

**2007**

LUND UNIVERSITY INDUSTRIAL DESIGN LTH

## Preface

After having issued our rather weighty tome “Just five years”, charting our activities from 2001–2006, we decided to keep this new almanac more portable, truncating all available material to the essentials of 2007.

Right now, European universities are reshaping their curricula in accordance with the Bologna Process so as to implement bachelor and master programmes. We too are in the process of doing so with the first courses of our bachelor programme having started this August. The year 2010 will then see our first graduates being awarded the bachelor degree; students enrolled prior to 2007 will graduate with a master’s degree after five years of study as was common in the past.

As a result of this change, this yearbook presents not only master projects, but also some of our sixth-semester projects that will be awarded a bachelor degree in the future.

Our sixth-semester students were given the option to self-organise a project in co-operation with a company or choose between projects instigated by either Sony Ericsson or Husqvarna within equally distributed groups. Sony Ericsson’s creative design centre offered a project loosely centred on the theme of “accessories”. Husqvarna presented two themes with a focus on “gardening in the cities of 2020”; either designing products for cleaning and the like – or designing means of watering that take aspects of sustainability into account. The brand to work on was to be Husqvarna’s Flymo.

On the one hand the wide thematic scope of master projects results from the students being able to self-organise them in close consultation

with their examiner and supervisor and/or a company. On the other hand, there is an obvious tendency that there is a tendency to choose projects with an ecological and sustainable focus.

Overall, it becomes clear that while students have one eye fixed on their future employability, their attitude towards consumerism and mass production becomes more reflective and critical in the sense that some things must not be (re)designed once again. Our faculty positively encourages this approach to the profession.

As in previous years, our students were given the opportunity to exhibit their projects not only internally but also to a much wider audience by partaking in international design events. This yearbook features our exhibition activities at the

Furniture Fair, Stockholm  
Salone del Mobile, Milan  
Designmai, Berlin  
100% Design, London  
Form Design Centre, Malmö  
Ingvar Kamprad Design Centre, Lund

Enjoy this 2007 issue...

*Claus-Christian Eckhardt*  
*Professor of Industrial Design*



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*Exhibitions*



**Emergence Design**  
*Master Projects Exhibition*

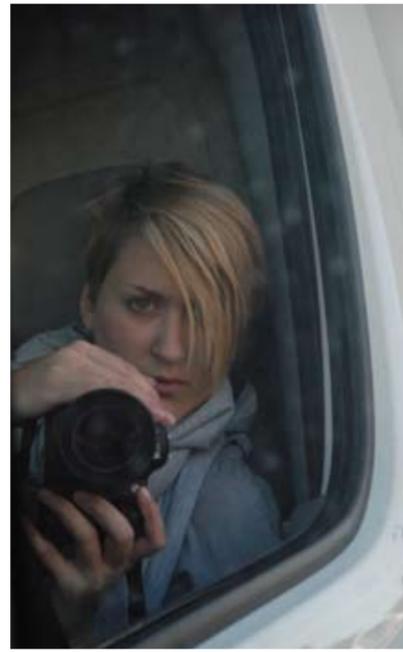
The graduate show “Emergence Design” was exhibited at:

The Form & Design Center – Malmö, 24th of May-10th of June

The IKDC – Lund, 3rd-14th of September

The London Design Festival, 20th-24th of September





## Stockholm Furniture Fair

### Post fossil fuel project

Fossil fuel is the resource that has made the industrial development of the western world possible. Many systems that are vital to the functioning of society such as agriculture, fishing, forestry, mining, material processing, manufacturing, food production, transportation and many other activities are more or less dependent on fossil fuel.

No doubt, short-sighted political and economic interests have had a great and unfortunate influence over the planning of our society. We in "the west" are used to, and take for granted, housing with constant indoor climate, access to mobility, kitchen equipment, artificial lighting, food regardless of season, holiday trips, to mention a few, all of which consume energy, much of which today derives from fossil fuels.

This "way of life" continues to be sold to us, by an advertising budget of approximately USD 400 billion/year. The "real costs" of this "way of life" in terms of misuse of energy, using up natural resources, unequal distribution of wealth, segregation, social instability, violence, crime, war, terrorism are becoming increasingly clear. If this "way of life" were to comprise all citizens of the world, we would need the energy and natural resources of 4-5 planets.

Some questions worth asking: Why do we need so much fossil fuel? What do we use it for? What are the consequences? How can we change our way of life and stop using it? As designers, we can play an important part in this change by suggesting solutions that will make it a positive experience.

The project was carried out in co-operation with Högstad & Christinehofs Förvaltnings AB (HCF) which manages one of the biggest private estates in Skåne with 13,000 Ha, of which 6,000 are cultivated land and 6,500 managed forest. The company manages around 1000 buildings and has meat production and some tourist business.

The task was to develop a product/system/service that would constitute a natural part of any of HCF's activities. It should be possible to sustain the product/system/service in a post fossil fuel era.



**Salone del Mobile, Milan***Supermarket – Seriously Super Serious*

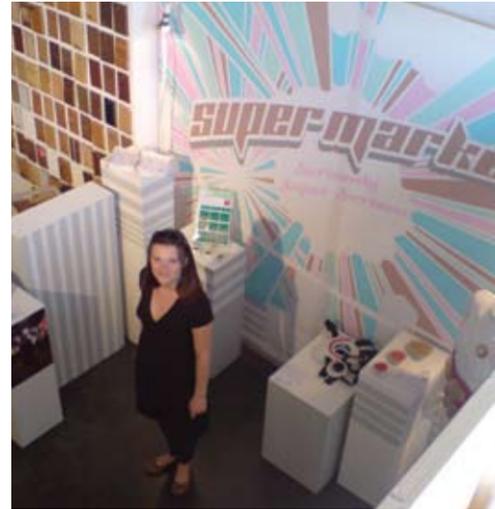
Imagine being a super hero. Even though you possess super powers, you may still find everyday life difficult.

Just think about the troubles dealing with having an alter ego, always having to come up with excuses for leaving in a hurry, or being too strong for normal life. And where do super heroes change into their costumes when the phone booths disappear due to the increased use of cell phones?

Supermarket – Seriously Super Serious brought these questions to a higher level by questioning if possibly the needs of super heroes be translated to the daily life of ordinary people?

Supermarket – Seriously Super Serious, was an exhibition based on a workshop outside the compulsory curriculum.





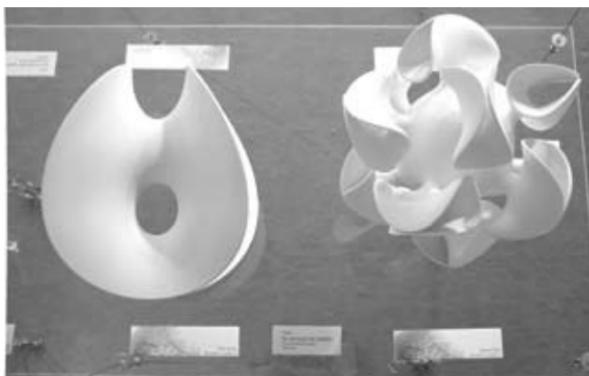
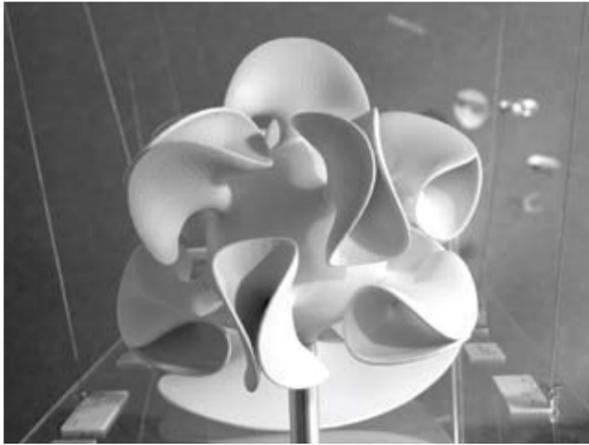
**Designmai, Berlin**  
*Minimal Surfaces + Objects*

**Minimal Surfaces + Objects**

In 'Les Stratégies Fatales' Jean Baudrillard poses the question: "Perhaps the object deceives us because it is dissatisfied with its alienation in consequence of observation? Perhaps it contrives its own answers; not only those commonly expected of it?" Students investigate whether the singular character of minimal surfaces paves the way for objects beyond mainstream design with software.

In collaboration with Prof. Dr. Konrad Polthier, Chair of Mathematical Geometry Processing, FU Berlin.





*Sixth semester projects*





**Snorri Valdimarsson**  
*Typus 9.0*

The Typus Project is an attempt to fill a void in the sailboat market and design a new breed of sailing sports boats. The result is a day cruising/racing boat that offers an innovative layout and solutions to usability issues.

High performance sailing is all about contact – contact with the forces of nature, contact with the boat and contact between team members. Recreation at the destination is equally important.

The boat can be used as a base for short excursions ashore and activities like swimming, scuba diving or surfing. Many times it's simply all about relaxing in the sun and enjoying the scenery.

**Dan Nordlund**  
*Barca Racer*

The Barca Racer is a fast, modern bicycle for urban cities that was created in an attempt to bring things back to basics: “The pure joy of riding a bicycle, letting it become an extension of your body and feeling the road and environment”. In this concept, old style and new equipment have been combined and the result is a lot of awesome details to drool over. Or what do you say of rear horizontal dropouts, leather saddle with titanium rails, integrated bell and highly efficient roller brakes? And of course it has handbuilt wheels!

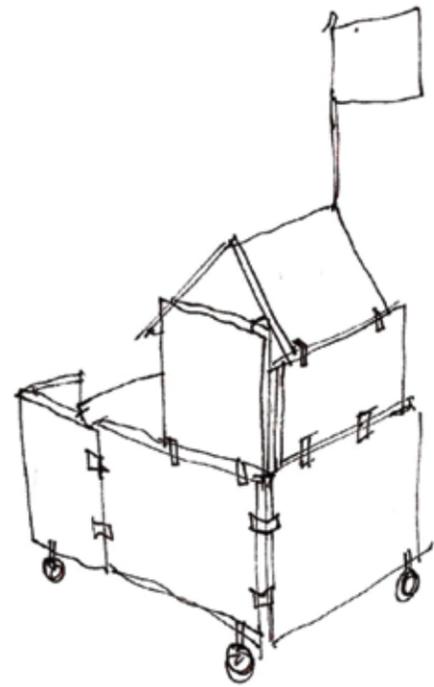




Fredrik Hyltén-Cavallius  
and Jacob von Matern  
*NIM*



The NIM frame is made of a carbon fibre sandwich material which makes it very light and strong. NIM is also built to be as easy as possible to handle. An allen key is the only tool needed for all the main functions, for instance to turn the handlebars 90° making it easier to park in a tight bike stand. Put NIM in your car or bring it into your flat. To minimise the risk of ruining your trousers and to make the changing of a tyre as smooth as possible, the chain has been replaced by a belt drive and the internal 3-speed gear hub is placed between the pedals.



**Anna Olstam**  
*Caplico*



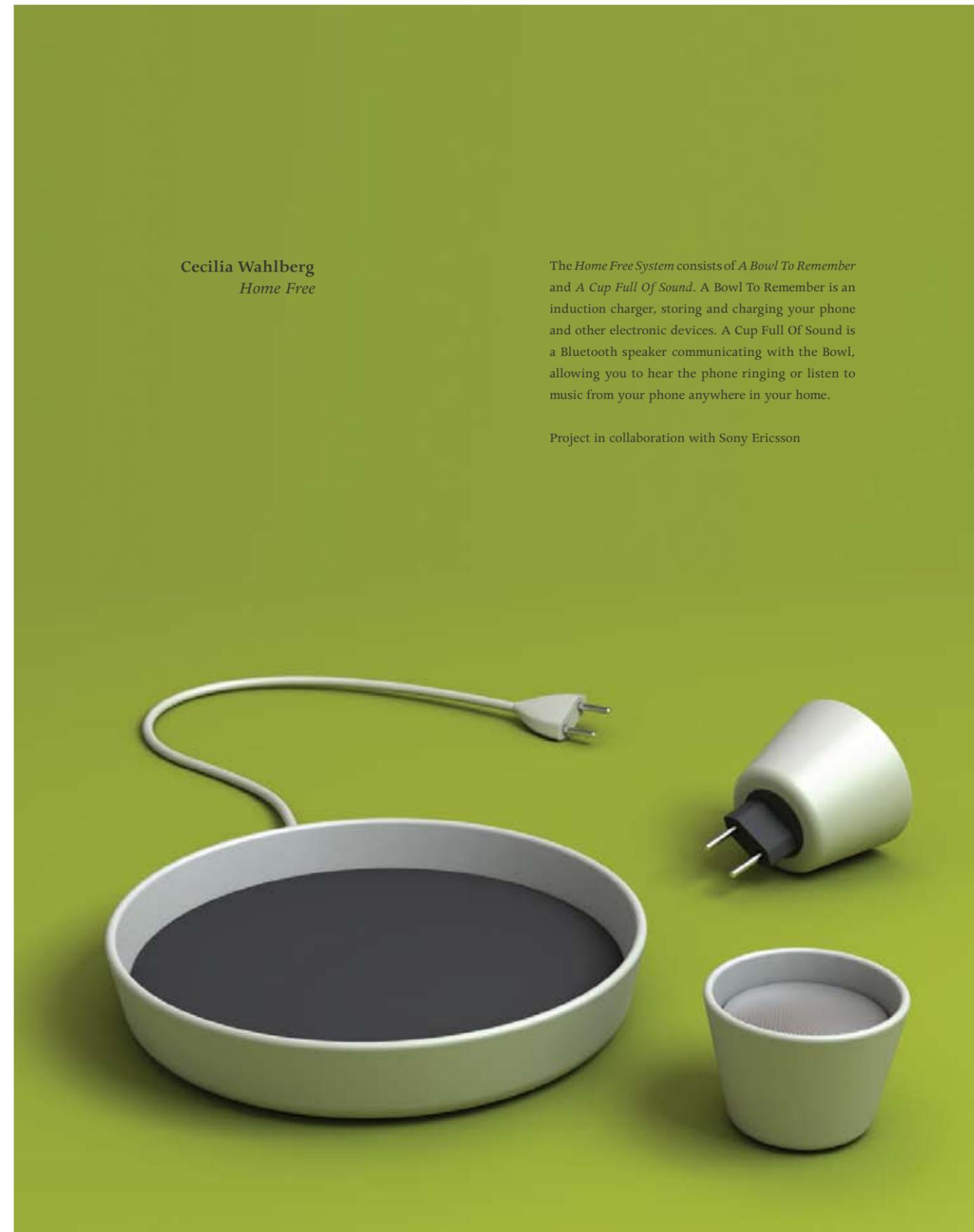
As many toys today come with a predetermined game, the aim of this project was to design a toy that encourages children to be independently creative and active. Caplico lets the child connect cardboard sheets, making it possible to build large scale objects. What to create is up to the child to decide; the cardboard can be cut in varied shapes and painted. After use, the cardboard can be recycled or packed flat to be used again.

Caplico: applico = Latin word for connect, C is for cardboard

**Cecilia Wahlberg**  
*Home Free*

The *Home Free System* consists of *A Bowl To Remember* and *A Cup Full Of Sound*. *A Bowl To Remember* is an induction charger, storing and charging your phone and other electronic devices. *A Cup Full Of Sound* is a Bluetooth speaker communicating with the Bowl, allowing you to hear the phone ringing or listen to music from your phone anywhere in your home.

Project in collaboration with Sony Ericsson



Feelchair is a wireless mobile accessory to relax on. After a hard day you can use your Feelchair as a handsfree kit for making your phone calls. Or just listen to your favourite music. Microphone, loudspeakers and a headphone jack are built in. Massage pads enable you to feel the voice of the person you are talking to or get into the good vibrations of your music. Innovative led fabrics illuminate the sculpture with information about music or text messages, videos, light therapy programmes...

Project in collaboration with Sony Ericsson

**Thomas Demharter**  
*Feelchair*



**Linn Källgren**  
*Pulse*

Energy scavenging was an interesting track that led me into thinking about how we use energy today and how we could allow ourselves to get trapped in our current oil addiction. Historically man used his/her own muscle power to produce and manufacture many things but with industrialisation and the use of fossil fuels machines took over the heavy tasks step by step. So what happened to the human muscle power? Well, it faded gradually. To prevent this and to feel healthy a massive workout trend started resulting in huge amount of energy going to waste in gyms and running tracks.

The goal for this project became to create a concept for generating energy where it is now wasted and make sure that this scavenging is as unconscious as possible. This means the act that generates the energy is not performed to create the energy but simply is a bonus for another activity.

Information found in scientific studies about energy scavenging was used as a starting point for calculating the potential amount of energy that could be generated using different methods. One of the most promising ways to generate power is to use the energy in a person's heel strike while walking. This compression force is relatively high and is enough to charge a mobile phone battery fully in about 2 hours.

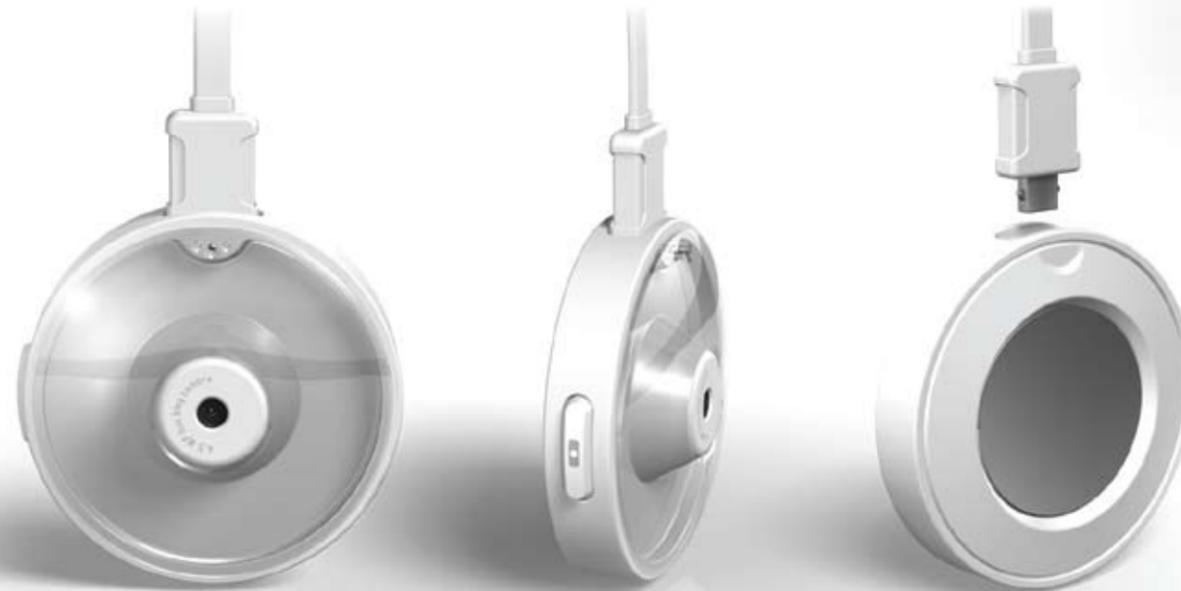
Project in collaboration with Sony Ericsson





Karl-Johan Hjerling  
and Tomas Ekström  
*Bloggle and IR Cloak*

Project in collaboration with Sony Ericsson



Bloggle – Broadcasting your take on life.  
Streams live footage via mobile phone to MySpace site.



IR Cloak – Because not every day is a great hair day.  
IR projecting pendant that dazzles out digital photography.

What will gardens look like in 13 years? How can Flymo's brand values be translated into a physical product? What is the most versatile tool used today for cleaning up in a garden?

The Powerbroom can be used in any way a regular broom can be used: it can collect leaves, twigs, gravel or scatter snow and pine cones. With the added power of an electric motor it gives users the power to get rid of moss from their patios and walkways, but still keeps the noise down and air pollution at a minimum.

Project in collaboration with Husqvarna/Flymo

**Carl Nordenskjöld**  
*Power Broom*



**Anders P Hellberg**  
*Flymo Rake*

The issues of preserving life on our planet and the problems of consuming energy in a world dependent on finite resources can no longer be ignored. Therefore I opted to look beyond the traditional motorised Flymo products and looked at what work we can actually carry out ourselves, using only our bodies as engines. Tidying your garden very often includes raking. Whether it's leaves, twigs or grass, getting the stuff off the ground for transport is always a hassle. My solution combines the traditional rake with a set of extra large hands to lift the debris without having to carry extra items around the garden.

Project in collaboration with Husqvarna/Flymo



**Lina Lewerth**  
*Compot*



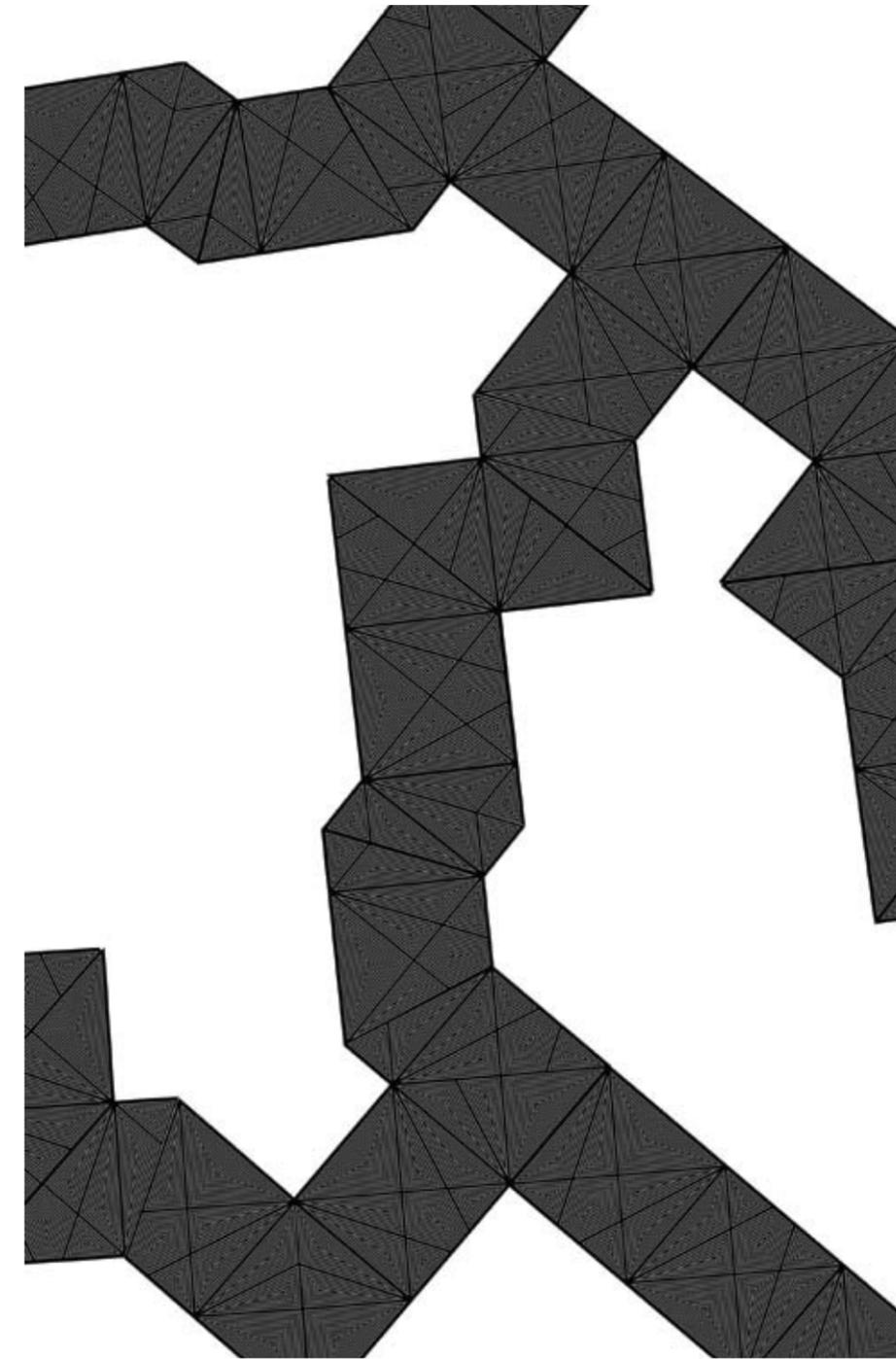
There are a number of economic and environmental advantages to composting, but many people think it's hard work. Size, dampness, oxygen supply and temperature are some of the important aspects you need to consider. By solving some of the biggest problems, I wanted to make composting easier and work more efficiently.

The COMPOT is a composter that:

- Blends into the environment.
- Let's you regulate how much air you let into the container.
- Is easy to empty and allows you to empty a small amount of soil.

Project in collaboration with Husqvarna/Flymo

**Johanna Nieminen**  
*Flymo Way*



The Flymo Way Project was based on the goal of finding new ways to tidy up garden walkways. The target user group was young families in big European cities in 2020. I focused on a winter garden theme and especially on the problem of slippery ground. Flymo Way is a heating carpet system for outdoor use to keep the walkways free from snow and ice. It can be modified to the required form because of the functional pattern on the carpet. By using Flymo Way you can avoid snow shovelling, sanding and salting during the winter and dust and cleaning in the spring time.

Project in collaboration with Husqvarna/Flymo

Water Aide is a project aimed at lowering the extreme over consumption of water in the garden. To minimise evaporation, over-watering and rotting plants, Water Aide has rain and solar sensors to show when watering is needed and the risk of evaporation is low.

Conscious watering is a central concept. The user should be aware of the use of precious water, which is why no automatic systems are used. Instead, a few additional products can be used for convenience, using RFID technology. An indoor display shows if the garden needs to be watered, and a hose valve shuts the water off when the moisture level is optimal.

Project in collaboration with Husqvarna/Flymo

**Oskar Daniel**  
*Water Aide*



**Tomas Johansson**  
*Fruit Collector*

**What:** A product that saves fallen fruit from rotting on the ground. It also saves the user from mashed fruit all over the garden.

**Why:** Windfalls rot fast and it is annoying and messy to pick them up; the fruit tends to stay fresher if it is not lying on the ground.

**How:** A flexible landing net in four parts connected by Velcro. Fits trees with a diameter of 8-30 cm. Extruding aluminium arms connected with plastic parts. Fixed to the tree with nylon cargo bands.

Project in collaboration with Husqvarna/Flymo



**Therese Broberg**  
*Family O' Four*



The inspiration for this project was to take a closer look at the design process of my fellow classmates and myself. I alternated between the roles of being a quiet observer and an active advisor. Thanks to the privilege of being close to, but not a part of the work, I gained a great deal of insight into how our products come alive. I tried to capture and illustrate the time and effort and never ending work that lies behind a design project. A book and an exhibition were the results of my project.



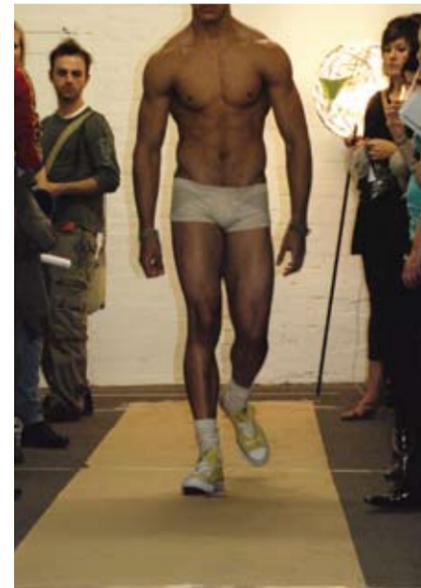


*Master projects*





Katarina Ivarsson  
Green Pollution



The world we live in is rapidly changing, presenting us with new, environmentally complex issues. Many signs around us show that something is wrong. Large-scale air and water pollution, together with growing landfills, declining energy sources and extreme climate changes are all pointing out the need for change. We all know that we need to take responsibility, but instead, we tend to blame the problems on the large multi-national businesses and industrial nations such as the USA and China. The USA says no to controlling CO<sub>2</sub> emissions and carbon trading and resists signing the Kyoto Protocol while China speeds up its own industrial revolution at an alarming rate.

China is facing many serious environmental issues. High levels of air pollution, illegal waste disposal, energy shortages, land degradation and water pollution are just some of the problems that affect not only local communities but also threaten us on a global scale. Natural resources used for energy and the abundant amounts of water used to support its huge population is an increasing problem since both the rate of efficient use and rate of recycling of these resources are extremely low. Pollution, waste and low rates of recycling together present a major obstacle to sustainable development for China. At the same time, China's economy is the fastest growing in the world and is being pushed forward by new consumers who all aspire to a western lifestyle, thus creating a relentless boom in everyday consumption.

GREEN POLLUTION has the aim of tackling this problem by directly targeting the source, offering a way of eco-consumption for the Chinese consumer.

This project aims to show how to create a framework to inspire people to embrace a sustainable lifestyle that can be used for sustainable product development.

GREEN POLLUTION is a web based open source forum where one can share experiences and listen to others on how to achieve a sustainable lifestyle. From a personal perspective GREEN POLLUTION is about your resources, your time and your energy. From the global perspective it is about our world.

When looking at the everyday lives of people, we discover and explore the needs and desires of consumers and companies, generating a huge source of knowledge. By integrating this information into the design process, we can create green products and open new doors to eco-consumption.

I have chosen to focus on the textile industry and its needs since there is a strong tendency towards eco-textiles, which is seen as the new

frontier in the textile business. Companies in this industry are looking for partnerships and support and, above all, require information to implement actions at various levels. How do they carry out energy audits? How does one retrace the environmental path of the fibres used? How are fabrics chosen using ecological and scientific criteria? Which companies are true green fabric suppliers?

Globally, only 2.5% of the cultivated land is used for growing cotton, but the production and manufacturing of this natural resource is responsible for one quarter of all pesticides used. Together with the USA, China is one of the world's largest producers of cotton, keeping the bulk of its harvest for the domestic market. This raises the issue to implement a clothing production based on organic natural grown cotton that has very small environmental impact. Replacing the "regular cotton" production that relies heavily on pesticides with an integrated ecological solution – and creating a true "eco brand" – gives the consumer a wider choice in adopting a green lifestyle.

Sustainability is just one key element; by adding fair trade and ethical policies to the mix, one lessens not only the environmental impact but also improves people's lives and helps to advance the communities that work in the entire process. From the fibre to the finished product, one could implement a brand that is truly sustainable – from an environmental and human perspective, too.

Design is an important tool to apply to our challenges. We have the opportunity to support well-being instead of well-having. A designer must be concerned about sustainability. It is no longer acceptable to create products without awareness of their environmental impact. Cold rationality, fearless objectivity together with the use of technology is what environmentalists and ecologists have been trying to employ to get us out of our current predicament – but with minimal success. We must take further actions now to communicate important issues.

Emilie Hallgard  
JASPER



My diploma research was executed in collaboration with TerraNet AB, a company developing a new peer-to-peer technology for mobile communication, requiring no external network resources and operators since the devices create their own network. This allows calling and text messaging to be free of charge. The project focuses on developing countries (Kenya in this study) and investigates how the TerraNet technology would work when the mobile phone is combined with the concept of a digital wallet.

Mobile banking is advancing quickly in developing countries mainly because of three factors:

- Regular banking never had a complete breakthrough and few people have access to a bank.
- As a country is developing, the need to bank and transfer money safely is increasing.
- In many developing countries, there is a tradition of sending money to family and friends – mobile banking makes that easy.

#### System

JASPER is a dual-mode concept: mobile phone mode and wallet mode. The wallet mode has two main functions: locked account and open account, equivalent to bank card and cash respectively. The locked account works with a PIN code, just like any banking card – if JASPER is lost or stolen, the account can be blocked. The open account is always on, making transactions easy and quick. In order to pay with JASPER, one can either “blip” another device or transfer money to contacts in the phone book or to any other number in the network. JASPER also features an “analogue component”, because a system like this is

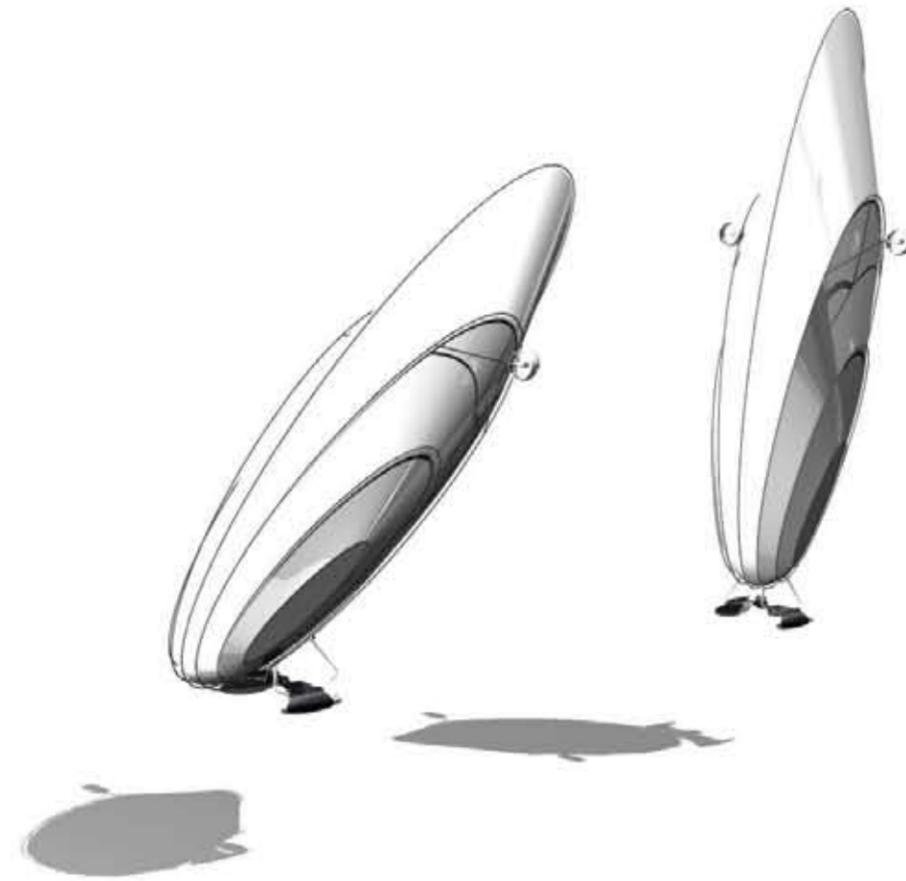
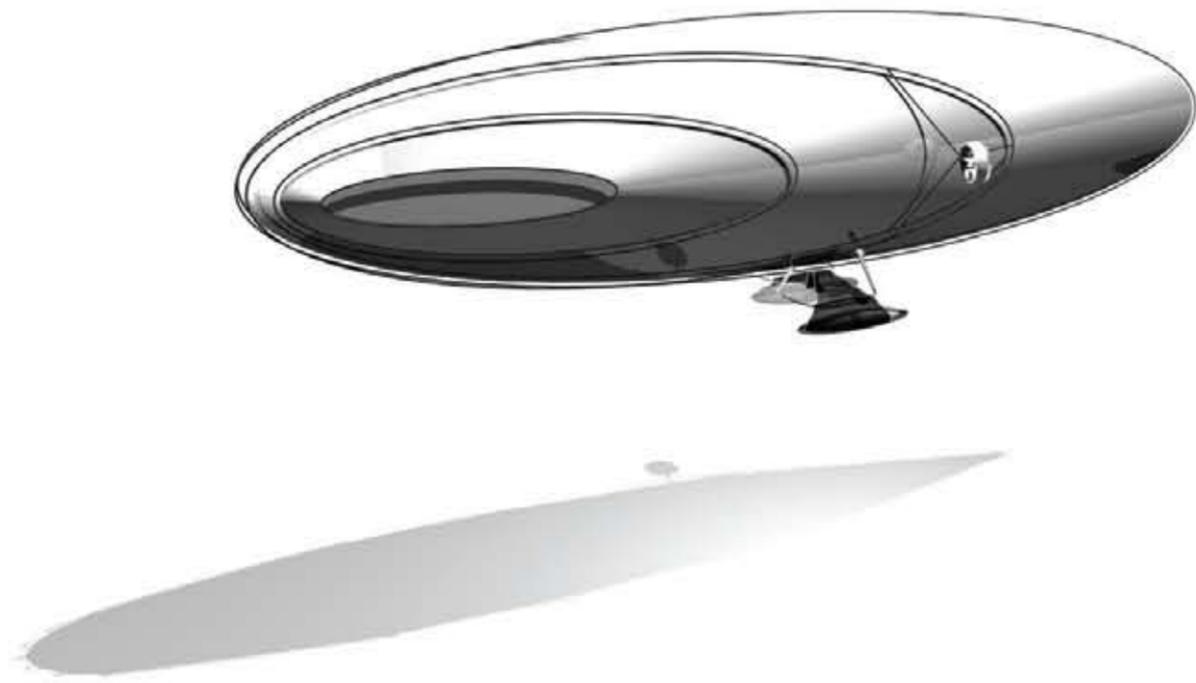
unlikely to completely replace cash. Research shows that the target group lives virtually “card-free”. JASPER allows its owner to safely store cash; it offers a simple and free-of-charge method to transfer money to family and friends. It could also simplify and encourage business activities in developing areas.

#### Product

JASPER is a product specifically developed to support the needs and demands of the target group. It consists of a “digital component” and an “analogue component”. The digital component includes mobile phone and banking features and the technology that allows “blipping” other units. There is no camera, MP3 player or other extravaganzas to keep the device cost at bay. The analogue component is attached to a card that slides down and locks to the backside of the digital component. This means it can be detached and used separately. Many households in Kenya lack electricity and it is very common to charge one’s mobile phone at a local shop. However one might not want to leave the analogue component – the wallet – at the charging location and a detachable solution allows the user to keep it safe. It also allows the analogue component to be replaced when worn out. It is mainly made from leather and can be produced locally. The use of leather links to traditional wallets and also allows for personalisation with different colours or other embellishments. The analogue component covers the buttons on the front, providing another level of security to the key lock function. Since the product handles money transfer, it is important that the key lock is not removed and money transferred by accident.



Carl Hagerling  
*Blimp*



The Blimp is a helium filled airship that by changing the centre of gravity can fly in horizontal and vertical positions.

## Anton Breman

### *Hotel Spot*

Be where you want to be. Not where you have to be.

#### Description

Spot is a flexible hotel system for the near future, a concept for exploring the ever-changing cultural landscape. It takes the customers' needs, interest and wishes in consideration and opens new doors in the search for alternative locations and activities. With an intuitive five-step booking system, you are on your way to the experience of a lifetime. Hotel Spot is a self-supporting living unit that harvests the sun and the rain. It creates cultural and geographic freedom for the modern tourist.

#### Why Mobile?

By adding mobility to the hotel, its resources can be fine tuned and adapted to all kinds of situations, depending on seasons, events, festivals, etc. With Hotel Spot, the holiday adventure is always in walking distance of one's interest – whether it is in exploring nature or clubs.

#### Adapt

Spot has been created with mobility in mind and can easily be adapted for use in both urban and rural areas. Employing the concept of “working globally and acting locally”, Hotel Spot may put a higher positive pressure on local businesses. Through collaborative efforts, they can create a conscious ethical, moral and sustainable business environment that will provide the complete service that makes up a hotel.



**Micael Palmgren**  
*Christelle*

*Christelle* is a “green boat” concept for 2020. We have witnessed the introduction of numerous environmentally friendly vehicles from car manufacturers – but so far, we have not seen a single proposal for a sustainable motorboat. Global warming has been brought to everybody’s attention and I believe things have to change. We can’t go on consuming resources as if there was no tomorrow. But to “go green” is often very costly and at first glance, *Christelle* is no exception. The technology chosen to propel the boat is expensive right now, but will become more affordable in the future – my research indicates that it will be commercially viable in the marketplace in the next 10-15 years. The intended launch should be much sooner though – at first in the form of a rental boat scheme. The unique modular design is able to “change skin” on the spot, allowing limitless possibilities for configuring the boat for any purpose – for casual day trips on lakes and longer journeys at sea, too. I have repeatedly questioned every aspect of the design to deliver the best water sports experience for tomorrow’s customers.



**Martin Pråme***Bluto*

Bluto is a basic Blu-ray disc player that connects wirelessly to the TV. To watch a movie, one simply takes the player and operates it directly – there is no remote control and no need to put it in a specific location. The whole idea of the device is that it should be simple, manageable and readily accessible. At the beginning of the project, I was very interested in how products can leave room for the user's own interpretations and a personal take on the identity of an object – or how and in what context it is being used. I became aware of the concept of appropriation, which proved to be descriptive of the phenomena I was trying to understand. The reason for working with home electronics was simply that I identified it as a group of products lacking in appropriability. This incentive was simply too obvious to ignore. I started my project with a literature study, examining “appropriation”, “ambiguity” and related concepts. After deciding to design a Blu-ray player, I researched various user groups through mood boarding, scenario writing and by conducting interviews. It has also been crucial for me to research the technology involved.



**Sara Sveninge**  
*T-Sled*

This project was inspired by my very own Swedish heritage, my experiences from travelling, studying and working in various places in Europe, mixed with my interest for simple and smart solutions – and my love of snow.

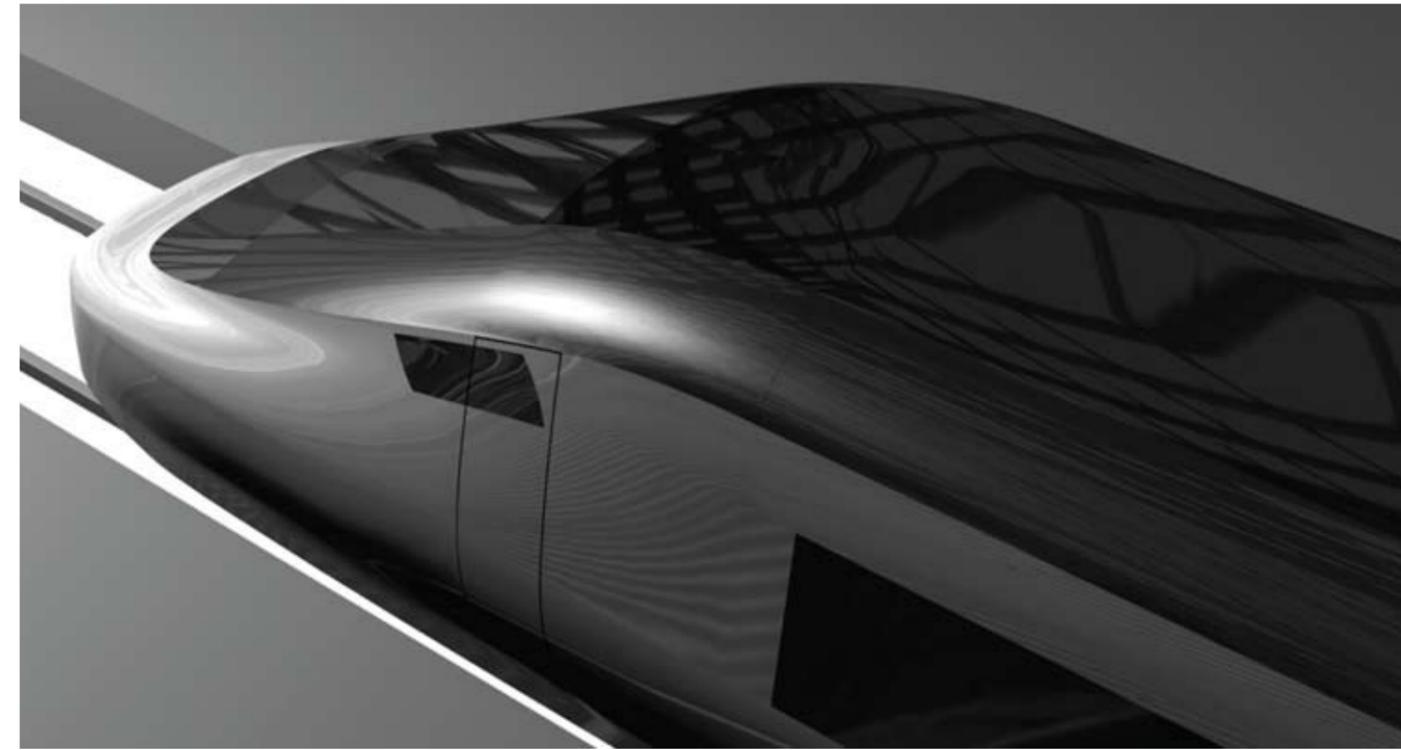
People have always travelled and transported their goods on snow. Motor powered vehicles have replaced traditional means of transport though, and are causing environmental and aesthetic problems. My vision is car-free towns and villages in order to preserve the atmosphere in the mountains. During the development phase, I researched, sketched and prototyped desired functions. The design considers the impact of the winter climate on the material and user, as well as security issues and off-season storage. The result of the project is a human powered sleigh for transporting people, luggage, winter sports equipment and shopping bags. It increases mobility and will be provided for the guests arriving at the local train or bus station. My project brings together traditional alpine environments, nature and high tech winter sports equipment.





**Kjell Alvaro Sundqvist**  
*The Green Train*

The Green Train is the next generation Swedish high speed train. The project is a double diploma for both industrial design and architecture and has been done in-house at Bombardier Transportation as a pilot study. The train is designed on an existing train platform, but with a new car body construction. The Green Train will be Sweden's fastest land carrier, travelling at 250 km/h and tilting in tight rail curves. The train offers the widest train passenger space in the world, and the highest passenger capacity among European trains. The project has developed innovations aimed at maximising the sensation of personal space and integrity – yet maximising the number of seats. A high passenger capacity means less meters of train, which in the end generates lower energy consumption = a Green Train.



Christian Sterngren  
*ADM*

ADM is a concept for managing small and large music productions with an audio mixing console. It focuses mainly on visualising the route of the audio signal as well as the use of traditional peripherals in a structured manner and in various configurations.

Audio mixing consoles have gone through many evolutionary stages since the first analogue mixers were manufactured. With the introduction of digital devices, the possibilities for audio management have become even greater.

The design of contemporary audio mixing consoles offers a vast array of controls and means of adjustment. Some have hardly changed – either due to necessity or just out of plain habit.

My concept features a unique way of visualising the audio signal paths so that the user knows exactly how and where the signal is being manipulated. I also explored the “vintage look” of analogue mixers in the hardware design aspects.



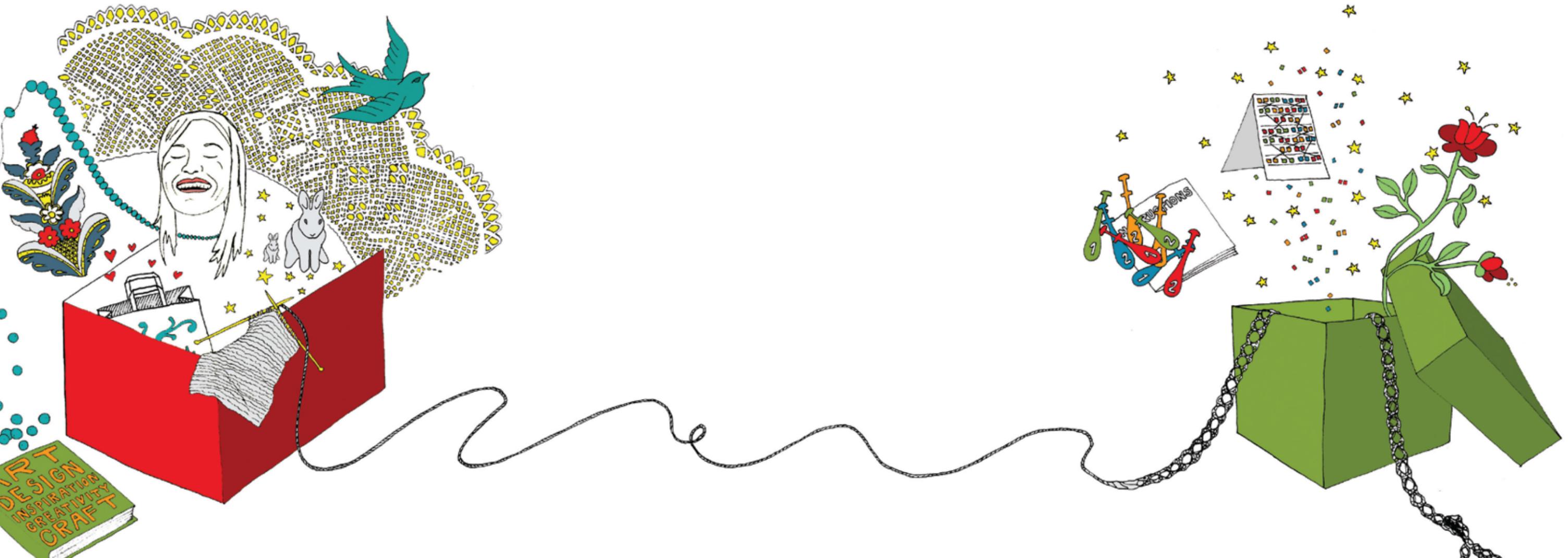
**Anna Åberg**  
*Golf Teaching Aids*

Five products to help golfers achieve the perfect swing. In my research, I identified the crucial moments when golfers make major mistakes: body posture, grip, swing plane, wrist hinge (half way back in the swing) and impact position (when hitting the ball). My golf teaching aids are designed to assist users in finding the right positions in the swing.



**Susann Hertz**  
*From A to B*

Crafts are trendy! Sweden has a long and rich tradition of textile crafts, which in the past were mainly practised by women out of sheer economical necessity and as a personal expression of local culture. In exploring historic Swedish textile crafts I wanted to find out why they no longer seem to be popular. The answer is that they are simply unfamiliar to most and difficult to learn, let alone master. The specific craft I focused on is lace making, which unfortunately is on the verge of becoming a lost art. The result of my project is a DIY kit for making lace – including all materials, tools and instructions. It should entice people to have a go at lace making until they are skilled enough for more complex projects, self-designed and executed without further guidance. Too many textile crafts come with rather long-winded and complicated instructions; simplifying those was thus a major part of my project.



**Robert Nightingale**  
*Water Shelter*

The Water Shelter Project responds to the needs of rural populations in developing countries who live in areas of recurring floods, with a geographical focus on the Zambezi basin in Sub-Saharan Africa.

The design provides the user with the necessary tools and information to migrate temporarily and efficiently, encouraging self-sufficiency at each stage of a disaster. The bespoke design addresses four vital needs: shelter, drinking water, product transport and information, whilst reflecting social traditions.

The design incorporates local and remote product distribution systems, a water collection system (which harvests and filters rainwater from the shelter canopy) and the Water Roller (which is used to transport the shelter, possessions and water) whilst also adding creative value for the user on a day-to-day basis.

The design provides shelter through a three-stage strategy: Transit, Transition, and Rebuild. The shelter in phase one provides emergency shelter en route to safer locations. On arrival the transition shelter utilises local materials (grass and sticks) to increase in size. The Water Shelter package also promotes healthy behaviour and a template for planning sustainable temporary communities. Finally the design offers a structural template for permanent housing upon return or relocation. This project was carried out with on-site contacts from the UNHCR and NGOs in Mozambique and Zambia.



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