

# SKYSEED

regrowing ecosystems at scale





10/2002

2002

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Healthy forest near Freiburg, Germany

2020

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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

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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



# 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

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4 competitors abroad



## ✗ lead advantage

Especially Dendra and Dronestead 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 (regulations, 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

# SUCCESES & STATUS QUO

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Drone + seeding mechanism ready



Pellet recipe ready



Pellet production in Künsheim 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.



# DIVERSE TEAM OF ENTHUSIASTS

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## Ecology



**Dominik Wind**  
Ecology, GF  
founder open state  
consultancy, forest enthusiast



**Katrien 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 %**

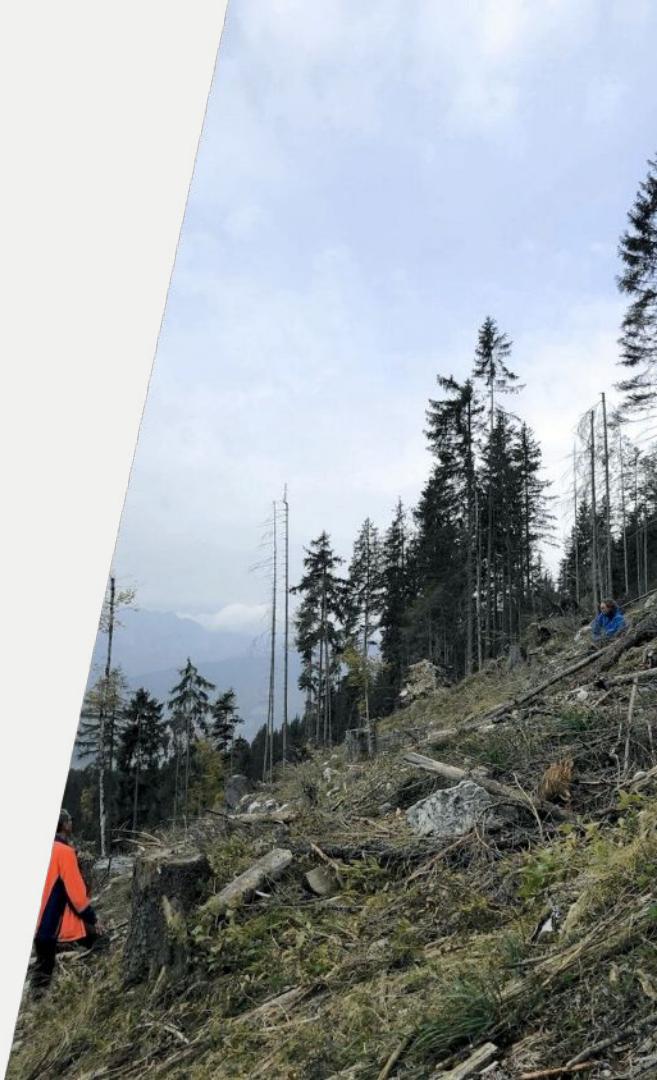
margin

**~1.000 €**

gross profit  
per ha

**~1 Mio €**

income  
per drone / year



# FUTURE BUSINESS CASE: WE DO WHAT OTHERS MEASURE.

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## Companies

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



## Corporate Carbon Footprint Platforms

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

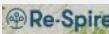
...



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

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



## CO2 certificate exhibitors

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

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# WHAT'S NEXT?

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

**~ 1 Mio.**

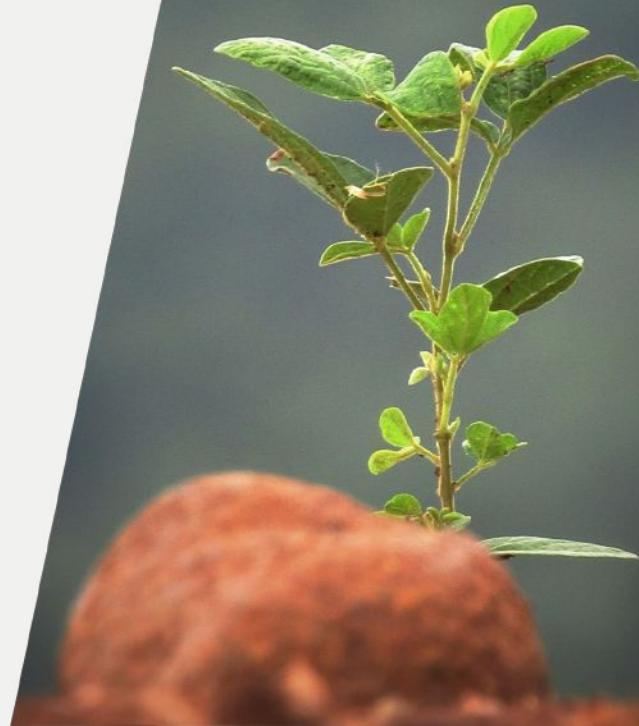
to grow our team

**~ 600K**

to scale our  
pellet-production &  
drone fleet

**~ 400K**

to build software and  
automate our  
processes





# THANK YOU

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# APPENDIX

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# Our upside potential in 4 dimensions

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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