How Tuft+Paw reimagined the litter box

Jackson Cunningham shares how Tuft+Paw started out as a retailer of boutique international pet brands before redesigning an over-looked but essential product, the litter box. From product design to crowdfunding, here's the inspiring journey.

Temps de lecture : minute

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My online business - <u>Tuft+Paw</u> - began as a retailer of amazing boutique pet brands from around the world. We spent months curating the best collection we could find. But there was one product category that never seemed to have good options. And for cat owners, it was an essential. The litter box.

I was actively looking for litter boxes that we could sell on Tuft + Paw. I looked at all the options on Amazon, around the world, and in a variety of pet stores. The problem I kept running into was that you either got a cheap plastic litter box that looked like it came from the dollar store or some space-aged automated robot that was ugly and loud.

I knew we had to make a better litter box

There was something about the analogue task of sifting sh*t each morning that never got less unpleasant. It's hard to be on autopilot while doing it because it's never exactly the same – it requires you to be all too present.

Taking care of this task is what makes the concept of an automatic litter box so great. But these boxes come with major downsides – they're big, loud, expensive, and prone to breaking.
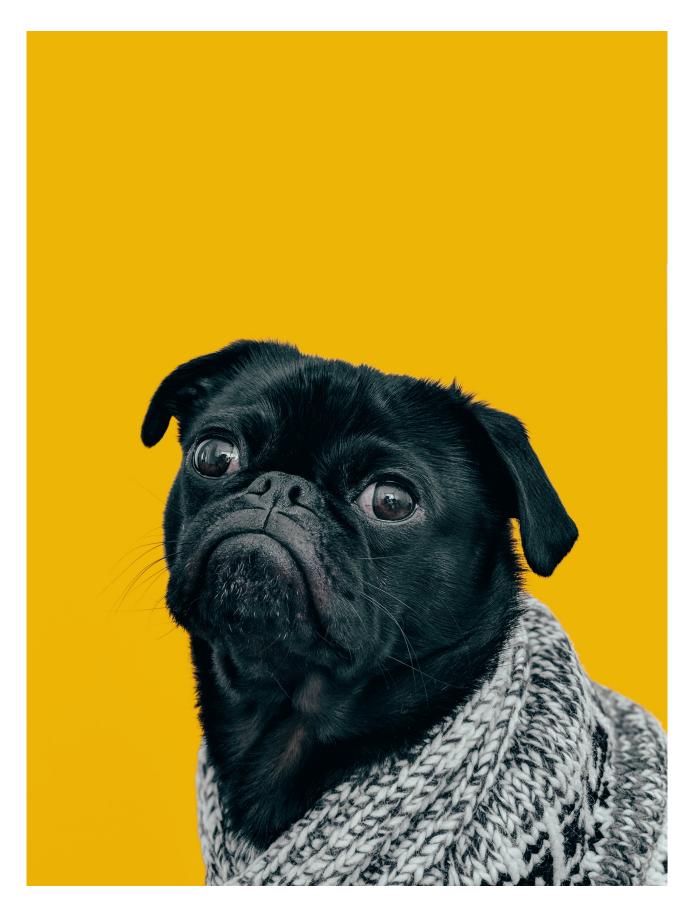
My first thought was – what if we could make an "automatic" litter box in concept, but without the need for electricity? It could be quiet, simple, and affordable. Essentially, I wanted to <u>redesign the mechanics of a litter box</u> so that it didn't require that unpleasant analogue hunting-and-sifting. Was there a way we can clean a litter box by pushing a lever or using a clever sifting device? Surely I could find some smart engineers who could solve this!

I met Steve, industrial designer

I met with Steve, an industrial designer – who later became our Head of Product – to outline the challenge. A few days later, I received an excited text from him:

> *"I think I've found the one. Call me."*

Steve's concept was a simple but brilliant modification to existing analogue sifting mechanisms. Typically, the challenge with a sifting system is that, while you can easily pull the sifter up through the lighter litter, you can't actually push the sifter *back down* through the coarser litter – it gets stuck. So you end up needing to dump the litter, replace the sifter and pour litter over top. It's not a good solution.

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Steve's idea

Steve's idea was for a cylindrical litter box with a matching plastic sieve that sat inside. When it's time to clean the litter – you pull the sieve up. When it's time to put the sieve back – you push down and *twist*. The simple act of twisting the sieve allowed it to push through the coarser litter, while also cleaning any debris stuck to the side walls! The secret was making the litter box a cylinder rather than a rectangle to allow for the screwing motion. It was exactly the elegant solution I'd had in mind.

It was only while building our prototype that we discovered the design's fatal flaw. Our in-house cat behaviourist, Marci Koski, advised us that a litter box should be at least 1.5x a cat's length (about 27"). This is why most litter boxes are rectangular – one dimension is long enough to allow the cat some room, while the other is narrow enough to allow the box to fit into smaller spaces. Because our box needed to be circular for the sake of its turning function, the "long side" was the diameter of the box. It was too big, and we had to go back to the drawing board.

Cylindrical litter boxes are way too big

After several weeks of brainstorming, all of our ideas were making the box more complicated, not less. I felt like we were hitting a wall.

Then we had a realization – what if we didn't need to *re-invent* the litter box, what if we could just make the standard model *better*? One thing I noticed while testing out dozens of litter boxes was that the scoop was always sold separately or included as an afterthought. The scoop at my apartment sits on the floor beside my litter box – that's the design! Another reality of litter boxes is litter debris getting track onto the floor,

basically necessitating cat owners to keep a vacuum or broom nearby for cleanup.

We landed on a concept aiming to bring these elements together into one cohesive design. A litter box with an integrated scoop, dustpan, and hand brush. We also wanted it to be aesthetically-pleasing with high-quality materials – in contrast to most litter boxes on the market.

Marci outlined the following essential features of a cat-friendly litterbox:

- One side should be at least 1.5x the length of the cat (at least 27").
- The entrance shouldn't be higher than 6", to ensure that elderly cats can get in.
- The walls shouldn't be too low, either, because some cats pee standing up.
- The box shouldn't be enclosed – cats hate this because they like to be able to see potential threats while they're vulnerable

Along the way, many of these requirements became practical roadblocks. Yes, we could put something together that was functional – but we wanted to combine function with form in a way that was truly satisfying. Was it possible?

Early variation – I couldn't stop seeing a McDonald's booster seat

Finally – after countless iterations, I saw the newest model and knew it was the one. It looked great. And at the same time, it integrated several thoughtful features:

- A rubberized bottom, to keep the box firmly planted on the floor.

- A hidden grip for moving and carry the box.
- A removable tool-insert for easy rinsing.
- A scoop with slats modelled off best-reviewed scoops online, allowing litter to sift easily, and curves corresponding to the exact contours of the box, allowing for quick thorough cleaning.
- A basin with no unnecessary nooks or crannies, allowing for single wipe cleaning.

For high-peeing cats, was it high enough?

The only question was the wall height. It was 6" – higher than most litter boxes – but for high-peeing cats, was it high enough?

Our cat researcher surveyed dozens of cat shelters to figure out the frequency of this issue. Fortunately for us, it wasn't especially common – maybe 5% of cats will pee standing. 6" seemed like an acceptable balance-point between the interests of the cats who were old and the cats who liked to pee high and proud.

We considered a variety of materials but ultimately decided to make the litter box plastic because it's durable and easy to clean. However – plastic has a reputation for being low-grade and environmentally detrimental. We wanted our box to be neither.

To address the quality question, we visited a local high-end cookware store to look at their plastic products. We discovered a few things:

- Shiny plastic looks cheap. We should make ours matte.
- Flimsy plastic looks cheap. We should make ours thick.
- Smooth plastic looks cheap. We should make ours lightly-textured.

Smooth glossy plastic looks cheap compared to lightly-textured matte plastic

I found some beautiful (and expensive) bowls by Mepal that matched all these criteria. They gave me confidence that we could make a plastic product that was visually stunning. I assumed that it would be easy to make our product from recycled materials when it came time to manufacture down the road.

We made the decision to launch on Kickstarter because making plastic product requires us to produce moulds that are very expensive. The mould for this project will be around $50K and we wanted the validation on Kickstarter to justify moving forward to produce this. If there was no traction on Kickstarter, we'd begrudgingly scrap the idea and save ourselves $50K.

In order to launch on Kickstarter, we needed photos and videos of a working product. So we hired a prototyping agency that essentially makes your product using 3D printed parts, and in some cases, wood, spray-painted to look like plastic. Having a prototype is important for allowing the product to be envisioned – but it's expensive. Our prototype cost over $5K.

We used it to create some amazing photos and videos for our Kickstarter campaign, and we were ready to launch – pending addressing the environmental concerns.

The last thing I want to do is create more

plastic garbage in the world

I assumed, for the right price, it would be easy to find a factory who could build our product from recycled plastics.

But I was wrong – it's extremely difficult to create a pure white colour from recycled plastics. Usually, factories will pour the dark dye in with recycled materials to create a consistent colour, so while dark colours are easy, light ones are almost impossible. Virgin plastic is also such a cheap material that most factories don't want to bother with the hassles of recycled plastic.

After much research, we finally found a manufacturer willing to make our product in white using post-industrial recycled plastics. Post-industrial recycling means the item being recycled has been made by a factory as surplus but was never used by a consumer.

Given that we'd already prepared the prototype and Kickstarter video, we decided that we'd launch version 1.0 as white, made with post-industrial plastics, and for version 2.0 to be made from 100% recycled ocean plastics and entirely in black.

The Kickstarter campaign

We finally launched on Kickstarter a couple of weeks ago, and it's been an interesting experience. For every big design choice, there are those who love it and those who are critical. So it becomes difficult to measure what really needs to be changed.

https://www.facebook.com/Kickstarter/videos/130894021297536/

It takes an especially strong stomach to read through the comments on Facebook – some of them can be outright mean.

Our most common criticism so far has been that the sides of the box are too low. I went to a local pet store and found ours was the same size as their extra-large box – so we're not sure whether the complainants are members of an outspoken minority. I've been using the litter box with my own cat and it's bigger than any litter box I've owned.

Designing cat products is a challenging balance

The products need to be good for the cats who use them, appealing to the humans who buy them, and practically viable to the company that makes them. In the case of a litter box, cats want one that's open and accessible, while humans want one that looks good and keeps the litter out of sight. Our job was to unify these interests in a way that made good design and manufacturing sense.

This experience has taught me to appreciate that there are real people behind the products we use. Designers are trying to make products better – a process that ranges all the way from a close-up focus on subtle details to huge aesthetic judgement calls. Take this moment to look around you. Chances are you're surrounded by objects you've never thought about. I can pretty much guarantee you that, once upon a time, there was a team of people who tried to do exactly that.

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Article by Jackson Cunningham