

Appendix

Appendix 1: Boxing match between Epeios and Euryalos	2	Outslayer Muay Thai Heavy Bag Stand	27
Appendix 2: Boxing match between Dares and Entellus	4	Appendix 6: Project Brief	29
Appendix 3: the Marquess of Queensberry rules	5	Appendix 7: Co-Design materials	33
Appendix 4: Boxing training activities	6	Informed consent form and explanation form	33
Appendix 5: Punch bag stands/mounts reviews	9	Interview Questions	36
TITLE Heavy Bag And Speed Bag Stand	9	NextRound collage	40
TITLE Platinum Heavy Bag Wall Hanger 2.0	11	Chosen location: Where would I place my NextRound punch bag if I were to get one? pros & cons sheet	41
RDX X4 2FT FOLDING PUNCH BAG WALL BRACKET	12	Chosen location: My own NextRound map	42
Everlast Single-Station Heavy Bag Stand, White	14	Appendix 8: Co-design result sheets	43
ABUSA Heavy Duty Black Swing Hangers	19	Co-design session 1 (pilot) - participants 1 & 2	43
Dura Punching Bag Hanger Heavy Duty	22	Co-design session 2 - participant 3	44
Dolibest Heavy Bag Hanger	24		

Co-design session 3 - participant 4	45	Appendix 10: “How to...” brainstorm	50
Co-design session 4 - participant 5	46	Existing products and their pros & cons	50
Appendix 9: Dimensions of existing standing solutions for punch bags	47	Filled in “How to...” brainstorm sheets	51
TITLE Heavy bag stand speed stand	47	Appendix 11: Calculations NextRound Defence concept	61
Everlast Heavy bag stand	47	Appendix 12: Concept evaluation survey	64
Outslayer Muay Thai heavy bag stand	48	Survey questions	64
Fightcamp standing punch bag	48	Survey results	72
Outshock movable punch bag stand	49		

Appendix 1: Boxing match between Epeios and Euryalos

Book XXII of the Iliad by Homeros (675 BCE), translated by Lattimore, R (1951). Retrieved from <https://www.britannica.com/sports/boxing> on 9-2-2022.

“Sons of Atreus, and all you other strong-greaved Achaians, we invite two men, the best among you, to contend for these prizes with their hands up for the blows of boxing. He whom Apollo grants to outlast the other, and all the Achaians witness it, let him lead away the hard-working jenny [female donkey] to his own shelter.

The beaten man shall take away the two-handed goblet [likely the prize for winners of boxing matches].”

He spoke, and a man huge and powerful, well skilled in boxing, rose up among them; the son of Panopeus, Epeios.

He laid his hand on the hard-working jenny, and spoke out:

“Let the man come up who will carry off the two-handed goblet.

I say no other of the Achaians will beat me at boxing and lead off the jenny. I claim I am the champion. Is it not enough that I fall short in battle? Since it could not be ever, that a man could be a master in every endeavour.

For I tell you this straight out, and it will be a thing accomplished.

I will smash his skin apart and break his bones on each other.

Let those who care for him wait nearby in a huddle about him to carry him out, after my fists have beaten him under.”

So he spoke, and all of them stayed stricken to silence.

Alone Euryalos stood up to face him, a godlike man, son of lord Mekisteus of the seed of Talaos;

of him who came once to Thebes and the tomb of Oidipous after his downfall, and there in boxing defeated all the Kadmeians.

The spear-famed son of Tydeus was his second, and talked to him in encouragement, and much desired the victory for him.

First he pulled on the boxing belt about his waist, and then gave him the thongs carefully cut from the hide of a ranging

Ox [these were the primitive ancestors of modern boxing hand straps]. The two men, girt up, strode into the midst of the circle and faced each other, and put up their ponderous hands at the same time and closed, so that their heavy arms were crossing each other, and there was a fierce grinding of teeth, the sweat began to run everywhere from their bodies. Great Epeios came in, and hit him as he peered out from his guard, on the cheek, and he could no longer keep his feet, but where he stood the glorious limbs gave.

As in the water roughened by the north wind a fish jumps

in the weed of the beach-break, then the dark water closes above him, so Euryalos left the ground from the blow, but great-hearted Epeios took him in his arms and set him upright, and his true companions stood about him, and led him out of the circle, feet dragging as he spat up the thick blood and rolled his head over on one side.

He was dizzy when they brought him back and set him among them. But they themselves went and carried off the two-handed goblet.”

Appendix 2: Boxing match between Dares and Entellus

Verse 404-484 of the Aeneid by Virgil, retrieved from <https://www.britannica.com/sports/boxing> on 9-2-2022.

Further on we find the account of the games on the occasion of the funeral of Anchises, in the course of which Dares, the Trojan, receiving no answer to his challenge from the Sicilians, who stood aghast at his mighty proportions, claims the prize; but, just as it is about to be awarded him, Entellus, an aged but huge and sinewy Sicilian, arises and casts into the arena as a sign of his acceptance of the combat the massive cesti, all stained with blood and brains, which he has inherited from King Eryx, his master in the art of boxing. The Trojans are now appalled in their turn, and Dares, aghast at the fearful implements, refused the battle, which, however, is at length begun after Aeneas has furnished the heroes with equally matched cesti. For some time the young and lusty Dares circles about his gigantic but old and stiff opponent, upon whom he rains a torrent of blows which are avoided by the clever guarding and dodging of the Sicilian hero. At last Entellus, having got his opponent into a favourable position, raises his tremendous right hand on high and aims a terrible blow at the Trojan's head; but the wary Dares deftly steps aside, and Entellus, missing his adversary altogether, falls headlong by the impetus of his own blow, with a crash like that of a falling pine. Shouts of mingled exultation and dismay break from the multitude, and the friends of the aged Sicilian rush forward to raise their fallen champion and bear him from the arena; but, greatly to the astonishment of all,

Entellus motions them away and returns to the fight more keenly than before. The old man's blood is stirred, and he attacks his youthful enemy with such furious and headlong rushes, buffeting him grievously with both hands, that Aeneas put an end to the battle, though barely in time to save the discomfited Trojan from being beaten into insensibility.

Appendix 3: the Marquess of Queensberry rules

1. To be a fair stand-up boxing match in a 24-foot ring, or as near that size as practicable.
2. No wrestling allowed.
3. The rounds to be of three minutes' duration, and one minute's time between rounds.
4. If either man falls through weakness or otherwise, he must get up unassisted, the boxer has 10 seconds to allow him to do so, the other man meanwhile to return to his corner, and when the fallen man is on his legs the round is to be resumed and continued until the three minutes have expired. If one man fails to come to the scratch in the 10 count allowed, it shall be in the power of the referee to give his award in favour of the other man.
5. A man hanging on the ropes in a helpless state, with his toes off the ground, shall be considered down.
6. No seconds or any other person to be allowed in the ring during the rounds.
7. Should the contest be stopped by any unavoidable interference, the referee to name the time and place as soon as possible for finishing the contest; so that the match must be won and lost, unless the backers of both men agree to draw the stakes.
8. The gloves to be fair-sized boxing gloves of the best quality and new.
9. Should a glove burst, or come off, it must be replaced to the referee's satisfaction.
10. A man on one knee is considered down and if struck is entitled to the stakes.
11. That no shoes or boots with spikes or sprigs (wire nails) be allowed.
12. The contest in all other respects to be governed by revised London Prize Ring Rules.

Appendix 4: Boxing training activities

Punch bag training: Today, punch bags are the standard product for people who wish to punch something during their boxing workout. They exist in all sorts of shapes and sizes, and exist in the form of hanging, as well as standing bags.



Man working out with a punch bag.

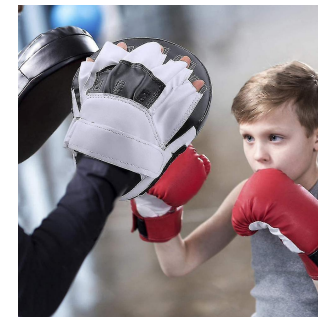
<https://blog.ringside.com/finding-the-right-punching-bag-for-your-in-home-gym/>

Punching on focus pads or at the other person's gloves: This type of training is generally done with two people. One will be wearing regular boxing gloves, while the other wears focus pads on their hands. The one with the pads can move the pads around, and the one with regular boxing gloves will try to land punches on the

pads. Types of pads for other parts of the body, such as the legs, also exist. Pad training is great for training technique, as well as reflexes.



Boxing focus pads.



A child punching at boxing focus pads.

<https://www.fruugo.nl/boksen-pads-2pcs-boksen-focus-mitts-en-pads/p-69452029-139500363>

Shadow boxing: Shadow boxing is the practice of throwing punches in the air (Nguyen, 2013). It is a way to train techniques, without the need for a target. While it doesn't help training reflexes, as there are no targets to react to, it is a great way of improving the way you move around. It can help train specific combinations of punches and footwork, and can be done without any equipment needed.



Shadow boxing.

Light sparring: You can spar without getting hurt. If you punch at only half power, and avoid hitting the other person's face, sparring can be really fun and engaging to do. When sparring with somebody like this, you can bring together all techniques and everything you have learned into practice.



Two men sparring lightly.

<https://www.alanorrwingchunacademy.com/ben-and-jimi-light-sparring-3-rounds/>

Fighting an opponent: When thinking about boxing, most people envision fights between two fighters in a ring. Yes these fights are also a way to train boxing and get better. However, most trainers discourage the majority of their trainees from participating in fights like these (for obvious reasons, might I add). Still, fighters who partake in fights like these can learn a lot from them. Few things can train your reflexes, fearlessness, and defences like powerful and fast punches flying towards you at full force. In a full-force fight, every aspect of training comes together in a true test of strength against an opponent who means to do so better than you do.



Full-force fight between two professional fighters: Vergil Ortiz Jr. hits Mauricio Herrera during a welterweight boxing match.

<https://spectrumnews1.com/ca/la-east/sports/2020/07/24/state-s-first-boxing-card-since-march-to-be-held-friday-at-indio-casino>

Appendix 5: Punch bag stands/mounts reviews

I researched three of the most often used punch bag stands and five of the most often purchased punch bag hooks based on their reviews. These reviews provided me with insights as to what problems users experienced when using their products, as well as really positive experiences they had with them.

TITLE Heavy Bag And Speed Bag Stand



<https://www.titleboxing.com/bring-the-gym-to-you/title-heavy-bag-and-speed-bag-stand>

The need to make some unprofessional adjustments to become satisfied

great stand, but needs weights

Overall Rating ★★★★★

After looking at similar stands by Everlast and Century, I settled on this one, since pretty much all the Title gear I have has been great. It is pretty heavy, but I was still able to set it up alone. Having a wrench or two was helpful for getting the nuts really tight. I am 6'2", and it is a tad shorter than I would like, so I don't use any chain to hang the bag, just a steel loop that opens up. It definitely moves a lot, as all of these stands do. Instead of buying weights, I bought 4 bags of pea gravel, 35 lbs each. That did the trick. I also anchor the bottom of the bag using bungee ties connected to the corner attachments in the front. My 70 lb bag works great there!

The speed bag platform is nice, but I made a couple upgrades. I bought a better quality swivel from Title—about \$50-60—and I bought a 50 lb bag of sand that I wrap in a garbage bag and lay across the top of the platform to dampen vibrations. It does the trick, nearly as good as a pro-quality speed bag platform in a gym, and I can get some good speed going on it!

The speed bag platform goes high enough for me—I have to raise my arms a bit but not too much—but if you are taller than 6'2" you might not be lifting your shoulders up as much as you would like.

For the money, I don't think you can beat this stand, and with a little modification, it is almost boxing-gym quality.

Review by T Hitman 11/5/21

This person sounds so happy with his stand, even though they had to make so many adjustments to their product. They appear to have had to make some more professional adjustments (replacing the speed bag swivel), and some less professional upgrades (the bags of pea gravel). If my product were to need pea gravel I would cry. Aside from that, the review also shows a need for the product to be usable by tall and short people.

Appreciation of durability

Great stand

Overall Rating ★★★★★

Have had this stand for 10 years and still looks the same as it did when I first bought it. Holding up great with daily use hoping it lasts another 10 years at least.

Review by Luis 1/7/20

Overall Rating ★★★★★

Still holding up well after 6+ years of use.

Review by 11/19/17

The stand might need modifications, but people appreciate a good product that survives their aggression.

TITLE Platinum Heavy Bag Wall Hanger 2.0



<https://www.titleboxing.com/bring-the-gym-to-you/title-platinum-heavy-bag-wall-hanger-2-0>

Not compatible with every kind of wall

Don't use with hollow-block masonry.

Overall Rating ★★★★★

Bought this a while back because hanging my heavy bag from the basement joists wasn't working since it shook the whole house. Thought attaching the hanger to the masonry wall would be the fix. I attached the bag with masonry anchors and even used masonry epoxy for a more solid fit. For a while it worked great - no complaints from the wife about the house shaking and nothing falling off the dressers - but over time the vibration from hitting the bag worked the anchors and screws free and I had to take the whole thing down. Masonry work is hollow, not solid, so it didn't provide a complete hold for the anchors and screws. Had the same problem with a speed bag (non Title Boxing) installed with Tapcon screws where the stand eventually started to shake when hit because the screws came loose. If you have hollow-block masonry in your basement, meaning the cinder block holes weren't filled in with concrete, this isn't the long term solution. If your home has more modern construction, where the basement walls are poured/form concrete, this should work great.

Review by Boxer11 12/30/20

The product itself might be durable, but the walls it is attached to apparently aren't. The big problem of wall or ceiling mounts like these really seems to be the connections to these walls or ceilings. They depend on bolts, and this connection is one that is susceptible to get damaged over time.

RDY X4 2FT FOLDING PUNCH BAG WALL BRACKET



<https://rdxsports.co.uk/rdx-heavy-duty-hanging-punch-bag-2ft-folding-wall-bracket/>

It should be noted that all reviews for this product are rather positive. I am not quite sure that the product is actually perfect and without inconveniences, but for now this will have to do.

Weightlifting

REVIEW BY BUSH

RATING	=====
DESIGN	=====
AFFORDABILITY	=====
MATERIALS	=====
DURABILITY	=====

GOOD QUALITY

This is one good heavy bag wall mount that you can fix almost anywhere you want. The high-grade steel is carrying my 100lbs punch bag for months now. I am truly impressed.

The most common fear users appear to have is products not being able to hold the weight of their punch bags. Therefore, most positive reviews mention it holding on for a longer period of time.

Limited space

REVIEW BY VAL

RATING 
DESIGN 
AFFORDABILITY 
MATERIALS 
DURABILITY 

PERFECT GYM EQUIPMENT FOR LIMITED SPACE

Everytime i am training at home i am silently thanking this Folding Punch Bag Wall Bracket for making boxing training possible at home. Solid metal frame. It was super easy to assemble and install. Very affordable and durable gym equipment

REVIEW BY SWANSON

RATING 
DESIGN 
AFFORDABILITY 
MATERIALS 
DURABILITY 

EXCELLENT GYM EQUIPMENT

I got this in order for my punch bag to fit into my tiny apartment. If you have limited training space at home than THIS Folding Punch Bag Wall Bracket is for you. Solid frame and anti corrosive coating makes it an ideal equipment for tropical high humidity environments.

People value wall/ceiling mounts because they take up less space than most stands.

Everlast Single-Station Heavy Bag Stand, White



https://www.walmart.com/ip/Everlast-Single-Station-Heavy-Bag-Stand-White/55041450?athcpid=55041450&athpgid=Athenaltempage&athcgid=null&athznid=utic&athieid=v0&athstid=CS020&athguid=TKBX_of7U5EEjYhqsKJUwdjdEED2FMLFnbjv&athancid=null&athena=true&athbdg=L1600

also on here, except in black this time:

https://www.amazon.com/Everlast-4812BDTC-Heavy-Bag-Stand/dp/B004HFLUK8/ref=sr_1_4?keywords=boxing+stand&qid=1636454942&sr=8-4#customerReviews

The need for weights

★★★★★ Verified Purchaser

4/15/2020

Awesome

Easy set up, and very sturdy. You'll need some weight plates to help weigh the stand down to offset the weight of the heavy bag

Clarissa

★★★★★ Verified Purchaser

6/30/2020

I love it

You'll need weights to place on it so that it doesn't fly off balance. I love it. I got the bag from Walmart as well. Shipping is fast. It's easy to put together even with just one person.

Happy

★★★★☆ Verified Purchaser

Good beginner's stand

Just got this in the mail yesterday and set it up. I'm a pretty small woman & was able to set this all up yesterday in about an hour by myself. The only part that I had trouble with was lifting the bag to the chains once I put them on. It needs more weight on the pegs to stabilize than I imagined it would (or maybe I'm just a tad bit stronger than I first thought!). It came to me in good condition, the box was a little rough though. I am very happy with this purchase. I've included a photo, just wanted to note that the basketball hoop next to it is a child's size hoop, just to bring things to proportion. The bag stand is a little over 7 ft if I had to guess.

wnzj

The ever returning case of weighting down these stands is also found here. I gather it's hard to determine the amount of weight a person needs, as this will differ from user to user.

Expectation management

★★★★☆ Verified Purchaser

7/4/2021

Disappointed in stability

We put it together fairly easily. But when I got to the last page of the instructions it said you would need to put three 25 pound weights on each side. Why wasn't this listed initially before I purchased it? I thought it had everything I needed. Very disappointed that now I have to buy something else before its stable.

Lynn

★★★★☆ Verified Purchaser

11/5/2012

Does the job

My only criticism is the 200 plus pounds of dead weight required to stabilize the stand. If you were to use weight plates as recommended it would cost you over 200 dollars which is of course more than the bag and stand cost. I used 70lb sandbags, one on each leg. Cost me 12 dollars.

Cherubim31

It seems like people are fine with needing to add weight. However, they wish to know they need to beforehand (which seems perfectly reasonable to me). If a product (in this case the stand) needs an external product (in this case weights) to function properly, it should be very clear it does so upon purchase of the initial product.

Footwork



Joe

★★★★☆ This was the best way for me to get maximum use of this ...

Reviewed in the United States on February 2, 2016

Verified Purchase

I didn't want to hang the bag from my ceiling simply because I was afraid it would void our 1 year home warranty. So, this was the simplest alternative.

When I got the stand, assembled it, It was apparent that about 50lbs was needed on each side.

Now, I am not experienced with heavy bags, a noob, but I found that the bag limited working of foot work. Yes, because of the fact you can't go 360 degrees, but also because of the legs that support the bag, especially when you throw weights of them.

So, my solution to this was simple. I took out my reciprocating saw and shorted the front legs so that they did not extend past the bag. I then took the ends and put them back onto the now shorter legs.

After this, I got myself some 1/2"x6" concrete anchors. Drilled appropriate holes and secured this stand directly to the concrete floor. This was the best way for me to get maximum use of this stand.

As it comes, with just the long supports and by putting weights on it, it's completely functional, but you'll just have limited foot movement. Overall happy with the quality and product.

[^ Read less](#)



The feet of the stand limit some users in the kind of workouts they want to do. A stand like this will prevent users who might want to be able to punch the bag from all sides from doing so. Some people come up with clever solutions though.

Loud!



Jason Corbeil

★★★★☆ **Frame is loud, but very sturdy and reliable with 100lb bag**

Reviewed in Canada on August 24, 2019

Verified Purchase

Wasn't difficult to setup, very sturdy, will take any size bag and weight and definitely does its job but the main knock is that it is noisy. Even after investigating to re-tighten some bolts its loud, creaky and makes noise with every punch as it flexes. Totally fine if you have your headphones on and your in a room or basement where you are not bothering anyone but it's quite loud and wouldn't be suitable in an apartment or condo, you would get noise complaints from the creaking metal piping.



Greg

★★★★☆ **Pretty alright stand.**

Reviewed in the United States on November 11, 2015

The stand works, however it does require some extra steps to be taken. The stand will be very squeaky if you put it together with the hand tools it provides. I would strongly suggest a ratchet and better Allen wrench that the product comes with to tighten the entire stand up correctly to prevent **loud** annoying squeaks every time you make contact. I have a 100lb bag hung from this and even with medium power punches, the stand will sometimes lift off the ground! This is even with 2 20lb weights in the front and an 80lb bag of quickcrete in the back. I would suggest having 80% of the weight of the bag used for weights in the front to keep it and the stand down and nothing less than 80lbs for the rear. The stand when fully assembled WILL NOT fit through a normal width door, if you want to move the stand from one room to another, you will basically have to break down the entire stand. This is not an issue but just a forewarning. I did not purchase from Amazon, but this exact stand does come in different colors. The one I purchased was White and it looks pretty cool.



Amazon Customer

★★★★☆ **Good for \$\$**

Reviewed in the United States on February 3, 2012

Verified Purchase

Not quite heavy enough. It makes a lot of **noise** when in use. Buy a bag anchor and weight plates to help with these issues.

This product has a multitude of metal profiles shoved together sliding into one another. This metal on metal contact can create rather awful noise. Aside from that, the noise of the thumping of the stand on the floor is also mentioned. It seems to me however, that this thumping is cancelled by adding the weights.


ABUSA Heavy Duty Black Swing Hangers



https://www.amazon.com/ABUSA-Hangers-Included-Playground-Trapeze/dp/B07SDD936K/ref=sr_1_1_sspa?keywords=Ceiling%2BMount%2Bfor%2BHeavy%2BBag&qid=1636462701&sr=8-1-spons&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUFHUFFZWkdTSUYySVAmZW5jcnlwdGVkSWQ9QTA5Mzk5NzgzVIRVWkE0UUk5NllYmVuY3J5cHRIZEFkSWQ9QTAzMTA2MDkxWjhRUUVYxSEtDTEsyJndpZGdlE5hbWU9c3BfYXRmJmFjdGlvbj1jbGlja1JIZGlyZWNoJmRvTm90TG9nQ2xpY2s9dHJ1ZQ&th=1

These hangers are not specifically boxing products, but it appears that many people use them for their punch bags.

Breaking upon installation

 hugscot


★☆☆☆☆ **Broken on install! Not as sturdy as made out to be.**

Reviewed in the United States on July 4, 2020

Size: 2 Packs | Color: 2 Packs Black | **Verified Purchase**

Buyer beware! But as sturdy as I thought. One bracket broke while fastening to the ceiling. As you can see from my pictures part that attaches to the ceiling is not solid and as such is a very weak point in the construction. I highly doubt these would hold up to the weight rating stated and don't feel safe using these.



 Cook

★★★★☆ **Buyer beware**

Reviewed in the United States on May 11, 2020

Size: 4 Packs | Color: 4 Packs Black | **Verified Purchase**

Really cheap anchor bolts. Bolt broke while screwing into a pre drilled hole. Do not use and go to local hardware store and get you a quality set. The black paint chips and flakes very easy. Will rust after first few rains. And then after order out of stock. Buyer beware. No directions and bearings fall out. Stickers for hole alignment came with three so dont crumble up but re-use what u have



Ud

★★★★☆ **Bolts broke while installing in wood beam**

Reviewed in the United States on April 2, 2020

Size: 4 Packs | Color: 4 Packs Black | **Verified Purchase**

Sticker mentioned in description was missing in shipment.

2 bolts broke while installing in wood beam, I reached out to seller and they said - "they are gift and they can not take any guarantee for the screws, I should buy my own screws". This is unacceptable, not sure what is worst shipping defective product or not assuming responsibility of defective product. very poor experience.

It is apparently easy to break either the hanger or the bolts during installation.

Not weatherproof



DR Rizzles

★★★★☆ **Good, but...**

Reviewed in the United States on April 19, 2021

Size: 4 Packs | Color: 4 Packs Black | **Verified Purchase**

These are really nice and designed well, with no obvious issues cosmetically. No squeaks, good sealed bearings, nice and smooth operation.

The one complaint I have is why I gave it 4 stars: Corrosion is going to be an issue, but won't show up for a while. These are aluminum. All the fasteners are just black coated steel or zinc-coated steel. So galvanic corrosion will be an issue. The hex bolt should be upgraded to stainless steel at the very least - an easy fix post-purchase. I also wouldn't use the lags included but get something designed for outdoor use such as hot-dipped galvanized or a GRK or something similar - ESPECIALLY if putting into pressure-treated lumber. The corrosion opportunities can lead to weakened connection points and ultimately failure of your swing.

Aside from corrosion, be sure to use Loctite on that hex nut or replace with a nylock nut. Fingernail polish works just fine, too. The hex nut doesn't have to be tight by any means, but if it loosens and the bolt creeps out, the unit will fail.

These hangers apparently degrade when hung outside.

Dura Punching Bag Hanger Heavy Duty



https://www.amazon.com/Punching-Ceiling-Rotation-Antirust-Stainless/dp/B08SHS5DBD/ref=sr_1_2_sspa?keywords=Ceiling+Mount+for+Heavy+Bag&qid=1636462701&sr=8-2-spons&psc=1&spLa=ZW5jcnlwdGVkUXVhbGlmaWVyPUFHUFFZWkdTSUYySVAmZW5jcnlwdGVkSWQ9QTA5Mzk5NzgzVIRVWkE0UUk5NllYJmVuY3J5cHRlZEFkSWQ9QTA1NzkwNjlyMlhGVzY3NIM2OEc1JndpZGdldE5hbWU9c3BfYXRmJmFjdGlvbj1jbGlja1JlZGlyZWNOJmRvTm90TG9nQ2xpY2s9dHJlZQ==

Once again, no negative feedback. I think this is only so because nobody had trouble installing the bolt into their ceiling, which a lot of users will have with their ceilings.

Sturdiness



Katie DeMaria

★★★★★ **100% recommend!**

Reviewed in the United States on April 5, 2021

Verified Purchase | **Early Reviewer Rewards** (What's this?)

Bought it for my little brothers punching bag and this works so much better then the one it came with! Super sturdy and easy to put together! Would 100% recommend



Alex Chambers

★★★★★ **Perfect and sturdy hanger!**

Reviewed in the United States on March 5, 2021

I like this punching bag hanger so much, I bought two more for my home gym. Easy to use and install. Very easy setup and safe.

The sturdiness, easiness of use and the fact that the hanger allows for movement in all directions make this product rather highly valued.

Dolibest Heavy Bag Hanger



https://www.amazon.com/Dolibest-Rotation-Strength-Training-Resistance/dp/B08R5TFHQR/ref=sr_1_6?keywords=Ceiling%2BMount%2Bfor%2BHeavy%2BBag&qid=1636462701&sr=8-6&th=1

For the do-it-yourself people



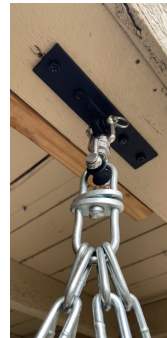
Amazon Customer

★★★★★ **Good quality mount for 100lb bag**

Reviewed in the United States on August 5, 2021

Style Name: heavy bag hanger only | **Verified Purchase**

The mount came with 4 woodscrews as well as 4 expansion anchors for cement or drywall. You'll need to drill pilot holes, I had to use 1/4 inch drill to get the screws through. Also make sure you have a socket wrench to tighten the screws. The moving parts have convenient plastic spacers so you're not grinding metal on metal and with the pin assembly you don't need additional clip/carabiner. This is perfect if you need your bag to hang a little higher.





Rather Be Fishing

★★★★☆ **Strength is great; hook is too small**

Reviewed in the United States on August 6, 2021

Style Name: heavy bag hanger only | [Verified Purchase](#)

I bought this because the original hardware I used to hang my Everlast heavy bag broke off at the ceiling. This hardware says it handles up to 600 lbs but it doesn't look very heavy duty. But, it works well! The installation was simple and the dual pivot points relieves the strain on the hardware. My only complaint is the hook is too small to directly hang the bag loops. I had to rig a short piece of climbing rope to attach the bag to the hook.



Joe Durr

★★★★★ **Great so far**

Reviewed in the United States on April 5, 2021

Style Name: heavy bag hanger with chain | [Verified Purchase](#) | [Early Reviewer Rewards \(What's this?\)](#)

Used it to hang a 100lb heavy bag in my basement off the floor joist. Used it a handful of times so far and it's still hanging even after some hard roundhouse kicks. I did add in a spring between the bag chains and the bracket to eliminate some of the shake to the floor above. Very easy to install, just a few screws and it's in, hardest part is lifting the bag to hang it haha.



Amazon Customer

★★★★★ **Used outside hardware as well but very sturdy.**

Reviewed in the United States on September 30, 2021

Style Name: heavy bag hanger with spring | [Verified Purchase](#)

I bought a 2x6 board, and 5in non predrill wood screws.

I used 10 of the long screws 5ea side to mount the 2x6 to a wooden beam on the ceiling. Two of the included screws to go into the hardware itself and two of the long screws I bought. I have a 100lb bag hanging from it. With the spring there is no movement whatsoever in the hardware or on the beam. Very satisfied with this product.



These folks keep mentioning the hanger is easy to install, and then include a full description of the steps they undertook. Handy folks (and myself) will agree with them that the installation was indeed easy, but I suspect a lot of less handy inclined people will have a hard time with the installation. These handy folks also come up with clever little customisations to make the hanger suit their needs more properly. All these reviews were made shortly after receiving the product.

Lack of survivability

 s power

★☆☆☆☆ **METAL FAILED. DOES NOT SUPPORT WEIGHT STATED.**


Reviewed in Canada on August 13, 2021

Style Name: heavy bag hanger with spring | [Verified Purchase](#)

The main support is not iron and it should be, NOT STRONG. TYPICAL of unaccountable vendors. The specs state it can handle heavy bag over 100lbs, bag is Faritex 100lb bag - as you can see from pic the eyelet starts circular and becomes oval within 2 months of use.

I am considering filing claim as the centre of 3 16 ft 2x6 is compromised if I take plate out and obviously cannot properly weld onto while attached. So \$300 of work ruined. Speaking of weld the specs say the support plate is not welded- look close it is.



 Amazon Customer

★☆☆☆☆ **Dont**

Reviewed in Canada on August 2, 2021

Style Name: heavy bag hanger with spring | [Verified Purchase](#)

This product was crap. The screws are made of crap material and will strip almost immediately

 G&J

★☆☆☆☆ **Cheap hardware. Time will tell.**

Reviewed in the United States on May 28, 2021

Style Name: heavy bag hanger only | [Verified Purchase](#)

Bracket seems quality, there are plastic pieces instead of all metal, and I managed to strip the head of one and totally break another of the low quality lag bolts included.

Alas, the product does not hold up well over longer periods of use. The bolts wear and the hook tears out.

Outslayer Muay Thai Heavy Bag Stand



https://www.amazon.com/Outslayer-Heavy-350lbs-Capacity-Punching/dp/B007A0BP26/ref=sr_1_32?keywords=punch+bag+stand&qid=1636468595&sr=8-32

Noise



Laurence Singerman

★★★★☆ Adequate

Reviewed in the United States on May 13, 2020

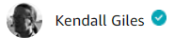
Verified Purchase

There are several connection points and each will screech and groan while you punch and kick the bag. It tends to scoot across the floor even though you pile up sandbags to counter that. But the sandbags also reduce the bag's swinging arc. So, that's not so great.

In brief: Noisy, unintentionally mobile, compromised arc.

Once again the squeaking of metal parts on one another is mentioned.

Made for kicking

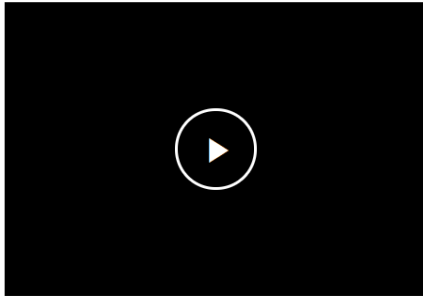


Kendall Giles

★★★★★ Easy to put together, fun to use

Reviewed in the United States on September 3, 2013

Verified Purchase



Along with a quality heavy bag, I needed a way to hang the bag. Hanging the bag from the ceiling or from the wall was not an option in my finished garage, so I looked for free-standing bag holders. Having experience with a cheaper bag stand, where the metal supports restricted movement and also caused injury by getting in the way when kicking the bag, I wanted a stand that would maximize my ability to use the bag while minimizing the amount of space it took up in my garage.

The Outslayer Muay Thai Heavy Bag Stand

seems to be just what I was looking for.

The Outslayer stand came in two boxes--one box had metal pieces burst through--the delivery person was not too happy, but nothing was damaged.

The stand was easy to assemble--it took maybe 10 minutes to put everything together.

The stand is just over 7.5 feet tall, and supports up to 350 pounds. The stand comes with four (empty) sandbags that you fill with sand and place over the arms of the stand to keep it stable.

In the video I give a tour of the Outslayer heavy bag stand and show it in use.

The Outslayer Muay Thai Heavy Bag Stand fits perfectly in my garage and works well with a 6' bag--there's a lot more space around the bag for movement, and I can hit and kick with freedom.

The design of the stand was made with kicking users in mind. The singular central pole is the only vertical steel in the product, meaning users won't kick into it when kicking their bags.



ThreeTorties

★★★★★ Best Bag Stand on the market. Period.

Reviewed in the United States on July 29, 2018

Verified Purchase

This bag stand is excellent. Simple, and solid, easy to setup and adjust. This stand is great because it is strong without the use of side supports. On lesser bag stands, the side supports can catch your feet on hard Thai low kicks. Ouch. This bag stand doesn't have that problem. I would buy this stand again in a heartbeat. I wish I would have ordered this stand sooner. I was suspicious of all the positive reviews at first, but that was unfounded. Now here I am adding to the positive reviews. Do yourself a favor and get this stand!!

Appendix 6: Project Brief

5410 TU Delft

DESIGN FOR our future

IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSCE&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

USE AN Adobe ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT
Download again and/or open in case you find other software, such as Preview (Mac) or a web browser


STUDENT DATA & MASTER PROGRAMME
Save this form according to the format: "IDE Master Graduation Project Brief_ familyname_ f.lastname_ studentnumber_ dd-mm-yyyy".
Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 11

family name: Nieuwenhuizen Your master programme (only select the options that apply to you):
 initials: SD given name: Stephanie IDE master(s): ID DI SPD
 student number: 4540948 2nd non-IDE master: _____
 street & no.: _____ individual programme: _____ (give date of approval)
 zipcode & city: _____ honours programme: Honours Programme Master
 country: _____ specialisation / annotation: Medsign
 phone: _____ Tech. in Sustainable Design
 email: _____ Entrepreneurship

SUPERVISORY TEAM **
Fill in the required data for the supervisory team members. Please check the instructions on the right!

** chair: Arien Jansen dept./section: SDE/MM Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v.
 ** mentor: Tomasz Jakowicz dept./section: HC/DCC
 2nd mentor: Tim van der Vaart 1 Second mentor only applies in case the assignment is hosted by an external organisation.
 organisation: Sports-fk city: Amsterdam country: the Netherlands
 comments (optional): _____ 2 Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

IDE TU Delft - E&SA Department /// Graduation project brief & study overview /// 2018-01 v30 Page 1 of 7



Procedural Checks - IDE Master Graduation

APPROVAL PROJECT BRIEF
To be filled in by the chair of the supervisory team.

chair: Arien Jansen date: 6.12.21 signature: [Signature]

CHECK STUDY PROGRESS
To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 30 EC YES all 1st year master courses passed
 Of which, taking the conditional requirements into account, can be part of the exam programme: 30 EC NO missing 1st year master courses are:
 List of electives obtained before the third semester without approval of the BoE: _____

name: J. J. de Bruin date: 16-12-21 signature: JdB

FORMAL APPROVAL GRADUATION PROJECT
To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

• Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)? Content: APPROVED NOT APPROVED
 • Is the level of the project challenging enough for a MSc IDE graduating student? Procedure: APPROVED NOT APPROVED
 • Is the project expected to be doable within 100 working days/20 weeks?
 • Does the composition of the supervisory team comply with the regulations and fit the assignment?
 comments: _____

4/1/2022
 name: Monique von Morgen date: 4/1/2021 signature: MvM

IDE TU Delft - E&SA Department /// Graduation project brief & study overview /// 2018-01 v30 Page 2 of 7
 Initials & Name: S.D. Nieuwenhuizen Student number: 4540948
 Title of Project: Bringing the NextRound punch bag into the homes of future users

Bringing the NextRound punch bag into the homes of future users project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 24 - 11 - 2021 end date 26 - 04 - 2022

INTRODUCTION **

Please describe, in the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...)?

This graduation project will be done in collaboration with the start-up company Sports-f(x). They are currently developing the NextRound punch bag, an intelligent tool for boxing workouts.

Sports-f(x) has over the past few years been working on creating an intelligent punch bag, the NextRound (image 1). This system measures data when used, which includes for example punch impact, speed, location, and intensity. The punch bag is accompanied by two app interfaces: the NextRound Live app and the MyNextRound app. The NextRound Live app is on a tablet, which is directly connected to the punch bag. This app measures data during a workout session, and gives guidance while working out (image 2). The MyNextRound app can be used on people's phones before or after a workout and gives feedback on their workout data.

These apps use gamification principles to provide training programs and workouts so users can train to achieve their goals, and visualise their improvement. The NextRound aims to keep people engaged, motivated, and guided to work out. They designed it as a tool to achieve the need of competence (as based on the Self-Determination Theory by Deci & Ryan, 1985).

The punch bag is going to hit the market early 2022. At first, it is mainly sold to gyms and to some early adopters of private users, who wish to have it in their homes. After that, NextRound wishes to be able to serve a larger audience of at-home users.

Sports-f(x) sees an opportunity to appeal to people who want to practice sports and exercise at home. They see a trend in people wanting to do sports at home, and wanting to do so well. They see opportunity in reaching people beyond those who already practice boxing. They think there are going to be large groups of users who don't yet know they want to practice boxing, but will find themselves interested when they find out about the product. These people however, will need convincing to get into boxing exercise. These people are not yet familiar with boxing technique, but the app programs will help them here. The NextRound Live app will include instructional material so people can practice as they learn. Who exactly these people, who the product should reach, are however, is as of yet unknown.

To be able to reach these new and unknown users, the product will need to be able to be positioned at their homes. It is a big and heavy product, which will need quite a bit of space. Aside from that, there will need to be a designated spot for the tablet with the NextRound Live app somewhere close to the punch bag. There are already a number of simple products on the market which people can use to position any punch bag in their home. However, these are simple products which don't necessarily integrate well with the NextRound punch bag. Aside from that, NextRound wishes to have their own product solution, which matches their vision and which helps especially the new user group of people who might not know they would like to practice boxing yet. This is where I come in. In the following pages I will explain how I plan to create a solution for bringing the NextRound punch bag to people's homes.

space available for images / figures on next page

introduction (continued), space for images



image / figure 1: The NextRound punch bag in use. The tablet with the NextRound Live app hangs on the wall.



image / figure 2: The NextRound Live app displays data about the workout during, and directly after the workout.

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

There is a need from people to exercise at home, and to do so in a motivating and engaging way. A product that could help them do so is the NextRound punch bag. There is a big problem however, as it is going to be hard for people to position one of these punch bags at home.

Another product will be needed to install the punch bag. There are already a multitude of products that can be used to have a punch bag at home, but these come with a multitude of problems when trying to use them for a NextRound punch bag specifically. Existing solutions are not integrated with a tablet, which will be needed for NextRound users, since otherwise they won't be able to use the NextRound Live app. Without this app, the NextRound punch bag is not usable in the way it should be.

Aside from functionally not being able to support the NextRound system, there are other problems here. Existing solutions tend to either be big, hefty, and loud products, or be products that require a user to drill hooks into their walls or ceilings. Not all houses, and not all users, are going to be able to use these kinds of products, which would make them unable to use the NextRound punch bag. This in turn would mean that their personal needs of wanting to do motivating exercise at home cannot be fulfilled.

Lastly, existing solutions are generally "dumb" products. They don't make the interaction with the NextRound punch bag any clearer, and do not support the potential functionalities that it might have. Therefore, the installed NextRound punch bag will not be able to offer as much potential valuable interactions as it could.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Design a product to bring the NextRound punch bag to consumers at home. This positioning solution product will be integrated with the punch bag, and the NextRound Live app. The product should fit to the punch bag visually, and in use. The bag and the newly designed product should become a whole, and the new product should add a new functionality to the already existing functionalities of the punch bag.

Design a product which can help users install and position the NextRound product in their homes. This product should be compatible and integrated with the NextRound punch bag.

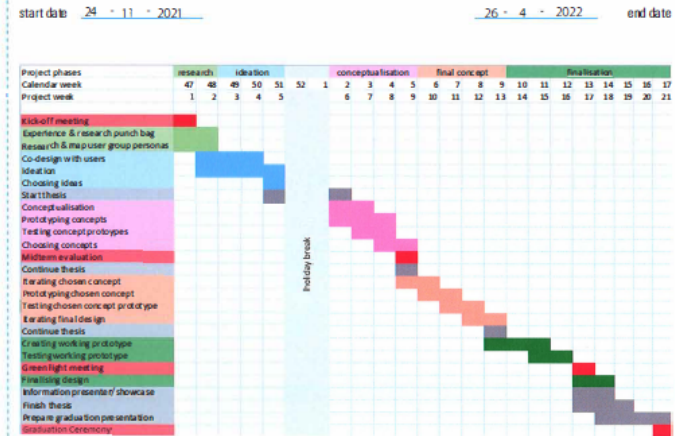
Research who the users might wish to have a product like the NextRound punch bag installed in their home, but who don't know they do yet. These people will be called the potential users. Then do research with said potential users in the forms of co-design and user testing.

Create prototypes and test said prototypes with the earlier defined potential users.

Aim to design a product which adds a functionality to the interaction of the NextRound punch bag. This functionality should enhance the interaction a user would have with the NextRound punch bag if it didn't have this product solution. It should bring the interaction from mainly revolving around punching a bag, to also incorporating a part of what boxing is that a punch bag alone couldn't help somebody train with. It should help give people an aspect of the interaction that one would only have when boxing with a human opponent to boxing with a product.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.



Dates with important meetings and/or deadlines (these are marked red in the Gantt chart):
 wednesday 24-11-21: Kick off meeting
 wednesday 2-2-22: Midterm evaluation
 wednesday 30-3-22: Green Light meeting
 tuesday 12-4-22: Deadline graduation report and information presenter/showcase
 tuesday 26-4-22: Graduation ceremony & public presentation

I will not be working on this project during the holidays, which is monday 27-12-21 through friday 7-1-22.



MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, ... Stick to no more than five ambitions.

The main reason why this project motivates me as a graduation project, is because I want my project to be two things: physical and user-centered.

By physical I mean that I want to create a hands-on design process, which involves many prototypes and builds. I want to touch what I think up, and will write/draw any idea that pops into my brain. I will keep a collection of all my design work in a binder, instead of some intangible online solution, because doing so gives me a clearer overview.

By user-centered I mean that I want to involve users/possible users/other people in my design process. I want to try out some co-design methods to get ideas from these people. I also want to use this method, as well as interviews and observations, to get a better understanding of who these people are and what their wishes are.

With that in mind, these are my ambitions of activities I want to do during this project:

PROTOTYPING

I want to make multiple prototypes during the design process. During the earlier steps these should be a bit low-fidelity, and should serve the function of exploring the design. In later stages, they should be of a higher fidelity, and serve the function of being tested. I want to train myself in being faster (in the early stages), and be more thorough (during the later stages) with prototyping.

CO-DESIGN

I want to learn better to use the rich knowledge and ideas of possible users. I want to try and train myself at some co-design techniques, to learn from people who might use the product. I have in the past had courses about the theory of co-design, but I don't feel like I've got any hands-on experience putting it to practice (partially due to the pandemic). To do so, I will research co-design techniques and try to find ways to make these work in the design process.

USER-TESTING

Combining the previous two ambitions, I want to use the prototypes to test with and learn from users on how to improve/adjust the design. I have done some user testing before, but I want to train myself to do so more methodically. I really hope that the regulations will allow me to do this user testing physically, as that would be closest to an actual use scenario.

COMPANY WORK

This is going to be the first time I'll be working with a start-up company, so this experience is bound to be insightful for me. The design project I'm going to be doing is supposed to be a product that they intend to put into the market. That is new for me as well! This will very likely influence the form of the final product, and I'm eager to see where it'll go.

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Appendix 7: Co-Design materials

During the research phase of my project, I conducted co-design sessions to learn more about potential users of my to-be-designed product. For these sessions I prepared some materials, which you will find here.

It should be noted that the questions and templates shown here are all written in English. However, the sessions were conducted in Dutch. For this reason, I used Dutch translations of these sheets during the sessions. Here, you'll only see the English versions, because this report is in English.

Informed consent form and explanation form

Before starting the session, I wanted to be sure that the participants and I were on the same page as to what it was we were going to do. To do so, I made an explanation form about the session, as well as a consent form. The explanation form would explain what the session would be about, and the consent form would explain what data I would collect and what I would use it for.

Both sheets were for the participant to keep, and I made extra copies of the consent form so both the participants and myself would have a copy.

Explanation form research about hanging solution NextRound punch bag

Design research graduation project S.D. Nieuwenhuizen

Hello! I am a Master student of Design for Interaction at Delft University of Technology, and today I am going to conduct design research with you regarding exercise. For this research I would like to learn about the following:

- Your exercise habits, both inside and outside the house.
- What drives you to exercise or do sports.
- How you use sports products in your day-to-day life.

The goal of this research

For my graduation project I am designing a product to help motivate people in a positive way to exercise at home. To be able to do so, I want to learn more about how people (such as you) exercise. I wish to learn what makes you feel good about exercising. I also want to learn what does not help motivate you. I want to learn these things in order to use that knowledge to make my future product design suit the lives of people such as yourself better.

The contents of the research

The session consists of two parts.

1. I ask you interview questions to learn to understand your mindset.
2. I will give you a hypothetical situation. Through an exercise I prepared, you will explain how you would apply said situation in your life.

You are the expert of your own life

Please be honest in your answers. In this research, there are no wrong answers. I am trying to learn about your opinions and motivations, and you are the one who knows those best. If for any reason, there is a question you do not wish to answer, notify me and we will skip said question.

Data

To aid me when I'm making conclusions of this research, I will make an audio recording of the full session. It might happen that there is a moment during the session where I would like to make a picture or a video of something happening during the session. In such a situation I will ask you if you would permit me to take a picture or film what's happening. If you want me to, I can blur you out of visual material by drawing over you (you can make a note of this in the consent form). An example of what this looks like can be seen below.



The picture on the left is the original, the picture on the right has been drawn over to make the person depicted not recognizable.

The data gathered during today's session will only be used for my personal graduation project. I will use this data to communicate with my client and coaches about what I've been doing and what I've learned from these sessions. This raw data will not be shared publicly.

The conclusions I'll make following today's session will be published in my graduation report. This report will be shared on the Education Repository of Delft University of Technology (<https://repository.tudelft.nl/islandora/search?collection=education>). This is where all graduation reports of students of the university are collected.

If I wish to use any visual material of today's session in my graduation report, I will contact you by then to ask for your permission.

Withdraw from the research

If at any moment after today's session you want to withdraw from the research, feel free to contact me. Then I will delete the data from today's session and will not use it any further.

Consent Form for co-design session

Please tick the appropriate boxes

	Yes	No
Taking part in the study		
I have read and understood the study information in the explanation form, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	<input type="radio"/>	<input type="radio"/>
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	<input type="radio"/>	<input type="radio"/>
Use of the information in the study		
I understand that information I provide will be used for the design process of S.D. Nieuwenhuizen's graduation project. The conclusions of the research will be displayed in their graduation report, and will be communicated with coaches and clients.	<input type="radio"/>	<input type="radio"/>
I understand that personal information collected about me that can identify me, such as for example my name or where I live, will not be shared beyond the study team.	<input type="radio"/>	<input type="radio"/>
I agree that statements I make can be quoted in the graduation report.	<input type="radio"/>	<input type="radio"/>
The graduation student may make/use visual material (pictures or videos) from this session in the following way (mark which option has your preference):		
<input type="checkbox"/> I do not wish to have any pictures or videos be taken of today's session.		
<input type="checkbox"/> Images and video material may be made and used as described under "Data" in the Explanation Form. However, I want the graduation student to make me unrecognisable by drawing over me as in the example image.		
<input type="checkbox"/> Images and video material may be made and used as described under "Data" in the Explanation Form.		
Future use and reuse of the information by others		
I give permission for the conclusions of this research for which I will give my input to be archived in Education Repository of Delft University of Technology so it can be used for future research and learning.	<input type="radio"/>	<input type="radio"/>
I understand that the audio recordings of today's session will only be heard and used by the graduation student.	<input type="radio"/>	<input type="radio"/>

Signatures

_____	_____	_____
_____	_____	_____
_____	_____	_____
Name(s) of participant(s)	Signature	Date

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

<u>S.D. Nieuwenhuizen</u>	_____	_____
Name of researcher	Signature	Date

Study contact details for further information: +31637125302

Interview Questions

I used the following list of questions as guidance during the session. In the session, I tried to get behind why they wanted or thought certain things, so I pushed myself to ask for reasons behind their statements.

Getting to know them

What is your age?

Do you exercise?

Why do you exercise? [KEEP SDT IN MIND] [SEARCH FOR PAINS & GAINS]

- Do you enjoy exercising?
- What kind of exercise do you do?
 - What about [x] do you enjoy?
- Where do you exercise?
- How often do you do so?
- With whom do you exercise?
- Since when do you exercise?
- Are there sports/exercise routines you have done in the past but currently no longer practice regularly?
 - What is the reason you stopped?
 - What about these sports/exercise routines didn't work for you?

Link to products/things they have at home

What kind of products do you own specifically to exercise?

- Where do you use these products?
- Do you have any exercise-at-home products you really enjoy?
- Have you in the past had any exercise-at-home products which you currently no longer use?
 - Why did you stop using them?
- Are there any apps/programs you like to use to exercise?

Link to boxing

What do you think about martial arts?

- Have you done any martial arts in your life? (might have come up before)

What do you think about boxing?

- Have you ever done any boxing?
 - Do you still do boxing?
 - Where have you done boxing?
 - How did you get into boxing?
 - What kind of boxing exercise/training have you done?
 - bag/pads/sparring/shadowboxing → do you enjoy this sort of training?
 - What do you think about punch bag training?
 - Is there something you miss in punch bag training?
 - Why?

Link to NextRound

So, I've been asking these questions specifically about boxing because for my graduation project I'm working with a start-up company who are creating an intelligent punch bag, the NextRound.

[SHOW PICTURES]

This punch bag is a device which can track punch speed & power to help users see how well they perform. It uses gamification principles (where motivational mechanics from the gaming industry are used in a non-gaming context) to motivate people to exercise and have fun with it. It is a tool which can be used for power training as well as cardio. The punch bag comes with a tablet with which you can choose workout programmes or challenges, and which can show you your stats immediately while training. It also has a personal app in which you can see your personal stats.

[OPEN TO QUESTIONS]

NB if they really, really are not interested at all in the product, use another sports product (say a spinner) in the map exercise.

Map

So, I would like to ask you a hypothetical question. If I gave you one of these punch bags right now, where in your home would you place it? Think about that for a bit for yourself, and then please write the answer on a post-it.

[LET EACH OF THEM THINK FOR THEMSELVES FOR A BIT]

I would like you to think out loud about the room/place where you would like to have this punch bag, and discuss amongst yourselves where you together would think is the best place to put it.

[LET THEM DISCUSS WITH ONE ANOTHER ABOUT ROOM/PLACE TO PUT IT, AND COME TO AN AGREEMENT]

Can you please for this room/place write down three reasons it would be nice to have the punch bag here, and 3 reasons it would not be nice to have it here.

[LET THEM WRITE DOWN ON POST-ITS]

Is [x] still the best place to have it? Or do you wish to discuss other locations?

[IF NEEDED, BRAINSTORM WITH THEM ABOUT SPACES IT COULD BE IN, TRY AND FIND WHY SOME SPACES ARE REALLY NOT SUITABLE]

[IF SURE, HAND MAP]

Could you sketch the floorplan of this room out for me? It doesn't have to be perfect or to scale. Please use this [BLACK MARKER] to draw the shape of the floor. Please also draw, if applicable, if there are any stairs, windows, or doors in this room. If there are any doors, please also sketch in which way they open.

[IF THEY HAVE DIFFICULTY, SHOW EXAMPLES]

[AFTER THE FLOORPLAN IS DONE]

I imagine there are already objects & furniture in this room. Here [SHOW CONTAINER OF PAPER PIECES] are some pieces of paper which you can use to show where you want each piece of furniture to be. If you want another shape of furniture piece, I also have new sheets of paper and scissors.

[ONCE THEY FEEL DONE]

So this is where you would put the punch bag?

- Why this location?
 - What is the reason you want it [x]?
 - So if I understand correctly [x]?

How would you want to put the punch bag in place?

- If you could have it in the most perfect way possible, how would you position it?
- How can we make this more ideal for your situation?
 - Try to guide into extra features they want their product to have?

[IF THEY ARE SURE AND HAVE PERFECT ROOM FINISHED]

So I think we have found the solution which fits your situation the best. [HAND GLUE] Can you fix everything in place for me? [FACILITATE EXTRA SHIFTING AROUND IF NEED BE]

To said room/place

[IF POSSIBLE]

Would you be okay with showing this room to me?

[VISUALISE THE PLACE IT WOULD BE]

[ASK FOR PICTURE OF PLACE & WITH USER(S)]

Wrap up

Thank you very much for answering all my questions & brainstorming with me!

[ROOM FOR QUESTIONS]

NextRound collage

I used this collage to have some visual material to support my explanation about what the NextRound punch bag is.



Chosen location: Where would I place my NextRound punch bag if I were to get one? pros & cons sheet

After finishing the interview portion of the session, I would ask the participants to imagine they were to get a NextRound punch bag of their own. I asked them what they would do with it, and once again tried to find the reason why they would make this decision. To guide this, I gave them the following sheet, along with three pink and three green post-it notes. At the top of the sheet, they would have to write down where they would put their punch bag. Then, they would write three pros of having the punch bag in said locations on the three green post-it notes. After that, they would write three cons of having the NextRound punch bag there on the pink post-it notes. We discussed the pros and cons after they were done writing. The template of this sheet is shown here.

Where would I put my NextRound punch bag if I were to get one?

Filled in by: _____

I would put my NextRound punch bag here:

Chosen location: My own NextRound map

After discussing what they would do with their NextRound bag, we went to the location they would put it (if possible). There, we could discuss their positioning solution more clearly. From this discussion, we would draw a map together of what this situation would look like. The template of the map is shown here.

My own NextRound map

Made by: _____

This is where I would place my NextRound punch bag: _____

And this is how I would fill the space:

Appendix 8: Co-design result sheets

These sheets are a summary of the results derived from the co-design sessions. The text contains quotes from the sessions, which are in italics. The other text consists of my findings and conclusions. On the top right, you can see the maps which were drawn in each session. Below the maps are pictures taken in the context of use. I drew on the pictures to protect the identities of the participants, and to show what the solution they came up with during the sessions would kind of look like in reality. Annotations were added to these drawings for clarity.

Co-design session 1 (pilot) - participants 1 & 2

Session 1 (pilot) - participants 1 (age 54) & 2 (age 56)

Opinion towards sports

Both these participants are in their fifties and very active. They both go to their own gym, and practice boxing there. Both have dealt with injuries in the past, and are very wary of avoiding to get more in the future. They exercise to keep healthy and be strong in their bodies, to avoid future injury.

Quotes & motivations behind them

"Boxing is a cardio tool I love to end my sessions with, to truly let everything out!"

Both of them love boxing as a tool for blowing off steam and letting everything go.

"For people our age, competitive sports aren't feasible to do regularly anymore."

Competition-heavy sports don't suit their lifestyles anymore. They both used to play badminton and participant 2 also played soccer for a long time, but found themselves getting injured often and got beaten in matches, which made these specific sports no longer fun for them.

"I do really like pad training with my trainer, that way he can help me train my reflexes." "Same for me, but a while ago I hit him in the shoulder too hard and I could see that it hurt him. It made me feel terrible. Hurting people for sport is against my worldview."

Doing boxing with another person is fun, but once somebody gets hurt they feel guilt.

"When I enter the gym I love to give one of the bags a good kick. Bam! I'm here. I also used to do a lot of early morning sessions, as it made me feel completely started up in a second!"

Boxing gives him an adrenaline kick which makes him feel mighty and ready for the day.

"In the beginning I was blown away by how heavy it is, I couldn't pull up my arms at all after a session. Now that I've been training I can keep going a lot longer."

Seeing her progress gives her a confidence boost.

Wishes for the product

They wish to have space to properly do their punches to avoid injury. They would like the product to be usable outside (but properly protected against the weather). When not using it, they want the bag to take up as little space as possible to not disturb any other daily activities.



Co-design session 2 - participant 3

Session 2 - participant 3 (age 23)

Opinion towards sports

Currently he doesn't really exercise regularly. Used to go to a gym with a friend, but his friend moved away. He kept going there a for a bit on his own even though it was a lot less motivating alone. Once the pandemic started, he stopped and didn't start again afterwards. In the past he practiced karate regularly, but stopped once he moved to Delft to study.

Quotes & motivations behind them

"The lockdown was the nail in the coffin for [going to the gym]."

During the pandemic it became very difficult for him keep exercising, as his gym had to follow strict and often changing rules.

"I know I didn't have eyes on me [at the gym], but I still kind of felt like I was being judged. [...] Alone in the gym I got really self-conscious. All I do needs to be good or others might see I do bad or that I'm not strong."

Being surrounded by strangers can make him self-conscious when working out.

"I don't like hitting other people, sadly it's kind of essential in [karate]."

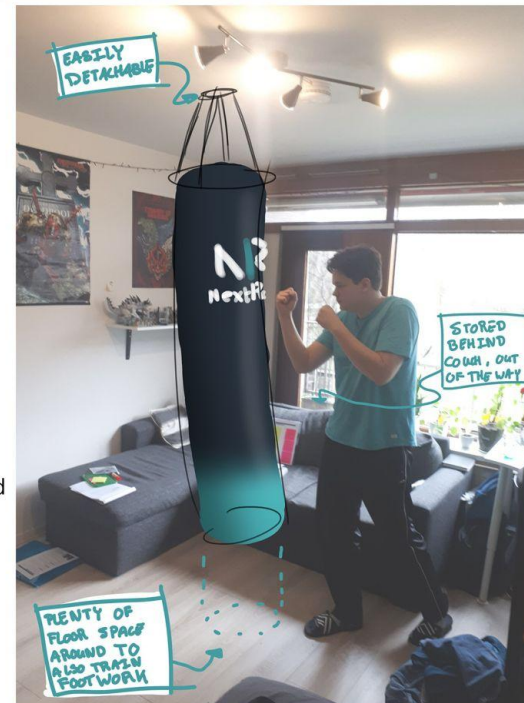
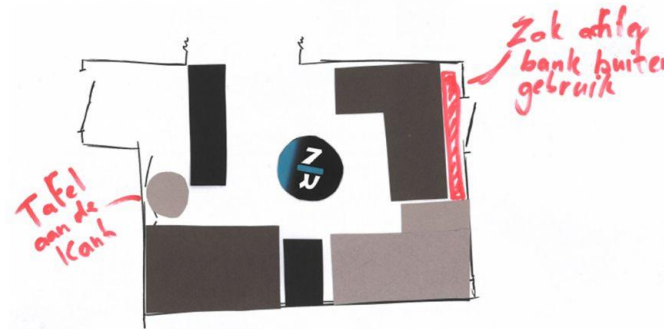
In karate he really enjoyed practicing and perfecting techniques, but trying them out on one another and sparring made him feel bad for hurting somebody.

"Cardio is boring to me. I'm not the type to go cycling for one and a half hour. But if in that time [...] I could do something like really sharpen my technique I could enjoy it better."

Cardio doesn't interest him because it's monotonous. What would engage him if he could work out while receiving guidance to get better, as that would make it an engaging challenge.

Wishes for the product

He wants it to be possible to put the bag away when not using it. He wants to be able to train techniques and get feedback on his techniques while working out. He wants to exercise in a space where he won't feel exposed.



Co-design session 3 - participant 4

Session 3 - participant 4 (age 36)

Opinion towards sports

He is very active. Exercises mainly by himself, but also occasionally with a friend. He cycles, swims, runs, does fitness, and since working with NextRound has been trying out boxing. He exercises mainly by himself, and is strongly intrinsically motivated to work out. He also exercises at his uncle's home gym every Sunday, and goes swimming with a friend every now and then.

Quotes & motivations behind them

"Where & when I work out is dependent on my work planning for that day."

His job requires him to have a flexible workweek, which makes his planning irregular and unpredictable. This requires his workout routines to be flexible, and means he can't really sign up to many classes (especially because having to cancel makes him feel bad).

"There are many reasons I exercise. When I don't exercise for a longer period of time I feel worse, whether that's physical or mental. Exercise helps me destress, it gives me energy. It also helps me deal with injuries. I had back issues a few years back from inactivity, and getting stronger through exercise healed me."

Exercise is very important to him, and he really values his exercise time for many reasons. It keeps his body and mind feel good and strong.

"Starting my days with exercise gives me a powerful start of the day. At the end of the day [...] I like to do exercise to let the stress of the day go and behind me."

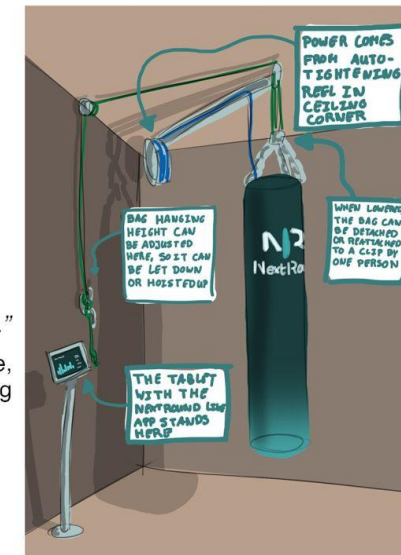
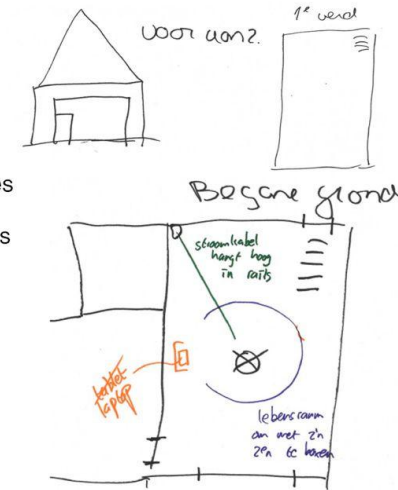
Exercising rounds his days up; it's where he likes to start and likes to end. Starting off with exercise gives him energy, and ending with exercise gives him peace of mind.

"What I noticed over time, when I wasn't able to train as much as before, was that my performance worsened. What I loved about [crossfit] was seeing improvement. When that no longer happened I quickly lost motivation."

Seeing he improved was a big motivator to do crossfit in the past. When his work schedule got less predictable, he couldn't keep doing crossfit anymore. His performance worsened to quickly that his motivation to keep doing it was lost quickly.

Wishes for the product

He wishes the product to facilitate two people use it at once. He wishes that moving the product around and mounting it can be done by one person.



Co-design session 4 - participant 5

Session 4 - participant 5 (age 59)

Opinion towards sports

She is very active, and enjoys to exercise. Her routine is very diverse and flexible, and she loves it that way. She's a member of a gym chain with many locations all over the world, and with said membership has access to every gym of the chain. She mainly goes to classes and doesn't really use the machines by herself.

Quotes & motivations behind them

"I enjoy my classes live, on location, with an instructor in front of me."

Having a trainer, a voice to trust and listen to, is a huge motivator for her. So is being at the gym.

"I'm in the luxurious position to have 3 gyms within a kilometer radius from my home, so I can look everyday where they'll have classes I want to follow."

Flexibility is key for her. Her work schedule changes by the week, and so does her exercise schedule. Being able to try many different things at her gym is part of the reason she has so much fun working out.

"When I got a hernia the doctor forbid me jog. That made me think 'finally, I have an excuse to stop.'"

Running/jogging is really boring to many, for its monotony. So is most cardio. Offering cardio which is not monotonous, and preferably doesn't take much time, could really help many people.

"It should not be too dominantly in view. [...] My work-from-home space can have its door closed and the washing machine is in its own closet. I like having these activities organised and separated. [...] There used to be a punch bag in the cellar, but I took it down. Everytime I walked by it I thought 'I could also be doing something with that', even though I know from experience I don't enjoy it."

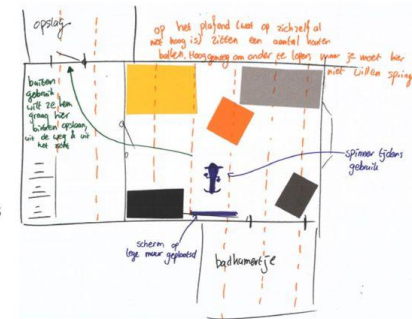
While doing an activity at home, she doesn't want to feel guilt or distraction by products belonging to other activities. She also did many a boxing class in the past to try again and again if she would like it, but she doesn't get joy from it.

"Exercise is fun and must be fun. It's got to give you energy. And when it doesn't do so, you shouldn't be doing it."

She really wants to feel good and happy from exercise, and she does. This feeling is precious to her.

Wishes for the product

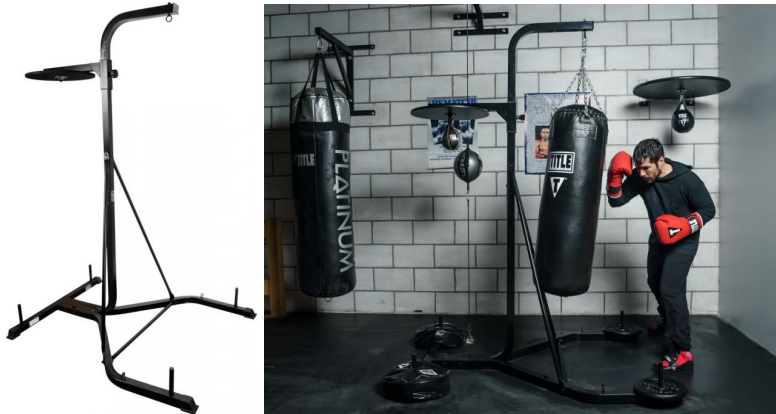
Wishes it to be easy to clean. Wants it to be out of view when not in use. Wishes to see trainers/people when working out.



Appendix 9: Dimensions of existing standing solutions for punch bags

I researched the dimensions of five different standing solutions for punch bags. These five are five of the most popular punch bag stands.

TITLE Heavy bag stand speed stand



<https://www.titleboxing.com/bring-the-gym-to-you/title-heavy-bag-and-speed-bag-stand>

Floor space: 1,17 metres width by 1,42 metres depth → 1,66 square metres floor space
Height: 2,16 metres

Everlast Heavy bag stand



https://www.amazon.com/Everlast-4812BDTC-Heavy-Bag-Stand/dp/B004HFLUK8/ref=sr_1_4?keywords=boxing+stand&qid=1636454942&sr=8-4#customerReviews

Floor space: 1,45 metres width by 1,21 metres depth → 1,75 square metres floor space
Height: 2,19 metres

Outslayer Muay Thai heavy bag stand



https://www.amazon.com/Outslayer-Heavy-350lbs-Capacity-Punching-dp/B007A0BP26/ref=sr_1_32?keywords=punch+bag+stand&qid=1636468595&sr=8-32

Floor space: 1,22 metres width by 1,22 metres depth → 1,49 square metres floor space

Height: 2,38 metres

Fightcamp standing punch bag



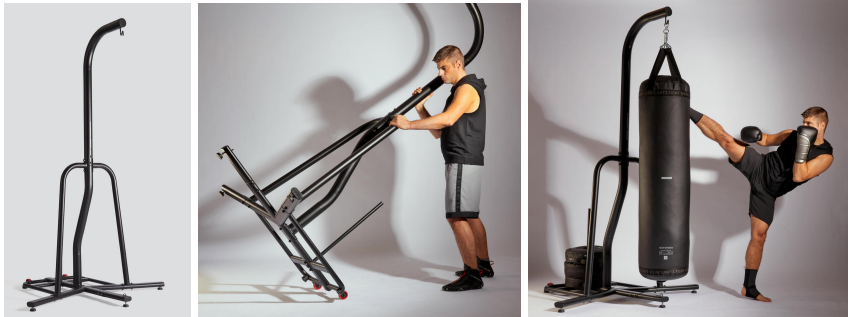
<https://joinfightcamp.com/shop/products/fightcamp-personal/>

Floor space: 0,61 metres width by 0,61 metres or 1,22 metres depth (depending on whether or not the 4 extra floor tiles are in place or not) → 0,37 or 0,74 square metres floor space

Height: 1,70 metres tall

The amount of space needed to work out with a Fightcamp punch bag is hotly debated. Users claim to need way more space than advertised, especially if they also wish to do some footwork in between punches.

Outshock movable punch bag stand



https://www.decathlon.nl/p/veelzijdige-en-te-verzwaren-standaard-voor-bokszak-900/ /R-p-308532?channable=02893b736b7569640032373632303836e3&mc=8554189&gclid=Cj0KCQiA_8OPBhDtARIsAKQu0gajJjvblO5zvDY8kpGT6n9CHHO3pfQQmR56VkQJr6zkWv_Tl-nbj7oaAnRzEALw_wcB

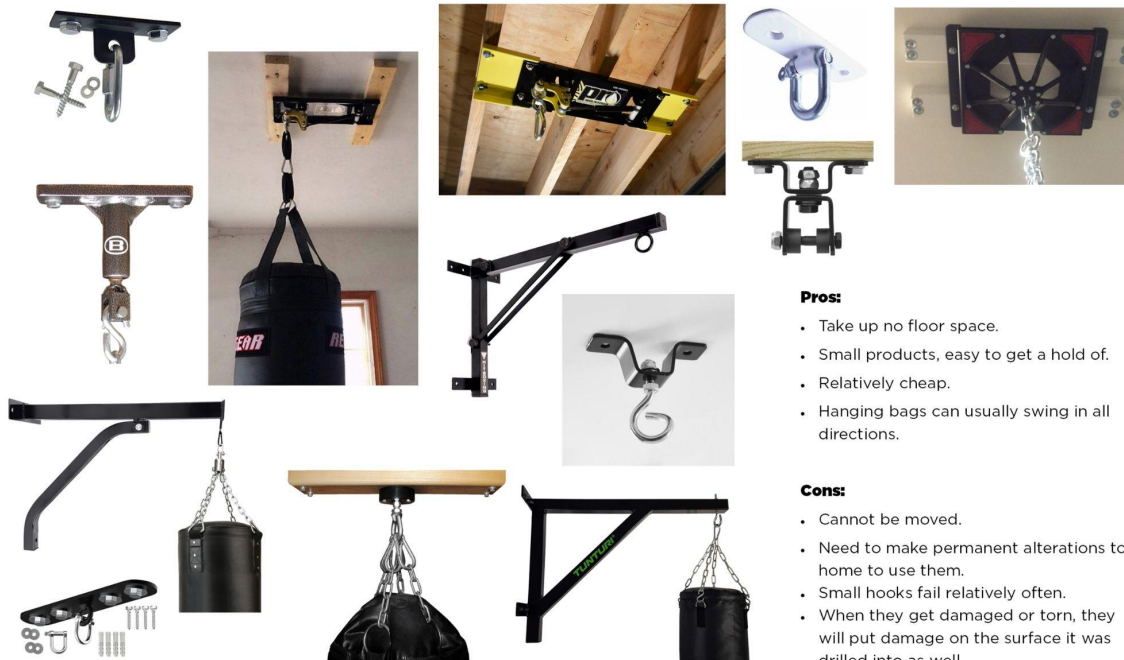
Floor space: 1,40 metres width by 1,40 metres depth → 1,96 square metres floor space
Height: 2,30 metres

Appendix 10: “How to...” brainstorm

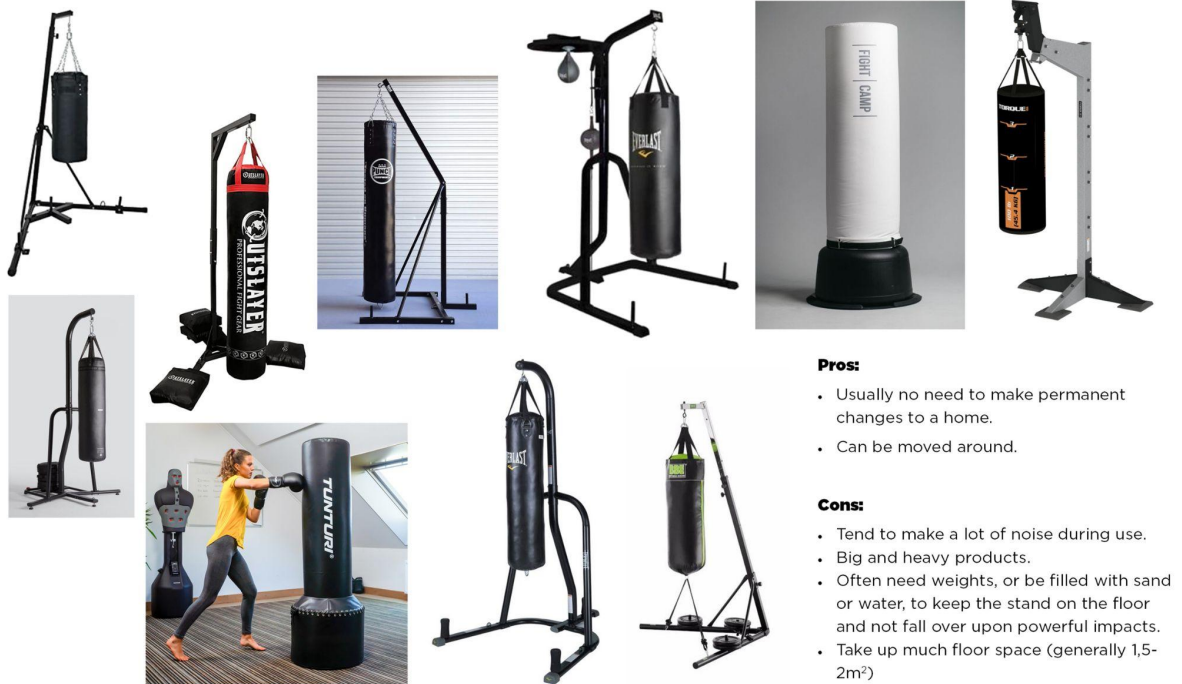
Existing products and their pros & cons

To help educate the participants on the existing punch bag positioning solutions, I showed them these two visuals. They helped explain the current product context, and thus where opportunities could be for a more suitable product.

Punch bag hooks



Punch bag stands



Pros:

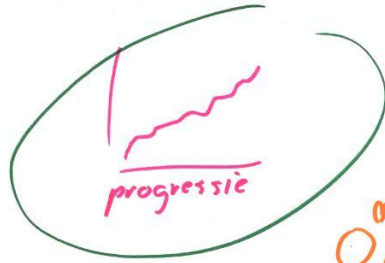
- Usually no need to make permanent changes to a home.
- Can be moved around.

Cons:

- Tend to make a lot of noise during use.
- Big and heavy products.
- Often need weights, or be filled with sand or water, to keep the stand on the floor and not fall over upon powerful impacts.
- Take up much floor space (generally 1,5-2m²)

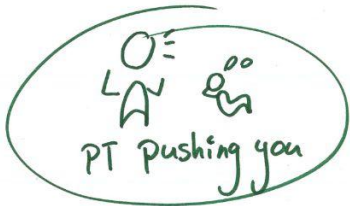
Filled in “How to...” brainstorm sheets

During the “How to...” brainstorm sessions, we filled in nine sheets which can be found on the following pages. The “How to...” questions were based on the gaps in my knowledge which I needed to aid my design process. Each of us used a different colour pen to help us differentiate our sketches. The purple and pink sketches were done by two IDE student peers, and the orange sketches were done by myself. After the session, I evaluated the sketches, and added some more in dark green which I felt could add to the batch. Then, I circled the sketches which were interesting for the Morphological Chart in green as well.



+1?
nog maar 1'kje

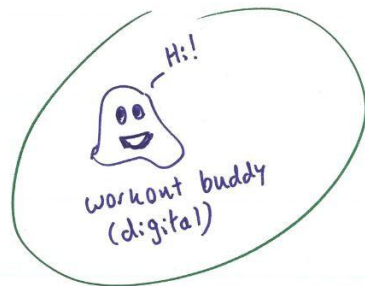
encouragement
from loved
one



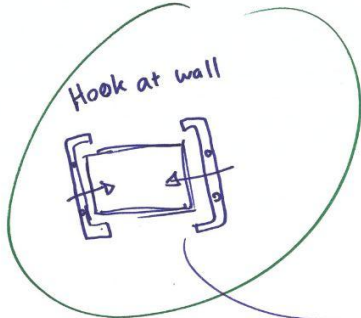
How to encourage somebody
to start a workout and see
it through to the end?



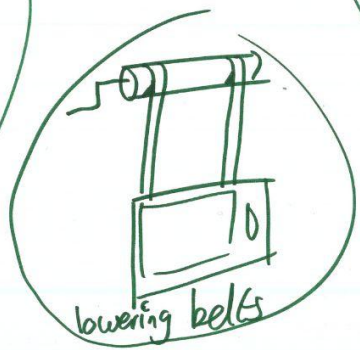
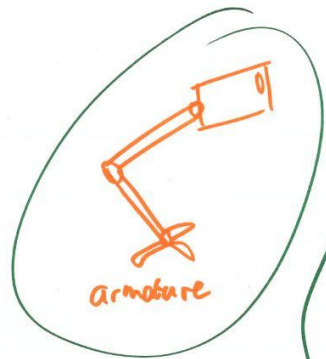
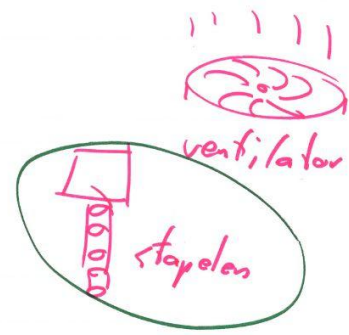
AAA OR
peer pressure



100%
completion



How to get a tablet at a height somewhere about 1 to 2 metres off the floor?



① → ② → ③
step plan

active figures?

AR → VR?

Robot coach

YT tutorials

How to help people work out with proper technique?

digital version

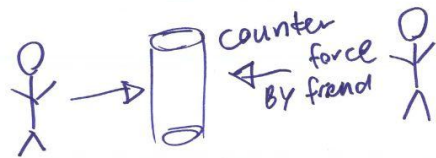
trial period not coach

personal trainer

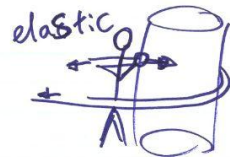
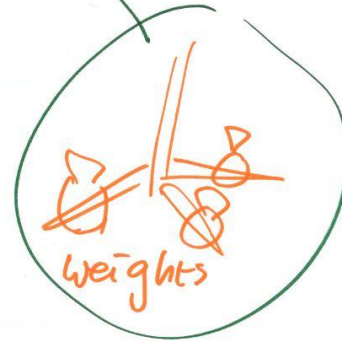
instruct about importance of good technique

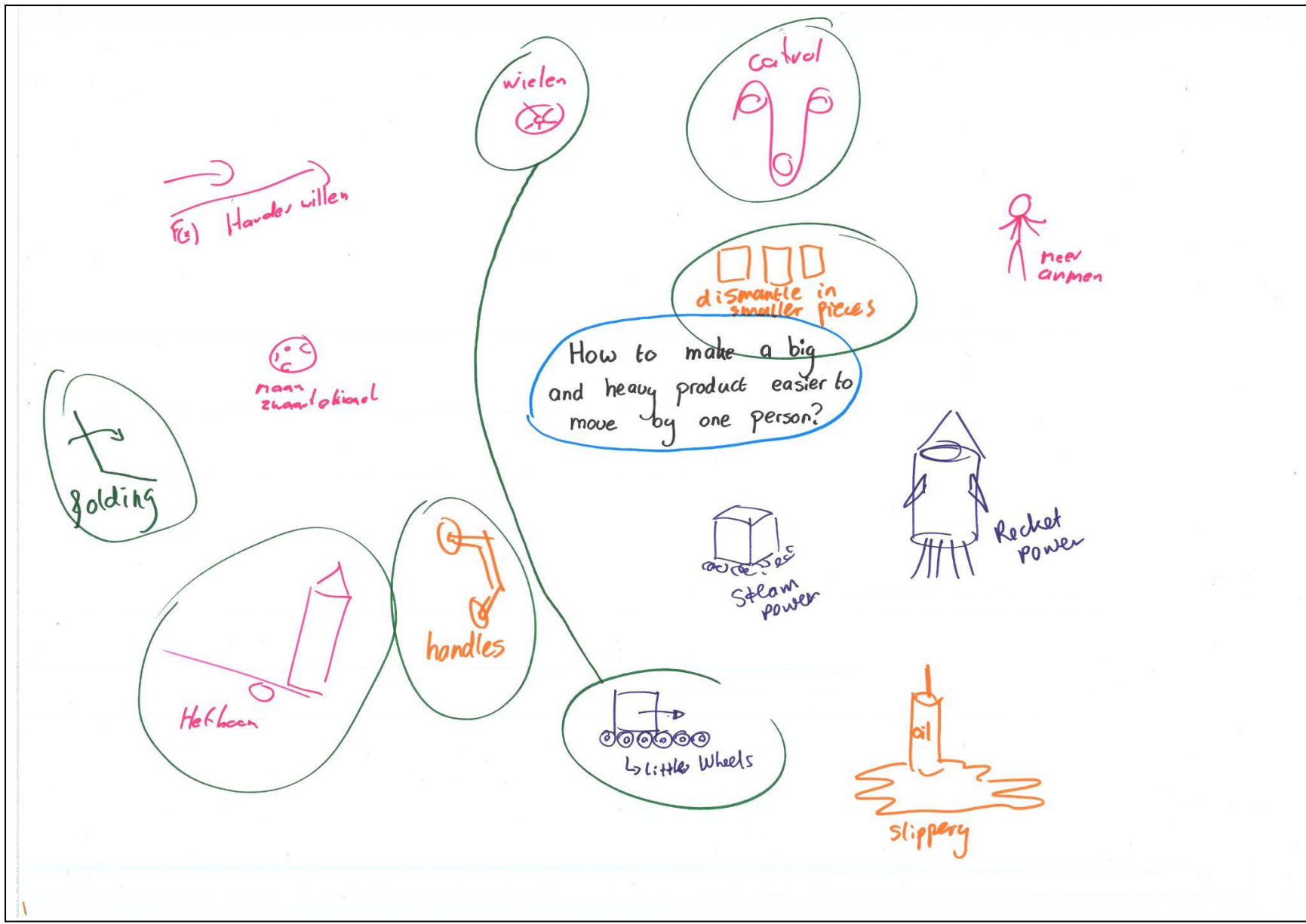
let 'em break something that'll teach 'em

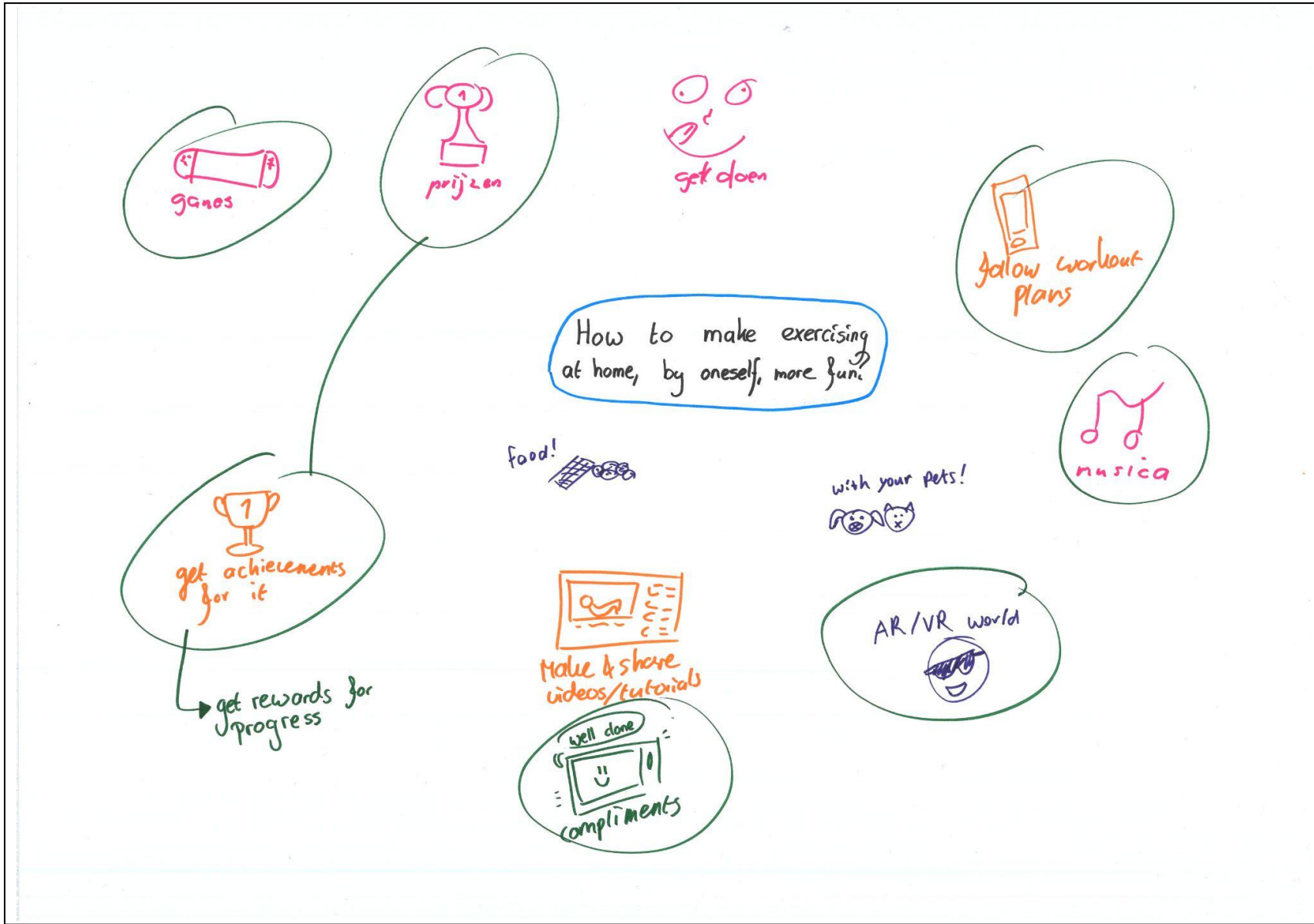
compare to bad technique & show better results



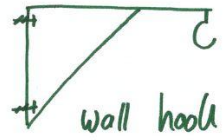
How to keep a product from falling over when it's being punched or kicked?



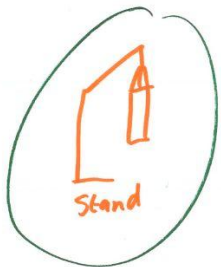




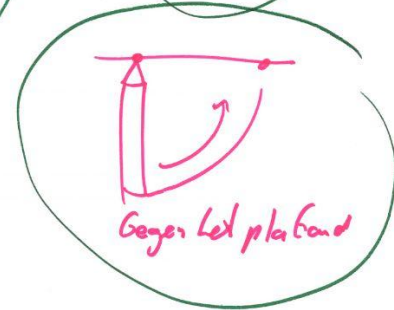
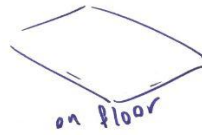
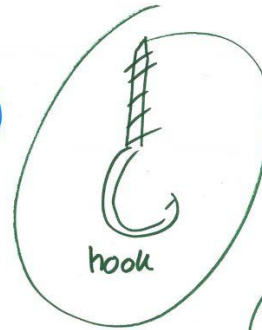
genoeg duct tape



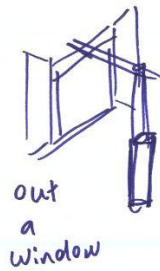
call a prof.



How to place a punch bag at home?



under het forijit






Online workout programmes
(by gym/YouTube/etc)




setting daily goals

How to work out at home?




meubels gebruiken



traplopen



weightlifting




8 home gym



equipment stellen



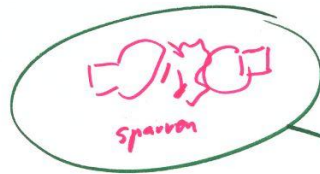
body weight exercises



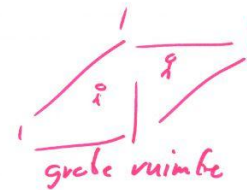
with your pet



in Garden/tree



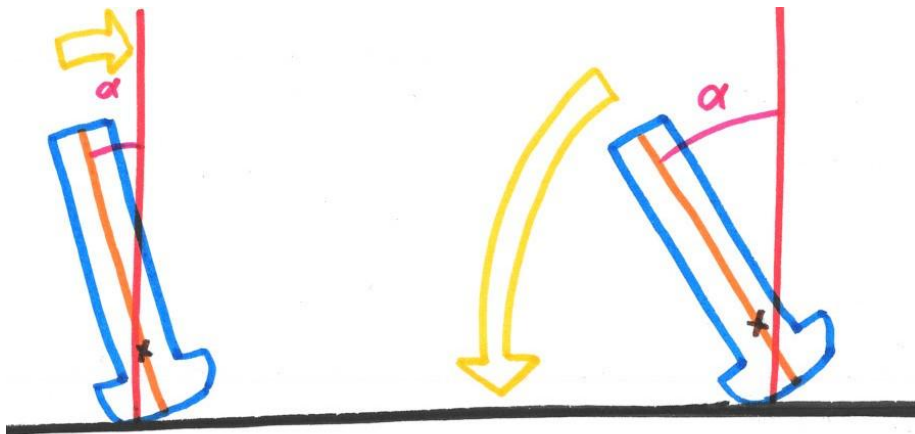
How to work out indoors, together with a buddy?



Appendix 11: Calculations NextRound Defence concept

For the NextRound Defence concept, I wanted to know how hard users could punch it until it would topple and fall over, because a falling punch bag is something I want to avoid at all costs.

To clarify when the punch bag would fall over, I made these sketches. These sketches assume a static situation, where the bag has been punched by a user to the right of the punch bag. The punch bag on the left has received a punch which is not very powerful, while the punch bag on the right has received a punch which is very powerful. The situation drawn shows the punch bag swaying away from the punch. The drawing shows the exact moment the system has stopped moving away from the impact, where it stands still for a very short moment before it swings back.



The black line on the bottom is the floor. The punch bags and their respective NextRound Defence bases are simplified by a blue silhouette. Through the centre of the punch bags, I drew an orange line, which shows the central axis of the system. The brown cross on this line denotes the centre of gravity of the system, which in reality is in the same point in the punch bag. The red line, perpendicular to the floor is a line drawn from the point where the punch bag base touches the floor and is drawn up. The angle between the orange and red line is drawn in pink, and will be called α . The yellow arrow shows the predicted movement of the bag.

For the situation on the left, the centre of gravity is to the right of the red line. This means gravity will make the bag sway back onto its base. For the situation on the right, the centre of gravity is to the left of the red line. This means gravity will make the bag fall over.

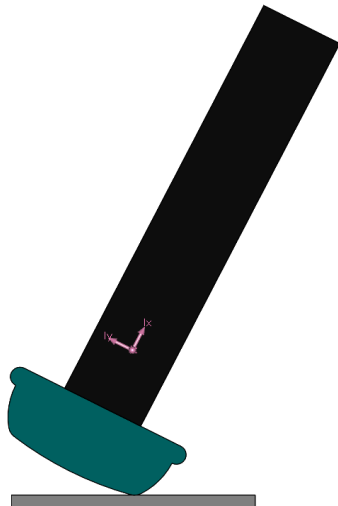
A punch which is less powerful will result in a smaller angle for α , while a more powerful punch will make α larger. What I'm looking to find is at what angle of α , the centre of gravity crosses the red line. This will tell me at what angle, and therefore at what punch power, the bag will start to fall over.

To find this α , I used SolidWorks to help me. I made a 2D simplification of the punch bag and the base, assigning the punch bag a uniform mass of 45 kilograms and the base a uniform mass of 70 kilograms.

Then, I connected the base and punch bag through mates, so they would be rigidly connected together.

I put them on a schematic representation of the floor (which had no weight), and created a coordinate system on the connection point between the floor and the base. This meant that when I angled the bag at different angles, the coordinate system for the mass properties would always be at the point where the base touched the floor.

Then, I filled in different angles for α , and for each I looked up the coordinates for the centre of mass of the system. When I hit the angle of an α of 27 degrees, I found that the centre of mass of the system was straight above the connection point, meaning that an α of 27 means the system will topple. A screencap of what this looks like can be seen here.



In this situation, there exists an equilibrium of forces, and the system is static. To calculate the punch force needed to get the system, I made a simplified calculation of the situation, based on the formulas presented here:

<https://physics.stackexchange.com/questions/231263/toppling-of-an-object>

$$m * h = F * h - m * r$$

The different parts of this formula have the following meanings:

$m =$ mass of the whole system

$h =$ height of the impact of the force, measured from the floor

$F =$ force of the punch

$r =$ radius of the surface of the bottom of the base

The force is the unknown value. The other values are known. If rewritten to find the F , the formula would look as such:

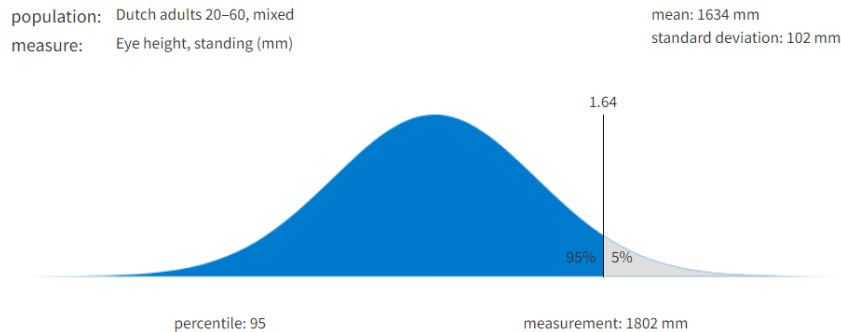
$$F = m(h + r)/h$$

The punch bag has a mass of 45 kg, and the base has a mass of 70 kg. From this we can conclude that the complete system weighs 115 kg. Thus:

$$m = 115$$

I based the calculations on an extreme situation, where a strong and tall user gives a rear hook to the system. A strong and tall user

will be more likely to topple the system, as the momentum on the system will be higher when the force upon it is higher and the arm of the impact is longer. As for the rear hook, this punch packs the most power for most boxers. A rear hook at an opponent is generally given to the area ranging from the belly up to the face. In this situation, I assumed a punch to the opponent's "face", with the opponent being the punch bag. The height of the impact is based on the p95 eye height of Dutch adults (<https://dined.io.tudelft.nl/en/database/tool>).



The p95 height of Dutch adults is 1,634 metres. Thus:

$$h = 1,634$$

As for the radius of the bottom surface of the system, I had to make some simplifications. The formula mentioned above,

assumes a flat bottom surface. The surface of the system is slightly curved. Therefore, these calculations are not 100% watertight, but should be seen as an estimate. The radius of the bottom surface is 0,50 metres. Thus:

$$r = 0,50$$

With these values known, the formula can be filled in and solved as such:

$$F = m(h + r)/h$$

$$F = 115(1,63 + 0,50)/1,634$$

$$F = 150,2 \text{ kg}$$

A force of 1502 N is needed to topple the system. According to calculations made within the company, it was deduced that the average at-home users can hit up to about 1200 N if they try really hard. Professional fighters' punches can reach up to 1500 N if they try really hard. Thus, it could be concluded that the NextRound Defence system is suitable for use by non-professional users without toppling it. Professional fighters might occasionally be at a chance of toppling the system. For the purpose of at-home use, the NextRound Defence should function properly.

Appendix 12: Concept evaluation survey

On the following pages, you can view the Concept evaluation survey questions which were sent out to potential users. The survey was in Dutch.

Survey questions



The image shows a screenshot of a survey email. At the top, there is a dark grey header with the NextRound logo (the letters 'NR' in white with a teal vertical bar) and the text 'NextRound' in white. Below the header, the main content is on a white background with a teal border. The title is 'NextRound Boxing bij jou thuis'. The text reads: 'Hey jij daar!', 'Vind jij boksen interessant? Wil je invloed hebben op de ontwikkeling van een echt product? Dan kun je meewerken aan de ontwikkeling van NextRound Boxing Home.', and 'Je hoeft geen vechter of beroepsontwerper te zijn om waardevolle input te leveren. Wees deel van de ontwikkeling van het NextRound boks systeem en ontwerp met ons mee in deze forms.' At the bottom left, there is a red asterisk followed by the word '*Vereist'.

NextRound

Om te beginnen, dit is wat het NextRound Boxing systeem is:

Het NextRound boks systeem is een intelligente bokszak (punch bag) die jou inzicht, begeleiding en feedback geeft op jouw workout performance. In de bokszak zitten sensoren die metingen doen tijdens de workout, die je dan achteraf kan inzien op de NextRound Live app, op de bijgevoegde tablet.

Met NextRound kun je je cardio workouts interessanter maken door het scala aan workouts wat wordt aangeboden door het systeem. Het systeem helpt je groeien waar jij wilt groeien, en biedt instructief materiaal aan om jou te leren beter te boksen.

NextRound is niet ontwikkeld voor alleen de beroepsvechters. Het is een cardio tool waarmee jij kunt trainen op jouw level, en waarmee je begeleid kan sporten. Ben je niet op zoek naar begeleiding maar wil je wel inzicht in je performance? Ook dat kan met NextRound.

Benieuwd hoe die zak eruit ziet? Check de foto's hieronder voor de zak zelf en wat je te zien krijgt op de NextRound Live app na een workout.

Het NextRound systeem



Hoe zou jij jouw NextRound boks systeem willen plaatsen?

Om zo'n NextRound boks zak thuis te hebben, zal je een product nodig hebben waarin deze geïnstalleerd staat. Er bestaan al allerlei soorten standaarden, haken of voeten die gebruikt kunnen worden om boks zakken in te plaatsen, maar samen met jou kunnen we iets bedenken wat een interessantere workout biedt dan wat er al op de markt is.

Daarvoor kun je hieronder drie ideeën zien; de NextRound Defense, de NextRound Studio Wardrobe en de NextRound Tulip. Deze drie producten zijn ideeën over hoe de NextRound boks zak bij mensen zoals jij thuis geplaatst zou kunnen worden. Met jouw feedback hierop kunnen we samen een product maken wat zo goed mogelijk is.

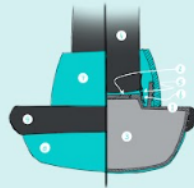
De drie ideeën worden uitgelegd door een set tekeningen met een verder uitleggende tekst. Als je deze hebt bekeken kun je daarna over ieder concept een paar vragen beantwoorden over dit concept.

NextRound Defense

Boksen met de NextRound Defense



Opbouw van de NextRound Defense



Verdediging trainen met de NextRound Defense



Installatie van de NextRound Defense



Neem de voet (1) en draai de waterdichte dop (2) eruit.



Vul de voet met water (3) tot ongeveer 1 centimeter boven het gat van de dop.



Schroef de dop terug in de voet, en zorg ervoor dat er geen lucht binnen komt. Droog daarna het vlak rondom de dop.



Zet de bokszak (4) op de voet, en lijn de ringen (5) aan de zak uit met de gespjes (6) in de voet.



Rijg de riemen aan de gespjes door de ringen heen en trek ze strak, tot de bokszak stevig vast zit aan de voet, en rechtop staat.



Schuif de deksel (7) over de bokszak van bovenaf en schroef die strak op de voet.



Houd de zak schuin en verplaats deze naar de gewenste locatie door het te rollen over het vinyl (8) onder de voet en de bumper (9).

NextRound Defense

De NextRound Defense is een rolbare voet voor onder de NextRound boks zak. Deze voet is gebold aan de onderkant, waardoor de zak kan wiebelen tijdens de boks workout met het NextRound systeem. Dit wiebelen simuleert het bewegen van een tegenstander, waardoor je tijdens het gebruik verdedigsoefeningen kunt doen. Een standaard hangende boks zak beweegt ook, maar deze zal onderin meer uitzwaaien dan bovenin. Dit is bij de NextRound Defense andersom, deze zal bovenin meer uitzwaaien en onderin minder. Door de vorm van de voet zal het systeem, wanneer er niet op geslagen wordt, rechtop staan.

De voet heeft een buitendiameter van 80 centimeter, en de voet zelf is 30 centimeter hoog. Als de boks zak van 1,80 meter er in geïnstalleerd staat, zal het systeem 2,10 meter hoog zijn.

Om de voet te verzwaren moet je deze vullen met circa 50 liter water. Wanneer de voet gevuld is met dit water, zal deze ongeveer 70 kilo wegen. Hoe het vullen en installeren werkt is op de tekeningen rechts te zien. De cijfers in de tekst rechts verwijzen naar de onderdelen die te zien zijn in de opbouw tekening.

De bodem van de voet is bekleed in een laag vinyl schuim (dit is hetzelfde materiaal waar onder andere yoga matten van gemaakt worden). Dit vinyl zorgt ervoor dat de vloer waar het NextRound systeem op staat niet beschadigd wordt door het bewegen van de voet.

Ook zit er een rubberen bumperrand om de zak heen om extra bescherming te bieden. Deze rand is handig als je het NextRound systeem wilt verplaatsen. Het verplaatsen van het systeem is te doen door de zak schuin te houden, en deze dan te rollen.

Hoe enthousiast word je van de NextRound Defense? *

1 2 3 4 5 6 7 8 9 10

niet zo enthousiast heel erg enthousiast

NextRound Wardrobe Studio

Wat vind je goed aan het idee van de NextRound Defense? *

Jouw antwoord

Wat vind je niet aantrekkelijk aan de NextRound Defense? *

Jouw antwoord

De NextRound Defense is geen perfect product. Hoe zou jij het verbeteren? *

Jouw antwoord

Boksen met de NextRound Wardrobe Studio



Bovenaanzicht gesloten en open

Oefeningen met de NextRound Wardrobe Studio

De NextRound Studio opzetten

- 1 Draai het handvat van de deur aan de voorkant om de deur van het slot te halen.
- 2 Schuif de grendels van de zijdeur naar het midden om de zijdeur boven en onder van het slot te halen.
- 3 Doe de zijdeur volledig open.
- 4 Druk de twee voetjes in de voordeur en de zijdeur tegen de grond om de deur stevig vast te zetten.
- 5 Rol de workout mat uit vanuit de voorkant van de kast.
- 6 Vouw de workout mat uit naar rechts.
- 7 Trek aan de hendel links aan de binnenkant om de bokszak naar voren in de kast te trekken.
- 8 Pak handschoenen uit de kast en kies een workout op de tablet om te doen.

NextRound Wardrobe Studio

De NextRound Wardrobe Studio is een concept waarbij de NextRound wordt opgeslagen in een kast. Wanneer de kast gesloten is heeft deze een hoogte van 2,10 meter, een breedte van 90 centimeter en een diepte van 60 centimeter. De kast staat op de grond en tegen een muur, en zal aan de bovenkant met muurankers aan de muur bevestigd moeten worden.

Om de NextRound boks zak tevoorschijn te halen moet je een aantal stappen doorlopen. Deze staan op de tekening rechts aangegeven. Wanneer je de NextRound in gebruikmodus zet, staat de kast volledig open en staat de deur op twee antislip voeten op de grond. De mat die uit de kast rolt heeft een dikte van 2 centimeter, en rolt 1,60 meter uit naar voren. Wanneer de flap naar rechts is uitgevouwen is de mat in totaal 1,90 meter breed. Je kunt de mat gebruiken om oefeningen mee te doen, waarvoor de NextRound Live app workouts zal aanbieden.

Wanneer de kast dicht is hangt de boks zak in het midden van de kast aan een rails. Wanneer de kast open gaat kan je deze via een hendel binnen de linker kastwand naar voren trekken, waardoor de zak beweegruimte heeft om te zwaaien wanneer je er op slaat. Dan heb je alle ruimte hebt om de zak heen om goede klappen of trappen uit te delen zonder dat je bang hoeft te zijn dat je aan de kast stoot.

De tablet met de NextRound Live app hangt aan de binnenkant van de voordeur. Je kunt bokshandschoenen opslaan aan de binnenkant van de kast. Zo heb je direct alles bij je wat je nodig zou kunnen hebben tijdens je workout.

Een uniek aspect aan de NextRound Wardrobe Studio is dat je er reflextraining mee kunt doen. Aan de binnenkant van de voordeur en aan de linker zijwand zitten op iedere wand drie spotlichtjes. Als je op de NextRound Live app kiest om een reflex workout te doen, dan zal het systeem van de lichten aan gaan. Tijdens een reflex training gaan deze lichten in willekeurige volgorde en op willekeurige intervallen aan, waarbij ze op een plek op de boks zak schijnen. Wanneer dit gebeurt moet je deze plek zo snel mogelijk raken met een klap of trap. Na de workout geeft de NextRound Live app je statistieken met je reactietijd, die je met deze reflextrainingen kan verbeteren.

Hoe enthousiast word je van de NextRound Wardrobe Studio? *

1 2 3 4 5 6 7 8 9 10

niet zo enthousiast heel erg enthousiast

Wat vind je goed aan het idee van de NextRound Wardrobe Studio? *

Jouw antwoord

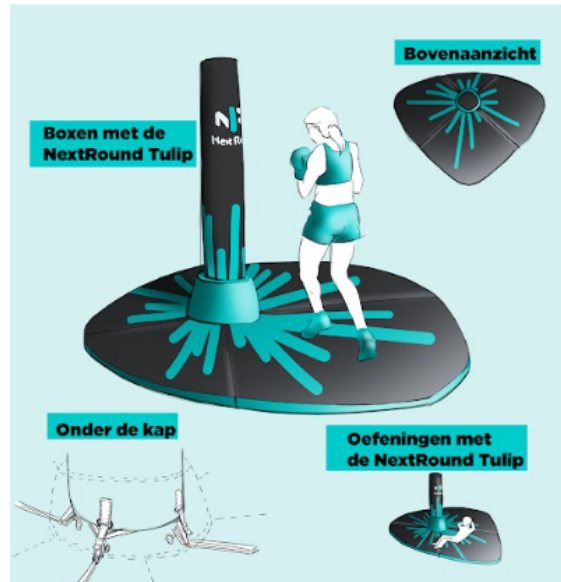
Wat vind je niet aantrekkelijk aan de NextRound Wardrobe Studio? *

Jouw antwoord

De NextRound Wardrobe Studio is geen perfect product. Hoe zou jij het verbeteren? *

Jouw antwoord

NextRound Tulip



Jouw NextRound opslaan



Draai de kap in het midden tegen de klok in om het slot van het vouwmechanisme te halen.



Vouw de achterste mat omhoog en zet die vast om de zak heen. De zak staat nu op het achterste wiel.



Vouw één van de matten aan de zijkant omhoog en zet die vast om de zak heen. De zak staat nu op het achterwiel en een zijwiel.



Vouw de mat aan de andere zijkant omhoog en zet die vast om de zak heen. De zak staat nu op het achterwiel en de zijwielen.



Vouw de mat aan de voorkant omhoog en zet die vast om de zak heen. De zak staat nu op alle vier de wielen.



Rijd de zak naar de gewenste plek.

NextRound Tulip

De NextRound Tulip is een concept waarbij de NextRound boks zak op een voet staat waaruit een workout mat gevouwen kan worden. Deze matten zijn vier centimeter dik, en het systeem is wanneer het uitgevouwen is 2,20 meter breed en 2 meter diep. De zak zal het systeem 2 meter hoog maken.

Met een standaard als deze kun je workouts doen die een combinatie zijn van boksen en body weight oefeningen (denk hierbij aan bijvoorbeeld push ups, sit ups, planken, squats, ga maar door). Je zult niet zelf een workoutprogramma te hoeven bedenken, aangezien de NextRound Live app die zal aanbieden.

Wat uniek is aan de NextRound Tulip is dat je de vloermatten gemakkelijk om de zak heen kunt vouwen. Door het opvouwen neemt de NextRound ten eerste een stuk minder ruimte in beslag, en ten tweede zal de Tulip rond te rijden zijn, zodat deze gemakkelijk verplaatst kan worden. Hoe dit proces gaat kan je rechts zien op de tekeningen. Als je de NextRound tevoorschijn haalt keer je deze stappen om.

Het vouwen werkt omdat er door de kern van alle vier de matten een stalen profiel loopt. Wanneer dit profiel omhoog gevouwen wordt, wordt het wiel aan het profiel, wat onder de boks zak zelf zit, zit naar beneden gedruwd. Hierdoor het gewicht van het geheel op het wiel te rusten. Zodra alle vier de matten omhoog gevouwen zijn, staat het systeem nog enkel op de wielen en kan het verreden worden. Een schematische tekening van hoe dit er uit ziet onder de kap is linksonder in de tekeningen te zien.

Hoe enthousiast word je van de NextRound Tulip? *

1 2 3 4 5 6 7 8 9 10

niet zo enthousiast heel erg enthousiast

Wat vind je goed aan het idee van de NextRound Tulip? *

Jouw antwoord

Wat vind je niet aantrekkelijk aan de NextRound Tulip? *

Jouw antwoord

De NextRound Tulip is geen perfect product. Hoe zou jij het verbeteren? *

Jouw antwoord

Demografische vragen

Zou je je geslacht en leeftijd met ons willen delen? We zouden graag inzicht krijgen in wie er met ons mee ontwerpen.

Wat is jouw geslacht? *

Man

Vrouw

Anders: _____

Wat is jouw leeftijd? *

Kiezen

Ter afsluiting

Bedankt voor je input! Het gaat ons helpen bij de verdere ontwikkeling van NextRound.

Heb je nog een idee voor een product waarmee mensen thuis de NextRound zouden kunnen installeren? Vertel ons er over.

Jouw antwoord _____

Heb je nog een opmerking of vraag die je kwijt wil?

Jouw antwoord _____

Laat hier je e-mail adressen achter als je het interessant vindt om in de toekomst mee te doen aan een test als we daadwerkelijk een product als dit gaan maken (zonder e-mail adres kunnen we je niet bereiken):

Jouw antwoord _____

Verdere informatie

Wil je meer leren over NextRound? Check ons op:

Onze site: <https://nextroundboxing.com/>

Instagram: <https://www.instagram.com/nextroundboxing/>

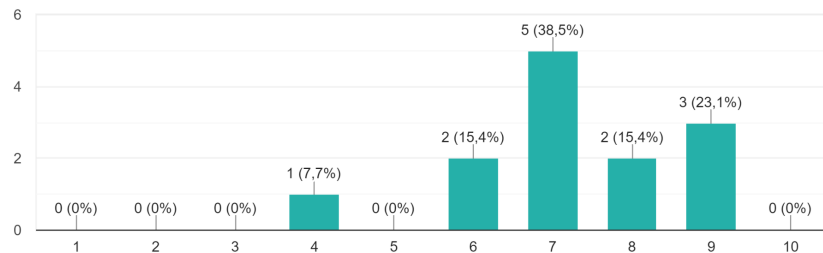
LinkedIn: <https://www.linkedin.com/company/nextroundboxing/>

Survey results

The responses on the survey questions per respondent were as follows:

Hoe enthousiast word je van de NextRound Defence? (How enthusiastic are you about the NextRound Defence?)

Hoe enthousiast word je van de NextRound Defense?
13 antwoorden



1. 9/10
2. 8/10
3. 6/10
4. 7/10
5. 9/10
6. 6/10
7. 7/10
8. 9/10
9. 7/10

10. 4/10
11. 7/10
12. 7/10
13. 8/10

Wat vind je goed aan het idee van de NextRound Defence? (What do you like about the idea of the NextRound Defence?)

1. Je kan er rondom draaien, neemt redelijk weinig ruimte in beslag & je hoeft hem niet op te hangen aan steunbalken oid.
2. Dat het wiebelen van onderuit wordt gesimuleerd en niet van boven, net zoals het bij een mens ook afkomstig is uit de voeten.
3. Het vullen van de viet ziet er simpel uit, de beweeglijkheid van de bovenzijde is voor de variatie mooi
4. Tof, vooral de feedback van performance vind ik heel nice
5. Het is een gaar concept. Vooral het beweegbare en het is een cardio tool waarmee jij kunt trainen op jouw leven. Dit spreekt mij het meest aan. Het inzicht krijgen in mijn performance, maar ook voor cliënten die bij mij
6. Makkelijk te plaatsen
7. Dat het een tool is waar mensen zelfstandig mee uit de voeten kunnen.
8. Uitdagende training thuis en verplaatsbaar
9. Het is interessant dat het plaatsingssysteem onderdeel wordt van de workout. Middels de beweging.
10. Portable, quality material

11. Lijkt me een simpele manier van trainen. Relatief weinig ruimte en verplaatsbaar
12. Plaatsing van het systeem kan in meer thuissituaties. En het uitzwaaien kan een tegenstander nabootsen.
13. Voor een standaard huis is deze optie heel makkelijk bruikbaar of plaatsbaar in tuin.

**Wat vind je niet aantrekkelijk aan de NextRound Defence?
(What do you dislike about the idea of the NextRound Defence?)**

1. Wellicht dat deze teveel beweegt tijdens het boksen.
2. Afhankelijk van je gewichtsklasse, lijkt 50 kg me niet een enorme verzwarende aangezien deze helemaal aan de onderkant bevestigd is, wat, tenzij ik het systeem verkeerd begrijp, niet goed uniform verdeeld is zoals bij een bokszak
3. Ik vrees dat de bovenkant misschien teveel gaat zwaaien en dat ik meer ruimte nodig heb
4. Lijkt me een gedoe met water (voor in huis). Als deze zakken bij een gym te gebruiken zijn helemaal top. En hopelijk zijn ze zwaar genoeg voor harde stoters. En lang genoeg voor lange.
5. Je performance bijhouden
6. Zal makkelijk buigen
7. Een beginnende gebruiker kan door het heen en weer gaan van de paal de stoot verkeerd inschatten en klachten krijgen aan pols/elleboog. Maar dit weet ik niet zeker aangezien ik er niet op geslagen heb.
8. Verplaatsbaar maar wel stevig
9. Ik ben toch bang dat het te wiebelig/onrustig is tijdens de training.

10. 1. Water filled, (there is always a bubble and sound) potential leaks and bacteria.
2. Area needed to accommodate the product when it is in use (it seems that the foot will move around the floor)
11. Het ziet er niet mooi uit. Dit zou bij mij in een speciale kamer komen. Dat ik m normaal niet zie. Die heb ik alleen niet. En is dat water geen gedoe?
12. Het verplaatsen en herplaatsen van het systeem is vrij veel handeling.
13. Geen idee

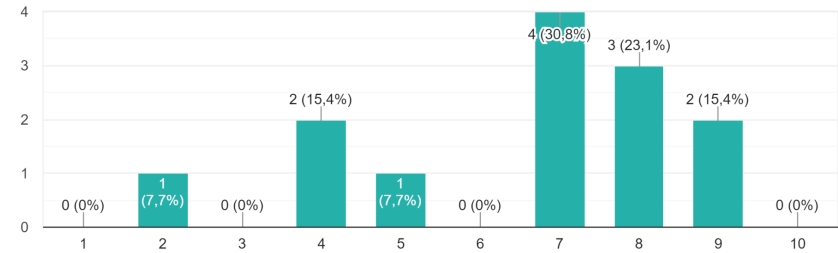
De NextRound Defence is geen perfect product. Hoe zou jij het verbeteren? (The NextRound Defence is not a perfect product, how would you improve it?)

1. Meer gewicht in de steun zodat deze stabiel staat.
2. Manieren vinden om meer gewicht uniform over het product te verdelen
3. -
4. -
5. Stootkracht opmeten? Misschien iets zwaarder kunnen maken, want 70 kilo slaat een zwaargewicht zo omver.
6. -
7. De onderste deel van de paal een stuk zwaarder maken (staal/ijzer iets in die richting) Zodat er beweging in zit maar niet "te" veel

- 8. Het verplaatsten zo eenvoudig en lichtgewicht maken wat niet ten koste gaat van de boksak (ivm omvallen)
- 9. Voor het geknoei met water zou ik iets anders verzinnen. Maar ik weet zo 1,2,3 niet wat.
- 10. Consider sand filled base / heavier base
- 11. Ik zou m in verschillende interieur vriendelijke kleuren leveren. Voor mensen die niet heel veel ruimte hebben en vaak tegen het ding aan kijken.
- 12. -
- 13. Misschien aan één kant twee kleine wielletje zodat het nog makkelijker te verplaatsen is.

**Hoe enthousiast word je van de NextRound Wardrobe Studio?
(How enthusiastic are you about the NextRound Wardrobe Studio?)**

Hoe enthousiast word je van de NextRound Wardrobe Studio?
13 antwoorden



- 1. 4/10
- 2. 7/10
- 3. 4/10
- 4. 7/10
- 5. 2/10
- 6. 7/10
- 7. 9/10
- 8. 5/10
- 9. 9/10
- 10. 8/10
- 11. 8/10
- 12. 8/10
- 13. 7/10

Wat vind je goed aan het idee van de NextRound Wardrobe Studio? (What do you like about the idea of the NextRound Wardrobe Studio?)

1. Reflex functie
2. De toevoeging van reflextraining is heel interessant en uniek! Ook is het product zo heel compact opgeslagen
3. Het ziet er uit als een degelijk product dat ik iedere keer snel kan gebruiken. De functie van reflextraining is erg cool.
4. Op te bergen wanneer wenselijk, goede oplossing voor thuis
5. Niet handig dit nodigt minder uit.
6. Workout lichtjes! En als je de deuren dicht doet zie je de bokszak niet meer, mooi voor binnenshuis
7. Reflex training is leuk (is een spelletje)
8. Uit het zicht door af te sluiten
9. Eigenlijk bijna alles. Na de training is alles netjes uit het zicht weggewerkt. Het systeem met de lichten (reflexen trainen).
10. 1. Creative, particularly the reflex addition. 2. That everything is retained within the cabinet when not in use 3. The sliding rail to give space
11. Dat het uit het zicht op te bergen is. En dat er gelijk een trainingsmat bij zit voor andere oefeningen.

12. De mogelijkheid tot het snel installeren en opbergen van het systeem. De mogelijkheid tot reflextraining is ook een hele goede toevoeging
13. Mooi opberg idee zodat je als je klaar bent met sporten er niks meer van ziet

Wat vind je niet aantrekkelijk aan de NextRound Wardrobe Studio? (What do you dislike about the idea of the NextRound Wardrobe Studio?)

1. Niet volledig rondom de zak bewegen, wellicht dat deze te ver zwaait en tegen de randen beweegt.
2. Het fijne aan een bokszak vind ik dat je hem van alle kanten kan benaderen, wat hier natuurlijk niet mogelijk is.
3. De toegevoegde waarde van de app zie ik niet. Dit zou IRL een dealbreaker zijn voor mij
4. Hoogte. De vulling van de zak is bovenaan voor ik gok 20+ cm verwaarloosbaar om op te slaan. (hoe dieper is de zak, hoe compacter de vulling). Met rails/ketting en bovenstaande verlies je al gauw 40-50cm. Hierdoor is de zak op 210-50=160cm pas prettig om op te slaan. Als lange stoter kom ik dit probleem vaak tegen.
5. Zoals ik net zei kost ruimte en nodigt minder uit
6. Je kan niet om de zak lopen
7. -
8. Niet bruikbaar voor thuis, zeer groot

9. Tja. Dat zijn de muurankers. Naast nogal drastische beschadigingen aan de muur denk ik ook dat het niet voor iedereen is weggelegd om die goed te bevestigen.
10. Potentially the space required when in use.
11. Ik kan 'm op dit moment niet kwijt in m'n huis. Omdat het toch een best groot ding is.
12. Of het aansluit bij het interieur
13. Je moet er wel echt een plek voor creëren waar je ook meteen kunt sporten. Want uitgekapt neemt het best wel ruimte in.

De NextRound Wardrobe Studio is geen perfect product. Hoe zou jij het verbeteren? (The NextRound Wardrobe Studio is not a perfect product, how would you improve it?)

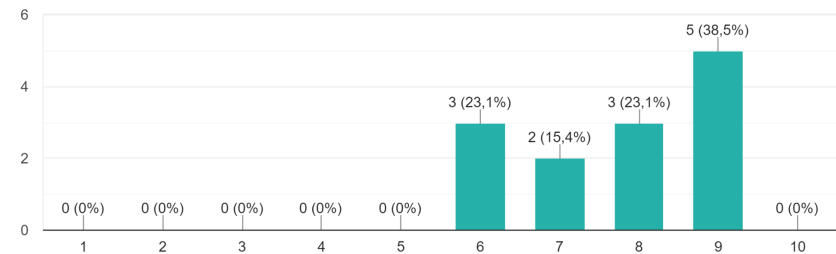
1. Reflex functie in de andere opties proberen te implementeren, verder lijkt me dit geen voordelen hebben tov de andere opties.
2. Ik kan niks bedenken zo gauw, cool idee!
3. Verwijder de app. Behoud de rest
4. Linker kastdeur ook open
5. Niet ik zal het niet maken
6. -
7. Uiteindelijk uitbreiden
8. Ruimte besparender!
9. Een plaatsingsservice. Dus dat iemand 'm bij je thuis komt installeren.
10. Is it possible to attach/secure both the top and the bottom of the punch bag? Providing there is sufficient elasticity in

the movement, data could still be captured with a reduced working space.

11. -
12. -
13. -

Hoe enthousiast word je van de NextRound Tulip? (How enthusiastic are you about the NextRound Tulip?)

Hoe enthousiast word je van de NextRound Tulip?
13 antwoorden



1. 7/10
2. 9/10
3. 6/10
4. 8/10
5. 8/10
6. 6/10
7. 7/10
8. 9/10
9. 8/10

- 10. 9/10
- 11. 9/10
- 12. 9/10
- 13. 6/10

Wat vind je goed aan het idee van de NextRound Tulip? (What do you like about the idea of the NextRound Tulip?)

- 1. Goed idee met andere workouts uitvoeren.
- 2. De mat geeft het een voordeel ten opzichte van het Defence systeem aangezien ze de omgeving nog meer workout friendly maken.
- 3. Ziet er erg gemakkelijk uit om te gebruiken
- 4. Vrij omheen te bewegen
- 5. Leuk idee en het makkelijk verplaatsen is fijn
- 6. Verplaatsbaarheid
- 7. Goed om mensen vitaal te maken
- 8. Gelijk een workout mat er om heen , wat aantrekkelijk maakt om ook op blote voeten te kunnen trainen
- 9. De relatief eenvoudige verplaatsbaarheid. Zomers lekker buiten trainen. In de winter binnen in huis of in de schuur.
- 10. 1. Creative idea /style 2. Portability /options to move it easily from place to place 3. Secure base
- 11. Omdat je 'm makkelijk kan verplaatsen. Eventueel ook buiten zou kunnen gebruiken. Mat voor grond oefeningen.
- 12. Verrijdbare opzet. De toevoeging van voldoende matten waardoor het een volledige trainingsomgeving wordt gecreëerd.

- 13. In vergelijking met de twee andere producten vind ik deze het minst. Dan kies ik liever voor de eerste optie en neem voor ander oefeningen een apart matje.

Wat vind je niet aantrekkelijk aan de NextRound Tulip? (What do you dislike about the idea of the NextRound Tulip?)

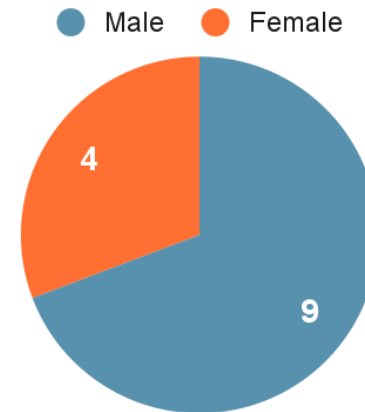
- 1. Neemt uitgevouwen veel ruimte in beslag.
- 2. De extra materialen zullen vast de kosten omhoog gooien?
- 3. Voor dezelfde hoeveelheid ruimte kan ik ook mijn zak gewoon ophangen.
- 4. Te groot voor thuis, gym top
- 5. De Mat eromheen vouwen. Staat niet zo mooi.
- 6. Omvang vouwmechanisme
- 7. Mist het menselijke aspect "trainer "
- 8. Is de boksak nog makkelijk te verplaatsen?
- 9. De diameter. Je moet wel die ruimte hebben.
- 10. Nothing
- 11. Lijkt me een lelijk ding. Die ik echt weg wil kunnen zetten waar je m niet ziet. En kan we voorstellen dat het een kwetsbaar systeem is wat langzamerhand niet lekker meer in vouwt of niet meer soepel rijdt.
- 12. -
- 13. Dat de matten uitklappen

De NextRound Tulip is geen perfect product. Hoe zou jij het verbeteren? (The NextRound Tulip is not a perfect product, how would you improve it?)

1. Wellicht dat een losse mat ernaast hetzelfde bereikt zonder dat je een hele uitvouwbare constructie nodig hebt.
2. Het idee klinkt heel goed!
3. -
4. -
5. Mat ergens in kunnen stoppen. In d'r boksak opgerold als er een gat in het midden zit
6. -
7. Meer workouts voor variatie
8. Makkelijk verplaatsen van de boksak
9. -
10. Could there be a reflex option within this concept?
11. Ik zou 'm leveren in verschillende interieur vriendelijke kleuren.
12. -
13. -

Wat is jouw geslacht? (What is your gender?)

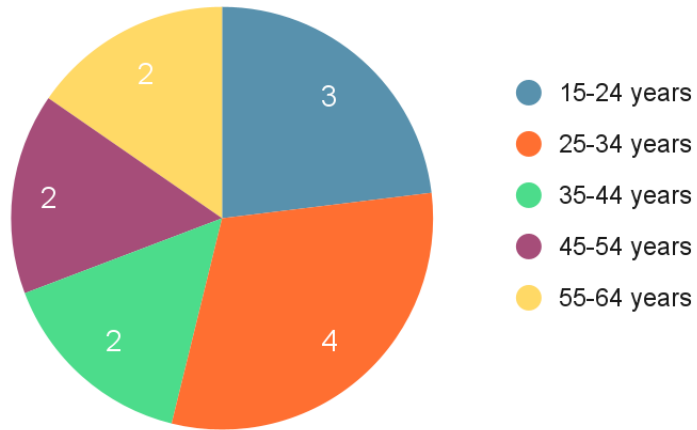
RESPONDENTS' GENDER



1. Man
2. Man
3. Man
4. Man
5. Man
6. Man
7. Man
8. Vrouw
9. Man
10. Vrouw
11. Vrouw
12. Man
13. Vrouw

Wat is jouw leeftijd? (What is your age?)

RESPONDENT'S AGE



1. 25-34 jaar
2. 15-24 jaar
3. 15-24 jaar
4. 25-34 jaar
5. 25-34 jaar
6. 15-24 jaar
7. 25-34 jaar
8. 45-54 jaar
9. 55-64 jaar
10. 55-64 jaar
11. 35-44 jaar
12. 35-44 jaar
13. 45-54 jaar

Heb je nog een opmerking of vraag die je kwijt wil? (Do you still have any remarks or questions?)

1. Lekker bezig hoor mannetjes
2. -
3. -
4. Succes! Tof!
5. Als het gemakkelijk te verplaatsen is dan zal dat fijn zijn
6. -
7. -
8. Wat worden de prijzen ?
9. -
10. The punch bag is very traditional. Is there an option other than a bag that may fulfil all the criteria?
11. -
12. Succes met het onderzoek!
13. -