

holy

The Future of Manufacturing
for Composites



Team

Our team unites software scaleup with industrial composite experience.



BOSSE ROTHE
Founder & CEO

Previously founded recycling software company Cleanhub, scaling it to 1M€ ARR.

1st hire at AI start-up Fashwell, acquired by Apple.



MORITZ REINERS
Founder & CTO

Previously 10 years at Airbus' composite center, CTC, as Project leader & Assistant to CEO.

Worked on industrializing novel carbon fiber production lines.

Strong key hires

Kiki van Lieshout, >9 years experience in sales and marketing within the 3D printing and robotics industry

Dr. Salman Bari, PhD in robotic automation engineering from TU Munich

Dr. Dario Fiumarella, PhD in carbon fiber composites from PoliTec Torino

Total 11 people

8 tech | 3 commercial

Raised 3,5M€ in grants and equity from...



ROCKSTART
Energy Fund | VC



INNOVATION STARTER
Generalist Fund | VC



ADYEN
Disruptive Tech Grant



EIT MANUFACTURING
European Institute of Innovation & Technology for Manufacturing

... and many more

Problem

Lightweight composites are critical for our industries but face critical challenges.

1

HIGH COSTS OF PRODUCTION

>60%

of manufacturers cite costs and complexity as barriers to adoption.

2

LABOR INTENSIVENESS

>70%

of production relies on manual processes.

3

LENGTHY TIME-TO-MARKET

>70%

of projects take longer than expected.

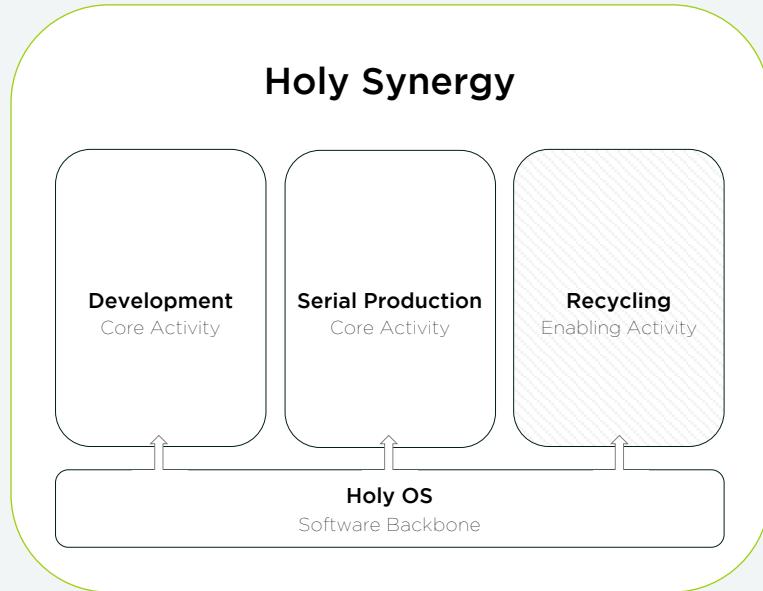
4

ENVIRONMENTAL IMPACT

0%

of material can be upcycled.

Holy Synergy: The future of integrated manufacturing for composites.



What is it?

A next-generation manufacturing system designed to maximize efficiency by delivering performance that exceeds the sum of its individual elements.



The software-centric nature of our system enables continuous improvement with every component produced, driving a compounding competitive advantage over time.

Unique Value Proposition

The solution creates disruptive possibilities for the products of our customers.

UP TO 50% COST SAVINGS

UP TO 70% LIGHTER & STIFFER

NEW GEOMETRIES UNLOCKED

100% RECYCLABLE

Our technology enables components that are “designed for recycling” achieving full circularity.

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We deliver pre-serial prototypes at lightspeed.

From CAD to Prototype

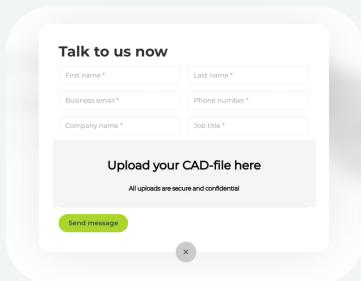
- Customer journey starts with interest to build a component through us
- They are looking to receive a prototype before transitioning to serial production.

Our objective

Reduce the time to pre-serial prototype
from 12 months to 10 working days.

Our software-centric system helps customers unlock the full potential of their components.

1



Customer sends us a CAD-file plus specifications of their component.

2



We compute the ideal fiber path with hyper-local reinforcement.

3



We place the fibers with a highly-efficient, fully automated robotic process.

4



Our finished components do not require any post-processing.

We produce composite components at scale.

Flexible delivery of components

- Customers make purchase orders for 10 to 1000s of components.
- Our modular production allows for efficient, and highly repeatable quality.

Our objective

Run a robotic production line with capacity of **500 units/week** at **99% production yield**.

We are redefining labor- and material-efficiency for composites.

1



2



3



We robotically place a continuous dry fiber.

We create a stable preform.

We inject a resin and demold a net shape component.

Existing Customers

A strong market pull validates our superior product.



Component

F1 Mirror Housing

Customer Value

-20% weight

Revenue Potential

~0.2M€



Spiral Orthoses

New geometry

~1.8M€



Ankle Foot Orthoses

Scalable production

~4.7M€



Industrial Clamp

-65% weight

~1.5M€

Our customers & qualified leads bring us a long way already.

Signed customers

Serial production agreement & expansion plan for next years.



Rev. potential: 1.8M+€



owned by:



Rev. potential: 4.7M+€



Rev. potential: 1.5M+€

Serial customers in motion

Qualified interest for serial production & working towards contracting.



Rev. potential: 20M+€



Rev. potential: 20M+€



Rev. potential: 10M+€



Rev. potential: 10M+€

POCs in motion

Initial component identified & working towards start of paid POC.



Rev. potential: 10M+€



Rev. potential: 20M+€



Rev. potential: 20M+€



Rev. potential: 20M+€

Market



Addressing a 240B€
market worldwide.

Market

Holy addresses 50k+ businesses globally.

We have strong signals for PMF in our beachhead performance market, and plan to expand our TAM step-by-step, first across customer segments and then across other composite materials.

SAM: 80% of TAMs, excluding very small and extremely complex parts.

SOM: 15% of SAMs, we aim to become a dominant solution.

240B€

TAM all segments, all composites (glas-, aramid-, naturalfibers etc.)



31.4B€

TAM incl. large-series for all segments, carbon fiber only



1.4B€

TAM for performance segment, carbon fiber only



Calculation of TAMs: # of businesses x ACV [product lines x CF components per product line x unit price x units/year]. E.g. Motorsport TAM: 150 businesses x 3 product lines x 10 CF products x 1500€ price per unit x 100 units per year = 675M€. 150 identified businesses in the motorsport segment, 150 in the medical segment and 500 for sports equipment ([active FIA motorsport teams](#), [Research and Markets, 2023](#)). All composites TAM: 120B€ composite material market x 200% material cost ratio ([Global composites market share, 2023](#)).

We have a high-margin B2B business model.

Customers

Industrial manufacturers from automotive and orthopedics, to professional tools and beyond.

Business Model

Product 1:
-100€/hour in development projects of new components.

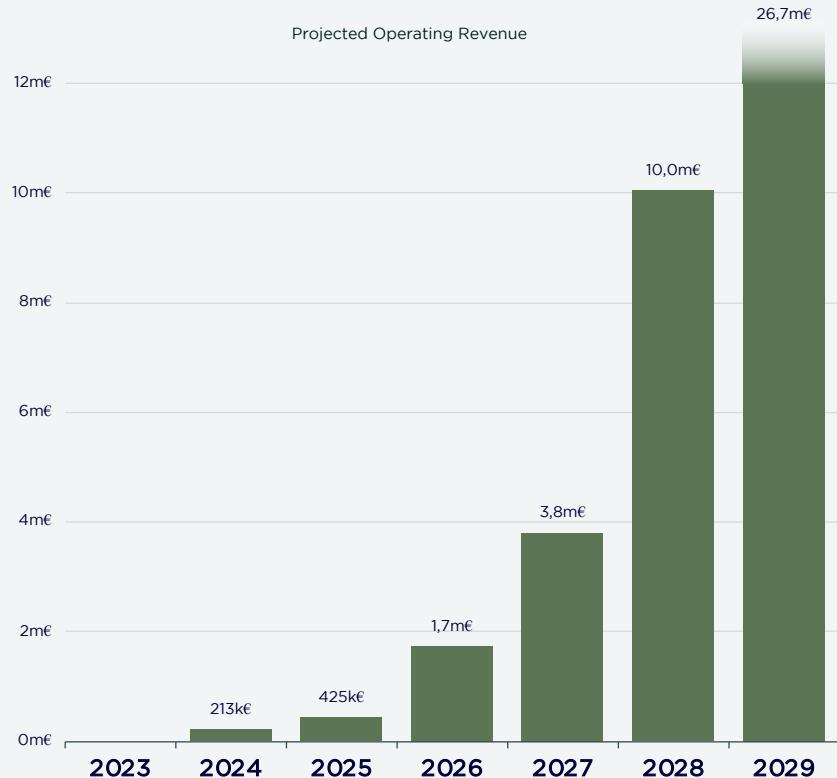
Product 2:
40-600€/component in serial production.

Gross margin per component

We have a gross margin of more than **50%**, driven by material efficiency and process automation.

Financials

We have a clear plan to scale.



Roadmap

Our roadmap is steered by crystal clear milestones.

		2024	2025	2026	2027
FINANCE	Valuation (€)	11m	11m	40-60m	40-60m
	Equity raise (€)	1.8m	Our Ask: 0.5m	10m	-
SALES Go-to-market	Objective	First components sold	Validation of business model	Proven repeatable sales motion	Clear playbook to scale revenue
	KR1: Annual revenue (€)	0.2m	0.4m	1.7m	3.8m
	KR2: Gross margin per component (€)	-	50%	55%	60%
SERIAL PRODUCTION Product 1	Objective	Successful demonstration of a pilot operation	Successful demonstration of continuous operation	Running in continuous mode	Running in continuous mode under all operating conditions
	KR1: Production capacity per line at max. rate	10 / week	100 / week	250 / week	500 / week
	KR2: Production yield	50%	90%	95%	99%
DEVELOPMENT Product 2	Objective	Understand full development cycle	Parametrized full development cycle	Optimized full development cycle	Automated development cycle
	KR: Time to pre-serial prototype <small>Industry benchmark: 6-12 months</small>	6 months	4 months	2 months	10 working days

Change is coming and we intent to lead.

How we see composite manufacturing
5 years from now:



The future of production

We will have transitioned from manual production to a fully autonomous system - where robots run the entire process, continuously learning and improving faster than any human-led operation ever could.

Why customers will love working with us

Our unfair advantage means we can serve customers better than anyone else. We can provide them a powerful competitive edge, making their products dramatically lighter, stronger, and more efficient – at scale.



Bosse Rothe

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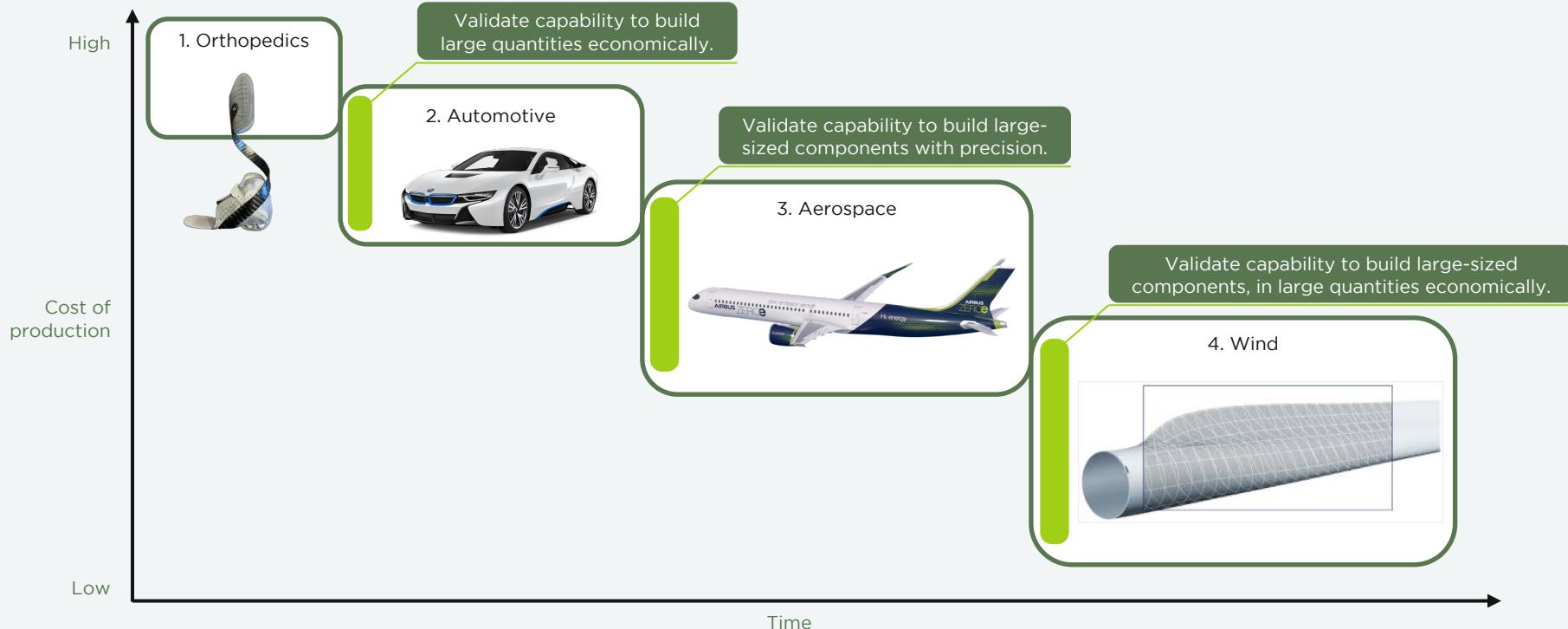


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www.holy-technologies.com

As we decrease the cost per unit with smart automation, we unlock additional larger markets.



The composite ecosystem.

