



World leader of AUGMENTED
PROTECTION IoT platform

- ▷ For existing Personal Protective Equipment (PPE)
- ▷ Designed to save lives & anticipate risks

THIEREN® is a trademark of Lucie Labs S.A.S

PROBLEM : Personal Protective Equipment (PPE) are a must have in our daily lives, but their innovation has stalled...



1938

3M Scotchlite

Properties: reflective tape



1969

Gore-Tex

Properties: breathability and water protection fabric



1971

DuPont Kevlar

Properties: high tenacity and thermally stable fibers.



1983

Primaloft

Properties: thermal insulation fibers

PROBLEM : Smart Technologies are everywhere ... but nowhere in the PPE market

Autonomous (Smart) car

Tesla Model 3



Smart TV

LG Smart TV



Smart Watch

Apple Watch Serie 8



Smart Ring Bell

Ring Video Doorbell



Smart Speaker

Google Home



Smartphone

Samsung Galaxy S22



- ▶ It is a **hassle** for PPE manufacturers and technical textile (chemical) companies to integrate the IoT technology in their existing products.
They don't have any experience with technology and its associated deployment in their production lines...
- ▶ They need a **plug and play solution** to digitalize their PPEs
...

OUR SOLUTION

Thieren's **Augmented Protection IoT platform** (electronics, software & electro-textile fabrics) ready to be integrated into existing Personal Protective Equipment (gloves & garments) to :

- ▶ **Sense** dangerous surroundings
- ▶ **Heat** body parts under harsh weather conditions
- ▶ Make people highly **visible** in any low light conditions

OUR SOLUTION



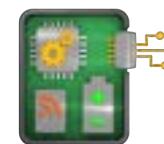
Thieren Center
Software Cloud



Personal Protective Equipment (PPE)
Gloves & Garments



Thieren Connect
Software Application
(iOS/Android)



Thieren Module
Electronics / Hardware

Reusing mature IoT technologies (electronics & software) from the consumer and automotive markets / *3 patents already filed

THE ASSETS OF A MARKET LEADER



Augmented Protection IoT Platform: We own and supply the full ecosystem. Mature Software/Electronics and Electro-Textile fabrics ready to be integrated into PPEs (gloves & garments) for brands.

Credibility: We produce our electronics & Electro-Textile fabrics. We have shipped >200 000 units since our creation with an efficiency rate >99%

Quality: We have learned to be obsessed with quality thanks to our past work with Louis Vuitton. We work with brands on their integration of the Electro-Textile fabrics into their products and we assist them on their production line.

Next gen electro-textile fabric: We have partnered with DuPont to bring next generation certified electro-textile fabrics at industrial scale to the market.

PATENT PORTFOLIO

Patents already filed

INPI Number : FR2110595 - Date : 06/10/2021
(France)

Module awakening using the accelerometer sensor

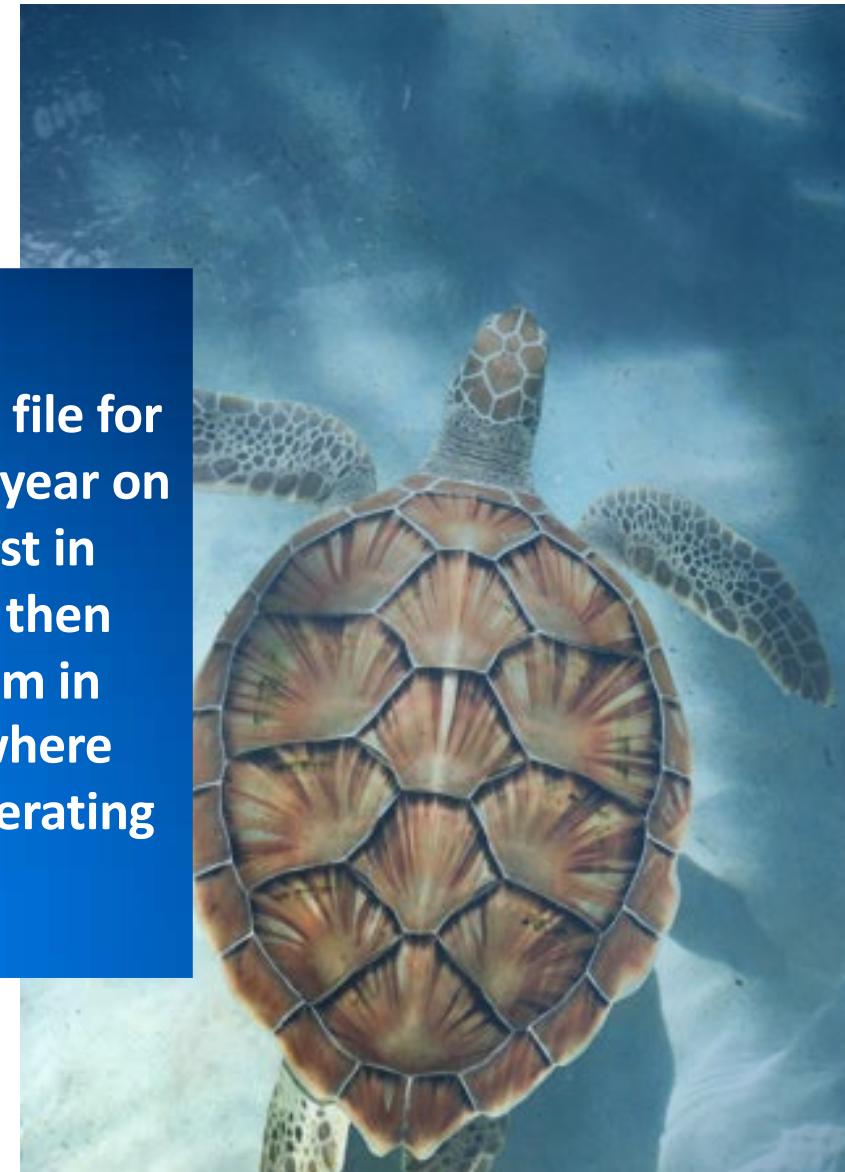
INPI Number : FR2112722 - Date : 30/11/2021
(France)

Synchronization of connected modules

INPI Number : FR2113715 - Date : 16/12/2021
(France)

Configuration and charging of modules

**Our plan is to file for
3 patents per year on
average first in
France and then
extend them in
countries where
Thieren is operating**



MARKET : SIZE and GROWTH

**110B \$ by
2028**

**PPE market
(Worldwide)**
Total Available Market
(TAM)

**6B \$ by
2028**

**Smart PPE market for non
disposable gloves & garments
(US, EU, APAC)**
Serviceable Available Market
(SAM)
4% of TAM

**120M \$ by
2028**

THIEREN revenues
Share of Market (MS)
4% of SAM

Source: Grand View Research

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THIEREN

MARKET : Direction Confirmed By FROST & SULLIVAN

Celebrating 60 years

FROST & SULLIVAN
The Growth Pipeline™ Company

Contact Frost Store Partner login ▾

INDUSTRY

SOLUTIONS

BLOG

ABOUT



Home > Research > Industry > Chemicals, Materials & Nutrition > Future of Personal Protective Equipment (PPE)

Future of Personal Protective Equipment (PPE)

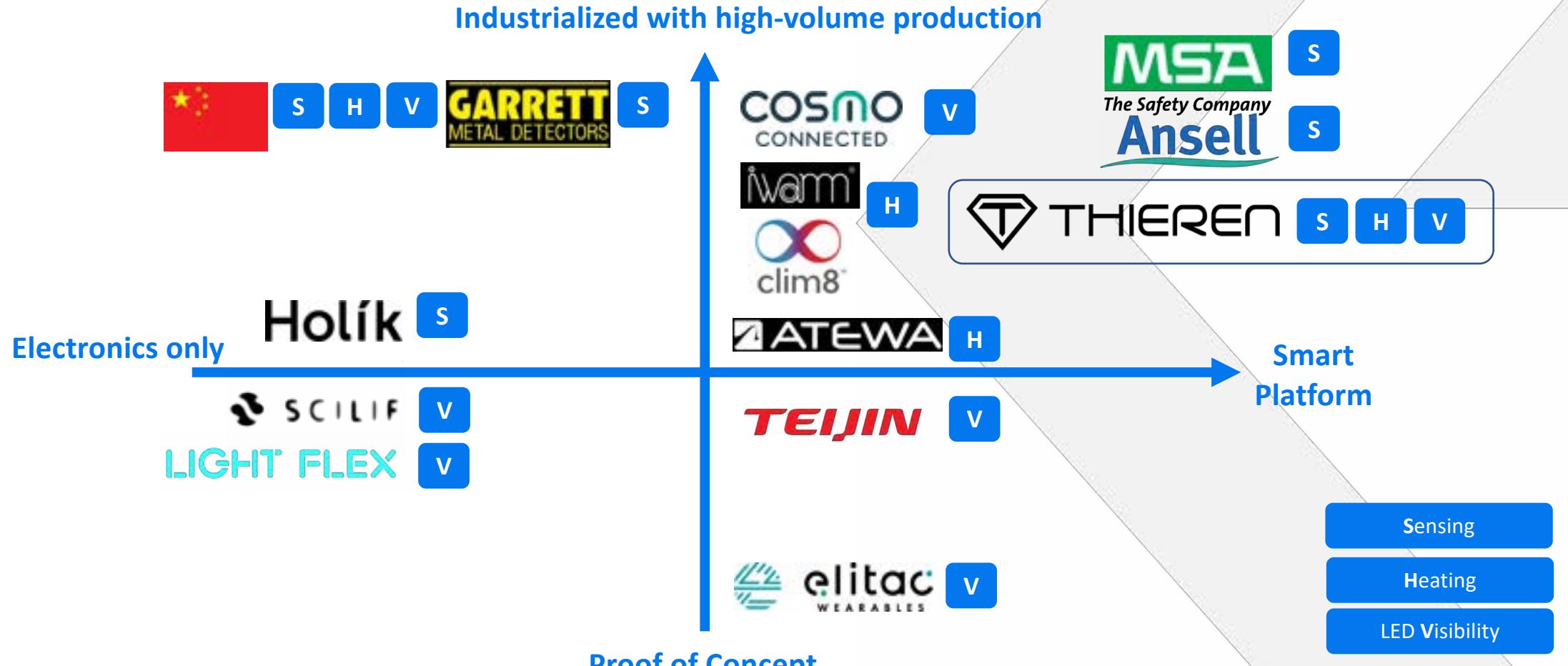
As the PPE industry struggles with pricing pressures and increasing commoditization of products, strategic differentiation of products and services will separate winners from losers in the industry. The competitive landscape for the PPE industry will be very different in 2030, driven by innovation, disruptive business models, and advent of smart and wearable PPE products transforming the workplace to a connected domain enhancing worker safety and productivity.

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COMPETITION



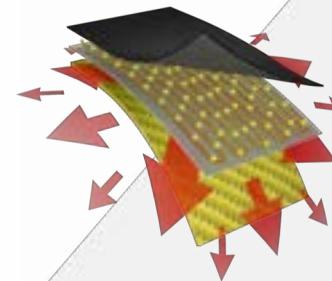
THIEREN'S COMPETITIVE ADVANTAGES



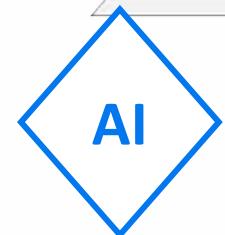
**First to industrialize
and to certify**
a turn-key Augmented
Protection IoT Platform for
existing Personal Protective
Equipment (PPE)



**Unique partnership with
DuPont**
to create next generation
electro-textile fabrics and
bring them at industrial scale
on the market



**Unparallel coverage of Electro-
Textile fabrics**
enabling THIEREN to address a
wide variety of Personal
Protective Equipment (PPE)



**Smarter augmented
protection**
by applying machine
learning algorithms
from the data generated
by the modules

TIME TO MARKET: Worldwide Deployment

Year	2020	2021	2022	2023	2024	2025	2026	2027	2028
Europe	1	2	3	7	10	14	19	29	45
France	1	2	3	3	4	4	4	6	8
Germany				2	3	4	4	6	8
UK				2	2	3	4	5	8
Nordics					1	1	2	4	8
Italy						1	2	3	6
Spain						1	2	3	4
Switzerland							1	2	3
North America	0	0	1	1	2	4	6	12	22
US					1	2	3	4	16
Canada				1		1	2	4	6
APAC	0	0	0	0	0	3	6	12	12
Australia						1	2	4	4
South Korea						1	2	4	4
Japan						1	2	4	4
Total Number of Customers	1	2	4	8	12	21	31	53	79
Average Revenue per Customer (in M\$)			0,5	0,5	0,7	0,8	1,1	1,3	1,5
Total Thieren Revenues (in M\$)	0,4	0,7	2,0	3,8	8,3	16,9	33,9	69,8	121,8
Grow Rate (in %)		63%	186%	90%	118%	104%	101%	106%	74%

Countries	#	Targeted markets
Europe	France	2 Motorcycle/cycling
	Germany	2 Industrial Gloves
	UK	2 Industrial Garments
	Nordics	2 Ski/Outdoor
	Italy	2 Industrial Garments
		2 Industrial Gloves
	Spain	2 Motorcycle/cycling
		1 Industrial Garments
		1 Industrial Gloves
	Switzerland	3 Ski/Outdoor

Countries	#	Targeted markets
North America	US	4 Motorcycle/cycling
		4 Ski/Outdoor
		4 Industrial Gloves
		4 Industrial Garments
	Canada	2 Ski/Outdoor
		2 Industrial Gloves
		2 Industrial Garments

Countries	#	Targeted markets
APAC	Australia	2 Industrial Gloves
		2 Industrial Garments
	Japan	1 Motorcycle/cycling
	South Korea	1 Industrial Gloves
		1 Industrial Garments
		1 Ski/Outdoor

BUSINESS MODEL : B2B

Core

Modules & Electro-Textiles

We sell modules and electro-textiles per unit. The software license is integrated into the unit cost. The average Gross Margin is 40%



Opportunity

SaaS

We will sell a monthly/yearly subscription fee to access data analytics and configuration of the modules.



Opportunity

Insurance Subscription

We will sell a monthly/yearly subscription fee to cover for repair or replacement of modules in the event of accidental damage or battery depletion and access to technical support from THIEREN.



Production of Hardware :
Outsourcing of the production /
Expenses & CAPEX are kept under
control.

Economies of scale (costs decreasing
with volumes) + Product's lifetime of
5 years on average (R&D spend
under control)

Market practice upfront deposit + no
inventory of finished products.

TRACTION

France (deals lead by Founders)



- ▶ 1M € purchase orders confirmed by September 2021
- ▶ Awaiting 1M € purchase order (PO) with existing customers in the coming months

World Wide (deals lead by Sales & Marketing team)

- ▶ 520 qualified leads (as of today) in SalesForce
- ▶ Expecting first POs* from new customers in the coming months:
 - Polyco Healthline (UK)
 - MCR Safety (US)
 - TS Safety (China)
- ▶ Average PO size is now at 450k € with a minimum PO at 350k €



TEAM



Yan Lee-Dajoux
CEO & Co-founder
Partnerships, Product

20 years experience in Sales & Marketing in startups and global high-tech corporations (Ericsson and TI).



François Mazard
CTO & Co-founder
R&D, Operations

20 years experience in HW design and SW architecture & development at a global high-tech corporation (TI).



Nicolas Riche
VP Finance
HR, Legal, Finance, Office

20 years experience as CFO and auditor in leading firms like E&Y



Didier Argenton
VP Sales & Marketing
Marketing, Sales

30 years experience at C-level in 5 start-ups and global high-tech corporations (Siemens, QCOM, TI)

ESG CRITERIA

Environmental

- ▶ Repairability of electronics and battery of our solutions
- ▶ Recycling of any elements of our solutions
- ▶ Production of our Modules & Electro-Textile Fabrics based in France-Europe

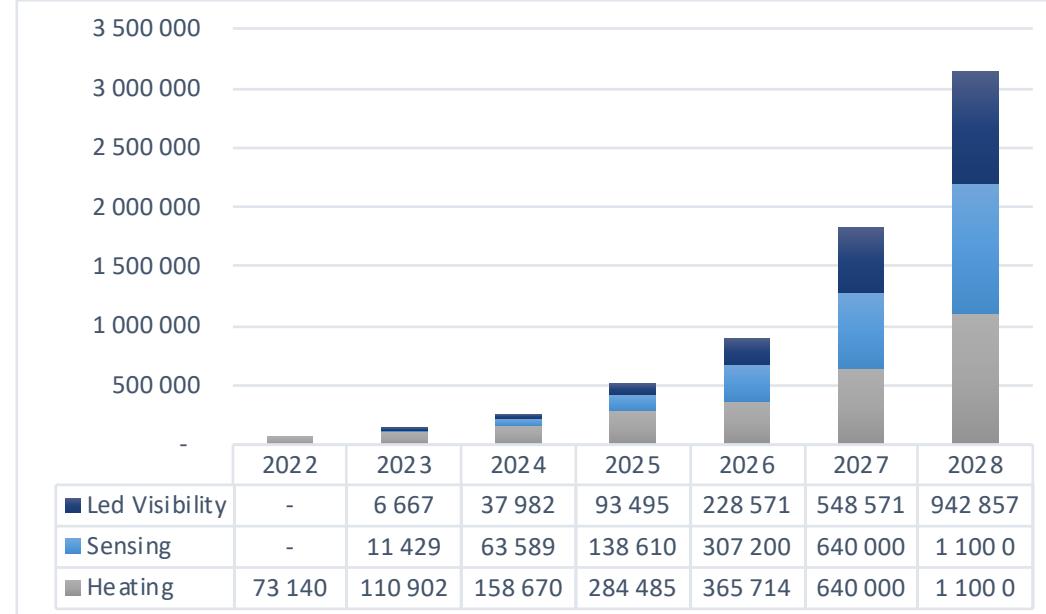
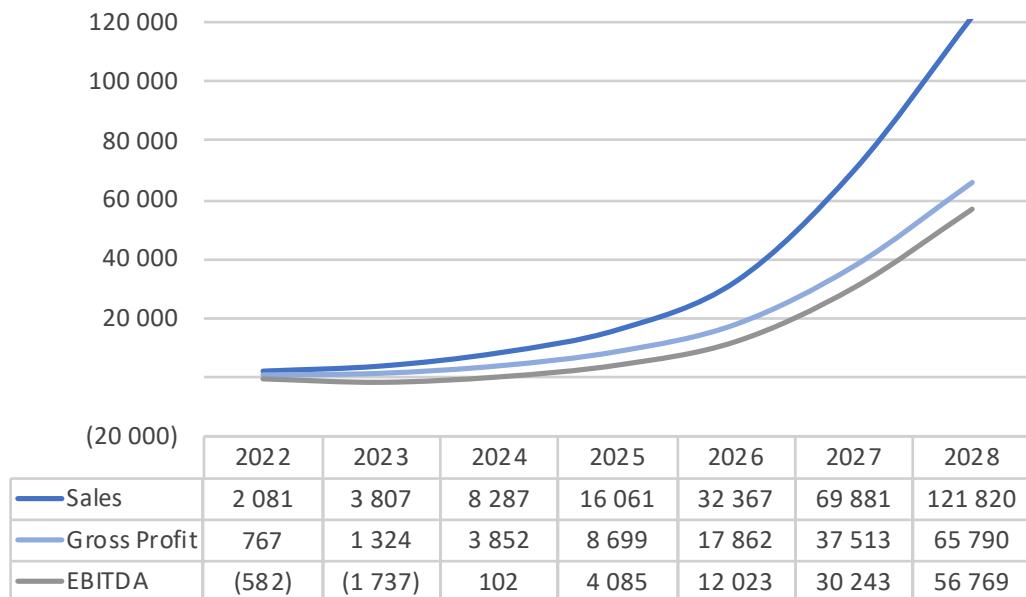
Social

- ▶ Increasing the safety of workers and consumers by integrating our solutions in PPEs
- ▶ Providing equal opportunities inside THIEREN
- ▶ Complete traceability/quality reports of our products to our customers

Governance

- ▶ President and Managing Director functions are separated
- ▶ Externalized accounting with external yearly audit
- ▶ Company registered in France under French laws. No subsidiaries.
- ▶ Shareholder's protection under the shareholder's agreement. Quarterly strategic investor's meetings. Yearly all investor's meeting.

REVENUES, KEY FIGURES (K\$) & VOLUMES



P&L

	2022	2023	2024	2025	2026	2027	2028
Total Sales	2 081	3 807	8 287	16 973	33 923	69 881	121 820
Cost of Sales	(1 314)	(2 312)	(4 216)	(8 274)	(16 061)	(32 367)	(56 030)
Gross Profit	767	1 324	3 852	8 699	17 862	37 513	65 790
Margin %	37%	35%	46%	51%	53%	54%	54%
Operations	(156)	(295)	(339)	(439)	(644)	(1 012)	(1 503)
Research & Development	(406)	(665)	(865)	(1 064)	(1 206)	(1 365)	(1 598)
Product	(70)	(247)	(289)	(338)	(450)	(608)	(710)
Sales & Marketing	(59)	(882)	(1 215)	(1 513)	(2 091)	(2 743)	(3 385)
G&A	(657)	(972)	(1 042)	(1 260)	(1 448)	(1 542)	(1 825)
Total Operating Expenses	(1 348)	(3 061)	(3 750)	(4 614)	(5 839)	(7 270)	(9 021)
EBITDA	(582)	(1 737)	102	4 085	12 023	30 243	56 769
Depreciation & Amortization	(29)	(46)	(59)	(73)	(89)	(96)	(95)
EBIT	(610)	(1 782)	43	4 013	11 934	30 148	56 674
Margin %	-29%	-47%	1%	24%	35%	43%	47%
Other Expense/(Income)	103	287	336	383	448	513	584
Net Income	(507)	(1 496)	379	4 396	12 382	30 660	57 258
Margin %	-24%	-39%	5%	26%	37%	44%	47%

FINANCIAL

For our Serie A we are looking for **3M €** to :

- ▶ Reach 16M € revenues by 2025
- ▶ Be EBITDA >0 by 2024
- ▶ Be Cash Flow >0 by 2025

We will use the Serie A funding for :

- ▶ The scaling our **Sales & Marketing** efforts in Europe (1), North America (2) and APAC (3)
- ▶ The scaling of our **Back-Office** (Operations & Product Management)
- ▶ The development of new strategic **Partnerships** (3M, Google, etc)

Cap. Table (2022)

- ▶ Management : 63,85 %
- ▶ Business Angels: 22,21 %
- ▶ Allianz Crowdfunding : 4,13 %
- ▶ VCs : 9,80 %

Total invested (seed): 1,9M €

- ▶ Love Money: 300k €
- ▶ Crowdfunding Allianz: 500k €
- ▶ RSI/Néo-In/Creazur: 1,1M €



LET'S BUILD NOW TOGETHER THE
PROTECTION OF TOMORROW

THANK YOU

www.thieren.com



APPENDIX

FROM LUCIE LABS TO THIEREN

2019	2020	2021	2022
<p>IoT Platform <i>(Digital Transformation of Physical Object)</i></p> <p>Markets</p> <ul style="list-style-type: none">▶ Automotive▶ Textile (Consumer)▶ Luxury <p>Geographies:</p> <ul style="list-style-type: none">▶ France	<p>Smart Textile Platform <i>(Augmented Protection Solutions for PPEs)</i></p> <p>Markets</p> <ul style="list-style-type: none">• Textile (Industrial & Consumer) <p>Geographies</p> <ul style="list-style-type: none">• France	<p>Smart Textile Platform <i>(Augmented Protection Solutions for PPEs)</i></p> <p>Markets</p> <ul style="list-style-type: none">• Textile (Industrial & Consumer) <p>Geographies</p> <ul style="list-style-type: none">• France• North America	<p>Smart Textile Platform <i>(Augmented Protection Solutions for PPEs)</i></p> <p>Markets</p> <ul style="list-style-type: none">• Textile (Industrial & Consumer) <p>Geographies</p> <ul style="list-style-type: none">• France• North America• Europe

200ku produced and sold until 2022



PARTNERSHIP WITH DUPONT



INNOVATIVE YARNS & FABRICS

World's largest chemical company. Global leader in protective yarns and fabrics with unparalleled trusted brands and innovation capabilities.

NEXT GENERATION OF AUGMENTED PROTECTION SOLUTIONS

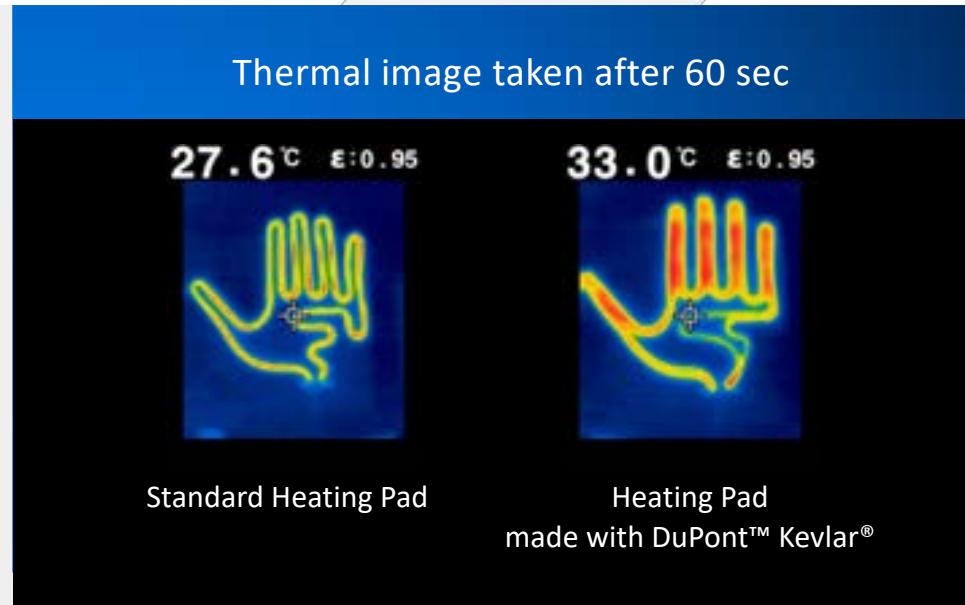
Signed Agreements

- ▶ Nomex® & Kevlar® Ingredient Non-Royalty Bearing License Agreement : Ability to use for free the Nomex® and Kevlar® branding
- ▶ Lucie Labs® & DuPont® Joint Development and Secrecy Agreement : for the Heat Sensing Solutions

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HEATING FABRIC FABRIC WITH DUPONT™ KEVLAR®

- ▶ Lightweight & 5 times stronger than steel
- ▶ Reliable in toughest weather conditions
- ▶ Faster heating ramp
- ▶ Full finger heat surface coverage
- ▶ Fully personalized for seamless glove's integration
- ▶ Safety of user ensured by Kevlar® technical properties
- ▶ Nominated for next DuPont Kevlar Innovation Award



Commercialized and industrialized !
First customer: Furygan (consumer market)
Next customer: Procovès (industrial market)

HEAT SENSING SOLUTION : INTERSCHUTZ 2022

DuPont, Procovès and THIEREN will unveil the first firefighter's gloves equipped with the first ATEX certified heat sensing solutions based on Nomex® fabric from DuPont® at the Interschutz trade show (international firefighter trade show, 20th-25th June 2022, Hannover, Germany)

This solution for firefighters, can prevent burns by sensing the heat. It alerts (vibration) the firefighters of the risk level(s). The solution is completely washable and configurable using THIEREN Center solution (SaaS). Data analytics are available to understand the thermal stress endured by firefighters during each missions.

HEAT SENSING SOLUTION (PREVENTING BURNS)



Procovès® Firefighter
Glove (Nomex® based
from DuPont®)

THIEREN Electro-
Textile Fabric

THIEREN Module



THIEREN Center



THIEREN Bay

DEALING WITH THE SHORTAGE OF COMPONENTS

