

Appendices

Design for Repurpose

practical guidelines for circular product design

Master Integrated Product Design

Thesis
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Appendices

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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` - - - - `end date`

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introduction (continued): space for images

image / figure 1: _____

image / figure 2: _____

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.

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.

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.

start date - - - - end date

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 a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

FINAL COMMENTS

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

(H1) Database of 80+ past Repurpose Cases HvA

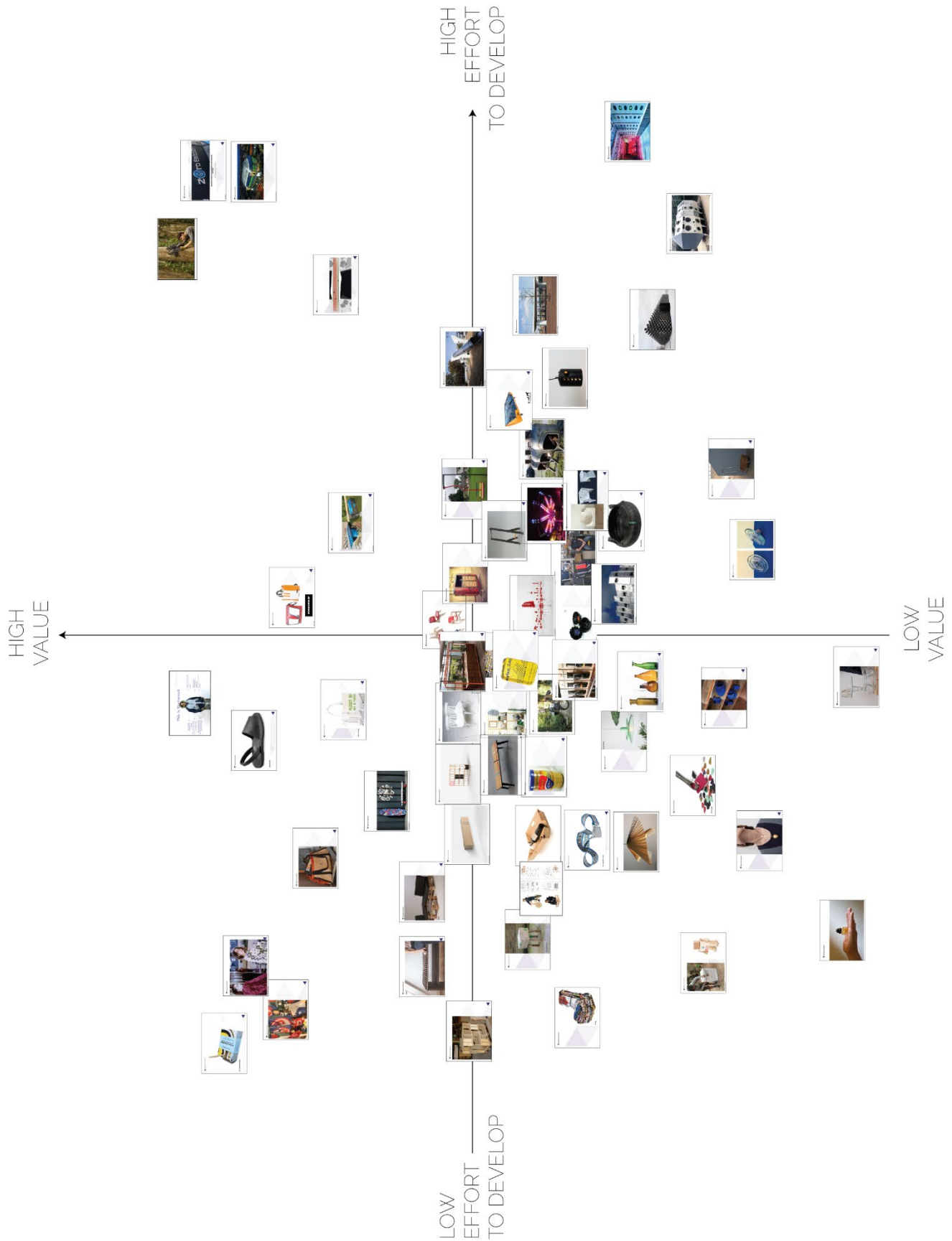
ber	name		Product type
1	Flip the Flop masterpieces	ART	Consumer products
2	ArenA chairs	furniture	Furniture
3	Dienstblaadje	Household item	Consumer products
4	Freitag bags	Bag	Consumer products
6	Guitars from skateboards	Instrument	Music instruments
7	KLM Cargo / 100% circulaire	wearable/ bag	Consumer products
9	Table Gymfloor	Interior furniture	Interior design
11	Hotel Vetements	wearable	Fashion
12	Slam Design Pickmaster Plectrum Puncher	Instrument	Tools
15	Pallet furniture	Exterior Furniture	Garden Furniture
16	Vechtclub XL	Architecture	Architecture
20	Ski lift as chair	Exterior Furniture	Various: Home architecture, restaurants, cinema's and public transport
21	Brave soals (recycling)	wearable	Fashion
22	Zeecontainer start up offices	Architecture	Architecture
25	Tafelvoetbal tafel van treinvloeren	Toy	Sports/ Hobby
26	Joining Bottles (pastic melting)	Connection	Interior
27	Close collaboration chair parachutes	furniture	Interior
29	Rev flitt aqua light	Interior furniture	Interior
30	PDP light	Interior furniture	Interior
31	Boiler Lamp serie	Interior furniture	Interior
32	Drum Lamp series	Interior furniture	Interior
33	Can lights	Interior furniture	Interior
34	Oil drum furniture	Interior furniture	Interior
35	Oxgut bags	Bags	Interior
37	Leather tiles	Interior furniture	Furniture
38	Chest of drawers	Interior furniture, art	Furniture
39	Rag Chair	Interior furniture, art	Furniture
40	Modpools	Sports	Leisure
41	FaberExposize / Omrin	wearable	Fashion
42	EV batteries	electronics	Various: Elevator, Light (stadium, public road etc)
44	Terraskachel	Exterior Furniture	Garden utilities
45	Gevelbekleding	Architecture	Bouwproducten
48	Hydroponics bakken	Industry	Various e.g. aquaponics, rainwater storage
50	Playground	Toy	Public space
51	Vinyl bowl	Household item	Interior
52	Spails	Toy	Playground
53	bath chair	Interior furniture	interior
54	Bicycle stop	Exterior Furniture, public space	Public Space
55	Bottles	Household item	.
56	Basket Tires	Household item	interior
57	tool voor drinkglas uit fles	tool	.
58	tool voor drinkglas uit blik	tool	.
59	Tassen van steigerdoek	bag	.
61	Bicycle belt	wearable	.
62	Rijkswachters	art	.
63	Dog bed	interior furniture	.
64	Coffeebar (SuperUse)	Exterior Furniture, public space	.
66	Crates	furniture	.
67	Kitchen island	interior furniture	.
68	Wine holder/ service tray	.	.
69	Musterdjar glass	household item	household supplies
70	Wasteboards	mobility	.
71	Cabinet Cartoni	interior furniture	interior, cabinet
72	Gevelbekleding van stoelschalen	architecture	architecture, façade
73	Coca Cola accessories	Household item	household supplies
74	containerstoel	Household item	seat, exterior
75	Pondje Papier	Household item	Office supplies
76	Infra naar Interieur wood bench	interior furniture	Interior decoration
78	Vliegtuigonderdelen	Architecture, interior	Interior architecture
79	Metalen wandpanelen van stansrestant	Architecture	Architecture
81	EV-Home	electronics	Battery, electronics
83	Glass arrangement	art	Tableware, art
84	Fun-for-dogs trolley	interior furniture, pets	Transport, pets
85	MS. Teaspoon	art	Accessoire, art
86	Roll-on scent	art	Beauty
87	XX chair	interior furniture	Interior
88	100 blue containers	art	Interior, art
89	smartphone	electronics	automotive
90	Kesbeke lampen	interior furniture	.
100	circular carrier seat	interior product	seat, exterior
101	NS trein prullenbak naar plantenbak	exterior furniture	.
102	modular/ adaptable chair and desk	interior furniture, office	.
103	suit for homeless	wearable	.
104	Mobile illegal deforestation audio	electronics	.
105	ikea multifunction chair	toy, interior furniture	.
106	stroller scooter	mobility	.
107	windmill blade bridge picnic table	exterior furniture	construction, energy
108	affordable luxury chair (modular design)	interior furniture	.
109	uitvouwbare space sheet	Industry	.
110	CAT remanufacturing motors	industry	.
111	bureau from trainceiling	interior furniture	.
112	rack for haning up items	interior furniture	.
113	horse seat for playground	toy, exterior furniture	.
114	NS train speakers	.	.

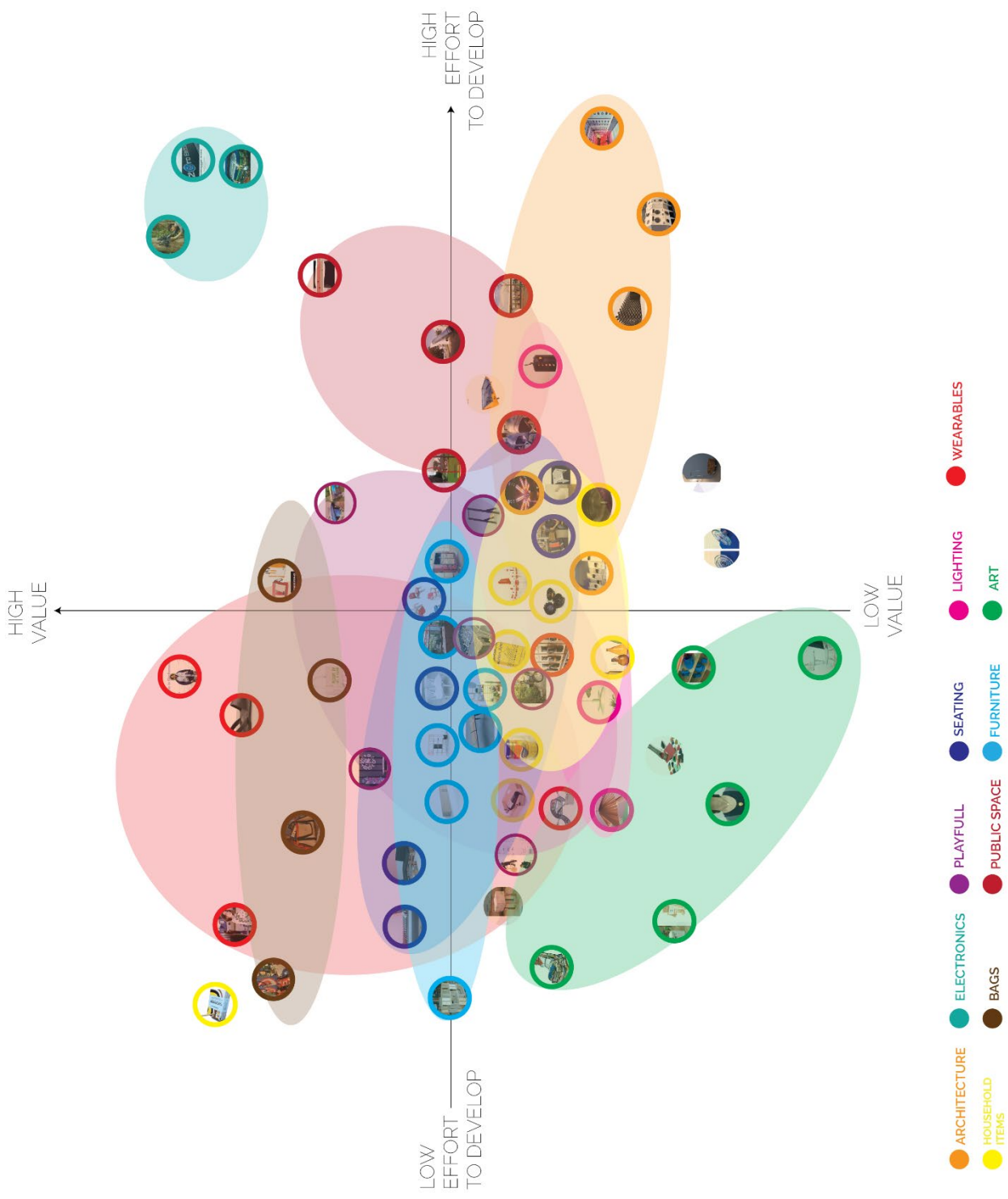
number	name	Company	Function L1	current batchsize
1	Flip the Flop masterpieces	Oceon Sole Africa	Thong	a lot
2	ArenA chairs	Ahrend	Stadium seat	appr. 50.000 seats
3	Dienstblaadje	NS Upcycle / VerdraaidGoed	Time table trainstations	... per year (check with VerdraaidGoed)
4	Freitag bags	Freitag	Truck tarp and safety belts	a lot
6	Guitars from skateboards	Prisma guitars	Skateboard	.
7	KLM Cargo / 100% circulaire	Sortiva & local social manufacturer	Fastening / safety belts	limited, exact quantity unknown
9	Table Gymfloor	PlanQ	indoor sports floor	limited
11	Hotel Vetements	.	old hotel curtains	.
12	Slam Design Pickmaster Plectrum Puncher	.	Tool which facilitates Repair	.
15	Pallet furniture	MEUBELMAKERIJ MELVIN ROOD	EURO Pallets	virtually unlimited
16	Vechtclub XL	Repurpose	doors	.
20	Ski lift as chair	unknown	skilift	.
21	Brave soals (recycling)	Brave soals	tyres	.
22	Zeecontainer start up offices	Zeecontainerwoningen	container	.
25	Tafelvoetbal tafel van treinvloeren	Veldwerk	Trainfloor	.
26	Joining Bottles (pastic melting)	Micaella Pedros	Plastic bottles	a lot
27	Close collaboration chair parachutes	RÆBURN (, Layer)	Parachutes	.
29	Rev flitt aqua light	Studio botté	Fan covers	a lot
30	PDP light	Studio botté	Luxaflex	a lot
31	Boiler Lamp serie	Willem Heeffter	Espresso boilers	.
32	Drum Lamp series	Willem Heeffter	Washing machine drums	.
33	Can lights	Willem Heeffter	Food cans	.
34	Oil drum furniture	Hamed Ouattara	Oil drums	large
35	Oxgut bags	Oxgut	Fire hoses	large
37	Leather tiles	Ting	Leather man's belts	.
38	Chest of drawers	Studio Remy Veenhuizen	Drawers	.
39	Rag Chair	Studio Remy Veenhuizen	Clothing	high
40	Modpools	Modpools	Shipping container	high
41	FaberExposize / Omrin	Omrin	Flags	.
42	EV batteries	Nissan etc	EV battery	.
44	Terraskachel	unknown / various	gas bottle	.
45	Gevelbekleding	superuse	Gevelbekleding	.
48	Hydroponics bakken	Various	Liquid transport	Unlimes
50	Playground	Opdrachtgever: Kinderparadijs Meidoorn, Rotterdam	Windmill blades	Unlimited
51	Vinyl bowl	.	Record	Unlimited
52	Spails	.	Playobjects for children	.
53	bath chair	reddish design studio	Bath	.
54	Bicycle stop	?	Windmill blades	Unlimited
55	Bottles	.	.	.
56	Basket Tires	Beterleven.net	Cartyre	Continuous
57	tool voor drinkglas uit fles	.	.	.
58	tool voor drinkglas uit blik	.	kickstarter draft top and drink	.
59	Tassen van steigerdoek	Beat the Bag (VerdraaidGoed)	bag	.
61	Bicycle belt	cinGomma	.	.
62	Rijkswachters	Studio Hamerhaai	.	.
63	Dog bed	Indusigns	.	.
64	Coffeebar (SuperUse)	SuperUse	.	.
66	Crates	Fiction Factory	.	.
67	Kitchen island	Fiction Factory	.	.
68	Wine holder/ service tray	VerdraaidGoed	.	.
69	Musterdjar glass	Marne	mustard container	.
70	Wasteboards	Wasteboards	.	.
71	Cabinet Cartoni	Cartoni	.	.
72	Gevelbekleding van stoelschalen	Chybik Kristoff	.	.
73	Coca Cola accessories	Coca Cola	.	.
74	containerstoel	Roteb	Waste container	.
75	Pondje Papier	Jos vd Meulen / Made Sustained / social working place	Posters	.
76	Infra naar Interieur wood bench	ToTT (Talk of The Town)	Bridges metal parts	.
78	Vliegtuigonderdelen	SuperUse Studios	Airplane interior	.
79	Metalen wandpanelen van stansrestant	SuperUse	Restant gestante platen	.
81	EV-Home	relectrify	Battery	.
83	Glass arrangement	Atelier Remy & Veenhuizen	Various glassware	.
84	Fun-for-dogs trolley	Ed Annink	Dog basket	.
85	MS. Teaspoon	Ed Annink	Spoon	.
86	Roll-on scent	Eric Klarenbeek	Saltshaker	.
87	XX chair	Luc d'Hanis & Sofie Lachaert	Bar stools	.
88	100 blue containers	.	Flowerpots/trays	.
89	smartphone	Comet	smartphone	.
90	Kesbeke lampen	.	.	.
100	circular carrier seat	Vanderlande	.	.
101	NS trein prullenbak naar plantenbak	NS	.	.
102	modular/ adaptable chair and desk	Ahrend	.	.
103	suit for homeless	shellersuit	.	.
104	Mobile illegal deforestation audio	.	.	.
105	ikea multifunction chair	? Ikea	.	.
106	stroller scooter	bugaboo	.	.
107	windmill blade bridge picknicktable	.	Windmill blades	.
108	affordable luxury chair (modular design)	Layer	.	.
109	uitvouwbare space sheet	NASA	.	.
110	CAT remanufacturing motors	CAT	.	.
111	bureau from trainceiling	NS	train ceiling	.
112	rack for haning up items	NS	fence next to train tracks	.
113	horse seat for playground	esschert Design	.	.
114	NS train speakers	.	.	.

number	name	Availability (once / intermittent / continuous)	Uniformity	function L2
1	Flip the Flop masterpieces	continuous stream	Various sizes, colours and qualities	Art / decoration
2	Arena chairs	once	Various qualities, batches	Consumer chair
3	Dienstblaadje	intermittent (yearly)	Different printing on each	Tray
4	Freitag bags	continuous stream	Different colours, prints and quality	Messenger bag
6	Guitars from skateboards	.	.	Guitar
7	KLM Cargo / 100% circulaire	continuous (after x-time usage)	uniform stream, various colours	KLM various products (pillows, bags etc)
9	Table Gymfloor	once	various quality and colour	Table
11	Hotel Vetements	.	None	clothing
12	Slam Design Pickmaster Plectrum Puncher	.	.	Facilitating Repurposing
15	Pallet furniture	continuous	Yes	Lounge chairs
16	Vechtclub XL	.	Various sizes and colours	Indoor Walls
20	Ski lift as chair	incidentally	uniformity per project /batches	Furniture: restaurants, cinema's and public transport
21	Brave soals (recycling)	.	reasonably uniform	Shoes
22	Zeecontainer start up offices	.	uniform sizes/forms various colors	Housing
25	Tafelvoetbal tafel van treinvloeren	intermittent	uniform, some wearing	Table football table
26	Joining Bottles (pastic melting)	continuous	.	Joinery for interior products
27	Close collaboration chair parachutes	.	.	Rocking chairs and screens
29	Rev flitt aqua light	continuous?	High	Lighting fixture
30	PDP light	continuous?	High	Lighting fixture
31	Boiler Lamp serie	.	.	Lighting fixture
32	Drum Lamp series	.	.	Lighting fixture
33	Can lights	.	.	Lighting fixture
34	Oil drum furniture	continuous	high	Furniture
35	Oxgut bags	continous	high in shape, low in colour	Bags and furniture coverings
37	Leather tiles	.	.	Tiles for tables, walls, doors and floors.
38	Chest of drawers	.	.	Chest
39	Rag Chair	continues	all fabric, but other than that not	Chair
40	Modpools	continues	high	Swimmingpool
41	FaberExposize / Omrin	.	.	Bags and clothing
42	EV batteries	.	.	Power
44	Terraskachel	.	.	Terrace stove / heater
45	Gevelbekleding	.	.	gevelplaat
48	Hydroponics bakken	.	.	.
50	Playground	Continuous stream	One colour	Childrens playground
51	Vinyl bowl	Continuous	Black and coloured label	Dishes
52	Spails	.	.	various
53	bath chair	.	.	Furniture
54	Bicycle stop	Continuous stream	One colour	Shelter
55	Bottles	.	.	.
56	Basket Tires	.	Only black	Basket
57	tool voor drinkglas uit fles	.	.	.
58	tool voor drinkglas uit blik	.	.	.
59	Tassen van steigerdoek	.	.	.
61	Bicycle belt	.	.	.
62	Rijkswachters	.	.	.
63	Dog bed	.	.	.
64	Coffeebar (SuperUse)	.	.	.
66	Crates	.	.	.
67	Kitchen island	.	.	.
68	Wine holder/ service tray	.	.	.
69	Musterdjar glass	.	.	glass
70	Wasteboards	.	.	.
71	Cabinet Cartoni	.	.	.
72	Gevelbekleding van stoelschalen	.	.	.
73	Coca Cola accessories	.	.	.
74	containerstoel	.	.	Street Chair
75	Pondje Papier	.	.	Scrabbling block
76	Infra naar Interieur wood bench	once	.	Various: chairs & lighting armature
78	Vliegtuigonderdelen	.	.	walls, chairs etc
79	Metalen wandpanelen van stansrestant	.	.	wall decoration and fences
81	EV-Home	.	.	Power supply
83	Glass arrangement	.	.	Etagere
84	Fun-for-dogs trolley	.	.	Trolley
85	MS. Teaspoon	.	.	Necklace
86	Roll-on scent	.	.	Perfume bottles
87	XX chair	.	.	Bench
88	100 blue containers	.	.	Container
89	smartphone	.	.	in-car parking meter
90	Kesbeke lampen	.	.	.
100	circular carrier seat	.	.	.
101	NS trein prullenbak naar plantenbak	.	.	.
102	modular/ adaptable chair and desk	.	.	.
103	suit for homeless	.	.	.
104	Mobile illegal deforestation audio	.	.	.
105	ikea multifunction chair	.	.	.
106	stroller scooter	.	.	.
107	windmill blade bridge picknicktable	.	.	bridge, picknicktable
108	affordable luxury chair (modular design)	.	.	.
109	uitvouwbare space sheet	.	.	.
110	CAT remanufacturing motors	.	.	.
111	bureau from trainceiling	once to continuous	uniform	.
112	rack for haning up items	once to continuous	uniform	.
113	horse seat for playground	.	.	.
114	NS train speakers	.	.	.

mber	name	Add-on	link 1
1	Flip the Flop masterpieces	contact adhesive glue and in some of	https://oceansoleafrica.com/
2	ArenA chairs	Wooden or steel frame	.
3	Dienstblaadje	None	https://loopedgoods.com/product/dienstblaadje/
4	Freitag bags	car straps, stitches	https://www.freitag.ch/en
5	Guitars from skateboards	Glue	https://www.primaguitars.com/pages/our-story
7	KLM Cargo / 100% circulaire	stitches, zippers, filling (pillow)	https://www.100procentcirculaire.nl/online-store
9	Table Gymfloor	legs, handles, logo's	http://www.plangproducts.com/gymfloor-line
11	Hotel Vetements	.	https://www.hotelvetements.com
12	Slam Design Pickmaster Plectrum Puncher	.	https://www.bol.com/nl/p/boston-punch-a-pick-plectrum-knipper-plectrum-tang-
15	Pallet furniture	metal strips, plexiglass (acrylate of po	https://www.so-flex.nl/soflex-lite
16	Vechtclub XL	.	https://www.repurpose.nl/projecten/vechtclub-xl/
20	Ski lift as chair	wood, bolts, paint, textile	https://skiinformatie.nl/oude-skiiften-hergebruiken-als-meubelstuk/
21	Brave soals (recycling)	.	https://bravesoals.life/
22	Zeecontainer start up offices	.	https://www.zeecontainerwoningen.nl/
25	Tafelvoetbal tafel van treinvloeren	buy in parts	https://veldwerk.info/portfolio/circulaire-voetbaltafel/
26	Joining Bottles (pastic melting)	boards and timbers	http://joiningbottles.com/
27	Close collaboration chair parachutes	.	https://layerdesign.com/project/close-collaboration/#top-page
29	Rev flitt aqua light	Canopy and bulb	https://www.studiobotte.com/2019-rev-flitt-silo
30	PDP light	Canopy and blub	https://www.studiobotte.com/2019-pdp-caramel
31	Boiler Lamp serie	.	http://www.willemheffer.nl/products/
32	Drum Lamp series	.	http://www.willemheffer.nl/products/
33	Can lights	.	http://www.willemheffer.nl/products/
34	Oil drum furniture	metall & glass	https://www.coroflot.com/hamedouattara/FURNITURE-MOBILIERS
35	Oxgut bags	textiles, thread	https://www.oxgut.com
37	Leather tiles	.	https://www.tinglondon.com/about/
38	Chest of drawers	.	http://www.remyveenhuizen.nl/work/furniture/chest-drawers-you-cant-lay-down
39	Rag Chair	metal strips	?
40	Modpools	Electronics (heating etc)	https://modpools.com/
41	FaberExposize / Omrin	.	https://www.omrin.nl/bij-mij-thuis/over-omrin/nieuws/gebruikte-vlaggen-van-lf20
42	EV batteries	.	https://nos.nl/artikel/2239009-johan-cruiff-arena-wordt-superbatterij-voor-elekt
44	Terraskachel	.	https://www.terraskachtje.nl/index.php
45	Gevelbekleding	.	https://www.salvoweb.com/salvoweb/16991-flow-design-philosophy-for-archite
48	Hydroponics bakken	.	https://www.mediamatic.net/en/page/46417/aquaponics-at-mediatic-fabriek
50	Playground	.	https://architectenweb.nl/projecten/project.aspx?ID=14709
51	Vinyl bowl	.	https://theupcycle.nl/
52	Spails	.	https://rutgerdankelman.carbonmade.com/projects/6996331
53	bath chair	.	https://www.recyclart.org/idee-recyclage-13/
54	Bicycle stop	.	https://www.volkskrant.nl/economie/wat-te-doen-met-een-afgeschreven-windmolen-
55	Bottles	.	https://www.trendhunter.com/trends/upcycled-glass
56	Basket Tires	Yarn	https://www.gewoongerralda.nl/a-50237070/manden/gerecyclede-autoband-man
57	tool voor drinkglas uit fles	.	https://www.amazon.com/dp/B01D4VUJ02/?tag=hardcoreprofi-20
58	tool voor drinkglas uit blik	.	https://www.kickstarter.com/projects/drafttop/draft-top-and-drink-topless
59	Tassen van steigerdoek	.	https://www.voordeewereldvanmorgen.nl/duurzame-blogs/beat-the-bag-maakt-tassen-
61	Bicycle belt	.	.
62	Rijkswachters	.	https://www.indusigns.nl/indusigns-shop/stoere-hondenmand-the-original-basic-colo
63	Dog bed	.	.
64	Coffeebar (SuperUse)	.	.
66	Crates	.	.
67	Kitchen island	.	.
68	Wine holder/ service tray	.	.
69	Musterdjar glass	minus a product part	.
70	Wasteboards	.	https://wasteboards.com/
71	Cabinet Cartoni	.	https://www.architonic.com/en/product/cartoni-design-cabinet-connect/20041544
72	Gevelbekleding van stoelschalen	.	https://chybik-kristof.com/portfolio-item/my-dva-showroom/
73	Coca Cola accessories	.	.
74	containerstoel	.	https://www.rijnmond.nl/nieuws/174824/Van-zooi-naar-mooi-Rotterdam-maakt-stoels
75	Pondje Papier	.	http://www.josvandermeulen.nl/pondje-papier/
76	Infra naar Interieur wood bench	.	https://www.ttotttdesign.nl/projecten/maastunnel
78	Vliegtuigonderdelen	.	https://www.superuse-studios.com/projects/worm-re-create/
79	Metalen wandpanelen van stansrestant	.	.
81	EV-Home	.	https://www.bloomberg.com/news/features/2018-06-27/where-3-million-electric
83	Glass arrangement	.	https://www.droog.com/project/glass-arrangement
84	Fun-for-dogs trolley	Steel frame, wheels, leather straps	https://www.droog.com/project/fun-dogs-trolley
85	MS. Teaspoon	.	https://www.droog.com/project/onno-ed-ms-teaspoon-and-king-gold
86	Roll-on scent	.	https://www.droog.com/project/roll-scent
87	XX chair	.	https://www.droog.com/project/xx-chair
88	100 blue containers	.	https://www.droog.com/project/100-blue-containers
89	smartphone	.	https://www.researchgate.net/publication/260338005_Comparative_life_cycle_asses
90	Kesbeke lampen	.	https://www.pie-nuts.nl/product/405033/kesbeke-touwlampen-set
100	circular carrier seat	salvaged spruce wood	.
101	NS trein prullenbak naar plantenbak	.	.
102	modular/ adaptable chair and desk	.	.
103	suit for homeless	.	.
104	Mobile illegal deforestation audio	.	.
105	ikea multifunction chair	.	.
106	stroller scooter	.	.
107	windmill blade bridge picknicktable	.	.
108	affordable luxury chair (modular design)	.	.
109	uitvouwbare space sheet	.	.
110	CAT remanufacturing motors	.	.
111	bureau from trainceiling	.	.
112	rack for haning up items	.	.
113	horse seat for playground	.	.
114	NS train speakers	.	.

(H1) Quantitative Case analysis





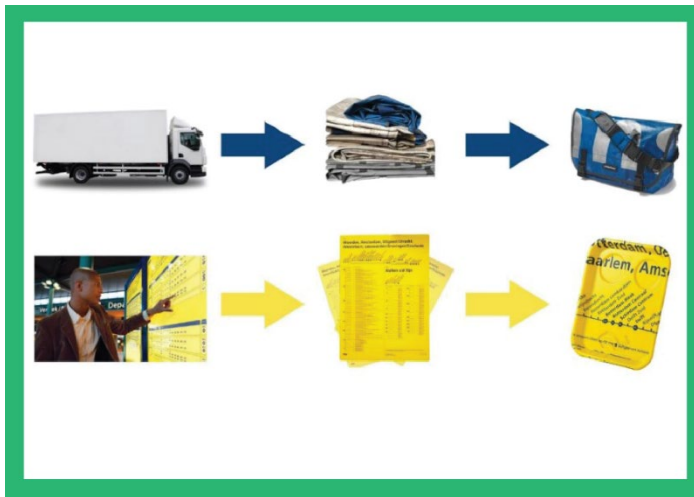
(H3) Interview Questions

Basis vragen past case companies

Introductie van project

Leuke persoonlijke vraag stellen

1. Waar staat Verdraaid Goed als design studio voor? En hoe zijn jullie ooit gestart?
2. **Wat is je drive om met repurpose design te werken? -**
3. *presenteren algemeen voorbeeld van repurpose design*
- 4.



5. **Wat versta jij onder duurzaam ontwerp?** (Wat versta je onder circulair ontwerpen? Wat versta je onder repurpose design?)
6. **Stellen later in het interview:** Wat zijn de moeilijkheden en uitdagingen als het gaat om repurpose design?
7. **Wat zijn de kansen en voordelen van het ontwerpen voor of met repurpose design?**
8. **Wat zijn redenen waarom mensen of bedrijven kiezen voor een repurpose ontwerp?**

Algemeen

Manier van werken/ Hoe ontwerpen en wat is het start-punt

9. Hoe ontstaat een design opdracht?
10. Hoe ga je te werk, hoe bepaal je wat je gaat maken, voor wie en waarom? Hoe kom jij op ideeën met gebruikte producten als startpunt?
11. Hoe kom je aan je materialen?
12. Cabinet connect & karton (Zie voorbeelden hierboven .herkomst grondstof. Opslag. Continue stroom? Kwaliteit/eigenschappen bepalen van materiaal)
13. Denk je voornamelijk uit het materiaal of ben je bezig met wat het moet worden?
14. Zijn er bepaalde eigenschappen/ kwaliteiten in restmateriaal waar je naar zoekt als je er een nieuw product wil maken?

15. Heb je wel eens vanuit een product een nieuw product gemaakt?

Pijnpunten repurpose

16. Zijn er dingen of situaties waardoor een repurpose project makkelijk of juist minder makkelijk gaat?

17. Op je website staat: design for disassembly

Oplage/ conitu / start-punt

18. Maak je producten op aanvraag of op aanbod van materiaal?

19. Maak je meer serie producten of meer eenmalige projecten? Hoe groot zijn die series?

Opslag

20. Hoe zit het met opslag van afval en opslag van producten?

Verkoop/ klant

21. Hoe werken de verkoopkanalen? Verkopen jullie alles zelf? Via een site of zijn er andere belanghebbende/winkels?

22. Wat voor business model houdt je aan bij het product? (verkoop/leash/pay-per-use)

End of life vs 3th cycle

23. Denk je bij je product ook na of het na dit gebruik nog een keer gebruikt kan worden? Komen producten terug?

** repurpose voorbeelden laten zien ter inspiratie* Zie voorbeelden onderaan het bestand*

Repurpose standaardiseren

**Voorbeeld laten zien* Zie voorbeelden onderaan het bestand*

**Plaatje over het verschil tussen nu en straks laten zien* Zie plaatjes onderaan het bestand*

24. Eerdere vragen: Wat zijn de moeilijkheden en uitdagingen als het gaat om repurpose design?

25. Wat zijn de kansen en voordelen van het ontwerpen voor of met repurpose design?

26. Wat zijn redenen waarom mensen of bedrijven kiezen voor een repurpose ontwerp?

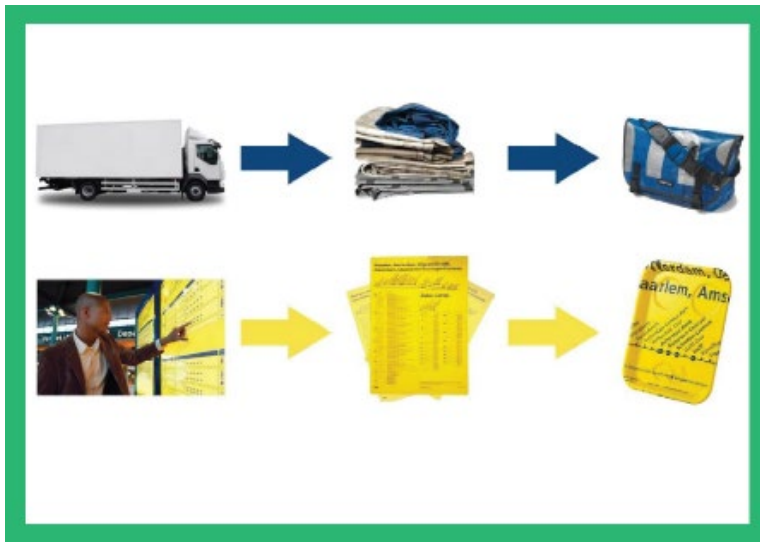
- a. Wat moet er volgens jou gebeuren om repurpose als design strategie in een stroomversnelling te krijgen (hoe kunnen ontwerpers hieraan bijdragen in hun product ontwerp/ ontwerp-process) (en stel als er een voordeling btw tarief zou zijn voor 2e hds grondstoffen) ?
- b. Hoe gaan we deze stroomversnelling van repurpose design bereiken, welke middelen zijn hiervoor nodig?

Basis vragen Future case companies

Introductie project

Leuke persoonlijke vraag stellen

1. Heb je al eens repurpose design gehoord? (voor bedrijven die niet bij het HvA project betrokken zijn).



Algemene design aanpak van je bedrijf

2. Kun je in 2 zinnen zeggen hoe jullie het design process aanpakken binnen [naam bedrijf]? Wat is het startpunt van een nieuw project? (voorbeeld bij FLEX/design: playful, simple, technisch kloppend).
3. (Ligt het al erg vast wat voor product jullie gaan maken vanuit de klant of hebben jullie daar heel erg vrijheid in?)

Current case

4. Kun je ons een korte introductie geven in je project? (Hoe is dit project ontstaan)
5. Wat is de insteek vanuit/ meerwaarde van dit project voor jullie? En wat is de insteek vanuit/ meerwaarde voor de klant? (Waarom dan? Hoe zat dit dan? Kan je daar een voorbeeld van geven?)
6. Gaan jullie bij dit repurpose project anders te werk dan normaal?
7. Hoe verandert dit je aanpak in het design process: in acquisitie/ ideeën bedenken/concept fase/ technische ontwikkeling etc?
8. (Wat als je nog een keer dit project zou opzetten, zou je dit anders doen? (Hinderlijke factoren/ stimuli)

Future situatie A

**Uitleg future case A_ = Het ontwerpen van producten met producten uit je portfolio /bestaande producten.*

Voorbeeld laten zien als het nodig is

9. Waar zou je dan op letten? Bij welke portfolio projecten zou je dit overwegen/ nuttig vinden?

Future situatie B

Uitleg future case B_ = Het ontwerpen voor toekomstige repurpose producten (product ontwerp met meerdere levens) (repurposed product)

**Voorbeeld laten zien* Zie voorbeelden onderaan het bestand*

**Plaatje over het verschil tussen nu en straks laten zien* Zie plaatjes onderaan het bestand*

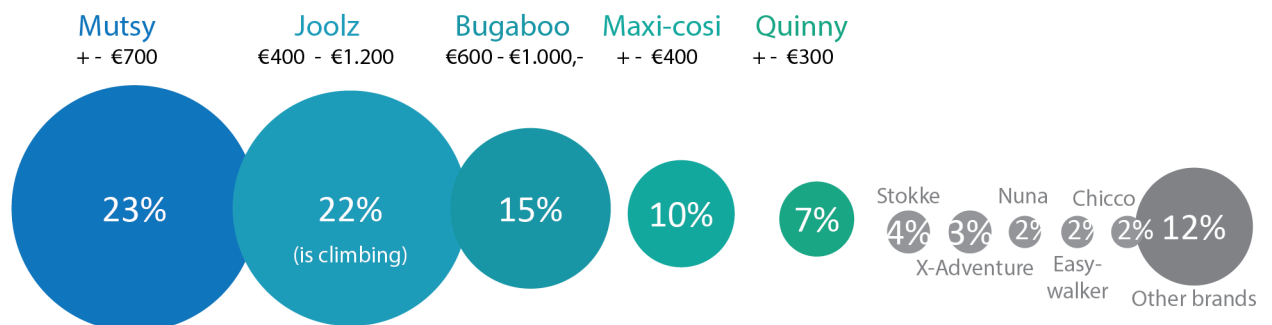
10. Wat als je nu een product zou maken wat meerdere levenscycli? (verschillende functionaliteiten)
 1. (wat als je de producten zou kunnen terugkrijgen? Wat als jij of de klant eigenaar zou zijn van het materiaal/ product en je zou het kunnen terugkrijgen?).
 2. Wat is het eerste wat je te binnen schiet als ik dit zeg? Zie je kansen? Als je kijkt naar de producten die je tot nu toe hebt gemaakt?
 3. Als je dus van te voren weet dat je een product maakt wat eindigt in een nieuw product. Maak je daarin andere ontwerpkeuzes dan dat je nu maakt? Waarom?
11. Wat als je de repurpose methode breder zou kunnen toepassen in je bedrijf?
12. Wat is daar voor nodig? (Hoe beïnvloedt dit je ontwerp en je ontwerp proces?) (business case, stakeholder cooperation, productie, etc)?

(H4) Product Price Benchmark



Product attributes parents look for
during sale (2016- 2017)

(WIJ Monitor, 2019a)



5 most sold buggy brands in the Netherlands 2016 - 2017
and the average price new product

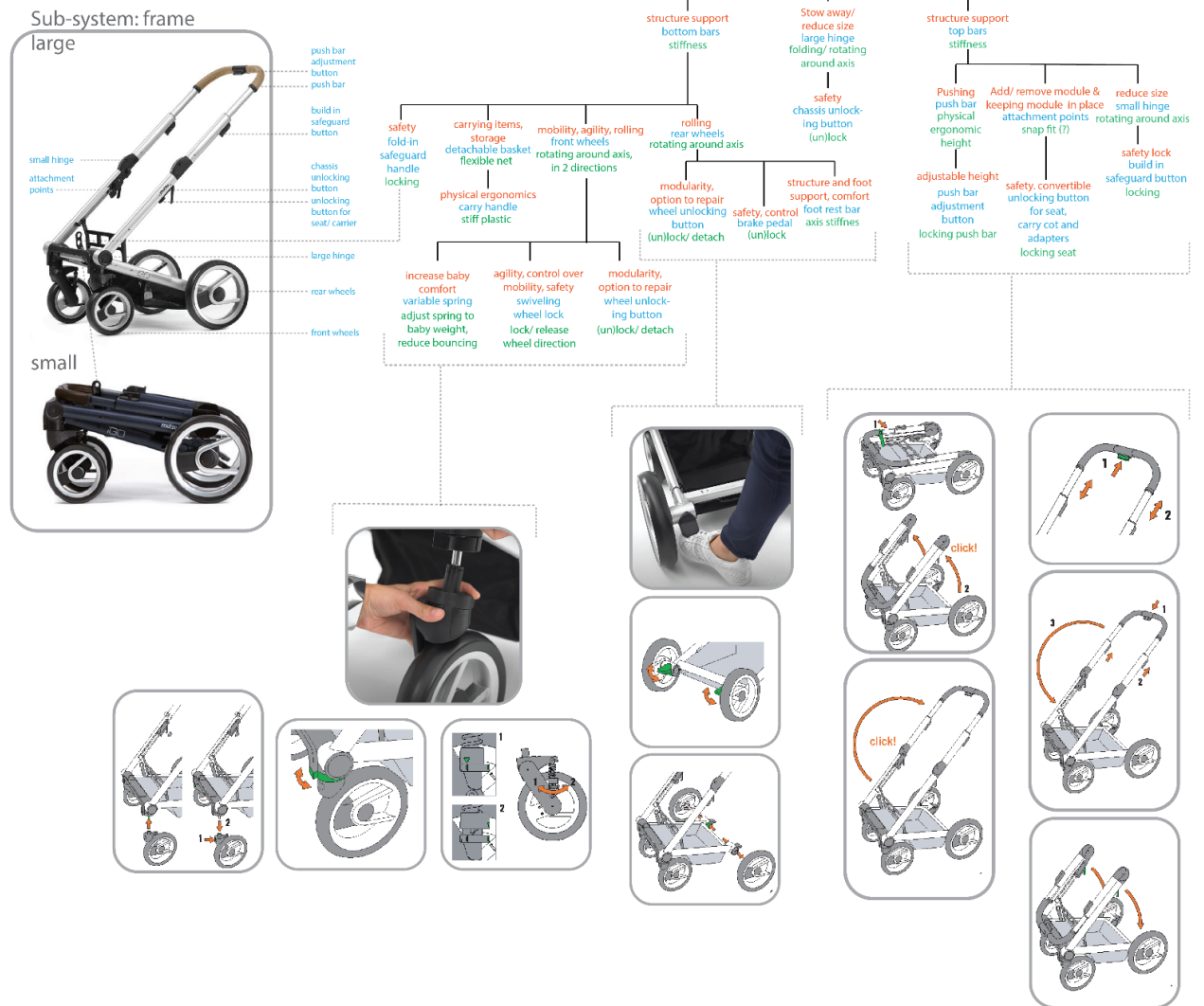
(WIJ Monitor, 2019a)

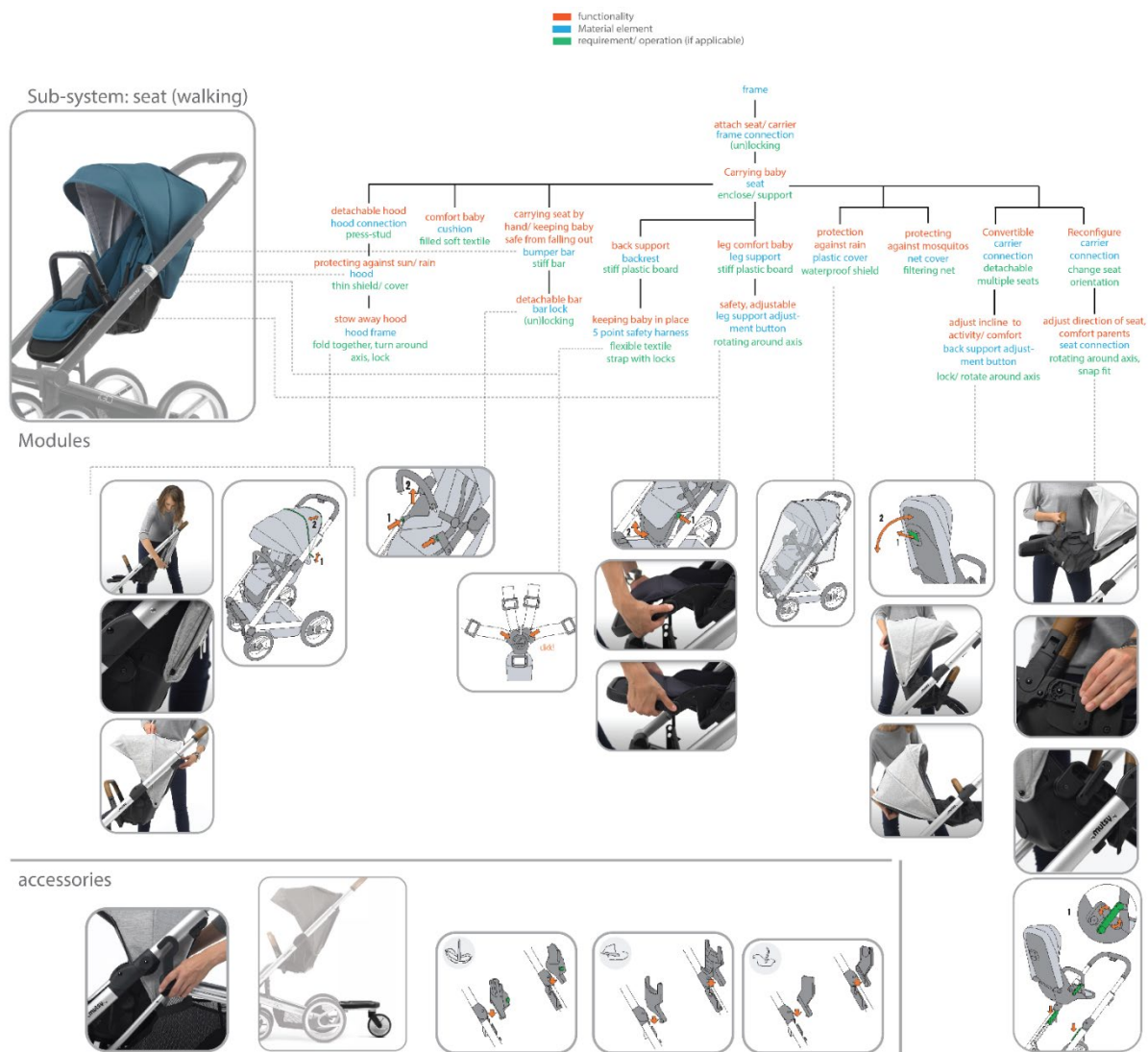
musty.com, bugaboo.com, joolz.com, bol.com, maxi-cozi.com, babyplus.nl

(WIJmonitor, 2019)

(H4 and H5) Functional structures of main and subsystems

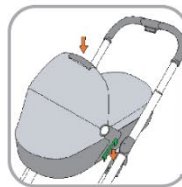
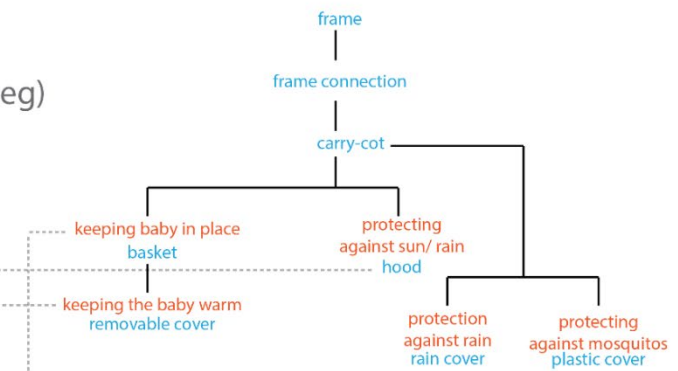




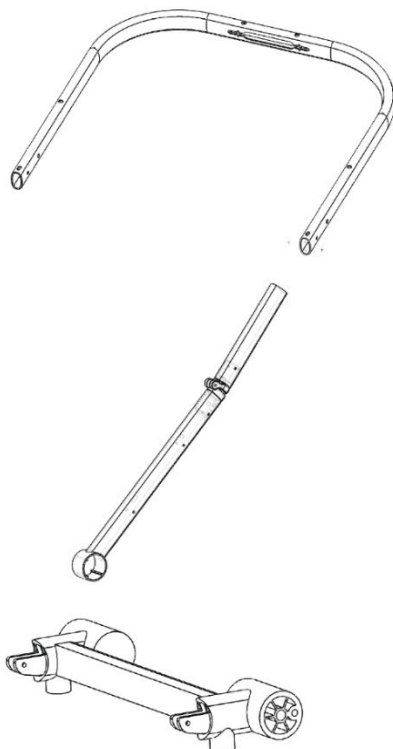
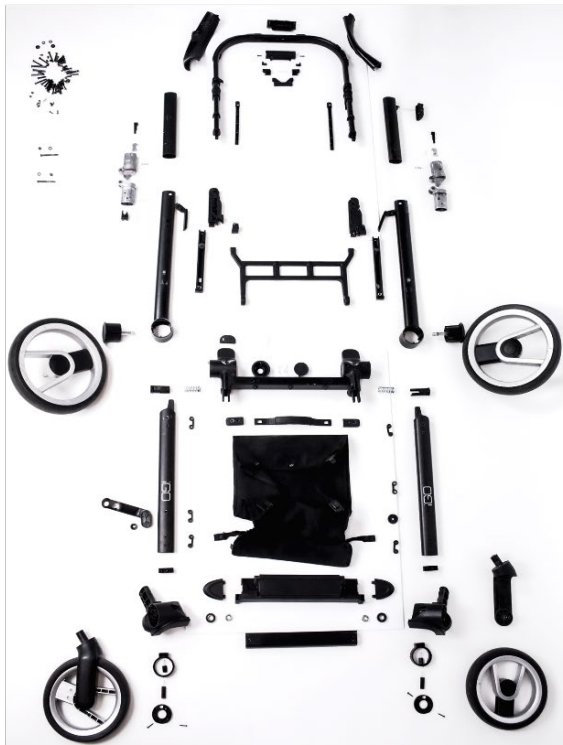


- functionality
- Material element
- requirement/ operation (if applicable)

Sub-system: carry-cot (reiswieg)



(H4 and H5) Product disassembly



<https://www.babytrailerplace.com/products/mutay-igo-the-stroller-with-black-charcoal-silver>

(H4) Personas

In experience seeker

PERSONA 1.



ANNE & DAVID

"The fabrics in the store were of such nice colors and quality and the children's chair really matches the colors of the house. My family comes over for some quality time, so the kids can play together and we will have nice conversations at the fireplace."

ABOUT

- ☐ Age: 28
- ☐ Job: Doctor, stay at home mom
- ☐ Status: married
- ☐ Income: ++
- ☐ Children: 1
- ☐ House: city apartment

NEEDS

- Being close to the baby/ making sure the baby is well cared for
- Quality time with the family/ sharing with friends
- Looking forward to choosing baby items
- Trying out the products' attributes & "sensing" the materials and colors in the store

FRUSTRATIONS

- Lack of sleep
- Hormones make the brain more emotional, which makes it harder to make rational decisions
- When I can't spend some time outside

CHARACTERISTICS

- Radiating while talking about all the positive things: emotionally involved
- Very involved with social family activities
- Decision by feeling

CONTEXT/ SCENARIO



The practical approach

PERSONA 2.



SUSAN & PETER

"I prefer that the children have nice activities to do throughout the day. When I stand up at 6:30 I like to have all the laundry finished and the breakfast at the table, before the kids get up."

ABOUT

- ☐ Age: 35
- ☐ Job: Entrepreneur & accountant
- ☐ Status: married
- ☐ Income: +
- ☐ Children: 3
- ☐ House: suburban area

NEEDS

- "I care most for a compact stroller, which I can take along in my carrier bicycle"
- I want to test the product in-store on low-effort functionality
- Nice activities for the kids to do

FRUSTRATIONS

- Lack of time
- Worrying about all the options/ ways to take care of the baby
- I want to have a place to store all the baby supplies

CHARACTERISTICS

- Sharing with the family how the product works and trying the new product together
- early bird/ pro-active
- Decide by rational thinking

CONTEXT/ SCENARIO



(Global Baby, 2016, 03:15–05:21) (DE BELLINGAs, 2018, 03:15–05:21) (Travel Mama Anna Von, 2017, 03:15–05:21) (But First, Coffee, 2018, 03:15–05:21) (Sannie Verhoeven, 2018, 03:15–05:21) (Emily Faith, 2019, 03:15–05:21) (Morgan Bylund, 2019, 03:15–05:21)

(H4) Future trend prediction

Global trends & influence on user needs – user analysis

Search for simplicity & meaning	Authenticity + tech dimension	Rapid change & increased feeling of responsibilities	Conscious health & climate
Overwhelmed by abundance of choices, information and connections (by tech)	Search for reflection of real personal values & more genuine connections instead of stereotypes	Urbanization – busier cities	Expectation with companies for merged action for climate change, food and health
Difficulty to find meaning in varying aspects of life	Brand worship is still a short-cut for decision making, but also seen as an excuse to make money.	Need for technology to fix thing. Technology makes life better in general	trade-off between ethical consumption and convenience
Moving from materialism to experiences & career in established markets	Tech increases the possibility to participate and interact with a brand. Increase of smart products/ complete package products.	Concern for aging population	balancing own health and planets' health
		Less positive future outlook than expectations	Shortage asks for innovation
		Increased emergencies: climate change, loneliness, less control over the future, longer working	Health (such as peak fitness) becomes more important when people get older
Increased user needs			
Providing convenience, easy choices and a simpler life	Nuanced mass customization & autonomy on end-product (independence, personal freedom)	Toys focusing on tinkering with technology	More sharing concepts & smart products, which clearly help users in making truly sustainable product decisions.
Clear and unifying information over various channels	Trust through transparency (origin, how produced/ grown), loyalty and companies providing clearly green or ethical product-choices	More focus on protective products, Being assertive and independent	Expectation = complete package of wellness, ethical and sustainable product
Search to switch off/ spend time for wellbeing & wellness		Convenient products for busy lives, multitasking and small spaces + time saving products	More emphasis on spending time on wellbeing activities: relaxation or fitness
Instant gratification, social online shopping, living in the moment	Real life memorable shopping experiences: human touch to match digital product-service	Products supporting longer working/ wellbeing at work/ caring for elderly	Locally produces/ grown. Larger variety in healthy eating from an earlier age.
		Enduring appeal of nostalgia	

(Ipsos, 2020)

From current user trends to future user trends

Self-care rituals +
comfort baby



**Balancing
work and care**

Natural/ eco-friendly
products



**Trustworthy
natural/ eco-friendly
products**

Health & food focus



**Fitness & healthy
food, care for
elderly**

Ease of use, safety,
functionality



**Lightweight, time-saving,
simple, protection
core functionality,
managing busy lives**