

Alumni master projects

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Tilt

Annika Carlsson

Tilt is a piece of dual-use furniture, mainly for outdoors.

In the upright position, it's a chair with proper back and armrests; tilted sideways, it becomes a two-seater bench. The aim of my project was to create a smart and attractive piece of furniture that can compete with comparable products on the market. My inspiration came partly from the ubiquitous garish monoblock-chair, seen in gardens and outdoor restaurants all over the world.

Obviously, there's a need for practical, stackable and low maintenance furniture for outdoor use. In order to compete with the extremely low-priced conventional monoblock-chair, an added-value strategy was needed – in this case through shape and function.

Tilt is a one-piece stackable object, manufactured from injection-moulded polypropylene.



Volvo Sport

Torbjörn Ericsson

My diploma work was carried out at the Volvo Cars Product Design Department in Gothenburg in spring 2003. Volvo Sport is an exterior concept of a practical rear-wheel drive two-seater with a sizeable luggage space, a symbiosis of sports car and station wagon. Most sports cars currently available have hardly any room for luggage and storage, some feature tiny rear seats that only children or rather small passengers can use comfortably. This rather conventional configuration is called 2+2; the rear seats in these cars are hardly ever used. Therefore, my concept was to be a pure two-seater to make room for a large practical luggage space.

The target group is adventurous, unisex, 35-50 years of age with superior financial status. These people put an emphasis on features like safety, good looks and active driving. They often do sports like golf, hill climbing, scuba diving, etc., therefore wanting a sports car that can offer both active driving and room for luggage. My design has a strong Volvo identity with a powerful stance and good proportions. Many design features are clearly linked to past models like the Volvo P1800ES and the Volvo 144.

In many automotive diploma works, we have seen things like freely suspended wheels and other gimmicks. According to the designers I talked to at Volvo, they prefer to see students capable of designing a fairly realistic car. Therefore I chose to create something original yet realistic.

A longer rear overhang underlines the fact that my Volvo Sport is a rear-wheel drive car. The main reason for choosing rear-wheel drive is that it is more fun to handle, also eliminating irritating vibrations in the steering column when accelerating hard. Another reason to have a longer rear overhang is to get away

from present-day cab-forward design. My feeling is that this trend will probably change into more of a cab-backward design as seen in the great GT cars of the 60s and 70s. The bonnet is fairly long, accentuating the powerful, longitudinal engine; a nice spin-off effect is that the deformation zone is larger, adding more safety to the occupants in case of a frontal collision. The wheel arches are well defined to give the car a powerful stance. The recognisable "Volvo-catwalk" along the body sides and the characteristic rear window arrangement are key features, a reminiscence of the Volvo P1800ES.

The Volvo Sport is a crossover concept, fusing two different worlds. It is a sports car – and a car for sports. It is a fun car – and it's practical. It is fast – and it's safe. The safety aspect is expressed by a sturdy C-pillar, providing a sense of security. It also stiffens the car's structure. The rear body side graphics accentuate the security theme even more. A wide frame to give an impression of strength and stability – also making the glass areas look less fragile – encloses the side windows. The soft front, reminiscent of the Volvo 144 and 244, has a separate aluminium coloured section acting as bumper. The roof is made of light but strong laminated glass to achieve a spacious feeling and brighter interior.

To keep with the sleek design, the keyless doors do not have handles. Instead, a fingerprint sensor on the B-pillar must be touched to open the door. The fibre-optical headlamps are integrated in the grille and they are, just like the taillight clusters, invisible when not illuminated. The indicators are also obscured when not in use.



Riekkis Fly-Fishing Equipment
Emanuel Lidberg

Rod and reel is one object instead of the conventional two, giving the equipment a very distinct identity and a design that stands out from the competition. The closeness between handle and reel allows the fingers of the casting hand to control the rotation of the spool during casting and fight.



Manual Demining Tool System
Marpe Tanaka



There are many different demining methods, but the most common and most accurate one is to do it manually – a dangerous, slow and tedious procedure. The circumstances deminers face vary a lot and many different tools are needed in the process. Deminers have to do everything on their own, from digging and excavating soil to sawing and cutting branches and roots. My design facilitates their work by providing all tools necessary, tools that are flexible, ergonomic, easy to store and transport – and that aid the safety aspect. Furthermore, they are simple to manufacture so they could be made locally and adjusted to environmental and situational differences.



The X-Project

Måns H. Sjöstedt, Puia Shamsossadati

More and more people suffer from insomnia, depression, head-, back- and neckache. One of the factors that contributes to these illnesses is stress. The goal of our project was to develop designs that help people avoid or reduce the damaging side effects of stress.

The X-Project resulted in four concepts for health improvement products, which are based on well-known methods and theories for stress relief and well-being. The main idea was to make them easy to use, accessible, fun and inspiring, so they can become a natural part of one's daily life and routines.

X01 – Communication Jewellery

A new communication concept for giving couples support in showing emotions. Because humans are flock animals and social creatures by nature, we want to belong to a group, particularly in stressful times. Being touched by someone you love increases the level of oxytocin in your body, which in return makes you calm and happy. A psychological aspect of belonging to a group is that you are aware that your friends or loved ones are always there for you. Knowing that there is someone who cares for you and supports you in difficult situations has a soothing effect and reduces your worries. The jewellery create a link between loved ones, giving couples new means of communication when they are apart. They provide a feeling of emotional security, letting you know that there is always somebody there.

X02 – Relaxation Improver

A small portable device that helps and teaches people how to relax. Brain and body have a rest system that with its hormones and nerve signals makes us recover. For this rest system

to start, the body and mind must be calm. If you're not mentally calm, the recovery process is not going to be effective. To get mentally relaxed is difficult, especially if you feel stressed – and today most people are not able to get in to a truly relaxed state. Relaxation techniques can teach us to be mentally unperturbed, there are different types of meditation and many can be learned with some practice. They help us to deeply focus upon the core of our being; there is a quieting of the mind, emotions, and body. This product will help people to get moments of relaxation using biofeedback technologies by which you will learn to relax your body and mind through audiovisual feedback of your brain activities. This employs binaural beats and sounds to stimulate the user to get into a state of complete relaxation.

X03 – Sleep Stimulator

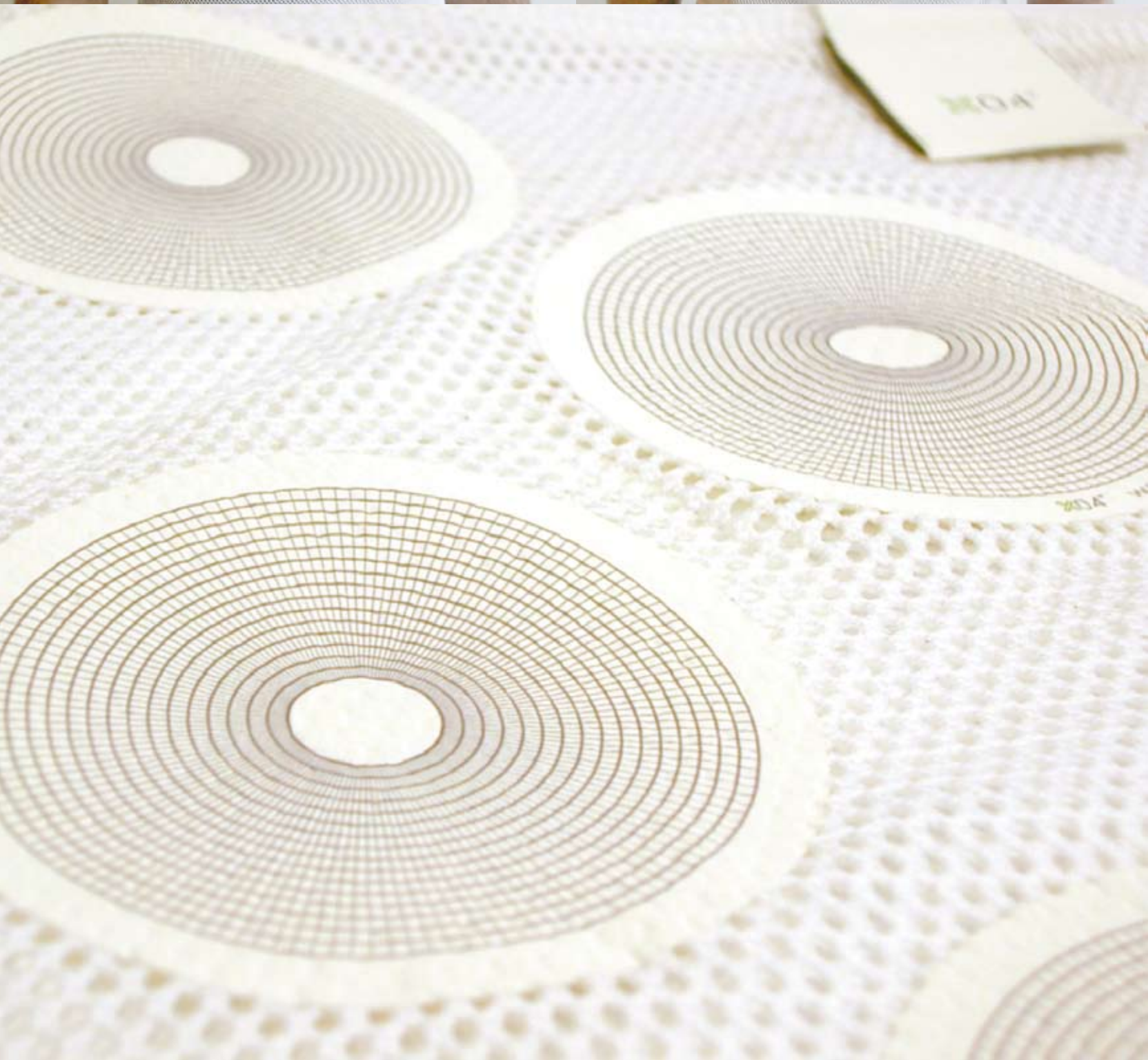
An aid for better sleep and comfortable awakening. More and more people have trouble sleeping, often caused by worries and stress. A study in Sweden showed that 25% of the population have sleeping problems. Waking up and not feeling rested is a bad way to start the day; a tired body and mind are more vulnerable to stress.

Falling asleep: the pillow uses sound and pulsating light as stimulation to slow down brain activity. What happens is that the brainwave activity tends to mirror the flickering light and sound. This helps the user to get into a relaxed mood before falling asleep, making mental and physical recovery more effective. Waking up: in the morning, 30-45 minutes before the alarm is set to ring, the pillow emits a slowly increasing light. Even though you're still sleeping, it prepares your body for the waking-up process and gradually guides you out of sleep, making you feeling refreshed and renewed.

X04 – Wearable Tension Reliever

Common symptoms of stress are body tension and muscle ache. These physical symptoms can lead to more emotional stress, which can again worsen the physical symptoms. By stimulating the tensed muscles with heat and massage, you increase the blood circulation in the tensed area and release endorphins and oxytocin that are proven to reduce tension, pain, blood pressure and pulse as well as anxiety.





Designing Frames for Meals

Tiina Karjalainen



Dishes, as well as the food on them, have been decorated for centuries with the aim to add beauty to our everyday lives. But the differing aesthetics, those of dishes and food, seldom relate to each other. After all, both have an influence on the appreciation of a meal. With my designs, I want to emphasise the interplay between the aesthetics of dishes and food. My aim has been to design a frame, where all aspects of the meal – the food, the dishes and the service set can interact in a form. Simply put, this project is about how decorations and food can interact on a plate, or how a plate and a decoration can interact with food.

The Connected Youth, Furniture in Cooperation with IKEA

Hanna Åkesson



Everyday work and leisure furniture aimed at teenagers; for play, relaxation, homework, socialising and many other situations.

Work and relax in bed – KNÄGO

Teenagers like to spend a lot of time in bed. This tray can be used as a work surface in bed and elsewhere.

Work and relax in front of the TV – LÄXA

Teenagers like to watch TV or play video games in groups. This piece of furniture is a seating alternative and an extra table or storage for dirty clothes.

Work and relax on the floor – MUTTER

Teenagers are always stressed. With this low seat cushion I wanted to express a feeling of relaxation. It's like a friend to hang out with. When not in use, it decorates the floor, the wall, the bed.

Liturgical Field Kit
Anna Hjertman



New times demand new approaches!

Never before in modern times have so many Christian rituals been carried out in the open air. Many people today do not feel that a visit to a church is the only way to come in contact with God. They choose to celebrate religious feasts in a more untraditional manner with weddings in nature's own splendid chambers, baptisms under the tree in the garden and worship services on magnificent mountainsides. The wishes of the people have changed and the Church needs to follow along, out in the real world where their role is in demand.

The Church is needed, even in times of war and famine, and carries out fantastic work in many different places on earth;

places where the established church is an exception and where worship services are celebrated out-of-doors in what are often rough conditions.

By creating a functional and attractive field kit with the Church's liturgical tools, I hope that I, in my way, will practically facilitate things for ministers and pastors in their daily encounters with people, by giving them a tool that makes their work a bit easier but also offers opportunities to an event that is both solemn and memorable.



Stressless Island

Annika Forsberg

My inspiration came from investigating drab pause zones, waiting rooms, cafeterias and the "coffee break culture" in office environments. I wanted people to be able to disconnect from work when taking a break. Many people work too much and too hard; therefore it is important to consider the quality of one's time off work.

My design is an artificial arbour, a place for coffee breaks and daydreaming. It is like being outdoors but staying indoors. It can't compete with real nature, but it will let you imagine and conjure it up.

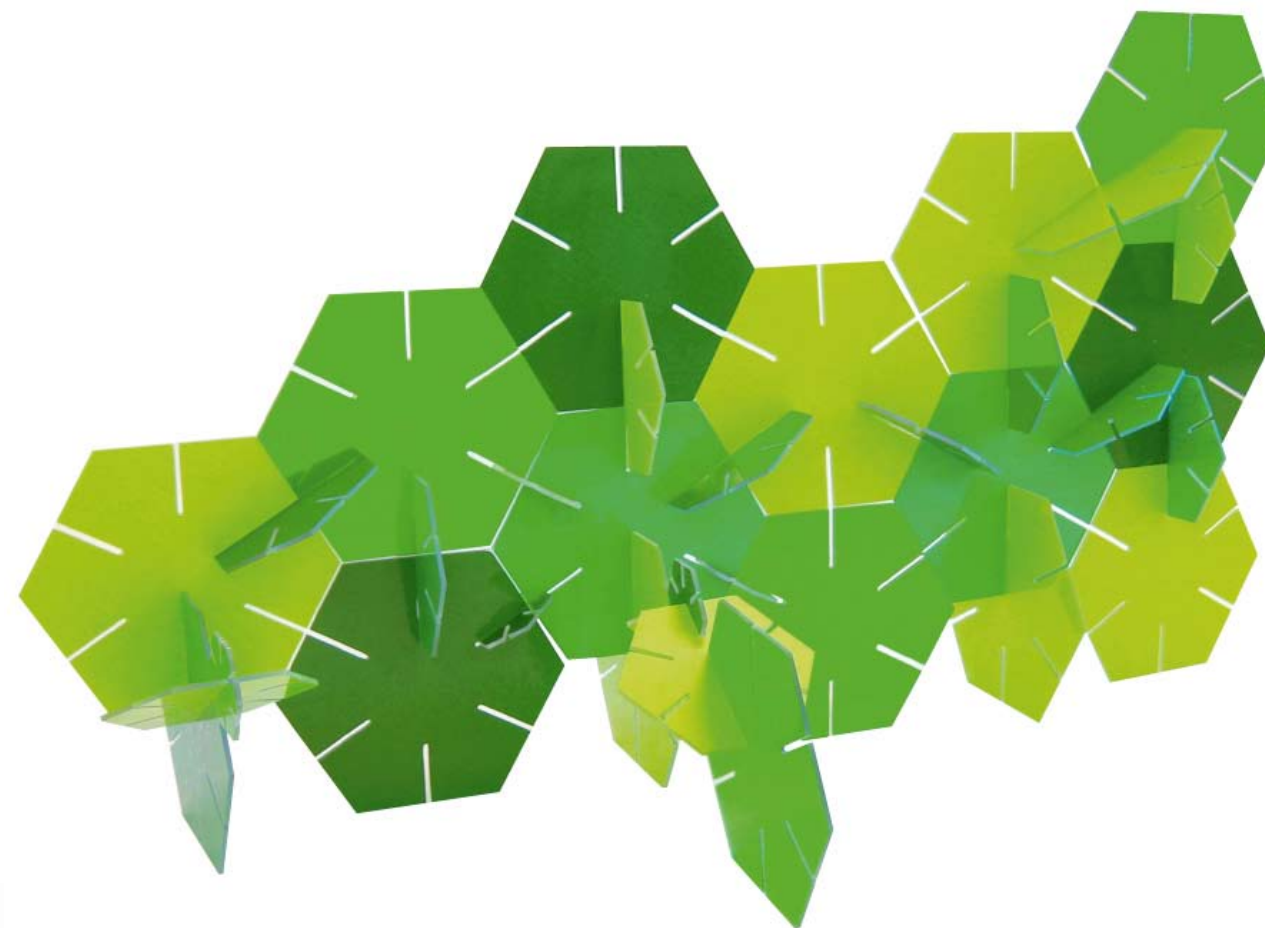
Stressless Island is made for one or two people. If you want to sit on the bench together, you simply move the table to the centre. There is no space for being offish: you have to sit close. For a single person, there'll be ample space with the table moved off to one side.

The bird perched in the arbour has a loudspeaker in its body – listen carefully to hear it sing!



Allergy Park
Jenny Nordberg

Over 40% of the Swedish population suffers from an allergy to some extent. In the past thirty years, this figure has increased by over 10% every decade. Being outdoors in spring and summer can be agonising for many allergy sufferers. The Allergy Park is an alternative park with no known allergens. It is also a somewhat ironic comment on the rapidly increasing number of people suffering from allergies and similar welfare diseases.



Snow Terrain Vehicle
Ambjörn Viking, Daniel Mauritzsson



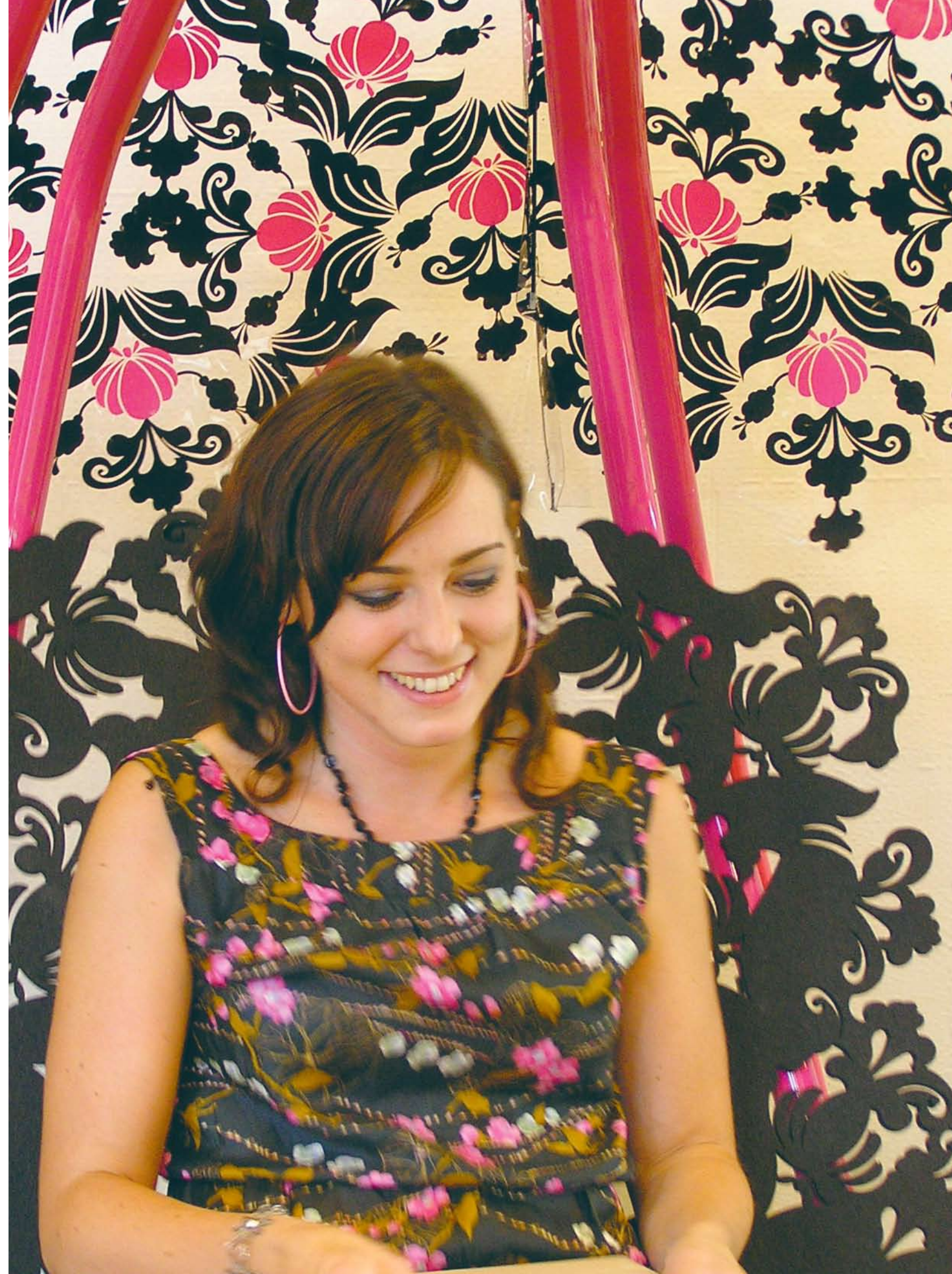
This project is a redesign of a snowmobile formerly known as BigFoot. The design was developed in collaboration with Folan AB, the manufacturer of the vehicle. Our ambition has been to improve looks and safety of the snowmobile and make it a more practical "tool" for those working in the field of forestry and alpine rescue. We have also improved its multifunctionality to put forward a higher degree of flexibility, such as adjustable steering and variable seating arrangements. A high and a low version were developed to be used for different purposes and depending on terrain. The snowmobile is of the twin-belt type and can substitute 3-4 smaller snowmobiles in size and capacity.

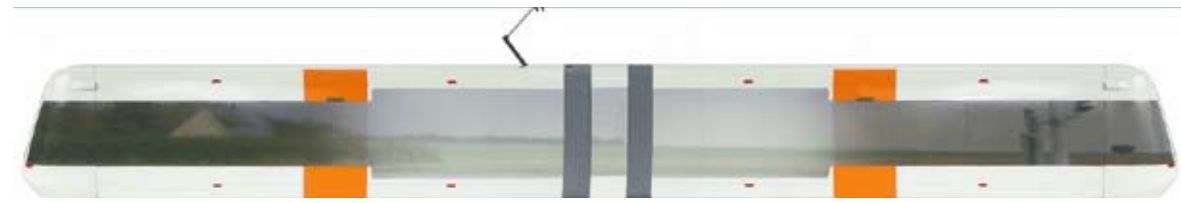


Kurbits – Garden Swing Furniture
Stina Moraeus

The aim of my project was to create a private space within larger spaces, a small retreat for a coffee break, reading or simply daydreaming and swinging for a while. It can seat two – for some intimate moments to be shared. I wanted to update the traditional hammock and create a garden swing style piece of furniture with a tree-like canopy covered with a foliage pattern.

My Kurbits hammock is a synthesis of the essence of a traditional hammock and my own personal interpretation of the old patterns in Kurbits' decoration and artwork – which is part of my cultural heritage from Dalarna. The canopy pattern casts shadows on the person and the seat leaves a temporary trace on the body of the time spent swinging.





Lundalänken, A Commuting and Transit Concept
Josefina Brismar



This project aims to provide a conceptual interior and exterior proposal for a light rail vehicle in Lund. It was done in cooperation with Lund City Council and Bombardier Transportation.

Key issues in designing for the light-rail sector is accessibility for passengers and ease of maintenance. Specific requirements such as the needs of commuters versus those of local travellers place demands on the design of the interior. Since this vehicle will serve the largest hospital in the region, it also has to cater to hospital patients and their special needs.



Aesthetically, my aim was to create some kind of a blend between the central European design language used in public transport and the Swedish culture of engineering and functionality. Lundalänken will become a new landmark and symbol for the region; hence it should express progress and optimism.

Better Boston Brace and Soft Support
Sixten Heidmets



My task was to design a healthcare product. The main achievement of my project is to offer solutions for improving the intra-brace climate of the Boston Brace, thereby breaking the barrier between the medical sphere and everyday life, to which the brace should adapt. As a by-line, the present work features a solution for an elastic orthosis that is used for the prevention of scoliotic processes, to correct a minor scoliosis and to alleviate other back problems. It has not been my aim to invent a new therapeutic method, rather to make a working method user-friendlier in the design process. The Boston Brace, a rigid polypropylene medical support, is the worldwide standard for the cure of idiopathic scoliosis. This condition is a childhood health problem causing an s-shaped sideways warping of the spine. Therefore, the main focus of my design is on children and teenagers. In the case of the elastic orthosis or Soft Support, other age groups come into focus, too.

All designs are based on interviews with physicians, orthopaedic engineers, orthosis users, scientists, tailors and manufacturers and on study of relevant literature. Several functional mock-ups were made according to the results of analysis; reduction of moisture inside the brace were especially addressed. My goal



in redesigning the Soft Support was to transform it into a sporty and rather casual looking garment.

Based on sketches, I made a prototype of an improved Boston Brace. In tests, the functional interchangeable inner lining combined with openings facilitating ventilation performed 30% better than the existing Boston Brace with regards to humidity evacuation and thermal regulation. While working on the Better Boston Brace, I considered the demands and colour preferences of my chosen target group. The Soft Support prototype is an orthosis resembling a sports shirt with integrated support elements necessary for reshaping the spine.

The Better Boston Brace is a thinner and lighter medical brace with more airy looks, featuring improved thermal properties and changeable inner lining. The Soft Support can be worn as a kind of fashionable garment; the innovative appearance blends the medical qualities with a sporty lifestyle.

Toadstools And Candle-Light

Rani Leoson Samuelsson

Toadstools

It is the Japanese architect Shigeru Ban whose paper architectures inspired me to look into the endless possibilities of this simple material. He used paper in the form of tubes, honey-comb panels and membranes to construct his structures. If it is possible to create entire buildings from paper – then making furniture can't be impossible. Therefore, I decided to design a typical structural and common piece of furniture – a stool. Having initially decided to design a stool and supplementary side table from pulp (mashed paper), it was after Shigeru Ban's paper tubes I modelled my furniture. I believe the structure of the tubular form would add to the strength of the paper and allow me to express my desire for an organic shape, showing the potential of using pulp. When wet, it can be worked like clay; it can be pressed into moulds or modelled over an armature. Once dry, it shows many of the properties of wood.

**Candle-Light**

Most people enjoy the warm glow of a lit candle. It is comforting, intimate and cosy. I wanted to play with the word candlelight; the idea of using the wax as a material for housing a light instead of being its fuel was born. I also studied the aesthetic possibilities of the wax material. Would the same feelings of comfort arise if an electric light bulb replaces the burning wick? How would the wax react? I had considered the possibility that the wax lampshade might soften and decided to regard that prospect as a bonus. It would give the owner an opportunity to reshape the lampshade and take a part in its design process. So far, my experience has been that by using low energy light bulbs, the risk of the wax melting is minimal. Having experimented with form-moulding lamps from wax before, I later wanted to try my hand at dipping one. I hand dipped the lampshade by using lace and the chandelier with cotton wick.





Finnair Intercontinental Business Class Concept
Juho Viitasalo

In 2005 Finnair was planning to renew their intercontinental fleet and preparing for the opening of new routes to Asia. My diploma project was considered to act as a planning tool for the division of service development at Finnair. My task was to develop a design concept for the business class service on the airline's next generation wide-body aircraft.

I studied the habits and trends of the Asian customer segment and explored future aviation and air travel concepts. I also interviewed company employees in Finland, Japan and China and travelled between these countries in my research phase. The major part of my research dealt with the ways on-board service is organised. This meant I had to study various aircraft candidates and find out what their individual strengths were. From all research conducted I derived design concepts covering such areas as seat design, cabin design and service branding.

The seat design uses a lie-flat mechanism that provides passengers with excellent comfort during long-haul flights. Entertainment systems and abundant storage compartments for personal items are integrated. Various issues in connection with the well-being of the passengers are also addressed.

The cabin design comprises the general cabin area and a spacious multifunction entrance area, which can be used for various in-flight services such as serving meals and drinks. All design elements were required to fit the corporate brand of Finnair and to convey a fresh Nordic feeling.

My work was reviewed during and after the process by people from various departments of the airline – such as development, marketing, sales, operations and fleet maintenance.

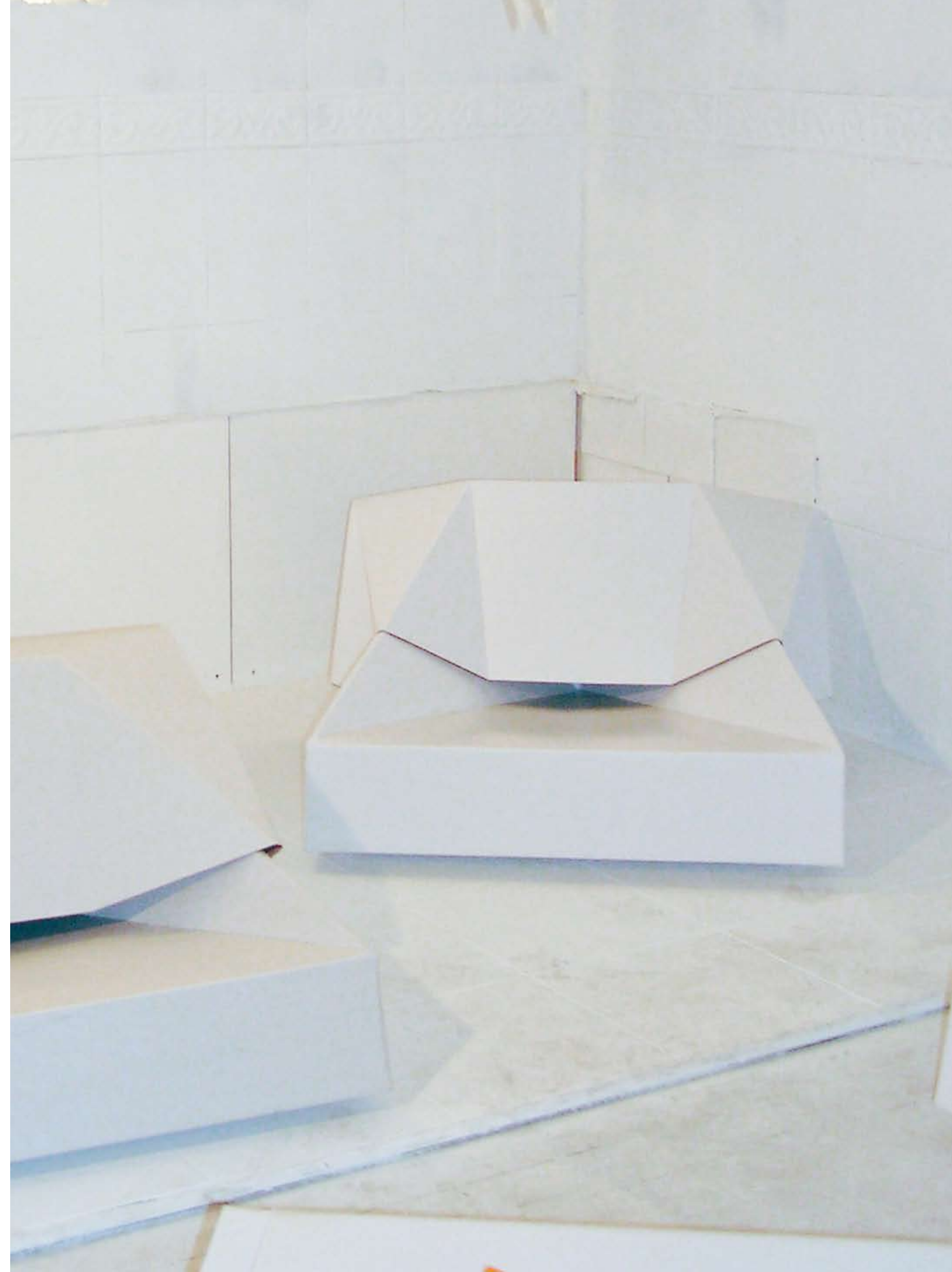
Some time after the completion of this project, Finnair announced the purchase of the new intercontinental fleet from Airbus Industries.



Origami Chair
Olga Shchukina

A new dimension to the idea of "folding furniture": adapting the ancient technique of the origami paper-folding craft. A suitable product for compact living, fit for a nomadic existence, because the objects can be unfolded and flat-packed. My innovative table and chair set was supported by IKEA. All objects are made from a single sheet of material each and feature a layered

construction of leather, board, and printed textile – making for a rather variable appearance. The serene faceted shapes express the grace and lightness of Japanese art. Like true origami, the objects are assembled without a single cut or using adhesives.



Klippo Kinetic
Hans Lekeberg

As our gardens shrink and our environmental awareness grows, the demand for simple manually operated tools increases.

Klippo Kinetic is a lawnmower that preserves the energy put into it and discharges it when needed most. When you come to a corner or want to do some extra mowing – typically under a bush or low trees – the blades will keep spinning for about half a minute thanks to the flywheel-principle on which the design concept is built. This also makes mowing more comfortable, because the unevenness of the lawn will be taken care of by the energy buffer and not immediately directed up to the handle.

The handle can be tilted 45 degrees sideways for perfect clearance close to walls and plants. The wide wheels enable you to mow along flowerbed edges and give you a much smoother mowing experience, even on rough lawns. The cutting width is 45 centimetres; the cutting height is adjustable in four steps: "Golf green", "Normal", "Rather seldom" and "First day in the country house".

Klippo Kinetic is a hand mower that gives you the needed amount of power, accuracy and durability. Without gas fumes. Without noise.



Sewing Machine for VSM Group
Sara Söderström

The sewing machine and its context.

Why don't sewing machine manufacturers distinguish themselves from each other regarding shape and function? Why don't practically all sewing machines express more design quality? Why is the sewing machine always seen as a typical female object?

Before my thesis, I established cooperation with the VSM Group in Husqvarna. A suggestion from the company's side was that I should create a new design profile for their mechanical models, including factors like ergonomics, usability and visual expression. I received a specific model from their range as starting point for my project. My goal was to not only design a sewing machine but also to find new ways of advertising it to attract new target groups.

For a start, I analysed sewing machines from historical, technical, economical and social perspectives. What was the *raison d'être* for the origin of the sewing machine? What factors have governed the design in the past? In what ways have the machines changed over the years?

Further on into my project, I investigated the market for sewing machines today, focusing on machines for home use. Who is the typical user? What are they used for mostly? To what extent does the customer influence the product development? Who could be the next target group?

Parallel to my research I was working on mock-ups and study-models that finally developed into a full-scale model.

