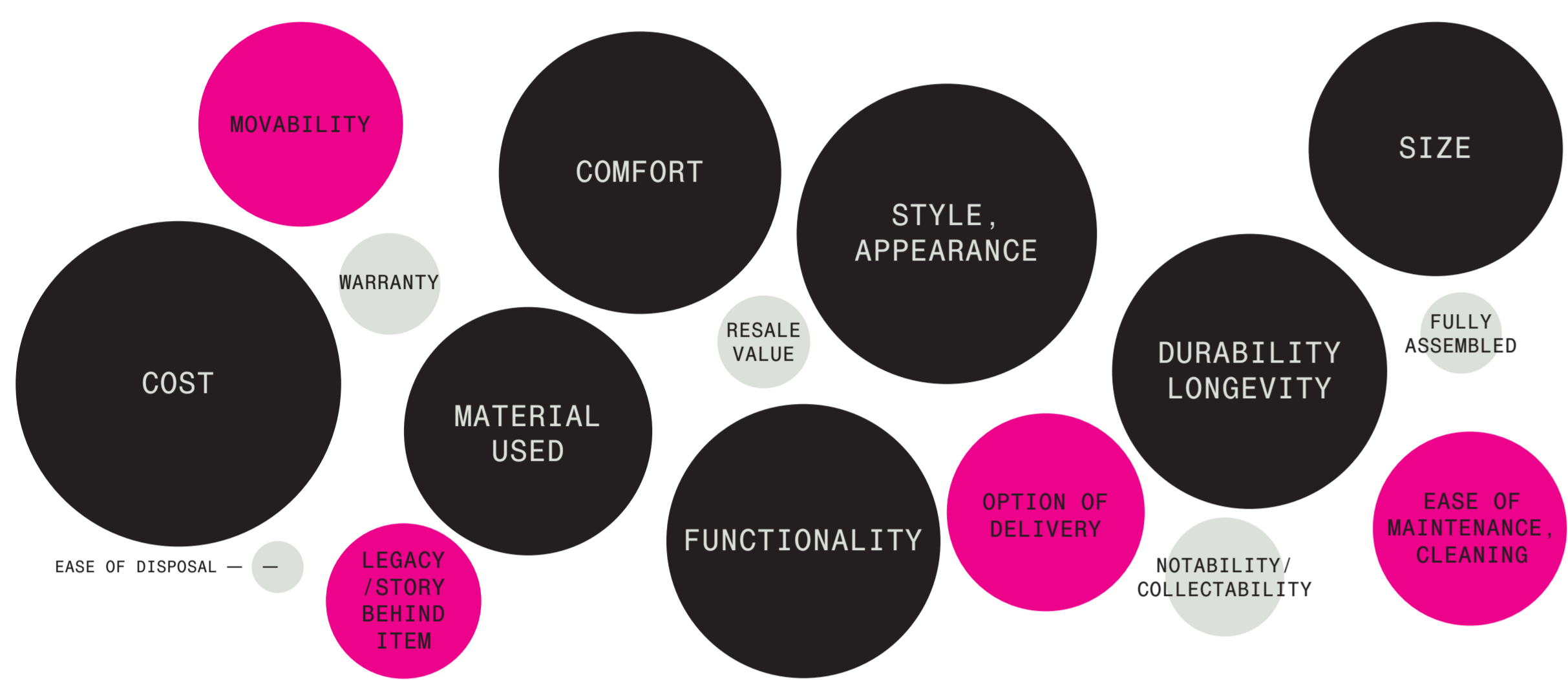
Flatpack: Repacked Exhibition

1. Internal City of Melbourne waste services contract data (unpublished).
 2. Cummins, E. (2020). Fast furniture is an environmental fiasco. The New Republic, 14 January. Available at: <https://newrepublic.com/article/156208/fast-furniture-environmental-fiasco>
 3. European Environmental Bureau (2017). Circular Economy Opportunities in the Furniture Sector. Report produced for the EEB by Eunomia Research & Consulting Ltd. Available at: <https://eeb.org/library/circular-economy-opportunities-in-the-furniture-sector/>
 4. City of Melbourne (2019). Waste and Resource Recovery Strategy 2030. Available at: <https://www.melbourne.vic.gov.au/SiteCollectionDocuments/waste-resource-recovery-strategy.pdf>
 5. Vermeulen, W. J., Reike, D., & Witjes, S. (2019). Circular Economy 3.0: Solving confusion around new conceptions of circularity by synthesising and re-organising the 3Rs concept into a 10R hierarchy. Renewable Matter, 27, 12-15.

Participants acquire furniture from various first- and second-hand sources, prioritising specific attributes. Some choose new items for convenience, particularly those recently relocated to Melbourne.

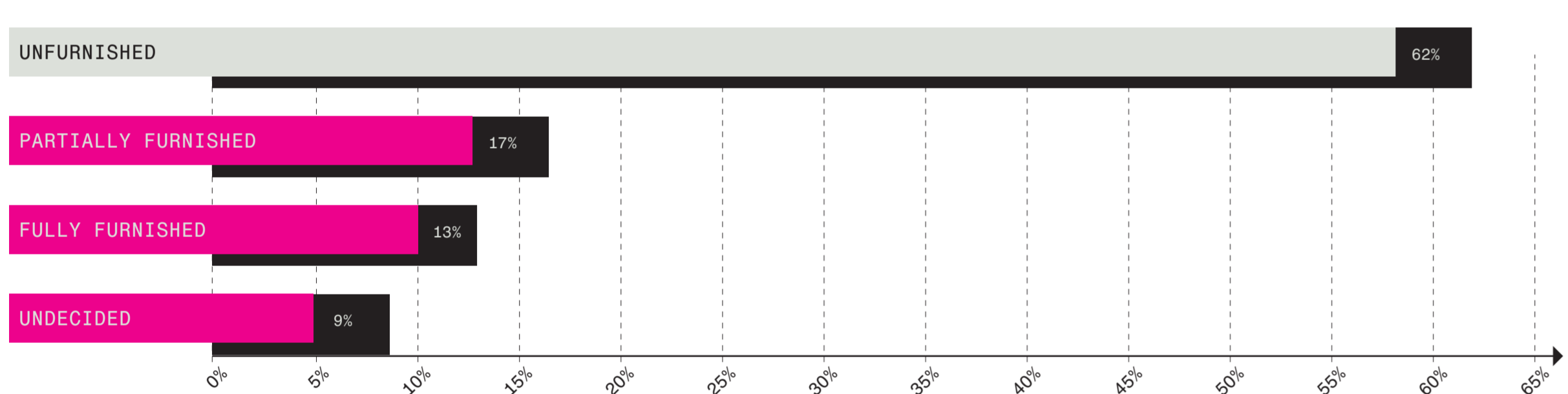


What characteristics and services do you prioritise when acquiring furniture?



While many participants prioritise functionality over fashion, most survey respondents would prefer choosing their own furniture than living in a pre-furnished space. This aligns with their emphasis on comfort, style, and appearance.

How furnished would you like a new dwelling?



"It's nice to see things come up on Facebook Marketplace or Gumtree or on the side of the road, and know that I have the ability to put a bit of imagination on it and be like, OK, it's not perfect the way it is now, but what can I do to make it perfect?"

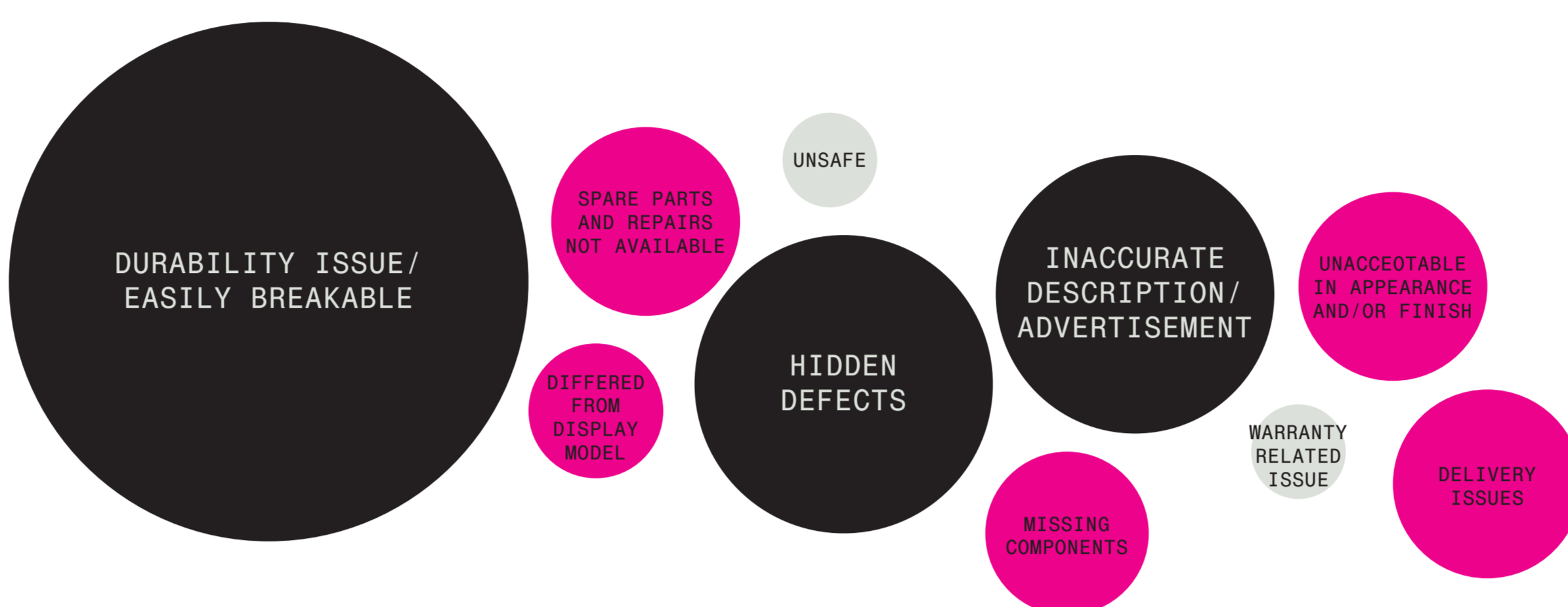
People acquire second-hand furniture, often online or through obtaining discarded items, for various reasons. Cost is a key factor for some, but many, like the participant quoted above, appreciate the potential in pre-loved furniture. Others seek unique styles and materials not readily available in modern retail outlets.



Functionality generally remained the primary focus once an item entered someone's life. While durability was the top concern in surveys, interviewees pointed out that items made from low-quality materials, especially reconstituted wood, were often seen as short-term solutions.

Why were participants dissatisfied with their furniture?

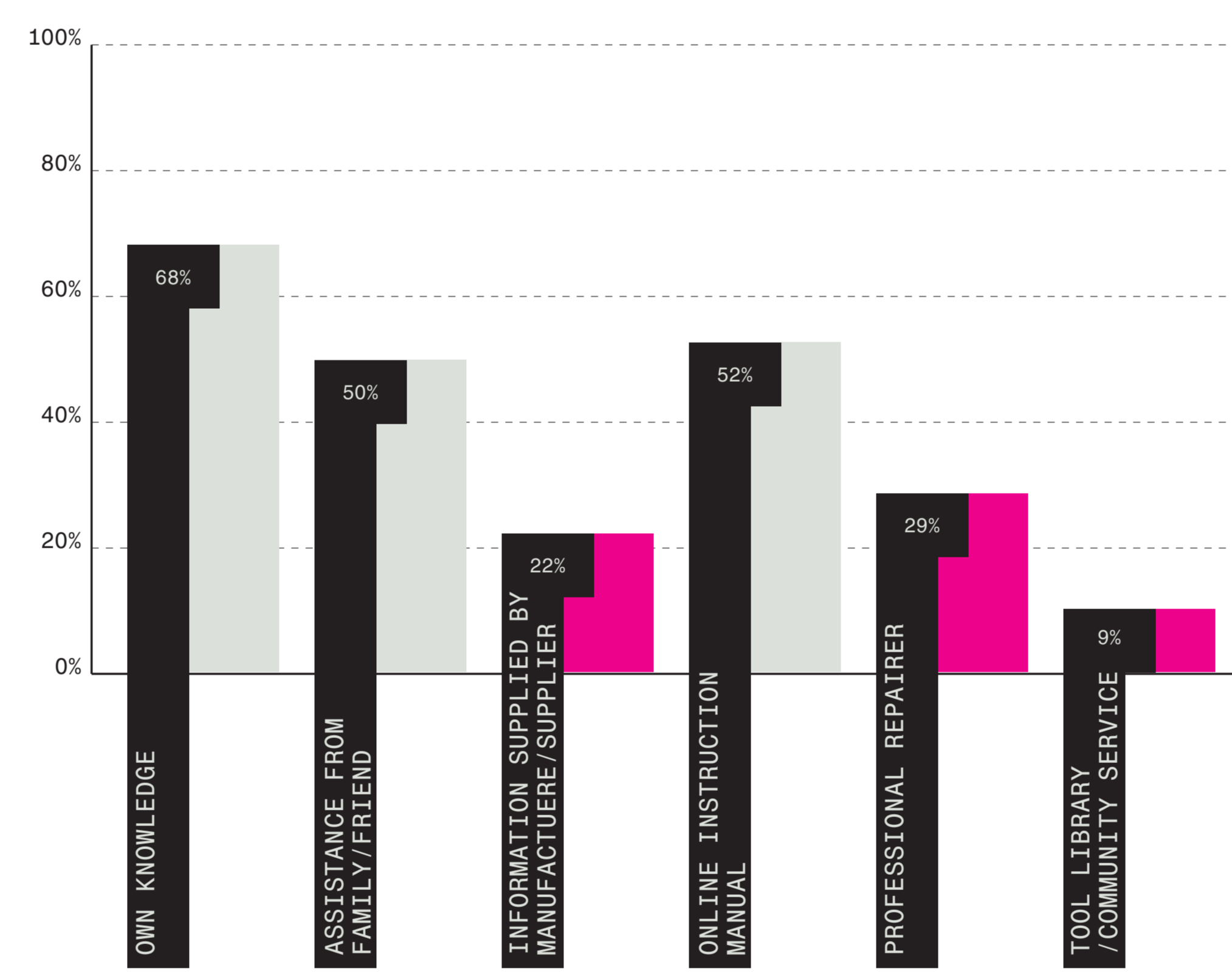
84% of survey participants were dissatisfied with at least one item of furniture they had purchased



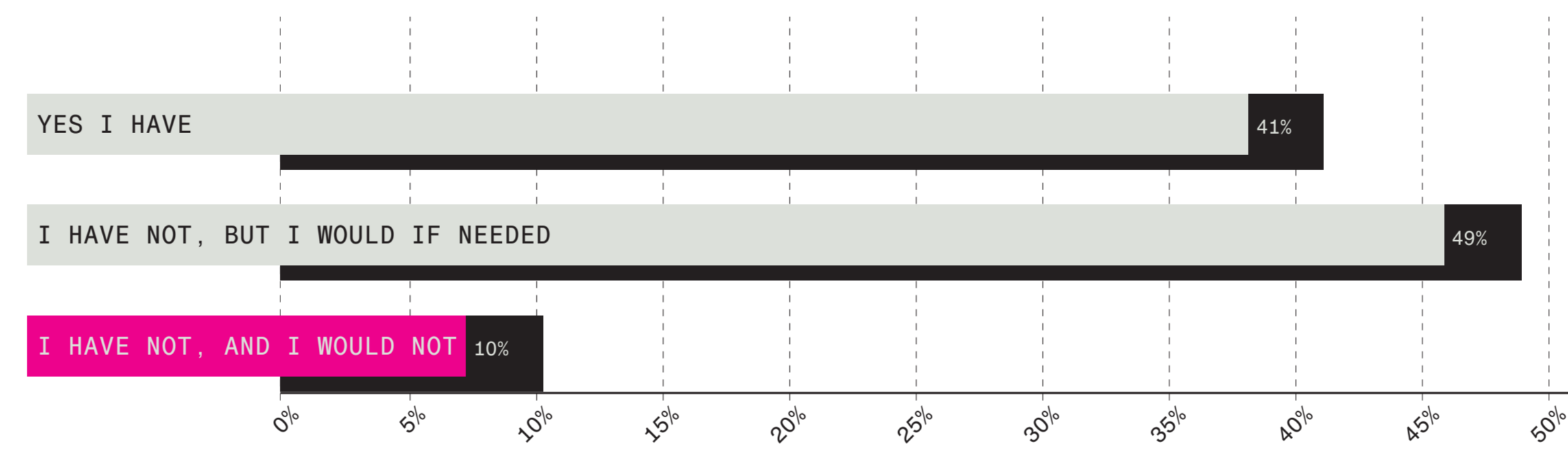
"The armchair was in pieces and falling apart, so I reupholstered it. I had to sand all the wood down, redo all of its supports, like dowel the wood and everything and it ended up being a really fun project I did with my dad."

Furniture repair attracts significant interest, with those interviewed engaging in a range of activities, from minor fixes to creative reimagining. Some, like the quoted participant, turn furniture repair into a passionate hobby learned from parental guidance.

Have you repaired furniture?



How did or would you repair furniture?



"The trunk has a special meaning for me, because it's the chest that my parents came to Australia with when they immigrated in the 50s. I will never, under any circumstances, ever sell that".

Many participants form strong attachments to their furniture, with 48.7% reporting sentimental value in at least one item.

These pieces often have a history of ownership, crafted by grandparents, or hold sentimental significance as the first furniture acquired when moving away from parents, creating meaningful ties rooted in significant memories.

"I see the hard waste collection being misused a lot and so it's not my first choice for a disposal method. I think we can do better"

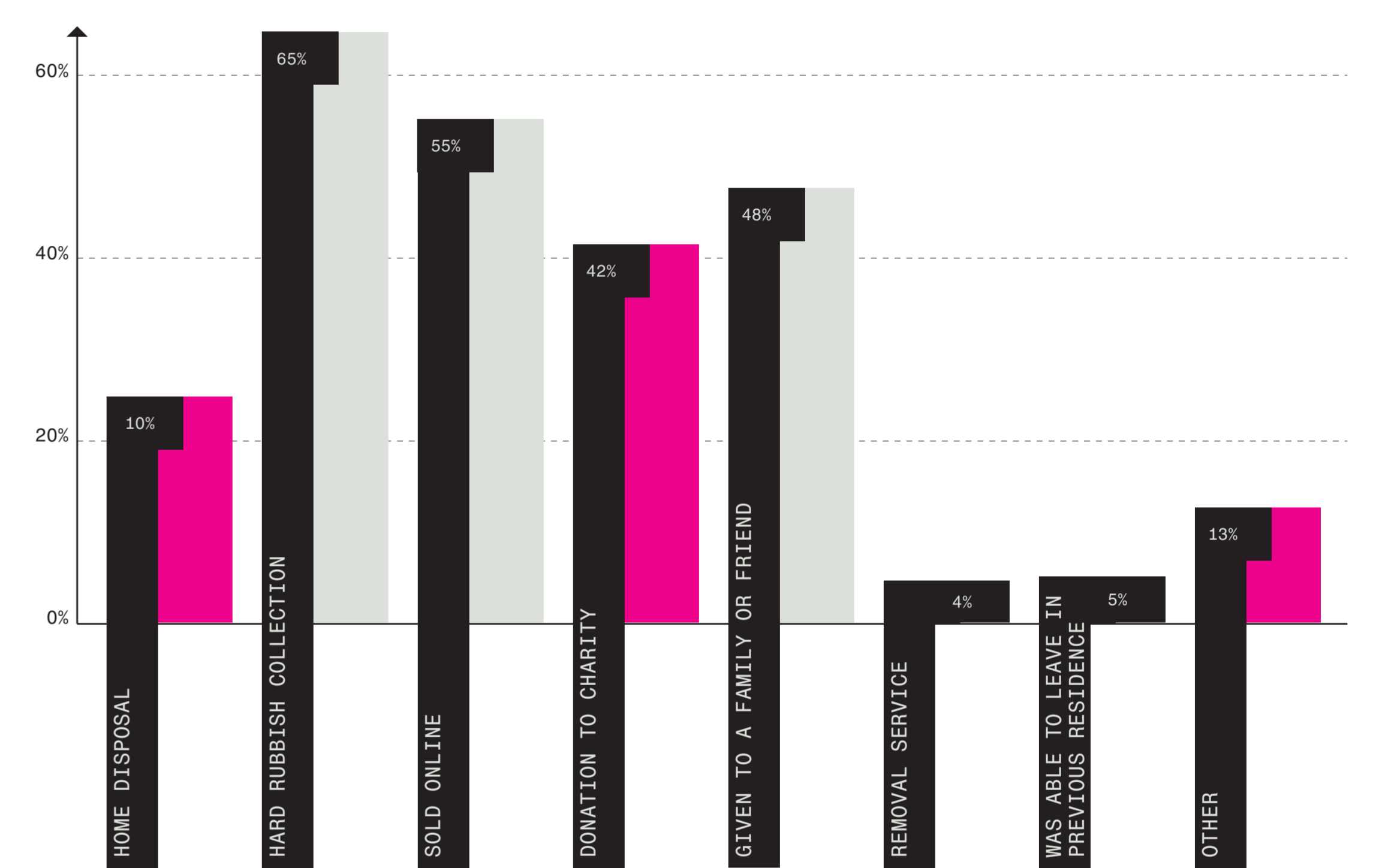
"I just feel like it's hard to get rid of things. I feel bad throwing away something that's not old and worn".



Many interview participants indicated that hard rubbish disposal was their last resort for disposing items, and was usually reserved for items that were no longer functional or easily repairable.

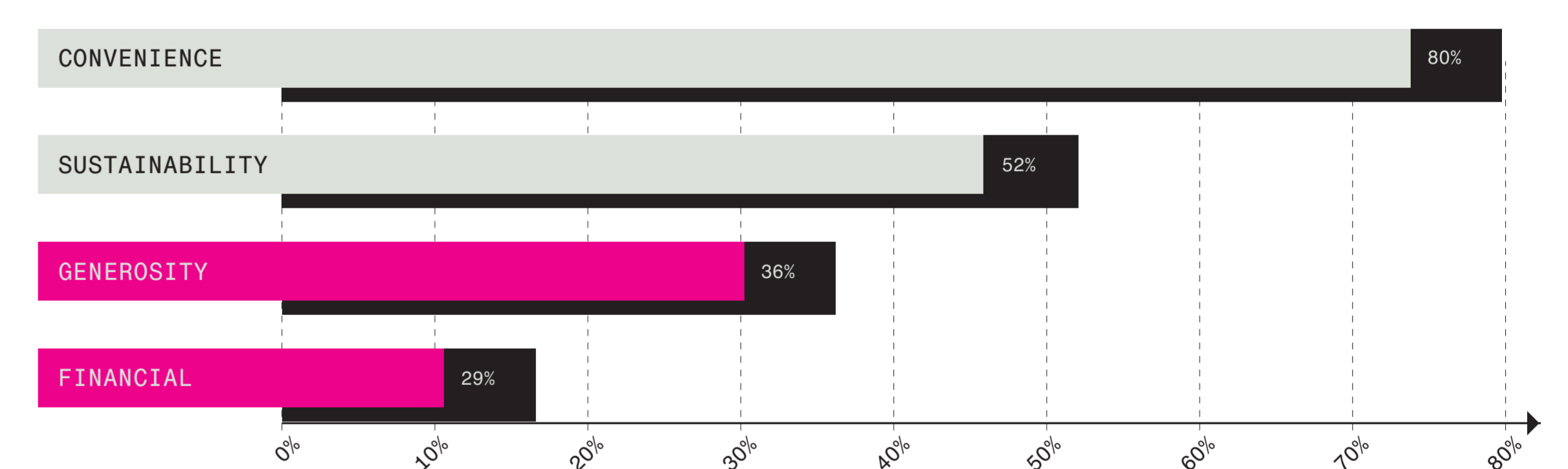
How did you dispose of furniture?

82% of survey participants had previously disposed of furniture



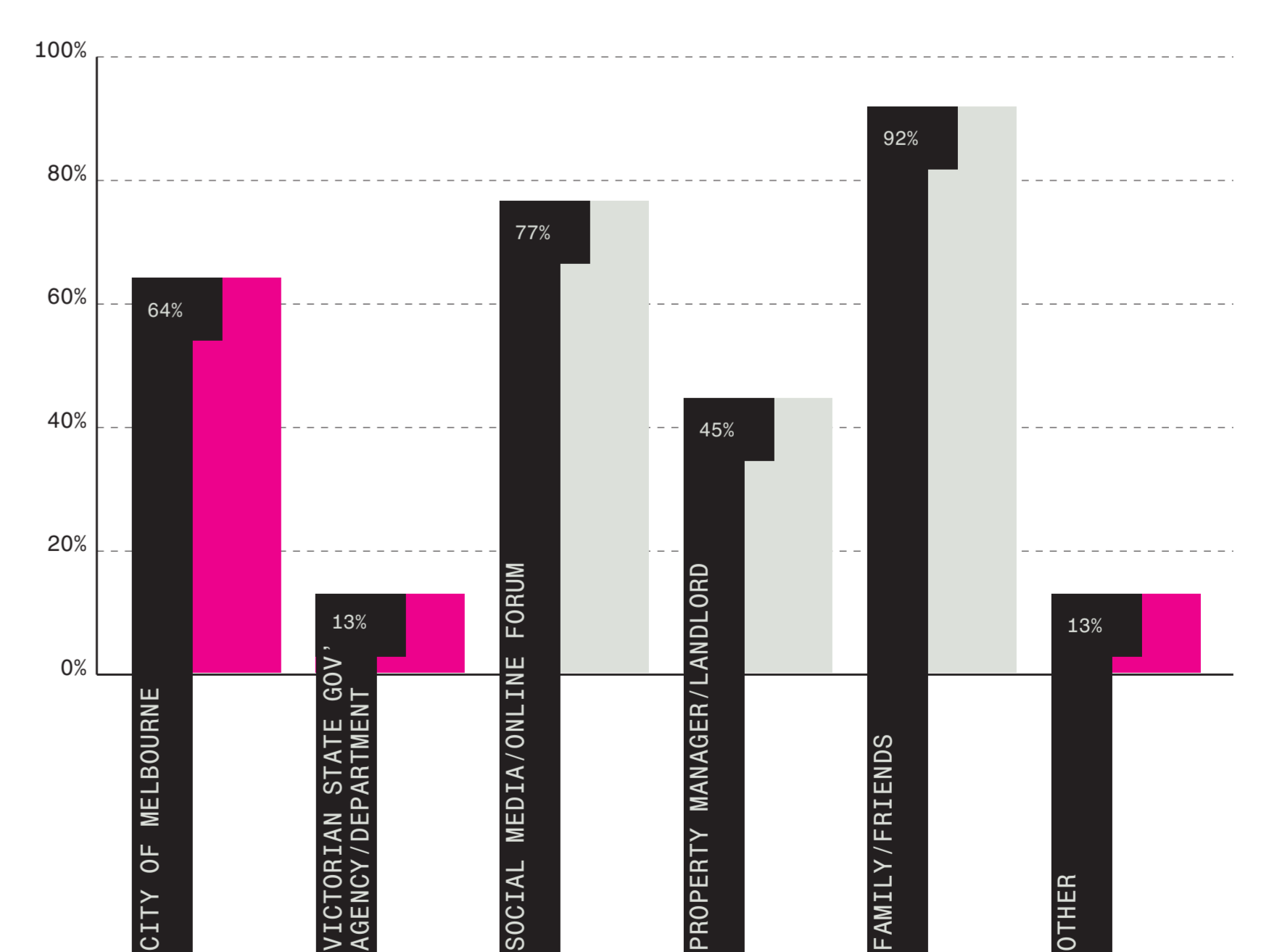
While convenience was the primary factor influencing disposal methods, some participants considered selling or giving away items online as equally straightforward as disposing of them in hard rubbish. Many found satisfaction in giving items for free on platforms like Facebook Marketplace or the Good Karma Network, driven by altruistic motives or the convenience of the process.

Why did they choose this method of disposal?



Family and friends were the most common source for information on how to dispose of rubbish, followed by social media or online forums.

Where did they obtain information on how to dispose of furniture?



"We have a bonfire every year. It's symbolic, put the old furniture onto the bonfire, then you ready for the furniture. It has a ritual feel to it, but it's also practical".

1 Refuse

Furniture is usually acquired based on immediate needs, especially for sizable household or outdoor items, according to our findings. However, exceptions occur during relocations, particularly to Melbourne or when transitioning from one's childhood home for the first time. In these significant life changes, individuals are more inclined to acquire items that might have been declined under different circumstances.

Interview participants often labelled their sofa as their least favoured furniture, deeming it underutilised and a wasteful investment in terms of cost and size.

- Increase refusal of unnecessary furniture by providing new arrivals to Melbourne with information based on others' experiences.

e.g. a tertiary education provider might advise incoming international or interstate students to postpone purchasing a sofa for their accommodation until a few months after their arrival to determine if needed.

2 Reuse

"I had to transport my dining table on public transport. I bought it second hand and then I had to take the legs off the table. I bought it and then I took it back home by using the trams. It was a bit embarrassing at the time."

"The thing that prevents me from getting furniture is how am I going to get to it and how am I going to actually load it when I'm there? Especially in the City of Melbourne. It's a nightmare."

The primary Circular Economy intervention, as revealed in our findings, is **Reuse**.

According to the survey, **68.7% of respondents have acquired at least one item through Reuse**.

In the disposal of furniture, **90.4% residents overwhelmingly favour Reuse**.

Interview participants commonly cited transportation difficulties for second-hand items obtained online or from hard rubbish.

Many participants also expressed difficulty in knowing the condition of items in hard rubbish and either refused to take the item or didn't know until they had gotten furniture home that there was unseen damage.

Obtaining reused furniture from a physical store in central Melbourne is hindered by the absence of a thrift store specifically catering to furniture items.

- Increase the acquisition of second-hand furniture through online platforms by introducing a delivery option for second-hand items.

e.g. An existing delivery service, such as Uber, partnering with Facebook Marketplace.

- To assist 'gleaners' to know the condition of furniture items in hard rubbish, a sticker system could be used to indicate functional, undamaged items.

- Establish an affordable and centrally located second-hand furniture store, potentially by using an existing council site.

- In conjunction with the sticker system mentioned previously, the contractor tasked with collecting hard rubbish furniture in the area (CityWide), could transfer the undamaged items to this store.

3 Repair

In the survey, **40.9% reported repairing furniture, while 48.7% expressed a willingness to repair if needed. Among those who repaired furniture, 76.6% relied on existing knowledge, while 8.7% sought assistance from a tool library or community service.**

"I just don't have the tools or the skills to use a drill or a saw or anything like that."

Some participants reported not having the skills or tools available to repair furniture. Some felt the investment required for such resources meant they were better off replacing a damaged item.

- Setting up more tool libraries and/or repair cafés within the City of Melbourne could greatly increase the repair of residents' furniture items. Such a facility would allow resident volunteers to share their skills with others.

Conclusion

These Flatpack: Repacked research findings highlight a population that is very engaged in sustainable practices and minimising waste. Those we engaged with exemplified a range of skillsets and attachments to their furniture, with some viewing it not only as a functional necessity but also as a form of self-expression. Although residents express good intentions in minimising furniture waste, they believe they would significantly gain from the implementation of additional systems and mechanisms for reusing and disposing of furniture.

This Research Project suggests that there is sufficient support from residents for additional Circular Economy-inspired initiatives, like those in the recommendations, to succeed in further closing the furniture loop in the City of Melbourne.

4 collection days
 1.8 km²
 34 hard rubbish piles
 73 furniture items
 100.2 m³

