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A Vision of Hope

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1. Initial Moments

3

„We reached Gilman’s Point, the eastern peak of Mt. Kilimanjaro in Tanzania. We were able to see the mighty layer of ice in the crater at sunrise. By 2030 this magical glacier will have vanished, the mountain guide told us.”

„A year later at camp Berlin, the last base before the peak of Aconcagua in Argentina, we waited three freezing nights for the right moment to make the final ascent to the summit. That year the Jetstream was unusually strong and forced us to turn back.”

„In 2003 we tried to climb Mont Blanc. It was a hot summer. During the ascent, massive rockfalls occurred and it became impossible to get past the rock face. The heat had defrosted the permafrost soil. Nobody was allowed to climb any mountain in the Alps.

We failed to reach the summit and went on our way.



Image 1: The panorama in Argentina; the atmosphere from above

2. Climate Crisis

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The European Green Deal is a promise to slow down climate change. It shows the way to a sustainable future; free and peaceful, with a strong economy, work, social security, and a healthy living environment. That is the Europe we are dreaming of.

This great challenge induces us to leave behind the goals, solidarity and motivation which lead to such destructive exploitation, depletion, and decadence.

Huge transformations require great efforts, endurance, courage, and teamwork.



Image 2: Europe, where are you going?

3. Explaining the Problem

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The earth's atmosphere is invisible, untouchable and yet it can still be harmed. It is difficult to comprehend, that our personal consumption of energy and resources might affect the world's climate. Maybe our latest trip in the car caused an even worse hurricane in Florida. Or maybe a drought in Africa became worse because we flew to our holiday destination by plane. Or maybe our use of coal to produce electricity has pushed back the monsoon in India. We can't put our finger on where and how our actions influence the climate. What we do know, is that we are changing the entire atmosphere of our planet and that we will have to live with the changes it brings to our life, our nature, our economy, our system of finance, politics and the peace we enjoy in many parts of the world.

That makes us passive, insecure and disorientated.

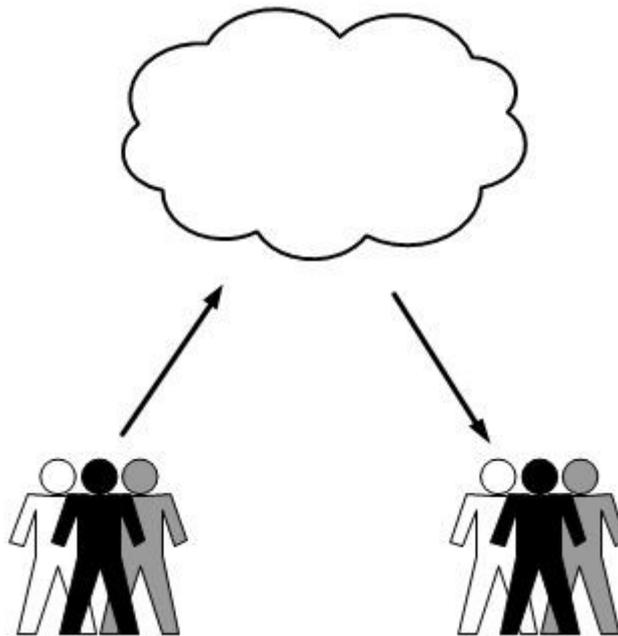


Image 3: Impact and Consequences of Emissions

4. Core Approach to the Solution

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To develop a better understanding and thereby change our actions, it's necessary to reflect on our emissions. To receive this response from our atmosphere, we need to connect and establish a form of communication with it.

But what would that connection look like, and how would it function?

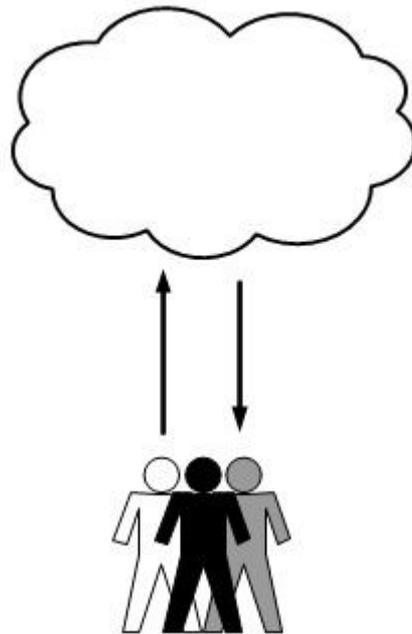


Image 4: Climate Feedback

We need a tool to measure our emissions, to rate them and to put the results back into the system. That way we can measure, control and regulate our actions.

5. Research

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The following pages figure out a possible way to improve the situation. It is a contribution to the complete system of human effort on the way into a sustainable future.

This way is full of bridges, open doors, one-way streets, and crucial forks. Life is an adventure in good atmosphere.

This project, let us call it, the “atmosphere-project”, uses the arts as a pioneer for technological development. This creative, experimental field is searching for the connection to the nature, philosophy, music, and literature. It expresses itself through its design and function, reflects our existence and sense.

For better understanding of the atmosphere-project, there are three partitions installed.



Ecosys – Energy-CONTROL-SYSTEM – This partition describes the applied technical solution.



Musys – This is the creative workspace for philosophy, music, arts, design, and literature.



Ecosys – stands for the workspace of ecosystems, biodiversity, and resilience.

6. €cosys



The basement for the overall structure, is an energy-saving-system we developed for industry, commerce, and buildings. This innovation carries the name €cosys, the €nergy-control-system. Complete automatized, this system saves energy and resources in companies.

€cosys collects information as temperature, sun-intense, rain and wind-speed from outside. Inside the production-plant movement sensors and temperature sensors deliver information.

With all that information, automatically, the system switches lightings, heating, compressed air systems off, or brings them into stand-by-mode, when the employees have left their working places. All systems are connected through a network and deliver all information to each point in a building.

On the bases of the collected data, it is possible to make energy-losses visible and to control energy-consumers more efficient. In this way, we can save energy up to 15%. That means, 15% less energy, costs, emissions, and runtimes.

According to the experience, the control-system deliver a return of invest (ROI), in three years.

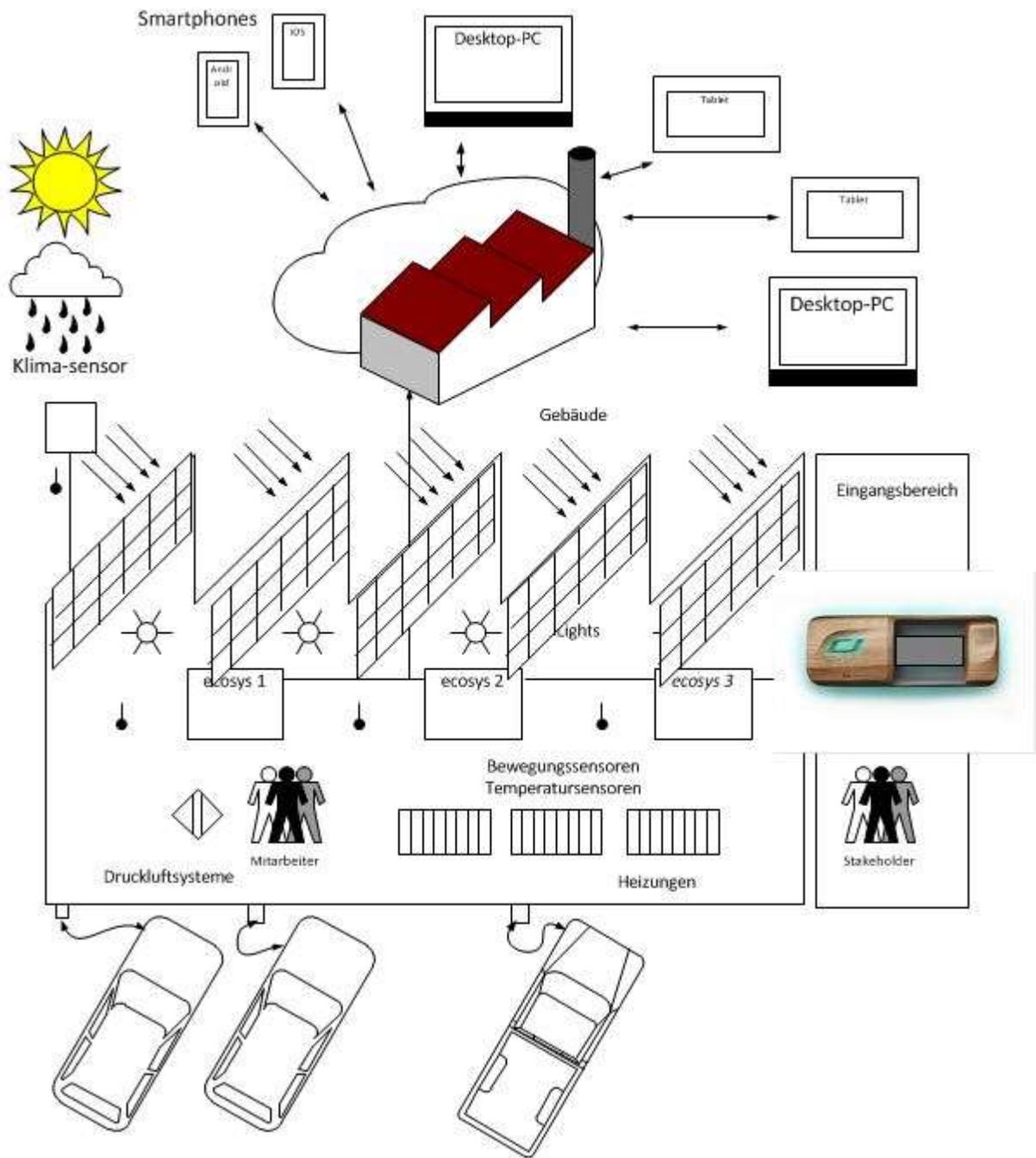


Image 5: Schematic Diagram of an Ecosystem

7. Further Development

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€cosys is a technical solution to save energy in companies. The savings of energy and costs are the overriding motives for an acquisition. To reach the climate targets and to pass this enormous transformation in our society, there is a need of an innovation in the collective awareness.

We thought about that and made the try to invent a device or vehicle, rather a structure that generates this required awareness.

But how should this device look like?

How can we force the awareness for climate-protection?

What kind of functions should it have?

How can we create a link to the earth atmosphere?

The development of this structure and all its components is the result of a long-term examination.

8. Musys



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Musys, is the name of our creative space for ideation. A space to leave the common trails, mindsets, to explore new fields, to trudge the first tracks in snow.

This space is open for music, painting, design, and literature and build bridges to architecture, culture and the social living together.

9. Experimental Tests on Emotional Conscience

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In the year 2009, the first soundtrack for climate-change was created. 20 participations choosed a personal piece of music to express their point of view to the topic. All inputs were taken without any assessment or comment. The collected music pieces were stored on a compact disc, artists created a cover for it.

The different styles and focuses of the music tracks are remarkable. They figure out how different the point of views and perceptions are. Because of the success of this project, the trials were repeated every year. People who work in the sectors of economy, arts, culture and many different more joined the project and were part of it.

List of the produced soundtracks

musys 2009 – Musys for Atmosphere

musys 2010 – Release your Energy

musys 2011 – The Green Scream

musys 2012 – System Response

Musys 2012 – System Response – was broadcasted on the Austrian Channel GoTV. One hour music around the climate change. One contribution was provided by the band Ancore. Follow the link to get an impression.

<https://www.youtube.com/watch?v=K5LTAYpbPzI>

musys 2013 – Atmosphericics

musys 2014 – Mirage

musys 2015 – El Nino

musys 2016 – Monsun

With the soundtrack, musys2016 – Monsun, the experimental phase was over. These produced soundtracks were produced for private use of the participations only.

Since the year 2017, the annual editions are published on the streaming platform Spotify.

Follow the user „atmosphericics7“ to listen the playlists.

musys 2017 – Jetstream

musys 2018 – Atmosphericics

musys 2019 – Requiem Anthropocene

musys 2020 – Visions of Hope

musys 2021 – Self-fulfilling Prophecies

With the allowance of the participations and artists we show a selection of soundtracks from the experimental phase. The graphic and artistic revision of the here shown examples, were overworked, and curated by Mika Design Studio Wolfgangsee. <https://www.designstudio-wolfgangsee.at>

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figure 5: Soundtrack 2011 - The Green Scream - Cover by Tanja Traussnigg

The Austrian painter, designer and mentor, Tanja Traussnigg, explores the hidden world of human minds. The secret mysteries of the dark, the darkness. The same secrets, that lay in the deepness of the human awareness. Compositions of paintings with extreme synthesis. Awaked through the soul. Sensual wishes. Fugitive moments of pleasure.

Tanja supported the atmosphere-project from the beginning and developed the covers for 2011, 2012, 2013, 2014 & 2015.

She describes the feeling of defencelessness and disorientation, that spreads in us through facing climate change. A feeling that expresses itself through the „Green Scream“.



Image 6: Soundtrack 2012 - System Response – Modified Perception through modified Reality

An article in a newspaper, where the Austrian artist, Erwin Wurm, talked about “modified perception through modified reality”, was the reason, to invite him to join the project.

Because the climate change modifies our environment and perception.

Erwin Wurm works for decades with the terms and definitions of sculptures.

His spontaneous and exemplary attendance to be part of it, honours and enrich the project with a “one minute sculpture” for the cover of the soundtrack, „System Response “.

In this way, he influenced the shaping of the atmosphere on crucial way.

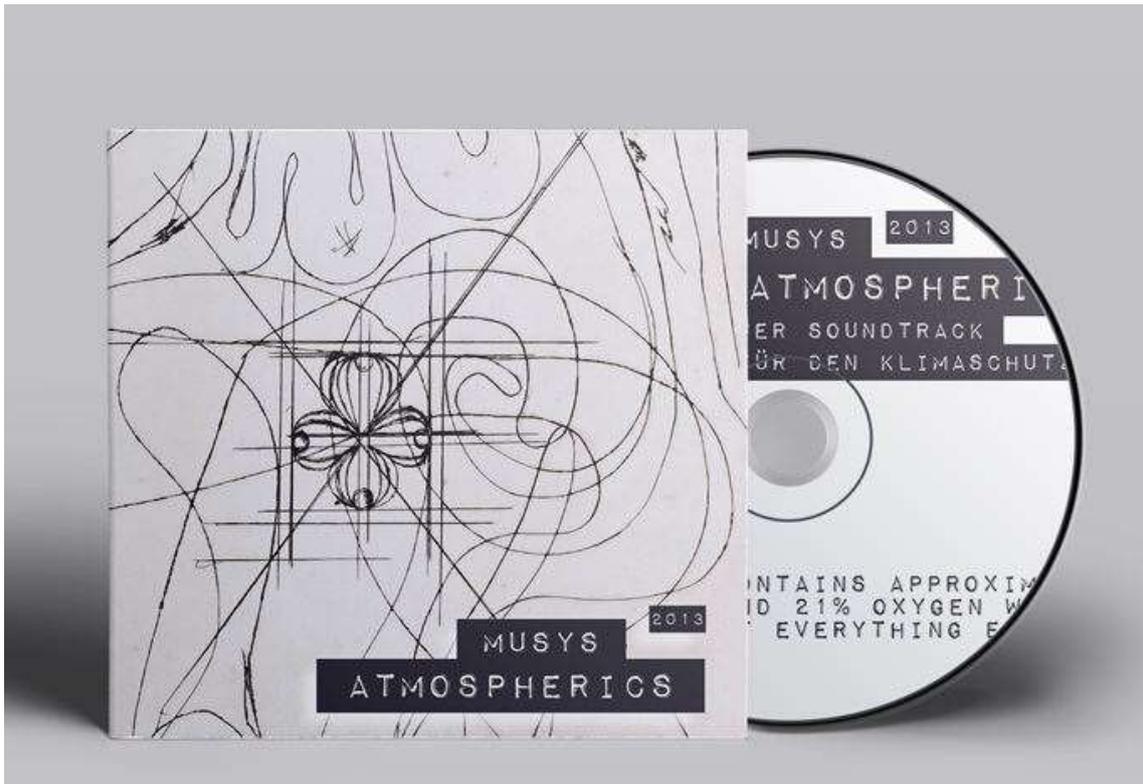


Image 7: Soundtrack 2013 - Atmospherics – uptake Life with all Senses

A human being experiences its environment with all senses. Hermann Nitsch, an Austrian painter, and performance artist is an important representative of the “Wiener Aktionismus”.

The visit of a life performance in the Nitsch museum in Mistelbach enabled an experience of his work. Through action performances all senses get stressed to a maximum. That makes a cognition of the life-process possible.

Hermann Nitsch supported the atmosphere project with the artwork „Detail Fuge“.



Image 8: Soundtrack 2014 – Mirage

Jonas Burgert: “The main idea of my works is to paint the stage where the struggle of mental representation happens. A stage, where a human being define itself, in all its absurdities, contradictions, hopes and desires.

With the work “Suchter” for the cover of the soundtrack 2014, Jonas participated in the atmosphere-project.

The experimental phase of ideation is finished with the soundtrack 2016. The resultant experiences where frequently incorporated into the development process.

Follow the user atmospherics7 on the streaming platform Spotify to listen the playlists.

Tutorial:

Enter this art space, listen to the music, regard the cover picture, and think about climate change. Exercise this several times and try to understand what atmosphere is, and what it could be.

This exercise is called “LUFTEN” (chapter 10).

10. Word Sculpture

„Give it a name, and it happens”, is a quotation from Amos Oz.

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Many activities are already climate friendly, for example biking, regional shopping, sustainable travelling by train. However, there is umbrella term missing, that describes all these activities.

Out of this need, a word sculpture was invented.

Definition: This word should generally describe climate protecting activities, generally. Therefore, this word is a verb.

Let us call it „**LUFTEN**”.

This word arose from a flash of inspiration and already exists in the German language. It means, blow, twist, ventilation, recording weather or to air something. For that reason, it fits absolutely and is senseful.

How to use this word in French, English, Spanish, Italian or all other languages is a challenge of linguists.

In German, this word is defined, all conjugations exist and are ready to use.

11. Development Process

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There exist no indications. Is it big, small, round or squared? What should it effectuate, how operate? How can we develop a device, vehicle, or tool, that does not exist yet? The need exists, to protect the climate, fauna and flora, to protect ourselves. It should be a tool, to satisfy that need.

For that purpose, we think about the problem statement, to develop a solution out of it.

We dedicate this development of this climate protection system to the earth atmosphere and therefore we call this project the “atmosphere-project”.

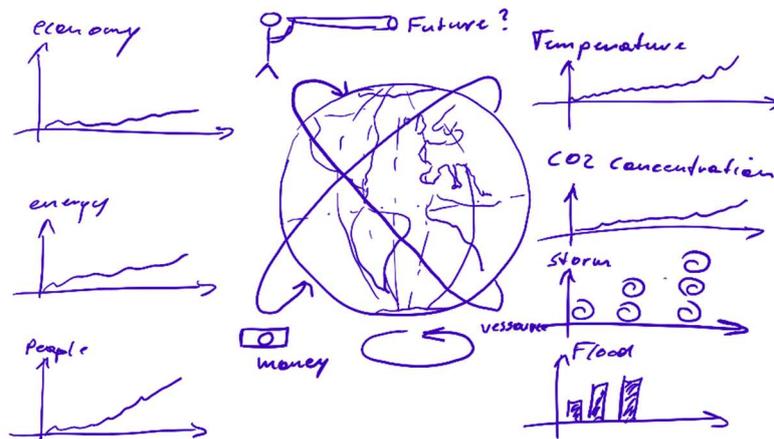


Image 9: Sketches about the Future

A rising world population cause an increase demands for food, energy, and resources. The size of our planet is bounded. More and more, we reach the limits and bring our ecosystems off kilter. Distributive justice is sinking, the access to resources is getting harder. Poor countries, as low pollution emitters, suffer more than rich countries as high pollution emitters.

To reduce emissions, and to work against this trend, we are searching for an innovative solution.

12. Experimental Sketches on Form and Function

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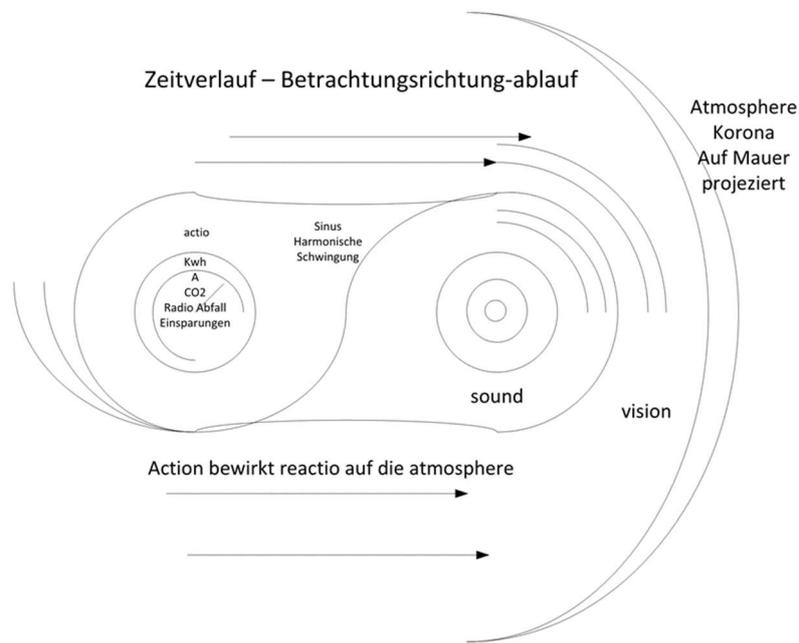


Image 10: Experimental Graphics

Polar lights should shine around the device, the handling should be touchless, and translucent screens will display information's. Light, fugitive and spherical, are the characteristics that the vehicle should have.

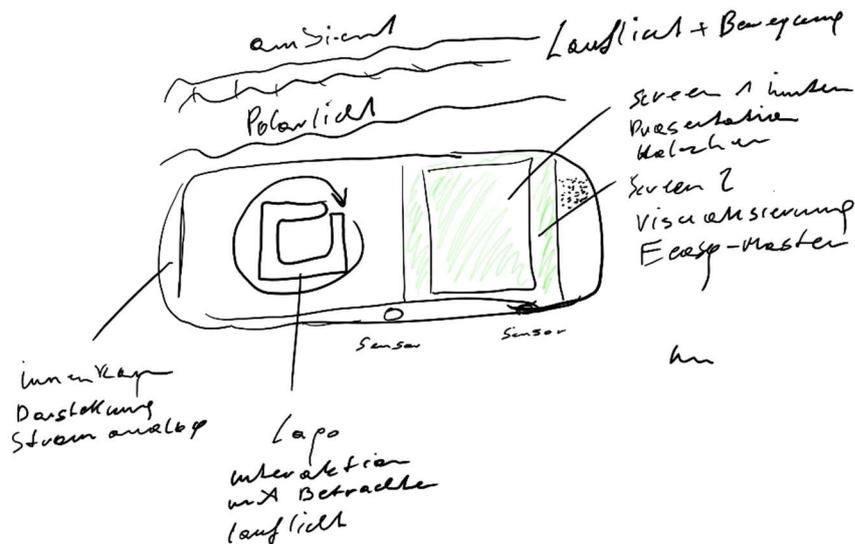


Image 11: Sketches to Ideas

13. Design

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Design is identification and gives a shape to a function. Design is something to touch, to observe, to smell, to taste, to hear, to uptake the function with all senses. Timotheus Lazar, an industrial designer, joined the project to design an interface to the earth-atmosphere.

He created mood-boards and collected feelings and attributes to express. Freedom, nature, adventure, dynamic and sportiness, all that should be expressed by the design-object.

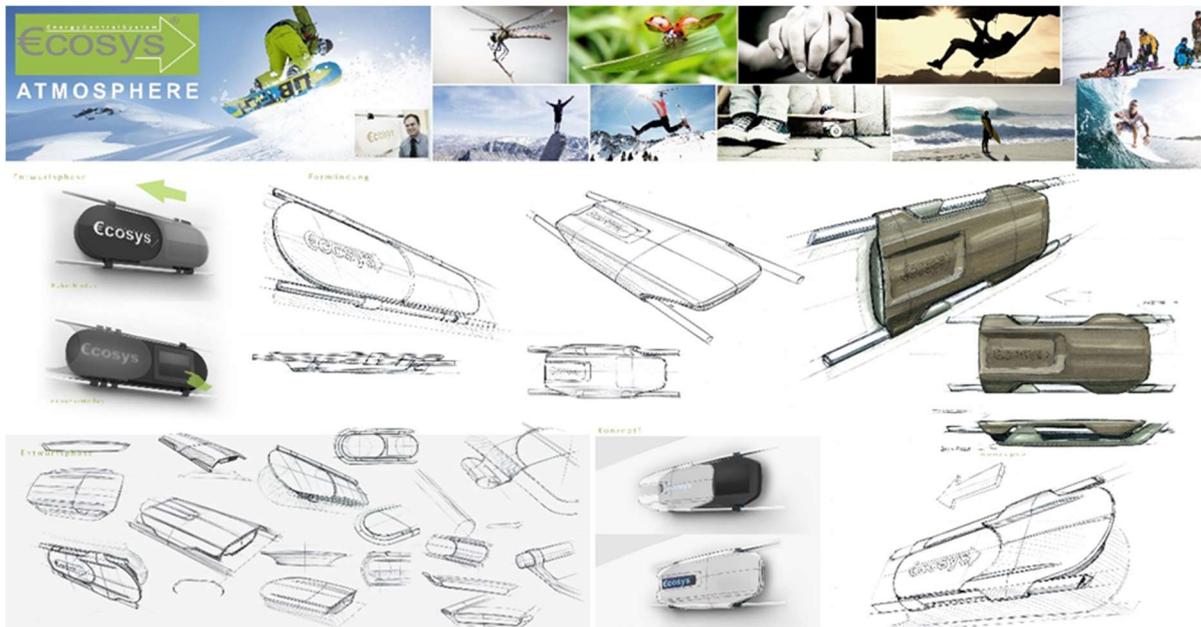


Image 12: The Quest for Design and Function

We used the first prototype, the atmosphere-polar from the year 2010, as basement. We overworked the shape, debated about functions and details as light effects, handling, positioning of the electronics. We always tried to integrate the characteristics of the earth-atmosphere.

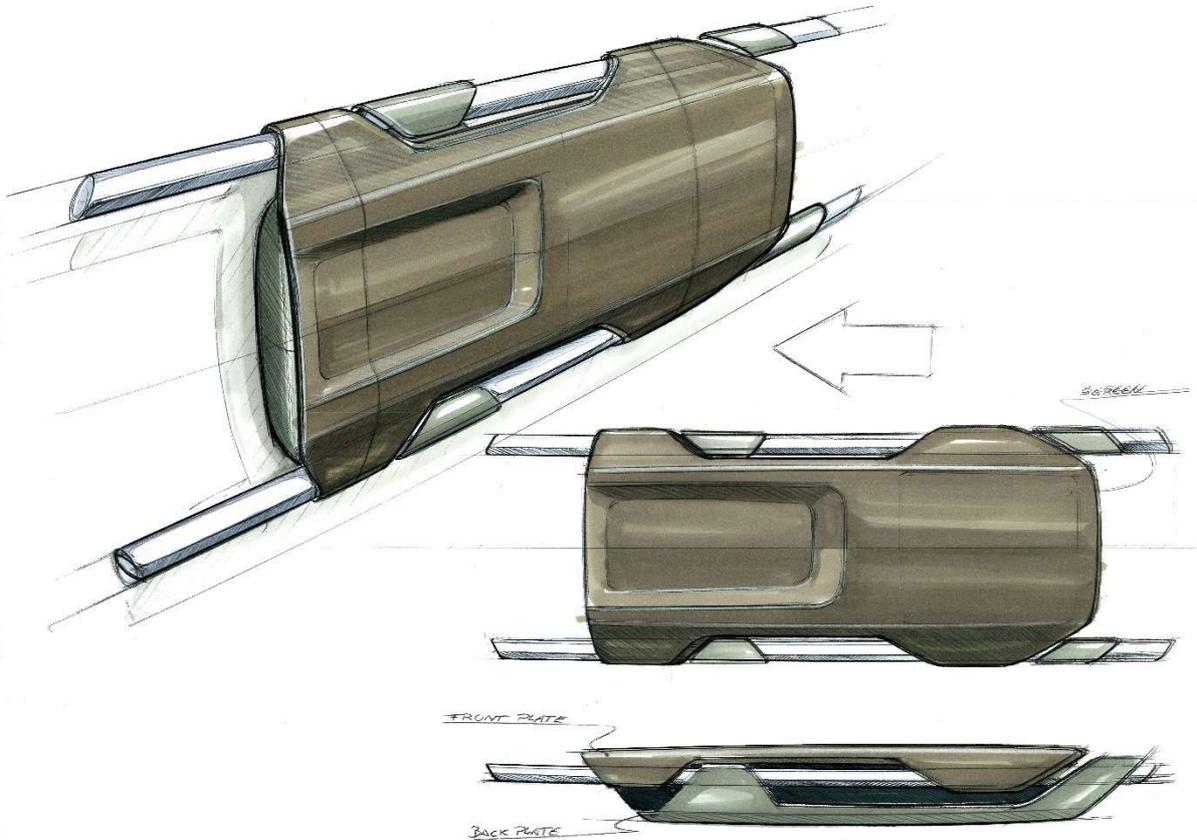


Image 13: Tests with different Models and Materials



die design process
 Die Aufgabenstellung des Designers besteht darin, ein Produkt zu entwickeln, das die Anforderungen der Kunden erfüllt und gleichzeitig ästhetisch ansprechend ist. Der Designer muss dabei die verschiedenen Aspekte des Produkts berücksichtigen, wie die Funktionalität, die Herstellbarkeit und die Nachhaltigkeit. Das Designprozess ist ein iterativer Prozess, bei dem der Designer verschiedene Entwürfe erstellt und diese mit den Kunden und anderen Stakeholdern diskutiert. Am Ende des Prozesses wird ein finaler Entwurf erstellt, der für die Produktion bereit ist.

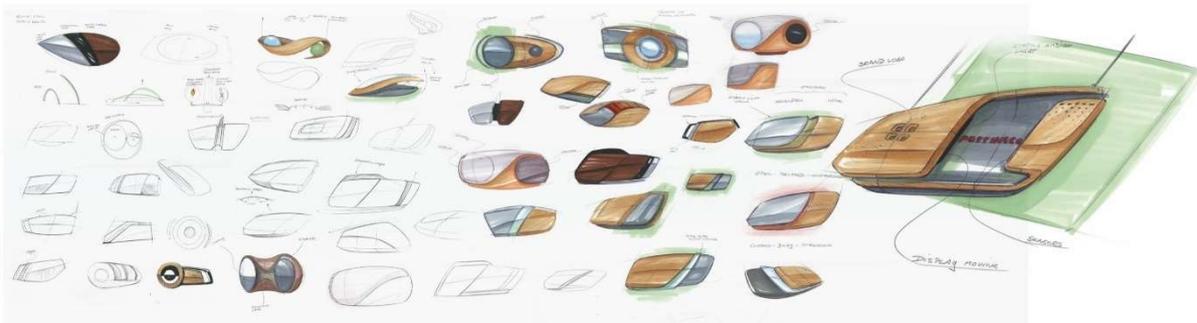


Image 14: Development of Design Elements



Image 15: Projection of a Solution out of Wood

We decided to follow the solution out of wood. Wood is renewable, a CO2-sink and ambassador for sustainability. Also, we think about the end of product life cycle and choose materials, easy to recycle.

Size and dimensions result from the interplay of monitors, sensors, electronic hardware and the interaction and communication through a medial person.

Length and width correspond to the proportions of the golden section to transfer harmony to the observer.

The shape is curved in all three dimensions. Lines and deflections express dynamic, airiness and accuracy.

14. Form Development

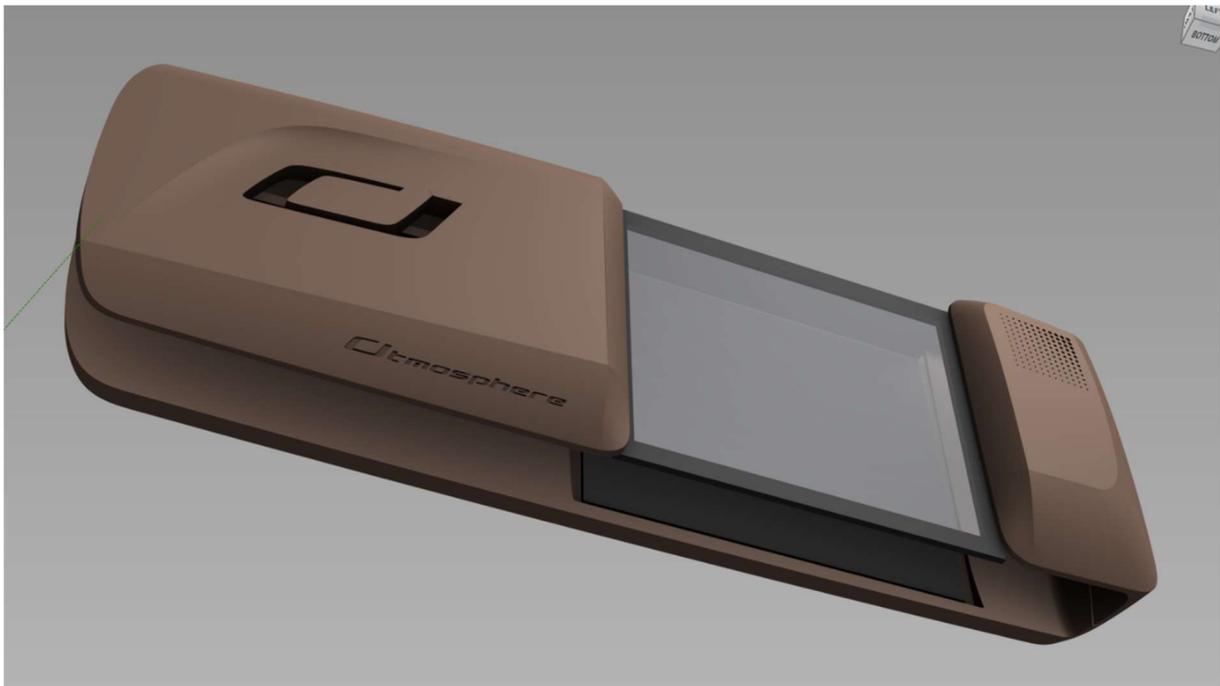


Image 16: Forming with Design Tools

After definition of the final concept, the modelling process started. The base area ends in two overlaps and enfolds the device. Out of each perspective, the basic shape of this enveloping is recognizable and repeated.

These enveloping represents the earth-atmosphere.

15. Production Process

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Image 17: Implementation of the Prototype

We started with the manufacturing of the complex oak-body. For the hardware and its interplay, we had to execute extensive trials. Equally through the small space, the placing of the electronic components was tricky.

With the data from the Design-model, the shape was constructed with a CAD-tool. After that, the CAD-data were translated with a post-processor into machine code, to mill the shape out of wood.

For that process we found a mould maker. This mould maker is specialized on moulds for the automotive industry and is expert in the use of wood.

For the production we used wood from an old oak out of the own forest. This oak was 200 years old. Stroked by a lightning, loaded with energy, the wood of this oak find its final destination in a climate protection system. The wood was tried for ten years and is stable enough for that application.



Image 18: First Trials to Manufacture the Shape

On the surface of the oak body, you can easily recognize the annual rings of the tree. This oak started growing around the year 1800. Therefore, you can read the climate history of the last 200 years on the surface of the oak body.

After a long planning- and development process, complex manufacturing, extensive test-routines, implementation of the hardware and software adaption, the “atmosphere” is accomplished.



Image 19: Final Foto of the "atmosphere4500professional – Monsoon"

16. Interaction and Communication

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Image 20: Innovation in Interaction and Communications

“atmosphere” stands for a kind of interface or communication device to the earth atmosphere. The two displays are arranged in an innovative way, one upon the other. The aim of this arrangement is, to create translucence and three-dimensional impressions. On the backside a common rgb-monitor is mounted. In a distance of seven centimetres, a transparent monitor is mounted above.

On that way, it is possible to overlay different information’s to produce spheric pictures. Underneath there are two sensors appropriated. These sensors make a touchless interaction through gestures possible, without touching the device.

On the backside of the system, there are led-light systems integrated. They produce effects like polar lights. According to the power consumption of a company or city, the device changes its aureole. That makes it possible to recognize the power consumption, on analogue way, without digits or data. These allows the observer to evaluate the situation in a split second.

The logogram is illuminated from the backside and is pulsing in a frequency of a slow heartbeat. This should tranquillize the observer. In the right upper area, behind the aesthetic arranged boreholes, a speaker is positioned. On the backside, there are gateways for LAN, USB, and a connector for the grid.



Image 21: An Aureole of Polar Lights express the Power Consumption on the Wall

Polar lights play around the device and paint pictures on the wall behind. These pictures reflect the activities in a company or building. Without digits or data, the system transports a kind of feeling as direct feedback. The system is floating in the space, through nearly invisible robes.

Located in entrance areas, it pulls the looks of employees, business partners and all stakeholders on it.

“atmosphere” is a strong presentation, a strong connection and a strong statement for companies, institutions, or cities, to expose active climate protection and sustainability.

17. Aspects of the Atmosphere Model

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For a better understanding of this climate protection system, we invented a structure or layer model. Again, this layer model carries the characteristics of the earth atmosphere. The layers carry the names troposphere, stratosphere, ionosphere, thermosphere, and exosphere. We use bees in the pictures as a kind of allegory, to build a bridge to the ecology.

Troposphere

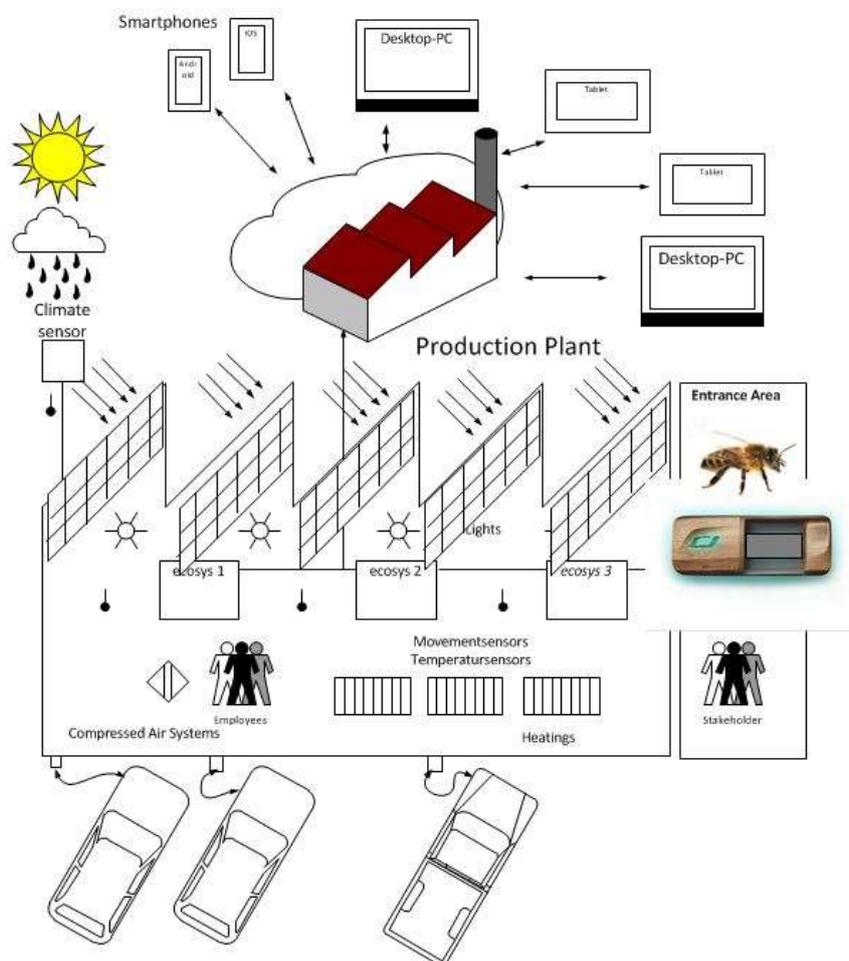


Image 22: Energy Saving in Companies, Buildings, and Institutions

In the troposphere we use for example a company. Saving energy, producing solar energy, the loading of electric cars or employees arrive with the bicycle. All that results, we display on the “atmosphere” in the entrance area.

Stratosphere

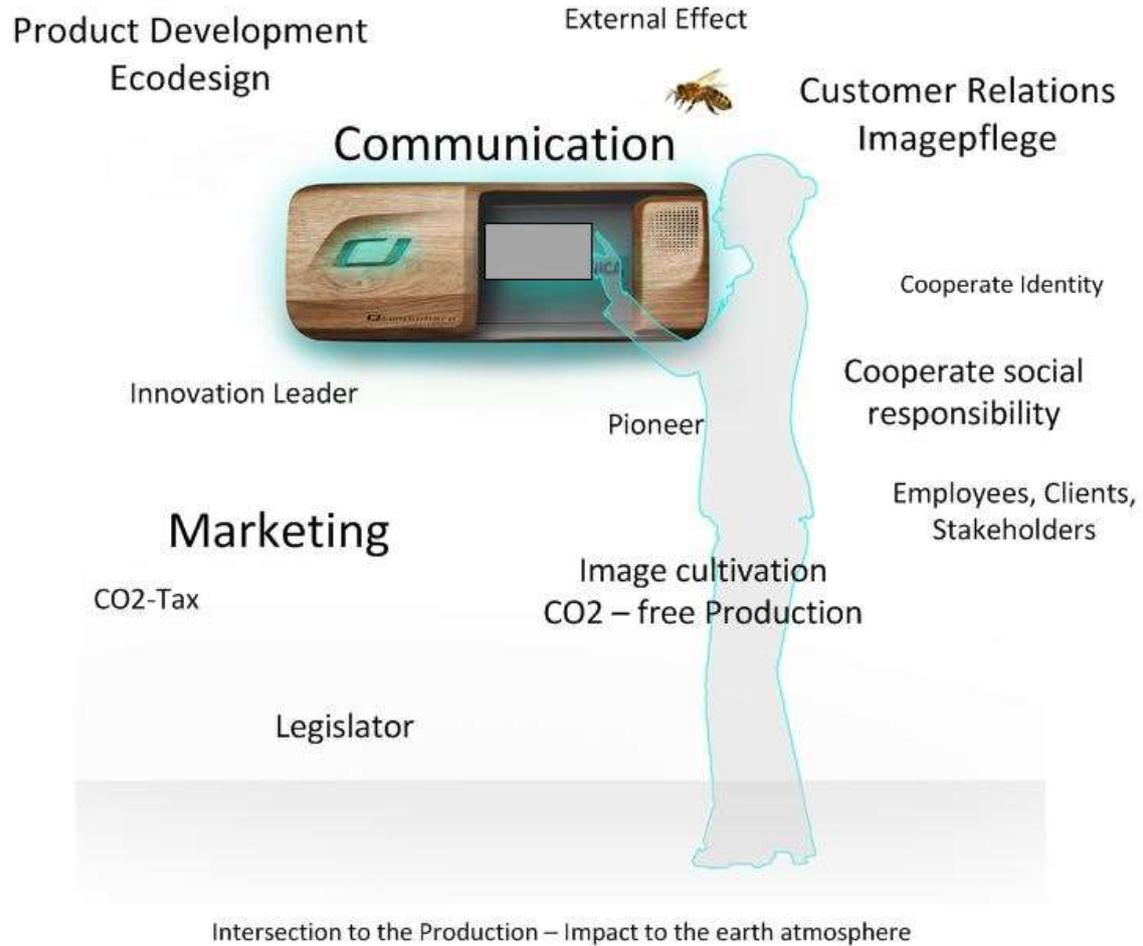


Image 23: „atmosphere“ exposed in the Entrance Area

The entrance area figures out the stratosphere, an area of communication to business partners, employees, and visitors. The system communicates and interacts with the observer, transports the cooperate identity and cooperate social responsibility.

Ionosphere

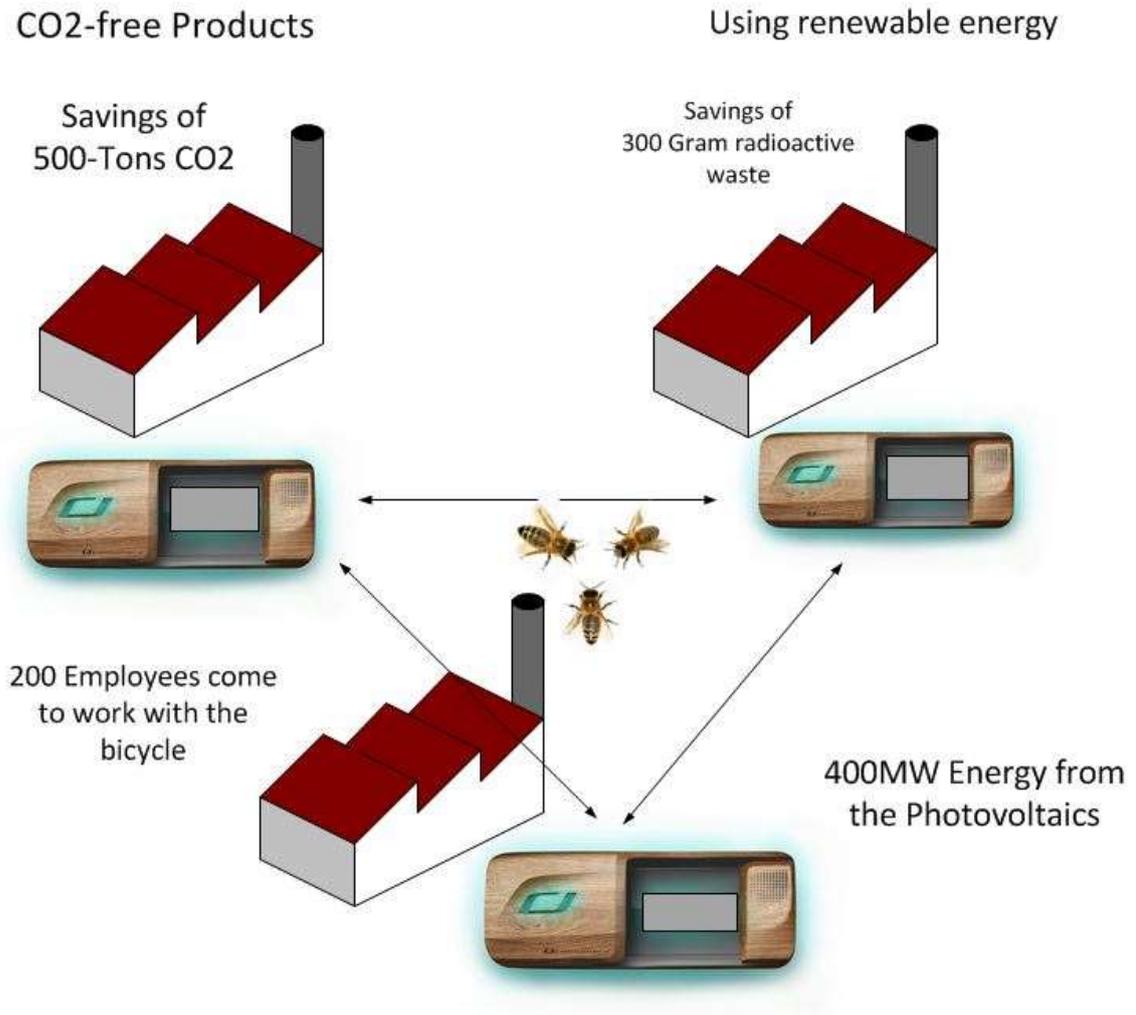


Image 24: Connection of different Parts of a Company

Companies act in distributed structures and different locations. The exchange of information should give the possibility to compare results and to force a competition.

Thermosphere

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Image 25: Climate Protection in a Cluster

Similar as a bee swarm, companies, communes, cities, and institutions communicate to each other. A field that is opening the areas of digitalisation and artificial intelligence.

In comparison to an ecosystem, this structure should reach a high level of diversity. Because diversity force the resilience.

Exosphere

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The „atmosphere” is a communication interface to the earth atmosphere and opens new spaces for awareness and acting. This area connects the disciplines in the context of climate change.

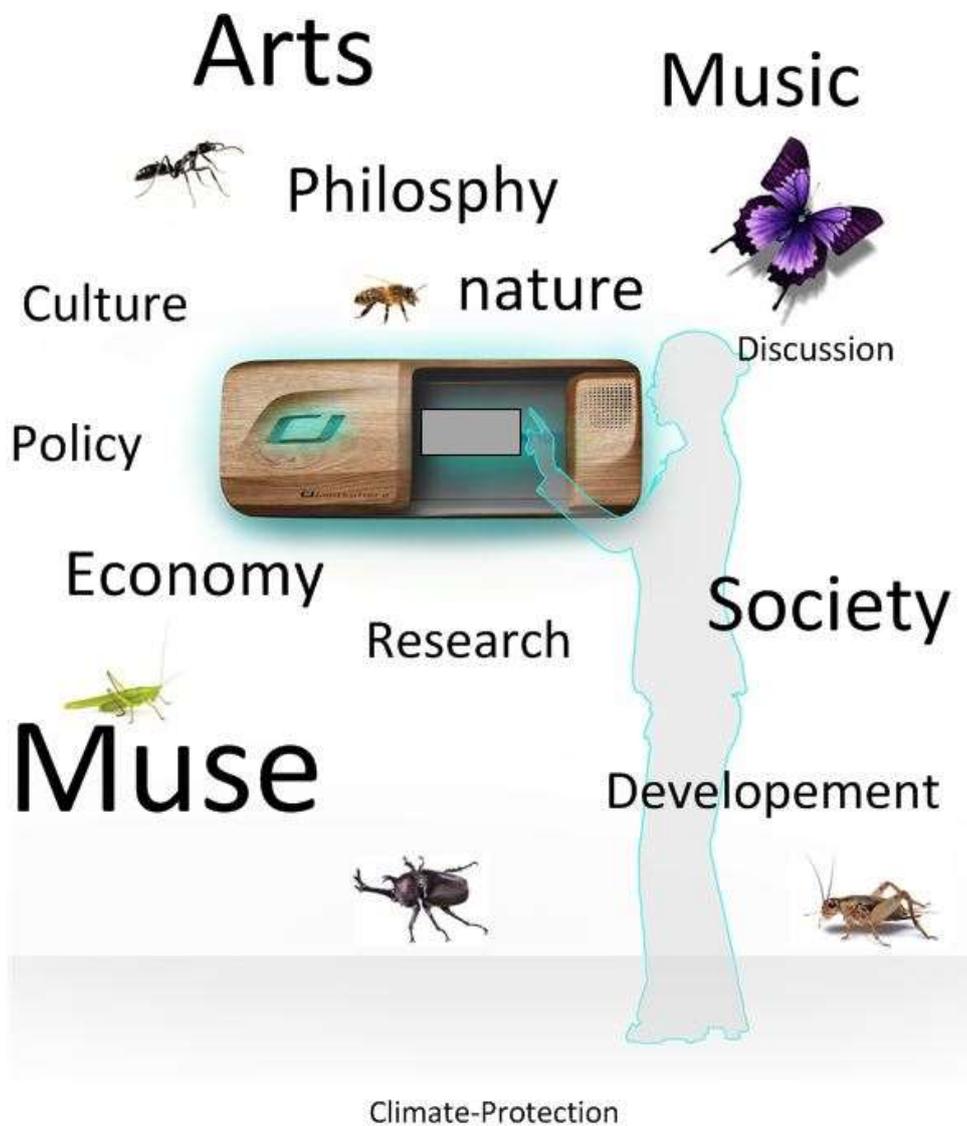


Image 26: Connecting the Disciplines in the Context of Climate Protection

18. Ecology



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The ecology inspired this project. Let us compare this innovation with a bee colony. Bees live in complex states and retain their viability with collecting pollen from the plants and trees. The bees store the pollen into the honeycomb. The queen bee and male bees retain continuity. Nurse-bees take care on the procreation and others defend the bee yard. They communicate through the waggle dance and exchange information about distance and direction to the blossoms. Most of the time, bees are peaceful, but when a storm is coming up, they get nervous.



Image 27: The Atmosphere Bee Colony, a Source of Inspiration

Bees act like modern democracies. To read in their behaviour, helps to understand how complex ecosystems are.

19. Architecture

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This building was constructed to dry tabaco in the 1960's by my grandparents. Now it is a kind of hangar, where atmosphere devices get developed and produced.



Image 28: The atmosphere-LOFT

In comparison to a bee yard and let us think inverse. So, the atmosphere devices collect the savings of CO₂ that is not emitted and store it into that building. The storage capacity of not emitted CO₂ is endless.

“The energy that is never produced for human applications, is the gentlest for the environment”.

“Efficiency first!”

The special wood construction of the atmosphere-LOFT is completely original and let think over the former function. Nowadays, this building is used as development- and production plant. It stays for a point of intersection to climate protection, techniques, arts, design, and ecology.



Image 29: Atmosphere-LOFT Workshop

20. Paths and goals

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This contribution describes one way of many to reach the European climate targets. This way should instruct and inspire. This way leads to undiscovered spaces of innovation and awareness, to decelerate climate change.

Let us shape the future of Europe | beautiful | sustainable | together.

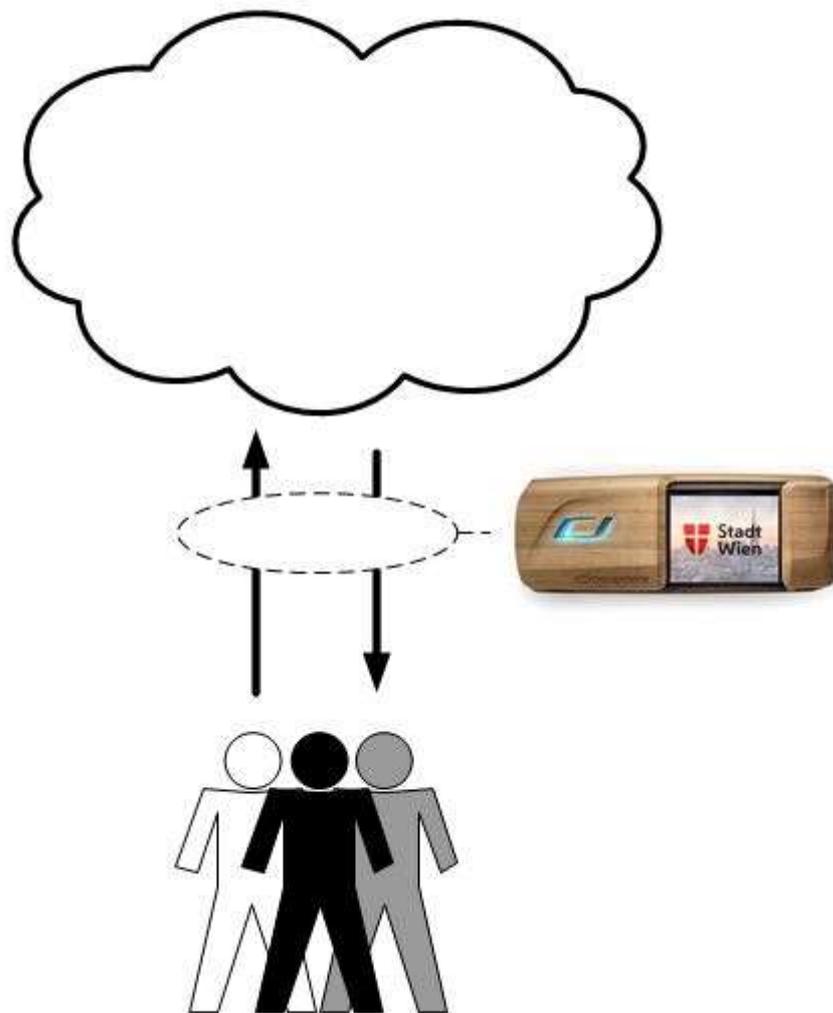


Image 30: Communication Interface to the Earth Atmosphere

21. “The Hill We Climb” by Amanda Gorman

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Let the globe, if nothing else, say this is true.

That even as we grieved, we grew.

That even as we hurt, we hoped.

That even as we tired, we tried.

Bibliography

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