



Wakee

Wireless
ultrasound switch
for IoT energy
saving



Dominique PALACCI
CEO

Part 1: Wakee project

**Connected objects will rise from 12 billions in 2021 to
50 billions in 2025.**

**They will generate
23% of environmental impacts
in 2025, where it was only 1% in 2020.**

Sources :
Green IT « Empreinte environnementale du numérique mondial » 10/19

➤ **80%** of the power consumption of connected objects is dedicated to maintaining their connectivity to the network.*

➤ The standby consumption of household equipment represents **11%** of electricity bill.**

➤ **Wakee** reduces energy waste by switching off IoTs rather than leaving them on standby mode and participates to **0 carbon** impact objective.

Sources:

* « *More Data : Less Energy* », Agence Internationale de l'Énergie, 2014

** Baromètre AFP-Powermetrix 2013

Somfy use case to reduce climate impact

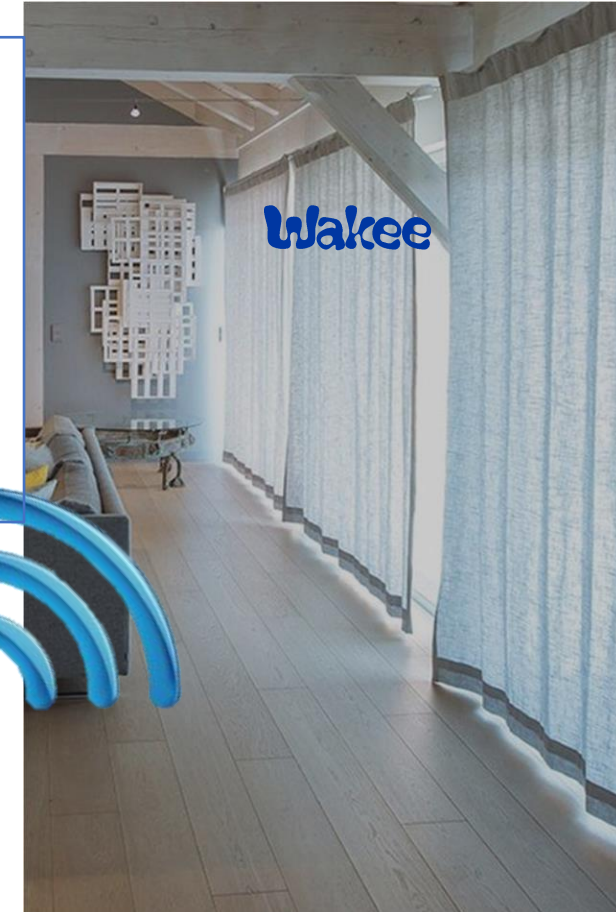
- **50%** of Somfy's climate impact comes from products' standby consumption.
- With Wakee, we can switch them on only when they are in use.

	RF only	With Wakee	Savings
Standby Consumption	300mW	0,9mW	97%

- Target of 0,4mW to come.



1. Remote control emits ultrasound.
2. Wakee wakes the curtain motor up.
3. Remote control emits instructions with RF.
4. Curtain motor switches off when finished.



Innovative concept: multiple usages and advantages

Wakee « ears » our exclusive ultrasound signals and sends the order to switch on / switch off.
We worked very hard to reduce Wakee standby consumption down to μW .
Our ultrasound signals can be played through existing speakers (smartphone, sound system).

- Reduce loss of energy
 - *Switch off plugged IoTs in a building via existing sound system.*
- Extend battery life
 - *Use self powered devices only when needed.*
- No electromagnetic pollution
 - *Works in radio waves saturated environments.*
- Stay confined
 - *Ultrasound doesn't cross walls and windows.*

Team of experts



Dominique PALACCI
59 years - CEO
edhec 1986



William SCHLEGEL
51 years - CTO
Efrei 1991



Bruno JAUFFRET
54 years – Business
Developer EMP 1985



Arthur AUBERTIN
29 years - R&D
Paris VI, PhD
Acoustic engineer



Luc FRABOULET
24 years –
Electronic engineer
ISTY



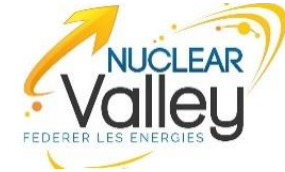
Mehdi MELHIA
23 years –
Com Systems
Master EEEA



Ilya FRANCIOSI
29 years –
Acoustic engineer
Paris VI

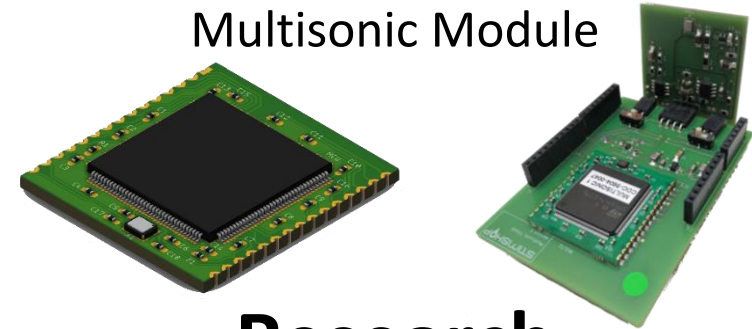
Acceleration

RéIndustry Digital Commission



Development

Multisonic Module



Research

Multi elements / exciters



Wakee Markets



- Smart sensors
- Industry 4.0

75% of French Industries use Predictive Maintenance (02/21)

Sources: [JDN](#)



- Public buildings (airports, stations)
- Office buildings

1100 billions€ worldwide in 2025
9 billions€/year savings for local authorities

[ILV](#)



- Automation
- Appliances
- Energy

88 billions€ worldwide in 2021
Expected 150 billions€ in 2025

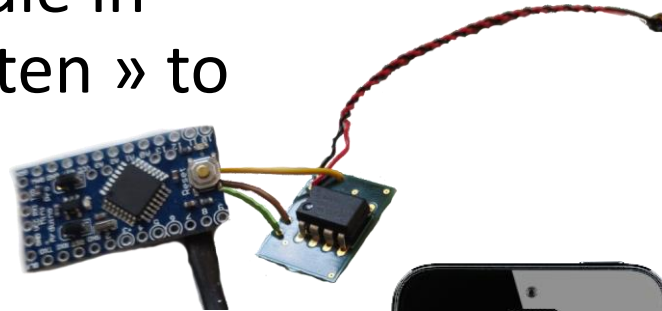
[Statista](#)

Mixed Business Model (hardware and licenses)

<90% of turnover>

- Integration of Wakee module in IoTs and appliances to « listen » to ultrasounds

- Electronic module sales



Price	Margin
3€ to 1,5€	30% to 40%

<10% of turnover>

- Interaction with Wakee via existing sound systems or mobile apps on smartphones

- Broadcasting License
- Activation License



Price/year	Margin
0,5€ to 0,3€	90%

Go to market strategy

➤ **Sign partnerships with Integrators and Distributors to propose energy saving service to Appliance and IoT producers**

- Smart sensors fitters
- Monitoring services
- IoT makers
- Manufacturers

Direct



Indirect

➤ **Promote Wakee energy saving to support distributors sales actions (like Intel inside)**

- Industries
- Institutions
- Corporates

Competing technologies

Technology	Companies	Consumption	Energy emission	Surface cover	Directivity	Universality
Radio Frequency	Schneider Electric, Xiaomi	+++	++	+++	+++	+
Infrared	Samsung, Legrand	+	+++	+	+	+
Ultrasound	Stimshop	+	+	++	++	+++

WAKEE Road Map

2021-2022

- Concept study
- Prototype

2022-2023

- POC
- IP
- First customers

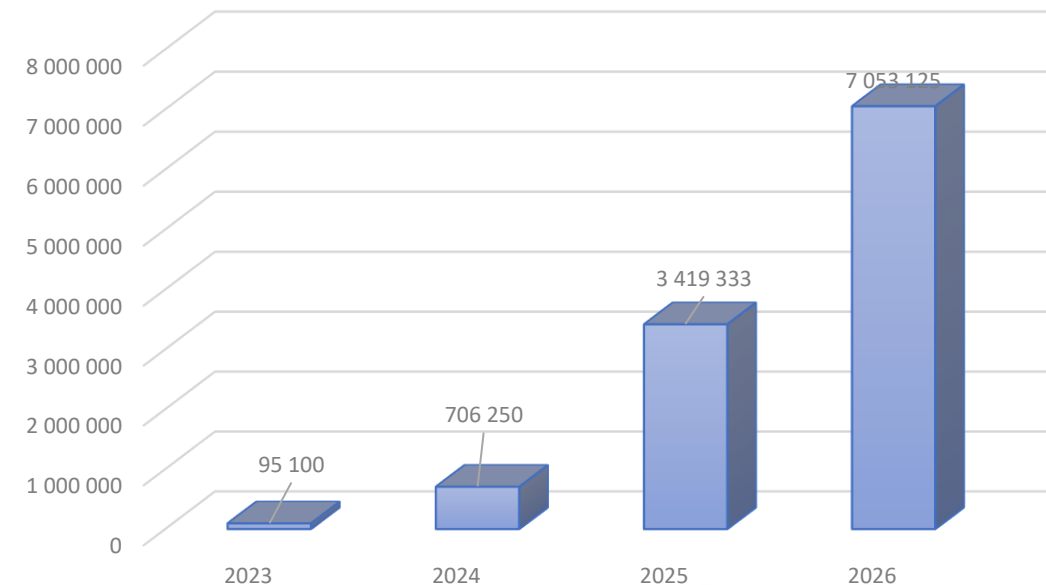
2023-2024

- Industrial product
- Partnerships production and distribution

2024-2026

- Dedicated factory ?
- Deployment

Wakee Turnover





Possible production positioning: from a Technology Provider to an Industrialist

- 2023: Integrate EUROPROD Technologies

- to produce existing STIMSHOP products in France
- To start Wakee production with small series



- 2025/2026: Create our STIMSHOP factory

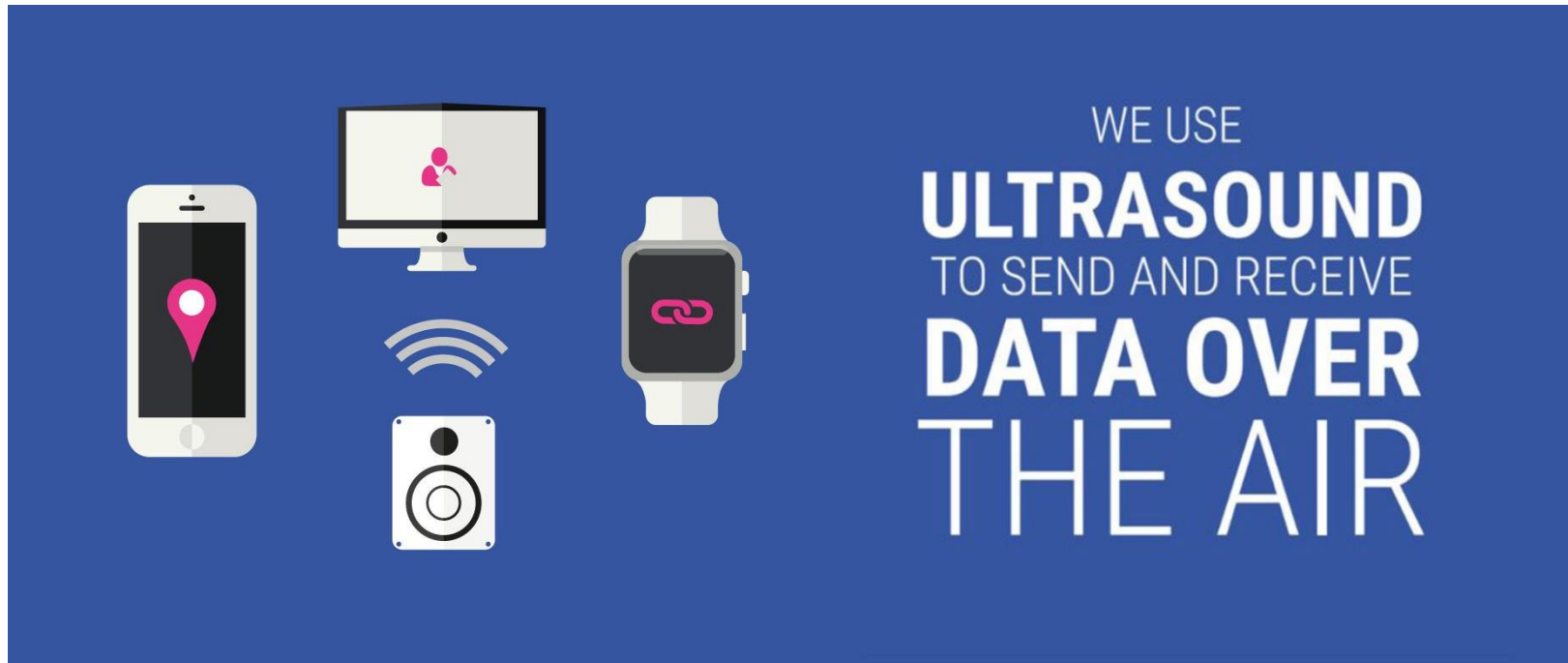
- Depending on the Wakee traction
- Axandus accelerator is ready to work with us on this project
- Be ready for mass production



Part 2: STIMSHOP

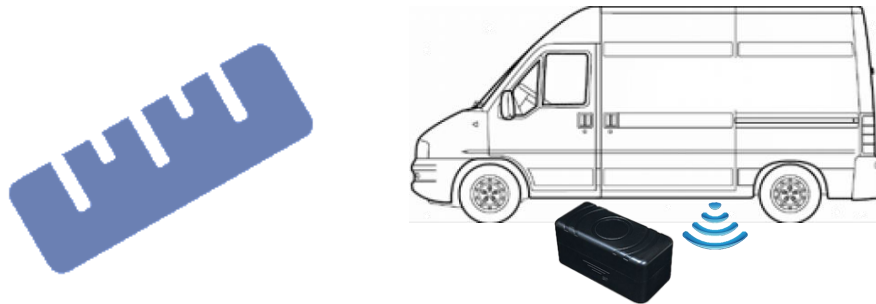
current activity

STIMSHOP ultrasound for security

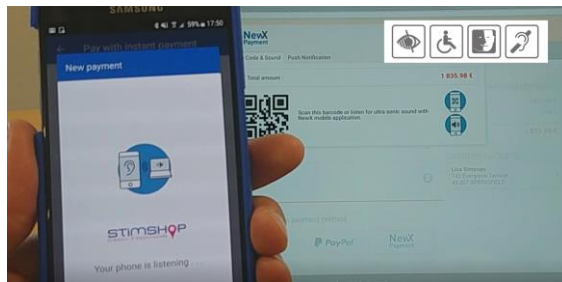


Secure Industry 4.0, IoT and contactless

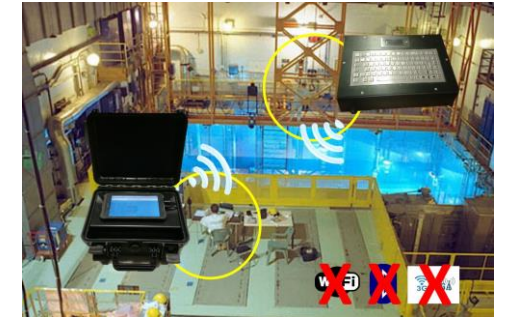
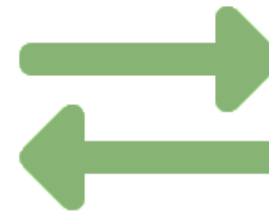
Measure



Authentication



Data Transfer

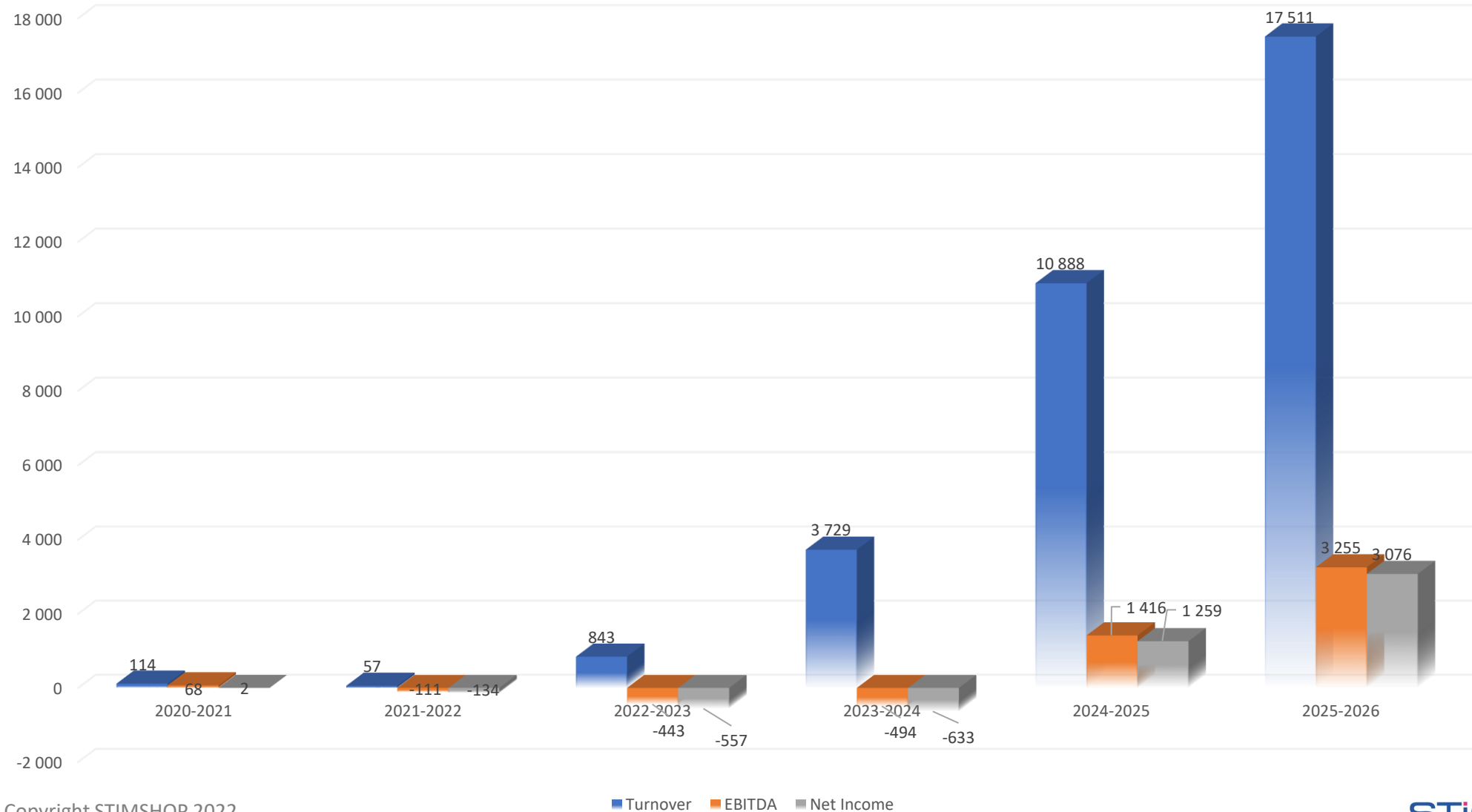


Presence Detection





STIMSHOP Forecast



Workforce

2022/2023
14

2023/2024
30/35

2024/2025
40/45

2025/2026
50

Fundraising in 3 steps

2022: 400K€

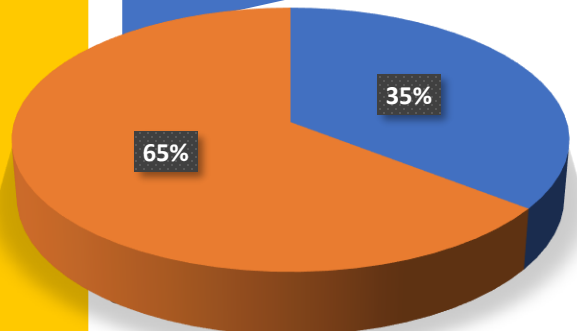
- 65%: Lead Wakee to an industrial product (IT)
- 35%: Accelerate other STIMSHOP products go to market (Sales force / Marketing)

2023: 800K€

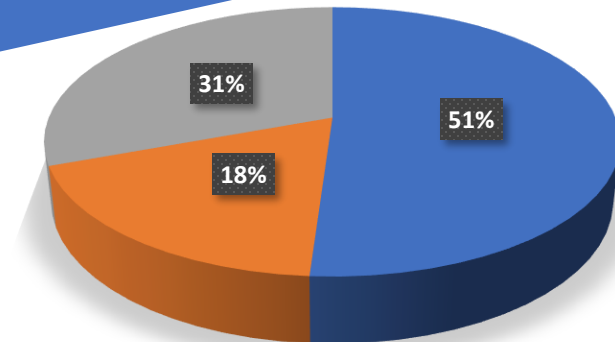
- 50%: Demonstrate Wakee traction (Sales force / Marketing)
- 30%: Develop integration partnerships (Marketing)
- 20% R&D / IT

2025: XM€

- Create a factory for STIMSHOP products ?
- Develop sales



■ Marketing / Business Dev
■ R&D / Wakee Techn. Dev.
■ Working Capital Increase



*"If you want new results,
stop doing the same things."*
Albert EINSTEIN



Dominique PALACCI

+33 (0)6 07 30 24 53

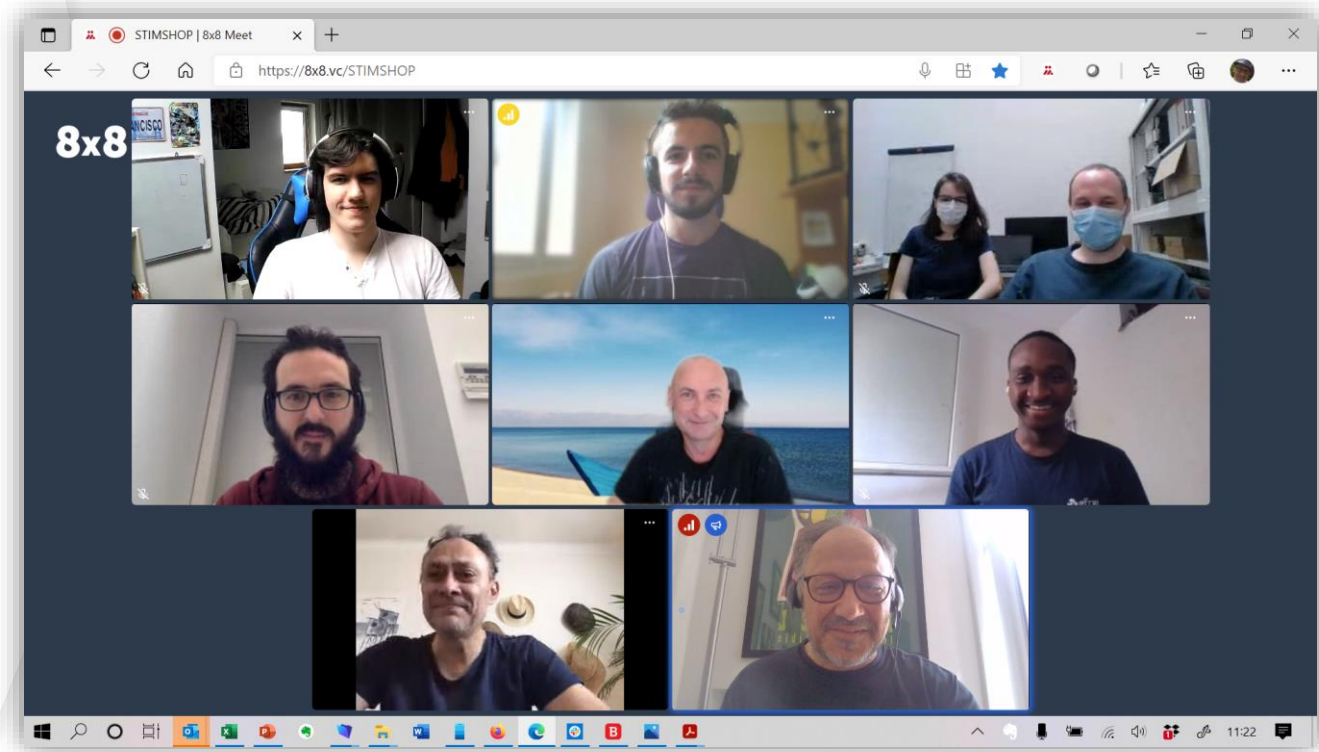
domi@stimshop.com

www.wi-us.eu – www.secumeter.me

www.umits.eu



Paris – Toulon - Singapore



Forecast

Appendix 1

(K€)	2020	2021	2022	2023	2024	2025	2026
CHIFFRE D'AFFAIRES NET	96	114	57	843	3 729	10 888	17 511
<i>Production immobilisée</i>	150	212	192	208	249	317	411
<i>Autres Produits et Subventions</i>	66	64	29	0	0	0	0
PRODUITS D'EXPLOITATION	312	390	278	1 051	3 978	11 205	17 921
Achats Hardware & Licences	21	20	4	137	1 253	3 870	6 962
MARGE BRUTE	291	370	274	914	2 725	7 335	10 960
<i>MB hors autres produits en % du CA</i>	78%	83%	93%	84%	66%	64%	60%
Charges Externes	119	194	212	543	691	1 192	1 673
VALEUR AJOUTÉE	172	176	62	371	2 033	6 143	9 287
Impôts et taxes	1	1	7	29	41	139	198
Nb de salariés moyen	5	5	4	15	34	46	49
Charges de personnel	140	106	167	798	2 486	4 588	5 834
CHARGES D'EXPLOITATION	281	322	389	1 507	4 471	9 789	14 667
EXCEDENT BRUT D'EXPLOITATION / EBITDA	30	68	-111	-456	-494	1 416	3 255
Dotations	62	89	63	160	197	231	276
RESULTAT D'EXPLOITATION	-32	-21	-175	-616	-691	1 185	2 979
RESULTAT NET	0	2	-134	-570	-633	1 259	3 076

Flux de Trésorerie	30 juin	30 juin	30 juin	30 juin	30 juin
(K€)	2022	2023	2024	2025	2026
Capacité d'AutoFinancement	-71	-409	-436	1 490	3 352
Variation du BFR	117	6	679	1 626	2 934
FLUX D'INVESTISSEMENT	-218	-254	-267	-351	-462
FREE CASH FLOW	-172	-657	-24	2 766	5 824
Augmentation de capital en numéraire (K+primes)		1 200			
VARIATION DE LA TRESORERIE NETTE	-172	543	-24	2 766	5 824
Flux net d'emprunt (si <0, plus de souscription que de remboursement)	-36	-76	-52	-46	-47
Comptes Courants d'Associés	108	-36	-83		
Variation de la Trésorerie Disponible	-100	432	-160	2 719	5 777
POSITION DE LA TRESORERIE NETTE	-466	77	52	2 818	8 642
Emprunts et dettes auprès des établissements de crédit	-267	-191	-139	-92	-45
Emprunts et dettes financières diverses					
Compte courant Actionnaires	-119	-83			
Banques	-80	351	191	2 910	8 687
VMP					
Point bas trésorerie (après date théorique de levée)	73	28-févr.-23			
Point bas trésorerie (après date théor. de 2e levée)	191	30-juin-24			

Share holders

- Share holders:
 - 77% Founders and CTO
 - 49% Palacci
 - 9% Fayard
 - 4% Gayet
 - 2% Perret
 - 12% Schlegel (CTO)
 - 23% Business Angels
 - 11% 3 BAs
 - 7% 23 BAs (Badge, Femmes BA, Rugby Angels)
 - 5% Altavia Coach
- Capital 163 K€
1.151 K€ funding raised to develop ultrasound technology
- Pivot from Retail to Industry in 2017
- JEI status since 2014, CIR labeled, R&D CIR agreement for customers

Use cases

Appendix 2

Use Case

Data transfer in constrained environments

Wi-Us ultrasound erases white zones

- Send data wirelessly without radio waves
- Works under any circumstances, without connection
- In explosive, humid, metallic, electrosensitive environments.



Use Case

Geolocate workers

Secure submarine maintenance operations

- Check workers positions in the submarine by ultrasound, even in explosive areas
- Send alerts by ultrasound all over the site
- Manage access control in different areas of the submarine

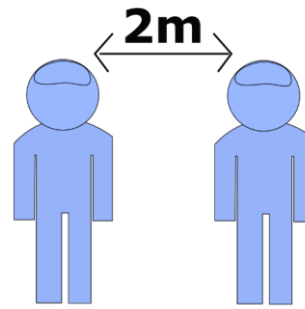


Business Case

Physical distancing

Help to respect physical distance under all circumstances.

- The SECUMETER badge flashes and vibrates and alerts when the distance of 2 meters is not respected.
- Train and secure workers for an everyday watchfulness.

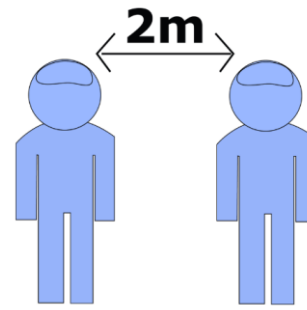


SECUMETER



Business Case

Workers protection



Safe zone to work.

- Respect the distance to the tree to work in a safe zone.
- Contact tracing management.
- Alert button for isolated workers emergency



Use Case

Tank thickness measure

UMITS



Permanent ultrasound thickness measure

- Ask for the thickness measure remotely via an ultrasound IoT instead of having to locally intervene
- Will work ten years thanks to an ultrasound ignition system

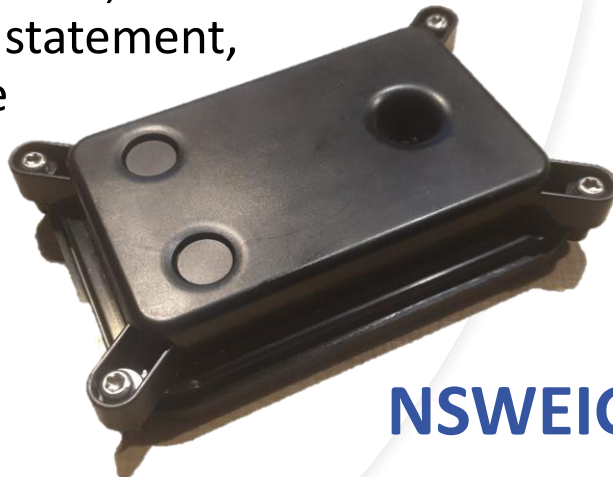


Use Case

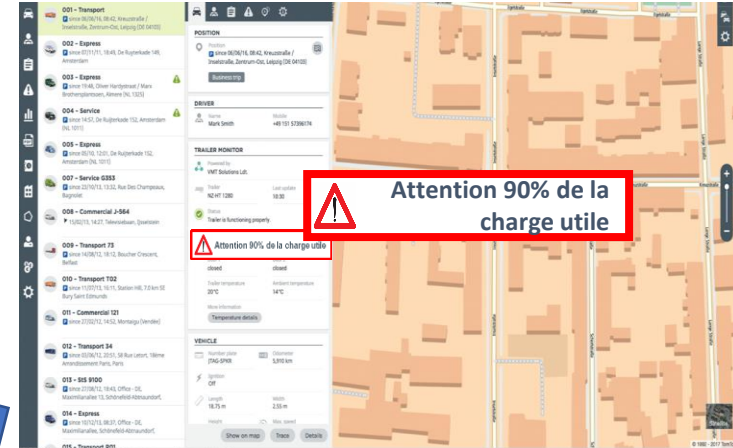
Load estimation

Load estimation via distance measurement

- NSWHEIGHT: watertight ultrasonic telemeter to measure ground distance and derive the load
- Input collected: Brake alarm, Overload alarm, Carbone impact statement, Predictive maintenance



NSWEIGHT



Miscellaneous

Appendix 3

Near-Ultrasonic Airborne Telecommunications

Benchmark

A few other companies also provide ultrasonic communications, but none as **robust** as STIMSHOP's.



Unique patent

- Distance
- Multiplexing

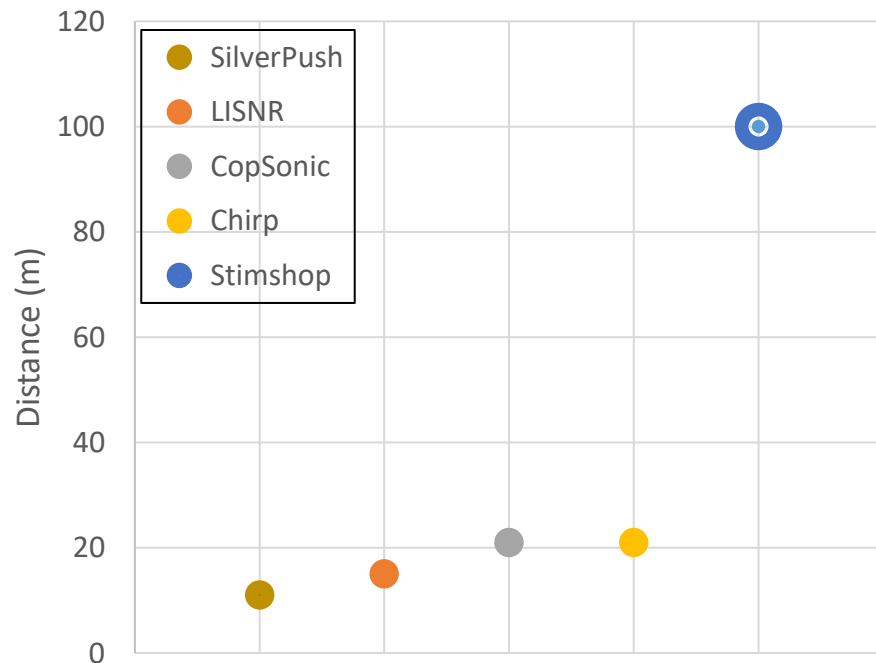


Fig 4: Ultrasonic communication systems comparison in range capacity.

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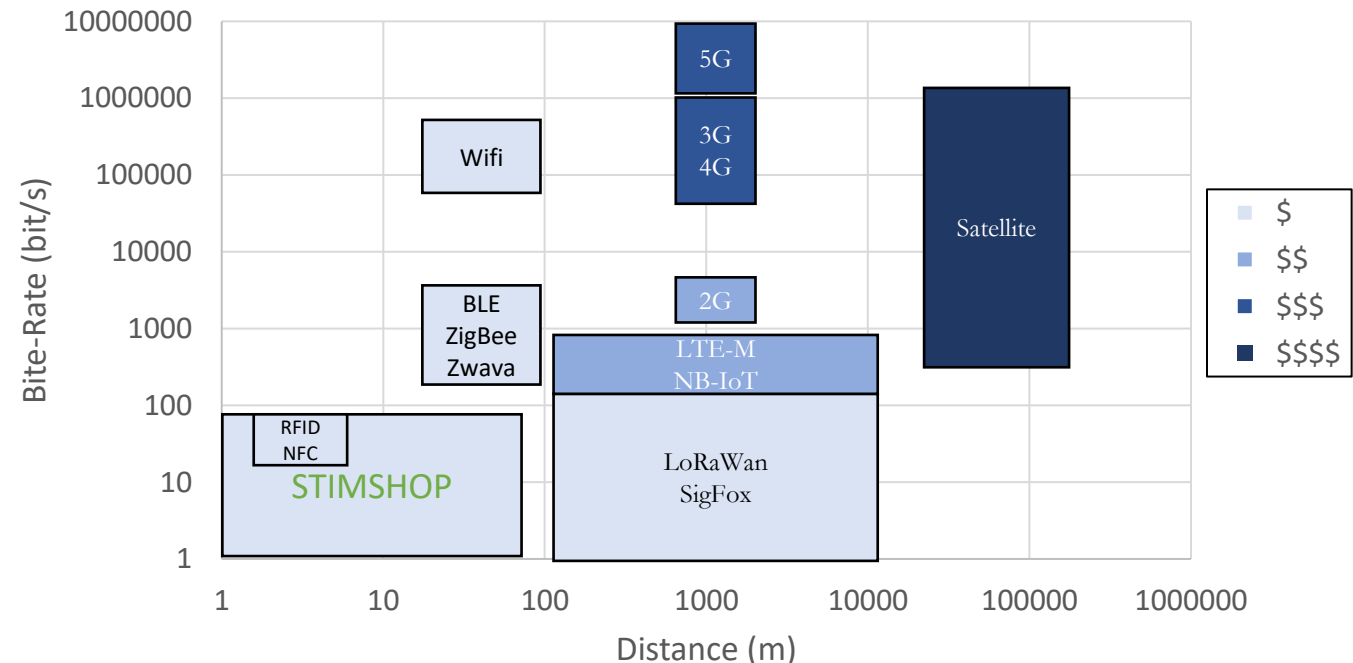
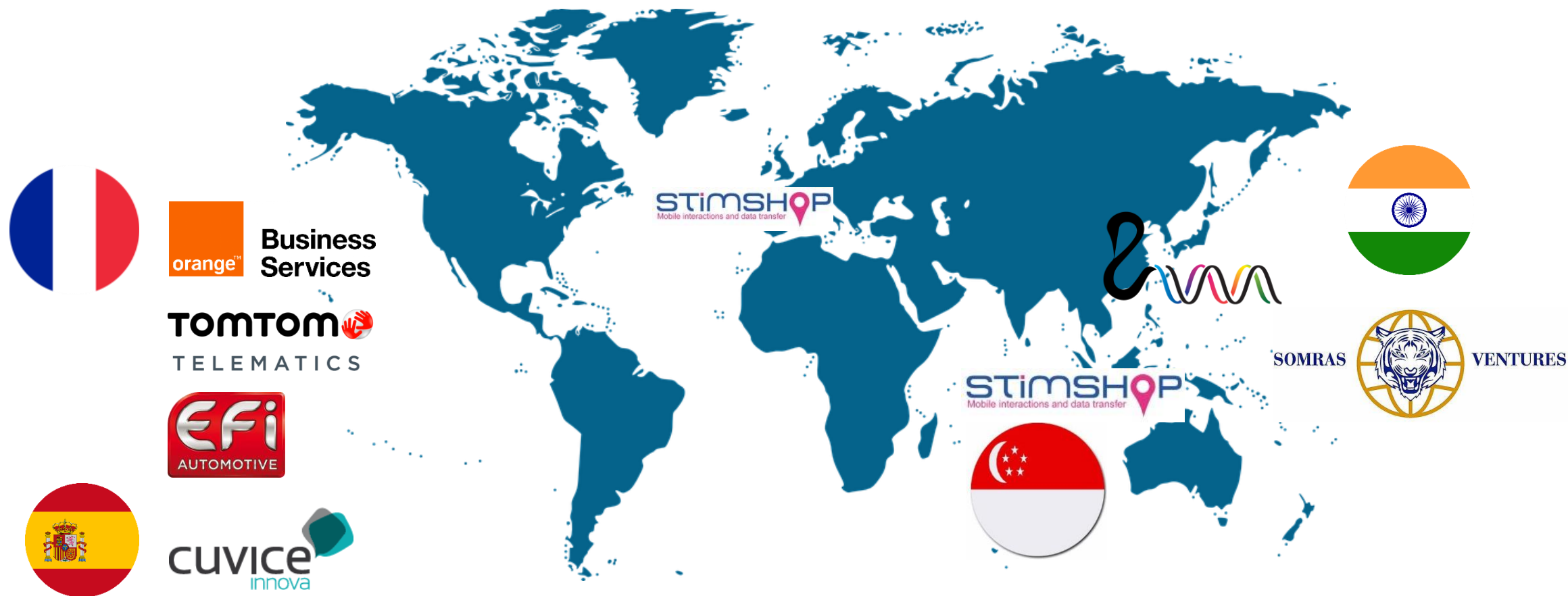


Fig 5: STIMSHOP and RF communication systems comparison in bit-rate, range and cost.

STIMSHOP in Europe and Asia



Customers, partners and supports

Customers



Partners Distributors



Business
Services



SOMRAS



VENTURES



Certifications



Awards

New Shopping Experience 2015, 2016

Vivatech 2016, 2017, 2018, 2019, 2021

IT Innovation Forum 2017, 2019

2018 : CEBIT Road Show, Airbus Développement
Total Développement Régional
Digital Day Nuclear Valley
Forum Innovation CETIM

2019 : Global Leader IE-Club – HPE Startups
e-Payments Worldline

2020: Global Industry, Slingshot

2021: French Tech Tour India, Somfy Challenge

