



# Innovation Pioneers

**THIS BRIEFING PAPER INCLUDES KEY TAKE-AWAYS FROM TANK MEETING NR 45, THE FIRST IN 2019, HOSTED BY WHITE ARKITEKTER ON “CIRCULAR ECONOMY AND SUSTAINABLE LIFESTYLES”.**

White Arkitekter led the tank meeting on Circular Economy and Sustainable Lifestyles, workshopping around circular business models with the help of the NÖHRA coaching model. The Tank Meeting took place on March 20<sup>th</sup>, 2019 in Gothenburg.



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## PARTICIPATING COMPANIES & ORGANIZATIONS

Asko, Astra Zeneca, Baux, CGI, Ericsson One, Frog, Frontit, Goovinn, Ideon Open, IKEA, RISE, SKF, Stora Enso, Swedish Environmental Protection Agency, Swedish Public Employment Service, Tetra Pak, The Absolut Company, Thule, Umeå Kommun, Vasakronan, Veryday, Vinngroup, Vinnter, Volvo Cars, Wazoku, White Arkitekter.

### PURPOSE

The purpose of the workshop was to explore the circular economy and ways in which we can live more sustainable lifestyles, focusing on creating new circular business models. The theme of the day was that sustainability is a driver of new business.

## WHITE ARKITEKTER – ROOMS WHERE PEOPLE GROW

White Arkitekter creates architecture that engages and contributes to a sustainable lifestyle with people in the center. The company was founded in 1951 and today employs around 900 people with the aim of creating innovative architecture. White is collectively owned by over 600 employees. This gives independence and freedom to reinvest in research, development and innovation.

The Tank Meeting started with Johan Lundin at White Arkitekter presenting the company. Today, White operates in 13 offices in Sweden, Norway, Denmark and Great Britain. In 2018, the company was involved in projects in 14 countries. Johan explained that White are involved in many areas including sustainability, project leading, product design, city planning and social anthropology.

### WHITE RESEARCH LAB

White is the architectural office in Sweden that invests the most money in its own research department - White Research Lab. White wants to contribute to a society where people are involved. Anna Johanna Klasander, Director of R&D at White Arkitekter, talked about the power of the collective and said that gathered knowledge is their most valuable asset. White operates a competence network that is open to all, where they monitor research and practice, share knowledge between offices, and initiate research and development projects.

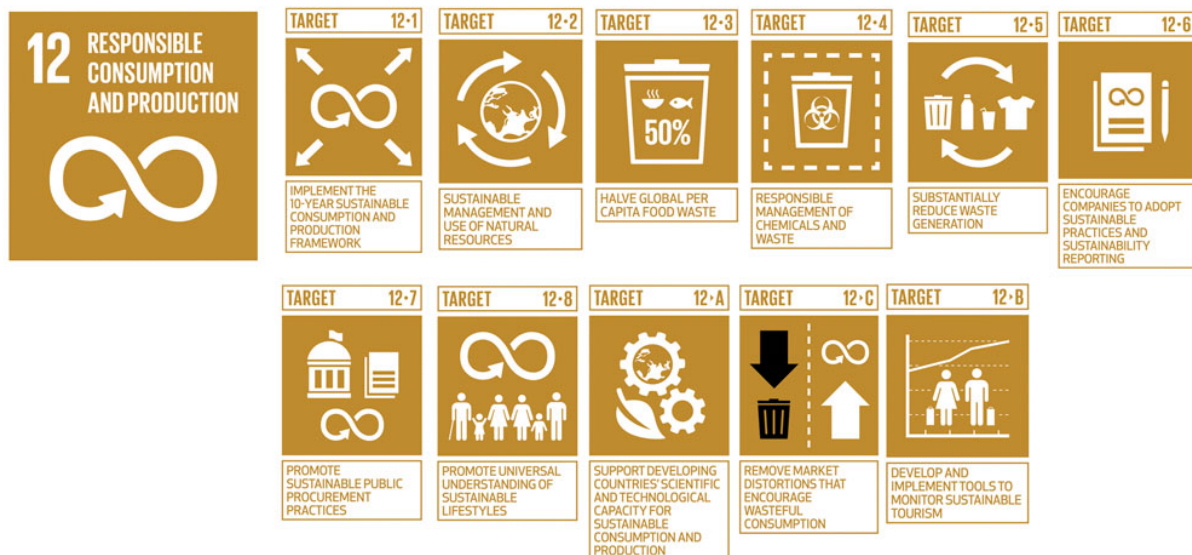
More about White Research Lab at: [whitearkitekter.com/white-research-lab](http://whitearkitekter.com/white-research-lab)



## CIRCULAR ECONOMY & SUSTAINABLE LIFESTYLES – TRENDS AND PREDICTIONS

Anna Graaf, Head of Sustainability at White Arkitekter, presented how the company works with the circular economy. Material worth 42 billion SEK, including steel, aluminum, plastic and paper, is lost every year when buildings are torn down, packaging thrown away and cars scrapped. Today, we only reuse 25 % of what could actually be reused. In Sweden, we are currently consuming resources equivalent to 4.2 earths every year.

In the circular economy, everything is a resource for someone else. We need to look at the UN Sustainable Development Goals and find ways to act as individuals and organizations for a more sustainable future.



### REDUCE, REUSE, RECYCLE, RENEWABLE, REDESIGN

In the shared economy we have a mindset where we look at what one person needs, and what another person has. We share things, resources and skills. For instance, Husqvarna has launched a concept for a shared tool shed in each neighborhood, instead of everyone owning their own tools. In interior design it is possible to reuse old material, for instance creating desk lighting from used car lights. Handbags are created from seatbelts from scrapped cars.

Loop Rocks is a platform from NCC that matches the supply and demand of second-hand building material between different building sites. At Way Out West a popular pizza was sold where the crust was made of leftovers from beer brewing. Nya Carnegie Bryggeriet launched the beer 'Pu:Rest' which was brewed from filtered waste water.





## CIRCULAR ECONOMY – PROJECTS FROM WHITE ARKITEKTER

White Arkitekter presented different projects that the company is or has been involved in during the past years when it comes to the Circular Economy.

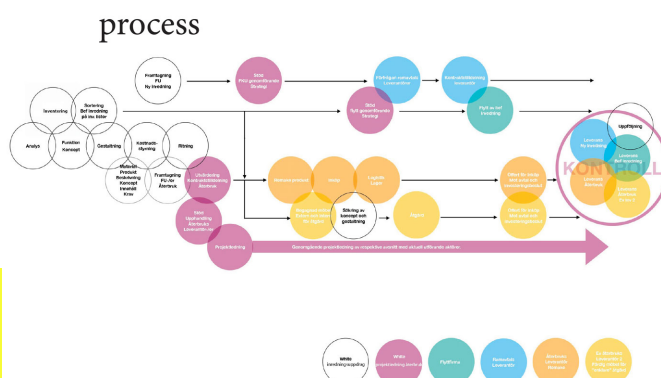
### SQUARE ONE – PUBLIC SPACE FOR THE PEOPLE OF LAGOS

Egil Blom, Architect, and Maria Glädt, Environmental specialist, presented the results of an international design competition that White took part in during the fall of 2018, with the aim of designing a multi-purpose stadium in Lagos, Nigeria. Currently, the Olusosun landfill stretches approximately 1km across the middle of the growing city. The area could be put to better use, but the team working at White also recognized the people making a living from the landfill today – creating local businesses from selling and repurposing the waste. The aim of the competition was to design a national stadium, but the team at White instead suggested building a place for all the people of Lagos, since not everyone would afford using the stadium.



### SELMA CENTER – COMMUNITY CENTER ON HISINGEN

White Arkitekter are currently involved in building a new Community Center at Selma Lagerlöfs Torg on Hisingen. The building will be completed in Q3 2019 and combine many types of activities: activity based work space, restaurants, culture and recreational space. Flexibility has been at the center of the project, together with sustainability. The goal has been to work with reused material in the highest degree possible. The team has worked with furniture that the client already had and tried to bring a second life to it through repairs and paint-jobs. The second choice has been to buy reused furniture from others. The space has a goal of using 80 – 100 % reused interior design upon completion. A challenge has been logistics and to find a system to label all furniture for full traceability and to create a design that will work with a big mix of furniture coming from six different locations.



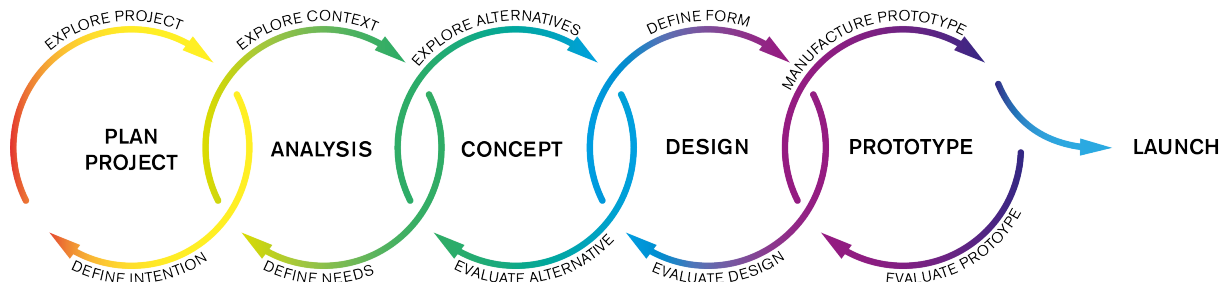
*Presentations about the projects are included as part of the documentation.*



## PRODUCT DESIGN IN THE CIRCULAR ECONOMY

Håkan Lesson, Product Designer, talked about product design in the circular economy. He said that the furniture industry is quite conservative, but that the focus has started to shift during the past five years. It's not only about presenting furniture and products anymore, but also about presenting sustainable solutions.

Two years ago, White Arkitekter were invited to participate in a research project called "Business model innovation in a circular economy". The research project seeks to develop more circular flows and new business models for the Swedish furniture industry to be at the forefront through repairing, renovation and reselling old furniture for lower climate impact. More at [cirkularitet.se](http://cirkularitet.se)



## CC BUILD – A PLATFORM FOR INCREASED CIRCULARITY

Sara Grahn, Architect SAR/MSA, presented the platform CC Build that aims to be a marketplace for products and services in the building industry. The goal with the platform is also to have a bank of knowledge with guidelines, digital tools for stock-taking and evaluated reference projects. Through the project partners, the platform has an annual saving potential of 43, 000 tonnes of carbon dioxide emissions, 25,000 tonnes of waste and costs of SEK 1.3 billion.

Sara presented a project that was done with Vasakronan for rebuilding one of their old offices from the 70's in Sundbyberg. Existing building parts, material and furniture were reused to obtain a recycling rate of 69 % for the project.

*Presentations about the projects are included as part of the documentation.*





## METHOD

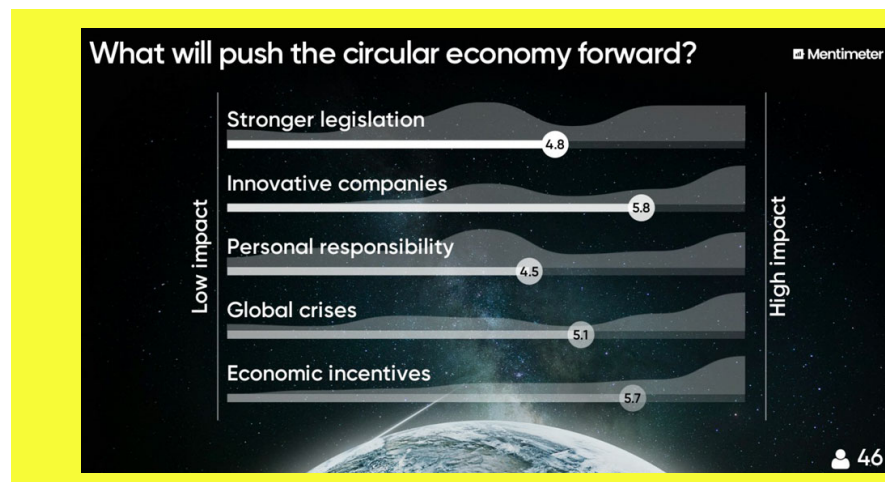
The workshop was built on the coaching model NÖHRA (Nuläge – Önskvärt läge – Hinder / Resurser – Aktivitet) or NOPRA (Now – Objective – Problems – Recourses – Activity). It is a map-model often used in coaching to help people or groups better understand their current situation, objectives and problems to better realize what resources and activities are needed to reach their goal.

White Arkitekter were inspired by the model and used it as a tool during the workshop to let each group create a circular business model.

## WARM UP

A Mentimeter poll was used to determine if the workshop participants had sustainable lifestyles today. The first question asked was for the oldest thing in each person's home. Some had furniture and jewelry dating back to the 18<sup>th</sup> and 19<sup>th</sup> centuries, while others answered things that were just a few years old.

The participants were also asked where they engage in sustainability issues. It became apparent that more people engage at work and at home, than they do in politics. Participants were also asked what they believe will push the circular economy forward with the following results:



## WORKSHOP – PROCESS DESCRIPTION

The participants were split into seven groups, with one representative from White Arkitekter in every group.

### 1. Warm up – what do we have in common?

Before lunch, each group was asked to consider what everyone had in common or how they were connected to come up with ways in which the group members could



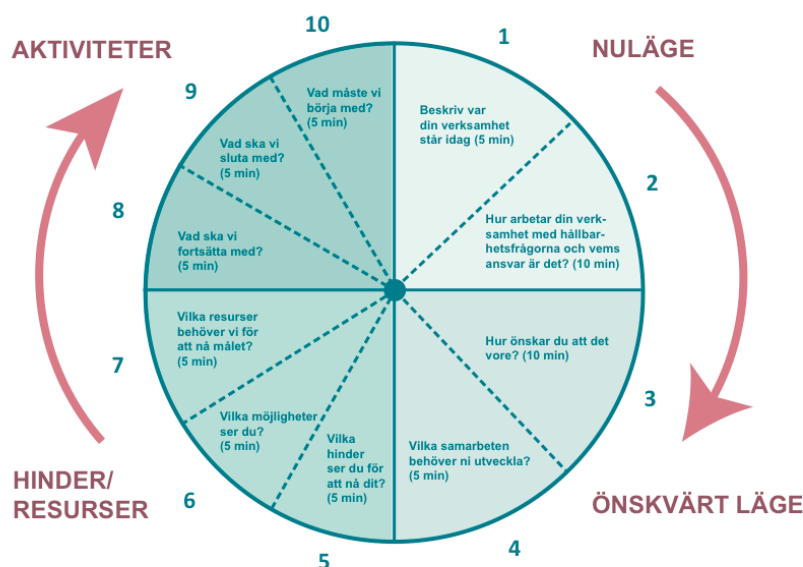
work together to support the circular economy. The solutions were then acted out in front of all participants.

## 2. How do we convert to circular consumption and a more sustainable lifestyle?

For the first part of the workshop, each group used the NÖHRA model in a circle diagram to discuss different ways in which people and companies can convert to a more sustainable lifestyle. Each group had 60 minutes to complete the task – going through the steps of Now – Objective – Problems – Recourses – Activity.

### Circular economy and sustainable lifestyles

#### 1. Hur ställer vi om till en mer cirkulär konsumtion och hållbar vardag? (60 min)



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## 3. Come up with a circular business model that meets the needs

For the second part of the workshop, each group was asked to create a new circular business model based on the identified needs from using the NÖHRA-model. The groups had 30 minutes to come up with an idea and prepare a presentation for all workshop participants. All teams then held a 3-minute presentation for each other and the team at White.

## RESULTS

### Group 1 - Earth Watch

Earth Watch is like a Fitbit, but for our global footprint. The device teaches us to live more sustainable in our everyday lives – both at home and at work. People are driven by competition, so the watch is powered with KPI:s that encourage people to change their behavior. For instance, you can gamify sustainability as an employer. Each employee gets measured on their sustainability and the data is then used in performance assessment and can for instance have an effect on a person's salary. It will also be possible to challenge each other – friends, coworkers etc. – and to create networks around these challenges. You might also gain points to use to buy sustainable goods, made from reused or sustainable material.

### Group 2 - Digiphysical

By tagging old things with stories it is possible to increase the value of old goods. Digiphysical is a business model where digital tagging is used to encourage people to keep things longer, and also to pass it on to someone else instead of throwing it away. If each generation that uses a certain product tags it with a personal story, it would increase the value of the product and make it more interesting for future generations to use it. A digital chip or 3D-print would be used to make physical products digital. An owner could for instance upload a story to a book that they brought with them up to the top of Mt. Everest. The digital service could be used by platforms such as Blocket to create more interest for reused goods.

### Group 3 - Blocktag

Blocktag is a blockchain for sustainable use. Whenever a new product is created, a file is attached to it that captures information such as what raw material was sourced to produce it, what company manufactured it, and so on. The tag is both physical and digital, and all data about each product can be accessed through an app. The aim with the business model is to make sure that products are always in use, so if something has been laying around the attic for two years the user would get a notification telling them to do something about it – for instance selling it. A system is put up where you can sell used things to the government and companies, and you get a kind of guaranteed 'pant' for selling a product on. You can also use the platform to rent things out from your home. You can also get a sustainability ranking based on the data from how you use, rent out and sell products you own.

### Group 4 - Circle of insights

Food consumption and food waste is a big problem today. This group looked at the bread industry and workshopped around how we can reach a zero-carbon footprint with bread and other food. A platform known as the 'circle of insights' tracks our personal consumption and shares the data with different actors. For instance, each time a bread is sliced, data is collected. When we go and buy lunch, our portions can then be customized based on how much we normally eat to reduce waste. The system



also tracks down our waste - and we need to pay more for waste management if we waste more.

### **Group 5 - Funters - global movement**

The year is 2024. An app first used by NCC to distribute resources among different parties has grown and now many different companies are using it, for instance Vasakronan. The use has spread from the Nordics to all over the world, and government agencies and the EU have created the funt directive 'Funt Banken'. It is nowadays mandatory to give all 'funt' (unused resources) a person or company has / produces back to the Funt Bank. Entrepreneurs, known as 'funters', then create new business models based on the resources they find in the bank. IKEA for instance has started production based on the funt. A funter in Amsterdam uses tulips to make hamburgers together with researchers. Volvo takes hair from hairdressers to stuff the seats in their cars. Funters has become a global movement.

### **Group 6 – Circular logistics through public transport**

To make recycling more accessible, this group produced a solution that meant that anything recycled could be transported for free using the public transport. A platform is created where you can upload, sell and buy things – and then get it delivered through the public transport system. The platform uses local hubs around the country to collect and distribute the recycled goods. The platform allows old goods to be tagged, photographed and distributed in better ways, while also making room for local people to work with the whole ecosystem through a gig platform.

### **Group 7 - RRMM - financial model to reduce risk for material handling**

Instead of producing new things, we should find models for repurposing. Bringing pack material back to the loop instead of using virgin material for new packaging. There needs to be a model for consumers to give material back so that it can be repurposed. A problem is the financial risk associated with the use of reused material – because the prices of virgin materials are unstable. It's therefore important to create a business model for risk management, combining social impact funding with commercial funding inspired by the stock market. How we start marketplace, from social impact, but then more commercial. It is important with a lot of creativity in the financial business, so they can help companies dealing with repurposed materials make money regardless of if prices go up or down.



## LEARNINGS & REFLECTIONS FROM PARTICIPANTS

"It was interesting to listen to presentations from White Arkitekter on how they are really doing something on sustainability. After that we had good discussions based on concrete things we can actually do ourselves. It would have been interesting to have even more time to create these valuable circular business models."

"Today, I think we all put hope and trust in the digital world. Everyone is mentioning tags, tracking etc. when discussing solutions for a circular business model."

"The technology is already there when it comes to the tracking of material and products. What we discussed in our group is that the collaboration between companies that could be exchanging resources is missing. The technology is there, it's more about opening up to use it and working together."

"We need to make decisions quicker on how to reduce waste. Bureaucracy is slowing down how long it takes to make decisions."

"It became apparent from the poll in the beginning of the day that we all in this room are more engaged in sustainability in our homes than in politics. Yet we talk about legislation all the time. It's a struggle."

"We look at both products, processes, legislation systems and finance systems. We need to think broad about this."

"I feel that a new market will need to emerge around these values. It will transform our companies, and maybe it will be easier for newer companies. The question is if the old companies will manage to transform to more circular business models?"

"Sustainability is a layer on top of your business model. Will companies survive and have the same revenue if they sell less new products in the future? Will they need to compete through add-on services or quality instead?"

"There is a sustainability aspect to almost all new startups and business ideas. There's a lot of hope in that."



## **CLOSING THOUGHTS**

The White Arkitekter team ended the day by concluding that many new ideas were generated during the afternoon. We want to survive on this planet, and therefore bringing people from across different businesses and sectors together is rewarding and also critical for sustainable success.

White also asked the participants for advice on what they could bring with them to continue working with sustainability going forward. The participants advised on working even closer to building sites to track all material going out to help support finding ways to reuse it.

In total 54 people took part in Tank Meeting #45, representing a mix of research companies, public organizations, companies and science parks. From the energy in the room, it became apparent that sustainability is a subject that interests many members of Innovation Pioneers.

**Thank you to the brilliant team at White Arkitekter for a day of circular economy, innovative architecture and sustainable business models!**

## **SHARED DOCUMENTATION**

White Research Lab  
Circular Economy & Global Goals  
Square One  
Selma Inredning  
Product Design in a circular economy  
CCBuild  
Mentimeter Results

### **TOOLS**

Workshop template (NÖHRA circle)



## **UPCOMING DATES FOR 2019**

21 – 22 May 2019, Tank Meeting #46 - Ideon Open/RISE, Lund  
10 – 11 September 2019, Tank Meeting #47 – Vasakronan, Stockholm  
27 September – 4 October 2019, Innovation tour to Seoul, South Korea  
22 – 23 October 2019, Innovation Pioneers Summit, Stockholm  
3 – 4 December 2019, Tank Meeting #48 - TBD