



SKYSEED

regrowing ecosystems at scale





10/2002

2002

—

Healthy forest near Freiburg, Germany



SKYSEED



4/2020

2020

Today, it's one of our customers.  
What happened?

# MANY REASONS, ONE RESULT

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pests



fire, storm & dryness



monocultures



# “UNFORTUNATELY” A LOT TO DO

—  
~ 300.000 ha

Damaged forests in Germany until 2021.

~ 80.000.000 ha

Endangered forests in the EU right now.

# THE URGENT NEED

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To fight climate change and biodiversity loss, we need to renature our planet - literally as soon as possible.

We play our part by tackling the urgent need to **reforest at scale** - cheaper, faster, and truly sustainable.



# OUR SOLUTION



# WHAT WE DO

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We use drones and seed-pellets to support natural regeneration, everywhere.

## current way

- › exhausting manual work
- › planting of seedlings
- › mainly focussing on tree species that won't survive in future climate conditions

## our way

- › (partly) autonomous drones
- › organic seed-pellets growing trees in place
- › mixed forests that are more resilient to climate change, store CO2 faster, increase biodiversity and secure a long-term income



# WE ARE MORE THAN A TECH START UP

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We mimic nature's tricks to speed up its very own process of regeneration.

- › We follow the logic of natural succession.
- › We drop seeds, not seedlings.
- › We avoid all possible impacts on the ecosystem and imitate natural rejuvenation.

# SELF-DEVELOPED FOREST SEED PELLETS INCREASING SEED SURVIVAL AND RESILIENCE WITHOUT ARTIFICIAL INGREDIENTS\*

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## Substances 1 + 2

enable the **homogeneous bonding** of all raw materials.

## Substances 3 + 4 + 5

create a **bi-directional capillary action**:

- no germination while production
- redrying without killing seed

## Substance 6

enables **machine processability** of even microscopic seeds.

## Substances 7

**protection** from rodents, snails, etc.

## Substance 8

**protection** against late frost.

## Substance 9

**protection** from drought and heat.

\*We would be more than happy to discuss materials and chemical compounds in detail, but unfortunately cannot provide more information at this point due to the ongoing patent proceedings.





# SKYSEEDS PELLET PRODUCTION FACILITY

1

## weighing

of raw materials

3

## marriage

of seeds and pellet mass under  
specific temperature and  
addition of water

5

## packaging

for safe transport

2

## mixing

of raw materials to create  
homogenous pellet mass

4

## redrying

to prevent germination  
of seeds



SKYSEED



# POTENTIAL CUSTOMERS

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## Nobles & private owners

› e.g. Thurn und Taxis (20.000 ha) , zu Fürstenberg (18.000 ha)

## Federal state forests

› e.g. Bavaria (755.000 ha), Forst Thüringen (500.000 ha)

## Organisations owning forests/land

› e.g. E.ON (70.000 ha), Deutsche Bahn (20.000 ha), LEAG

## Organisations doing afforestation/CSR

› e.g. Tesla, Ecosia, BAUHAUS





# ADVANTAGES FROM CUSTOMER'S PERSPECTIVE

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In comparison to conventional planting methods, we can enter nearly every area (e.g. steep slopes), trees from seeds are more resilient and we are ...

**~ 30%**

cheaper

**~ 20X**

faster

**+30%**

better survival rate



# WHAT CUSTOMERS SAY

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*"I've known the founders team for many years and trust in their **ability to translate my challenges to an effective product.***

*I invested in Skyseed, because I see that my fellow foresters have an **overwhelming demand** for a solution like Skyseed."*



Lucas von Fürstenberg

Freiherr von Fürstenberg'sche  
Forstverwaltung

*"We were sceptical at first whether a start-up from Berlin would really understand the scope of our renaturation work of former coal mines.*

*But after discussing potential test areas in person, we are optimistic that **we will be able to reforest many areas with Skyseed** in the coming years."*



Thomas Lückfeldt

Renaturation at LEAG AG



# THERE IS A HEALTHY COMPETITION & A PROOF OF CONCEPT

4 competitors abroad



## ✗ lead advantage

Especially Dendra and DroneSeed are established, got couples of millions of funding and use impressive technologies.

## + Focus on other countries & boundaries

They focus on North America, Australia, Russia and Africa.  
It's not easy to access different countries (reglementations, ingredients, supplier network)

## + Huge Markets

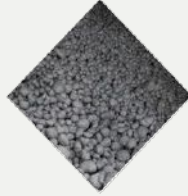
Collaboration instead of competition. It's so much to do.

- Focus on Europe first
- Build strong relationships of trust
- Use technological progress and get funding to reduce lead advantage of others

# SUCCESSSES & STATUS QUO



Drone + seeding  
mechanism ready



Pellet recipe ready



Pellet production in  
Külsheim up and running



10 test cases with  
customers this fall



10+ inquiries of potential  
customers like E.ON, LEAG  
and nobles



Patents for seeding  
mechanism and  
pellet-recipe in progress



First media coverage,  
e.g. "Land und Forst" and  
"Forst und Technik"



Scientific monitoring  
(pellets) by TU München,  
Amt für Waldgenetik





WE DO IT.



SKYSEED

# DIVERSE TEAM OF ENTHUSIASTS

## Ecology



**Dominik Wind**

Ecology, GF  
founder open state  
consultancy, forest enthusiast



**Katrin Staab**

Pellets & Consultancy  
gardener, experienced in  
regenerative farming & soil  
regeneration



**Johannes Miczajka**

Pellets & Consultancy  
gardener, former forest  
enterprise



**André Franz**

Pellet Production  
Engineer  
Maker  
Max Planck Institute

## Sales & Operations



**Ole Seidenberg**

Partnerships & Finances, GF  
founder open state  
consultancy, founder  
WIGWAM



**Elias Schneider**

Communications & Funding  
former UNHCR, Phineo



**Reenste Seidenberg**

Team Assistant & Bookkeeping  
sociologist, trainer

## Product



**Simon Wind**

Product, GF  
strategist advertising,  
Business Innovation VW



**Denise Sengül**

Data Analysis  
Data Scientist with  
7mind and other  
startups



**Daniel Sachse**

Software Dev,  
Drone Pilot  
Full Stack Developer



**Raphael Müller**

Seeder Development &  
Drone Pilot  
Student, Mechanical  
Engineering



**Markus Patas**

drone development &  
Drone Pilot  
Industrial Engineer,  
Consultant for VW



**Joachim Grund**

Seeder Development  
Mechatronics engineer



**Katharina Holstein**

Data Analysis  
Team Lead @  
Fraunhofer Institute



# BUSINESS MODEL

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So how does this work financially?  
By disrupting the way we plant, we can  
achieve...

**>20 %**

margin

**~1.000 €**

gross profit  
per ha

**~1 Mio €**

income  
per drone / year





# FUTURE BUSINESS CASE: WE DO WHAT OTHERS MEASURE.

## Companies

Increasingly need CO2 certificates to offset emissions that cannot be avoided.

planA

.planetly

THE CLIMATE  
CHOICE

...

## Corporate Carbon Footprint Platforms

Measure the carbon footprint of companies and link it to projects to offset it.



S K Y S E E D

We implement the CO2  
offsetting needs quickly,  
sustainably and  
measurably - on the  
ground.

Together with certificate issuers & forest owners  
we enable the creation of more CO2 certificates.

Instead of a one-off payment, we participate in CO2 certificates → forest  
owners can afford more reforestation.

We profit more and more each year and accordingly as the CO2 price  
rises. → Steady income beyond the service business.

## Forest owner

Owens land and wants to or  
must (Federal Forest Act)  
reforest in a cost-effective  
and sustainable manner.

Pina

Re-Spire

waldklima  
standard

...

## CO2 certificate exhibitors

Measure captured CO2 in forests and  
issue certificates so that forest owners  
are rewarded for forest conservation  
and not just deforestation.

# WHAT'S NEXT?

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We are looking for **2+ mio. €** seed funding.  
We are planning to invest...

**~ 1 Mio.**

to grow our team

**~ 600K**

to scale our  
pellet-production &  
drone fleet

**~ 400K**

to build software and  
automate our  
processes





# THANK YOU

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# APPENDIX



# Our upside potential in 4 dimensions

We gain access to more and new landowners due to a raising affordability.



CO2 & ecosystem value rewards.

Prepaid reforestation  
CSR / donations

Projects paid for by state ministries  
and development agencies.



**Financial models**

We participate in more parts of the value chain.



Pellets as a standalone product.

100% natural stain for seedlings &  
tree nurseries.

Drones drop sensors, gain data for  
third parties or even harvest seeds.



**More products & use-cases**

We access more areas and increase our asset utilisation.



Grasslands will be in EU focus in the  
coming years.

Protection from desertification and  
erosion.



**More ecosystems**

Each € spent converts into more healthy plants every year.



We will fly drones in swarms of 3-5.

Pellets will be more efficient, we will  
gain more data & knowledge.

Batteries will last longer, payload will  
raise dramatically.



**Technological advancements**