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Reuse within the Business of Children's Toys

Contributing to a more circular and economically
stable playtime

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Återanvändning inom leksaksindustrin

Bidra till en mer cirkulär och ekonomiskt stabil lek

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Godkänt 2021-06-28	Examinator Claes Tisell	Handledare Erik Widmark
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SAMMANFATTNING

Denna rapport redovisar ett examensarbete inom masterprogrammet Integrerad Produktdesign vid Kungliga Tekniska Högskolan i Stockholm. Projektet genomfördes i samarbete med Micki Leksaker AB i syfte att utveckla en tjänst som främjar en mer hållbar livsstil och konsumtion av barnleksaker.

Då målet med projektet var att utveckla en tjänst, användes en användarcentrerad tjänstesdesign metodik genomgående i projektet. Processen var därför iterativ med involvering av olika intressenter och slutanvändare i alla projektfaser. Den djupa förståelsen av användarna och deras behov, samt förståelsen av leksaksbranschen, marknaden och aktuella samhällstrender utgjorde grunden som det slutgiltiga konceptet bygger på.

Det framtagna servicekonceptet består av ett aktivitetscenter där förskoleklasser och skolklasser kan lära sig mer om hållbarhet genom filmer, teatrar, böcker och workshops där barnen får bygga sina egna leksaker med hjälp av gamla leksaker, återvinnings- och restmaterial från Micki Leksakers produktion, och andra industrier. Experterna på aktivitetscentret undervisar kontinuerligt om hållbarhet och skolorna erbjuds även att hyra inlärningspaketet för fortsatt arbete inom ämnet på skolan.

Tjänsten erbjuder ett konkret och konstruktivt sätt att öka kunskaperna inom hållbarhet, produkters livscykler och kopplingen till natur och miljöpåverkan. Genom att introducera hållbar utveckling redan i tidig ålder, kan tankesättet följa med under uppväxten och därmed bidra till en ökad medvetenhet och mer hållbar livsstil på sikt. Att samla in gamla leksaker, kvarvarande material från produktionen och restmaterial från andra industrier bidrar även direkt till en mer cirkulär ekonomi, då materialet som annars skulle bli avfall lyfts högre upp i avfallshierarkin genom återanvändning.

För att tjänsten ska kunna realiseras behövs dock vidareutveckling av konceptet, gällande materialet som ska erbjudas och implementeringen av tjänstens olika delar. Genom att erbjuda en sådan tjänst kan Micki Leksaker tydliggöra sitt engagemang kring barnen och deras utbildning, samt utveckla sitt hållbarhetsarbete ytterligare; vilket kan stärka både varumärket och kundrelationerna.



Reuse within the Business of Children's Toys

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Approved 2021-06-28	Examiner Claes Tisell	Supervisor Erik Widmark
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ABSTRACT

This report presents a master's degree project in Integrated Product Design at KTH Royal Institute of Technology in Stockholm. The project was conducted on the behalf of Micki Leksaker AB, with the purpose to develop a service that promotes a more sustainable lifestyle and consumption of children's toys.

Since the project goal was to develop a service, the overall methodology used for this project was service design with a user-centered approach. Hence, the process was iterative with the involvement of different stakeholders and end-users in all stages of the project. The foundation on which the final concept relies, is based on a deep understanding of the users and their needs, as well as the understanding of the toy market and current trends.

The final service concept consists of an activity center where preschool and school classes can go to learn about sustainability through movies, theatres, books, and workshops where the children get to construct their own toys out of old toys and waste materials. The experts at the activity center continuously teach about sustainability and offer rentable learning packages with materials for working with the subject in school.

This service provides a tangible and constructive way of increasing the knowledge in sustainability, products' life cycles, and the connection to nature and environmental impacts. By introducing sustainable development at an early age, it resides with them as they grow up. Collecting old toys, left-over material from production, and waste materials from other industries contributes to a circular economy and puts the teaching of sustainability into practice. As well as this, by using old toys and waste materials, the final step of the waste hierarchy is decreased.

Further development of the concept is needed, regarding the learning material and activities, and the implementation of the various parts of the service. By offering such a service, Micki Leksaker can clarify their commitment to the children and their education, as well as further develop their work on sustainability, which can strengthen both the brand and the customer relationships.

ACKNOWLEDGEMENTS

We, the authors of the thesis, feel proud to present our final project within the master's programme Integrated Product Design at KTH Royal Institute of Technology. There have been many people involved throughout the project, contributing to the development of the final service concept. Without their help, this project would have never ended up where it did, and for that, we are eternally grateful.

First of all, we would like to thank Micki Leksaker AB for welcoming the idea of this degree project. We are not only grateful for the opportunity to find more sustainable solutions for one of Sweden's largest toy brands, but also for the fantastic reception we received from the very beginning. Warmest thanks to our industrial supervisors Stefanos Papamichailidis and Pontus Albinzon for their commitment and encouragement throughout the project. Thank you for being a constant source of inspiration and giving valuable feedback that has made it possible to take this project further than we could have imagined.

For participating in a collaborative ideation workshop and being inspiring and fun to work with, we want to thank our classmates Ellen Danielsson and Christopher Lekström. Many thanks also to Kristina Aronsson from Micki Leksaker, for taking part in another ideation workshop alongside Stefanos and Pontus. The generated ideas and inputs from these workshops were a significant part of the concept development and helped to form the final service.

We would also like to thank everyone who, by responding to surveys and participating in interviews, helped in understanding the problems, needs, and desires that were important to address in the development of the service. We especially want to thank Hélène Håkansson and Sara Karlsson, for their curiosity and willingness to contribute on more than one occasion. It was truly inspiring seeing that kind of dedication and love for the children at school and the teacher's profession. It is thanks to all of you who shared your knowledge and experiences with children, play, learning, and toys, that we were able to develop this service.

For feedback and help regarding the cost structures and revenue streams, we want to thank Mohammad Akhbari, senior lecturer in economics at KTH. Furthermore, we would like to thank KTH and all lecturers for the knowledge we gained throughout our education. It will take us far on the journey ahead.

Finally, we would like to give our warmest thanks to our supervisor Erik Widmark from Expedition Mondial, who has always contributed with a lot of energy and inspiration while guiding us through every part of the project. The feedback we received along the way has been invaluable; the knowledge in service design and how to translate insights into user-centered design decisions is something we will carry with us for the rest of our professional lives.

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TABLE OF CONTENTS

1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 Purpose.....	1
1.3 Delimitations.....	2
1.4 Methodology.....	2
1.5 Top of Mind.....	2
2. FRAME OF REFERENCE.....	3
2.1 Service Design.....	3
2.2 User-Centered Design.....	3
2.3 Circular Economy.....	4
2.4 Children's toys.....	4
2.5 Safety requirements for toys.....	5
3. BACKGROUND RESEARCH.....	6
3.1 Available services.....	6
3.2 Micki Leksaker AB.....	6
3.3 Micki's products.....	10
4. MARKET ANALYSIS.....	11
4.1 Today's market.....	11
4.2 Competitor analysis.....	13
4.3 Stakeholder analysis.....	18
4.4 Target group.....	21
5. USER STUDIES.....	22
5.1 Surveys.....	22
5.2 Interviews.....	23

6. INSIGHTS.....	27
6.1 User needs.....	27
6.2 Target audience.....	30
7. IDEATION.....	31
7.1 Ideation Methods.....	31
7.2 Workshops.....	33
8. CONCEPT DEVELOPMENT	35
8.1 Rough Concepts	35
8.2 Interviews with trigger material.....	37
8.3 Concept iterations.....	38
8.4 Testing the Concepts.....	41
8.5 Concept evaluation.....	47
8.6 Value Proposition Canvas.....	48
8.7 Requirement Specification.....	50
9. FINAL CONCEPT	51
9.1 What, Why, How.....	51
9.2 Service outline.....	51
10. BUSINESS MODEL.....	54
10.1 Business Model Canvas.....	54
10.2 Cost Structure.....	56
10.3 Revenue streams.....	57
11. DISCUSSION	60
11.1 Purpose.....	60
11.2 Delimitations.....	63
11.3 Methods.....	64

11.4 Recommendation.....	66
11.5 Future work.....	67
12. CONCLUSION.....	68
REFERENCES.....	70
APPENDIX A: TOP OF MIND.....	
APPENDIX B: CURRENTLY AVAILABLE SERVICES.....	
APPENDIX C: MIND MAP OF MICKI'S BRAND VALUES.....	
APPENDIX D: TOY CATEGORIES.....	
APPENDIX E: COMPETITOR ANALYSIS.....	
APPENDIX F: SURVEY ANSWERS FOR PRIVATE CONSUMERS.....	
APPENDIX G: SURVEY ANSWERS FOR PROFESSIONAL CUSTOMERS.....	
APPENDIX H: INTERVIEW TEMPLATES.....	
APPENDIX I: INSIGHTS.....	
APPENDIX J: WORKSHOP OUTLINE.....	
APPENDIX K: ROUGH CONCEPTS.....	
APPENDIX L: TRIGGER MATERIALS FOR ROUGH CONCEPTS.....	
APPENDIX M: VALUE PROPOSITION CANVAS.....	
APPENDIX N: REQUIREMENT SPECIFICATION LIST.....	
APPENDIX O: REVENUE MODELS.....	
APPENDIX P: EXPECTED COST ITEMS.....	

1. INTRODUCTION

This chapter introduces the master thesis and discusses the background, purpose, and delimitations of the project. As well as this, the methodology is discussed, by explaining the fundamental principles that are used in the project. Lastly, the *Top of Mind* is described, which was performed in the beginning of the project and consisted of initial ideas for potential services.

1.1 Background

In today's society, there are vast discussions regarding how we humans are affecting the planet. In this debate, it is often commented upon what we should think about regarding the sustainability aspects of the products we consume. In general, mainly materials, manufacturing, and transportation are mentioned when discussing what is a more environmentally sustainable product. However, these are not the only aspects to take into consideration. In order to decrease our impact on the planet and the natural resources, we as humans need to change the way we consume different types of products.

The European Commission has created a *Waste Framework Directive* including a five-step "waste hierarchy" that EU countries should comply with. This establishes the order of preference for managing waste. Here, waste prevention is the most preferable option, followed by, in order, preparing for reuse, recycling the material, and other recycling, for example, energy recovery. The last resort is disposal of waste in landfills (DG Environment, 2021). In order to achieve the objectives of this directive, it is necessary to change the pattern of consumption in most market categories, decreasing the demand for

newly produced products by promoting reuse and refurbishment.

Choosing to focus on children's toys was based on the understanding of children in the Western world usually having a lot of toys that are, generally, only used for a certain period. Toys are present in most family homes; for children to learn and develop in an enjoyable way through play. Analyzing the possession of toys, it was stated that Swedish children in 2003 held an average of 500 toys, while having double or quadruple the amount of toys was not unusual (Harvard, 2004). In 2020, the sales within the market of toys reached above 2.6 billion SEK, with a 2.3 percentage increase since 2019 (Statistics Sweden, 2021). Therefore, it was deemed necessary to investigate possibilities of more sustainable consumption of toys.

1.2 Purpose

This thesis project focused on how to create a service that promotes a more sustainable lifestyle and consumption of children's toys. For such a service to be successful, there were some significant questions that required consideration:

- Which driving forces should be fulfilled for the customer, for them to consume toys more sustainably?
- To what price would such a solution be competitive while still generating revenue for Micki Leksaker?
- How can the system be designed to benefit both users and Micki Leksaker regarding economy, user experience, and implementation?
- How can it be assured that the safety requirements of the products are maintained throughout the use of the service?
- How is this service more environmentally beneficial?

The purpose of this project was to investigate these previously mentioned questions, today's market, customer and user needs,

develop possible solutions, and, finally, deliver a concept of a service within the market of children's toys. The project included designing the following aspects of the service:

- Service extent i.e. product segment and target audience
- Business model and implementation
- Service outline and user touch points

This service was designed for the Swedish company Micki Leksaker AB. When discussing the project with the supervisors Stefanos Papamichailidis and Pontus Albinzon from Micki Leksaker, it was agreed upon that the project would consist of designing a service promoting sustainability of children's toys. The target group would be either private people or schools, which would be decided based on research included in the project.

1.3 Delimitations

The project was limited by a time frame of 20 weeks with full-time work. Should products be a significant part of the service, the service extent would be based on Micki Leksaker's offer opportunities, in other words, their existing product portfolio. Revenue streams and cost calculations were planned to be only roughly approximated and/or sketched upon. Service touch points were intended to be schematically described, as interface and in-depth user experience design were excluded in this project. Study visits and physical

meetings were avoided due to the COVID-19 pandemic. Hence, meetings, interviews and workshops with Micki Leksaker, users and other people involved were held virtually using online tools such as Zoom, Miro and Mural.

1.4 Methodology

In order to develop a service that satisfies the users' needs, it is important that all decisions are made with regards to the users themselves, considering all of their individual needs throughout the use of the service. Hence, the methodology for this project was user-centered service design. This refers to the process being iterative, with the involvement of different stakeholders and end-users in all stages of the project. The service design methodology and user-centered design approach are further defined in the *Frame of Reference* chapter.

1.5 Top of Mind

Beginning the project, before the research and user studies, a *Top of Mind* of initial ideas and solutions was made, see Appendix A. This was done to have potential services written down and left alone while performing the state-of-the-art research, so as to not cloud the judgement and disturb the design process. The Top of Mind was revisited in later stages of creating concepts and services, and the relevant initial ideas were taken into considerations and developed further.

2. FRAME OF REFERENCE

This chapter describes the fundamental subjects and methods of the project. The topics discussed in this chapter were seen as the pillars of how to design the intended service and were used as guides during the entire project. This included the user-centered design and service design approach, the principles of a circular economy, the purpose of toys, and the safety requirements of toys. All research was performed by reading articles on Google Scholar, collecting data from the National Agency for Education, as well as going back to literature used in previously attended courses at KTH Royal Institute of Technology.

2.1 Service Design

When it comes to *Service Design*, there is no single definition. It is more of a way of thinking; a practice in which systems and processes may be developed to provide a service that satisfies the needs of the users (Schneider & Stickdorn, 2019). A service is an intangible phenomenon that takes place within the interaction between providers and customers, and unlike products they cannot be stored. Service design thinking is built upon five core principles: *User-centered*, *Co-creative*, *Sequencing*, *Evidencing* and *Holistic*. This means to constantly consider the habits and needs of the users, involve all stakeholders in the design process and create a flow throughout the service sequence; including the first contact, the actual service, and the post-service period. Furthermore, evidencing means making the intangible tangible; by providing some physical artifact

that can empathize the value of the service, such as mail, brochures, signs or products. Lastly, it means creating a holistic experience that satisfies all senses of the users. By constantly working with these principles in mind, great service experiences can be created.

2.2 User-Centered Design

In *User-Centered Design*, the focus of designing lies in understanding the end-users, their needs, and the environment (Interaction Design Foundation, 2021). It is a term that was founded in the mid-1980s at the University of California San Diego by Donald Norman and Stephen Draper (Abras, Maloney-Krichmar, & Preece, 2004). User-centered design is an iterative process consisting of four stages: the context of usage, user requirements, design solution, and evaluation of solutions. It is important to evaluate the solutions based on the previous research including the user requirements and the context of the product/service/system, to fulfill the user needs (U.S. General Services Administration, 2021).

The purpose with user-centered design is to constantly involve the end-user in different stages of the design process, in order to design a product/service/system that is aimed at the user and their needs. There are three categories of users: *Primary users*, *Secondary users*, and *Tertiary users*. The primary user is the one who will use the product/service/system. Secondary users are those who will use the product, service, or system occasionally, or through a mediator. Tertiary users are those who will be affected by the use of the product/service/system, or who will decide the purchase of it (Abras, Maloney-Krichmar, & Preece, 2004). Since there are different users with different influences and needs, it is, therefore, important to define these three users to design a product/service/system well, with the users in focus.

2.3 Circular Economy

Most economic systems today are linear; extract materials-manufacture-transport-use-end of life. This takes a toll on our environment due to CO₂-emissions, material extraction and use, and hazardous waste, amongst other influences. Since our resources are limited, it is argued that circular business models are more environmentally friendly than linear systems. In a *Circular Economy*, one promotes the reuse, remanufacture, repair and refurbishment of materials and/or products in order to decrease the environmental impacts (Honkasalo, Korhonen, & Seppälä, 2018). However, there are different definitions of circular economy (Geissdoerfer, Pigosso, Pieroni, & Soufani, 2020). What differs in the definitions of circular economy is mainly how to achieve it, and which parts of the products' life cycle to include. The different parts to take into consideration can be material extraction and manufacturing, design products to maintain their highest value throughout the life cycle and/or create a business model that changes the end-of-life so that the product is reused, recycled, refurbished, or remanufactured (Hekkert, Kircherr, & Reike, 2017). In this project, the circular economy was aimed to be achieved by implementing a service that enables and promotes renting, refurbishment and/or reuse of children's toys.

2.4 Children's toys

The purpose of children's toys is to function as a tool in their play. Toys come in all variants and are used all over the world; both at home and in school, to promote learning and development. According to the Swedish National Agency for Education (*Skolverket*), play is the basis for the development, learning, and well-being of children (*Skolverket*, 2018). Playing provides an opportunity to imitate, fantasize, and process impressions; helping children to create an understanding of themselves and others in their surroundings. Play also has a role in stimulating imagination and empathy, as well

as motoric skills and the ability for cooperation, communication, and problem-solving (*Skolverket*, 2018).

In play, children have control and greater freedom to fail, compared to during non-playful activities. The attitude towards play, however, varies with social- and work structure; the tolerance for play is generally lower in agricultural societies, where people are supposed to spend most of their time at work (Harvard, 2004). In Sweden, play is not only seen as an important factor at home but is also perceived as an essential part of the early years of education, and is, thus, a part of the curriculum. The educational materials in school are carefully selected to enhance the learning environment, where toys, amongst other tools, hold an important role to promote play and learning (*Skolverket*, 2018). For example, puzzles can effectively be used for children to evolve their thinking and problem-solving abilities. By exploring different sizes and shapes, the children must figure out how the objects can be manipulated to solve the puzzle, which provides an understanding of dimensions and context. Apart from learning how to develop solutions, the excitement children feel in succeeding to solve issues can also increase confidence in their problem-solving abilities (Guyton, 2011).

Around 90% of toys are made of plastic (CBC Radio, 2018), and many plastic toys end up in landfills (Brown, 2019). The raw material extraction and processing for plastics produce greenhouse gas emissions, which stand for 30% of the natural capital costs of plastic (UN Environment Programme, 2014). As well as this, plastics have other environmental impacts such as air, land, and water pollution, and depletion of water (Lord, 2016). Different types of plastics take different amounts of time to deconstruct naturally. For example, plastic toothbrushes which are often made of polypropylene and nylon take 500 years to decompose naturally (WWF-Australia, 2018). Reducing, reusing, and redesigning plastic products would reduce economic and environmental damage (United Nations, 2014). Although different toys are made of

different materials, including different types of plastic, it is visible that decreasing the production of plastics, thus also toys, would be environmentally beneficial.

2.5 Safety requirements for toys

When it comes to the safety regulations of children's toys, there are many laws and standards for the materials and manufacturing of the toys (Svenska Institutet för Standarder, 2021). Many of these regulations are intended for different ages of the children, where the general consent is that the regulations are aimed for toys for children under the age of 14 years. However, certain toys, such as softer fabric toys, are intended for children under the age of 36 months (Svenska Institutet för Standarder, 2018). In general, the safety regulations take into consideration toxic materials, sharp edges, and choking hazards, amongst other aspects.

Since a new product is not being developed, the safety aspects for the service would focus more on the cleanliness and the quality of the toys, rather than the materials and manufacturing of the toys. However, it is important to take into consideration the life expectancy and quality of time of the materials in questions. Depending on the final concept, the safety requirements for the toys would probably need to be researched more upon. Therefore, this was saved for later stages of the project, so that the safety requirements that were researched were relevant to the service outline.

3. BACKGROUND

RESEARCH

The background research described in this chapter was performed by first analyzing current service solutions on the market, for the consumption of children's toys and for sustainable consumption of products. Following this, Micki Leksaker AB was analyzed in regard to brand values and expressions, their offer and product portfolio, as well as their position on the market.

3.1 Available services

Currently available services promoting sustainability were investigated in order to know what is already offered on the market and to gain inspiration for later parts of the project. Firstly, services regarding children's products were researched, followed by general services promoting circularity. Most of these services focus on the reuse of products and materials, as well as rental services which in general counteract ownership and, thereby, emphasize sustainability.

Only one company in Sweden was found that focuses solely on the reuse of children's products, called Hyber. Hyber enables renting of children's clothes, carriages, and a small selection of other products, mainly for children of ages 0-12 months. Hyber collaborates with different brands and rents out its products to users (Hyber, 2021). Two other companies that also offer circular use of products are Sellpy and Hygglo. However, these services are not focused on children's products, but include all types of products and are dependent on products from the service users.

The only services that were found with a main focus on the reuse of toys were situated in London. Some of these services were similar to the Swedish Open Day Care (*Öppna Förskola*), where it was possible to play with the toys and rent them for use at home. Additionally, there was a company called Whirli, which allows users to rent their own hand-picked packages of toys from an online library of over 1000 toys (Whirli, 2021).

Finally, a Belgian company that manufactures products out of recycled plastic was discovered. This company, called EcoBirdy, collaborates with recycling centers and creates different products for children, such as tables and chairs. The products of Ecobirdy are manufactured of their patented material *Ecothylene*; which is made of recycled plastic only (ecoBirdy, 2021).

A more detailed description of these services can be seen in Appendix B.

3.2 Micki Leksaker AB

Micki Leksaker AB is a company that was founded 1944 in Gemla, Sweden. Today they sell products in Sweden, Denmark, Norway, Finland, and Germany (Micki Leksaker AB, 2021). Micki Leksaker AB, referred to as *Micki* henceforth, has three brands: Micki, Lundby and Skrällan. Micki bought up Lundby in 1997 and Skrällan in 2014. Micki also has licens brands, where they stand for product development. These brands include Pippi, Bamse and Babblarna. Last of all, Micki has partner brands that are supposed to strengthen and complete Micki's own brands and their licens brands, which amongst others include SIKU and DesignaFriend (Micki Leksaker AB, 2021).

3.2.1 Brand Values

A summarized perception of Micki's brand values was created based on their homepage. See Appendix C for the created mind map of Micki's brand values. Following this, the company's internal documents regarding their product development and brand book were sent from the supervisor Stefanos Papamichailidis. It was concluded that the analyzed perception of the brand was overlapping with what the company wants to be portrayed as. The results of this are presented below.

HERITAGE

WHERE DOES MICKI COME FROM?

Micki started up as a family-owned business from Gemla, and has existed for about 75 years, with the aim to make affordable toys of good quality. They are proud of their heritage, and even though today they cannot say "*Made in Sweden*" due to some production being in China, they are proud to say "*Designed in Sweden*" since the product development takes place here. The focus of the company has always been to create something fun for children, and to make products of quality materials, often wood-based toys with textile elements.

PERSONALITY

WHO IS MICKI?

Micki is a company driven by making children laugh. They are motivated by optimism and to see that it is possible to make a difference. They dream big and want to be perceived as fun and joyful, not stiff and boring.

OFFER

WHAT DOES MICKI DO?

Micki offers fun and qualitative products developed in Sweden. They have a factory shop in Gemla where they sell some products, but they also sell via their homepage and distributors such as

Babypuffsen, Jollyroom and Lekia. Micki offers a range of different products from their own brands Micki, Skrällan and Lundby, as well as partner brands and their licens brands Pippi, Bamse and Babblarna.

VALUES

WHAT DOES MICKI BELIEVE IN?

Micki's core values are care, exploration and playfulness. These were clearly visible in the company's design language and homepage, apart from exploration which was discovered when talking with the supervisor from the company. Other values that Micki have are curiosity, openness, respect, cooperation, self-confidence and courage.

For Micki, quality, safety, and responsibility are in focus, and all products are tested in detail. The products should be reliable both for children and parents/legal guardians. They have strict demands on their toys; they should be safe, durable, and nice looking. But it is equally important that they evoke the desire to play and learn. Micki operates on the belief that play contributes to safe and secure children. Two main values and mantras for the brand are "*All children need warmth and a roof over their heads*", and "*Children should always have the right to be children*". For the company, it is also important that it is and feels safe as well as easy to be a customer.

VISION

WHAT DOES MICKI ASPIRE TO ACHIEVE?

The brand's vision is happy and playful children in a safe world. The company aspires to be part of the fight for more children to have a safe and playful childhood.

MISSION

HOW DOES MICKI ACHIEVE THEIR VIEW?

To achieve their vision, Micki needs to understand children's needs and their way of playing. By constantly studying new technologies, research, trends, and much more, the products can continue to be

pedagogical, modern, and, most important of all, fun. This is done by selling fun and educational toys from Micki and various partner brands and engaging in different collaborations. Amongst others, Micki has a collaboration called Pippi of Today, which is a collaboration with Save the Children for young refugee girls. Between 2007-2017 they collaborated with SOS Children's Villages as well.

AUDIENCE

WHO DOES MICKI DO IT FOR?

Micki exists foremost for the children; to create joy and a playful learning experience. They also exist for families, to make it easier for them to have good quality toys for their children without worrying about cost.

BENEFITS

HOW DO WE HELP MICKI?

As of today, Micki's work on sustainability has focused mainly on social sustainability, while environmental sustainability could become a larger focus area. By creating a service for sustainable usage of children's toys, Micki stays modern and potentially more environmentally friendly than competitors, as well as strengthens their vision of existing for the children and their future happiness.

3.2.2 Micki's position

When comparing Micki to other competitors, they put themselves in the positions of *The Caregiver*, see Figure 1, from Micki's brand book as previously mentioned.



Figure 1. Micki's position as *The Caregiver*.

The caregiver position reflects the safety from the brand vision, and the understanding of imagination and joy from the brand mission. As a caregiver, Micki uses their desire to discover, to create something that leads to a safe world and shows they care for children, coworkers, parents, and grandparents. By having the caregiver position, they strive to be considerate, reliable, compassionate, engaged, and friendly. They believe that everyone should feel welcome, included, safe, and part of a bigger whole.

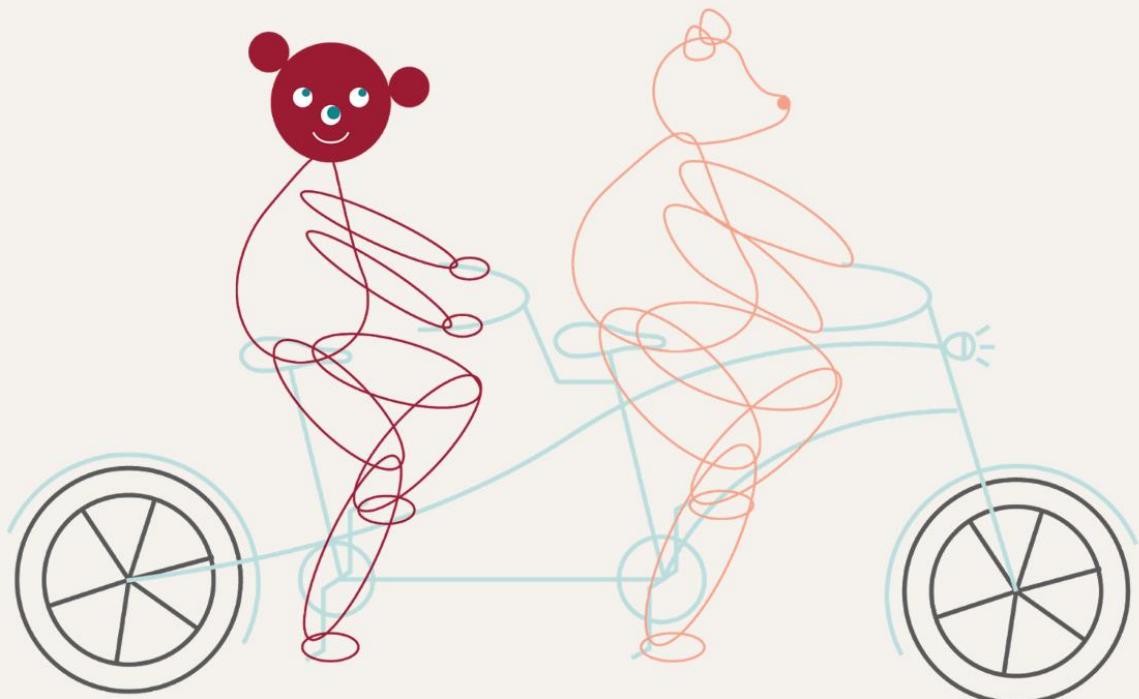
Another thing this analysis helped laying grounds for was answering the three important questions when branding for a company: *“Who are we? What do we do? Why does it matter?”* From the analysis, it was easier to answer these questions, and, thus, get a clearer image of Micki. This perception of Micki is represented in Figure 2.

WHO ARE WE?

Micki is a Swedish toy company with the vision of happy and playful children in a safe world.

WHAT DO WE DO?

Micki offers high-quality children's toys that are safe yet do not cost an arm and a leg.



WHY DOES IT MATTER?

Children are the future; Micki needs to provide them with environmentally sustainable and trustworthy options and help them have a safe and fun childhood. Micki works for the children and creating a service for renting children's toys is better for the environment, leading to the children having a brighter future.

Figure 2. The perceived brand personality of Micki.

3.3 Micki's products

Micki offers a lot of different toys through their different brand segments including dolls & dolls houses, figurines & playworlds, early learning and licenses. A selection of Micki's product line is shown in Figure 3.

The original Micki brand is mostly recognized by their wooden toys focused on early learning and roleplaying, featuring building blocks, motor skills toys, kitchen play, tool kits, and pull toys for the younger crowd. However, they also provide a few educational letter toys and puzzles, as well as crafts and play environments for farming and work life simulation. The definitions and explanations of the different types of toys is presented in Appendix D.

The Lundby brand offers Sweden's most well-known dollhouses and associated furnishings, while Skrällan offers talking dolls, dolls' clothing, and accessories to enhance the doll play such as carriages, bicycle seats and doll chairs.

Micki's license brands Bamse, Pippi and Babblarna, include franchised accessories such as travel bags, umbrellas, costumes, and toy tableware as well as figurines and play worlds. Babblarna, which is popular amongst the younger children, include franchised motor skill toys and a learn-to-walk-cart, while the Pippi products are directed to an older crowd by providing, amongst other things, more advanced puzzles, and games.



Figure 3. A selection of Micki's product portfolio.

4. MARKET ANALYSIS

To gain a better understanding of the current market for toys, different sources for acquiring toys were investigated and compared with each other. The comparison of different brands is shown in this chapter. Generally, toys are sold either on the brand's homepage and in their brand stores, via online toy stores, retailers, department stores, or second-hand markets. By visiting retailers' homepages, brand homepages, and different stores, it was possible to gain a better understanding of how Micki is perceived on the market, compared to their competitors. As well as this, a stakeholder analysis was performed to clarify which actors were important to take into account when designing the service and to define the intended target group of the service.

4.1 Today's market

Since the supply of toys on the internet was vast, it was deemed as more valuable to compare toys and brands in physical stores, to analyze the market and the competitors. Due to second-hand markets having a varied supply of toys of different qualities, prices, and brands, they were not analyzed and compared. To properly compare and analyze the different places where customers can buy toys, it was deemed as necessary to compare between stable markets that have basically a continuous supply of toys. Moreover, comparing brands and toys in brand stores would not give a clear picture of the different brands compared to each other. Therefore, it was decided to compare the toy supply of

retailers and department stores, since they have a steadier inventory of toys and are two of the largest marketplaces for several toy brands.

One of the most common toy stores in Sweden is Lekia; a retailer of all possible brands, with a wide range of toys and brands of all possible qualities and prices. Additionally, toys are also sold in department stores such as Åhléns. Åhléns has a smaller range of toys from selected brands, with varied prices and qualities. Comparing toy retailers and department stores was seen as valuable since it could give a clearer image of Micki, compared to competitors which were also displayed in these stores.

Visits to Åhléns and Lekia in Mall of Scandinavia, Stockholm were made in February 2021. The general impression of the stores is described below, followed by a comparison.

4.1.1 Lekia

The impression from Lekia was that there are many producers of children's toys, varying in quality and style. In Lekia there were mainly colorful toys, made of plastic, wood, and fabric. What was perceived as the most common brands in Lekia were Brio, Kid's Concept, Lego, BabyBorn, Humble&Heart, Teddykompaniet, Playgro, NAP/PAP, and City Action.

In this store, there were a lot of impressions from the toys and their packaging; sounds, colors, reflecting materials, shiny materials etc. Micki's product line and packaging were a complete opposite; not flashy, matte, and with calm colors. Comparing Micki's products and packaging in Lekia with that of other companies, Micki did not stand out, see Figure 4. Therefore, they might be perceived as a bit boring, especially in the eyes of a child.



Figure 4. Micki (to the bottom right) amongst competitors at Lekia

Comparing Skrällan with other dolls in Lekia, they covered slightly less than half of the shelf. The colors of Skrällan were calmer and milder compared to those of other competitors, see Figure 5. In Lekia, the largest range of dolls was by Humble&Heart, and BabyBorn, which are brands that use flashier colors that are more “gender specific”.

The main competitors for Lundby's dollhouses at Lekia were Schleich dollhouses. However, Schleich was more focused on stables, pastures, farms, and farm equipment made of plastic, where Lundby stands more for the simple, wooden, open dollhouse.



Figure 5. Skrällan compared to BabyBorn.

4.1.2 Åhléns

Åhléns is a department store with a children's toys section. Here, the impression was different from that of Lekia; the atmosphere was calm and not as intense. The most

common brands in Åhléns were Brio, Micki, Melissa & Doug, Teddykompaniet, Sylvanian Family, Kid's Concept, and VIGA. Here, Micki was not perceived as a potentially uninteresting option like it was in Lekia. Rather, it was seen as a sustainable, calm, sincere, and safe choice, see Figure 6. It was also clear that Micki and Kid's Concept are quite similar in their design; calm colors, wood, and simplicity.



Figure 6. Micki shelf at Åhléns

Furthermore, it was visible that Brio has a bigger selection of toys, as well as more “developed” toys that introduce the child to *STEM* learning (science, technology, engineering, and mathematics) and programming. As well as this, Brio has more colorful toys that are shiny, and, therefore, more visible. The packaging of Brio's toys is also partially plastic so that the customer can see the toys from the outside. Micki on the other hand does not use plastic in their packaging, hence their toys are only visible on a photo of the cover of the package, or if the package is partly open in its design. It was visible that Micki used a more sustainable design approach to their packaging, see Figure 7, which gave the impression of Micki being a more sustainable brand. This applies for the same reasons to Kid's concept; wood, calm colors, and no plastic packaging.

Comparing Skrällan with other dolls at Åhléns, they covered a big part and had their own section on a shelf, although BabyBorn dominated the bigger shelves. As well as this, the collection of Skrällan was larger at Åhléns than at Lekia and included more accessories for the dolls.



Figure 7. Micki's packaging design.

4.1.3 Conclusion

In conclusion, Micki and Kid's Concept has similar aesthetics and impressions; calm, made of wood, sustainable, and kind. Micki uses few and calm colors that are not bright or striking, designs matte products, and often produces toys of wood. In general, Micki is seen as the calm, clean, sustainable, and trustworthy choice, which is important to bring into the service. This image was collected due to the general design and material choices of their products, since many brands such as Brio and VIGA used brighter colors, but also due to their packaging and marketing being calmer than those of competitors. Micki's packaging is often white and only made of cardboard, while many other companies have strongly colored packages with plastic. The packaging Micki had that allowed the customer to see the toys was either due to protrusions or open sides that were not covered by plastic. This gave a stronger feeling of Micki designing more in accounts to sustainability than their competitors. Although Micki mostly has durable toys made of wood, so does Brio, Kid's concept, Sebra, and STOY, which is

why the packaging and marketing of the toys had such a big influence on how Micki was seen compared to the competitors.

When asking an employee at Åhléns, they said that the most popular toys were from Brio, Micki, and Kid's concept. They also said that Swedes in general bought from Brio instead of other brands, since the company is Swedish. Why Micki is not as well-known as a Swedish company was not clear.

Furthermore, Skrällan was simpler and more discreet than similar toys of other companies. Other brands that design dolls were flashier, had brighter colors, and were most often divided into "pink for girls" and "blue for boys". These brands were also deemed as more popular since they had a larger supply on the shelves.

When it comes to Lundby, the impression was that they are the classic dollhouse, partially since companies who create similar products make toys that belong more to specific fantasy theme worlds. As well as this, many brands creating dollhouses made them out of plastic, which led to Lundby being perceived as a bit more unique and classic, and not having any greater competitors. This is based on the visit to Lekia, which means that other stores that have a greater selection of dollhouses might give another perception of this.

4.2 Competitor analysis

To understand Micki and their competitors, the product lines of the companies were analyzed and compared with each other. This was initially done by categorizing Micki's different product segments and browsing online for similar products within each segment. The seven segments that were investigated were based on Micki's current product range, and include building blocks, roll toys, motoric toys, figurines and play worlds, dolls, dollhouses, and toys for fantasy/roleplay. The products in each category were presented with their brand and price, which made it possible to get an overview of Micki's biggest competitors

within each product segment and spot relevant factors for further comparison.

The more detailed comparisons were narrowed down to only include Micki's largest product segments; building blocks, roll toys, motoric toys, and dollhouses. For these categories, all brands were positioned on linear axles depending on the qualities of their products within that segment, where aesthetics, style, cost, material, and quality were taken into consideration. Positioning the brands on the different axles provided a visual interpretation of how the brands stand in relation to each other when it comes to being: *Affordable vs Expensive*, *Simplistic vs Detailed*, *Classic vs Innovative*, and having a *Wooden feeling vs Plastic feeling* or *Dusty colors vs Strong colors*. These comparable qualities were based on the differentiating factors that were found relevant for each product segment. A more detailed and thorough description of this comparison can be seen in Appendix E.

In this analysis, affordable vs expensive were merely referring to the relative price

differences between the products of each category, while simplistic vs detailed referred to the number of different materials, shapes, colors, patterns, features, or functions that were present in the products. Furthermore, classic vs innovative referred to how in line the products were with the historically "classic design" of the products, and wooden feeling vs plastic feeling related to whether the product gave an impression of being wooden or plastic. Moreover, dusty colors referred to calmer, less saturated colors, while strong colors were more saturated and brighter colors. An overview of the compared qualities with examples of toys from different brands, that represent each quality, can be seen in Figure 8.

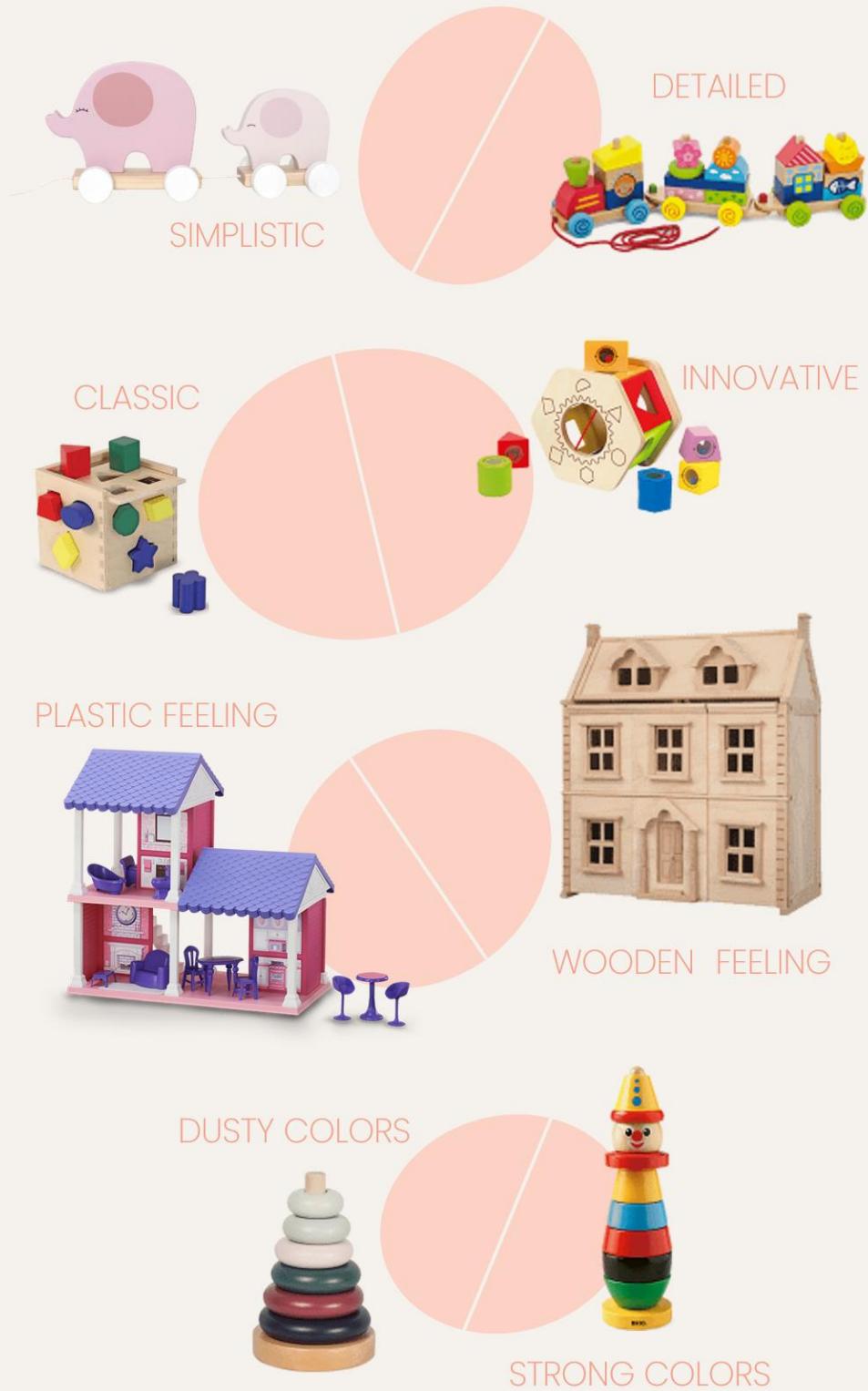


Figure 8. An overview of the compared qualities with examples of toys, that represent each quality.

What was concluded in the analysis was that STOY, Sebra, Kid's concept, Jabadabado, and at times VIGA have similar aesthetics to Micki; focusing on tranquility, kindness and simplicity as well as using dusty colors for their products. In general, Brio are big competitors since they have somewhat similar products and are a large, well-known Swedish company. Continuing on this line, Brio is seen as the Swedish brand for children's toys in general, while Micki is less known for being Swedish. However, what was also concluded from this analysis was that Brio focuses on a different target group than Micki based on the differences in the aesthetics of their products. Brio generally provides more colorful toys with added functions and details, while Micki keeps a more downscaled design with fewer features and calmer colors.

Jabadabado is also a Swedish brand and was the brand with the most similarities to Micki regarding the price range and design of their products. However, Jabadabado is not available to the same extent as Micki and is not equally established as a Swedish brand in today's market. Since consumers generally choose brands that they know of or have experience of, Jabadabado was perceived as still not as big of a competitor as Brio. Furthermore, STOY and Kid's concept are also Swedish brands, but since they are more expensive their target group is slightly narrower and different from that of Micki.

By analyzing the toys in different categories, it was easier to create a graph comparing Micki in general with their competitors, see Figure 9, and their potential placement after implementing a new service. In this graph, expensive vs affordable brand qualities were compared with *Calm* vs *Flashy* brand

qualities. What was defined as calm vs flashy brand qualities was based on the previous comparisons of dusty vs strong colors, and simplistic vs detailed brands; where brands with a more simplistic design and less saturated colors were seen as calmer, while brands with more detailed design with stronger colors were perceived as flashy. This gave an easier overview of Micki and their competitors, as well as gave a guideline to how Micki might want to be placed in the future.

What was concluded was that Micki is more on the affordable side, expressing calmness in their design. Competitors with a similar design to Micki were either more expensive, such as Sebra, STOY, and Kid's concept, or used slightly more details and stronger colors, such as Brio, Jabadabado and at times VIGA.

Furthermore, as seen in Figure 9, the arrow indicates a potential placement of Micki compared to the competitors, after the implementation of the service. What was concluded was that Micki should maintain the same cost of their product, to not lose any customers. However, the new service could further build on their work on sustainability by promoting a more environmentally friendly option on the toy market. This would enable Micki to be perceived as safer, calmer, and friendlier, which are considered their main qualities today.



Figure 9. The graph illustrates the placement of Micki compared to their competitors. The arrow next to Micki's logo shows where the new placement of the brand could be after implementing the service.

4.3 Stakeholder analysis

A *Stakeholder Analysis* was made to achieve an overview of whom this service may concern; in what ways the different actors would be affected or how they may influence the service. The stakeholder analysis was based on the level of interest of each stakeholder and their power to influence the service and/or its success. This helped to understand the relationships to everyone involved, and how to manage each stakeholder; to what extent they should be involved in the development process and how

to communicate with them for the service to be successful (Smith, 2000). The stakeholders included in this analysis were based on brainstorming all potential users and buyers of toys, toy sales companies, and others that might be interested or affected by a change in the toy market. The different stakeholders are listed and described briefly below, divided into four groups of how these should be handled; *Manage closely*, *Keep satisfied*, *Keep informed*, and *Monitor*, see Figure 10.

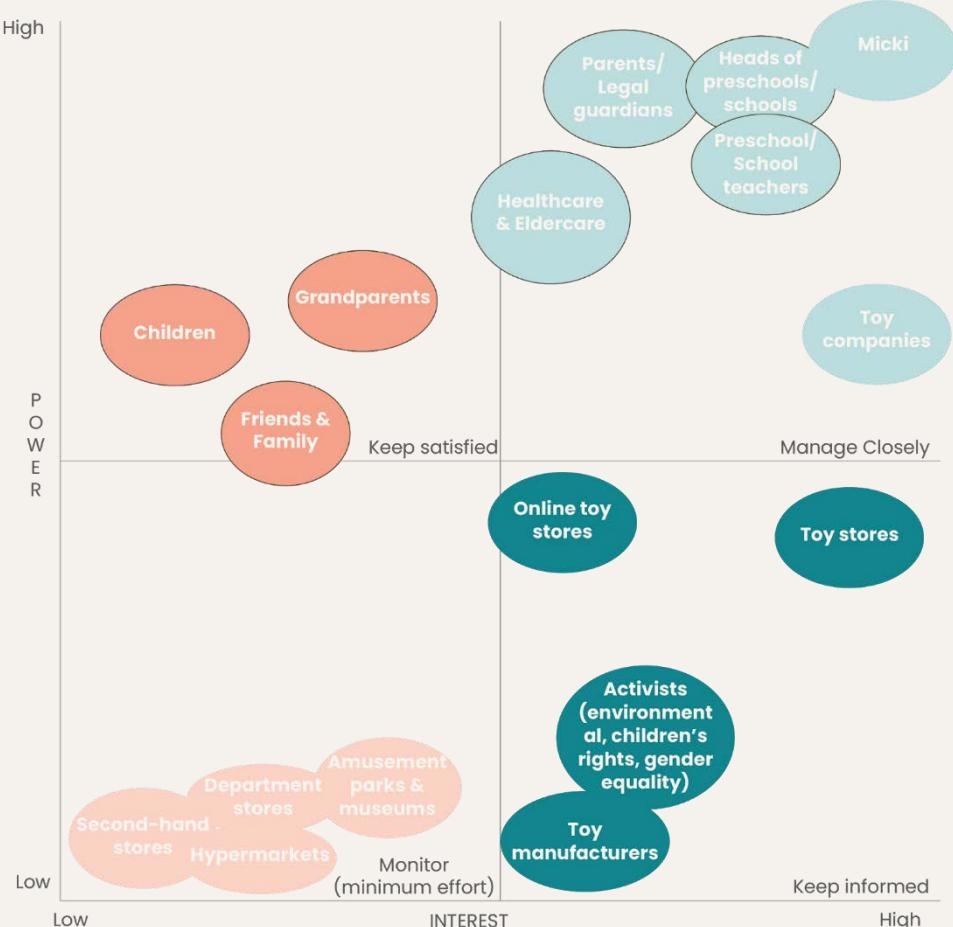


Figure 10. Stakeholder analysis. Potential primary, secondary, and tertiary users are marked with an outer edge of the circle.

MANAGE CLOSELY

Micki

Since the service was developed for and by Micki, they would ultimately hold the greatest power in influencing the service. The development of a toy service that promotes sustainability could make it possible for them to further emphasize their environmental work, attract new customers, and expand their market share. Hence, Micki's interest in the service was deemed to be larger than that of any other stakeholder.

Parents/Legal guardians

When it came to the private customer segment, parents and legal guardians were considered the ones who would choose whether to support or reject the service. Their interests lie with their children, wanting the best options to provide the children with fun, developing, and qualitative toys. Hence, it was concluded that they would have a lot of power over the success of the service. These stakeholders were defined as being potential primary and secondary users of the service since the intended service would enable them to consume toys more environmentally friendly. This would, however, depend on which target group was decided to focus on in later stages.

Head of Preschools/Schools

Heads of preschools and schools have the interest to find better solutions for learning tools and toys, to improve their mission. However, there are a lot of needs and requirements that would need to be fulfilled before such a service could be considered in education. Therefore, heads of preschools and schools were deemed to have a lot of power to influence how the service should be formed to fit them. Furthermore, these stakeholders were defined as potential tertiary users of the service if it was chosen to focus on designing a sustainable solution for preschools/schools. This was decided since heads of preschools and schools have control over school budget and purchases.

Preschool/School teachers

Teachers have a high interest in better solutions for providing the children with fun and high-quality learning tools and toys. Teachers work closely with the children in schools; hence, they know the needs and interests of the children. Therefore, they influence school management when it comes to purchases, and their power was thus assumed to be almost as high as that for the heads of preschools and schools. These stakeholders were also defined as being potential primary users, as well as secondary users, of the service, depending on which target group was decided to focus on in later stages. Moreover, this also depends on how the service is designed.

Toy companies

Other manufacturing companies of toys were also thought to have a high interest in the market change this service could possibly create, since they compete against Micki for the customers. They were considered to also have power in influencing the service since they would be able to adjust their original offer or develop a competing service, which Micki then would have to out beat.

Healthcare and Elderly care

In some cases, toys are used as a treatment tool for special medical conditions or within elderly care. Better solutions for providing toys to those who need it were thus deemed to be of interest. On the other hand, since there are many other important areas to deal with in healthcare and elderly care, it was assumed that toys might not be their highest priority. This could potentially have been a significant customer segment that would have influenced the service. However, due to the time limitations of the project, this potential target group was not investigated further.

KEEP SATISFIED

Children

The most important users of toys are the children themselves. They would need to be kept satisfied and would ultimately determine the difference between fun and boring toys or activities. Although children are generally not the ones who pay, they were thought to have the power to influence the adults in their surroundings to opt-out of the service if the toys or activities do not meet their needs or requirements.

Grandparents

For many grandparents, buying toys for their grandchildren is a way of expressing their love for them; hence grandparents were considered to be another large customer segment. Grandparents are also a source of help and inspiration to many parents, who might seek guidance in a lot of their life choices, including children's toys. Therefore, it was deemed as important not to underestimate grandparents' influence over such a service to be successful.

Friends and Family

Like grandparents, friends and other relatives often buy toys for children as an act of love and may also inspire and influence parents in their choices. These were hence considered another stakeholder of importance.

KEEP INFORMED

Toy stores

Specialized stores that only sell toys could be highly affected if the service would, for example, enable consumers to rent all toys instead of buying them. Therefore, toy stores were deemed to be interested in this type of market change. They were also deemed to have some power in influencing consumers whether to buy or rent toys, since some customers prefer easy access in physical stores.

Online toy stores

Online toy stores could also be affected if such a service was implemented. However, since online stores do not have the same fees regarding renting location, stock, etc., they were assumed not to be equally affected as physical toy stores would be. Therefore, their interest was considered to be slightly lower than that of the physical toy stores. When it comes to their power over such a service, it is clear that internet shopping has exploded in popularity. Consumers can browse to find the cheapest available options online and are fed with advertisements and special offers that influence their choices. Here, it was concluded that Micki must find a way to stand out from the clutter.

Activists

The debate of sustainable and ethical consumption is ever-growing, often led by activists fighting for changes in our world. Through the growth of this debate, factors such as environmental sustainability, gender equality, and children's rights are starting to become some of the most important aspects of everyday consumption. Activists are both very invested and interested in the development of more sustainable options and were thus deemed to hold the power to influence the market and individual consumers to choose between alternatives responsibly. Being the better option in the eyes of the activists was therefore considered to be of high essence. However, in practice, these factors might be overlooked by stressed and tired parents, reducing the actual power activists hold of the consumption.

Toy manufacturers

Depending on the nature of the service, the consumption of toys might be affected, which could possibly decrease the long-term manufacturing of toys. Even if there might be some interest in how such a service would affect the toy manufacturers, they were deemed to not have that much power in regard to the service.

MONITOR

Lastly, some stakeholders were believed to be affected by a change in the toy consumption, but supposedly not to the same extent as the other actors, namely retailers including *Second-hand Stores, Hypermarkets, Department Stores, Amusement Parks, and Museums*. Out of these, second-hand stores were deemed to have the least interest and power, since other product segments such as furniture and clothes are generally bigger and more profitable within the second-hand market. Hypermarkets came next since they are also more focused on other product segments, while department stores may have a slightly higher interest since they have separate departments for children's toys. Out of the retailers, amusement parks and museums were seen as having the biggest interest, since it could be imagined that a large part of their revenue is generated from selling toys. However, one can assume that their revenue comes mainly from ticket fees or additional food services etc. making it hard to estimate how big of a role toy sales plays, and how much interest they have in the subject.

4.4 Target group

Based on the stakeholder analysis, and in communication with the company, the target group was decided to include two different consumers of toys: *Private Consumers* and *Professional Customer*.

PRIVATE CONSUMERS

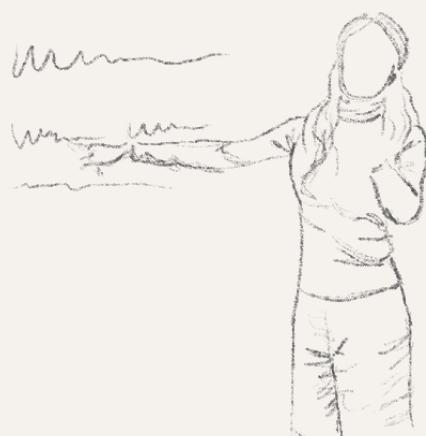
One of the target groups for the service was the *Private Consumers*; people who acquire toys for the children in their surroundings. This includes parents, legal guardians, aunts, uncles, grandparents, friends, etc. This group consumes toys regularly for the children to play with at their home or where they might stay when on vacation or visiting relatives and friends. In general, Micki's product line is aimed at children between 0-9 years old, with children of age 0-5 years as a main

priority. However, since this service should be able to be used by everyone despite mental or physical abilities, the target group was not defined by any specific age group of the children.



PROFESSIONAL CUSTOMER

The other potential target group was the *Professional Customer*, consisting of preschools, schools, preschool teachers, teachers, and children. The children in preschools are usually between 1-5 years old, while school children are of age 6 and above. This target group differs much in the consumption of toys since the material must meet certain standards. First of all, the tools used in school should have a clear purpose and help the children develop, not just keep them occupied. Other important aspects are for the toys to be free of dangerous substances, easily washed and disinfected, robust, and chew-proof so that they are durable to play with.



5. USER STUDIES

To achieve an understanding of user needs, surveys were sent out to appropriate channels, gaining quantitative data regarding toy consumption, brand recognition and perceptions of Micki. Additionally, in-depth interviews were performed to gain a qualitative understanding of people's opinions of toys and toy consumption, sustainability, and thoughts regarding different brands, by asking open questions.

5.1 Surveys

In order to collect a large quantity of data illustrating people's thoughts and opinions regarding toys and their usage, two surveys were created; for private consumers and for the professional customer. The surveys were sent to different Facebook groups that suit the description of the two target groups.

5.1.1 Private consumer

The survey for private consumers was divided in two; people who either have children at home and/or are expecting children, or people with children in their surroundings. The purpose of the survey was to acquire a better understanding of private consumer's views and requirements on toys as well as the largest toy brands in Sweden that were discovered during the market analysis. It was also investigated how, when, and where private consumers obtain children's toys, along with where they find inspiration, what they think of shopping, and if they could see themselves renting toys instead of buying them. In total 46 replies were collected amongst private consumers, and the results are summarized in this

subchapter. The complete survey with responses in Swedish can be found in Appendix F.

PEOPLE WITH CHILDREN IN THEIR SURROUNDINGS

When it came to people who have children in their surroundings, what was concluded was that Brio and Micki were the brands that most people considered as good quality toy manufacturers. However, it was also discovered that many people did not recognize the brand Micki without seeing the logo as well. Once they understood who Micki was, on the other hand, they found their products to be playful and of high quality. The most common reasons for buying children's toys were birthdays, holidays, and spontaneous shopping, where toy stores and second-hand stores were the preferred sources. When it came to inspiration for which toys to buy, the most usual sources were the children themselves. However, choosing between different toys, the most important aspects of toys were how environmentally friendly they were, followed by price, quality, and that the toys are developing or educative.

PEOPLE WHO HAVE CHILDREN AT HOME

When it came to people who have children in their homes and/or are expecting children, the most common ways of obtaining toys were buying them or receiving gifts and hand-me-downs from friends and family. In general, when toys are no longer in use, the most common thing to do with them is to save them for potential future use or give them away to friends or family. The second most common thing to do was to donate the toys, followed by selling or throwing them away. For buying toys, the most common places were, in order, toy stores, supermarkets, online toy stores and department stores. Yet again the children were the biggest source of inspiration. However, social media had a bigger influence on this category of private

consumers than on the previously mentioned category. Similar to people with children in their surroundings, birthdays are the main reasons for buying children toys. However, for people who have children at home, it was more common to buy toys spontaneously than during holidays. For this group of private consumers, it was not equally necessary to see the logo of Micki to recognize the brand. Micki and Brio were the two brands deemed to have nice toys of good quality, although Brio was more recognized than Micki. Yet again price and quality were the most important aspects of the toys, followed by environmental impact, being educative/developing, and style/aesthetics.

For this group it was also investigated which types of toys that people could see themselves renting. The conclusion was that the initial reaction was that people do not want to rent toys. However, the toys that people could see themselves renting if they had to choose, were building blocks, educational toys, and motorically developing toys. Most people, however, chose to buy those specific toys instead of renting them, when presented with that option. The biggest reason for renting was that it was more sustainable, while the biggest worry was that children's toys tend to break, get defects, or get lost.

5.1.2 Professional customer

The survey for the professional customer was divided into two: for those who currently work with children and those who have previously worked with children. In total 57 responses were collected, where all but one of the respondents were currently working with children. The results did not differ much between the larger group of respondents and the person who had previously worked with children and are presented in Swedish in Appendix G. A summary of these results is presented below.

Most of the respondents were preschool teachers and teachers in a municipality's school, with more than 20 years of experience. The most common toys used in

schools, according to the defined categories in Appendix D, were building blocks, educational toys, and plastic toys. The most important aspect of toys in schools was by far the quality, followed by what material the toys are made of and that they are educational. When the toys are no longer in use, they are most often saved in storage spaces. The least common thing to do was to sell the toys or send them back to the supplier.

The toys that were most probable to fit a rental service, according to the survey, were building blocks and educational toys, followed by motorically developing toys. What was also discovered was that many schools buy toys from Lekolar and ABA Skola AB and have contracts with these companies. Yet again Micki and Brio were the most recognized brands, where Brio was deemed to be a bit more popular than Micki. What this group thought of Micki's toys was that they are playful and of high quality.

The initial reaction to renting toys in schools was either doubtful or negative, due to similar reasons as for private consumers (wear and tear, and safety aspects). Only a small number of the respondents reacted positively, arguing for renting toys being more environmentally sustainable and enabling a bigger variation of the toys in the school. Another argument for renting toys and products in school was that it enables them to afford more expensive products. However, multiple respondents mentioned that renting toys would probably not be a feasible option, especially for preschools, due to the extensive wear-and-tear resulting in products being used until they no longer function.

5.2 Interviews

To gain an understanding of the needs and thoughts regarding children's toys, eleven in-depth interviews were conducted. Some of the interviewees were found through the surveys, in which participants could leave their email addresses if they were interested in further participation. The remaining

interviewees consisted of people in our surroundings that could fit the target group. Amongst the total number of eleven interviewees, four were currently working with children in preschools/schools, and seven were private consumers with different backgrounds and family situations. The private consumers consisted of parents with various amounts of children in different age groups, a parent-to-be, grandparents, and a legal guardian.

The interviews, which lasted for 1-2 hours each, took place digitally via Zoom and were recorded after permission. The interviews were constructed in a way for them to be more interactive, allowing the interviewees to participate more. This would enable a greater understanding of the needs and behaviors of the intended end-users, resulting in a service developed in regards to them. By creating *Interview Templates* in the online collaborative workspace Miro and sharing screens during the interviews, interviewees could see and follow the templates as they were filled in. In this way, it was possible to include pictures and gather answers in a more creative way and engage interviewees further throughout the interviews.

Two separate templates were created: one for the private consumers and one for the professional customer. They were both based on certain main subjects within relevant areas for the project such as sustainability, reuse, services used today and toys. The original interview templates were continuously revisited and updated according to responses and reactions from the interviews. Changing the templates was a way to eliminate redundant and repetitive questions and answers, and to fill discovered knowledge gaps. All iterations of the interview templates can be seen in Appendix H.

FIRST ITERATION

The templates consisted of introductory questions about each interviewee such as age, occupation, geographic position, living situation, family, and what children they may have in their surroundings. The interviewees

were then to describe what aspects they found important about children's toys and why and build their own ideal toy and service. Apart from this, they were to describe how a toy service could help them and create gains or pains for the service. Following this, in order to create a discussion regarding the choice of toys within the same product category, at least ten options of similar toys were shown to the interviewees. These product categories were based on definitions created in the market analysis, seen in Appendix D. Pictures of the toys were shown together with the brand logos and price tags, and interviewees were then to describe their pattern of thought when choosing their first, second and last choices, if they had any. See Figure 11 for an example of this.



Figure 11. Roll toys for the interviewees to choose between in the interview templates.

As well as this, a few rough concepts from the Top of Mind, see Appendix A, were presented in the template with pictures and text for the interviewees to evaluate with feedback and thoughts. This was valuable to quickly gain an idea of what might be an interesting alternative for a service regarding children's toys, and what needs the different concepts meet or do not take into account.

In the original template a *Customer Journey* was also included, with the purpose of finding out the important aspects throughout the user's journey. The interviewees were to explain each step, from the reasons why a toy is bought, to what happens afterwards when

the toy is no longer in use; what their sources of inspiration are, how they find and choose toys to buy, how the toys are provided to the children and how the toys are used.

Wrapping up the interviews, the interviewees got the chance to reflect on the raised subjects; discussing newfound perspectives, general thoughts about toys and their purpose, and the consumption and use of toys. By doing so, more room was given for the interviewees to express their thoughts and concerns about toys in general, providing a deeper understanding of the users' needs. This would also provide a quick overview of the key factors from the interviews, when analyzing the interviews in later stages.

SECOND ITERATION

However, as earlier mentioned, the template was continuously updated to better fulfill the purposes of gaining insights in the areas important for the project. When using the original template, interviewees were not able to complete the interview within 2 hours, therefore the template needed to be shortened. The customer journey was removed since it barely revealed any new information that the interviewees had not already mentioned in other parts of the template. The parts in which the interviewees should build their ideal toy and toy service were also removed, since interviewees had a hard time formulating their aspirations for those questions; most likely due to the questions being too open. It was realized valuable inputs came from interviewees comparing the different toys from the same product categories, resulting in even more categories of toys being added, according to the categories defined in Appendix D. Originally the product categories included walking-carts and roll toys, while after the first interview figurines, playworlds and dolls were added.

Different services that were unrelated to toys were also added in the template, to get an understanding of the thoughts around services in general; why some services are appreciated while others are not. In this

section, interviewees were asked to explain why they used certain services, discuss drawbacks, and compare with alternative options. For example, Uber/Taxi compared to owned cars, shared laundry rooms compared to owned laundry machines, and audio books compared to reading paper books.

THIRD ITERATION

Analyzing the template with regards to the purpose of the project, it became clear that some of the subjects that were on a greater level, for example general thoughts on sustainability and every-day habits, remained untouched through the early interviews. It was important to dive deeper into what the supposed service developed in this project actually would contribute to and what problems it would solve. The original purpose of the project remained; to create a service that promotes a more sustainable lifestyle and consumption of children's toys. Hence, it was significant to gain a better understanding on a greater level regarding the mindset of people when it comes to sustainability in general and how sustainability influences their everyday life, as well as how and if they apply their sustainable thinking to their consumption of children's toys.

Questions regarding interviewees thoughts on sustainability were, therefore, added. The order in which the questions were raised was also changed, so that the interviewees were first asked broader and more general questions about themselves and thoughts on sustainability, before narrowing down to specific products and services in the end. However, it quickly became clear that the answers received regarding sustainability were far too general since most people know what sustainability is and have a positive attitude towards sustainable choices. To get a better understanding of what people actually do, and not just what they think, the questions were slightly altered so that they focused more on how the interviewees are influenced and adapting their lives to actively work towards sustainability. An example of this could be the fact that many interviewees

stated public transport as a more sustainable option than travelling by car, however, this was not reflected in their everyday life.

FOURTH ITERATION

After performing several more interviews, it was realized that the collected answers and data were getting saturated when it came to people's thoughts regarding toys. On the other hand, further knowledge of people's thoughts on services, second-hand products and the use of second-hand toys was needed. Therefore, the template was updated with additional questions regarding consuming second-hand, first emotions when hearing certain business model-related words, and thoughts upon services.

In this final version of the interview template, the interviewees first described themselves

and their life situation, thoughts on sustainability and how sustainability was a part of their everyday life. Moving forward, general thoughts regarding second-hand consumption and what important aspects there are when it comes to second-hand products were discovered. It was also investigated if they had used any second-hand products and in that case what, as well as how and why they chose to do so. Following this, interviewees were to explain what characterizes a great service, as well as give examples of bad service experiences. They were also to discuss their feelings regarding business model-related words for example advertising, rental service, online shopping, and subscription, see Figure 12. Lastly, they were to describe how they would like a toy service to be.



Figure 12. Business Model related words in the interview templates for the interviewees to discuss their feelings regarding.

6. INSIGHTS

By clustering the data from the surveys and interviews, it was possible to create insights in user needs, observations, and opportunity spaces. The clustering was done by categorizing the data in different segments, such as the purpose of toys, saving toys, and safety in ownership. This gave a basis in the decision of which target group to continue designing the service for, as well as which target groups would be beneficial for the company to analyze in future work.

6.1 User needs

Based on the interviews and surveys, different insights were created in order to gather a greater and better understanding of the users and their different needs, as well as opportunity spaces. All insights for the two different target groups are presented in Appendix I. The user needs and opportunity spaces that were found are summarized in this chapter, describing prerequisites for a service to succeed on the private market as well as the professional one.

6.1.1 Private consumer

Regarding private consumers, the first reaction from the interviewees when it came to rental services for toys was that it was completely new; they did not know how it would work in practice and were uncertain if it would be financially beneficial for them. After more time of thinking, however, they came up with practical benefits of a toy service; to get more variety of toys, to only have toys at home that will be played with,

and not have to use as much space for storing toys.

A problem area that was discovered was that certain toys that contribute to the learning and the development of the child, such as puzzles or learn-to-walk-carts, are only used for a shorter period until the child has learned that toy. Once the child no longer is challenged, the toy becomes uninteresting and will mostly lay around unused. Some toys that are no longer in use are given away to friends or family, while other toys are saved for future use, as a memory, or because it is too energy- and time-consuming to sell the toy. Many people felt that unused toys take up too much space and believed there to be benefits in being able to send the toys back to, for example, a service hub immediately when the toys are no longer used. However, it was also mentioned that both parents and children can get attached to toys that have acquired an emotional value, and that it would therefore be appreciated if certain toys could be bought out of a rental service when needed.

In general, private consumers could see themselves renting things if they are uncertain of the child's preferences and the toy's usage; this applies especially to more expensive products. The private consumer does not want to contribute to unnecessary consumption, both from an environmental point of view but also due to their financial constraints and lack of space. How price-worthy something is depends on how much it is used and what additional costs can arise if anything happens during the rental period.

The biggest concerns regarding renting toys and buying used ones were connected to the condition of the toys. Toys wear out a lot when used by many children, and in some periods children put everything in their mouths. Thus, the concern was how safe it would be with a rental service; if the toys are broken or missing parts, if they are unhygienic or pose health risks. Not only were private consumers concerned about not receiving the toys in good condition, but also of having to return them in proper condition. They emphasized the risks of damaging or losing the toys, and that it would not be

economically viable to rent the toys if they must pay for such unexpected and highly plausible events.

Private consumers also explained that there is a security in owning things; to know that what is needed is always available, to know the conditions of the products and to have freedom in their usage. A need that is met by ownership is that it provides control and that users do not have to worry about taking care of someone else's property, or that someone might break their property.

The ownership culture is still strong, and for that reason, there are already many bought toys that children can inherit from siblings, relatives, friends, etc. People do not want to rent what they already have received elsewhere. Hence, for a rental service to be successful, it would be important to capture the customers before they have everything they think they need. Therefore, parents expecting their first child might be the most successful group to target amongst the private consumers, since they would potentially not have a full stock of child products. Generally, first-time parents are also more concerned about their parenthood and want more support than experienced parents. By catching them in the early stages of pregnancy, Micki can provide support and supply them with what is needed throughout the upbringing of the child, simultaneously strengthening the customer relations.

However, many interviewees believed that even a perfect service would not completely replace the purchasing of toys. Buying toys is often an act of love, and in some cases, toys are bought to give something special to the child, for example in conjunction with a birthday. Many private consumers felt that buying used toys as gifts could be perceived as "half-hearted" and that it is done only because buying new ones is not affordable.

6.1.2 Eldercare

Something that was discovered during these interviews was that toys are also used in the eldercare to help the elderly with motor skills and make them feel safe. Soft toys such as

fabric dolls are used to make the elderly feel safe and secure, and many times the elderly think the soft dolls are real children. Sorting boxes and similar toys are used to maintain and refine the elders' motor skills, so they do not lose their motion sensibility. These toys are most often used within dementia care. Furthermore, it was also discovered that the elderly are most likely more careful with the toys than the children are. Therefore, it would be beneficial for Micki to further explore how toys are being used in care for the elderly, as earlier mentioned in the stakeholder analysis. However, due to time limitations, this was not further explored in this project.

6.1.3 Professional customer

Initially, what was realized was that it might be difficult to implement a service in schools since they already have agreements with other suppliers and the municipalities. Buying second-hand was not seen as an issue as long as the object is in an acceptable condition. However, the only hesitation towards buying second-hand toys, was a doubtful attitude whether they would be as durable as newly produced toys. Furthermore, what was deemed as an important aspect was that the toys must be able to be kept safe, intact, and clean. Furthermore, there must be good insurance that covers the costs in case things break or disappear, which they tend to do in schools. Many materials are bought and used extensively, and the professional customer felt no need to rent the most essential or well-used toys, due to the wear and tear, and wanting constant access. Therefore, the opportunity space for a rental service would be to rent things that are more expensive to purchase, or materials for specific occasions, such as theme weeks or sports holidays, to do something special for the children. Examples of this would be ready-made adventure packages, trampolines, projectors, and digital media. Additionally, renting or rotating material between different schools would be suitable for things that must be updated to remain interesting and developing, such as puzzles and games. Furthermore,

professional customers expressed wanting control over what is available and bought, and to know that whatever is needed or wanted is available at that very moment. Two quotes from the survey described the insights and drawn conclusions well:

"I would prefer to rent toys that are used for a limited period. For example, outdoor toys such as tricycles, slays, and other things that are used during a certain season but take up a lot of space to store. Or things that are used for a certain theme we currently work with. For example, being able to rent a nature box, a dinosaur box, a fairy box. Renting "ordinary" toys such as blocks or dolls, which are used by the children all the time, mostly feels like an extra job to keep track of when it is to be returned; find all the pieces that are included, worry about if something has broken, and children who get attached to a certain toy. Renting would, in that case, be chosen if it were very advantageous financially, or if you worked at a temporary preschool, in a flex department/preschool."

"The trend is about more exploratory materials, traditional toys are of course still available, but to a lesser extent. If you are to achieve the goals in the curriculum for

schools, you can not have learning environments based on dolls, cars, etc. I would like to add that as school staff you have limited influence over purchases; we have to abide by agreements and have limited finances."

The drawn conclusion was that a service that facilitates for the professional customer and contributes to them having more time for the children, and helps them not having to create their own educational material would be suitable for schools. Furthermore, it was concluded that a rental service for larger and more expensive products would potentially be of interest to the professional customer. The material in the service, and, therefore, in the school, would in all probability then be used until it is completely consumed. Therefore, one question surfaced for the continuation of the project;

*HOW DOES THE INTENDED
SERVICE CONTRIBUTE TO
CIRCULAR USE OF MATERIALS
IN SCHOOLS?*

6.2 Target audience

After analyzing the insights further and holding a workshop with Stefanos Papamichailidis, Pontus Albinzon, and Kristina Aronsson from Micki, see Chapter 7.2.1, a decision regarding which target audience to focus on for the service needed to be made. This was done by discussing both potential target audiences and their opportunity spaces, and how a service for either target audience would influence the perception of Micki.

First of all, creating a service for either target group would be something new and attractive on the market. Secondly, when it came to the private consumer, the opportunity spaces and potential solutions for the service felt more straightforward. The general thought was that the final concept could be taken further and made more “complete” with detailed plans, for example regarding the implementation and logistics of the service. Another aspect of the service for the private consumer was that Micki’s current product line could be implemented in the service. In addition, it was clear that there is a potential market for renting children’s toys, especially for first-time parents. However, even though there were several aspects in favor of making a service for the private consumer, it was viewed as less challenging and developing with respect to the context of the current thesis. Focusing on private consumers would have been the safer choice. Since more insights and opportunity spaces were collected for private consumers than for the professional customer, it was deemed as more straightforward for the company to explore solutions for this target group by themselves. Due to these reasons, it was viewed as advantageous for the company and the thesis work that the continuation of the project explored the less predictable and stable opportunities of such a service.

Regarding making a service for the professional customer, it was clear that a service enabling the professional customer to have more time for the children would be

much appreciated. As well as this, the problem definition and the service could help steer Micki into new areas, and further strengthen their brand values. However, the service would be more difficult to make, since many schools are bound to Lekolar, ABA School AB, and municipalities. Also, what was concluded in the insights was that the professional customer does not want to rent toys according to the categories in Appendix D but would prefer bigger and more expensive products that are used for shorter periods. They would also like to receive ready-made material so they can focus more on the children and not have to make their own material. This means that Micki’s current product line would not suit the professional customers’ needs.

Moreover, the service would possibly not be as fully developed as the service for private consumers since it would be more challenging and conceptual. This would most likely result in a more sketched final concept for the professional customer, and not as far developed as the concept for the private consumer would possibly be. Ultimately, creating a service for the professional customer felt more challenging, exciting, rewarding and intriguing. Thus, the decision to focus on the professional customer was made.

Even though the decision to focus on the professional customer was made for this project, there were still user needs and opportunity spaces for the private consumer that were discovered and would be beneficial for the company to explore further. As well as this, it would be beneficial to research the usage of toys within eldercare since toys are used but not exposed to the same amount of wear and tear; and would potentially be well-suited for a circular service.

7. IDEATION

Ideating different solutions and services was done iteratively, and constantly in parallel with the other phases of the project, including the research phase. The different ideation methods and sessions are presented below, for an easier structure of the report. Also, workshops based on these methods were performed to gain new perspectives and discover different ideas.

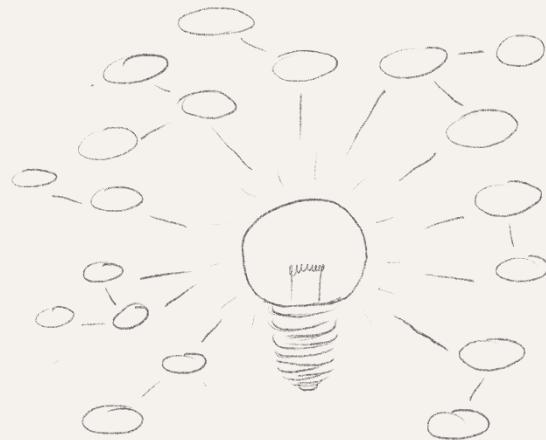
7.1 Ideation Methods

In early stages of the ideation process, divergent thinking and quantity of ideas were the main focus, where any kind of judgements or evaluation of the generated ideas were postponed. All ideas were welcomed and perceived as opportunities that were elaborated upon. This was done to ensure that no ideas were left unspoken, and that all possible solutions were considered. Each ideation session started with a warmup to get into a creative mindset. This was, for example, done with word association that encouraged brainstorming; by associating randomized words to the project in any possible way. Other methods used for the ideation sessions are described below.

7.1.1 Brainstorming

Brainstorming is a key procedure in most ideation processes and aims to generate as many ideas as possible. The method can be varied in endless ways, but generally follow a few basic principles where participants should aim for quantity before quality, come up with as wild and crazy ideas as possible, and build upon the ideas of others without criticizing or evaluating them (Ericson,

Törlind, & Wikberg Nilsson, 2016). A theme or topic of interest is chosen for the brainstorming, with problem statements or questions that are to be ideated upon. Ideas are continuously announced to the group and written down on post-its or a whiteboard, as they are generated. By sharing ideas directly as they occur, participants may be inspired by one another and possibly come up with additional ideas they would otherwise not think of. Once the ideas are drained, the brainstorming session might end or continue around new questions on the topic. Rounding off the session, the ideas are discussed and evaluated, so as to separate the impracticable ones from those that are interesting to further develop.



7.1.2 Crazy 8's

The *Crazy 8's* method is an exercise in which each participant sketches eight distinct ideas within eight minutes; one minute per idea (Google, 2021). The same principles as for Brainstorming are applied for this exercise; letting creativity flourish by leaving concerns and doubts until after the session. This exercise encourages the participants to go further than their initial ideas, where the later ideas are often more innovative due to the participants having to think outside of the box. By using this method, a wide variety of solutions are generated, where ideas that might seem impossible at first could potentially be developed into incredible, innovative, and feasible solutions.

7.1.3 Brainwriting

Brainwriting is an alternative brainstorming method, in which participants are given time to write down their ideas for others to build upon, by adding new features or combining them with other ideas (Ericson, Törlind, & Wikberg Nilsson, 2016). There are several different ways of doing this, but the general guidelines are similar to those of Brainstorming; not to criticize and to elaborate ideas as far as imaginable. The individual ideas are passed on and participants are then to combine and enhance each other's ideas, looking for adjustments and improvements to develop them further. After all the ideas have been worked on individually by everyone, they are presented and discussed; with a possibility to further elaborate them before they are categorized based on themes or areas that are relevant to the purpose. The generated ideas from this exercise can then be used as a steppingstone for further ideation or when building concepts.

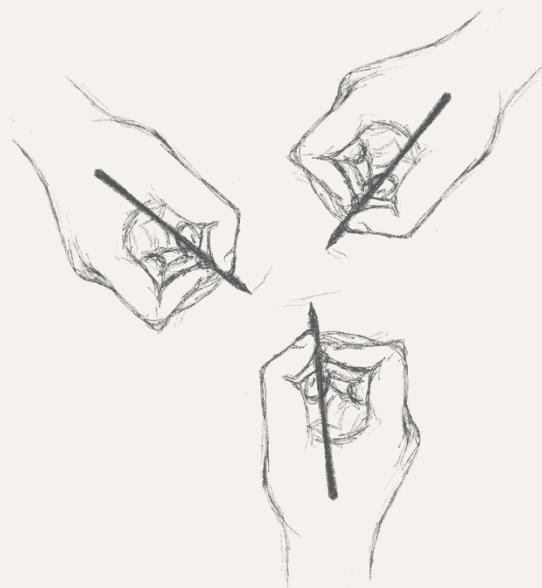
7.1.4 How Might We

The idea with the *How Might We* method is to reframe challenges and problem areas into opportunities. By analyzing collected insights from the research and user studies, *How Might We Questions* can be stated as a framework for ideating upon how to address certain issues or challenges (Hyper Island, 2021). For example, an insight stating that parents are too tired to play with their children could be reframed as; How might we help parents to gain sufficient rest? How might we facilitate housework for parents? How might we make it possible for children to play by themselves more often? The *How Might We* questions should be broad enough to enable a variety of solutions but narrow enough to know where to start the brainstorming. There is no maximum number of questions that could be stated from each insight; the more questions, the larger the framework for finding solutions and opportunities for ideation.

7.1.5 Unintended

Consequences

Unintended Consequences is a method used to explore new technologies or businesses and their unexpected and unintended consequences, intending to acquire inspiration for creating new business models for them. The method starts with Brainstorming for five minutes about new technologies and/or businesses, in groups of 3-5 people. Next, a few of these technologies or businesses are selected for which participants should try to come up with at least three unintended consequences. Examples of this could be that an unintended consequence of Netflix is people binge-watching series. After this, new business models are created for the technologies or businesses, based on their unintended consequences. An example of this would be Netflix having a *Pay-Per-Use* business model, where one pays more if one watches more series (Hyper Island, 2021). This exercise is used to discover unexpected potential, which in the end might steer the business in completely new directions.



7.2 Workshops

Workshops were performed to get insights from other people outside of the project group, to further enhance creative thinking, and help to ideate different solutions from several different perspectives. It was deemed important to include Micki in this process since they have great experience within the business of children's toys and ultimately must also have their needs satisfied for the service to work in practice. Apart from including Micki, it was also of interest to include others, for opposite reasons; to acquire an objective perspective from people that have no prior experience in the business of children's toys. Conducting the workshops helped to create additional ideas, which could then be used for further development of the concepts. The structures of the workshops are explained below, and the workshop collaboration boards can be seen in Appendix J.

7.2.1 Micki

A workshop was done in March 2021 with the supervisors Stefanos Papamichailidis and Pontus Albinzon, together with Kristina Aronsson from Micki. The workshop was held online via Zoom, with the digital media Mural as a tool. The workshop was divided into two identical parts: the first part for the private consumer and the second part for the professional customer. Solutions for both target groups were ideated upon since the decision of which target group to focus on had yet not been made at this stage.

The workshop started with a warm-up of writing down what was associated with the words energy, promise, and health, and how they could connect to Micki and a toy service. These words were chosen at random. Following the warm-up, a session of Crazy 8's was initiated, combined with the Brainwriting method. Each individual started with writing down all of their ideas for the intended subject, for eight minutes. The chosen subject was "What would a service for renting children's toys look like?". Once

these first eight minutes were up, each person chose one of their ideas to keep working on. The development of the ideas was done by each idea being passed on from one participant to the next, until all ideas had been sketched on by all participants. Once the ideas had been developed by everyone, they were presented and discussed in the group.

Following this came the How Might We session. The questions that were discussed in this session were based on the previous clustering of insights from the user studies. They were also based on the most distinct problem areas for the service to succeed, in order to find solutions and opportunities to address these issues. Some of the problem statements that were based on the needs of private consumers were deemed to apply also to the professional customer. Therefore, the answers given from the How Might We session for private consumers were also taken into consideration for the professional customer. However, a few problem statements were specifically directed to the use of toys and materials in schools, which were ideated separately.

For the private consumer, the following questions were part of the How Might We session:

- How might we make sure to adapt the offer for the customer so that they can choose for themselves which things they want or need, and have access to these whenever they want them?
- How might we ensure the condition of the toys before they are sent out to new users? How might we make sure the toys are intact, clean and safe?
- How might we make sure that users feel secure in borrowing toys? How might we reduce the worry of losing or destroying toys during the loan period?
- How might we build a service that constantly follows and contributes to the child's development? How might we make a service that adapts to the child's needs and abilities?

- How might we make having second-hand objects not feel like an alternative only for those who can not afford new things?

For the professional customer, the following questions were part of the How Might We session:

- How might we make it easier for the professional customer to have open and educational material that is adapted according to their teaching?
- Since the material in the schools wears out and is used until it no longer works, how might we build a service that contributes to circular use in schools?
- How might we allow the user to have control over the products that are in the service? How might we ensure that the material the customer needs is available when they need it?

7.2.2 Collaboration workshop

Another collaborative workshop was held with two other students from KTH, Ellen Danielsson and Christopher Lektröm, in April 2021. The reason for doing this workshop was to include people with none or

little knowledge within the subject, which would result in expanding the ideation session with ideas created from an entirely different point of view than that of the more experienced people involved so far. The students that were chosen for this workshop have the same educational background within Integrated Product Design. This was deemed beneficial due to the mutual experience within product development and service design; knowing the importance of a user centered approach and finding design opportunities based on user needs.

This workshop focused on ideating solutions for the professional customers since they, prior to this workshop, were decided to be the target group for the service. The workshop was also held via Zoom using the online platform Mural as a tool for the collaborative ideation session. The same structure as mentioned above was used for the workshop, apart from the How Might We session being replaced with a session of Unintended Consequences. The companies for which unintended consequences were ideated upon included Uber, Tipptapp, Zoom, and Swish. Ways of addressing the unintended consequences were then discussed, as well as how these solutions could be translated into implementable functions for the service that was developed in this project.



8. CONCEPT DEVELOPMENT

This chapter introduces the ideated concepts of the service, that were created with the previously mentioned ideation methods, as well as constantly going back to the research. This was done to make sure that user needs were taken into consideration and answered upon in the concepts. Initially rough concepts were created and evaluated with trigger materials. This was done to develop the concepts further and narrow down to a few final concepts. The more developed concepts were evaluated as well with trigger materials, leading to a final concept being chosen and iterated upon.

8.1 Rough Concepts

All thoughts and ideas generated from the collaboration workshops with Micki and the other students from KTH were clustered, to collect similar ideas and formulate *Rough Concepts* based on these. Earlier ideas and concepts were also added, to make sure every possible solution so far could be brought into testing towards the needs of the professional customer.

The rough concepts included variants of renting possibilities, e.g. renting larger and more expensive products, renting theme-based packages (both franchise packages and specific learning area packages). Other ideas were more focused on providing knowledge and inspiration in different ways; events with lectures and workshops, platforms for collecting ideas and tips, or instructional

documents on how to use materials for specific educational purposes. Additionally, there were several ideas for the professional customer to create their material packages; making it possible to pick individual products that are built together into finished learning packages or providing a standard material that can be combined in multiple ways to create personalized materials. Some ideas were focused on the children participating in different activities, for example using leftover material or defect products to create new toys; where Micki can provide the materials, tools, and instructions. Other rough concepts included Micki having their own center for activities, such as learning adventures, showing the development process of toys and how they are made, refurbishment workshops, or playing opportunities etc.

The clustered ideas also contained options for how to create value for such services, how the concepts might be implemented and how to contribute to a circular economy. Furthermore, many ideas were based on how to increase and maintain collaborative behavior amongst the teachers, not only through community platforms, but also by sharing physical materials in different ways. In conclusion, there were four different concept areas, seen in Figure 13. For a complete list of the rough concepts, see Appendix K.



Figure 13. Concept areas.

8.2 Interviews with trigger material

To evaluate the concepts and see if they would be of potential interest for the professional customer, new interviews with trigger materials were performed. The trigger materials consisted of the cores of the concepts: what the concepts were fundamentally based on. Testing the core principles was thought to give a greater understanding of how the concepts would be perceived by the professional customer, how they would work in real life, and if they would be valuable to the professional customer. The trigger material consisted of an introduction of the interviewee, to see what type of teaching they do and what the school's pedagogic focus is. After this, a session of "*Choose Quickly*" was performed, see Figure 14, where the interviewee had to choose fast between two alternatives of different sorts and motivate briefly afterward.



Figure 14. "*Choose Quickly*" session in the trigger material.

These alternatives were, amongst others, "Receive ready-made material vs Build your own material", "Second-hand vs New" and "Borrow from someone vs Lend to someone". This was a quick way to gather an understanding of some basic principles for the concepts to work.

Following this, the interviewee had to answer the question "Imagine if you were to collaborate with other teachers and/or schools. What would it look like? With whom and how?" and ideate upon it. This was also done for the question "Imagine if you were to buy or rent packages that facilitate the teaching and your workload, or that make the teaching more fun. What would these consist of and for what purpose would they be? How do you get the packages?". It was intended for the interviewee to ideate upon these questions by themselves. However, since this can be difficult for some, a few ideas of packages were created and hidden in the workshop material so that they would only be displayed if the interviewee needed help ideating or thinking of different types of packages, see Figure 15.



Figure 15. Examples of different types of packages

The next part of the trigger material was constructed so that the interviewee had to choose if they would preferably go to an event for further knowledge within a subject

area, if the material came to the school and they learned it themselves, or if a professional came to the school to teach them. They also had to choose who would be involved in this event - coworkers and/or the children - and what it would consist of. This was done by letting them choose between different categories of pictures that represented nature, sustainability, science, digital media, toys, holidays, construction of toys, mobility, open materials, cozy time with the kids, and crafts. These categories were chosen based on the rough concepts and were created with the goal of understanding the core of the concepts better and whether the concepts would be functional and solve the intended issues. For similar reasons as mentioned above regarding the packages for schools, suggestions with ideas for what the event could consist of and how the event could be constructed were added and hidden next to the trigger material. Yet again here, it was thought to show the interviewee these examples only when help was needed. Finally, the interviews ended with the question "In what way do you want more support to be able to optimize the teaching and learning for the children or when choosing materials and toys?".

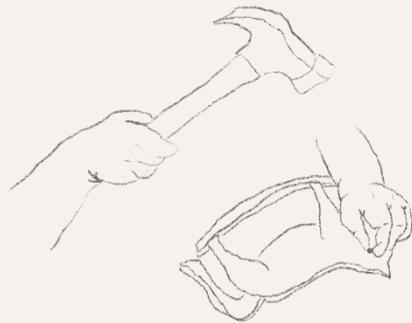
A visualization of the trigger materials can be found in Appendix L.

8.3 Concept iterations

The results of the interviews were clustered and new insights were created. Some insights were similar to what was previously discovered in earlier interviews and clusterings. However, new insights were gathered and ideated upon as well. The most important insights and realizations were woven into the rough concepts and solutions. The different concepts were iterated and merged, resulting in four concepts presented below.

8.3.1 Activity Center

During the interviews, it was clear that *learning by doing* is the most effective way to learn. When children are allowed to do things themselves, they become more engaged and can overcome thresholds that otherwise hinder them. By doing something concrete with the children, letting them interact with things in reality, experimenting, and trying for themselves, they learn better and remember more easily what they have learned. Another realization was that experiencing new environments is of great importance to give children a greater perception of reality and understanding of how things work, even outside their own schools and homes.



Based on these realizations, the core of this concept, the *Activity Center*, was to provide a new learning environment where children get to learn by doing. Connecting this to the purpose of this project, promoting a more sustainable consumption of materials, the idea was for the activity center to focus on reconstruction and creation of new things from old materials, such as broken toys and waste material. Micki would collect old materials and provide tools and ideas on how they can be combined into new things. In the activity center, the children would learn how toys are produced and what happens once they are thrown away, gain inspiration on how to prolong the lifetime of toys, and use old materials to create something new on their own. The construction process itself is a way of learning, which not only benefits the imagination of the children, but can also be

linked to all areas of the curriculum depending on the approach of each session.

The school personnel would get an introduction to this type of learning at the activity center or have an expert come to the school who goes through the material together with the class and explains how it is intended. The school could then continue the work on their own and construct new toys and materials based on what they have learned, with the possibility to order building materials and tools from Micki. The professional customer would continuously have access to further ideas and ways of how they could connect the construction process to their intended learning goals. There may be different developmental stages in the process at the activity center, including different degrees of difficulty or different purposes of the toy crafting workshops. Certificates or diplomas would be provided for each accomplished step, making it possible to build upon that knowledge in later stages if desired. When a stage is completed, the class would go back to the activity center or be visited by an expert at the school for feedback; to gain further knowledge and inspiration for how the creative process can be continuously linked to deeper aspects of a certain learning area or new learning areas.

What would be created within the framework of this concept could be gathered on a common platform, where teachers can follow how others have worked with the material, what the results have been, and what discussions and issues that arisen, etc. There, teachers and children can gain further inspiration and knowledge and follow their process through the different phases of education and learning.

8.3.2 Toy Library

This concept, the *Toy Library*, responds to a more circular use of toys, allowing toys to be reused several times and be constantly in use. What was discovered in the interviews was that many schools have a basement filled with toys and other objects that are forgotten

and not used, despite being in fine condition. This concept addresses this issue.

The idea of the concept was for there to be a library with toys that schools can use for a period and return and exchange for a new toy. By exchanging toys that are no longer used or needed, for new toys that are used, the schools benefit from not having unnecessary things in their storage spaces.



Renting toys from the toy library could be done as a loan; the school would have a card and borrow equipment for a certain number of days/months. The offer could be seen online, where the professional customer could book what they need and pick it up at the toy library. This would guarantee the professional customer knowing what is available when they need it. The professional customer could also choose to go directly to the toy library and see the toys there, choosing what suits their purposes.

An alternative solution to this would be for the professional customer to have a loan period where they borrow certain equipment to test it, and then choose whether they want to buy it or not. This could counteract unnecessary consumption and the fear of spending money on something that is not used. In the long run, this concept could contribute to fewer toys being left unused.

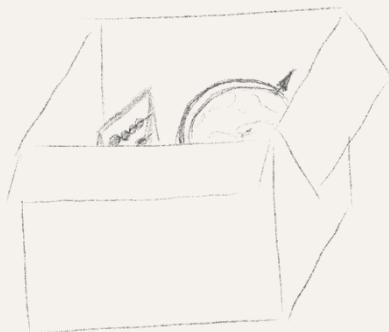
Another positive aspect of this concept is that it would make it possible for the professional customer to adapt what is rented according to the children's capabilities and desires. Since there are different groups of children with different interests each school year, this

would be appreciated by the professional customer.

An alternative solution to the idea of a toy library was a *Toy Truck* that comes out to the schools with ordered toys. The professional customer would order the toys they want to loan, fill out which toys they want to return or exchange, and the toy truck would come out to the schools with the ordered toys. This would make it easy for the professional customer since they would not have to take time for transportation to and from the toy library, but still be able to loan toys.

8.3.3 Educational Packages

During the interviews, it was clear that professional customers spend a lot of time creating materials for the class. This was seen as frustrating since they have invested in materials but must develop them further for their wished purpose, which is a time-consuming process. Therefore, the idea of creating a service that offers rentable ready-made, open materials with different uses was formed.



The idea with this concept, *Educational Packages*, was a website where the professional customers could find concrete tips and ideas on how Micki's toys could be used for various learning purposes. Different suggestions would be offered with exercises linked to the toys and what types of discussions could be created if the toys were used in different ways. The professional customer could also choose toys they already have and get tips based on this and specific learning areas. It would also be possible to

choose toys based on the age group of the children and/or learning areas and get suggestions for packages of toys that would fit the selected ages and subjects, that could then be rented.

The platform could be updated with input and reviews from other teachers, where Micki could verify the comments made. The professional customer could describe on the platform the material they used, how it went and what the purpose was, to help and inspire others. This would lead to the platform constantly becoming wider and more extensive, and to create more of a community for all of the professional customers.

An alternative to this was to design a standard material that could be combined in different ways to make it easier for the teacher to spend their time with the children, and not having to make their materials. However, this was deemed to be more of product development than service design and was therefore not developed further.

8.3.4 Digital Media

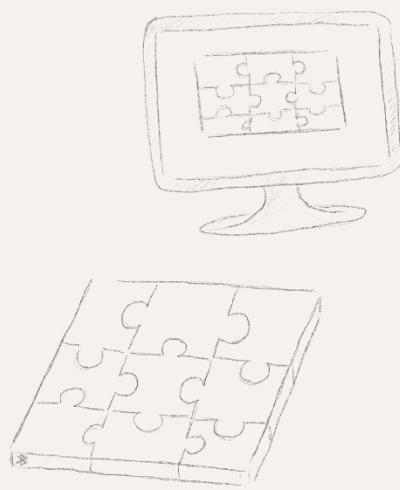
When performing the interviews, it was discovered that using digital media is increasing in schools due to the National Agency for Education stating that children should have the opportunity to learn more about technology. Therefore, different ideas regarding digital media were created.

Since this concept, called *Digital Media*, was not equally finished as previously mentioned concepts, it contained different ideas touching the area of digital media. One idea was for the children to build their own toy and world in a digital game. They would then have to go on voyages of discovery and solve riddles, puzzles, etc., to learn something at the same time as it becomes a creative game. The toys in the game could have toy children, making it possible for the professional customer to link the toy children to bigger purposes such as genetics and color theory. The game can also be connected worldwide so that the children could be invited into a world created by someone in another part of the world, say Australia. This would be like a

modern pen pal. When iterating upon the digital games, a thought of making a game where the children could follow the toy process, for example from tree to toy, and teach them about manufacturing and resources was found.

Other ideas regarded coding toys, so they move in different paths and patterns. Based on Micki's product line, an idea of coding what Skrällan says was generated. This would introduce the children to coding at an early age and possibly help with the issue regarding how to engage more girls in technology.

Something that was discovered from the interviews was that once a puzzle has been laid once or twice, it becomes uninteresting for the child. Solving this, a digital puzzle was thought of, where the puzzle contains screens that can be coded so that the user can decide different images to be displayed on the screens. By coding what is displayed on the screens different puzzles could be laid each time. Taking this further, allowing the user to upload different images would lead to an endless number of possibilities, instead of only having a few to choose from. The puzzle could even come in different degrees of difficulty, where the number of screens (puzzle pieces) varies for each level. The puzzle could therefore be easily adapted according to the age and development of the children.



When analyzing the concepts, it was realized that although the *Digital Media* concept would be of interest and solved several important questions, it did not answer the project formulation nor the main goal of the project. The concept in question related more to product development than service design and reuse of children's toys. Therefore, this concept was not chosen for further iterations and development. However, this concept would be of interest for the company to further explore and create more versatile materials for schools.

8.4 Testing the Concepts

The three concepts, the *Activity Center*, the *Toy Library*, and the *Educational Packages*, were considered promising for further development, and were thus analyzed with trigger materials in multiple interviews. The trigger materials were more specific than previous trigger material and were made to open for a discussion about the concepts. This enabled the evaluation and refinements of the three concepts.

8.4.1 Trigger Material

This chapter presents the trigger materials used for evaluating the concepts. The purpose of the trigger materials and how the interviews were conducted are described below.

FIRST ITERATION

In the first iteration, the trigger material for the *Educational Packages* consisted of a mock-up of a homepage, see Figure 16, where the professional customer chose different toys by Micki to create their educational packages with or chose from already made packages of toys. The toys were divided by subject area and appropriate age of the children and came with tips of how they could be used in different subjects and for different purposes.



Search for something...

AGE OF CHILDREN

1-2

2-3

3-4

4-5

5-6

COLOR THEORY

HISTORY

LANGUAGE

MATHEMATICS

MOTORIC SKILLS

PHYSICS

SCIENCE

SUSTAINABILITY

CREATE OWN PACKAGE



CHOOSE READY-MADE PACKAGE

PHYSICS 3-4 YEARS



HISTORY 1-2 YEARS



SCIENCE 2-3 YEARS



Figure 16. Trigger material for the *Educational Packages* as a mock-up homepage.

For the *Toy Library*, the trigger material was constructed in a toy journey, see Figure 17, where the toy started by getting packed and shipped to the toy library. Here, the professional customer chose whether to order toys online or to go to the toy library to loan the toys, followed by using them in school. Once the loan period was over, the toys were shipped back either via an ordered pick-up or by the professional customer going back to the toy library, followed by new toys being loaned instead.

Finally, for the *Activity Center*, the trigger material was constructed in a customer journey, see Figure 18, starting with the professional customer being educated in an area, followed by going to an activity center with the children and learning more about

sustainability and toy manufacturing, as well as making new toys out of old, broken toys and left-over parts from manufacturing. Following this stage, the children received a diploma for their participation. After this, the professional customers went back to the school and rented materials and tools to continue the work by themselves, and then had booked check-ups either at school or at the activity center, with the experts. Once the check-ups were conducted, the children received a diploma again for their participation. The purpose with the trigger material was for the interviewees to get an overview of possible solutions, upon which they could comment and elaborate according to their thoughts and preferences. This helped in further understanding their needs and requirements for all parts of the concepts.

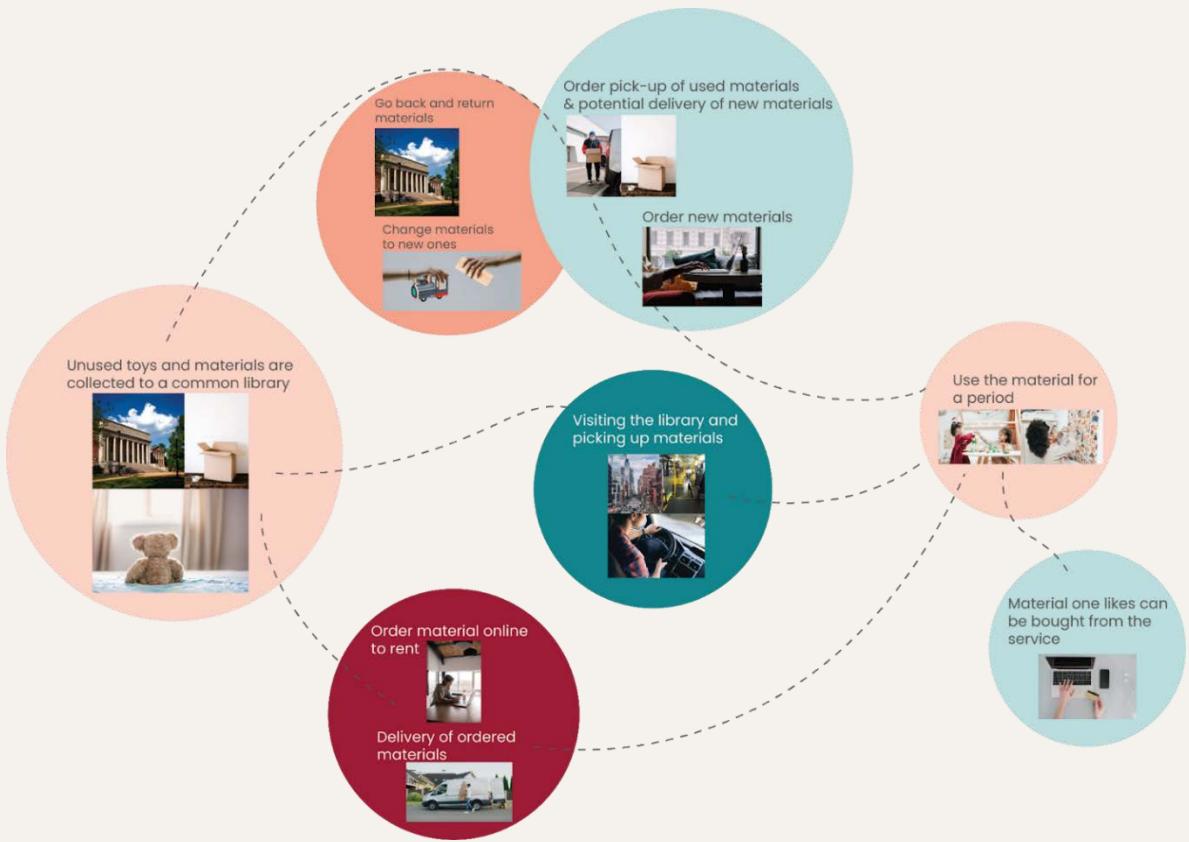


Figure 17. Trigger material for the *Toy Library* as a customer journey.

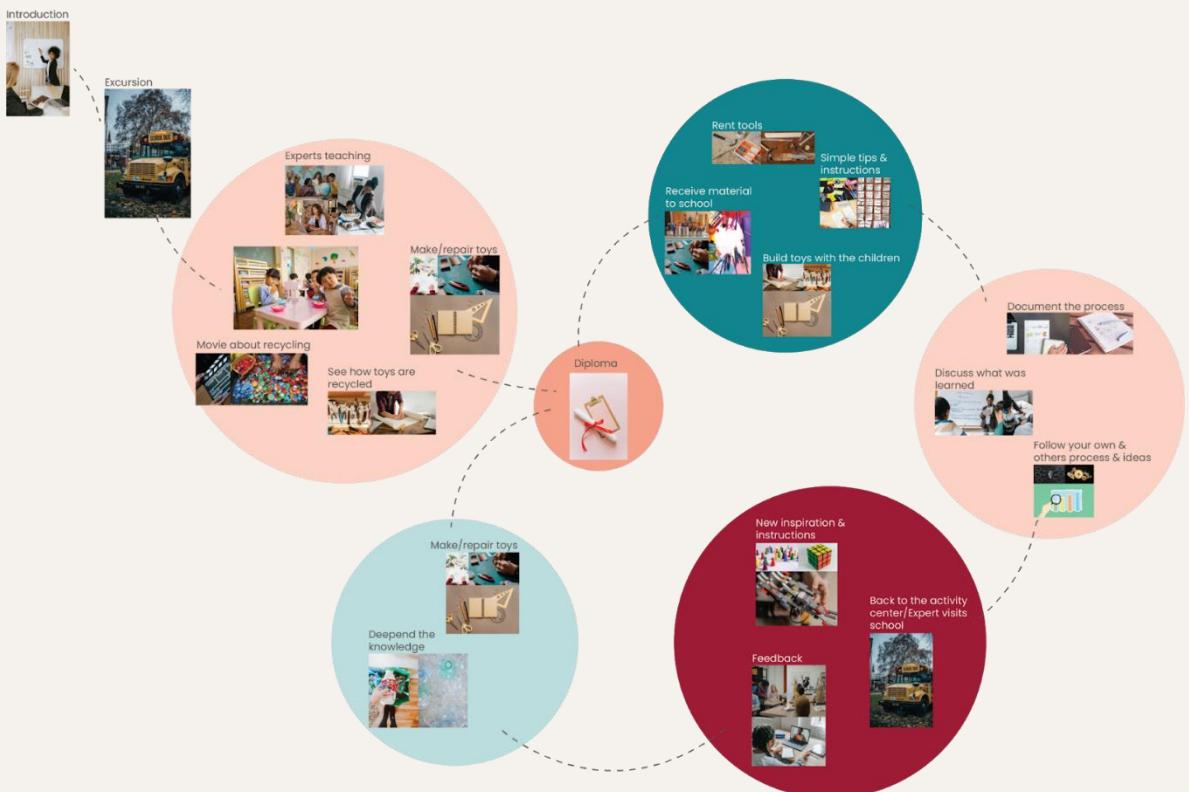


Figure 18. Trigger material for the *Activity Center* as a customer journey.

SECOND ITERATION

Something that was discussed after the first interview was if the trigger materials were equally developed for all concepts and if the part for evaluating the *Activity Center* had a clearer structure leading to it being more positively reviewed. Therefore, the trigger material was iterated. This led to the trigger material for the *Educational Packages* also being made as a customer journey, see Figure 19.

In this journey, the professional customer started with booking toys online, followed by choosing to pick up the toys at a center or the

toys being delivered to the school. After usage, the professional customer went through the process of either ordering pick-up at school or dropping off the toys at a center, followed by them changing the used toys for new ones.

The trigger materials were also constructed so that there was a clearer difference between the concepts *Educational Packages* and the *Toy Library*; the educational packages were more about helping the professional customer with ready-made materials and inspiration, while the toy library was more about circular usage of toys.

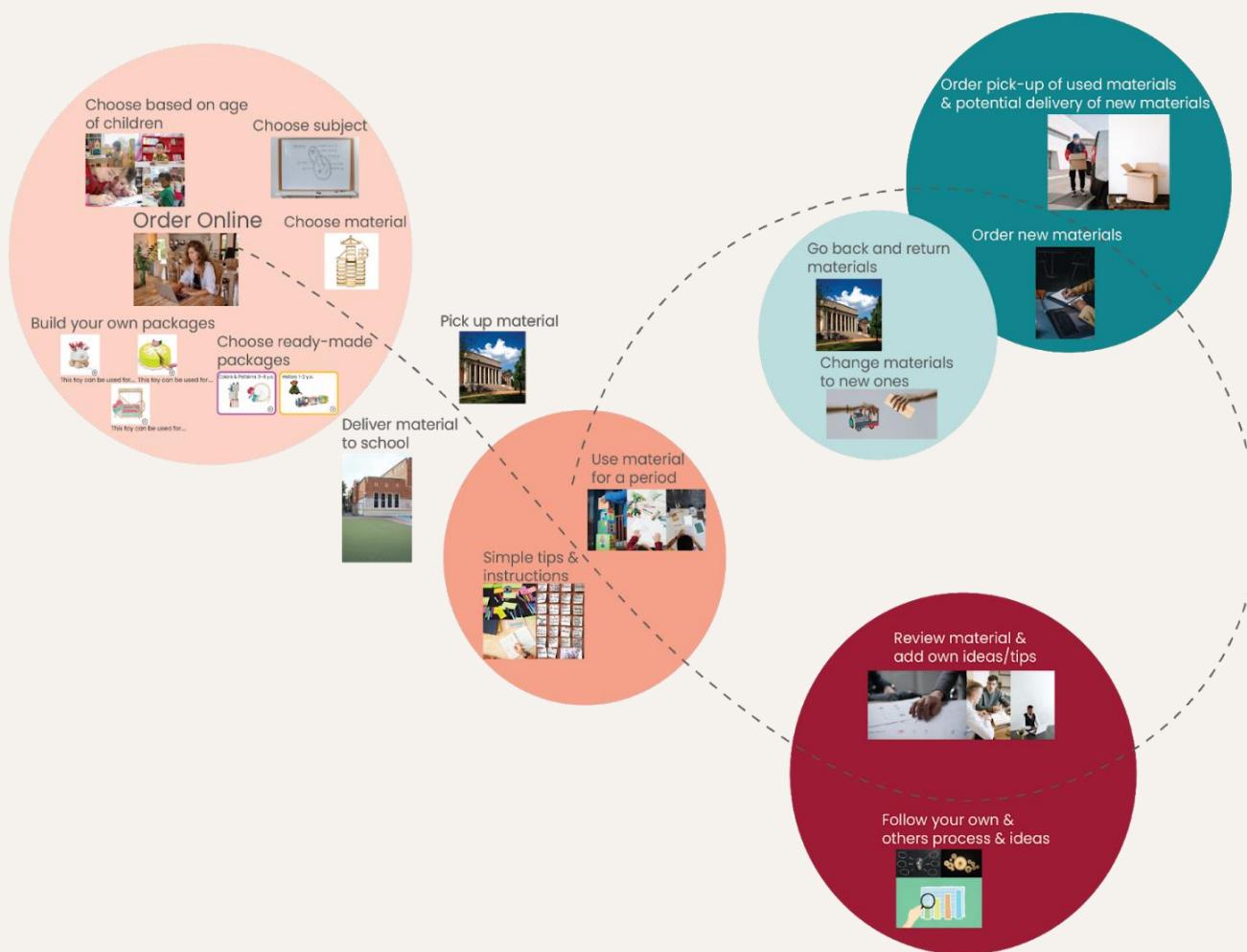


Figure 19. Trigger material for the *Educational Packages* as a customer journey.

THIRD ITERATION

After performing a few interviews with the second round of trigger materials, the trigger materials were iterated again. The mock-up of the homepage for booking materials was added anew. This was deemed as important since it made the interviewees see the basic functions of the idea clearer and discuss more how they order and choose materials.

8.4.2 Results

Here, the results of the interviews are briefly described for each concept. This gave an idea of how the target group perceives each concept and what their preferences were.

EDUCATIONAL PACKAGES

When it came to the *Educational Packages*, the general impression for how the service would be used was divided. Some interviewees stated that the package platform might be used more as a source of inspiration than a way to buy or borrow materials. Today, Google and Pinterest are used as sources of inspiration, but they only show photos of what has been done without explaining how it was used or for which purpose, which is something the professional customer expressed a longing for. The professional customer wants to be able to review and comment on the platform itself so that they can inspire others and get inspiration from others, leading to the platform getting bigger when more people use it. It was also seen as advantageous for the professional customer to see the process, what was difficult or easy, the results, etc. Here, the idea would be to first choose material, and then be able to see how it was used by seeing pictures and/or videos, with a short description. What was also stated was that the more the professional customer has to work with in regard to tips, ideas, materials, etc, the better it is for them as educators and for the children. On the other hand, other interviewees stated that the platform for educational packages would be used for renting toys, and not only as

inspiration. Dividing the material into subject area and appropriate age of the children would simplify the work for the professional customer, and they would most likely choose to create their own packages instead of ordering readymade ones. However, it was stated that renting the educational packages might not be practical, depending on what type of materials were included in the packages. Certain materials are not suitable for reuse due to them being fragile or consumables, while other materials can be used for a long time due to them being durable and robust, such as wooden toys. The materials would have to be developed by someone with knowledge in pedagogics and working with children, so that they would be suitable and answer the curriculum.

TOY LIBRARY

What was discovered for the *Toy Library* was that the professional customer would prefer the toys being delivered to the school, and not having to visit the toy library to get a hold of the material. Another reason for delivering toys to the school was that some schools are in the countryside and have difficulties traveling. However, a clear advantage with going to a physical location was that it would allow the customer to feel the material, see sizes, colors, etc. As well as this, it was stated that if they went with the children in small groups, it would be possible to see what arouses their interest and show the children that they have a voice and an influence in decisions. In comparison, the professional customer stated that they would go with colleagues to the toy library, to discuss the material with regards to subjects and purposes.

What was deemed appropriate or fun to rent were things that were not known if they would be used, expensive things, or simply things that are only used for a shorter period. Regarding the loan period, it was stated that around one month would be enough for start-up, use, and termination of materials. Borrowing for as long as the user wants was stated to not be profitable since certain material would be constantly booked, and

there would not be a circular and just system for all schools. However, it was also stated that renting toys could be problematic or non-economically beneficial for the school since toys in schools are used until they are no longer functioning. However, the toy library could be particularly suitable for after-school activities (*fritids*), to adapt the environment to the group of children.

What was also stated was that the concept might be difficult in practice, since the supply is dependent on what is collected to the library, and all schools might want to take part in the same materials. There would be a risk that only certain schools can book the necessary material, leading to an unfair distribution and usage. It was also stated here that it would not be good to be able to buy the toys out of the service since it would lead to only certain toys being left in the system, and most likely these toys would not be the ones professional customers want to use. This would forfeit the entire concept of using toys circularly. As well as this, if the concept depended on professional customers going through the basement and sifting out things that can be donated to the library, this would have to be ordered by someone with higher authority, since the professional customers would not want to prioritize their time for such tasks. Additionally, it was stated that borrowing materials might be too much work for the professional customer since they have to order, reflect upon, review, and return all material they use, and, finally, find new material. It would most likely be easier for them to buy material and use it when they wish to. However, it might be fun for the children to have new materials in schools on a more regular basis. This would, therefore, be a question of time and budget.

ACTIVITY CENTER

What was concluded with the *Activity Center* was that it could be difficult for some children who are shy, or who find it difficult to deal with too much stress or sensorial impressions. Therefore, it would be good with a quiet room with sound insulation, and a screen so the child can see what the others

are doing and get inspired. Moreover, it was mentioned that adapting the environment and learning of the activity center for children with special needs, such as neurodevelopmental disorders and motoric disabilities, was necessary. This could be done by creating a center with lots of space so that the children do not have to be on top of each other, constructing the local for low volume, offering earmuffs, and adapting the learning to different levels of the children's needs and capacities.

What was also stated regarding this concept was that it would be fun both for the professional customer and the students. It is always fun for the students to explore new environments outside the school building and see reality and the world. The students also tend to become more engaged and inspired when on excursions. Usually, schools go to museums because it is free, and then go back to school and continue working on and building their own things based on what they have learned. Therefore, it was stated that there is a risk for the schools not renting material from the activity center because they probably already have the materials.

Being able to choose between going to a center or having the expert come to the school was seen as something positive since not all schools are able to go on excursions due to location, time, and budget. Furthermore, a positive aspect of having an expert visit the school is that children usually love to be visited at school by other people. Besides this, it was stated that most schools should be able to visit the activity center at least once a year. Visiting more than that would depend on the school and the professional customer since everyone plans differently and has different budgets.

It was also stated that it would be beneficial if the professional customer could have influence in what is done and taught at the center. This would enable linking the activity center to what the children learn in school and to continuously build on the children's education. School subjects were seen to be easily integrated into the education at the activity center, especially science,

technology, and how to construct things. Additionally, it was stated that it would be a pedagogic and fun way to work; starting in preschool and working their way up in the older classes, profiting the children's constant development. Another positive aspect was that the children can learn about sustainability by recycling, reusing, mending objects, and constructing something new out of broken objects.

Something that was also mentioned during these sessions was that it could be easier for the preschool, ages 1-5, and preschool-class (*förskoleklass*), mainly 6-year-olds, to go on excursions more freely than older school classes, ages 7 and up. This was due to the older school classes having to follow schedules and subjects in a different way than preschools and preschool-classes. However, it was also discussed that it could be easier for the older school classes to be out the entire day, whereas after-school activities (*fritids*) start at 13.00 for preschool-classes. The older school classes could also go on excursions more often if the learning lessons were connected to the curriculum and continuously built on their education. The preschool would probably visit the activity center about once a year since multiple excursions with younger children might be too arduous for them.

8.4.3 Conclusions

In conclusion, it was clear that the professional customers do not have much time on their hands, and, therefore, all options of delivering materials to the school were preferred. As well as this, schools are tightly bound to their budgets, limiting them in their possibilities of borrowing, renting, or buying materials and visiting events. The most interesting concept for all interviewees was the *Activity Center* because it was inspiring, creative and would become a fun way for the children to learn about sustainability, how to mend toys, and how to reuse materials. It was also discussed that it would be possible to build the other concepts into the activity center; for example, finding

inspiration on how they can work with the material for different purposes. For the activity center to work and be constantly revisited or worked with, it would be necessary for it to complement and be connected to the curriculum. The *Toy Library* was seen to answer to sustainability in a more direct and concrete way, by creating a service for circular usage of toys. However, issues regarding the practicality of the service and if it would help the professional customer with their job were discussed. Something that was discovered during these interviews was that renting toys could be better suited for after-school activities (*fritids*), than for preschool or school. Regarding the *Educational Packages*, there would be a risk for it to be mainly used as a source for inspiration and to communicate with other professional customers. Creating an inspirational source where professional customers can show the idea, process, execution, and results of their projects, as well as review materials, would be appreciated by many. However, if the concept was used as a source for acquiring educational packages, it was seen as necessary to divide the material into groups of appropriate age and subject areas. Furthermore, each concept would need to be adaptable to children with special needs, so that the service can function well for all potential users.

8.5 Concept evaluation

Once the interviews were performed, a clustering session was conducted to analyze the concepts and insights from the interviews. When evaluating the concepts, it was discussed that the *Toy Library* could potentially answer the project's main goal the best, since it builds on a system of sharing and reusing toys. However, what is the true meaning of sustainable consumption and sustainability was discussed. Since sustainability contains many different parts, such as manufacturing, usage, and after-life, the *Activity Center* could still answer to this since it teaches children that broken things can be mended or made into something new,

and by using old toys and left-over material that would otherwise be thrown away. Even though a toy library would answer directly to sustainable usage by reuse of toys, the *Activity Center* has the benefits of implementing sustainable thinking at an early age and potentially making it clearer what sustainability is and how to achieve it in everyday life.

What was discussed regarding the *Educational Packages* was how the concept is unique compared to similar solutions that exist on the market today, and if it would be possible for schools to use such a service since they are bound to Lekolar and ABA School AB. A potential collaboration here would possibly solve this issue. Furthermore, it was discussed how this concept would implement circular usage. It was also argued how this concept enhances the brand perception of Micki and creates value for them as a company. Doubts regarding how strong the concept was in itself started to occur due to these reasons, and it was seen as potentially better to bring the core of the concept further but not the concept in itself.

Based on this; the insights and what felt most innovative, fun, and rewarding for Micki, the *Activity Center* was chosen as the concept to develop further. Apart from the concept being the most interesting for our development as design students, the professional customers answered most positively to this concept and found it to be the most creative way for children to learn about sustainability. All concepts were seen as innovative and answered to different needs of the professional customer, but the activity center was more unique and adaptable.

8.5.1 Testing the concept

Once the chosen concept had been iterated and refined, the trigger material was used again in an interview, to evaluate how the service would be perceived by other professional customers. Only one contact was able to attend the interview. However, what was concluded from the interview was that the activity center answers to

sustainability by teaching children that objects can be mended and remade and that it is possible to create something new out of scraps and waste. The positive aspect of specifically using old toys, apart from waste materials, was that "*It takes a step into the children's world*" meaning that it makes sustainability concrete but also fun and related to something children use often and have a relationship to. As well as this, the activity center does not only teach the children about sustainability but also how to construct something and think for themselves. Additionally, the interviewee stated that it would probably be easiest if the activity center provided different themes or focus areas of the activities at the center during different periods, letting the customers book which date and theme suit them the best.

8.6 Value Proposition Canvas

Once the concept was chosen, a *Value Proposition Canvas* was created by going back to the previous research and insights. A value proposition canvas helps define customer jobs, pains, and gains, and is a tool used for mapping out and defining the value of what is offered (Strategyzer , 2020). This was done to ideate further on the concept to see if the concept solves the discovered issues and insights and if there were more solutions and details to take into consideration. See Figure 20 for an illustration of the Value Proposition Canvas including questions that were to be answered. All the questions were answered in regard to the chosen concept, the *Activity Center*, and based on insights from the previous research and interviews. The completed Value Proposition Canvas is found in Appendix M. What was concluded was that the concept is a valuable solution, and the structure and the components of the service were visualized and became clearer in their functions and content. As well as this, the concept answered the insights and was based on the user studies.



Figure 20. Illustration of the Value Proposition Canvas and the associated questions.
One example of each category is shown in the figure.

8.7 Requirement Specification

Once the chosen concept had been iterated upon and developed further, a list of the requirements for the service was made, for it to fulfill the customers' and users' needs. This was made by creating a mind map of each part of the service, and what the potential harm these parts could inflict on everyone involved. As well as this, going back to the interviews and insights was necessary to bring forth aspects that the professional customer felt necessary for the service, for the children to learn something and have a fun time at the activity center, but also for the comfort of the professional customer.

In the requirement specification list, it is stated what each part of the service needs both in terms of safety aspects and user-friendliness. These include, amongst other things, how the interior of the center should be designed and constructed, how the recycled material should be treated before it can be used safely, and what knowledge the experts at the center should withhold. The full requirements specification list can be seen in Appendix N.

9. FINAL CONCEPT

This chapter introduces the final concept for the service. Here it is displayed what the concept consists of, and which issues it answers to, as well as discusses how the concept answers three important questions for creating a new business: "What do we offer? Why do we offer it? How do we offer it?". These questions are important since the answers make the brand and offer more understandable for customers, as well as giving guidance and unity for the brand (Neumeier, 2020).

9.1 What, Why, How

Once the Value Proposition Canvas was created and the specifics of the service were defined, the three questions "What do we offer? Why do we offer it? How do we offer it?" were answered. The questions were answered with regards to the final concept and how it connects to the user needs and purpose of the project.

WHAT DO WE OFFER?

We offer a tangible and constructive way of increasing the knowledge in sustainability, products' life cycles, and the connection to nature and environmental impacts. This is achieved by letting children learn by doing in a fun, engaging, and inspirational manner that develops their language, technical, mathematical, and physical skills.

WHY DO WE OFFER IT?

This service makes sustainable development comprehensible for younger children. By introducing sustainable development at an early age, it resides with them when they

grow up. By collecting old toys and left-over material from production, we contribute to a circular economy and put the teaching of sustainability into practice. Also, by using children's toys we take a step into their everyday lives and help them develop in their way and after their abilities.

We are also here for the professional customer: helping them have more time for the children and facilitating the increased work on sustainability according to the curriculum by the National Agency for Education (Skolverket, 2018). All children should be able to learn about sustainability despite the schools' prerequisites.

HOW DO WE OFFER IT?

We provide a new learning environment, where children and teachers are welcome to participate in learning events including movies, theatres, discussions, and workshops. Waste material and old toys are collected from production companies and private consumers to be used for toy crafting workshops at the center. Extensive research and experts with knowledge in sustainability and working with children provide up-to-date learning experiences and materials. The events and materials are carefully developed for different learning subjects and themes, in several languages and with different levels of difficulty. Learning packages with simple instructions are available for rental for the school to continue the work on sustainability after the visits. The service includes a platform for booking the event and learning packages and connects professional customers with each other for their development and inspiration.

9.2 Service outline

The final service consists of collecting old toys and materials, creating inspiring and educative workshops with the children to teach them about sustainable development, and continuously work on their learning of the subject. A schematic description of the service outline is shown in Figure 21.



Figure 21. Schematic description of the service. First, the materials are collected and transported to the activity center where they are cared for, for safety reasons. Following this, the material can be packaged and sent to the school for work within sustainability. As well as this, it would be possible to visit the activity center to work on sustainability or be visited in school by an expert from the activity center.

First, old toys and materials for crafts are collected from recycling centers, second-hand stores, and industries. The materials for crafts could consist of anything from paint, curtains, and fabrics to bottle caps, wallpaper, and cardboard boxes. After this, waste material from Micki's production of toys is collected and shipped to the activity center. This material is cared for, to make sure that the children come to no harm. Before going to the activity center, the teacher receives an education in the activity center, what will be done, and what the purposes of the materials and activities are, as well as how they are connected to sustainability. This can be done either at the school by being visited by an expert, or at the activity center.

At the activity center, the children get to learn about sustainable development by watching movies and theatres, reading books, and making their own toys out of the collected old toys and materials. An expert at the activity center teaches and helps the children to understand what sustainable development is, and how it can be achieved. Additionally, it is possible to choose to be visited by an expert from the activity center, instead of having to travel to a specific location with the children. After the first visit, the children receive a diploma for their participation. Once the first step is done, the professional customer can loan packages with materials and tools, so that the children can continue their work and learning of sustainable

development at school. These packages can be adapted to the appropriate age and interests of the children.

After working with the loaned package for a specified time, the materials can be updated for the next level and continued work on sustainability. To initiate the next level, the class can either go back to the activity center or be visited by an expert from the activity center. A second diploma is dealt out to the children for their participation, and different materials and tools are loaned for a new purpose. The lessons of sustainable development are divided into several steps to make it more interesting and easier for the children to learn. The idea is for it to be possible to keep building the children's education further and deeper within sustainability, in several steps. This is possible by letting the professional customer

choose how many visits they want to make and how often they wish to work with the material from the activity center.

The service includes a platform as well, where the professional customer can book the activities and read up on information about the service. When ordering the rentable learning packages, they can also read tips and get inspiration on how other customers have used the materials. Users can upload short texts about what they did and why, and add images and videos explaining their procedures. As well as this, simple documentation of the process is offered so that the customers can continuously see the development and learning lessons of their class. A schematic description of the contents of the activity center are seen in Figure 22.



Figure 22. Schematic description of the contents of the activity center; teacher training, movies and theatres explaining sustainability, books about sustainability, playground with refurbished toys, toy crafting workshops, diplomas for participation, a calm space, and customer service,

10. BUSINESS MODEL

Creating a business model is an essential part of starting up a new business or implementing a concept in reality. In this project, the focus was on establishing what different parts the concept needed for implementation, as well as concluding the cost structure and revenue streams. The methods used for this were learned from previous courses, as well as researched upon in different literatures. Different types of revenue models were researched for an underlying understanding of how to generate profit and can be seen in Appendix O.

10.1 Business Model Canvas

Based on the Value Proposition Canvas, the key propositions of the service could be defined and used for creating the *Business Model Canvas*, see Figure 23. By creating a Business Model Canvas, it is possible to get an overview of some of the most important aspects regarding the business, including customer segments, channels, and relations, what key resources, partners, and activities there are, and finally, what sources might generate costs or revenues (Schneider & Stickdorn, 2019). The defined segments of the Business Model Canvas are presented briefly below.



Figure 23. Business Model Canvas.

CUSTOMER SEGMENTS

The main users of this service are all educators and children in preschools and schools. Preschool children are of ages 1-5, while school children are of age six and up. Apart from this, after-school activity pedagogues and children might also be another user segment. Furthermore, in most cases, other customers are responsible for the actual purchase and budget, such as principals or municipalities, which makes these people an important customer segment.

CUSTOMER RELATIONSHIPS

To create long-lasting relationships with customers, every interaction throughout the service must be considered. Apart from available customer service, customer relations are nurtured by offering teacher training, activities and material adjusted to individual needs, transportation, and on-site visits by experts. Furthermore, customer relations are further strengthened by offering an engaging community platform for reviews, inspiration, knowledge, and where teachers can come together and influence each other and the learning experiences provided by Micki.

CHANNELS

The heart of the service is the activity center itself, which is where the main customer interactions will take place. This is where teachers and children go for the complete learning experience including: movies, theatres, and crafting workshops. On-site expert visits are another important channel to reach the customers who for various reasons are not able to visit the activity center but would still like to take part in this new way of learning. Channels for reaching out to new customers include PR/media and an online website. The website includes all information about the service, additional contact information for the activity center via e-mail or telephone, and a portal for booking. As well as this, the website can also be used by

members as a community platform, where users can read up on what other users have done, what their goal was, and what the results were. This would provide professional customers with tips and ideas, as well as a feeling of togetherness amongst educators from different schools.

KEY PROPOSITIONS

The key propositions are what makes this service valuable for the customers; the reasons for why the service should exist. These can be shortly summarized as offering a new learning environment that provides a fun, engaging, and inspirational education where children get to learn by doing, which makes for a concrete way for children to learn about sustainability. The service also contributes to a circular economy by the use of old and broken materials in the workshops, simultaneously promoting more sustainable mindsets of all participants, which may influence their everyday life choices. Lastly, the service is there for the teachers, facilitating their work with ready-made materials and learning activities which allow for them to spend more time with the children.

KEY RESOURCES

There are a few key resources that Micki needs for this service to function as intended. First of all, a building is needed for the activity center; with multiple rooms and spaces for the different activities that should take place there. Furthermore, materials and tools for the crafting, such as waste material, scraps from production, old products, screws, glue, etc., must be obtained. Lastly, none of this will be possible without human resources creating the educational materials and acting as experts; leading the activities at the activity center or on-site at the schools. Hence, experts with knowledge and skills in sustainability and working with children are an essential resource.

KEY ACTIVITIES

Before the service can reach consumers, there are some steps that Micki needs to implement. Foremost, educational materials and methods must be developed based on research and knowledge, for the service to fulfill its educational purpose with relevance to the curriculum. Distribution channels for collecting materials that are to be used in crafting workshops and packages need to be established, as well as transportation of the materials and tools. The activity center infrastructure must be built, and the online platform must be developed. After this, the service is ready for marketing and reaching out to the customers, and finally, for the start of a new learning experience at the activity center.

KEY PARTNERS

To create and gain a competitive advantage with this service, Micki would most likely not be able to do everything on their own; they would need to partner up with other experts and specialists in areas they are not currently operating within. The key partners include the professional customers and the Swedish National Agency for Education, to create a valuable educational purpose and learning experience with the service. Furthermore, municipal agreements are important for the professional customer to be able to use the service as a part of the education for the children. Other key partners are production companies, waste management companies, and recycling stations for the material supply, as well as tool companies and carrier/shipping companies to gain access to all the resources needed in the service. Finally, architects are needed for the infrastructure of the activity center, to make it a desirable option for school trips.

COST STRUCTURE

The development and maintenance of a service or product always entails costs. For the activity center, these may include

research and development costs as well as costs for manufacturing infrastructure, transportation, materials, and tools, rent of premises, insurance, and utilities. Additionally, costs for the development and maintenance of the platform, marketing, and ads, as well as costs for employees, experts, janitors/cleaners, and customer support are important to consider.

REVENUE STREAMS

There are several ways in which the service may generate revenue for Micki. Through the service, customer relationships may be strengthened, which could lead to increased sales of Micki's toys. Furthermore, revenue can be gained through membership fees, tools and material renting, sales of consumables, renting of learning packages, teacher training, and introduction fees, transportation charges, expert consultancy fees, and event charges. If the service creates sufficient educational value, subventions and grants may also be a source of additional revenues.

10.2 Cost Structure

After discussing the Business Model Canvas with the supervisors at Micki, it was concluded that the costs and revenues associated with the service were the most interesting aspects to investigate further at this point in the project. After going through the details with Mohammad Akhbari, senior lecturer in economics at KTH, in May 2021, it was clear that the investigation would be conceptual; pinpointing expected cost items rather than specific cost figures, and ways to charge customers rather than quantified revenues. This was decided since prices are generally constructed of costs and additional profit margins, and the multiple costs were hard to estimate without in-depth knowledge of Micki's economics.

To create an understanding of what costs are generated from each part of the service, the expected cost items were listed and categorized by function. The different functions include the main building of the

activity center, the online platform, the movies, the theatre, the playground, the calm space, the crafting workshops, the rentable learning packages, the teacher training, and the expert visits. Apart from categorizing the cost items by function, they were also categorized as *fixed costs* or *variable costs*. Fixed costs are independent of the volume of produced products and the number of users of a service, while variable costs are a function of the volume of the activity and change depending on the number of product sales or users (Briciu, 2008). Identifying fixed and variable costs is important to estimate the total costs with regards to changes in volume, and to make justified decisions for the business and revenue model.

The fixed costs include investment costs for implementing the service and its components, manufacturing of infrastructure, rent of premises, insurance, utilities, salaries to employees, maintenance, R&D of provable learning experiences, and marketing. The variable costs include features on-demand such as transportation service and experts visiting schools, as well as consumables connected to the crafting workshops and the rentable learning packages. The demand for consumable material increases with the number of users, hence costs for transporting crafting materials and preparing the material for use are also counted as a variable cost. The complete table of expected cost items can be found in Appendix P.

10.3 Revenue streams

Discussing revenue models for the service with Akhbari, it was advised that the revenue streams should be constructed so that the fixed costs are covered by a more predictable and stable recurring income, while variable costs should be recovered by charging customers on demand when using products and services connected to the variable costs. Here, it would be possible to combine multiple different revenue models to benefit users while ensuring a profitable service for Micki.

The essential recurring revenues could be obtained by offering a *licensing* or a *subscription model*; where the different needs of the users can be fulfilled by offering additional flexibility with the *Pay-Per-User model*, see Appendix O. The idea is for the membership fee and/or subscription fee to be constructed so that a reasonable number of users will make up for the fixed costs. Moreover, on-demand features should be priced individually based on the number of variable costs connected to each of them, with an additional profit margin. Additionally, flexibility is provided for on-demand charges with a Pay-Per-User model in combination with the *Pay-Per-Use approach* (See Appendix O); meaning customers only pay for the features they use with regards to the number of users.

To capture all potential users of the service, different customer segments would need consideration to make sure their individual needs are fulfilled. First of all, it might be beneficial to offer some parts of the service for free, namely customer service, basic online platform access for information about the service, and teacher introduction. In this way, the thresholds for considering the service can be more easily overcome, providing all potential customers with sufficient knowledge about the service and its educational purposes and benefits.

For some customers, another threshold might be the membership and subscription fees. Hence, offering the possibility to visit the activity center and take part in the provided activities there without having to become a member might be a way to win these customers over. However, entrance fees must then be more expensive than that for members so that becoming a member is still the most attractive option long-term. Apart from reduced entrance fees, members would also get access to the rentable learning packages and extended platform access with booking ability and detailed information about the packages, reviews, inspiration, and teachers' community.

The membership and subscription fee should be based on the number of students at the

school that will participate in the learning experience each year. However, interviewees underlined the fact that the actual number of children attending school activities are often significantly smaller than originally planned for at the start of the semester. Based on this insight, it would be beneficial to offer the chargeable features at different costs depending on the size of the child group for each event attended or learning package rented. This would offer flexibility to the customer, while still ensuring stable recurring revenues from the subscription fees, which would remain constant based on the estimated number of participating children. Naturally, this would require that the actual number of children participating does not exceed that of what is paid for in the subscription. Likewise, the costs for educating teachers in each learning package should depend on the number of teachers participating, with additional fees for experts visiting the school depending on the travel distance. Travel distance should also be considered if transportation is offered to and from the activity center, with different charges depending on the required size of the bus.

Furthermore, it was discovered during the interviews that some school classes have difficulties leaving school for field trips for different reasons; for example, the activities might be too far away for the school to afford or have time for, or there might be children who are not comfortable in new environments. For these customers to take part in this new way of learning without having to pay for features they will never use; an additional type of membership could be

included in the revenue model. This type of membership would then have the same subscription fee and provide the same features as the regular membership, but with slightly reduced costs for ordering learning packages and having experts visiting the school. If these types of members would like to visit the activity center at some point, it would however be more expensive than for regular members, to make up for these reduced costs.

An overview of the intended revenue model is seen in Figure 24. Here, the features included for the different types of users are listed together with additional features for which the users can pay to use. The different cost figures depending on the type of user and number of users are merely stated with variables, to easier get an understanding of the relative relationship between them. If Micki wants to develop the concept further this model could be used as a steppingstone, where the total costs must be quantified before the prices can be specified and the revenues estimated.

	NON-MEMBERS	NON-VISITING MEMBERS	MICKI MEMBERS	
	Pay per visit & users, add for transport	Membership fee + subscription fee /child	Membership fee + subscription fee /child	
Customer Service	✓	✓	✓	
Service Introduction	✓	✓	✓	
Platform Basic Access: Info about the service and the packages	✓	✓	✓	
Platform Booking Access: In-depth info about materials & ability to book materials	✗	\$	✓	
Activity Center Entrance: Access playground, movies, theaters and workshops	a*\$/group a>1 \$	b*\$/group b>1 \$	✓	1-10 kids e\$ 11-20 kids f\$ 21-30 kids g\$ e<f<g
Transportation to and from Activity Center	\$	c*\$/group c<1 \$	\$	\$ depending on bus size + \$ per km
Learning Packages & Platform Community Access: Ability to add process and read tips for ordered packages	✗	\$	\$	1-10 kids h\$ 11-20 kids i\$ 21-30 kids j\$ h<i<j
Material Fill-up	✗	\$	\$	1-10 kids k\$ 11-20 kids l\$ 21-30 kids m\$ k<l<m
Education for teachers / Package, at the center	✗	\$	\$	\$ per teacher
Education for teachers / Package, in school	✗	\$	\$	\$ per teacher + \$ transport per km
Expert visiting school	✗	d*\$/group d<1 \$	\$	1-10 kids n\$ 11-20 kids o\$ 21-30 kids p\$ \$ per km n<o<p

Figure 24. Overview of the intended revenue model.

11. DISCUSSION

In this chapter, the purpose, delimitations, and methods of the project are discussed for the created service, to evaluate how well the service answers the purpose of the project and how the result might have been affected by the chosen methods. As well as this, the recommendations and future work of the project, based on the drawn conclusions throughout the project as well as the delimitations, are discussed in this chapter.

11.1 Purpose

The purpose of the project was to create a service that promotes a more sustainable lifestyle and consumption of children's toys. For such a service to be successful, questions regarding customers' driving forces, costs, benefits for customers and Micki, safety requirements and environmental aspects were taken into consideration. Based on what was learned through conducting this thesis, the answers to these questions are presented below.

WHICH DRIVING FORCES
SHOULD BE FULFILLED FOR
THE CUSTOMER, FOR THEM
TO CONSUME TOYS MORE
SUSTAINABLY?

The driving forces of the professional customers were discovered, through interviews and surveys, to be centered in the children's education and well-being. In general, professional customers will do

everything they can to ensure that the children get a good education, and to help them develop into their own individuals. The service would, therefore, be more of an attractive choice if it was connected to the curriculum and adaptable to different children's abilities and disabilities so that all children feel safe and included. Furthermore, the professional customer tends to choose activities and materials that are not too expensive, and that they do not have to develop further on their own. Since the professional customer has a limited budget and time, and they would prefer to spend as much time as possible with the children, the service would need to benefit them regarding these aspects. Additionally, the professional customer would like more support and materials when working with sustainability. Currently, there are several options for working with other subjects such as math, natural sciences, and technology, whilst sufficient materials for working with the subject of sustainability are lacking. Therefore, another driving force for using this service would be fulfilled by providing a feasible option for the increased work in sustainability. These were the most important driving forces that were discovered. Developing the concept further and defining the implementation of the service on a more detailed level would be necessary to do in collaboration with professional customers. By doing so, their demands and requirements of the service would be fulfilled, as well as discovering what additional forces would prevent or encourage them to take part in the service.

TO WHAT PRICE WOULD
SUCH A SOLUTION BE
COMPETITIVE WHILE STILL
GENERATING REVENUE FOR
MICKI?

Due to the lack of in-depth knowledge regarding Micki's costs and budget as well as the time limitations of the project, prices and

revenues were not calculated upon in this project. However, an outline of the revenue model was presented; with expected cost items and possible sources of income. Should Micki want to realize the concept, they are able to elaborate further upon that outline to estimate the revenues. When doing so, it would be beneficial if the fixed costs of the service were covered by recurring income such as the presented subscription model, while variable costs could be charged on demand; for each visit to the center and each learning package rented. Regarding the economic thresholds for the professional customer, when comparing with other similar services that focus on children's learning, it was clear that as long as there is sufficient foundation in the curriculum, schools will be interested to pay for such a service. Since there are not that many other services with a focus on sustainability aspects, Micki also has the upper hand of being a recognized Swedish brand, allowing them to be able to facilitate workshops on sustainability, which is becoming increasingly important in schools. As long as the costs are possible to regenerate, additional profits from the service might not be that important; Micki would still benefit from increased recognition, improved customer relations, and brand building. The implementation of such a service could make Micki seem even more like a caring brand; where they can emphasize that sustainability and the future of children are what matters most to them. This would benefit Micki, and potentially increase the revenue of their current product portfolio.

That being said, there is still potential for the service to become a significant source of Micki's revenues. If the service is shown to be valuable to the professional customer and becomes a significant part of the education for school children, it lies within the professional customer's interest, as well as the municipality's, to keep it on the market. Hence, apart from professional customers being willing to pay for using such a service, subsidies and grants could potentially be generated from municipalities or the government. Furthermore, there is also a possibility to partner with other stakeholders,

taking advantage of the user base of the service to showcase products or services of other brands, generating additional income in commissions or advertising charges.

HOW CAN THE SYSTEM BE DESIGNED TO BENEFIT BOTH USERS AND MICKI REGARDING ECONOMY, USER EXPERIENCE, AND IMPLEMENTATION?

Most children think learning by doing, visiting centers, and/or being visited in school by someone is fun. Allowing the children to learn at their own tempo and create something from their own imagination and capabilities makes their education more inspiring, and the children happier. The service contributes to a circular economy and puts the teaching of sustainability into practice for the safety and happiness of our future generations. This is something Micki seeks, since their vision is happy and playful children in a safe world. Also, Micki's mission to contribute to the creation of good citizens is further achieved by offering children the possibility to learn about sustainability, be creative, and use their imagination in their own way.

Such a service would make Micki seem fun, inspiring, and playful, but still thinking further when it comes to sustainability and the children's future; aspects which are all parts of the core values of Micki. The service takes a stand in sustainability and allows children of today and the future to have fun and laugh.

HOW CAN IT BE ASSURED THAT THE SAFETY REQUIREMENTS OF THE PRODUCTS ARE MAINTAINED

THROUGHOUT THE USE OF THE SERVICE?

The safety aspects of the *Activity Center* were defined in the requirement specification list, including for example safety equipment, interior adaptations, and preparation of the workshop materials. The safety requirements of the products were not looked upon further. This would have been necessary when creating a service where products are put to a circular use, and risk wear-and-tear. However, since the products used in the created service are old toys that become refurbished, it was not deemed as necessary for them to fulfill similar safety requirements that exist for toys being sold or rented. On the other hand, control of their condition would be necessary, to eliminate all harm that could come to the children, and everyone else involved. This could include, for example, filing away sharp edges and getting rid of dangerous objects/details. This would need to be developed further, since the children's safety is a crucial aspect for professional customers when choosing the service.

HOW IS THIS SERVICE MORE ENVIRONMENTALLY BENEFICIAL?

When starting the project, the intention was to compare how and if the environmental impacts would decrease with the service. An idea for comparing the environmental impact was to first use CES Edupack, or similar programs, to calculate the emissions of the toys during their approximate life length. If the service would have been based on renting toys, the emissions would then have been calculated over the extended life length of the toys. This would be used to compare if the emissions would have a smaller impact on the environment, as well as potentially calculating the decrease in toy manufacturing. However, since the service is not a rental service and does not directly involve using Micki's products, this

comparison was deemed to be difficult to perform.

Nonetheless, it is still possible to discuss how and if this service would contribute to sustainability, despite the lack of hard data. A question that arose when choosing to focus on the professional customer was "*How does the intended service contribute to circular use of materials in schools?*". Since waste materials from Micki's production would be used in the service to create more and new objects, fewer amounts of wood could be wasted when manufacturing toys. As well as this, waste materials from other stores were intended to be used in the service as well, such as from second-hand and crafts stores, decreasing the overall waste in our society. Along with this, instead of old toys being discarded in landfills or sorted in recycling centers, they would get a new purpose and be refurbished for reuse. This service would, therefore, prolong the life-length of the needed materials and products, thus potentially decreasing their general environmental impact over their entire life spans. Comparing the service with available services today, which are discussed in Chapter 3.1, this service could prevent the latter steps of the waste hierarchy to a greater extent than existing services do today. The existing services reuse toys, but only toys that function; broken toys are sent to recycling centers or landfills. This new service, however, would answer to the reuse and refurbishment of old toys that are broken, and give them a new purpose. Although the materials and products that would be used in the service most likely would be thrown away in the end, using them for several purposes for a longer time is deemed to be more sustainable.

It could, however, be argued that the toys created in the workshops would not last that long, since they are created by letting children refurbish old materials. This could result in the materials being transported several times with only short periods of usage before they end up in landfills or recycling centers once again. The results of this could potentially be that the service would not be more environmentally friendly, since the

material would not be used for a longer period, but be transported to several places, increasing the emissions. Therefore, it would be necessary to choose old toys and materials that are durable enough to last long. The requirements for the quality of these toys would need to be researched more upon, and is, therefore, recommended for future development of the project.

On the other hand, since the idea of the service is to teach children about sustainability, making something new out of something old, and taking care of our resources, it can be argued that the future citizens of our society would have a different outlook on consumption and use of products. This would in the long run, hopefully, change our consumption and decrease the wear-and-tear that is seen as acceptable today.

11.2 Delimitations

Regarding the delimitations, it was stated that the service extent will be based on Micki's offer opportunities, in other words, their existing product portfolio. This was, however, decided when the general idea was to create a rental service for the project. Since the final concept was based on, amongst other things, collecting old toys and refurbishing them, it would not be necessary to take Micki's current product portfolio into account and implement it in the service.

It was also stated in the purpose to schematically describe service touch points but exclude interface and in-depth user experience. Once the service had been designed and developed further, it was appropriate to go into the details of the service touch points, for example, the overall design of the activity center and the learning packages. However, due to the time limitations of the project, it was realized that the remaining time would not be sufficient for defining these parts. Further developing the materials in the activity center, as well as the homepage and different features of the activity center would be too time-consuming for the remainder of the project. Instead, the

main focus of the project was to gain a deep understanding of users and the opportunity spaces and to create a conceptual solution for their needs.

As well as this, due to the current pandemic, no study visits were possible to attend. All work had to be performed remotely, including interviews that were performed via Zoom or the telephone. Performing interviews and using trigger material online gave results. However, it is better to see interviewees in real life since one can then pick up on body language and more easily create a discussion. Furthermore, no observations of how toys are played with and used schools were performed, due to this pandemic. This would have been optimal, since seeing children play with toys in school would give an insight into how the children play, with which toys they play, and why.

In the beginning of the project, it was seen as important to determine roughly approximated costs and revenue streams, to evaluate the economic benefits for Micki of implementing such a service. However, the initial assumption was that this project would most likely land in some sort of rental service, which would make such calculations easier to execute. Because of the complexity of the conceptual service system that was created, there were too many unknown factors that required in-depth knowledge in the costs and budget of Micki for the calculations to be made. Before coming to this realization, an attempt was made to approximate revenues by comparing what similar services such as TomTits Experiments¹ and NTA² are charging their customers. However, it soon became clear that the need for quantified costs was inevitable, to state reasonable prices and to calculate profit margins and estimated revenues. Therefore, it was seen as more beneficial for the company and for the results of the project to instead create a basic outline of the cost items and revenue streams, and define what is included for different types of users of the service. By delivering such an outline, someone who is better acquainted with Micki's finances may, later, develop the

model with substantiated cost figures and ultimately calculate the revenues.

¹TomTits Experiments is a museum in Stockholm, where people can go to play and explore more within the world of science, math and technology (Tom Tits Experiment, 2021).

²NTA is a service for schools, where packages consisting of different educational materials for different school subjects are sent to the teachers who have gone through the basic training for that specific subject (NTA - Naturvetenskap och teknik för alla, 2021).

11.3 Methods

The project started with the idea of creating a rental service for children's toys since renting is a common circular system for more sustainable consumption. However, once the user studies were performed, it was realized that starting this project with a solution was not the way to go; it would be more beneficial to analyze the overall consumption of children's toys and see thoughts on sustainability on a greater level, and from that narrow down the possibilities to certain service concepts. Once the research was not focused on a rental solution, it was easier to find more opportunity spaces, user needs, possibilities, and potential concepts. This resulted in a project that was more thoroughly done and well-executed. If the project would only have consisted of researching and designing a rental service, it might have led to a concept that was well functioning, but potentially acquiring less knowledge and understanding of user needs, opportunity spaces, and which areas would be beneficial for the company to further explore.

Since different schools have different pedagogical foci, as well as are divided into independent and municipal schools, it was debated if the target group, the professional customer, should be divided into several smaller target groups. Schools that are municipal versus independent have different administrations and heads to answer to, as well as different budgets. What was concluded was that, although the pedagogical

foci and the budget varies between schools, this would not have a significant factor in how to design the center, since the different schools still have the same fundamental desires and goals regarding the children's education. The only inhibiting factor for who visits the activity center would be the cost of it. Therefore, creating a revenue stream first was deemed as necessary. Here, different types of visitors were categorized depending on what they want out of the activity; visiting the center once, only being visited in school, membership for multiple visits, etc. This created a more natural customer segmentation, consisting of different types of users and visitors.

When evaluating the project, it was important to go back to the frame of reference, and the intended methodology. Throughout the project, a user centered approach has been maintained by constantly testing ideas on the customers and iteratively interviewing them. The end-users have been constantly involved in different stages such as initial research, concept development, and concept evaluation. By doing so, their needs and requirements have been defined and worked with during the entire project. The main focus has, however, been on the primary users, i.e. the ones who use the service. Secondary users were found when creating a customer segmentation for concluding the revenue model and were defined as people who occasionally visit the center. These users have been taken into consideration, although future work of the service should include them more. Moreover, tertiary users, who will be affected by the use of the product/service/system, or who will decide the purchase of it, have not been studied equally much. A few of these users were contacted, to evaluate the concept and make sure that the intended revenue model would be feasible in reality. Selected heads of schools in certain municipalities including Stockholm, Växjö, Gothenburg, Malmö, and Umeå were contacted. Independent schools were chosen not to contact, since they have different regulations and budgets compared to municipal schools. The assumption was that if the service functions for municipal

schools that have a tighter budget and more regulations, the service should also function for independent schools. None of the above replied, which made it difficult to involve the tertiary user in the project. This would, however, be necessary when developing the concept further and creating a more detailed revenue model.

Regarding service design methods, the project was consistently performed in regards to the five core principles: to be *User-centered*, *Co-creative*, *Sequencing*, *Evidencing*, and *Holistic*. The ideation sessions were performed co-creatively with the customers and the company, to involve the stakeholders in the process of designing the service. By doing so, the habits and requirements of the users could be discovered, leading to a service that answers to user needs, while still answering to Micki's brand values and business goals. In addition, the value of the service would be accentuated by providing refurbished toys on the activity center's playground, as well as the awarding of diplomas after participating in toy building workshops; which underlines the environmental benefits that this entails. This, in combination with satisfying the user needs throughout the use of the service, creates a service that is appreciated by visitors/users. However, developing the service further would require an even larger focus on the sequencing and holistic principles of the service design methodology. These principles can be used to a greater extent when going into the more detailed development of the implementation, interface, and user experience of the service. This was not performed in this project due to the time limitations and only constructing a conceptual service for Micki.

Researching the purpose and consumption of children's toys was performed to acquire an understanding of the extent of the production, consumption, and waste of toys. The data that was collected regarding the amount of toys children have on average, was from 2003. Data regarding toy consumption was not found for more recent years, and it could be discussed that these numbers are vastly different today. However, it could also be

argued that there is an increase in the number of citizens in Sweden in 2021 compared to 2003, including an increased amount of children (Statistics Sweden, 2021). Furthermore, the data showing the 2.3 % increase in toy sales from 2019 to 2020 shows that there is an increase in toy consumption. Although the numbers were not known, the conclusion for there being an increased consumption of children's toys and that this consumption needs to change for the environment's sake could still be easily drawn.

The survey respondents consisted of 46 respondents for the private consumers, and 57 respondents for the professional customers. For both target groups, there was a clear majority (>90%) of women responding to the surveys. Although the majority of the respondents were women, it was deemed as more important to have a variety in the nature of private consumers or professional customers that responded. It would, however, be beneficial for the future development of the concept to collect additional responses from a larger variety of people; including more men, non-binary people, and others that might not have been reached through the selected Facebook groups.

Before choosing which target group to focus on, seven private consumers and four professional customers were interviewed. This might have affected the choice of target group since more insights were gathered initially for the private consumers than for the professional customer. On the other hand, since the chosen target group was the professional customer, more interviews were performed, thus, more insights were gathered throughout the project. In total, 11 in-depth interviews of professional customers were performed during the entire project. This made the data collected throughout the project feel reliable, and that the most crucial user needs were discovered. However, since two interviewees were interviewed twice, there was a risk for redundancy in the collected data. This was, nonetheless, not seen as an issue since the collected data showed variety, but also strengthened already

created insights. As well as this, one of the interviewees was contacted for the first interview and for the last interview. During the last interview, when testing the final concept, it was stated that, according to that person, the most important and crucial parts of educating children and facilitating the work of the professional customers were answered in the service concept. Although it is important to not rely on only one respondent, this was seen as conformational of what previous interviewees said when testing the different concepts.

Other methods that might have helped strengthen the project were *SWOT Analysis*, *Customer Journeys*, and a *Function-Means Tree*. A SWOT Analysis would have helped in developing the concept further, by defining the strengths, weaknesses, opportunities, and threats. This was however not performed due to the time limitations. During the development of the concept, it was deemed that a customer journey would need to be created both for the professional customer and the children, to be fully rewarding. However, since this would be a time-consuming process, it was uncertain whether the results of completing the customer journeys would be sufficiently profitable over the invested time period for the method. Additionally, the service was deemed to be too conceptual for creating valuable customer journeys. Therefore, this method was not used for developing the concept further. Instead, the schematic descriptions of the service were made to categorize the details that needed development. The SWOT Analysis and Customer Journey methods could, however, still be used in future work when developing the service further, past the concept stage. The function-means tree was initiated once the final concept had been decided, to help the development of the chosen concept. However, it was realized that the Function-Means Tree method would have been of more help in previous stages of the project, when ideating and creating the different concepts. Therefore, the time was instead invested to focus on the remaining parts of the project, to create a well-planned and thought-through service concept.

11.4 Recommendation

Since the activity center is supposed to be a fun, engaging, and creative space for all children who visit, it is important to construct the activity center in a way that is appealing and functional for all visitors. Therefore, it is highly recommended that when planning the architecture of the activity center, it is done in communication with the professional customers; since they have the most knowledge in children and their different needs. It would also be beneficial to plan the architecture with experts within sound and light design and ergonomics, to ensure the comfort of the children. As well as this, it is important to develop pedagogical educational packages so they can be used by all users, disregarding disabilities.

During the evaluation of the concept *Educational Packages*, it was discussed that there would be a risk for the professional customer not renting packages and only using the service as inspiration. This argument could still hold for the packages rented by the professional customer from the activity center. However, if these packages would be constructed in a pedagogical way with unique materials and instructions, and not only consist of materials for building new toys, the risk for not renting them was viewed as low. For these packages to be desired, they would need to help the professional customer with their increased work on sustainability and improve the children's education within the subject. Therefore, developing these packages would need to be done in collaboration with professional customers, who have insights in the curriculum and who have pedagogical knowledge. Moreover, it would also be important to shape the education at the activity center to suit children of all ages so that visits can be performed throughout the different stages of school, and the activity center could, therefore, be a continued part of the children's education in school.

Furthermore, it would be beneficial to test the revenue model and types of visitors on professional customers and heads of schools.

This was attempted during the project, by contacting different municipalities, but was not rewarding since no answers were collected. Performing user studies regarding the memberships and revenue streams could give insight to the conditions for the professional customer to choose to visit the center, as well as give a basis in what the schools could see themselves paying for such a service.

11.5 Future work

The project goals stated, amongst other things, that the implementation of the service would need to be defined. This would, however, depend on which type of service was designed. Once the service and the business model had been formed, it was defined which were the key activities that needed more investigation to implement the service in reality. These consisted of, amongst others, creating a collaboration with craft shops for waste materials, preparing the material for usage (take away sharp edges/dangerous objects), storing the material in the activity center, and shaping the introductory education for the teacher. Due to the time limits of the project, this was not possible to be looked at further. However, for future development of the service, these aspects would be necessary to explore further and define on a more detailed level.

In this project, the focus was on creating a service for private consumers or professional customers. Since the chosen target group was the professional customer, the private consumers were not taken into consideration in further steps of the project. However, insights regarding private consumers' needs and requirements were concluded. It was discovered that a service for more sustainable consumption of toys would be of interest to private consumers as well. Additionally, a service helping first-time parents with their doubts, worries, and thoughts on being a parent would also be of interest. This would

be beneficial and important for Micki to explore further in a different project. It was also discovered during the research that toys are used within eldercare. This was not researched more upon due to the time frame of the project but would be beneficial to explore further. Developing a service for more sustainable use of toys in elder care could improve the perception of the brand: caring about children throughout their lives, from their childhood to old age.

Once the service was developed, it was also discussed if private people could use the service as well. Since the service is partially based on teaching about sustainability pedagogically, this would be possible for all types of users. However, the initial education teachers go through before visiting or receiving packages from the service might not be given to private people. On the other hand, the activity center could be constructed so that the initial education is not necessary for a visit. Moreover, since the activity center is intended to be for professional customers who visit during school hours, the center will most likely be vacant during weekends. Therefore, it could be possible for private people to visit the activity center during these hours. This would need to be investigated and developed further, to see if private people would like to visit the center, and what their incentives would be. Logistics regarding this would also need to be developed further, since for example the toy-building workshop would need to be supervised and most likely performed in groups, for a calmer and safer environment.

The platform for booking the visit at the activity center and ordering materials to rent for working with in school would need to be developed in the future. This platform would need to be designed in the same way as Micki's current homepage, to create consistency in Micki's offer.

12. CONCLUSION

In conclusion, by using user-centered design and service design methods, a service that contributes to a more circular and sustainable lifestyle has been created. The service includes watching movies, theatres, and reading books about sustainability. As well as this, workshops for children to build new toys using old toys and waste materials, are included at an activity center. The service teaches children about sustainability in a concrete way and offers the possibility to rent packages with materials to the school. By connecting the service to the curriculum, and facilitating the work of the professional customer, the service is a distinct option for learning about sustainability in school; and possibly shapes future citizens to maintain a more sustainable lifestyle.

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Appendix A: Top of mind

Play center where you can play and try Micki's toys to know which toys you want to rent, and maybe meet other families and become friends.

Service that sends out ready-made packages containing things that are in the school curriculum and that are needed for that age. Can also modify the packages as needed. Choose to rent packages that suit your needs.

Toy library where you can choose freely / Replace and return the toys that are not used. "Take everything you want" (For a certain amount? Different limits are exceeded). Either online or physical library. Pay a rather expensive amount to have the opportunity to freely choose exactly what they want - exchange and replenish without limits.

After the entire renting cycle, toys can be donated to, for example, orphanages

Include "stories" or "memories" with the toys where previous users tell about their relationship to the toys.

Rent "on-demand" only on special occasions/needs, birthday parties, etc.

Or rent a week over Christmas or similar when the grandchildren come to visit. Rent for the summer cottage, etc. Or that renting toys is available as an option for hotel vacations/visits.

Subscription where you get home new things every month.

A platform where people can exchange toys with each other.

People who have bought Micki toys that join the service can choose to send back their old products, which Micki can then rent out or donate to orphanages or the like. The customer can then get a discount on the service or a small amount back.

Can choose in the service that while renting toys, you can donate a toy/penny to one of the organizations Micki collaborates with. A toy is sent at the start of the service, then another one every 12 months or so. A small sum of all income from the service goes to the needy.

Every other week life - Get two sets for the price of 1? 1.5?

Several sets, house 1 has set A, house 2 set B, house 3 set C, then after 3-4 months, the sets are rotated via the service so house 1 gets set B and so on. However, this only happens between a few people and in a close environment to each other, such as the neighborhood, so that you know who they all are instead of it becoming someone unknown - creates security and a community.

APPENDIX B: Currently Available Services

Services for children's products

HYBER

Hyber (<https://hyber.com/>) is a Swedish company that provides a service in which it is possible to rent children's products such as clothes, carriages, and slings, for children of ages 0-12 months. As a consumer, one can choose to rent either a single product or a package of different products. There is no binding time and the cost of the service depends on how much one rents. The user decides when it is time to change products, and everything is controlled via an app. The cost of shipment is included in the monthly fee, and the return note is also attached to the initial shipment. Once the products are returned to Hyber, they are cleaned, mended and quality assured before coming back into the service and being shipped out again to a new user. During the rental period of the products, the user is responsible for the product not being lost or destroyed more than regular wear and tear. The wear and tear are controlled and measured by Hyber, which makes sure the products are usable for another cycle in their circular system. If a product is lost or destroyed more than accounted for, the user stands for the costs of the product in question. The cost depends on the decreased value of the product, if it is destroyed, or how much a similar product would cost if the product in question gets lost. The products in the circular system are owned by Hyber, and may not be sold or lent by the user. If the rented products are not returned, the user stands for the costs of replacing them. When returning the products to Hyber, the costs of renting them continue until they are received by Hyber.

WHIRLI

Whirli (<https://whirli.com/>) is a London-based company that allows private consumers to rent their own hand-picked packages of toys from a library of over 1000 toys. Users may freely choose a subscription plan depending on the amount of *Whirli Tokens* they would like to spend on toys from the Whirli library. One Whirli Token equals £1 retail price, so a toy worth £20 at retail would cost 20 Whirli Tokens. Once the user has chosen which toys they want to order in their toy package, with their available Whirli Tokens, the package is sent home for use. During the subscription period, the toys can be kept for as long as desired or be swapped for other toys from the Whirli library. Users have the freedom to send everything back, or just send back certain toys whenever they want; and for each toy that is sent back, their Token allowance is credited with equivalent Tokens that can be used for changing to other toys. Toys that are especially appreciated can be bought for less-than-retail prices. Additionally, if a toy is kept for over eight months, the user gains ownership of that toy.

Whirli provides durable toys that are suitable for children between newborns and 8 years old, and that meet all UK and EU safety standards. After use, the toys are collected at Whirli's facilities, where they are sterilized before they are sent to another family. Reasonable wear and tear of the toys are always included, but in case there is extensive damage, the user might need to pay for keeping the toy or for a replacement of that toy. However, the price for this is never more than what the toy would cost at retail. Whirli also offers a courier collection for returns.

LEWISHAM TOY LIBRARY

Lewisham Toy Library (<http://lewishamtoylibrary.org.uk/>) is a toy library based in Lewisham, London. The library is run by a board of volunteers and a librarian who maintains control and order of the stock. The librarian helps select what toys would suit the children. The idea with the library is for it to be a place where children and parents can visit, find one or several toys that they like, and then take the toys home. Anyone living in the local area of Lewisham Burroughs and who is a member can rent toys from the toy library. Lewisham Toy Library does not only rent out “regular” toys but also bigger and more expensive toys such as trampolines and tents, as well as furniture, for example for birthday parties. The toy library receives donations both in the shape of money and in the shape of toys. Renting toys from the toy library is free of charge, but the membership’s cost depends on the type of membership. Different memberships last for either 6 or 12 months and are aimed at single-child families, multiple-children families, families with income support, childminders, or organizations. Depending on the type of membership, different amounts of toys and larger items can be rented. The rental period for all memberships is 4 weeks. If rented toys and items are broken, damaged, or missing, the customer stands to pay for the damage. The cost of this depends on the popularity, age, and price of the item.

CHARLTON TOY LIBRARY

A similar concept, that is more in line with the Swedish Open Daycare is the Charlton Toy Library (<http://www.charltontoylibrary.co.uk/>), where parents/legal guardians and the children can come to play, meet other parents/legal guardians and children, or get advice from the staff. Charlton Toy Library is an independent voluntary group, located in Charlton, London. Charlton Toy Library offers playtime and borrowing sessions thrice a week, basic safety advice at home, and offers as well to visit the homes of those who worry about the children’s safety. Charlton Toy Library also has a project helping families and children in need, by supplying advice, support, and necessary equipment for kids to “just be kids”. They also focus on women refugees, helping them come into society and to give them support with their children. These so-called outreach services are free for the members receiving help. Since Charlton Toy Library is an independent voluntary group they stand for their own finances and have been receiving donations for their outreach services from BBC Children in Need.

PIMLICO TOY LIBRARY

Yet another similar concept is the Pimlico Toy Library in London (<http://www.pimlicotoylibrary.org/>). It is a registered charity that works similar to Swedish Open Daycare. The idea of the Pimlico Toy Library is to create an atmosphere where it is safe for children to play and explore new things, and for the parents to feel safe in their children’s playing. Each session, which lasts 2 hours, is held either during the morning or the afternoon, from Mondays to Wednesdays, and costs 1£. In order to book sessions, one has to be a member, which costs £20/12 months. With this comes access to all toys, games, and other materials that exist in the toy library. These items can be rented for £50/week. Toy librarians are there to help choose fun and developing games and toys and to create a safe space for the children and the parents.

ECOBIRDY

EcoBirdy (<https://www.ecobirdy.com/>) is a Belgium company, based in Antwerpen, that collects plastic toys, recycles the material, and creates new furniture for children out of recycled plastic. The collected plastic products are brought to a recycling center they collaborate with. The products are ground into smaller fragments, washed, and automatically sorted. The materials are constantly quality checked, both by humans and by machines. A binding formula for polymers is used to create ecoBirdy's patented material *Ecothylene*, which is made only by recycled plastic. Due to Ecothylene being made of only recycled plastic, it can as well be recycled after use. EcoBirdy uses one-piece technologies, where one mold is used for the entire product, to create furniture out of Ecothylene.

EcoBirdy partners with Mustela, a company that focuses on skin care for newborns and mothers, to reduce and recycle plastic waste. They have also partnered with local schools to teach children how to recycle toys, and create something new out of the recycled plastic; the mission was to teach children about the circular economy in a practical way.

Other types of services

SELLPY

Sellpy (<https://www.sellpy.se/>) is a Swedish service that enables selling and buying clothes and other objects second-hand. Sellpy takes 20% of the sales income. The person who is selling products pays 19 SEK for each bag they order from Sellpy, which they fill with the products that are being sold. These bags are then shipped back to Sellpy, either via the postal service or by Sellpy picking up the goods at the specified address for free. The shipping fee is included in the cost for the Sellpy bag. Once the goods have arrived at Sellpy's storage unit, they are made sure to be in good shape. Sellpy then uploads the products on their homepage with a price they set themselves, of minimum 50 SEK, based on their 700 000 previously sold products. The person selling their things can keep track of the process and edit the advertisements. If the seller regrets selling their things, they can cancel the sales and have them shipped back, for 10 SEK (advertisement fee)+shipping fee.

The products being sold on Sellpy are initially uploaded on Tradera, and when not getting sold, the price is lowered, and the product shifts between auction and fixed price. After being unsold for 90 days, the products are donated to charity. Unsold products are donated to Stockholm Stadsmission, Myrorna, or are recycled.

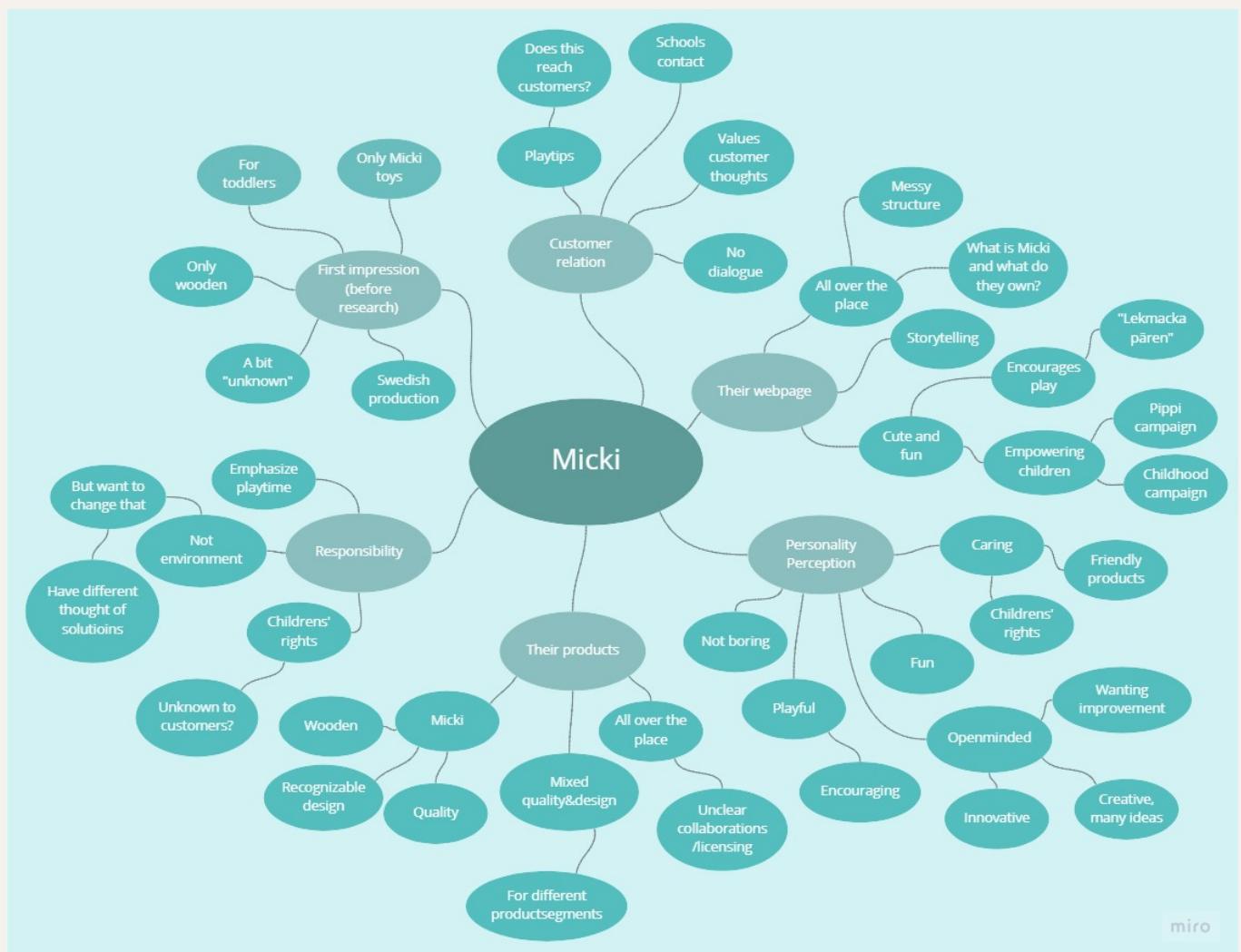
When selling products, one can choose to donate the money, receive it oneself or use it as Sellpy-credits for further purchase. Sellpy collaborates with SOS Barnbyar, Stockholm Stadsmission, Greenpeace, Rädda Barnen, Radiohjälpen and UNHCR, for donations.

HYGGLO

Hygglo (<https://www.hygglo.se/>) is a Swedish service where it is possible for private people to rent different products from each other. It does not cost to put up ads on the homepage, but Hygglo takes 20% of the rental costs (50% for drones). The cost for renting the products is

displayed on the ad as a daily cost, that is summed up for the entire rental period. For the person renting a product, there will be an additional booking fee. The payment is initially reserved and paid out once the rental period is over. The person who is renting the product needs to check the calendar if the product is available, and then send a request for it. Upon confirmation of the request, done by the owner of the product, the renter gets a notification via the app or a text message. The payment is done in order to book the product, and the time and place for a pick-up are decided by the people involved. Today it is not possible to extend the rental period. Hygglo has insurance up to 30 000 SEK excluding deductible. If the products are more expensive than this, Hygglo's insurance will cover the deductible, but the person renting out the products needs their own insurance for the product. Hygglo's insurance includes comprehensive insurance and insurance to reduce deductibles. Scratches and other wear and tear from regular usage, that do not affect the function of the products, are not included in the insurance. The insurance is only valid in Scandinavia and for 90 days. Since it is private people posting products or rent on the homepage, there is no specific type or age group of the products that are up for rent.

APPENDIX C: Mind Map of Micki's Brand Values



APPENDIX D: Toy Categories

Wood toys

What was categorized as wood toys were toys that were made of wood and that were of simple geometry with no greater details or side-functions. Examples of this can be seen in Figure 1 below.



Figure 1. Examples of wood toys.

Roll Toys

Regarding the roll toys, they were defined as toys on wheels and are pulled by a string or a handle. See Figure 2 below for an illustration of these toys.



Figure 2. Examples of roll toys.

Motoric toys

Motoric toys are defined as toys that help develop and evolve the children's motoric senses and abilities. This toy category includes several types of toys, and can be seen in Figure 3 below.



Figure 3. Examples of motoric toys.

Dolls

This category is defined as the classical dolls imitating babies and children. A few examples of these dolls are seen in Figure 4 below.



Figure 4. Examples of dolls.

Doll houses

This toy category includes doll houses of various sizes and materials. See Figure 5 below for an illustration of different doll houses.



Figure 5. Examples of doll houses.

Figurines & Play worlds

Regarding this category, it includes small figurines, often made of plastic, and playworlds that illustrate different scenarios in reality or different scenarios for the figurines to be in. See Figure 6 below for examples of this toy category.

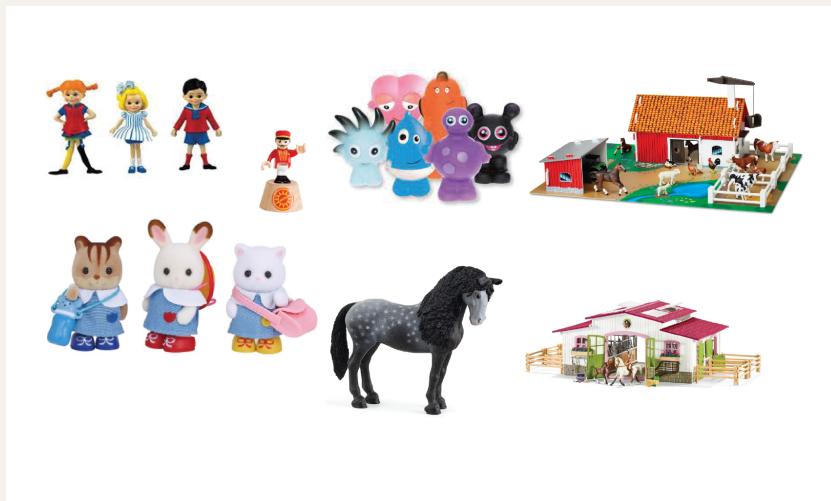


Figure 6. Examples of figurines and play worlds.

Fantasy/Role Play

Lastly, the category *Fantasy/Role play* includes toys that belong to an imaginative world or that allow the children to play and act out different roles. Figure 7 illustrates a few examples of what this category includes.



Figure 7. Examples of fantasy/role play.

Appendix E: Competitor analysis

Building Blocks

Building blocks are most often made out of wood and can have different shapes and sizes. The most common types of building blocks were taken into account in this analysis, see Figure 1 below. After the different building blocks were found and their prices were written down, it was possible to create a linear axle comparing affordability, simplicity, colors, and innovation. See Figure 2 below.



Figure 1. Illustration of the different wooden toys made by Micki and their competitors.



Figure 2. Linear axles comparing affordable vs expensive, simple vs detailed, dusty colors vs strong colors, and classic vs innovative, for building blocks.

What was concluded here was that Plantoys, Sebra, and Kid's concept were the most expensive brands. Melissa&Doug, Micki, and Brio were the most affordable ones in this category. VIGA, Classic World, and Hape were in the middle, while Jabababado was slightly more expensive.

Regarding the simplicity of the building blocks, which refers to how they are decorated on the surface, Sebra was the most detailed one, although they were not completely cluttered with details. Micki and Jabababado were second-most detailed, placed in the middle between detailed and simplistic.

When comparing the colors of the brands, Brio, Hape and Melissa&Doug were the strongest colored brands, closely followed up by Classic World and VIGA. On the opposite end, Plantoys, Sebra, and Kid's concept were the dustiest colored brands, followed by Jabababado. Micki has dusty colors by using pastels, but since their colors are a bit brighter and less grey-scaled than those of for example Jabababado and Sebra, they were placed closer to the middle.

Finally, the innovation of the brands was compared. What was meant by this was how innovative and new the design of the toys were, compared to the more "classic design" of them. Here, Brio, Viga, Classic World, Hape, and Melissa&Doug were brands with toys that are most in line with the classical design. Micki was deemed as being slightly more innovative, since they have small details on their building blocks, instead of empty, mono-colored sides. Since Jabababado included stars and other shapes on the surface of their building blocks, they were seen as more innovative than Micki. Kid's concept and Sebra were ranked as most innovative since their building blocks were different sizes and included numbers, patterns, and small paintings on the surface.

Roll Toys

What is meant with this category, is toys that are pulled with a string and propel forward with the help of wheels. Different toys from different brands were collected and analyzed, see Figure 3. Here, the most classic roll toys are seen furthest up to the left, and there are also images of wagons, seen furthest down to the right, as well as low carts to the left. Once the different models from the different brands were found, they could be compared according to the same categories mentioned in the previous section, see Figure 4 below.



Figure 3. Different rolltoys, made by different brands.



Figure 4. Linear axles comparing affordable vs expensive, simple vs detailed, dusty colors vs strong colors, and classic vs innovative, for rolltoys.

What was concluded from this was that VIGA and Hape were the most affordable brands within this category, followed by Brio, Plantoys, and Classic World. Micki and Jabababado held the same price range when it came to roll toys, being almost in the center between affordable and expensive, followed by slightly more expensive Fisher-Price and Melissa&Doug. Most expensive was Sebra, followed by Kid's concept.

Regarding simplistic design, Sebra and Kid's concept were most simplistic, closely followed by Jabababado. VIGA was also seen as simplistic, although the design of their toys varies a lot; sometimes they're simplistic, sometimes they're detailed. Here, Micki was centered between simplistic and detailed since the toys are in general very stripped, but with a colorful or "funky" detail such as using patterned fabric for the tail of the whale, see Figure 3 above. Brio, Hape, and Plantoys were seen as slightly more detailed due to them having additional

parts sticking out of the toys, and creating them in more innovative shapes than Micki, for example, Plantoys bunny that is curved. The most detailed roll toys were from Melissa&Doug due to their toys being colorful, patterned, and made of different shapes. For similar reasons, Classic World was seen as the second most innovative, followed by Fisher-Price.

Sebra and Kid's concept used dusty colors the most, shortly followed by Jabababado. VIGA and Micki were thought to use dusty colors, but that are more bright than gray-toned. Hence, they were placed closer to the middle, with Micki having brighter colors than VIGA. Brio, Hape, and Plantoys were seen as using equally strong colors, and much more than Micki. The products with the strongest and flashiest colors were those of Fisher-Price and Melissa&Doug, followed by Classic World.

Since Classic World has roll toys made of different shapes that move when the toy is being pulled, they were seen as most innovative. Following Classic World, Kid's Concept and Sebra were seen as the second most innovative since their roll toys consist of stuffed animals, which is not quite as common as wooden or plastic ones. In the middle of the linear axle, placed more to the innovative side, lie Plantoys, Hape, Micki, and, partially, Brio. This placement was based on the fact that roll toys from these brands were mostly wooden, and had some detail that made them stick out. Rolltoys by Plantoys had details that were sticking out of the general shape of the toy, for example, bunny ears, and making the bunny from a curved piece of wood. Hape and Micki were similar to Plantoys in this aspect, where Micki used patterned fabric for the fins and water coming out of the whale. For similar reasons, Brio was placed in this group, although seen as slightly less innovative since their wooden roll toys were more of a classic shape with less innovative details such as the antennas of the bee, which can be seen in many different types of products from different brands. Fisher-Price was seen as less innovative than this since their roll toy is made of plastic, which is a common material, as well as being of a well-known shape. Melissa&Doug were also placed here since their roll toys are classic wooden cutouts that are quite common in different products. More towards the classic side lies VIGA. This was, however, difficult to decide upon since their product line is varied and of a wide range. On the other hand, their roll toys were either classical trains or cutouts of animals. Both of these things are quite practiced by other brands, and, therefore, VIGA was put closer to the classic end of the linear axel. The most classically styled roll toys were by Jabababado since they were classic painted cutouts with no ejecting details or special shapes.

Dollhouses

The brands that make dollhouses do not always make toys of the previously mentioned categories. For example, Sylvanian Family and Hasbro are brands that have not been mentioned previously but are quite large in the market for dolls and dollhouses. Some examples of the many different dollhouses and brands are shown in Figure 5. The difficult part with analyzing these toys was that the price varied a lot within the same brand, making it difficult to compare the brands' prices with each other. The drawn conclusions can be seen in Figure 6 below.



Figure 5. Dollhouses from certain, leading, brands.

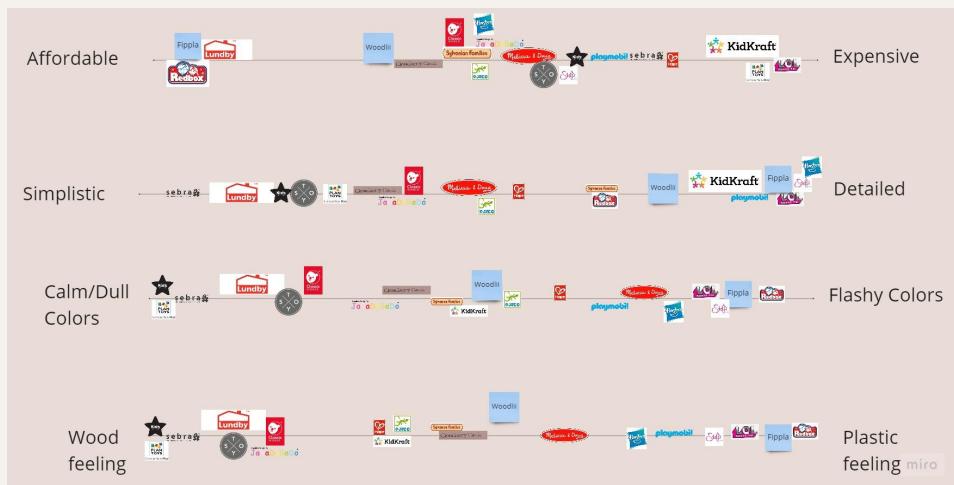


Figure 6. Linear axles comparing affordable vs expensive, simple vs detailed, dusty colors vs strong colors, and classic vs innovative, for dollhouses.

The most expensive dollhouses were from L.O.L, Plantoys, and Kidkraft. Followed by Hape and Sebra who had a similar price range, although Sebra was slightly less expensive. Playmobil was close in price range but slightly less expensive than Sebra. Cheaper dollhouses, but still on the expensive side, were from Kid's concept and Steffi. When it came to deciding the placement for STOY, it became difficult due to them having a price range from 249 SEK to 1999 SEK. What was concluded was that the average of STOY's price range placed them on the slightly more expensive side of the center of the linear axle. Similar conclusions were drawn for Melissa&Doug, although they were placed as being slightly less expensive than STOY. In the center, Jabababado, Hasbro, Djeco, Sylvanian Families, and Classic World were placed, due to the average of their price ranges being in between

affordable and expensive. Cloudberry Castle was similar, although slightly more affordable. Woodlil was even more affordable, although some of their dollhouses were of similar cost to those of Cloudberry Castle. On the most affordable end were Lundby, Redbox, and Fippla.

In regards to simplicity, Sebra and Lundby were seen as quite simplistic and similar to each other. Both are stripped and use few colors that are a bit grey-scaled. For similar reasons, Kid's concept was also seen as simplistic. As well as this, STOY was simplistic, but less so due to smaller details such as roof panels, windows, and fences. Although Plantoys were simple regarding not using any color for their dollhouse, they were still seen as more detailed since the structure of the dollhouse was more complicated with windows, pillars, and embellishments above the windows and door. Cloudberry Castle, Classic World, and Jabababado were seen as having about the same level of simplicity, although nearing the center of the linear axle. Melissa&Doug and Djeco were placed in the middle, due to their dollhouses being generally simply shaped with some detailed structures, colors, add-ons, etc. Hape was similar to these brands, though being more detailed with grass lawns, pools, etc. as a part of the dollhouse. Going more towards the detailed dollhouses were Sylvanian Family and Redbox, followed by Woodlil. The most detailed dollhouses were from Hasbro, Steffi, and L.O.L, as well as from Fippla, Playmobil, and KidKraft. These dollhouses were detailed with fences, stairwells, intricate roofs, decorations, towers, and more.

When comparing the color scheme of the dollhouses, Kid's concept, Plantoys and Sebra were seen as most dusty and calm since they mainly did not color their wood. Lundby, STOY, and Classic World followed shortly after, due to them having certain grey tones and some lighter colors. Jabababado and Cloudberry Castle were placed closer to the center due to their colors being slightly brighter. In the middle, Sylvanian Family, Woodlil, KidKraft, and Djeco were placed, due to them being colorful, although these colors were not too bright or flashy. Hape was similar but used slightly stronger and flashier colors. The dollhouses with the strongest colors were from Redbox, Fippla, L.O.L, and Steffi. Playmobil was close to being equally flashy, followed by Hasbro.

For the dollhouses, it was difficult to compare classic vs innovative design. Instead, the wood feeling was compared to the plastic feeling of the dollhouse. Here Kid's concept, Sebra, Plantoys, Lundby, STOY, Jabababado, and Classic World maintained the highest wood feeling since it was directly visible that the dollhouse was made of wood. Although it was visible that KidKraft, Hape, and Djeco were made of wood, they had details that made the house more plastic feeling, placing them closer to the middle. In the middle were Sylvanian Families, Cloudberry Castle and Woodlil, since they look a bit plasticky but still in a calm way, resembling wood, and also potentially combining the two materials. Melissa&Dough were on the more plastic side of the middle, due to them combining the two materials but using plastic more than wood. Redbox, Fippla, and L.O.L. were entirely made out of plastic, which was directly visible. Hence, they were placed furthest to the right on the linear axle. Following them came Steffi, then Playmobil, and Hasbro. The dollhouses from these brands were also made of plastic, but since they were more open and airy with the protruded windows and other details, they felt less plastic.

Motoric Toys

Lastly, motoric toys were analyzed. See Figure 7. Starting this analysis, the motoric toys were compared to the linear axles made for the building blocks, since they, in general, are also made out of wood and could be seen as quite similar. This was also done in order to understand if the conclusions drawn from one category could be compared to toys in a similar

category. What was concluded was that in general, the conclusions from the building block analysis could be applied to the motoric toys. However, the one thing that differed between these categories was the price range. Therefore, a comparison of the prices amongst motoric toys was made, see Figure 8.

What was concluded from this was that Fisher-Price was the most affordable in this category. Melissa&Doug came second, placed closer to the middle. Micki, DJeco, Brio, VIGA, Jabababado, and Hape were placed. STOY belonged more on the expensive side of the middle. The most expensive toys were by Sebra and Kid's concept. Following them came Plantoys and Classic World. Yet again, comparing prices was difficult due to the varying price range of the brands. However, these conclusions were drawn from comparing the average of the price range of the brands, and also their most expensive vs least expensive toys.



Figure 7. Different motoric toys made by different brands.



Figure 8. Linear axles comparing affordable vs expensive motoric toys.

APPENDIX F: Survey answers for Private Consumers

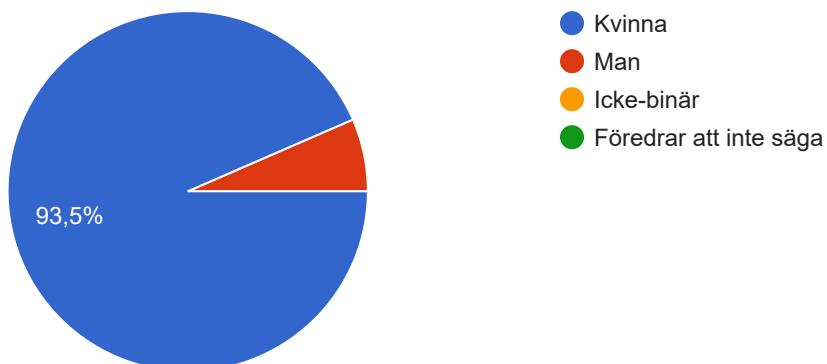
Barnleksaker och köpvanor

46 svar

[Publicera analyser](#)

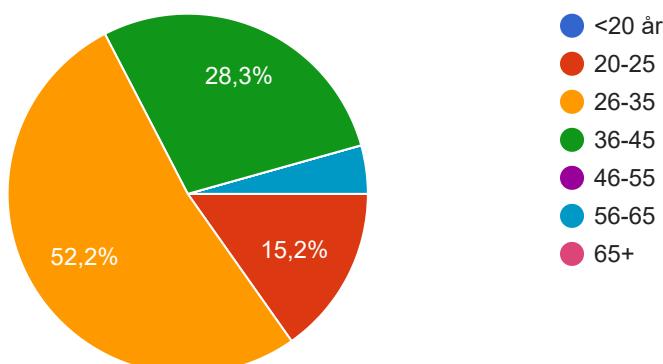
Vad identifierar du dig som?

46 svar



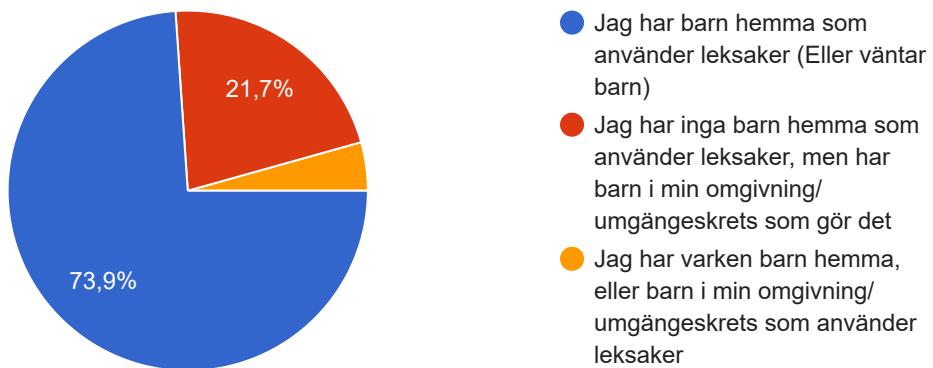
Vilken åldersgrupp tillhör du?

46 svar



Välj det alternativ som stämmer dig bäst. (Leksaker inkluderar INTE tv-/data-/mobil-spel eller bollsporter)

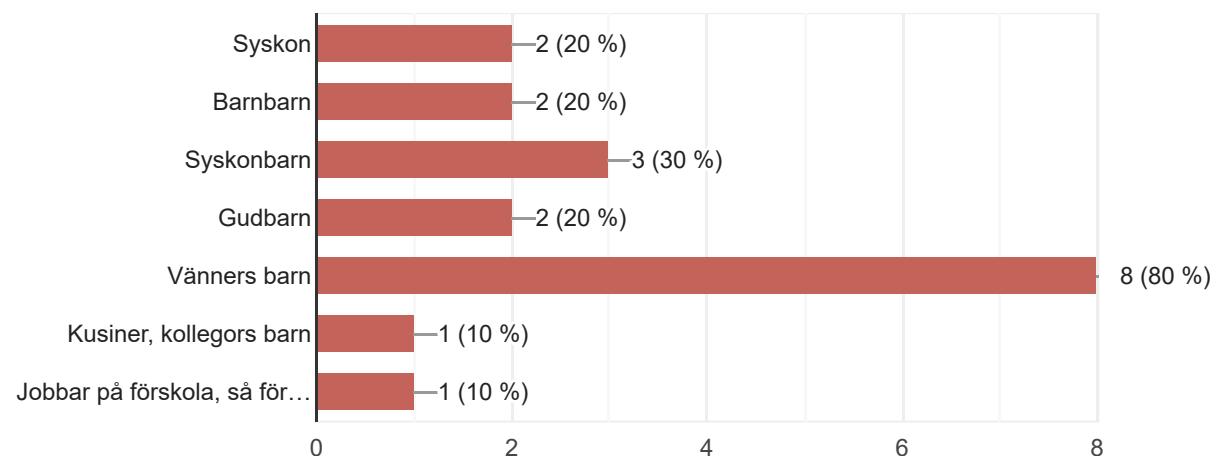
46 svar



För er med barn i er omgivning/umgängeskrets som använder leksaker

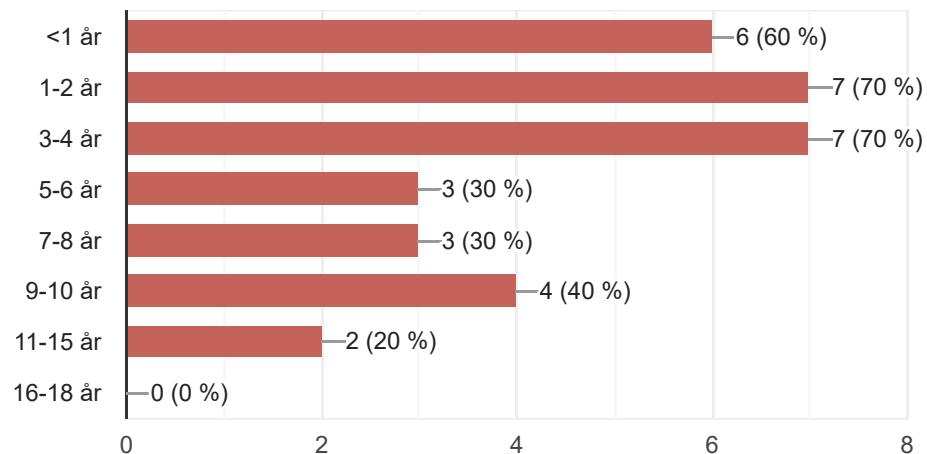
Vilka barn i din omgivning/umgängeskrets använder leksaker?

10 svar



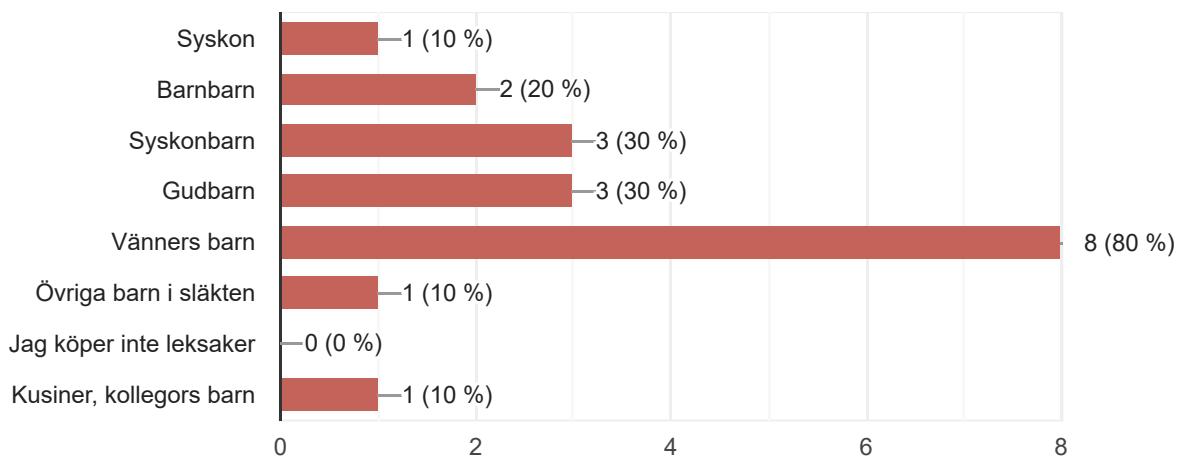
Vilken åldersgrupp tillhör barnet/barnen?

10 svar



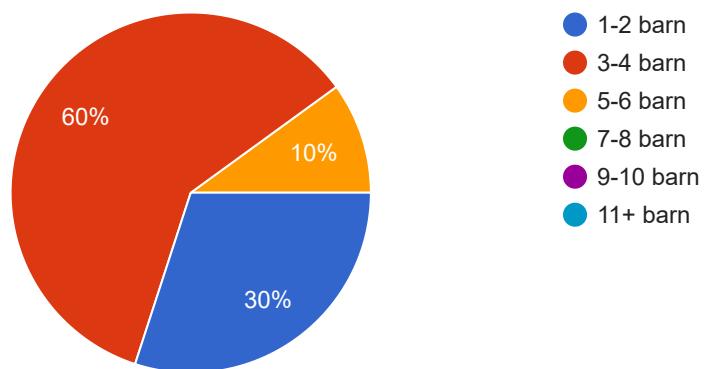
Vilka köper du leksaker till?

10 svar



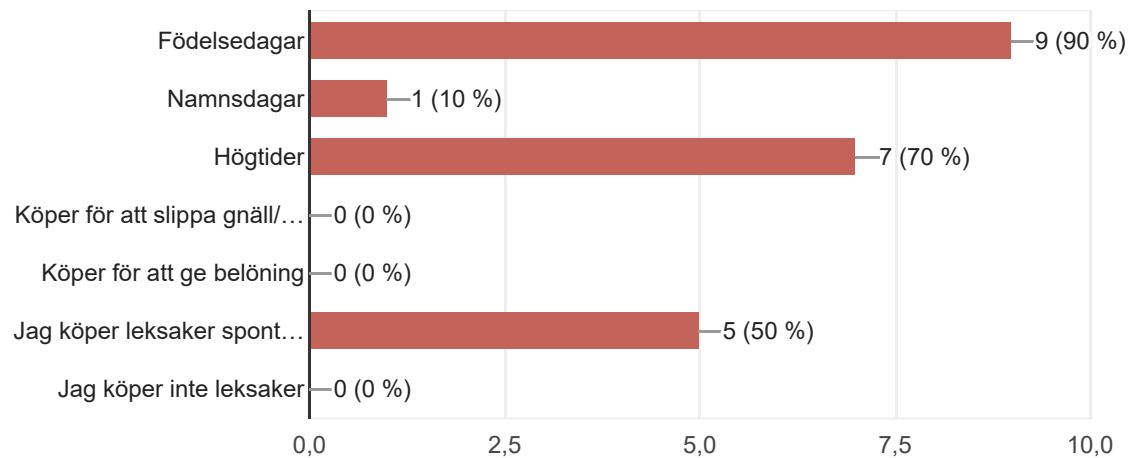
Hur många barn köper du leksaker till?

10 svar



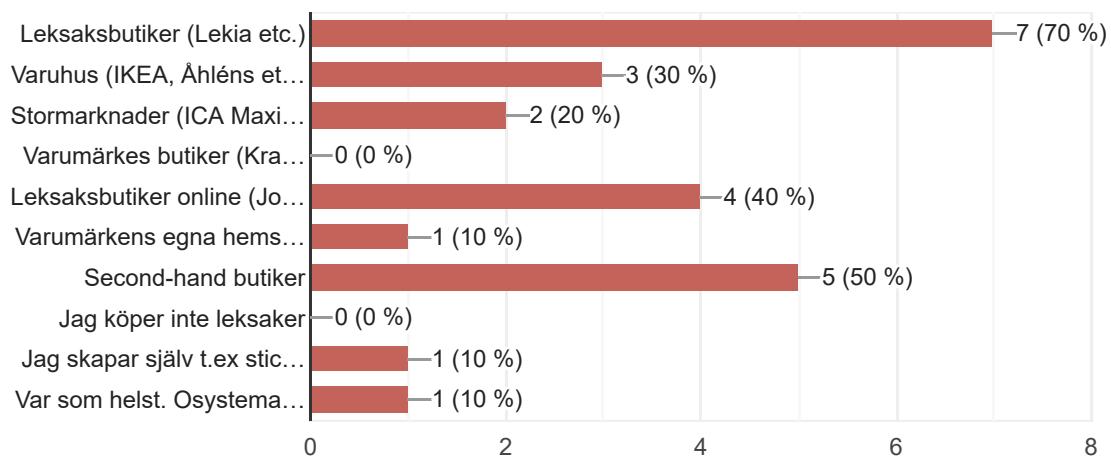
Vad driver dig till att köpa leksaker?

10 svar



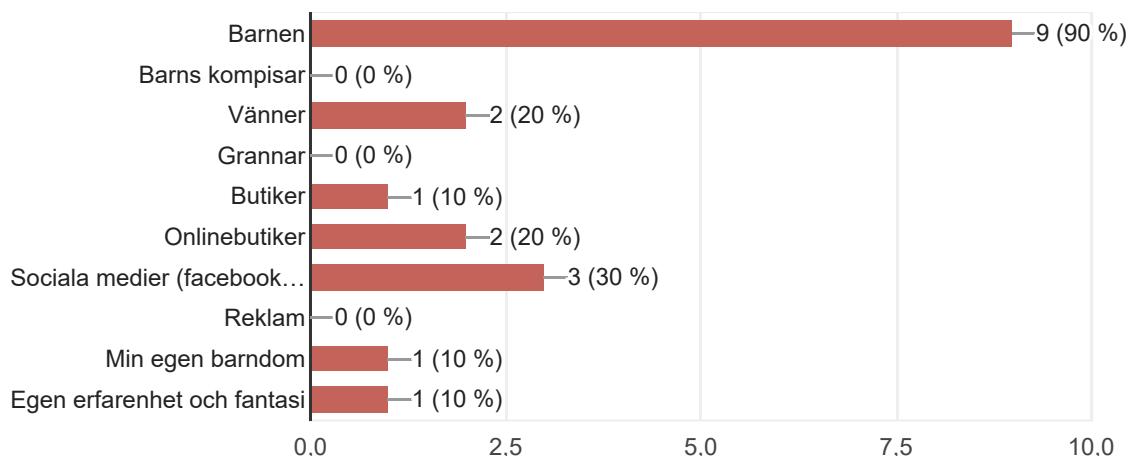
Vart köper du leksaker?

10 svar



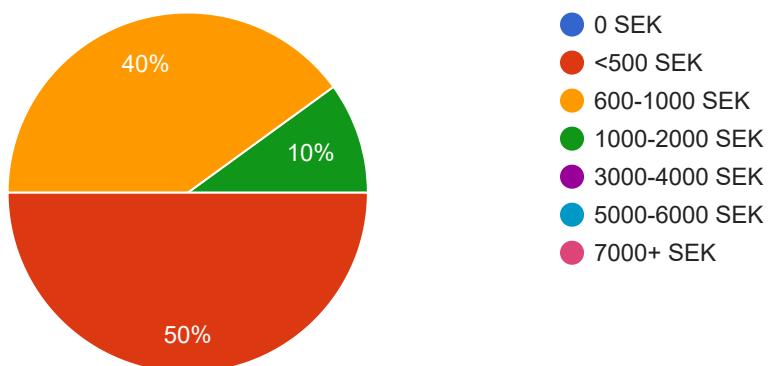
Varifrån får du din inspiration när det gäller barnleksaker?

10 svar



Hur mycket lägger du i genomsnitt per år på att köpa leksaker?

10 svar



Vilket är ditt favorit varumärke när det kommer till leksaker? Varför?

10 svar

uppskattade av barnen.

Olika förlag på grund av att de skriver normkritiska barnböcker.

disney leksaker

Lego. Bidrar till så mycket kreativitet!

Har ingen favorit varumärke i det här

Har inget

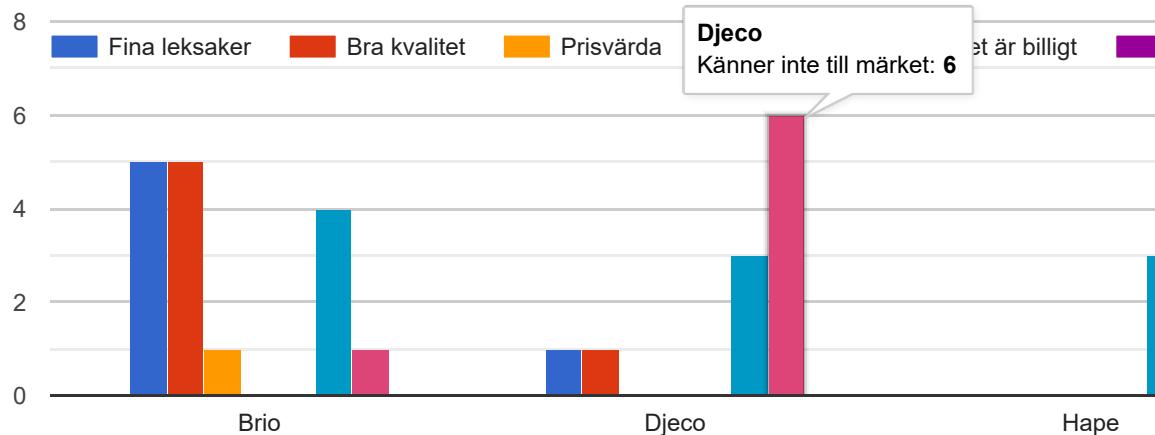
OLIKA förlag. Dom ger ut barnböcker och även vissa leksaker såsom gosedjur. Därför att dom gör allting ur ett normkritiskt perspektiv.

Brier. Bra kvalitet

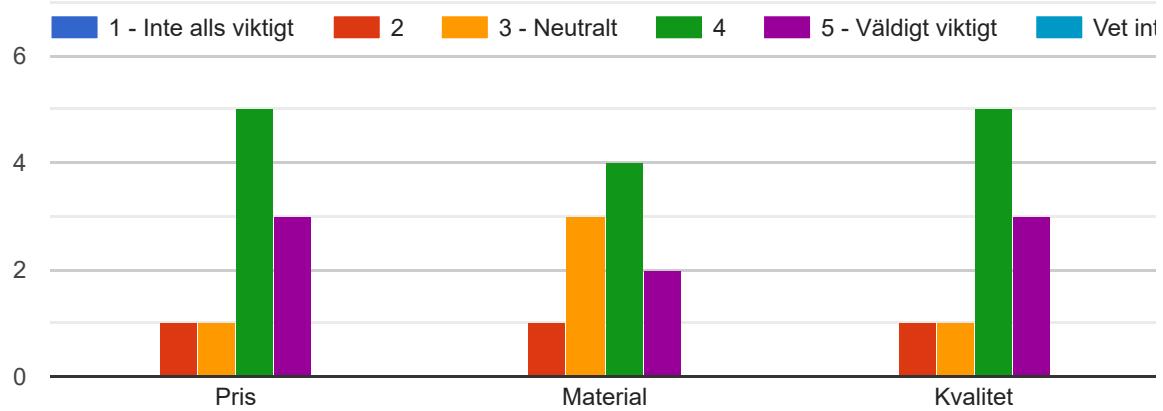
Vet ej



Kryssa i vad du tycker om leksaker från följande varumärken (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Hur viktigt är följande när du köper leksaker? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Vad är det jobbigaste med att köpa leksaker?

10 svar

Kostar pengar

Ju äldre barnet en ska handla till desto svårare är det om en inte känner barnet riktigt väl.

Sedan tycker jag väl att många leksaksaffärer kan vara intrycksmässigt väldigt överstimulerande.

Att de flesta inte är könsneutrala.

vet ej

Att hitta något som går hem hos barnen, uppskattas av föräldrarna och känns etiskt försvarbart att köpa.

Vad ska man välja?

Tänker på miljöpåverkan och skulle vilja köpa begagnad, men skulle inte accepteras av barnens föräldrar



Vad är det roligaste med att köpa leksaker?

10 svar

Glada barn

Att tänka på vad en själv tyckte om som barn och att vara uppmärksam på det taktila, hur det känns i händerna. Om det finns ett kunnigt & engagerat butiksbiträde att bolla med är det allra bäst.

Att köpa lärorika leksaker som barnet kan ha nytta av och lära sig saker från.

barnen blir alltid glada

Att se hur påhittiga många leksaker är

Att barnet kommer bli så glad

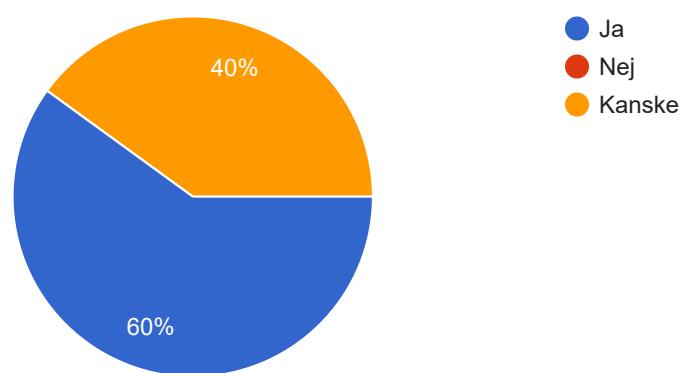
Att barnen blir glada

Att se barnet i fråga bli glad över och använda leksaken.

Skulle du kunna tänka dig att hyra leksaker istället för att köpa dem?

Exempelvis när du vet att du kommer ha barn i hemmet under en period.

10 svar



Varför/varför inte som fortsättning på frågan ovan?

10 svar

Ja, absolut! Jag väntar barn, det är dyrt med allt som behövs till barn.. kan man hyra för ett bra pris där leksakerna är miljövänliga, kemikaliefria, hälsosamma, prisvärda (så man tjänar på att hyra) !

Av någon anledning känner jag mig mest bekväm med begagnade leksaker som liksom kommer från mig, jag har sparat lite av mina egna grejer bland annat som minnen men också med typ att ha barn på besök i åtanke. Att det är begagnat blir kompenserat med att det är personligt typ. Nu har jag ju inte egna barn men kan föreställa mig att en del leksaker som t ex är mer skymmande och specifikt till för att leka i grupp skulle funka att hyra.

Tycker om återvinning! Leksaker ska inte heller vara en klassfråga!

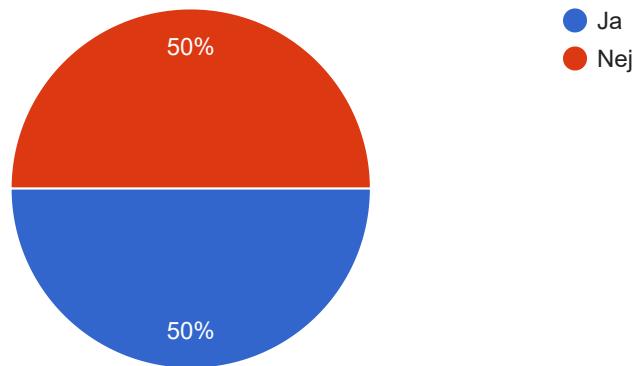
för man säljer/skänker ändå alla leksaker när barnen blir stor

Jag tänker att leksaken kanske går sönder och att det då är jobbigt om den är hyrd.

Vet inte om det blir aktuellt för mig, men kanske

Känner du till Micki Leksaker AB?

10 svar

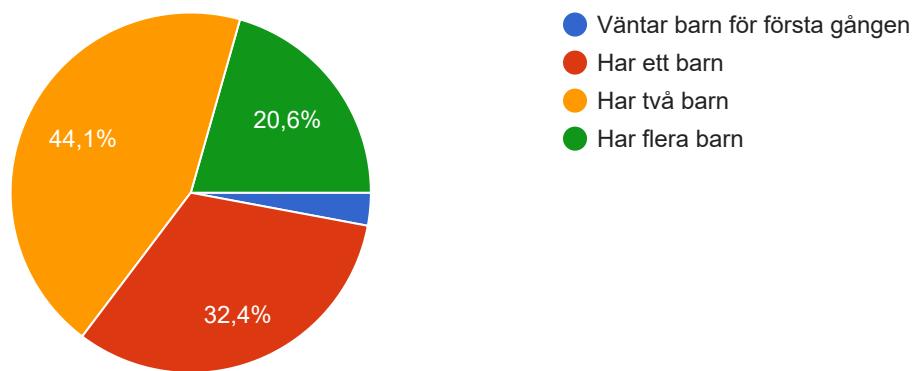


För er med barn hemma som använder leksaker



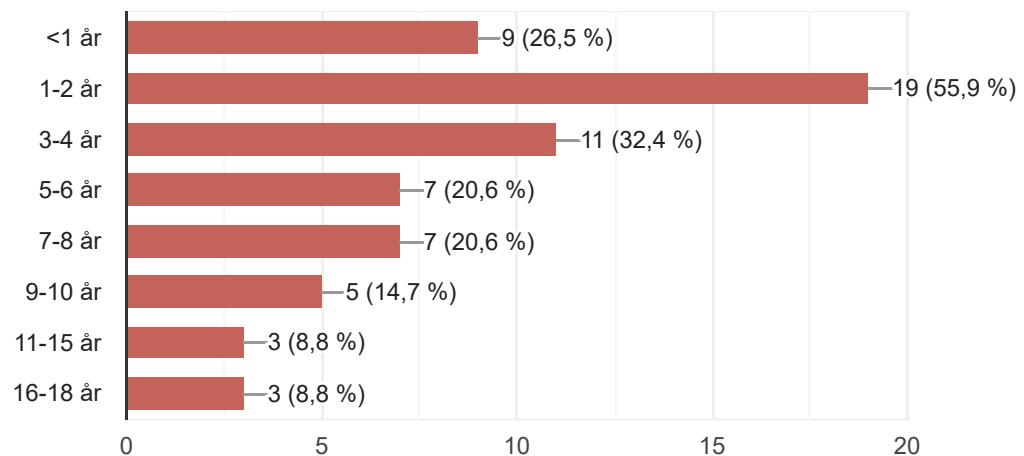
Kryssa i det som stämmer för dig

34 svar



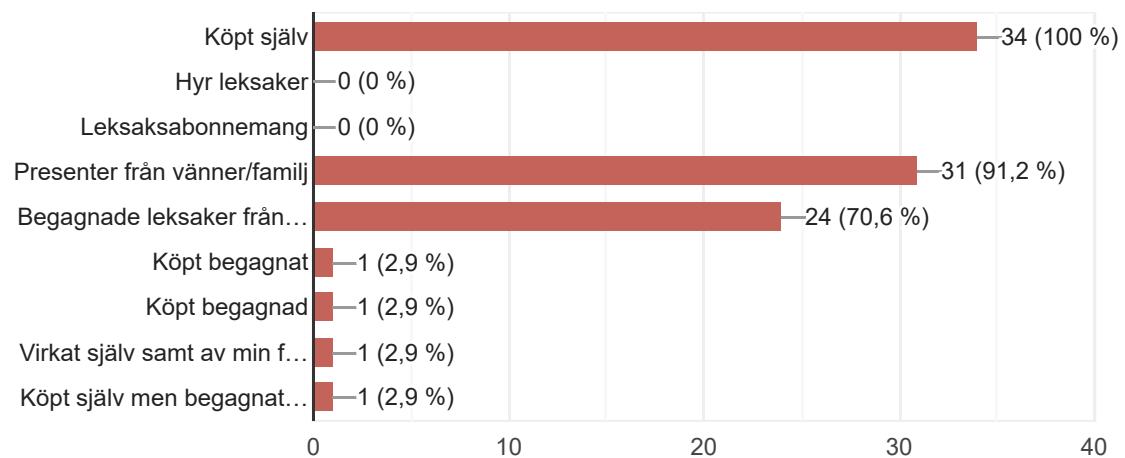
Vilken åldersgrupp tillhör dina barn?

34 svar

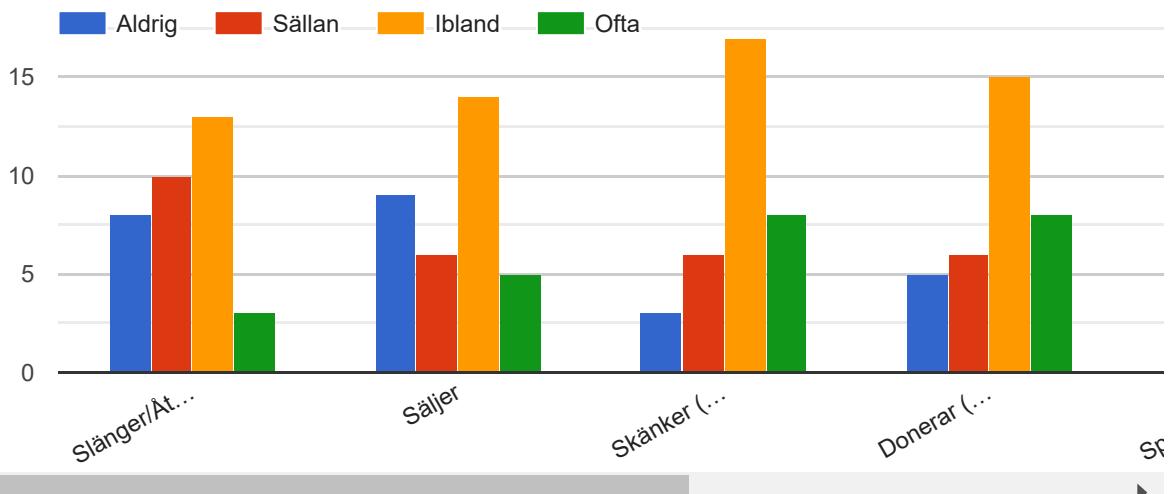


Hur har leksakerna till dina barn införskaffats?

34 svar

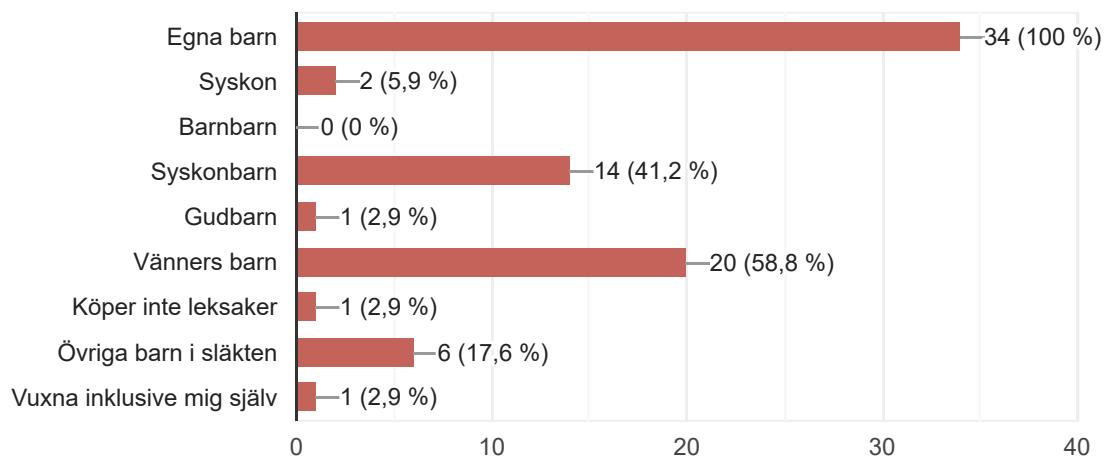


Vad händer med fungerande leksaker som inte längre leks med?



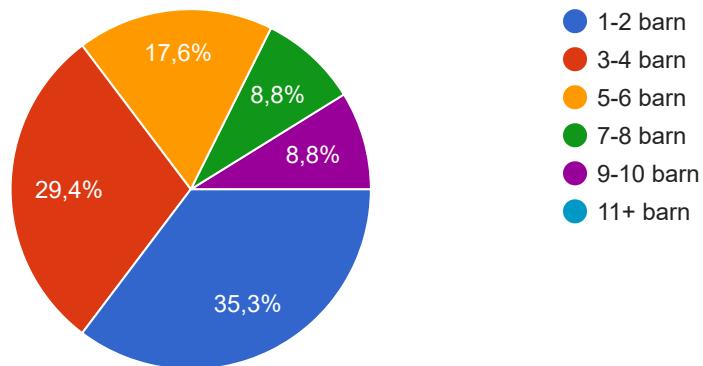
Vilka köper du leksaker till?

34 svar



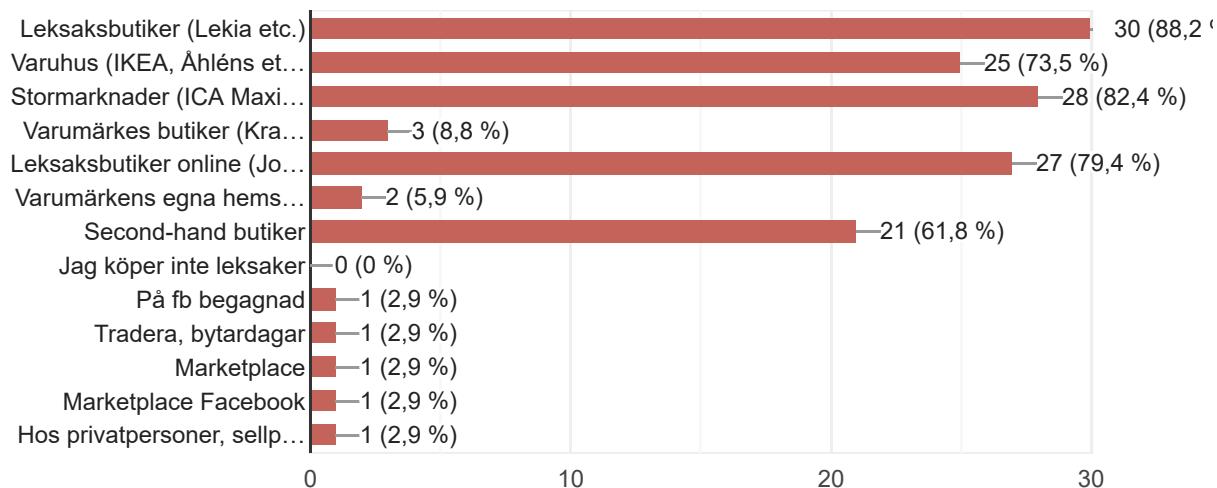
Hur många barn köper du leksaker till?

34 svar



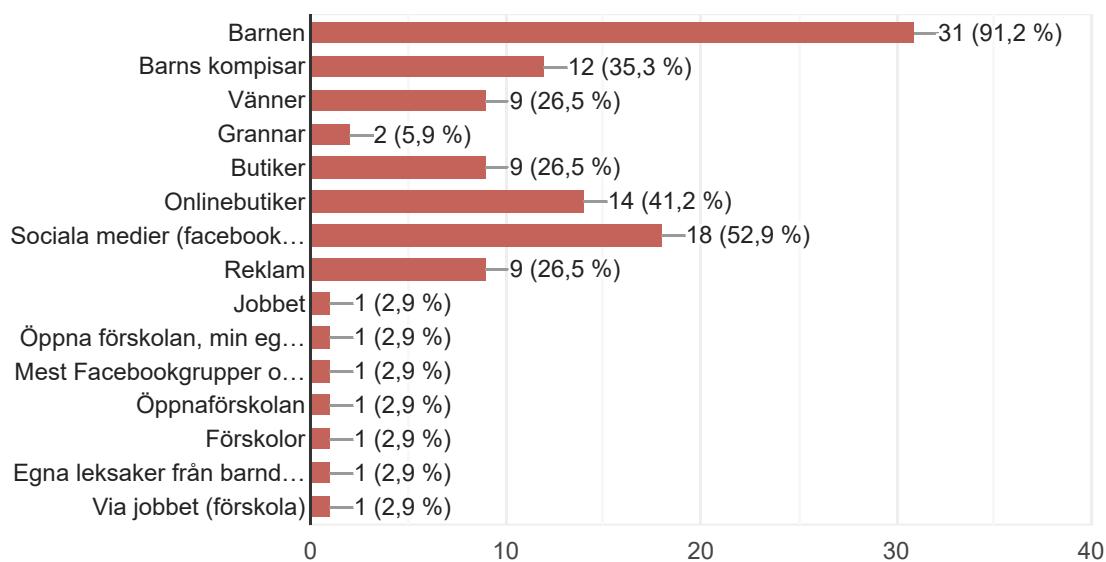
Vart köper du leksaker?

34 svar



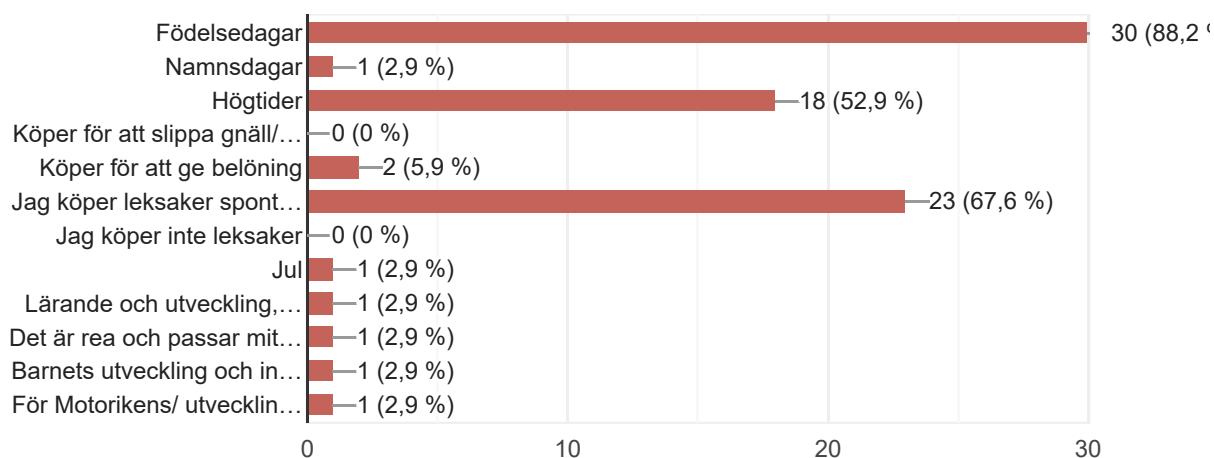
Vad är din inspirationskälla till att hitta leksaker?

34 svar



Vad driver dig till att köpa leksaker?

34 svar



Vad är det jobbigaste med att köpa leksaker?

34 svar

Dyrt

Kostar pengar

man vet inte om barnet gillar det

Leveranstiden

Blir ofta för mkt.

Finns inget jobbigt

Veta om de passar individen, roliga nog

När det är ett måste till andras barn inför födelsedag/jul

Getting the right stuff for the right age, especially for friends' children that I don't see often enough.



Vad är det roligaste med att köpa leksaker?

34 svar

Glädjen hos barnet

se barnets entusiasm

Tacksamheten

Se barnen blickar.

Jag köper det allra mesta second hand, så det är lite som en skattjakt.

Roligt när barn leker med grejer men köpt.

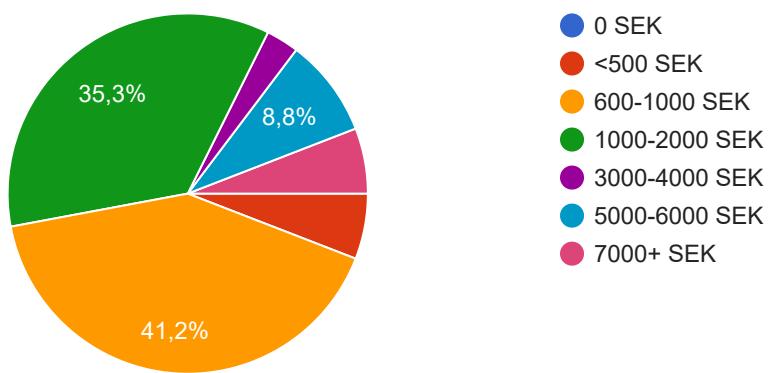
Om barnet/barnen blir extra glada

When they love and use them.

När man blir nöjd med köpet, både barnet och köpare ;)

Hur mycket lägger du i genomsnitt per år på att köpa leksaker?

34 svar



Vilket är ditt favorit varumärke när det kommer till leksaker? Varför?

34 svar

Inget speciellt

Har inget

Oj extremt blandat

vet ej

Lego

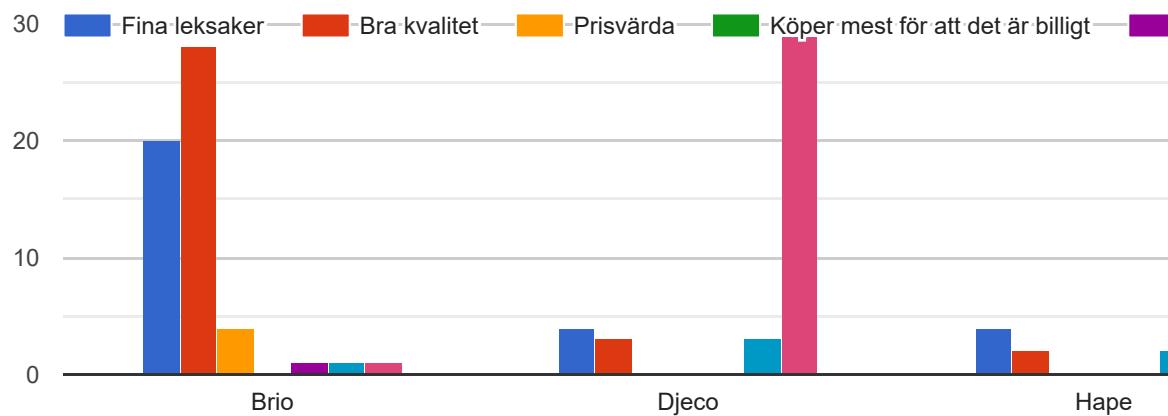
Lidl

PlanToys

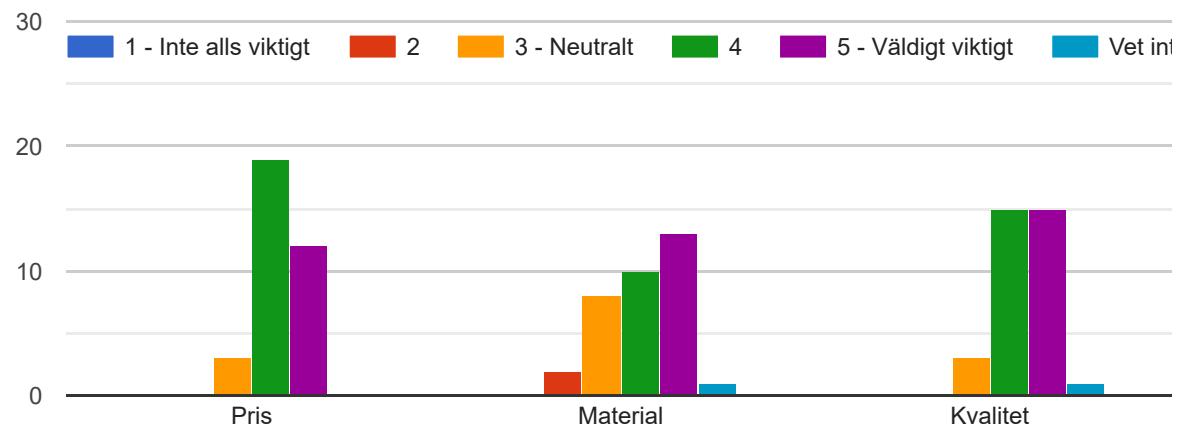
Spelar ingen roll, gärna plastfritt

Lego /plus plus, kreativt

Kryssa i vad du tycker om leksaker från följande varumärken (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)

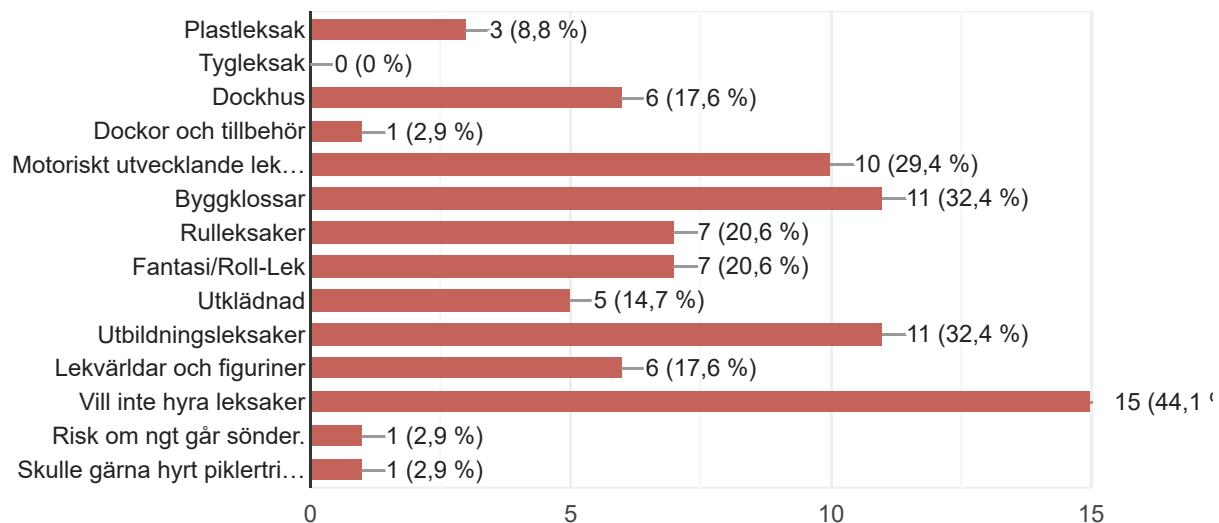


Hur viktigt är följande när du köper leksaker? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Om du hade hyrt någon av dessa leksaker, vilken/vilka hade det varit?

34 svar



Varför/varför inte? Som fortsättning på föregående fråga

34 svar

Svårt med barn , att ge tillbaka, går sönder , favoriter

vet ej

Bra produkter

Vill hellre äga än låna.

Förstår inte frågan

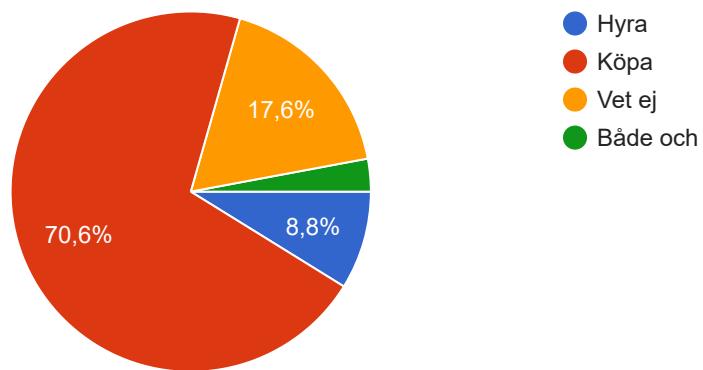
Känns svårt att vara rädd om leksaker, de ska vara hela för att lämna tillbaka

Leksaker går sönder och tappas bort.

I like if there's a developmental/teaching/learning perspective to it. But so far I only buy for toddlers or babies, as this is the age group in my circle. Later, I'd also go for those fantasy/imagination things.

Om du kunde välja mellan att hyra den valda leksaken (ovan) eller köpa den, vad hade du valt?

34 svar



Varför? Som fortsättning på föregående fråga

34 svar

Vet ej

Se tidigare svar

slippa köpa.

Äger hellre än att hyra

Vill äga

Helst köpt den begagnat

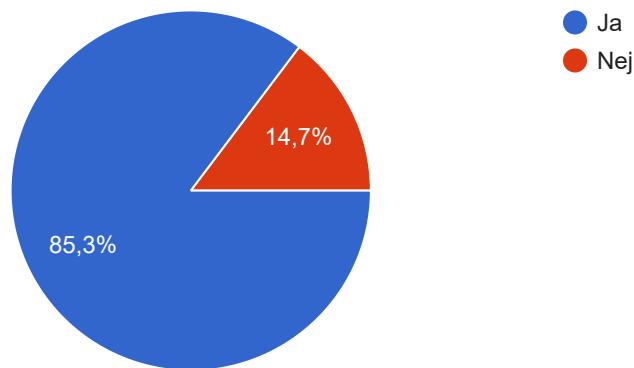
Känns bättre att äga än att hyra

Gillar inte att hyra eller låna saker. Vill äga själv så man inte har sönder andras saker.

In case it breaks/gets chewed on or super dirty I would not be comfortable returning a borrowed toy.

Känner du till Micki Leksaker AB?

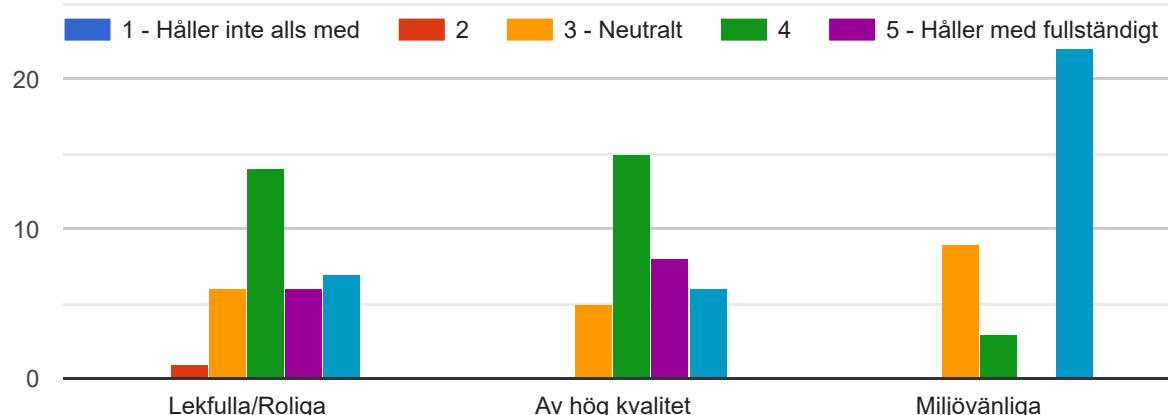
34 svar



För dig som känner till Micki



På en skala 1-5, hur mycket håller du med om att Micki och deras produkter är...(OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Tusen tack för svaren!

Kul med workshop/intervju! Här är min email

3 svar

Något mer du vill tillägga som vi missat?

2 svar

Ja! Hade gärna haft med i början ett alternativ för oss som väntar barn.

Nej

Det här innehållet har varken skapats eller godkänts av Google. [Anmäl otillåten användning](#) - [Användarvillkor](#) - [Integritetspolicy](#)

APPENDIX G: Survey answers for Professional Customer

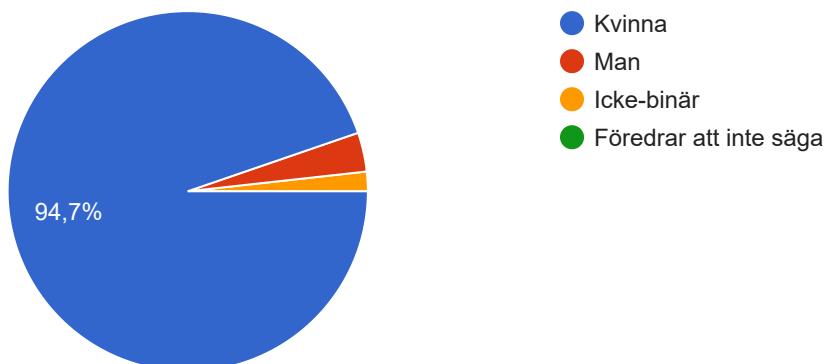
Barnleksaker och köpvanor inom skolan

57 svar

[Publicera analyser](#)

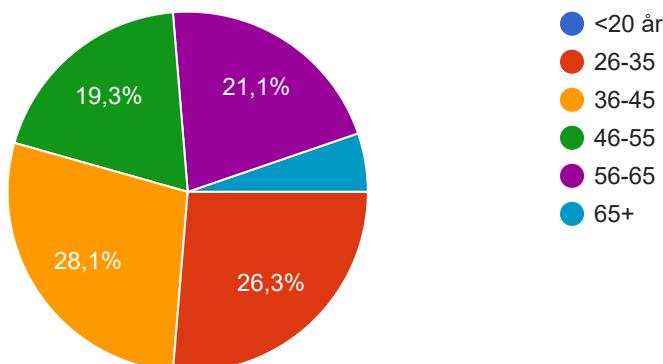
Vad identifierar du dig som?

57 svar



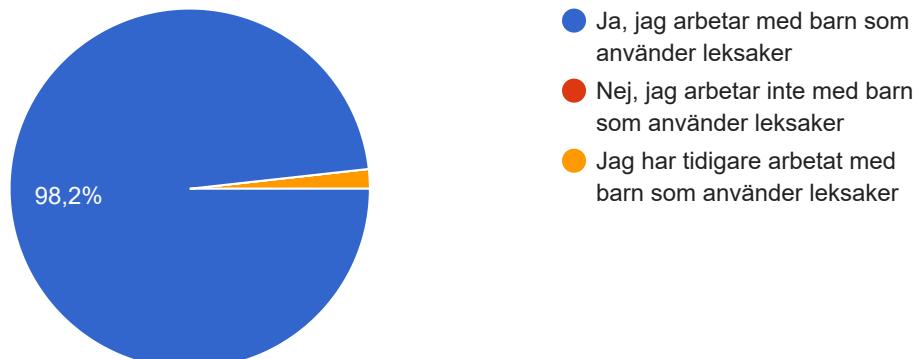
Vilken åldersgrupp tillhör du?

57 svar



Arbetar du med barn som använder leksaker? (Leksaker inkluderar INTE tv-/data-/mobil-spel eller bollsporter)

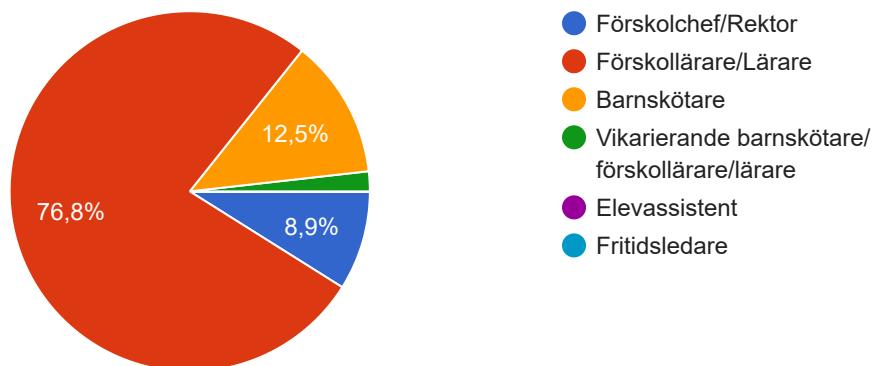
57 svar



För er som arbetar med barn som använder leksaker

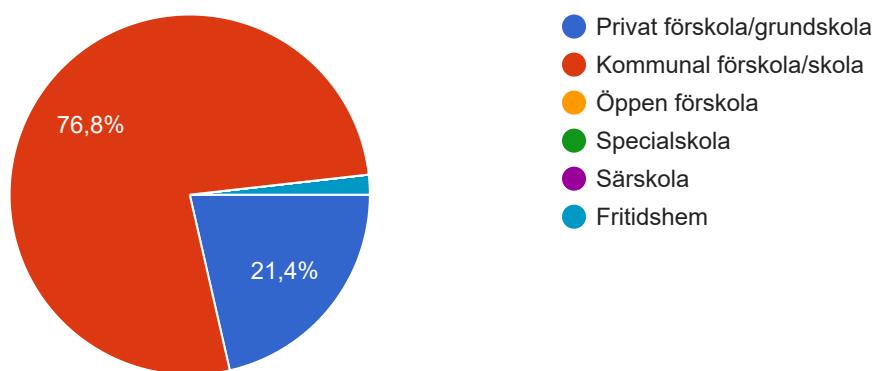
Vad har du för roll?

56 svar



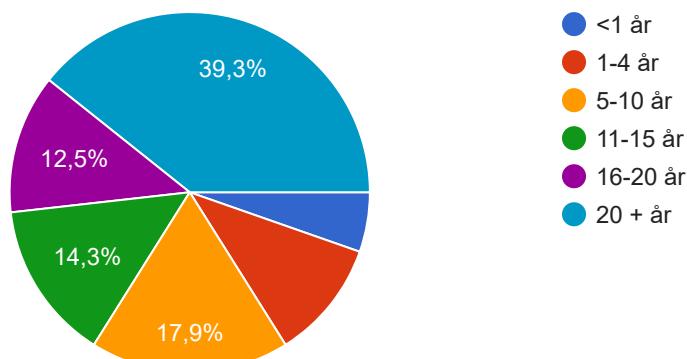
Var jobbar du?

56 svar



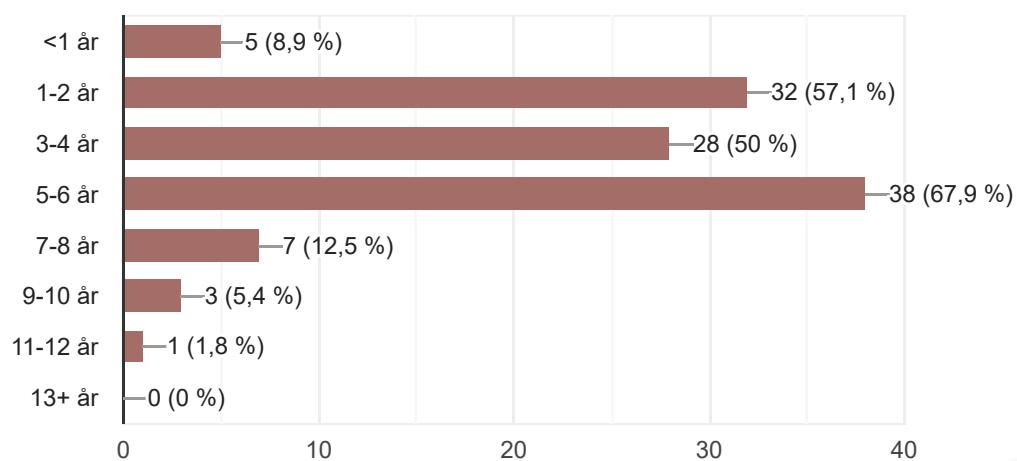
Hur länge har du arbetat med barn som använder leksaker?

56 svar



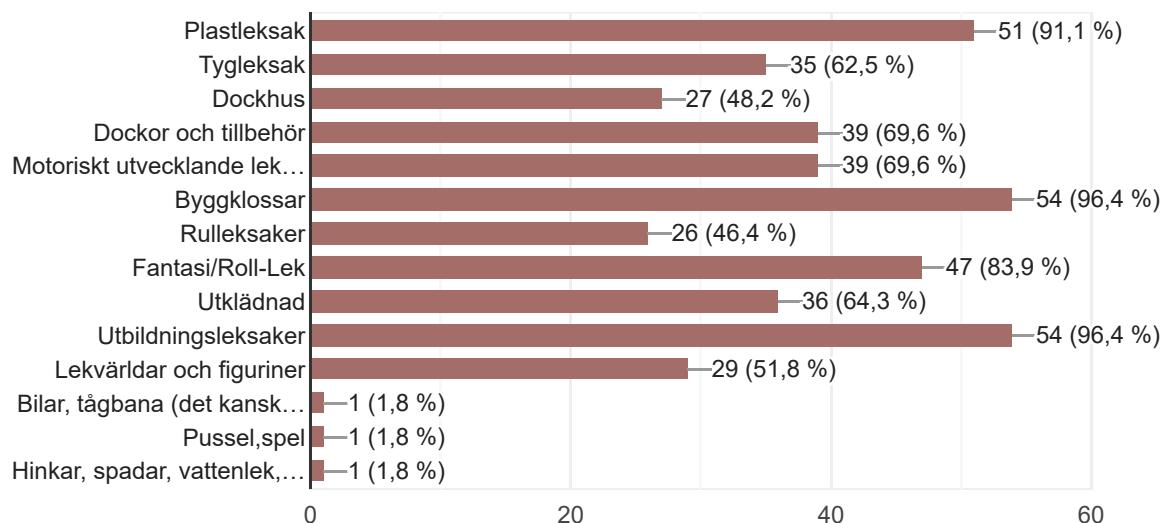
Vilken/vilka åldersgrupper tillhör barnen?

56 svar

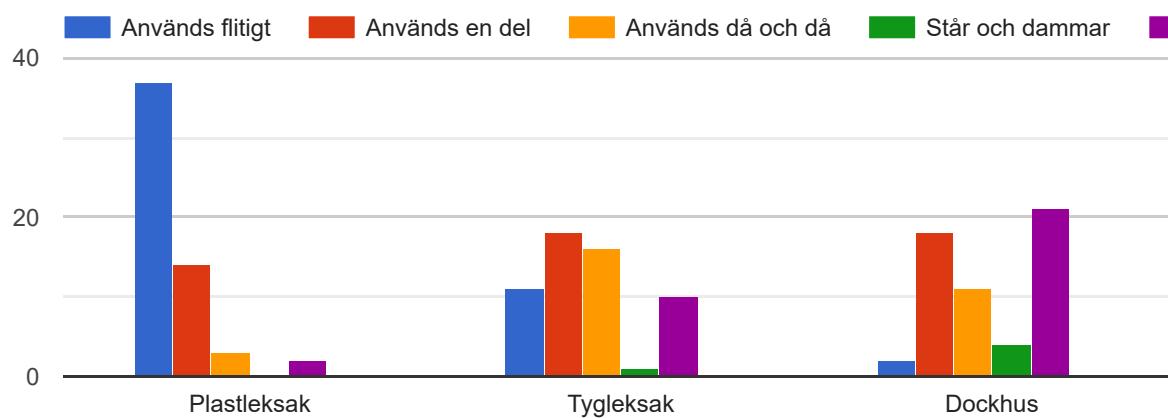


Vilken typ av leksaker leker barnen med?

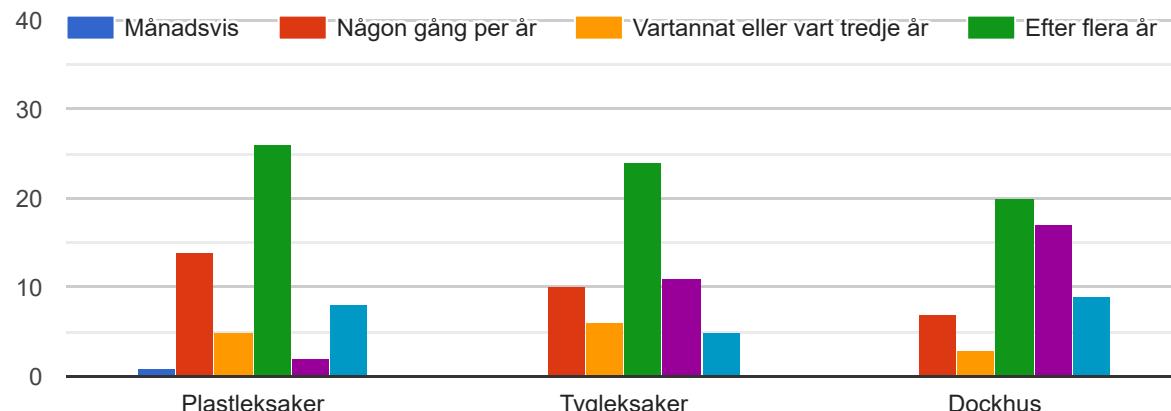
56 svar



Hur upplever ni att leksakerna är? (enligt kategorierna ovan) OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ

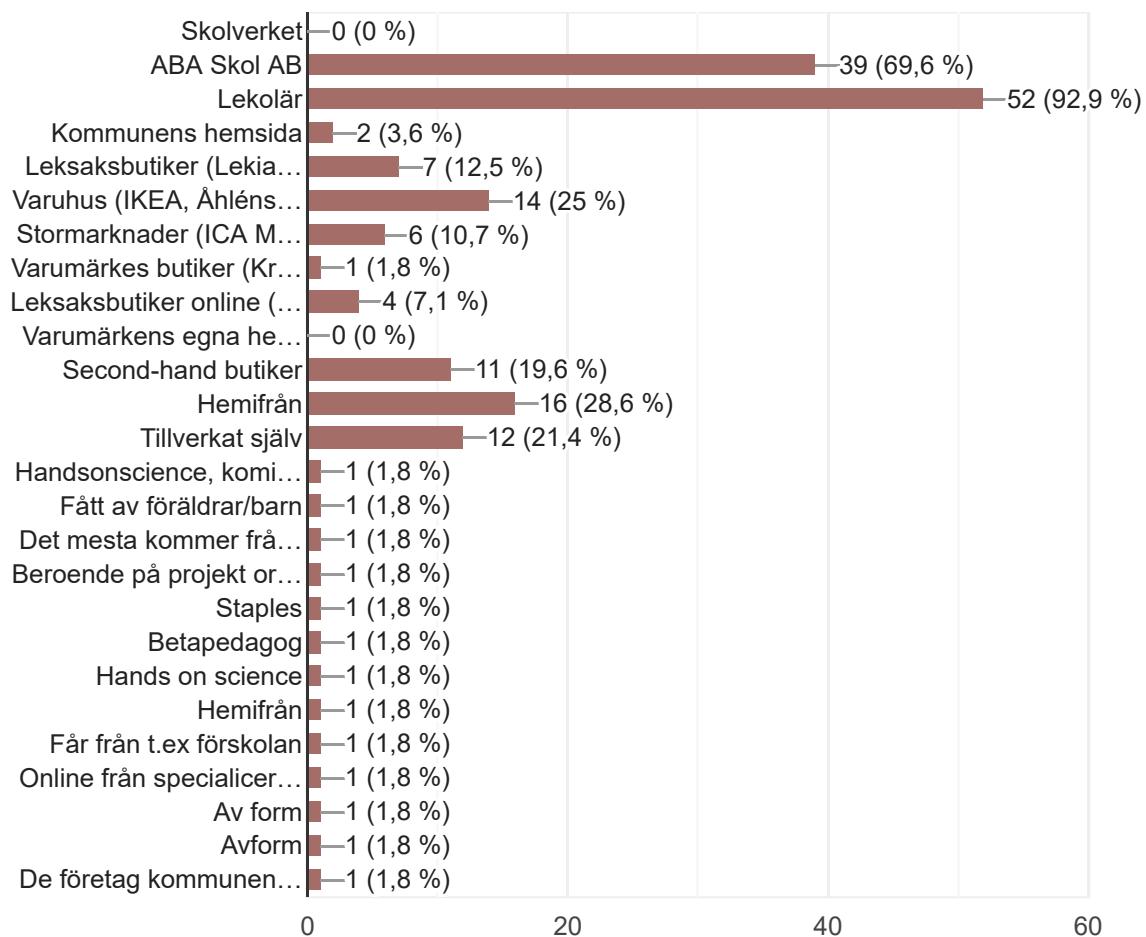


Hur ofta byter ni ut leksakerna enligt kategorierna ovan, för att de inte längre håller måtten? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



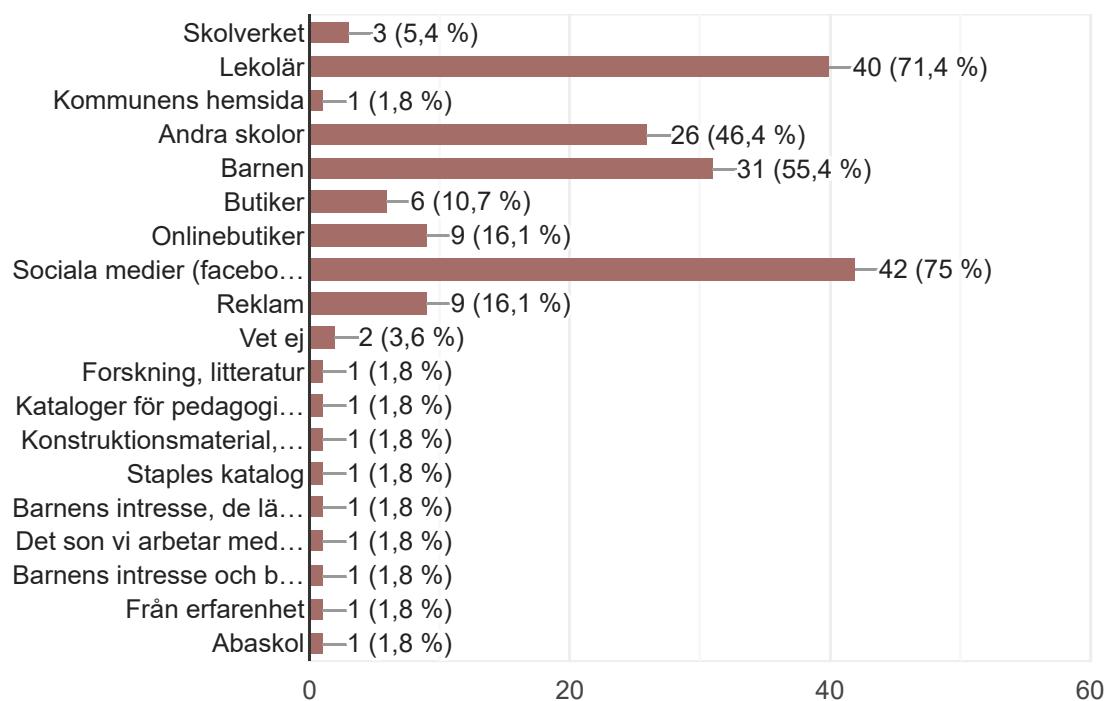
Varifrån införskaffas leksakerna?

56 svar

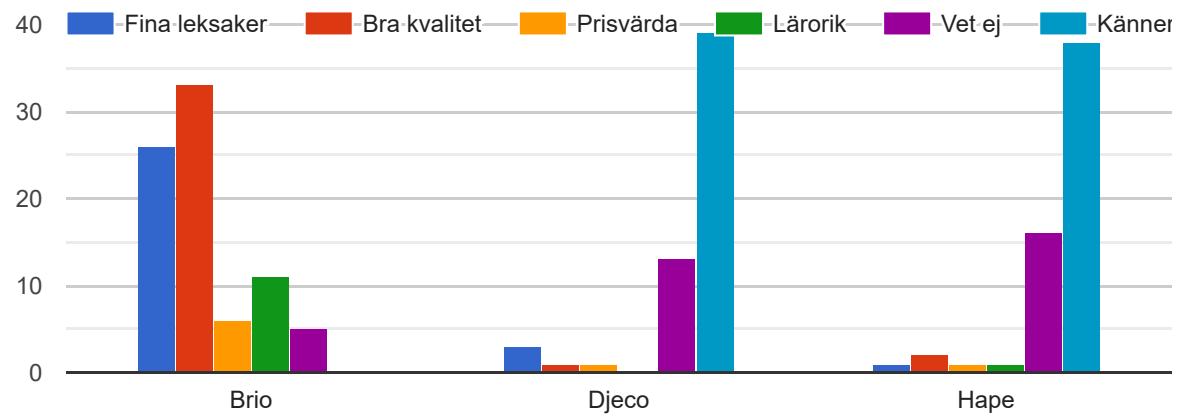


Varifrån får ni inspiration när det gäller barnleksaker?

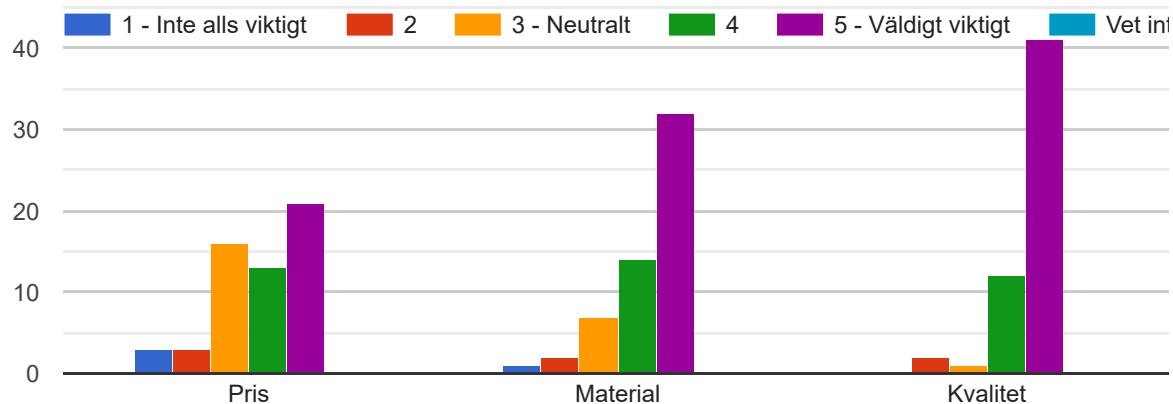
56 svar



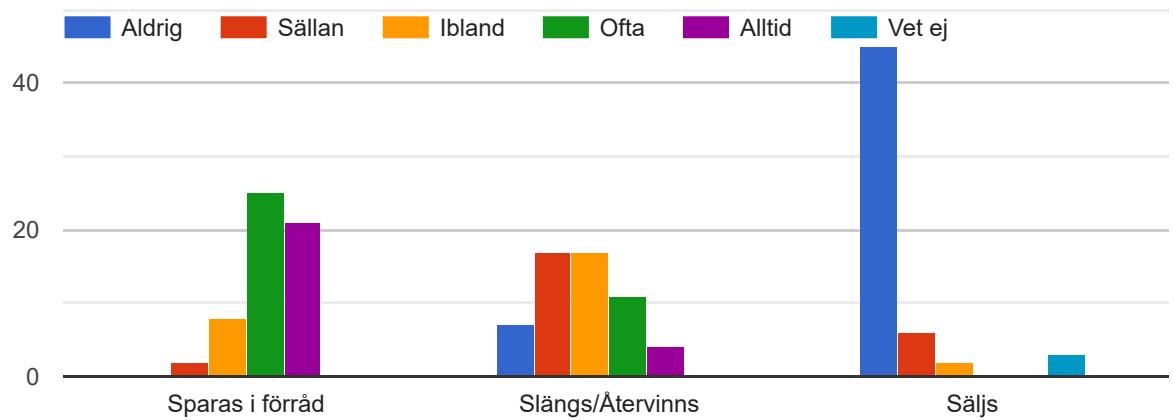
Kryssa i vad du tycker om leksaker från följande varumärken (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Hur viktigt är följande gällande leksaker i skolan? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)

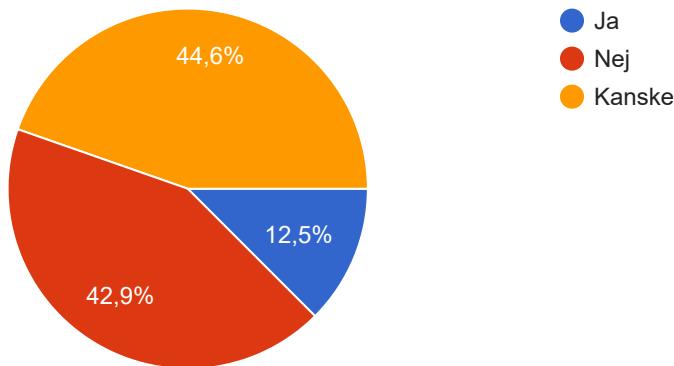


Vad görs med fungerande leksaker som inte längre används? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Tror du att det hade varit bättre för skolan att hyra leksaker istället för att köpa dem?

56 svar



Varför/varför inte som fortsättning på frågan ovan?

56 svar

X

Det blir bättre miljötänkande då du kan ha högre kvalitet på leksakerna samt att förskolan kan ha större variation.

Det känns inte som att ett företag skulle tjäna på det då leksakerna i förskolan slits/förstörs och förlorar således sitt värde ur den synvinkeln.

Variation.

Leksakerna blir slitna när de används.

Bra för stunden och kunna anpassa efter intresset hos barnen, Just nu.

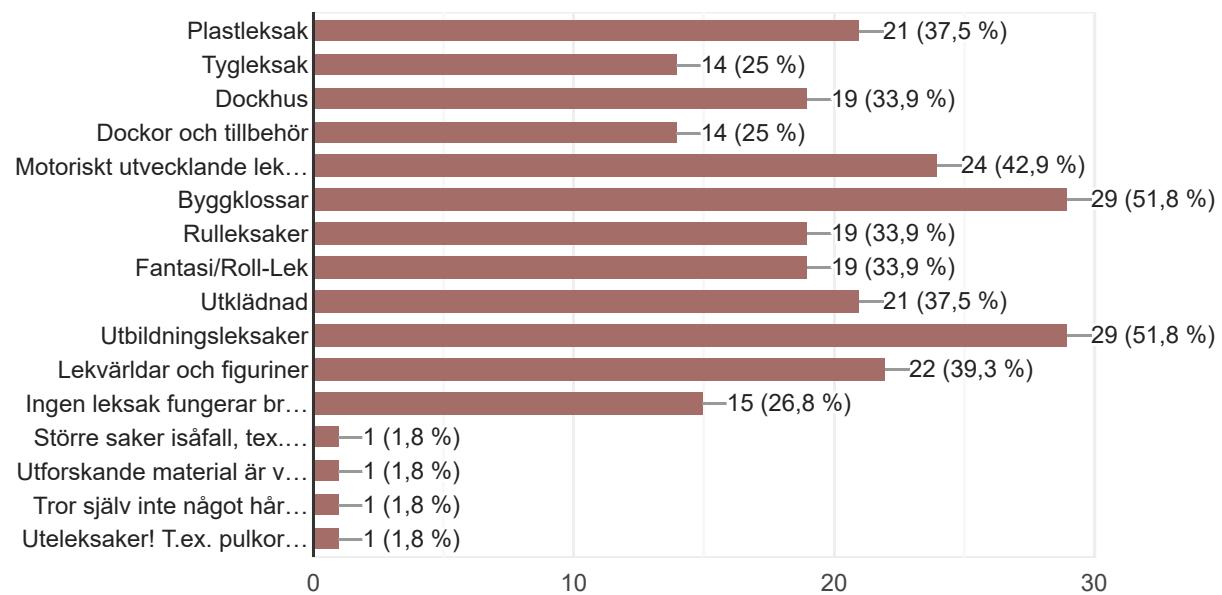
Då hade man fått ett större utbud av leksaker

Jag tycker man kan köpa in leksaker till förskolan och ser man att barnen inte finner något intresse för leksakerna efter en tid, så kan man byta leksaker mellan



Vilken typ av leksaker hade fungerat bra att hyra?

56 svar



Varför/varför inte? Som fortsättning på frågan ovan

56 svar

X

Jag tror att det mesta går att hyra, dock tveksam till tygleksaker med tanke på att de behöver tvättas innan nästa fsk tar över.

Jag tror att dessa saker är för ömtåliga för ändamålet.

Variation.

Leksaker blir slitna, inte kul för någon annan att hyra sen.

Det mesta gör väl att hyra så länge det känns fresht

Utbildning saker kan byttas ut så man får ett större utbud av material

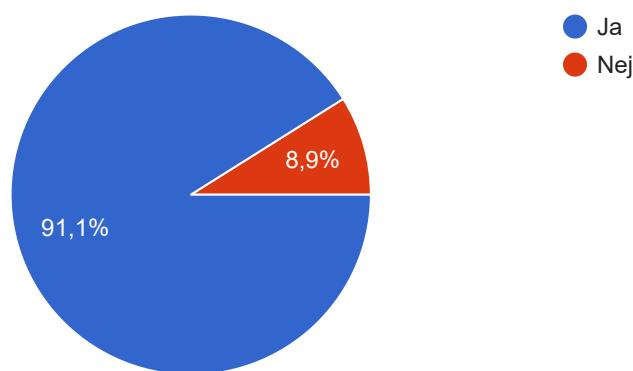
En del saker går sönder med tiden och andra leksaker håller bättre.

-



Känner du till Micki Leksaker AB?

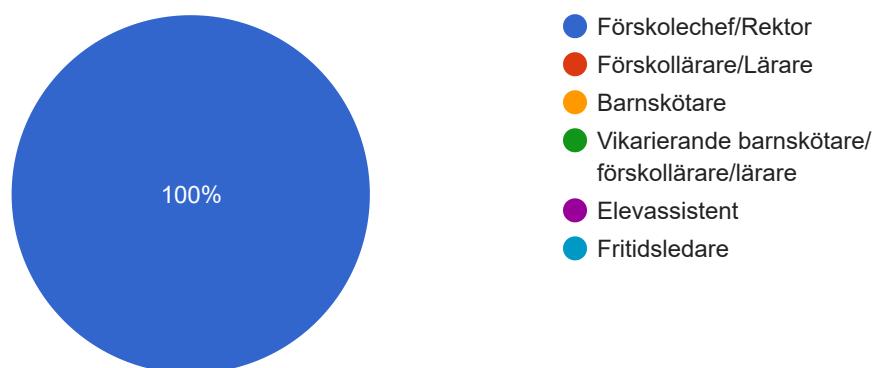
56 svar



För er som tidigare har arbetat med barn som använder leksaker

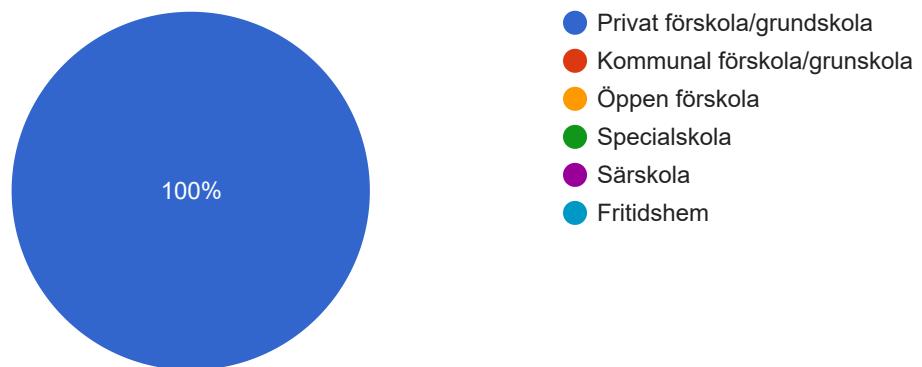
Vad hade du för roll?

Ett svar



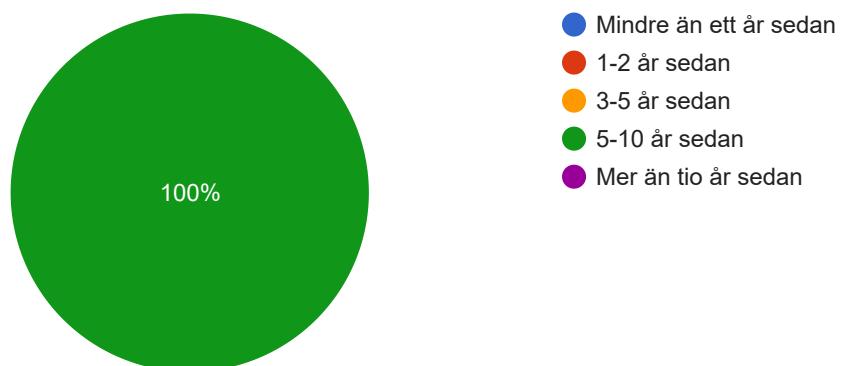
Var jobbade du?

Ett svar



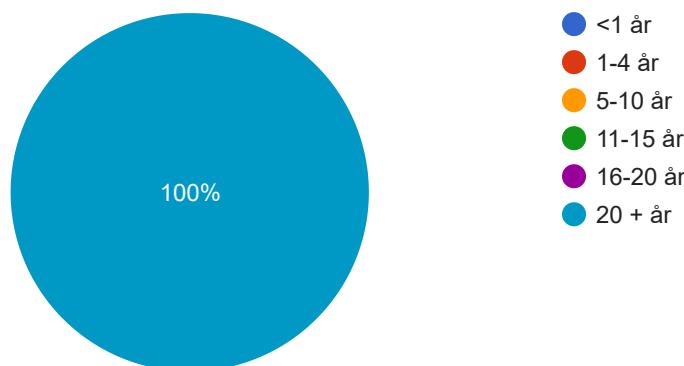
Hur länge sedan var det du arbetade med barn som använder leksaker?

Ett svar



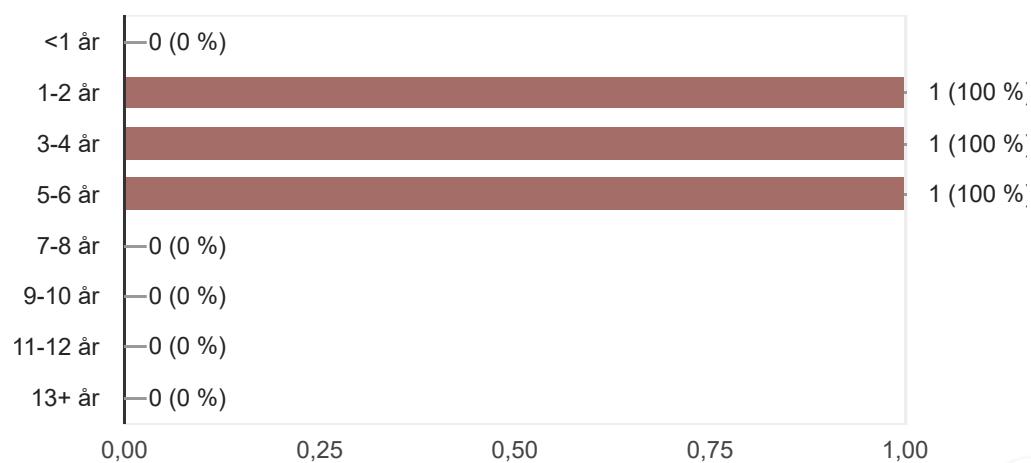
Hur länge har du arbetat med barn som använder leksaker?

Ett svar



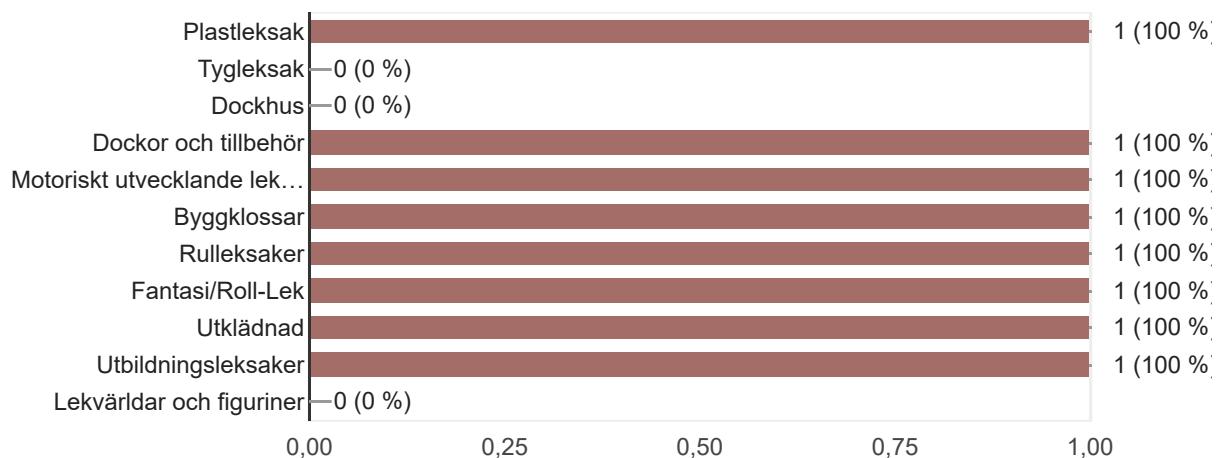
Vilken/vilka åldersgrupper tillhörde barnen?

Ett svar

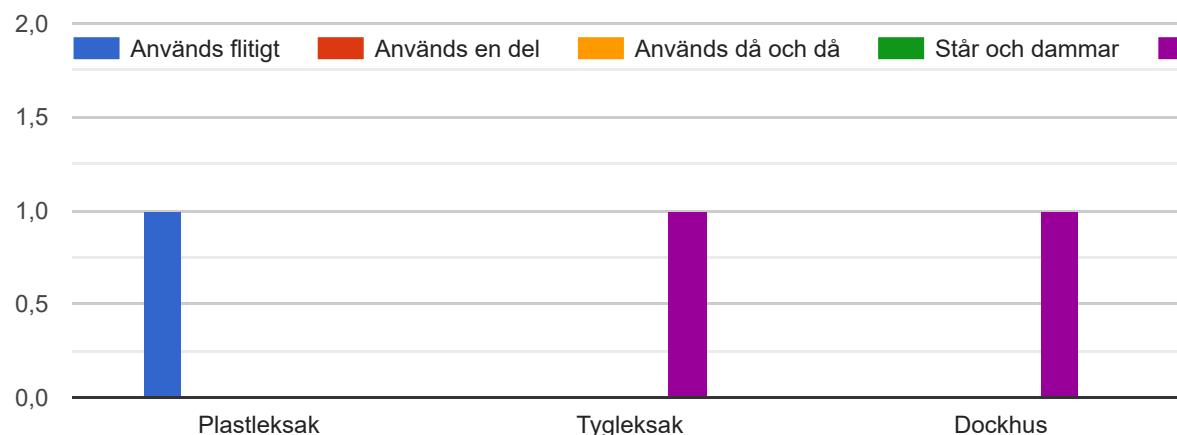


Vilken typ av leksaker leker barnen med?

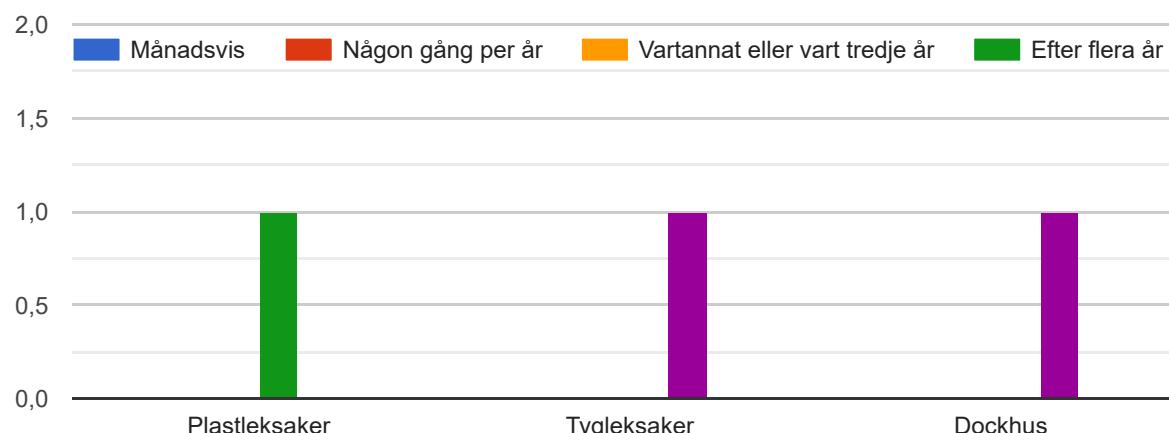
Ett svar



Hur upplevde ni att leksakerna var? (enligt kategorierna ovan) (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)

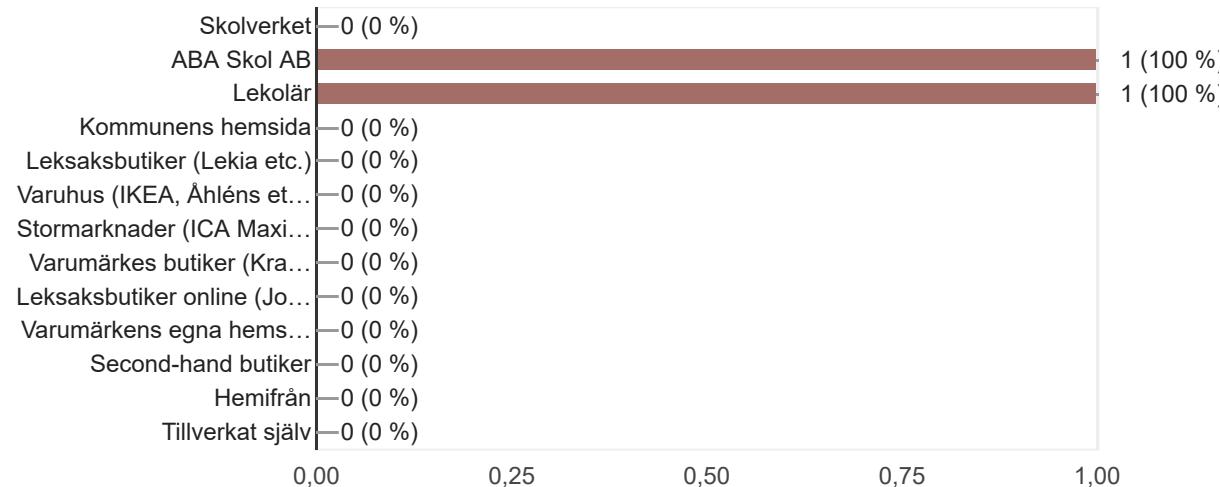


Hur ofta bytte ni ut leksakerna enligt kategorierna ovan, för att de inte längre höll måtten? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



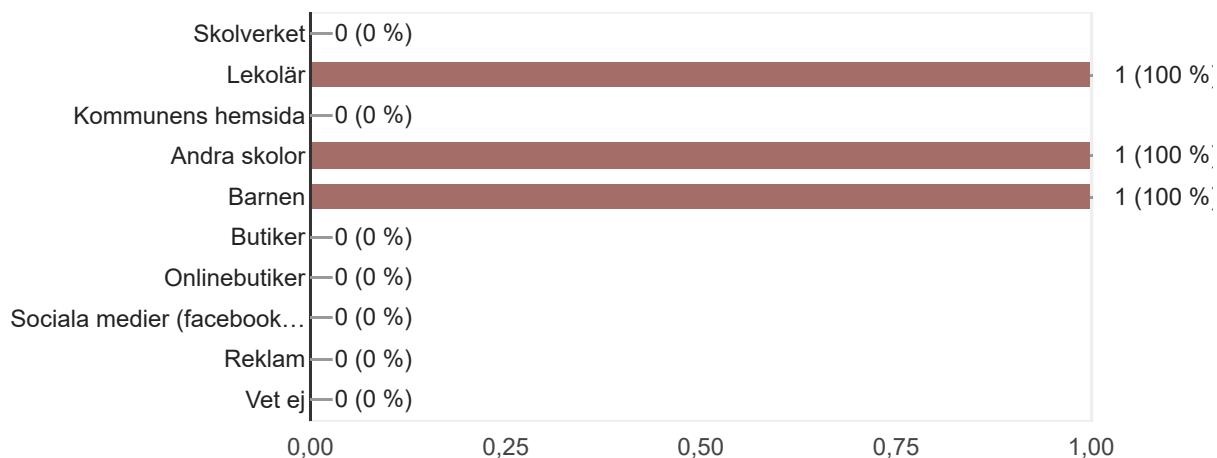
Varifrån införskaffas leksakerna?

Ett svar

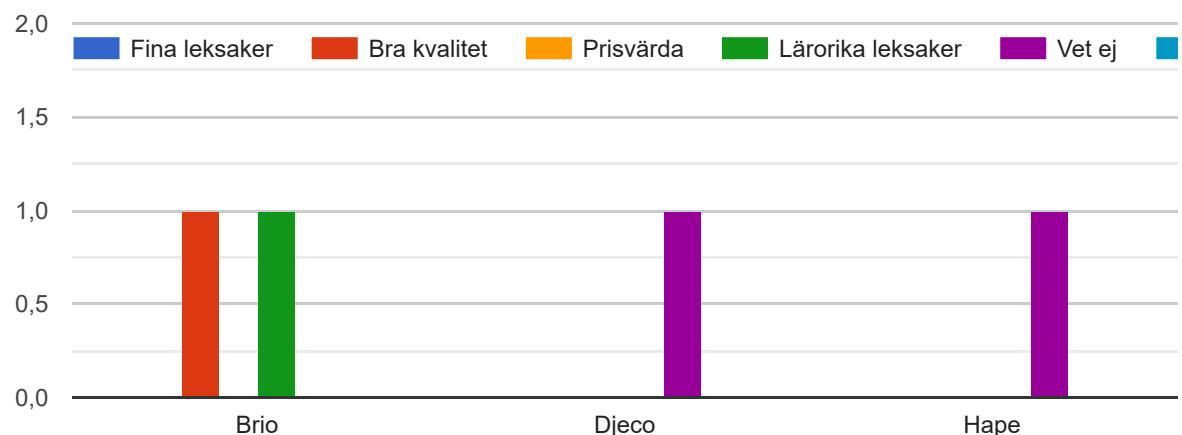


Varifrån får ni inspiration när det gäller barnleksaker?

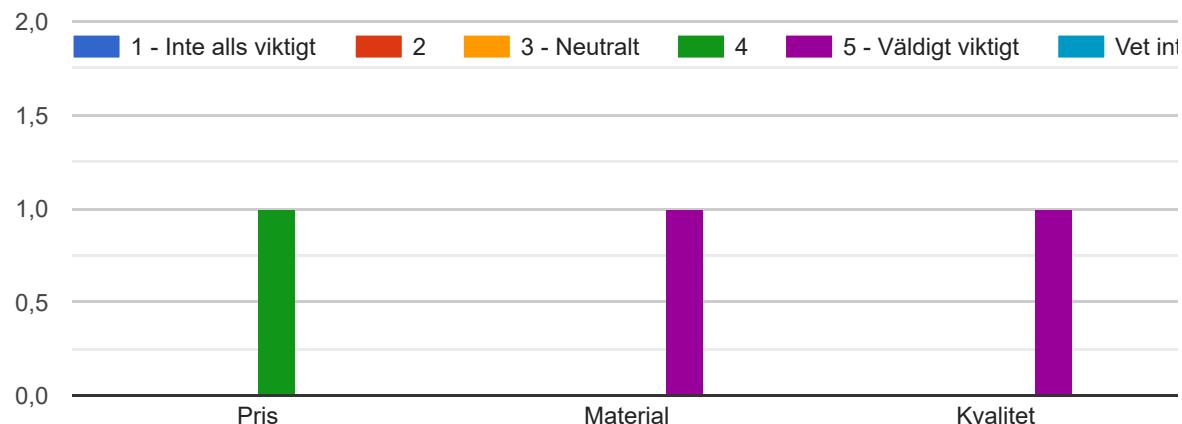
Ett svar



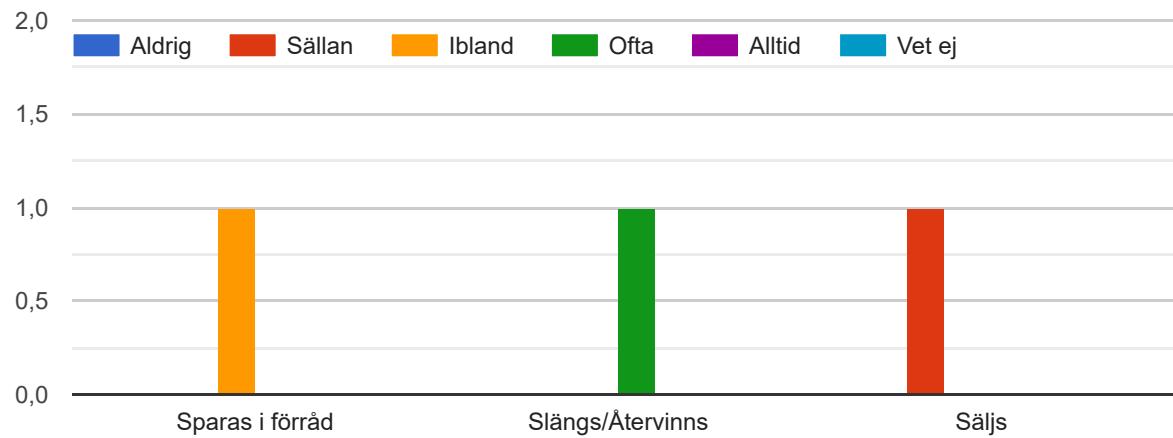
Kryssa i vad du tycker om leksaker från följande varumärken. (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Hur viktigt är följande gällande leksaker i skolan? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)

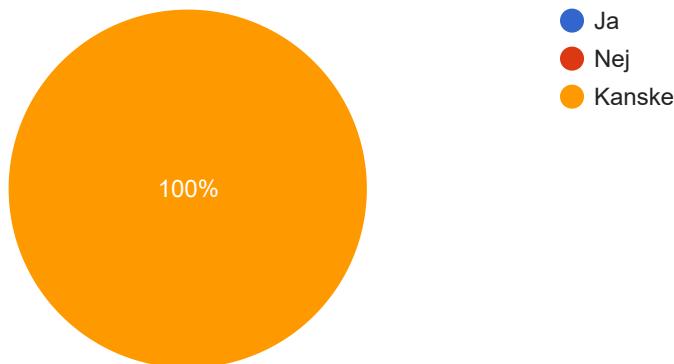


Vad gjordes med fungerande leksaker som inte längre användes? (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Tror du att det hade varit bättre för skolan att hyra leksaker istället för att köpa dem?

Ett svar



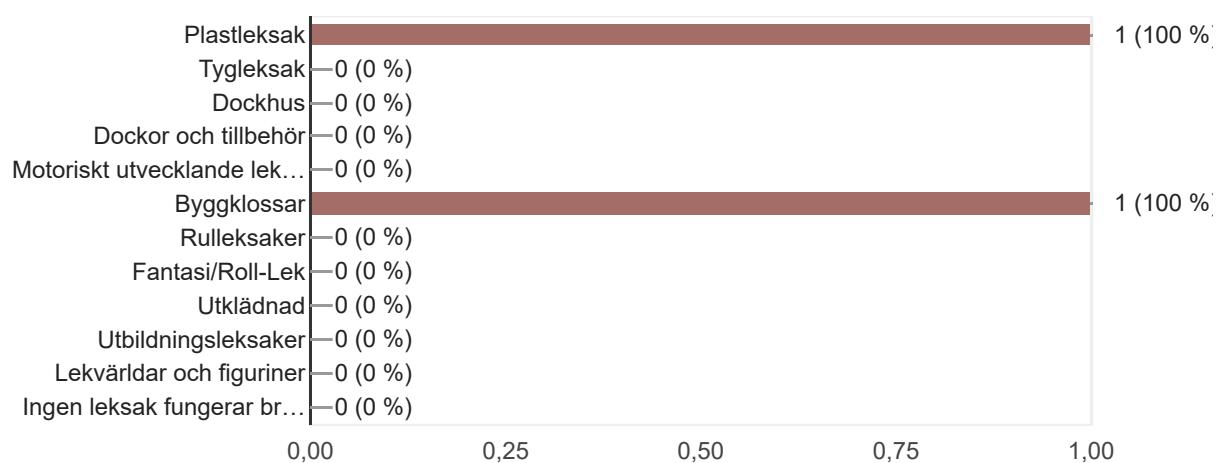
Varför/varför inte som fortsättning på frågan ovan?

Ett svar

Kräver hög kvalitet, möjlighet till rengöring och fungerande system

Vilken typ av leksaker hade fungerat bra att hyra?

Ett svar



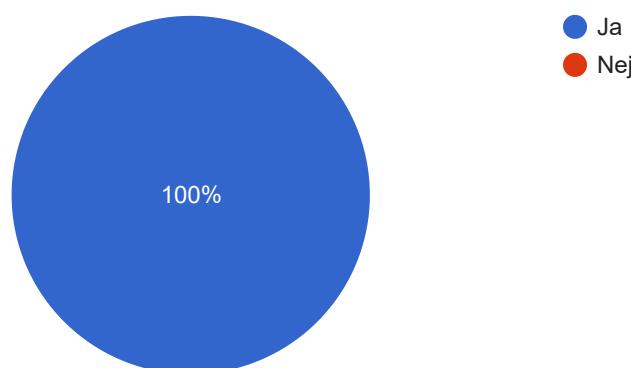
Varför/varför inte som fortsättning på frågan ovan?

Ett svar

Endast produkter som tål rengöring och inte hör till grundmaterial kan flyttas runt

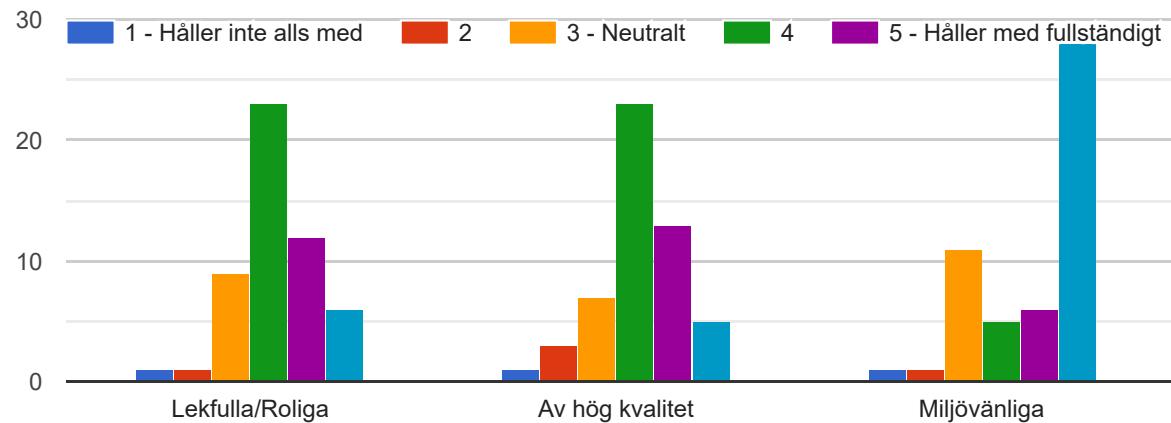
Känner du till Micki Leksaker AB?

Ett svar



För dig som känner till Micki

På en skala 1-5, hur mycket håller du med om att Micki och deras produkter är... (OBS om du svarar på mobil kan du behöva skrolla för att se alla alternativ)



Tusen tack för svaren!



Kul med workshop/intervju! Här är min email

2 svar

Något mer du vill tillägga som vi missat?

7 svar

Gör ni reklam åt Micke?

Trenden går mot mer utforskande material, traditionella leksaker finns såklart fortfarande men i mindre omfattning. Om man ska nå målen i läroplanen för förskolan kan man inte ha lärmiljöer baserade på dockor, bilar mm. Vill tillägga att som personal på förskola har man begränsat inflytande över inköp; vi måste följa avtal och har begränsad ekonomi.

Var detta ett beställningjobb av Micki???

Hygienasoekten

Tänk på att många förskolor kan inte välja att köpa från andra ställen än vad som är upphandlat på avtalet. Vi hade gärna köpt saker från andra leverantörer men är bundna till lekolär

Det här innehållet har varken skapats eller godkänts av Google. [Anmäl otillåten användning](#) - [Användarvillkor](#) - [Integritetspolicy](#)

Google Formulär



APPENDIX H: Interview Templates

For private consumers

FIRST VERSION



This Miro board contains several sections for a first version interview template:

- Top Left:** A box with text and a small icon, followed by a grid of pink squares and a vertical scale.
- Top Right:** A box with text and a diagram of a circle divided into three sections with icons.
- Middle Left:** A row of five boxes, each containing a grid of small icons (e.g., stars, circles, people) and a central circle with a star.
- Middle Right:** A box with text and a grid of green circles.
- Bottom Left:** A box with text and several small images of children's toys and activities.
- Bottom Right:** A large box containing a horizontal scale with five positions, each with text and a central circle with a star. Below the scale is a row of various emoji icons.
- Bottom Right Corner:** The word "miro" in a small box.

SECOND VERSION



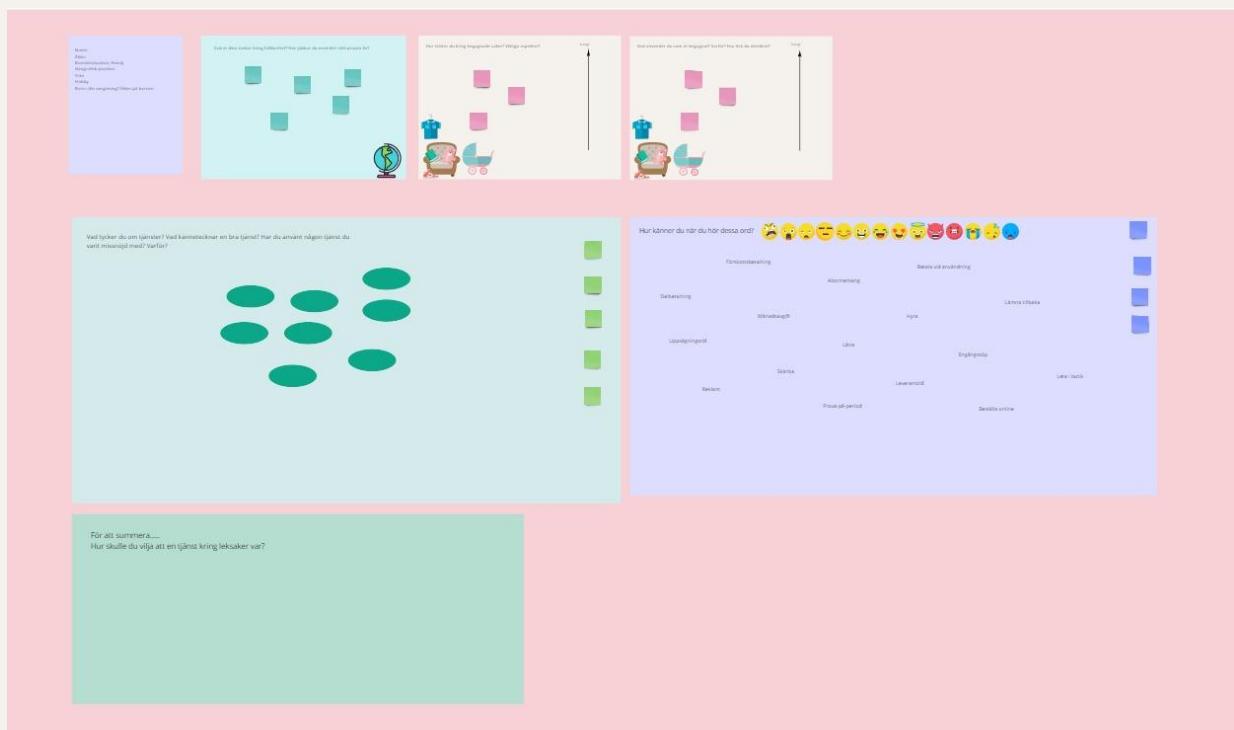
This Miro board contains several sections for a second version interview template:

- Top Left:** A box with text and a small icon, followed by a grid of blue squares and a vertical scale.
- Top Middle:** A row of five boxes, each containing a grid of small icons (e.g., stars, circles, people) and a central circle with a star.
- Bottom Left:** A box with text and a grid of green circles.
- Bottom Middle:** A box with text and several small images of children's toys and activities.
- Bottom Right:** A large green box with text and a central circle with a star.
- Bottom Right Corner:** The word "miro" in a small box.

THIRD VERSION



FOURTH VERSION



For professional customers

FIRST VERSION

SECOND VERSION

THIRD VERSION

FOURTH VERSION

APPENDIX I: Insights

Private Consumers

What is meant by private consumers are people who have children in their surroundings; parents, legal guardians, friends, aunts/uncles, grandparents, etc. The interviewees consisted of 7 people, including parents, a first-time parent-to-be and a grandmother.

PARENTS WANT THE BEST FOR THEIR CHILDREN AND WANT TO PROVIDE THEM WITH WHAT THEY DESIRE, WITHOUT SPOILING THEM

“I buy everything. I want my child to have the best in the world”

“When he was little you could give toys all the time, but the older a child gets you can not do that, because then they need to learn the value of things”

Parents want the best for their children, and feel guilty if they are not able to give them what they want or need. Those who often buy toys prefer to buy what they know will be appreciated and played with by the child that they are buying the toy for. When the child is young, private consumers can decide more freely which toy to buy. However, the older the child gets, the more the toys are chosen based on what the child likes. Since it is often the child who decides which toy is bought, based on what they like to play with, what looks fun and is appealing to them, the private consumer buys the specific toy even though they had not bought on their own initiative. Many parents do not want spoiled children, but still feel that they buy more than the child actually needs. When the children are 1-2 years old, it is not considered as serious to pamper them as when they are older. The parents think more about spoiling the children when they start to get older since they want the children to learn the value of things.

IT IS NOT THE TOY ITSELF THAT IS IMPORTANT, BUT HOW THE TOY IS USED THAT IS IMPORTANT

“When choosing a toy, I think more about how you can play with that toy. When the child interacts with the toy, the interaction creates a dimension that the toy alone does not have”

“Children of younger ages can have nice expensive things but they still play with the saucepan”

When discussing the purpose of toys with private consumers, they express that the most important functions of toys are to be fun, educational and developing. Parents want to help children in their development and often reflect on how a toy can be used and played with when they buy toys. Children seldomly want to play by themselves, and even if many parents enjoy playing with them, there are a lot of other responsibilities they have to deal with. Therefore, another important factor is for the toys to be interesting enough and encourage the children to play and learn on their own. However, many children can create fun games out of anything, it does not have to include toys since children are inherently creative. This is something some parents want to maintain even as their children get older, and, therefore, provide toys that can be used in endless ways just by using imagination.

PRIVATE CONSUMERS PREFER TOYS THAT CAN BE USED IN SEVERAL DIFFERENT WAYS

“Open materials are desirable, if not all parts are available, you can find your own construction”

“I like when things have several functions, and can be used for multiple purposes and different types of play”

Private consumers prefer toys that are open and can be used in different ways, as well as toys that are multifunctional. They do not want to limit the children in their imagination, and are looking for toys with multiple purposes or functions that can engage the children in different ways, at the same time extending the period of the toy being interesting and developing for the children. In addition, private consumers feel that if a toy becomes too detailed or messy, it is locked in its main function, and is thus not as attractive. Toys that can be used in different ways to practice different things are deemed to contribute more to the child's development. It can be as simple as cars with different colors and numbers, which can be driven around as intended, but with a little imagination can also be used to practice colors, numbers, mathematics; basically anything that can be thought of.

CHILDREN GROW FAST, AND THEIR INTERESTS CHANGE PERIODICALLY

“It feels unnecessary to buy so many toys, children grow so fast and go through so many different phases and interests, some toys are only needed for a very short time”

“For a two-year-old, you can buy things all the time because their development is changing so fast, and they need new things that can challenge them in other ways”

Children's interests are often periodic, which results in some toys being played with only in shorter periods. Therefore, parents want to find toys that the child finds interesting for a longer period, and that can be used in different ways to adjust the degree of difficulty and stay challenging even as the child grows older. Parents also feel that children quickly grow out of larger and more expensive objects, for example bicycles and skis, which often become physically impossible for the child to use after a while. Children's development changes quickly, especially when they are younger, and the need for new challenges often requires new things, leaving the "old things" mostly unused. In addition, some challenging and evolving toys are only fun the first few times they are used since the child no longer gets challenged by them after a while. Examples of this are puzzles and games, which are left to collect dust after being solved.

THE TOYS MUST BE CHOSEN BASED ON THE CHILD'S NEEDS AND ABILITIES, AND ADAPTED FOR A SAFE PLAYTIME

“I had not chosen a learn-to-walk stroller with too small a handle for the child, or where things are in the way for the child to see where it is going. It is also an advantage if the handle is a bit closer to the middle, so that the stroller does not tip backwards”

“I would not buy toys in cloth for toddlers, as they may not be washable, which becomes unhygienic as children often play with dirty hands”

For those who buy toys, it is important that the toys are adapted to the child's needs, abilities, interests and skills. The purpose of this is so that the child can play safely with the toy, but also because it should be developing, practical and useful for the child to play with. The age limits are by most people not followed strictly, but are merely seen as general guidelines to easier find toys that might be more suitable for the child in question. In many cases, individual abilities of the child to whom the toys are purchased are taken into consideration, which means that people choose what they think the child can handle, regardless of the child's age.

However, the design of the toys is important when it comes to their functionality, where toys that seem unstable or impractical are ruled out. The toys should be designed with regards to the anatomy of the children who will use it, with adaptations so that children will not fall or get pinched by moving parts. Some private consumers make sure to create their own things instead of buying them, in case they do not find something that meets their wishes or requirements.

When it comes to toys for younger children, softer toys without smaller, loose parts are often preferred. Young children, especially toddlers, put everything in their mouths. Therefore, it is important that the toys are safe so that small pieces do not come loose or that the material is not toxic or unhygienic. Furthermore, it is also important for toys to be easily washed and disinfected, which are reasons some people opt out fabric toys for younger children.

PARENTS WANT TO KEEP ORDER AT HOME, AND DO NOT WANT MORE THINGS THAN WHAT IS NEEDED, USED OR WHAT THEY HAVE SPACE FOR

“As a parent, it is quite nice if there are not too many toys that take up space. It would be perfect to rent toys instead of having to keep them in storage for half the usage time”

“Small toys are often lying around everywhere, which makes it damn painful to step on. It is better with more robust stuff that is easy to pick away and keep in place”

Parents generally feel that they do not want more things than necessary. They only want things that are needed, used and can be accommodated at home. It's perceived as annoying when things take up a lot of space, no matter how much space they have at home. It is important for parents that what is available is used and needed, so that it does not lie around and collect dust. In addition, it is easier to clean away and around larger objects than small items that are lost or scattered around the house. Toys with multiple loose parts are harder to keep track of, which does not only affect the ease of cleaning, but in some cases also the functionality of the toys if parts go missing. Incomplete or nonfunctional toys are not as fun to play with, creating further hesitation amongst parents to buy toys with many small parts, in case these parts will fall apart and get lost. Furthermore, many people expressed that it would be nice to be able to send back things that are no longer needed or wanted. Due to these reasons, it was mentioned that one of the most positive aspects of renting toys was that it helps avoid storing toys after use.

TOYS ARE OFTEN KEPT FOR FUTURE USE, FOR EMOTIONAL REASONS OR SIMPLY BECAUSE OF THE INCONVENIENCE OF DISPOSING THEM

"I also have a hard time knowing how to get rid of the toys just for the sake of it, we have room for them, and it is too stressful and time consuming to sell"

"There are a lot of things we have left that our child no longer uses, but we are too lazy to clean them out. Also, it may change in the future, that our child suddenly thinks those things are fun again"

As long as there is room, many people find that it is usually easier to just stow away toys that are not used instead of taking care of them for example by donating or selling them. Many parents do not want to throw away objects unnecessarily, but find it stressful to sell things. Things that are received as a gift are not always needed or desired, but can feel difficult to get rid of partially because they do not want to hurt those who gave the gift. A common behavioral pattern amongst parents is to save things at home for potential future use. They save for future siblings, or if the interests of their children change so that the toy is suddenly desirable again. Parents often prefer to lend out things they own instead of selling them, so that the things are available if they are needed later, while at the same time feeling good about them being used elsewhere. Many parents describe that almost nothing bought for their children has been sold for these reasons, as well as the fact that some products are being kept merely for the emotional value they hold. Examples of this can be toys that the children have been extra attached to, or that are linked to specific moments and memories. Nonetheless, sharing memories is a great way to increase the value of a toy and can help to finalize the moment with that specific toy. However, when giving away an emotionally attached toy to someone else, it occurs mainly when the relationship to the person who is receiving the toy is greater than the emotional value to the toy.

ONE IS ATTACHED MORE TO BOUGHT THINGS THAN TO RENTED OR BORROWED THINGS

"It would probably motivate the child that you can exchange something you no longer use for something else, instead of selling and buying something new"

"If I rent something, I have a contract where I have to return it. This would affect my emotional attachment to the object"

Many parents experience that both themselves and the children become more attached to purchased items than to rented or borrowed items. They express that it is not difficult to return things that have been borrowed, such as books at the library, while purchased things are often kept with arguments such as "this is my book". If the person knows that something is to be returned, they will most likely not be as emotionally attached to it. Furthermore, in many cases the child suddenly wants to play again with objects that are discussed to be sold. Therefore, some parents find it easier to sell the toys secretly, resulting in them feeling bad as parents. Swapping one toy for another instead of selling and buying new ones can often be easier. Swapping toys takes place in one go, and can serve as a motivation for the child to get rid of things they no longer use because they immediately get something positive from it, as opposed to selling and then having to wait for the positive aspect in possibly buying something new.

ROTATING THE TOYS ARE GREAT FOR KEEPING THEM INTERESTING

“Putting toys on the shelf or in drawers also creates a rotation that can arouse the child's interest”

“We usually put things away. He does not have to play with everything at the same time, then the toys can be picked up later and become exciting again”

Parents rotate their children's toys so that they do not play with the same toys all the time. In addition, it gets easily messy if all the toys are available at all times. By rotating the toys the amount of toys can be more manageable, both for the child to use them creatively, and for parents to keep the home clutter free. When removed toys are brought out again, they become anew to the children and, therefore, become interesting again. However, there are toys that children have a very strong connection to, that they carry around with them everywhere at all times. These toys are rarely rotated because parents want the children to feel safe and happy.

PAYING FOR SOMETHING IS A NECESSARY EVIL, AND CONSUMERS WANT TO GET THE MOST OUT OF THEIR MONEY

“It is expensive to rent childrens' clothes, it did not benefit us personally so we chose to buy clothes instead. If renting the clothes would have also been a way to save money, we might have considered it”

“We bought a dollhouse at a flea market for SEK 50, because it could be fun for our child to try, but we would never have bought the dollhouse if it had cost around SEK 800”

Paying for something is often a necessary evil, and there must be a balance between the price and the quality of what is paid for. Everyone wants to get the most out of their assets, and there are many situations where certain objects are preferred for multiple reasons but are opted out because they are too expensive. This is true for some rental services as well, where parents express the wish to rent things for the environmental benefits, but choose not to since it does not benefit them financially; it should cost the same or be cheaper. As the prices rise, so do the expectations. Things that are perceived as expensive must meet a certain standard; be bigger, better and/or have more details or functions. When prices drop, on the other hand, the requirements are significantly reduced, and many point out the ease of spontaneously buying things on sale or that are cheaper although they are not really needed or something the consumer would buy otherwise. Many parents look for deals on second-hand marketplaces, which can allow for them to buy specific things that they wanted for a long time but normally could not afford. Some parents point out that there is usually no stress in buying toys, and, therefore, it is often possible to wait for sales. Buying toys is often a spontaneous act however, leading to many parents buying unnecessary amounts of stuff for their children, merely because the deal is too compelling.

HOW PRICEWORTHY SOMETHING IS DEPENDS ON HOW OFTEN IT IS USED

“You never know how much the child likes something, some things are used for a short period and then they just end up taking space”

“It does not matter how cheap or expensive something is if no one uses it”

In general, the private consumer is afraid to spend money on things that may not be used, and would therefore prefer if it was possible to rent or borrow the product in question before buying it, to make sure that it would be used. This is especially desirable for products that are more expensive. The reasons for wanting to test products before buying them, specifically toys in this case, is due to financial constraints and lack of space. Private consumers do not want to pay for something that is not used, lies around untouched and then is sold for a much lower price. Private consumers generally feel that it is difficult to know which toy the child will like. The best toys are the ones that are actually played with. To take this further, how costworthy something is, whether it is rented or bought, depends on how much it is used. The cost of renting something depends on how much it is used and how much you get for your money; it has to be economically beneficial to rent something instead of buying it, otherwise it wouldn't happen.

IT IS IMPORTANT HOW THINGS LOOK AND THAT IT APPEALS TO THE CUSTOMER

“The purpose of toys is that they are fun, I might buy half of the toys because I want to play with them myself”

“That is an ugly toy. I wouldn't buy it”

When buying toys, private consumers often choose something depending on how appealing it is to them, both in function and aesthetics. The things that arouse interest and seem fun to them personally are more often purchased for their children. Many prefer colorful toys over more neutral colors or pastel colors for children, because it is perceived as more fun for the child and better for color learning purposes. In addition, toys that stand out from the crowd in some way, with extra or unexpected details are generally perceived as more amusing and are, therefore, preferred. However, the toys must still be understandable and likeable. The private consumers opt out of things they do not like, understand the purpose of, or know what it is; which also goes for franchises that they do not recognize or that they disapprove of, as well as ugly and scary looking toys.

PLASTIC IS A NO-GO

“As a consumer, you must have the impression that the toy will last for a long period of time. It is best if the child lives in a healthy environment; wood is better than plastic or other hazardous materials, and also feels more durable”

“Wood lasts longer and is better for the children”

Other important factors when the private consumers choose products are quality and material. It is important that the toy is made of a material that can be tolerated to play with, so that it lasts a long time. Wood is often preferred because it lasts longer, ages nicely and because it is not as dangerous for the child as plastic. Although there are different types of plastics with varying quality, plastic toys are often opted out anyway, because they are perceived as less durable or potentially more harmful.

IT IS OFTEN EASIER TO COMPARE THINGS IN A PHYSICAL STORE

"It is very difficult to see size and materials in a picture. In the store you get to meet people and interact with the products in a completely different way, then you can avoid mistakes so you have to return"

"Even though there is a greater supply online, it is easier to see the entire supply in the store, which makes it easier to find what one is looking for"

Although the private consumer often finds it smoother to order products online, there are definite advantages in buying things in a store. When in a store, it is possible to feel the material, surface treatment, size, etc., which is considered an elevating factor when buying toys. It is a different feeling to buy on site than to buy online; in a store the consumer can orient themselves in a completely different way and feel more confident in their purchase if they have had the opportunity to physically examine the object beforehand. Some private consumers also mention that it can be an advantage to get away from home, as it is easier to stay focused on what is intended to do.

THE PURCHASE OF TOYS TAKES PLACE IN DIFFERENT WAYS WITH DIFFERENT REQUIREMENTS

"If I am looking for a non-specified gift I can be tougher with my critique since I'm not looking for anything specific - I have no particular function or the like to find. I have more to choose from"

"I feel that my parents requirements are not as strict when it comes to my child, as they were with me"

Purchasing toys takes place in different ways: when the private consumer is looking for something with a specific function, or when they are looking for something non-specific. When looking for a toy with a specific function, the buyer can not be as strict with their requirements as there are fewer toys to choose from. However, when they are looking for something non-specific, they can be stricter with their requirements as there is a larger selection of toys to choose from. However, what was discovered was that private consumers generally do not analyze much about the products or services they buy during their everyday life. Instead, they tend to buy what is easily available. As well as this it was discovered that grandparents are not as strict with their requirements of toys for their grandchildren, as they were with their own children.

PARENTS CHOOSE WHAT IS FAMILIAR OR SUITS WHAT IS ALREADY AT HOME

"Knowledge of the company influences the choice of the toy. We still have inherited, bought and used toys from Brio and have noticed that there is a quality stamp there. I then gladly choose Brio based on experience and recognition"

"I like toys with softer, calmer colors, since they will look better in the childrens' room"

In general, the private consumer prefers to buy from companies that they recognize and have a good experience with, although it can be more expensive. Brands they have seen in school or have previously owned, that have a good reputation and that the consumer knows will

work and last are often preferred. It is also common to choose things that blend in well with the environment in which they will be displayed or used in. Often, consumers select things that suit what they already have; either to match the interior design at home or to build on with accessories and collect parts for a brand series they have started.

MOST PEOPLE STRIVE TO LIVE SUSTAINABLY, BUT IT DOES NOT ALWAYS WORK IN PRACTICE

“You often choose to take a flight instead of traveling by train, it goes faster and my child gets so sad when we travel by train, it has ended in disaster every time”

“Unfortunately, I am often forced to buy things from less environmentally conscious companies, if I could afford it I would have consumed differently but I lack the freedom to choose”

Private consumers do not want to contribute to increased consumption and do not want to be part of the wear-and-tear society. They try to sell or give away toys that are no longer used, and try to buy second-hand products because it is cheaper, but also to do something for the environment. Many people enjoy donating things they no longer need, because of the pleasure they get from letting someone else use the product. Most are in favor of reuse, hence buying and selling second-hand makes people feel good and as if they have contributed to a more sustainable society. Some consumers define sustainability as not ruining the environment for others and the future, and, therefore, try to make use of resources as long-term as possible.

Although most people want to live sustainably, this is not always possible in practice. Many feel that they could do significantly more, but that comfort and agility are often prioritized over sustainability; flights are faster than trains, it is easier to get where you want by car than by public transport, it is faster to find what you need by buying new and mass-produced products instead of second-hand, etc. In addition, sustainable choices are often perceived as more expensive, which makes sustainability something of an economic issue. Moreover, many feel that they lack the financial freedom to make informed choices, and are forced to buy things from cheaper brands where sustainability is not a priority.

Knowledge and research are often required to know what is sustainable and what is not, which many consumers feel they do not have time for in everyday lives. The same goes for choosing companies that have similar core values as oneself; consumers want to support those companies, but do not take the time to do the research required to find out which companies they want to support.

Some choices people make are sustainable, but they do not necessarily make those choices to benefit the environment; it tends to often be out of convenience. If there are no other alternatives, or if it is cheap or easy enough to make sustainable choices, it will happen more frequently.

SECOND-HAND IS NOT ALWAYS PRACTICAL

“I think a lot of toys get pretty rickety. Different people care differently about how broken or unhygienic things are before handing them over to someone else”

"I know that some people enjoy the hunt for bargains. Personally I just think it is extremely time consuming since there are so much worthless crap you have to go through before you find that one thing you like"

Many private consumers find it difficult to find what they need or are looking for in the second-hand market. It often takes more patience and time to find something you are looking for, and can be considered by some as too cumbersome. There is a desire for there to be more second-hand items to choose from and that they would be easier to find. The private consumer also experiences that certain products cannot be bought second-hand because they are consumables, for example stickers, or because they feel too intimate, for example underwear and mattresses. They also found it difficult to trust that people they do not know have the same standards as themselves when it comes to keeping things clean and in good condition. For that reason, some feel that, amongst others, Facebook Marketplace is too uncontrolled, as there is no guarantee that what is bought is of good quality or clean. On the other hand, many are positive about buying second-hand and say they are happy to choose used products, as long as they can feel confident that what they are buying is complete, functioning and clean.

One question that came up during the discussion about sustainability and previously used products was "What is the difference between second-hand and vintage?". Vintage was considered to have more of a cultural value than second-hand, for example art was not considered second-hand, and products with such cultural value were considered more enjoyable to search for than other second-hand products.

CONSUMERS WANT IT CONVENIENT, EFFICIENT, SMOOTH, AND EASY

"It is easy to go to the library, but difficult to go back to return the books"

"With my own car I have freedom, I can get where I want to when I want to"

For the private consumer it is important that the purchase and return take place in a convenient way that is efficient, smooth, simple and flexible. Consumers want to be able to do what they want when they want to, not have to go anywhere, and not be stressed about the mission. Another stressful thing is to wait - buying or returning something should be time efficient and happen whenever they want it to. In addition, the private consumer wants to complete all the work at once, and not have to come back several times or go to other places to finish what they intended to do. Some things that have to be done but are boring, for example paying bills, are, therefore, wanted to be done as efficiently and smoothly as possible.

What was concluded here was also that convenience is an important aspect when buying things in general, but also specifically children's toys. The private consumer does not always have a lot of time on their hands, or enough energy to look around or go to different places to find whatever they are looking for. It is, therefore, important that their way of consumption is as convenient and answers to their needs as much as possible. Some interviewees mentioned online shopping as a convenient way of consuming products, since they can get what they need from the comfort of their home.

SERVICES ENABLE GETTING NEWER PRODUCTS OF HIGHER QUALITY AT A MORE REASONABLE PRICE, AND AVOID DOING MAINTENANCE ONESELF

“It goes so fast in development, if you can take part in the new technology by renting the products that would be nice”

“The service includes maintenance, which means that the computer does not lose quality over time”

According to the private consumer, the advantages of using services are that one can get access to products of higher quality but at a more reasonable price. Users want the product at a certain level, but do not want to have to do the maintenance themselves, especially if it is a more complicated product such as a car or a computer. The need for a service depends on how complicated the product is. A service for the maintenance of a screwdriver, for example, would not be needed, but a car would need to be maintained. Moreover, the advantage of services, according to the private consumer, is that one can get more, better quality and/or more expensive things for a more reasonable price, and that it is possible to change or upgrade things according to wishes and needs. In a service, the customer is not as firmly bound in how long they have to use the product and be responsible for all maintenance themselves, as when they buy a product.

IT WOULD BE GOOD TO BE ABLE TO RENT THINGS YOU DO NOT USE SO OFTEN

“It’s so unnecessary to buy tools that one seldom uses. You buy a tool and use it once. It would be better to rent tools instead, but I haven’t found that anywhere”

“There are a lot of things I have that are not used so often, so then it would be better to be able to rent them instead. It is completely unreasonable that everyone should own everything”

In general, it is appreciated to rent things that are not used so often. Renting toys on specific occasions and when needed would be appreciated by private consumers. For example, someone who does not have toys at home would not have to worry about the child not having fun when they are visiting, if they could rent toys for the period of the child’s visit. In addition, the person renting toys would not have to buy toys that are mostly discarded or stored away for the rest of the year. Renting on-demand gives the consumer greater freedom and choice in their consumption.

THERE IS A SECURITY IN OWNING THINGS

“The advantage of owning is that you can sometimes use whatever you want right away, if you rent the product it’s hard to use it right away since you might have to wait.”

“I’m afraid of ruining something I’m renting — if I own it, it’s just my problem.”

The private consumer wants to own things they frequently use due to it being more economically justifiable and having freedom in the usage. The advantage of owning things is having constant access to them. As well as this, it is also seen that owning things gives a

greater control over those specific things. Not only when it comes to usage, but also maintenance, upholding standards, etc. Apart from having control, it is deemed as not equally devastating if something that is owned breaks, as if it would break when being rented. Private consumers want to be able to use things without worrying about the wear and tear, but also without worrying about how the previous person has used the rented product before it has arrived, and what condition it will arrive in. Therefore, it would be satisfactory if the service has an insurance that does not make it too expensive if something should happen to the toys, or that it could be possible to buy the rented toys out of the service. Being able to buy the rented toys would also be desirable if and when the children get attached to them.

RENTING OR BUYING SECOND HAND IS SOMETIMES VIEWED AS ONLY FOR THOSE WHO CAN NOT AFFORD BUYING NEW THINGS

“It would have been nice to pay the same amount to own the house instead of renting it”

“It just feels wrong and half-hearted to give away something used. I do not know why, maybe it’s a status thing: people would question if you can not afford something new?”

Something that was also discovered was that owning things highlights the owner’s status. If one can own something for the same price as renting it, ownership is preferred. By owning things instead of renting them, one has something to leave behind for other members of the family, and the value and memory stays, therefore, within the household or family. Some people have the feeling that used products are for those who can not afford new things, and prefer to buy new things for that reason. Therefore, the conclusion was drawn that it becomes a bit of a status thing, especially when it comes to gifts: both for others and one’s own children. Many people experience it as half-hearted to give away used objects instead of giving something new.

SERVICES EXIST FOR THE CUSTOMER, AND ARE BASED ON THE CUSTOMER BEING ABLE TO TRUST THE COMPANY

“If you are to use a service, you must be able to get help when it is needed. Immediately”

“It must be clearly stated who is responsible for what, for example if the toy breaks in the mail. Is it on me then? Or the postal company?”

Services are based on the customer being able to trust the company and what is stated in the contract. The private consumer states that they want the company to keep what is promised, and that they as customers get what they have paid for. A good service must exist for the customer, and facilitate for them. A good service helps immediately when needed. As well as this, there should be no hidden costs. Everything should be included from the start, with clear provisions regarding notice period and who is responsible in different situations - so that there is security and the consumer can rely on the service and the company.

WHAT ALREADY EXISTS AT HOME YOU DO NOT WANT TO RENT

“It would be good to be able to rent when needed and avoid packing and carrying a lot of things if you are going to travel somewhere”

“The grandparents have saved everything in the attic, so we don’t need to bring any toys, except the favorites of course”

The private consumer feels no need to rent things they already have received or bought elsewhere. Therefore, when choosing a service, it depends on what and how much already exists at home. A service should also be adjustable to the behaviors and needs of the customer, which all shift with time. As we have a strong ownership culture in our society, much has already been acquired and is no longer attractive to rent. Hence, it is important to capture the customers before they have everything they think they need.

The ownership culture also affects the need for toys outside of the home. During the interviews, many expressed that being able to rent toys while visiting relatives or friends would probably be highly appreciated by a lot of people. However, most of them also underlined the fact that they personally had no need for such a service, since the people they visit frequently have toys stored in their homes for different reasons. Since the ownership culture has been strong for a long time, this ought to be the case for many families, and would probably stay that way until it becomes more of a practice to rent toys instead of buying them. One thing mentioned on the other hand, was the possibility to rent toys when on vacation. Private consumers want the children to have toys even when traveling or when visiting other people. Therefore, toys are often dragged along, which can be difficult to fit in the packing, but also tedious to have to think about which toys to bring. Some people buy new things on holiday for that reason, and these toys are not always taken home again. Being able to rent on holiday or at the hotel where they stay would therefore make it easier for many private consumers.

OBJECTS AND SERVICES ARE EXCHANGED OR LENT TO PEOPLE YOU HAVE A RELATIONSHIP WITH

“We borrow baby clothes from friends, including maternity clothes (except for bras)”

“I have some toys that can be given away but I feel no need to get anything back for it, especially when it comes to family and friends”

People exchange, borrow and give away both services and products to people they have a relationship to. It is often a matter of giving and taking, but sometimes it can be enough or easier with a one-sided give-away. It can be easier to give away something than to exchange things with someone, since one would then have to find someone who wants to give what one is looking for, and wants to receive what one is giving away. It is seen that giving away or sharing things becomes an act of tenderness to people you love.

YOU CHOOSE THE SERVICE FOR THE EXPERIENCE

“Watching a movie at the cinema is a completely different thing due to the picture and sound quality. It is also the whole thing of getting away from home and feeling a little luxurious”

“Airbnb is more “homey”, while hotels feel more luxurious. It varies from one occasion to another where we choose to go”

In many cases, it is the experience that determines what service is chosen. For example, cinemas and hotels give a luxurious feeling. People choose to stroll in stores instead of searching online because it is more social and gives joy. Reading physical books instead of

digital ones is done for the experience and feeling of holding and touching a book. There is no major difference in the function of the product or service, but the experiences are different.

IT IS NEW AND A LITTLE SCARY WITH RENTAL SERVICES FOR TOYS, AND IT WOULD PROBABLY NOT COMPLETELY REPLACE THE PURCHASE OF TOYS

“The ideas are so new that it takes time before it sinks in”

“We probably would not have had to buy extra toys if we had such a service. Or yes, for birthdays per se, then you want to give something special. But if you could get things in connection with birthdays, maybe it would work!”

When testing different ideas with trigger materials during the interviews, the initial reaction to toy services was always a certain hesitation, and questioning how it would work in practice. After thinking for a while, however, the benefits were realized and the interviewees could imagine themselves paying more than they thought from the beginning. However, the cost depends on how much they gain from the service. In addition, parents feel that a toy service would not completely replace the purchase of toys. Especially not on birthdays, when they often want to give something extra big and nice, and maybe something that the child specifically wished for.

PARENTS ARE GREATLY INFLUENCED BY THEIR CHILDHOOD AND OTHERS IN THEIR SURROUNDING

“It's nostalgia. I think you guide the children into certain interests as well, otherwise I would not have forced my daughter to watch Pippi Longstocking. Pippi is after all Pippi, I grew up with it myself”

“I think my child gets inspiration for what he wants on youtube, where they play a lot with Play Doh and Babblarna. But he also nags a lot about things his friends at preschool have”

Parents are influenced in many different ways: by other parents, their friends, what they read online or in newspapers, their own childhood and their profession. Parents also criticize each other a lot, and compare themselves with each other. In general, parents like to share tips with each other on social media, by telephone, in reality, and more. However, some parents only want to give recommendations and do not want to receive them. As well as this, parents are greatly affected by how their own childhood was; they want to give their children what they themselves liked as children, and avoid doing or giving things they did not appreciate when they were little. Children are unknowingly affected by their parents' interest because the parents introduce what they themselves thought was fun as a child; they show programs and books they liked and buy toys they themselves played a lot with. Apart from this, children are also influenced by other children, social media and advertising. Children want the same things that their friends have and what they see on children's TV-shows or social media like Youtube.

FIRST-TIME PARENTS ARE OFTEN WORRIED ABOUT MAKING MISTAKES, AND WANT MORE SUPPORT TO KNOW WHAT CHILDREN NEED

"You may not be afraid of what the child does, but more afraid of what you do as a parent, which can potentially kill them"

"I have seen family, relatives and friends who have children, but it is not something you learn from. As a first-time parent I want more specific guidance on how to teach my children things, know what needs they have, and what toys are safe and appreciated"

First-time parents feel more anxious and nervous when it comes to "making mistakes" or harming the child in some way. They want more support and help to know what the child needs, in what periods the child needs what, what the child should be able to do at different stages in the upbringing, and what kind of toys are safe and appreciated. Even if they have family, friends and relatives who have children, they often do not absorb information from them before the child is a reality, and many would like to receive additional support from third parties.

CHILDREN SHOULD BE CHILDREN

"The children should be exactly what they want to be"

"I may prefer gray over pink or blue, which are very gender-specific"

Children must be allowed to be children and have the opportunity to develop on their own terms in the direction that suits them. Many people try to choose products that do not force children into predetermined roles, and therefore opt out of stereotypical colors such as blue and pink, and other things that enhance ideals and norms. Some private consumers actively try to choose more unique things that go against norms, and that do not steer the children in any specific direction. However, when it comes to norm-critical thinking, there is a clear division; those who stick to the traditional roles, and those who try to break the norms. Although there are people fighting these norms, there are strong stereotypes that "girls should be girls" and "boys should be boys", where it is thought that people have gone too far in making everything neutral. Some people want to dress their daughters in cute dresses and their sons in police outfits, and buy toys that are aimed for the specific gender.

PLAYTIME SHOULD NOT GIVE PERFORMANCE ANXIETY

"If my child does not understand or think a toy is fun, when others seem to appreciate it, it may make me anxious"

"Most children would think it would be great with a play center where you can try out toys. However, my children might not dare to test the toys if there are lots of other children there, since they are a bit more shy and careful"

What else was emphasized was that all children are unique. It was seen as important when talking about children playing and their toys, to take into account the differences of all children. Some children are shy and cautious and have to be met in the right way, so that they dare to try something by themselves without being anxious. Playing should not be an achievement, neither for children nor parents. Both parents and children might feel worse if

the child does not manage what is expected at a certain age, if they do not understand a specific toy or if they do not perform as well as anyone else in the same situations.

Elder Care

One of the interviewees of the private consumers mentioned elder care as a potential customer of toys, since that was their profession. This was not a part of the project scope, and was, therefore, not investigated further. However, it could still be valuable to mention with regards to future possibilities.

TOYS IN ELDERLY CARE BRING SECURITY

“We have a lot in the nursing homes and dementia homes, it provides security and is great!”

Toys are used within the elderly care to bring security and safety to the people living at the elder homes, as well as help them with their fine motor skills. Softer toys such as cloth dolls and teddy bears are used for feeling secure and calm, and sorting boxes are used for maintaining the motoric skills. These toys are especially good for people suffering dementia. What was also stated was that the elderly are generally more careful with toys than children.

Professional customer

The professional customer consists of people who work with children. Both preschools and schools are included when writing about schools, as well as preschool teachers being included when writing about teachers. What is meant with materials that are used in schools, is everything the professional customer uses in order to teach and help the children develop. This includes for example books, toys and digital media. In total, 4 professional customers were interviewed, including three preschool teachers and one child pedagogue.

PROFESSIONALS WANT MORE FINISHED PACKAGES

“You have aroused thoughts, what if we could get the material ready, how easy would it be if it could be so? That you get everything in one package and avoid doing it yourself”

“To provide the children with the material they deserve, I often spend time at home creating materials that don't exist on the market. It is a time consuming process, but I do it for the children.”

This insight is about how the professional customer often has to create their own materials to fulfil the different pedagogic purposes they have planned, but also to make the used material more fun for the children. This is a time consuming process, and even though some teachers like creating materials, this results in them having less time for the children or having to do things in their spare time. What was also concluded was that incomplete or non-developed material was not fun to work with, neither for the professional customer nor for the children. Finally, the professional customers create or improve the current material for the children's sake.

SCHOOLS WORK WITH TEACHING CHILDREN ABOUT SUSTAINABILITY IN A CONCRETE WAY

“The sustainability work we have done is noticeable on the older children; they do not want to throw away, they want to save everything and they have ideas on how it can be used in other ways”

Teachers work with sustainability on a level that the children understand, by connecting everyday situations to a discussion regarding how to handle resources so that they still exist in the future; to be careful with animals, nature, objects, and show the children that the resources are not infinite. The professional customer teaches the children to be careful with the toys in school since they belong to everyone, and everyone gets more joy out of them if they last longer. They also teach the children that it is possible to reuse things for new purposes and to not throw things away unnecessarily. Many schools connect the materials they use to nature and where materials come from, and teach the children what they may and may not do in nature. Another thing many schools do is reuse and recycle materials such as milk cartons, toilet paper rolls and cardboard, for the children's crafts. This material does get thrown out eventually, but using it first for crafts shows the children that things can be used more than once, and for more than one purpose.

THE EXCHANGE OF TOYS MAKES THEM MORE INTERESTING FOR CHILDREN, BUT CAN GIVE NEGATIVE CONSEQUENCES

“Sometimes things take time to learn and you need to allow that. Changing materials too often would stress the children”

“As a professional, you create and adapt the learning environment to where the children are at the moment”

The professional customer adapts the learning environment and toys according to the children's interests, needs and level of knowledge. Children develop fast and their interests shift in periods, which is a reason for rotating the toys. Toys are rotated to maintain the children's interest and not congest them with too many options, as well as to reduce the wear and tear of the toys. However, changing the toys too often can be stressful for the children. This is due to the children possibly not having sufficient time to play with the specific toys before they are changed, as well as it makes it difficult for the professional customer to have time to use all material in an educational way. Furthermore, if children are constantly fed with new and different toys, their creativity and imagination would possibly not develop as well and as far.

TOYS EXIST IN BIG AMOUNTS AND ARE USED EXTENSIVELY IN SCHOOL

“We try to use what already exists at school and not buy too much. It would be great to rent things that cost and that you want a variety on”

“It is enough that all preschools have 2-3 puzzles each and then switch with each other, instead of 20 each.”

In school there are large amounts of toys that are used diligently and constantly. The toys are used until they no longer can be used due to wear and tear. As well as this, the professional customer does not want more than what is needed. They try to use what already exists and only order toys they need for educational purposes. A basic stock of material is needed, and the educators do not feel any major need to replace this material before it wears out.

However, there are some occasions where renting toys might be an attractive option. What was discovered was that larger and more expensive things that are only used during a certain period, and that the school does not want to buy due to financial reasons would be suitable to rent. Such things could be projectors, digital media, trampolines etc.

Renting on-demand would also suit well in school, especially for the older children, during holidays and after-school activities (*fritids*) in order to make the time in school more special for the children who can not stay at home. It could also be suitable to rent toys in connection to special events or theme-weeks at school, where materials are wanted temporarily.

Additionally, teachers believe that things that have a limited period of learning and development would be fitting to rent. For example, puzzles; after a child lays it two-three times they have learnt that puzzle and no further development takes place. The same goes for pedagogic and developing games. The professional customer feels that these types of toys would be good to rotate, to help the children fulfill their development needs, without having huge amounts of puzzles and games in storage. For example, renting the toys and games in certain periods or sharing a collective library of such things with other schools would be a solution to this issue.

TOYS SHOULD ENCOURAGE PLAYING AND LEARNING, DESPITE GENDER OR PRESUMPTIONS

“The preschool tries to counteract norms and stereotypes, and believes that the child should be shaped into what they want and not what is expected of them. We are there to support them - to become their own individuals”

“All material must be available to everyone despite gender, presumptions or capabilities”

Social debates about gender equality are something that has received increasing focus in recent years, which is also beginning to permeate the way of thinking in schools. In schools it is becoming increasingly important to work critically with everyone's equal value and give all children the same opportunities to develop into unique individuals, and not put them in different compartments with ideals and norms based on gender, socio-economic and cultural backgrounds. Certain professional customers work with non-stereotypical and norm-critical thinking, while others don't work actively as much with those questions. However, all professional customers that were interviewed stated they teach the children about equal value, that anyone can for example play with dolls, wear pink, play with cars etc, believing that all material should be accessible to all children.

VIEWS ON THE TEACHER'S ROLE HAVE CHANGED OVER TIME

“Too many people get stuck in the compartments they have set themselves or been put in. It is sad that this is the case”

“I realise more and more how important the education at preschool is for the children's continued school work”

Something that was discovered during the first interviews was that there was a different way of thinking for people who educated themselves within working with children recently, compared to people who educated themselves a while ago. This hypothesis was tested on further interviewees. What was concluded was that there is a change in how the preschool and school teaching profession is perceived, both by parents and educators, as well as how they personally feel about their professional role in children's lives. Some parents still live in the belief that the profession is about childcare, where it is easy to get caught up in old habits such as pink dresses for girls and blue police uniforms for boys. Others, especially those who have been educated more recently, place greater emphasis on their pedagogical role; that education in preschool is extremely important for the children's continued development. What should also be taken into account is the type of education the professional customer has, and for how long they have studied, as well as their ability to continue to learn and develop in parallel with the children.

SUSTAINABILITY IS WORKED WITH DIFFERENTLY IN SCHOOLS

"I work with sustainability differently than my colleague. She focuses on nature and the right of public access (allemansrätten), while I focus on reusing materials"

"I do not know much about toy manufacturing. But at that level, the manufacturers would need to think more - do not create toys that are toxic!"

Sustainability is something that has become increasingly important in school. Especially newer schools are working actively with the subject, to make more sustainable choices. Professional customers can take courses in working with children and sustainability, and how to make more sustainable choices. Sustainability also extends over the work environment; for example, using water taps with sensors, automatic lights, reducing sound pollution, etc are ways the school tries to be more sustainable. However, the interest in sustainability differs between schools and within the staff. Certain schools can afford more environmentally friendly products and to create a more sustainable workplace. Other schools have a tendency of transferring the responsibility of the more sustainable choices on the manufacturers of products, and choose the cheaper toys due to economic constraints.

REDUCING SENSORY OVERLOAD MAKES SCHOOL AND LEARNING MORE COMFORTABLE FOR EVERYONE INVOLVED

"It becomes unnecessarily tough and difficult for the children if there are too many impressions"

"Sustainability also takes into account the working environment. Children are in large groups with other children during all of their school years"

The environment in schools, for both adults and children, is also something that is being discussed more often. Within the school, the children are almost always in large groups with other children all the time, so to reduce stress and discomfort, the professional customer tries to reduce the overload of the senses. The professional customer tends to opt out products that result in a sensory overload such as loud toys, especially electronic sounds that are considered more strenuous than mechanical ones. Reducing visual impressions by choosing more neutral colors and materials can also reduce visual overload for both children and staff.

IT IS NOT THE TOY ITSELF THAT IS IMPORTANT, BUT HOW THE TOY IS USED THAT IS IMPORTANT

“A doll is a doll — never anything else. Materials in school should be open for the children to be able to use them in several ways and explore for themselves”

“We use hand puppets with different emotions and give the doll feelings for the children to understand easier social aspects such as comforting someone who is sad”

The professional customer prefers to use open materials that can be adapted to the children's needs, level of knowledge, abilities, creativity and playfulness. Open materials allow children to develop and use their imagination in their own way. If a toy is locked in its aesthetics and usage, it is more difficult for the child to use it in whichever way it wants, and, therefore, inhibits the child in growing and developing its imagination. Furthermore, when children can use all their senses it makes learning easier for them. For all of these reasons, it is not as important what the toy looks like as it is how the toy is used and how the toy can help the child develop. Therefore, in school, toys are selected based on how freely children can use them and for how long children can play with them. Toys and playtime are used pedagogically for children to learn about and relate to larger purposes; social interaction, nature, their bodies, values such as empathy, etc. Toys can be used to create an understanding of interactions and social aspects that are important to know later in life. The purpose of toys is for children to learn something and to develop. The most important thing of all is that the toy arouses the curiosity of the child, because otherwise they will not be used, as well as initiating interactions and allowing children to practice social situations.

TOYS USED AT HOME ARE NOT ALWAYS SUITABLE FOR SCHOOLS

“How parents look at life and what they believe in affects what toys exist at home”

“Even if we don't have dolls in princess dresses at school, the children might have them at home”

What is offered to children at home is different to what is offered at school. Even though there are parents who want to break the norms, strong stereotypes live on in many homes, which is something that schools are actively working against. Certain toys that schools do not buy due to them not being in line with the school's politics, might be given to the children at home. As well as this, certain toys are better suited to have at home, as they can be too unhygienic to have in school, for example fabric toys, or become too popular and create conflicts amongst the children. Children are generally also more careful with toys they have at home, resulting in fragile things being better suited for playing with at home. However, there is a trend at home to buy fewer things but of higher quality, if they are affordable.

THERE IS A TENDENCY OF SHARING IDEAS AND INSPIRATION BETWEEN TEACHERS, BUT NOT MATERIAL THINGS

“We could probably be a little more open and share the material, because it is still the same preschool and the same municipality. We can see other departments' things on the shelves, but we do not lend to each other since we have a “it's mine / ours”-mentality”

“We share ideas with each other and recommend games or toys. But we do not share materials”

Teachers give and take inspiration from each other to find new and educational materials and ideas. It is a strong community in that they support each other to succeed better. Exchanges of toys and materials can take place to a certain extent, but only during crucial times and within the same school or school area. In general, however, professional customers are careful of the things they have bought for the department, and want to know that whatever they might need is at their disposal when they need it. The professional customer often plans for how material can be used for educational purposes, meaning that material is generally bought and carefully selected in respect to the pedagogical teaching. Hence they want access to materials they have chosen. Professional customers want control and independence. It is, therefore, still not seen as practical to borrow from each other, for fear that things will break, disappear, or if they might need it themselves while it is being used elsewhere.

YOU CHOOSE WHAT IS FAMILIAR

“What’s that? I wouldn’t buy it”

“I know what that toy is referring to, and that it would be very appreciated by the children, but my older colleague probably doesn’t and would, therefore, not buy it”

What is bought for the school is something the professional customer already knows or recognizes; either the reference of the toy, or the brand of the toy. Professional customers buy things that they themselves know something about and have a relationship to, and that arouse their own interest and curiosity. If they do not understand the toy or how it can be used, they will not buy it. Furthermore, they are more inclined to buy toys from brands they know of and recognize.

TOYS MUST HOLD AND NEED TO BE SAFE

“I’m afraid the children will destroy the books we’ve borrowed”

“We do not have all toys constantly accessible, so that they do not wear out or disappear. Toys are like consumables; they are used until they run out or break”

Toys are exposed to extensive wear and tear in school and must therefore last a long time. The children should not be hindered in playing with the toys for fear of breaking something. For this reason, wood is often chosen over plastic, as plastic can become dangerous if it breaks; for example cutting oneself on hard edges and getting pinched. Some plastics are considered better than others, for example CE-marked plastic or plastic with higher quality that lasts, such as Lego, Duplo, PlusPlus and Fisher Price. However, many schools choose not to buy plastic toys also from an environmental point of view. In emphasis, it is important that no part of the toy can come loose and be harmful, and that the material does not pose a danger to the children. Since it is difficult to keep track of all toys in school as things disappear and are lost, it is important that the toys can continue to be used even though certain parts are missing. It’s not fun to play with something that does not work, is incomplete or is broken.

TOYS MUST BE KEPT HYGIENIC

“Had I shopped for the department, I would not have bought certain toys in fabric for hygienic reasons”

“The children who use roll toys have them in their mouths and lick them, and they cannot be washed if they are made of fabric”

The hygienic aspect of toys is important. It is important to be able to clean the toys since many children use them, and in school many children put toys in their mouths. The professional customer's biggest concern about renting toys is how to clean them after use. Having second-hand toys in school is not seen as an issue, as long as the toys are complete and washable/disinfectable.

SCHOOLS HAVE EXTERNAL INFLUENCES ON THEIR DECISIONS

“The municipality has agreements with various companies that we order from”

“We usually order from Lekolar and ABA School AB. That's where we may order our toys from, we are not allowed to go to the toy store and buy toys ourselves”

Schools can seldom freely choose what they buy, and are bound by different agreements and guidelines from municipal politicians and the National Agency for Education (*Skolverket*). Moreover, parents tend to transfer responsibility for their children and the children's learning to the school and the professional customer. It is becoming increasingly stricter how schools should work with pedagogical education and sustainability issues, with many people surveilling them.

IT IS IMPORTANT TO CREATE AN ENVIRONMENT THAT ALL CHILDREN FEEL SAFE IN

“The toys are for the children to use, should be available and the children should be able to reach it themselves, without having to ask for help from the adults”

“Our way of thinking is never that the toy should be for a specific child. All children are individuals, and material that can be used by everyone in any way is good”

All children must have the same conditions to be able to develop and learn. The materials used in schools are for all children to use, and never for only one specific child. The professional customer has a role of making sure the children have all the material they need to develop, and that they can access it. Another important thing is to create an environment in which the children can feel safe, but also so that the parents feel safe with the children being there. Usually the professional customer decides general subject areas for each day, so that both children and parents know what is to be expected that day. This creates stability, comfort and safety in the school.

SCHOOLS HAVE A BUDGET THEY MUST ADHERE TO AND TRY TO INVEST THEIR RESOURCES IN THE RIGHT MATERIAL

“The economic question is if renting would be cheaper?”

“The budget is tight, so we can not always buy things”

Due to financial constraints, certain resources must be prioritized, and everything the children and staff want cannot be fulfilled. The professional customer wants to get as much as possible out of the budget and what is good in the long term. Due to the budget being tight, schools tend to try to go for the cheapest, yet most long lasting alternative. When it comes to renting things for schools, there is a concern that they will have to pay for something that has broken, which would not be financially sustainable for the school.

THE PROFESSIONAL CUSTOMER WANTS TO MAXIMIZE THEIR TIME WITH THE CHILDREN

“If we are to pick up / drop off at the library, then we take our time from the children”

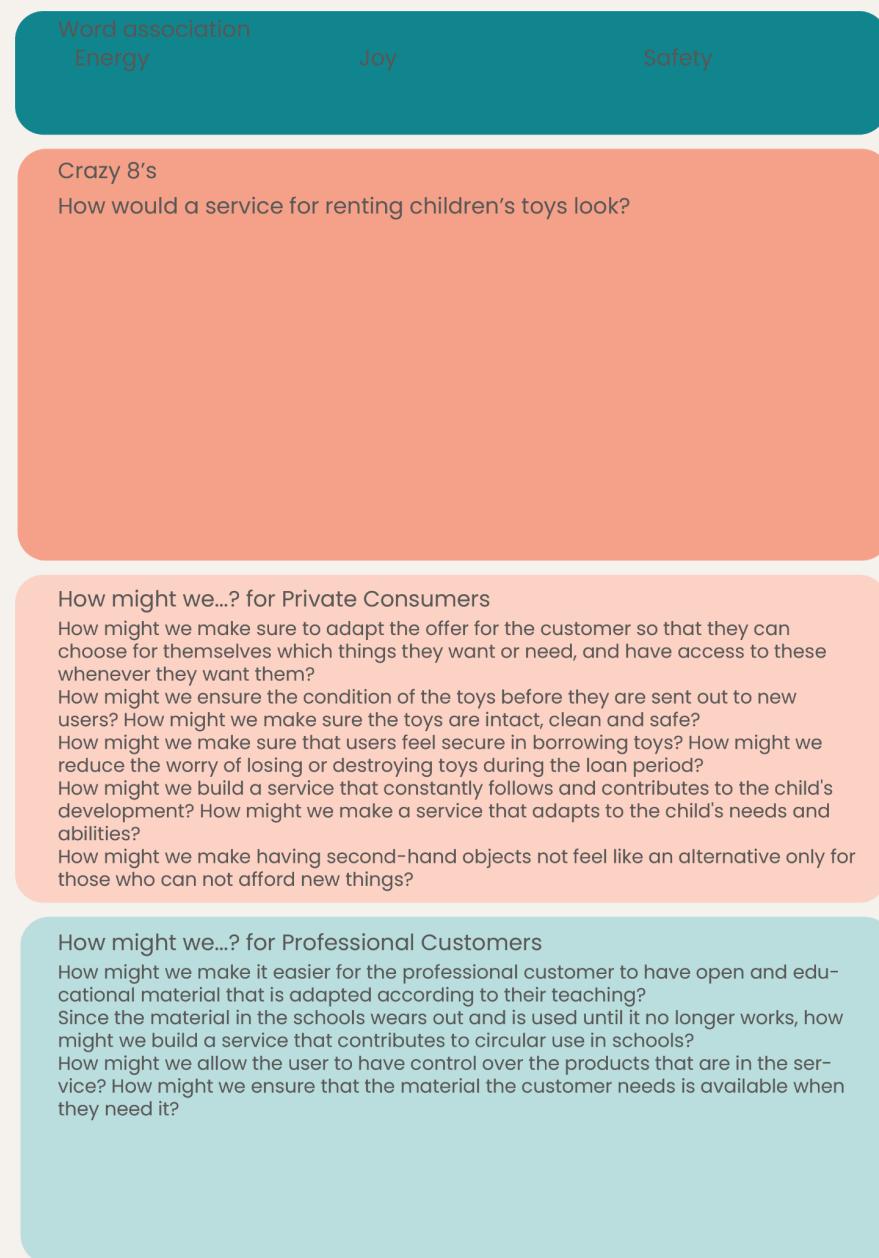
“I try to do all administrative work when the children are not around”

The professional customer has a lack of time and resources, and wants to prioritize their time for the children and the pedagogical work that concerns them. The professional customer wants to spend as much of their time with the children. Administrative work is something they do not want to spend much time on, so they prioritize what work should be done during their time apart from the children. Therefore, it is also a priority to hire extra resources for certain jobs such as cooking and cleaning, so that the professional customer can focus on the children.

APPENDIX J: Workshop Outline

With Micki

For the workshop with Stefanos Papamichailidis, Pontus Albinzon, and Kristina Aronsson, the following outline was used for the workshops' different stages. The workshop outlines were constructed both for the private consumers and the professional customers.



With students from KTH

A workshop was held with Ellen Danielsson and Christopher Lekström from the master's program Integrated Product Design at KTH. This workshop focused on the chosen target group: the professional customer.

Word association

Energy

Joy

Safety

Crazy 8's

How would a service for sustainable consumption of children's toys look?

Unintended Consequences

Uber

Zoom

TipTap

Swish

APPENDIX K: Rough Concepts

Micki Recycle & Build

Micki rents out kits that children can use to make their own toys. These kits consist of tools, defect toys or recycled materials/waste from their production. Micki also offers tips on DIY projects and how things can be built together for several purposes.

Micki Plock & Combine

The professional customer can pick up individual things that are built together into ready-made learning packages. The professional customer selects for example, a book with belonging figures, songbooks, stuffed animals or the like. (Combine different materials that are a little more solid in appearance/use into a personal package).

Micki Build & Learn

The professional customer has access to standard materials that can be combined in different ways and built together into almost anything (open, basically “unfinished” material). The professional customer builds together themselves, or together with the children. (The standard material is used in itself in several ways, open material).

Digital Creation

The children can make their own programs/games, which are then shared with other preschools online. They build on each other's games.

Micki Crafts & Restoration Event

Micki holds events where they show how toys are dismantled for recycling or restoration. Can also be interactive so that those who come can work with toys and redo them, to then send on to other people there who work on that toy.

The professional customer/the children can hand in toys at the event which will be fixed and restored. You can exchange the toy you send in for a new one, or you get a discounted price for buying a new one.

Micki Create

A person from Micki can be hired who holds creative events, which becomes a fun thing where you can learn through different tasks. The person uses toys in a creative way to learn about larger purposes - both for the professional customer and the children. The user can pre-book what type of event they want; learn about nature, math, cultures, etc.

Micki Play & Create Hub

Go on an excursion with the children! Renovation workshop where children can see how toys are made, how the material is recycled and the children can learn and explore different topics together with experts from Micki. Try toys, play, and draw/craft new toys. Different theme days have different learning foci, or there is an opportunity to choose different learning activities on site.

Micki BuildOn

Materials created for specific learning purposes can be passed on when they have been used and developed by the next educator/school. The material then becomes more complete with time and an exchange of other schools' materials is obtained. The different materials can then rotate between different preschools

Micki TrendStory

Toys go on with stories and tips for the next user, which creates value. Potential work with sustainability influencers who make reuse a trend and remove the stigma from the used could be implemented to make the subject more interesting/”cool”.

Micki ThemeWorld

On special occasions or theme weeks, the school can rent materials that suit the intended theme. For example, play worlds/figurines/fairy tale books within a specific theme, such as Babblarna, the Barba family, Space, Dinosaurs, etc.

Micki LearnKit

Schools get the opportunity to rent tools and theme packages to be able to teach children about something specific. For example, cooking kits, cultivation kits, tool kits, or other to connect to, for example, animals, nature and sustainability. Themes can be adapted according to age, interest and specific needs.

Micki rEcoPlan

A service that recommends materials based on the planning type of product and its use. The service also recommends things that are good for extra difficulties in certain areas. The toys are also exposed on a scale of difficulty. The professional customer can fill in which toys are used and in what way; share this with the rest of the school / other schools. The professional customer can also receive personal help from an expert who selects what fits according to the specified info regarding the needs. The material in the service is adapted to the degree of difficulty, interests and areas of need, like a "development ladder"; users fill in what stage the child is in, can see the next step, and recommend toys for each step. The professional customer does not have to look for good material since the service does this automatically and recommends suitable material. The material also comes with instructions on how it can be used in different ways, and in different cycles of use; "The next step is"

Micki Play4All

A service where the children via the school can borrow toys that the school rents from Micki; gives children who might not otherwise have families who can afford the chance to have toys at home. Alternatively, the professional customer can also recommend (in the service) toys that would help the child develop in the areas that the child has difficulty with.

Micki Share

Micki offers a teacher community, where educators can share materials, inspiration, and ideas on how toys can be used in new ways, play tips, workshops/seminars on children's development. There they can also follow other children and educators' travels and how they work with different areas/materials, or can show the children their own development journey.

Micki ReThink

Micki offers inspiration on how toys can be used in different ways to relate to larger purposes or encourage play and discussions with children about sustainability, gender, ethics, mental illness, etc. via lectures and events, on the website, or through instruction sheets / posters etc.

Micki Toy Library

Here, the professional customer lends toys to the school for a certain period. Micki and the municipality work together and build a resource library; including a booking system to book what is needed or see if what is needed is rented by someone else. The new toys are more expensive and the more cycles of use something has, the cheaper it becomes. Micki checks that the condition is ok.

Micki Connect

A service where you can connect several schools in the local area or several departments in the same school with each other, and rotate the sets of toys between those departments/schools. Users can easily keep track of what is available and where. Users can follow the rotation in the service and see which set they should get next, ask for things they want, or post things they no longer want. There is also a user rating of the condition of the toys; rates the quality. (and / or) Micki becomes a stopover station that double checks condition + refurbishment so that the quality is ok.

Micki HeadsUp

The professional customer gets a heads-up on what will come into the service and how it can be used. Everything in stock has instructions on how to use it. The professional customer orders according to need; the service is constantly fully charged so that there is no end to the stocks.

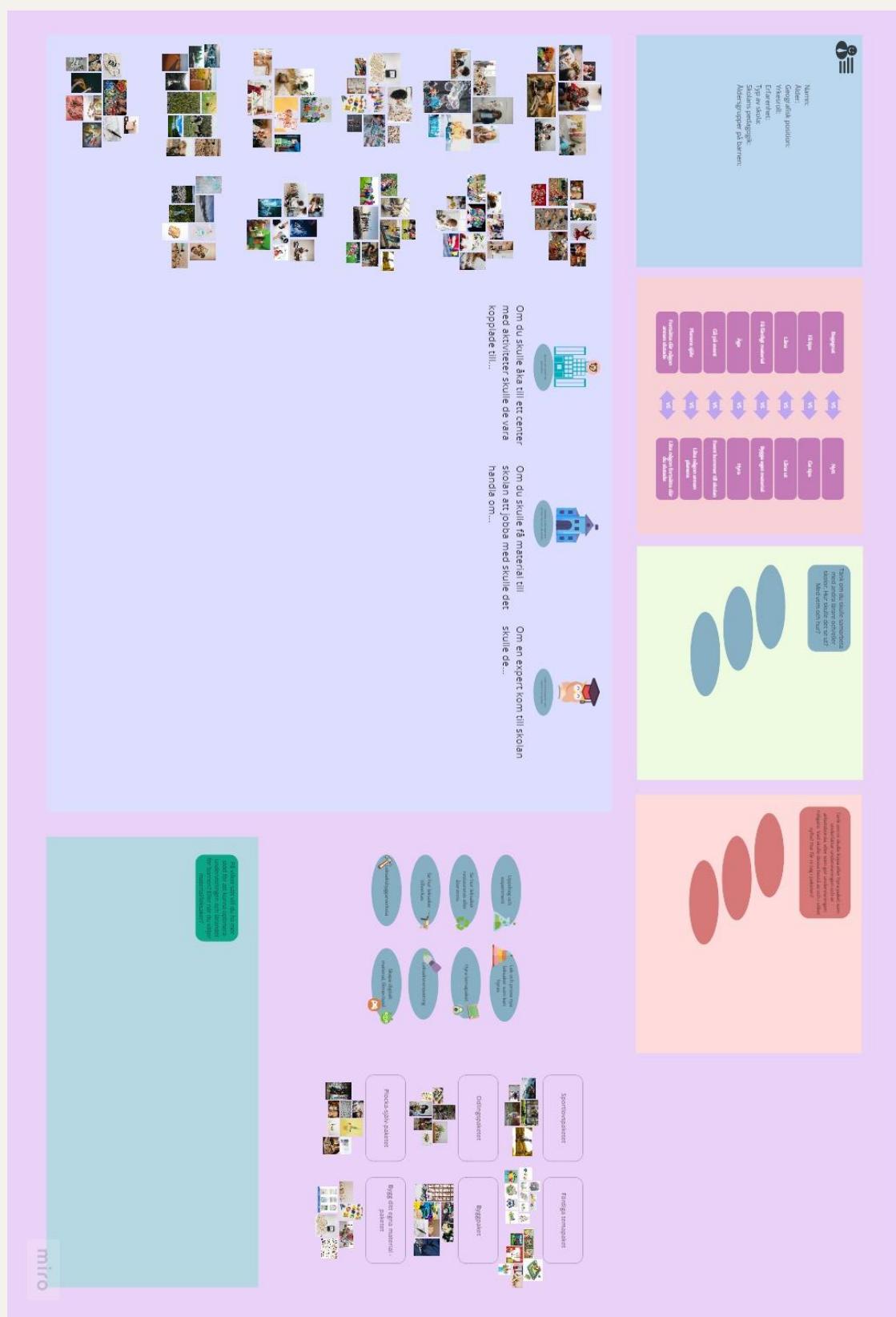
Micki Give & Get

Unused toys are handed over to Micki, who handles the resale. The school can then either receive a share of the profit, choose to donate to charity, or exchange for something else that has been submitted from other schools. Toys that no one is interested in are sent to children who can not afford toys themselves (for example orphanages, organizations, etc).

Micki Pop-up

A pop-up playground/toy truck that happens three times a year or similar. The truck contains toys that can be rented. The professional customer pre-books what they need so they do not have to leave empty-handed from the truck. The truck contains extra things that are recommended to be used together with what has been ordered, which complements the materials. The professional customer rents until the next time the truck comes by. Children can keep up and see the truck.

APPENDIX L: Trigger Materials for Rough Concepts



APPENDIX M: Value Proposition Canvas

Once the concept had been chosen, a *Value Proposition Canvas* was created by going back to the previous research and insights. This started by writing down *Customer Jobs* by answering the questions “*What is the job your customer wants to be done in their work or life? What are the functional, social, emotional jobs your customer wants to get done?*”. Following this, the gains for the professional customer were mapped out by answering the questions “*What would make your customer happy? What would make their life and job-to-be-done easier? What do the customers dream about?*”. After this the pains for the professional customer were defined by answering the questions “*What is annoying or troubling for your customers? What is preventing them from getting the job done? What is keeping your customer awake at night?*”. Once this was done, it was possible to formulate the gain creators as well as the pain relievers. This was done by answering the questions “*What can you offer your customer to help them achieve their gains? How do you outperform the current solutions? How will adoption by your customer be easier?*” and “*How can you help your customer relieve their pains? What problem can you eradicate? How do you fix current underperforming solutions? How do you eliminate risks your customers fear? How do you get rid of current barriers?*”. Finally, the products and services offering solutions were ideated upon by answering the question “*What are the products and services you can offer your customer so they can get their job done?*”. All of the questions were answered in regards to the chosen concept “*the Activity Center*” and based on insights from the previous research and interviews.

This was done in order to ideate further on the concept to see if the concept solves the discovered issues and insights, and if there were more solutions and details to take into consideration. What was concluded was that the concept is a valuable solution, and the structure and the components of the service were visualized and became clearer in their functions and content. As well as this, the concept answered the insights and was based on the user studies. Besides this, the Value Proposition Canvas gave a basis in creating a Business Model Canvas.

The results of the Value Proposition Canvas can be seen in Figure 1 below.

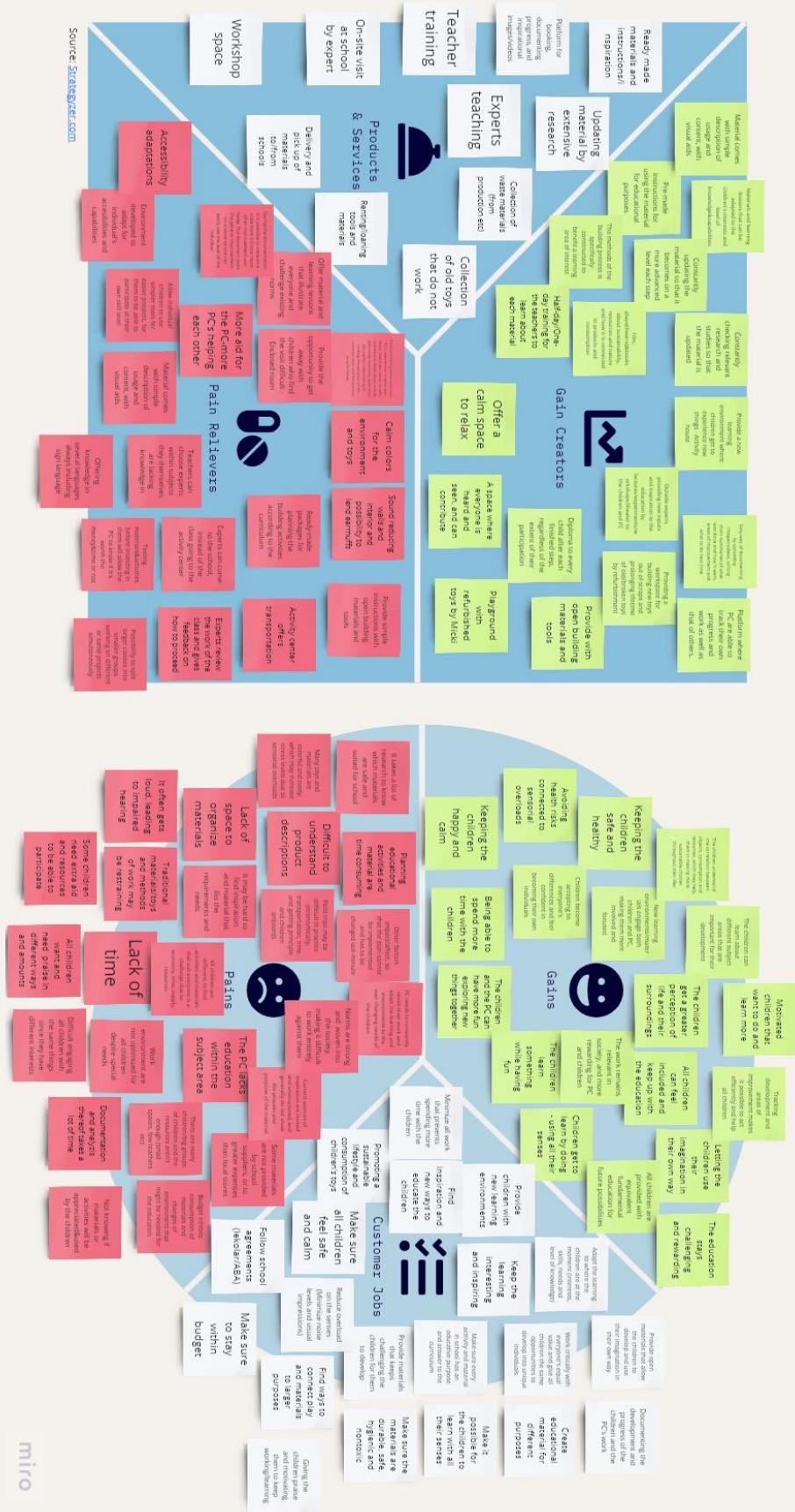


Figure 1. Results of the Value Proposition Canvas

Appendix N: Requirements Specification

Expert

Experts should have knowledge in:

- The purpose of the service and its components
- Sustainability
- Pedagogical education
- Special needs
- First aid and CPR

Local

All locals must be equipped with:

- First aid kit
- Defibrillator
- Fire blanket
- Fire alarms and extinguishers; connected to the alarm center
- Cleanable and disinfectable premises and interior
- Good ventilation
- Sound level regulation
- Access to hearing protection (desirable)
- Action plan for serious events; fire, threats&violence, disappearance, death, illness, accidents, etc.

For the children's safety, there should be:

- Enclosed areas
- No high heights of the interior
- No sharp edges of the interior
- No fragile objects that can be dangerous
- No hazardous chemicals

For the children's comfort, the architecture and design should include:

- Adapted after children's reach (stairs, tables, chairs, toilets)
- Adapted for disabilities; wheelchair, visually impaired, hearing impaired, etc.
- Pleasantly tactile surfaces
- Lighting that is not burdensome
- Calm space; sound isolated
- Visual aids
- Minimize sensory impressions

Activities, Packages, and Materials

All materials and activities should have:

- A clear goal and purpose connected to the curriculum
- Clear instructions guidance with visual aids for both teachers and children
- Several language options including sign language
- Adjustments for individual needs; e.g. different levels of difficulty, adapted tools, etc.
- Constant surveillance

Inappropriate materials must be sorted out, i.e. :

- Toxic materials
- Dangerous objects
- Very small objects
- Materials that can not be cleaned/disinfected

Before use, the materials must be:

- Cared for, avoiding sharp edges/dangerous details
- Cleaned and disinfected

Booking system

Security

- IT security (GDPR)

Usability

- Easy to use
- All information necessary is stated
- Easy to access customer service

APPENDIX O: Revenue models

A business revenue model is a framework of how the company generates profit and considers the value proposition, the worth of what the company offers, and how to charge customers (Eggert, Hogreve, Muenkhoff, & Ulaga, 2013). How to gain profit will be an important aspect of this project, hence an overview of commonly used revenue models are investigated and briefly described in this section. Which business revenue model that would suit the service designed in this project would need to be investigated more thoroughly in the later stages of the project.

Transaction-based models

This is the most classic way to operate businesses, where revenue comes from selling goods or services to customers who are either consumers (B2C) or another business (B2B) (AltexSoft, 2020). The costs of production are covered in the selling price, which also includes a margin for profit. There are, however, a lot of different ways of implementing transaction-based models.

The markup model is commonly used by wholesalers and retailers, which refers to buying goods and selling them at a higher price with a profit margin. It is also common for mediators such as e-commerce marketplaces, that charge a certain percentage of a sale from the sellers (Campbell, Revenue Models, 2019).

With an *arbitrage revenue model*, sellers can take advantage of the fact that an asset is priced differently in different markets. Hence, the profit is gained through buying goods or services in a lower-priced market to sell in another market at a higher price (Campbell, Revenue Models, 2019).

The subscription model is based on having recurring revenue from users who want access to a product or service over time, e.g. monthly or yearly. By providing different subscription plans, the needs of different user segments may be simultaneously fulfilled, i.e. having various plans that differ in price, features, or duration. In that way low- and high-income earners can both be captured, offering a better and fuller experience as the price of the subscription rises. (Campbell, Subscription Revenue Model, 2019)

Using *licensing*, the owner keeps full control of intellectual property such as copyright, patents, and trademarks, allowing for others to make use of products or services by renting them out (Campbell, Revenue Models, 2019). In comparison with a subscription, which has greater opportunities for upselling, licensing instead has the advantage of a more stable recurring income.

A *Pay-Per-Use* approach is an option where customers are charged only for the parts or features that they use; e.g. additional storage space in cloud storage services (AltexSoft, 2020). This is similar to the *Pay-Per-User model*, which instead consists of limiting access to the product or service by charging clients differently depending on the number of users e.g. accounts on Netflix (Software Brothers Editorial Team, 2019).

A *freemium model* is based on providing the main function of a product for free with the opportunity to pay extra for additional features/services/bonuses (AltexSoft, 2020). This may also be used in combination with *hybrid pricing*, which is characterized by the mixing of different pricing plans. For example, a freemium model could morph into a payment plan after a certain period of time, offering or forcing the user to pay for future access to the product/service.

Other revenue models

There are also ways for a business to gain profit without selling goods/services in the traditional way; for example, acting as a mediator and charging commission by advertising or donations.

Advertising is used as a revenue model, but often in combination with other ones; when owning a platform that reaches out to a significant number of users, income can be generated by payment from advertisers wanting to display their offer to the user base of that platform (AltexSoft, 2020).

The *affiliate revenue model* includes promoting other products/services, where the commission can be collected from the promoted seller if there are any subsequent sales (Campbell, Revenue Models, 2019). If this is implemented for products in synergy with products of their own company, this revenue model is set up for a win-win situation.

In the *commission model*, the business can function as a bridge between two parties, where the transactions in between are charged by commission. In this case, it is the consumer rather than the seller who stands for the commission. Such a business may be quick to establish since it is based on existing products, but may also be easily replicable because of this. Therefore, it is sensitive to competition (Campbell, Revenue Models, 2019).

Another way to gain income is through *donations* from regular users, which is particularly common for nonprofit organizations and online media (Campbell, Revenue Models, 2019). Donations could be driven by granting access to exclusive content or by the customer's perceived value of what is offered.

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APPENDIX P: Expected Cost Items

Activity center	Platform	Movies	Theatre	Playground	Calm space	Crafting Workshop	Rentable Packages	Teacher Training	Expert visits
Fixed costs									
Manufacturing Domain infrastructure	Room architecture	Room architecture	Personell constructing safe refurbished toys	Sound isolation	Develop + Update crafting sessions in line with curriculum	Develop + Update boxes in line with curriculum	Personell that educates teachers		
Visual aids (signs etc)	Web developers	Comfortable seats	Comfortable seats	Clean and disinfect material before use	Screen (showing the other children)	Visual aids	Personell that creates boxes of materials	Material for education	
First aid kits and defibrillators	Personell for customer service: chat/email/phone	Projector/S creen	Stage	Cushions/couch	Work table + Chairs	Tools	Instructions (multilingual)	Lecture halls with tables and chairs, whiteboards, screens etc	
Fire alarm Extinguishers & Blankets	Security system	Speakers	Backstage area	Couch	Work tables&chairs	Tools			
Development of action plans for serious events	Platform maintenance	Headphones for noise cancelling/reducing	Speakers		Speakers	Hearing protection			
Architecture of premises		Buy movie rights?	Microphones		Hearing protection	Instructions (multilingual)			
Rent for local		Movie personell-start movie	Actors			Material & Tool storage			
Hiring experts		Manuscript creator/editor	Costumes creator/edit or			Supervisors			
Insurance		Movie production-outsourcing	Props						
Cleaning			Manuscript creator/editor						
Utilities									
Sales Persons									
Customer Service									
Personell and receptionist									
Maintenance									
Marketing/PR									
Variable costs									
Tickets/access cards					Glue	Glue	Personell visiting school (transportation)	Experts on demand	
Transportation service					Paint	Paint		Transportation of expert to/from school	
					Crafting material	Crafting material		Material for working	
					Personell for sorting + care and cleaning/disinfecting of material	Personell for sorting, care and cleaning/disinfecting of material			
					Transportation of material	Package deliveries			miro
						Refill boxes with material			

