CARBONSAVER

**The AI based SaaS platform that
helps architects
draw sustainable homes**

The **carbon footprint of buildings** is a major problem!

40%

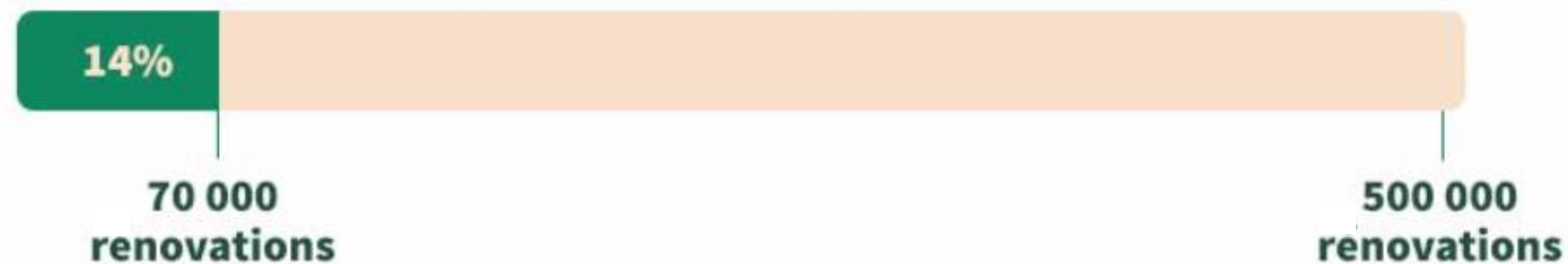Greenhouse gases in France and Europe

37%

Energy consumption

70%

In France 70% of waste comes from building industry

The climate challenges have never been so strong, but countries are facing a problem of pace ...

For example, France aims for 500,000 energy renovations per year, only 70,000 were carried out in 2019.

14%

70 000
renovations

500 000
renovations

At present, **architects and project managers** who are appointed by individuals are **too generalists** to design projects for them offering optimal environmental performance. Thus, **Carbon Saver** decided to devote itself to the construction and renovation **of individual dwellings** before expanding to collective housing and then to functional buildings.

A project born from deep knowledge the needs of architects

Interview MISM sur BFM Business

Our previous interior design start-up managed and controled 2,500 projets carried out during these 5 years, and has established a privileged relationship with its network of +150 architects (2 to 3 group training sessions provided to the community each year)

We benefit from an excellent knowledge of each architect's working methodologies, the pain points of the profession and a community of potential testers.

Available software are unsuitable for users and environmental priorities

« Where once Autodesk Revit
was the industry enabler to smarter working,
it increasingly finds itself a constraint and
bottleneck [...] »*

« have spent a combined
22 M$ on Autodesk products
over the past five years »*

*a group of **17 of the UK's leading architecture studios** wrote a letter to American software maker Autodesk criticising the cost and lack of development of its Revit application.
https://www.dezeen.com/2020/08/01/architects-criticised-autodesk-bim-software-revit/

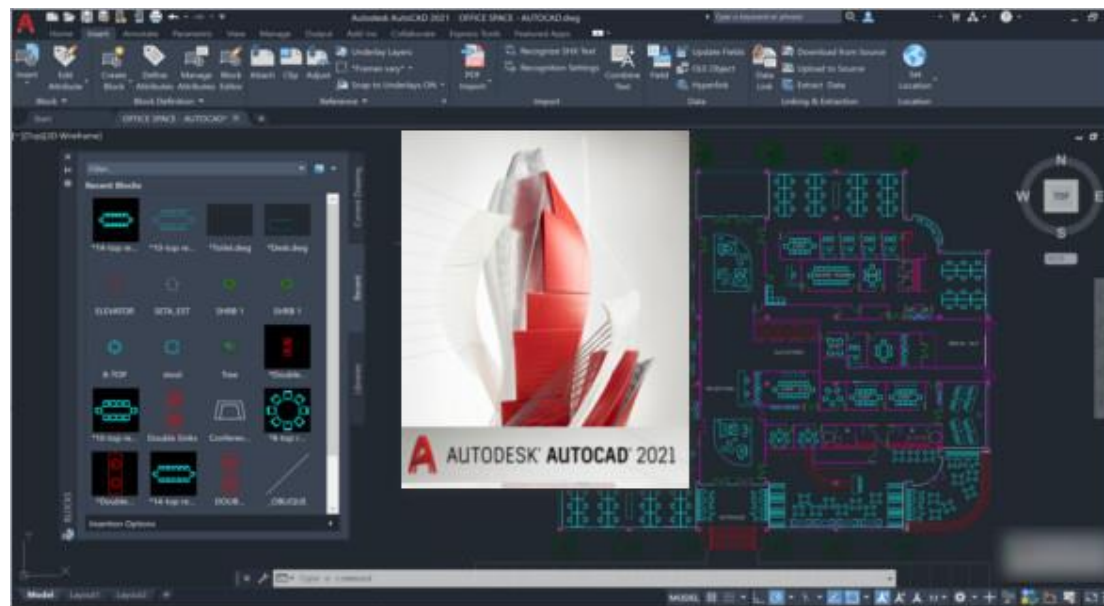# A yearly $5 billion Global Market
2 key competitors

Autodesk

Business model: subscription
Design software & services

Valuation: $60 Billion

Annual revenue : $900 million
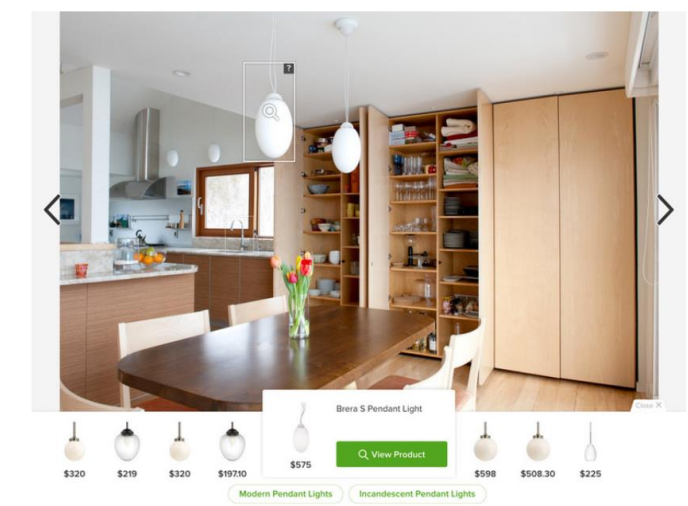(architectural design solutions
contribution is 65%)

Founded in 1982

Houzz

Business model between
eCommerce and membership.

Valuation: $4 Billion
Total raises: +$600 million
Last raise: 2017

+40 million users

Founded in 2009

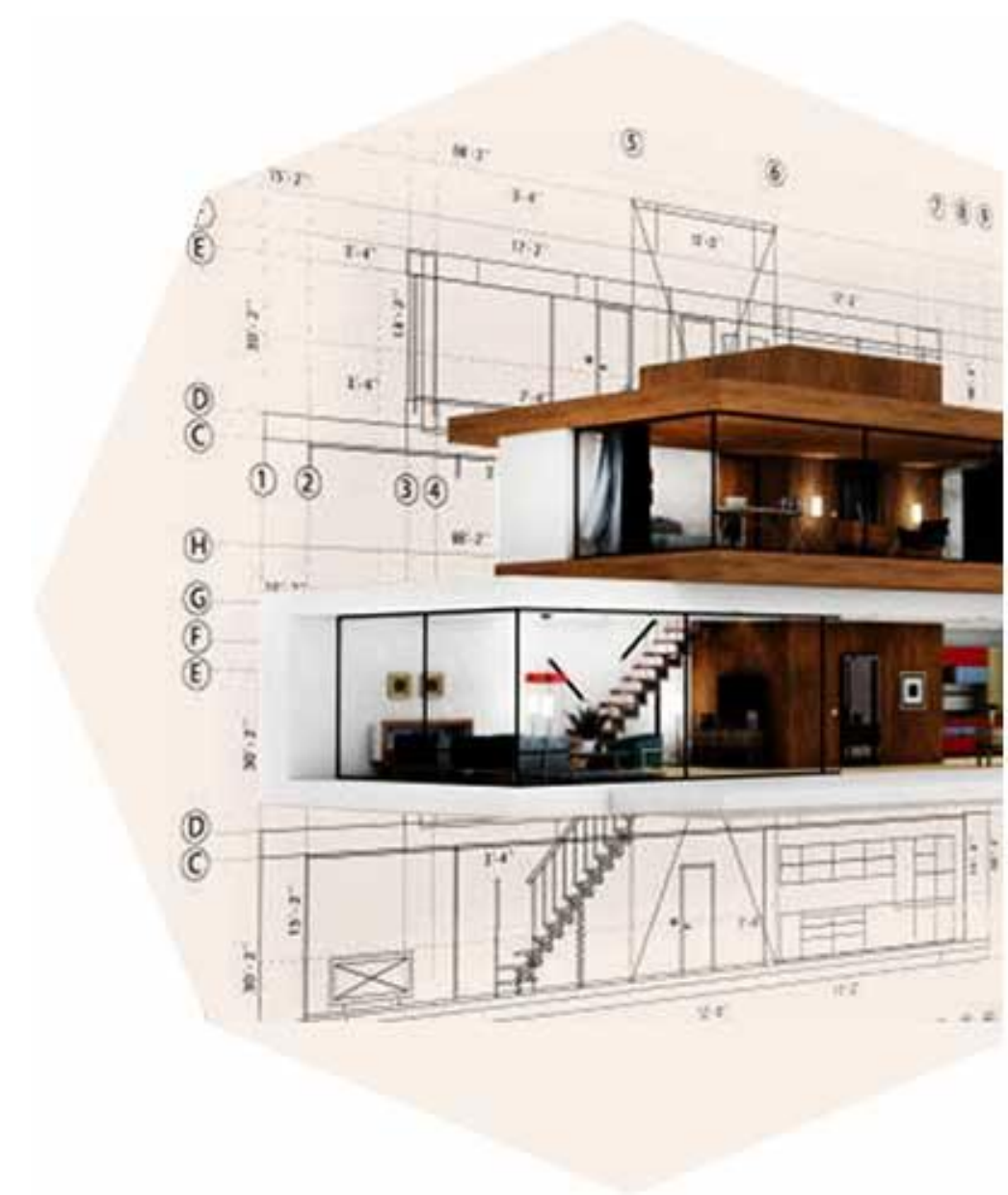# Carbon Saver is a « super assistant », ally of the planet and architects

An **assisted design** solution that ...

Understands the original floorplan drawn by the architect
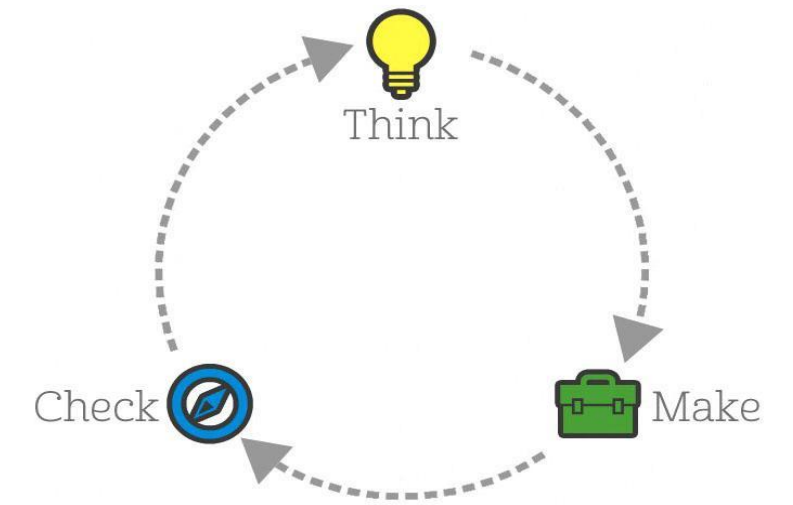
Automatically **suggests eco-designed solutions**

Draws "automatically" in an existing layout

Saves the architect time and more

The **architect is empowered**: at each stage of his project, he choses and decides.
Thanks to Carbon Saver he focuses on his added value: creating and understanding his client's needs.

Lean UX* at the heart of our approach

Think · Make · Check

Our co-design process is very user-centric and inspired by the "LEAN UX" culture:

"**Going from doubt to certainty**: everything is guesswork, until proof to the contrary".

• We use **rapid and inexpensive prototyping techniques** to systematically confront our "business" assumptions with our user community *.
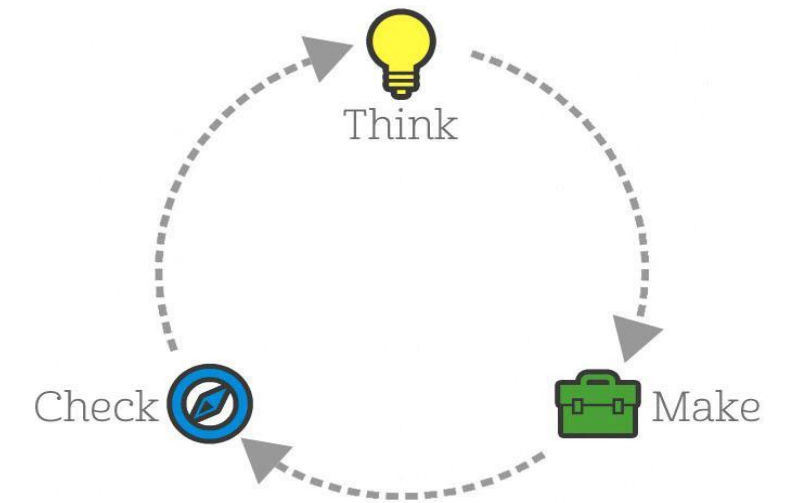
We only engage our means of production when we our design is validated by users and we collect feedback from our users to continuously improve our product.

• Our **users** are more than "beta testers".
They are **at the heart of the design of our software** because they are involved very early in our design workshops.

So we can fully understand and define their problems and together create the best solutions.

* more than 400 architects (recruited mainly via social networks).

A comitted community

Example bellow: qualitative workshops

Eco-design at the heart of Carbon Saver

Carbon Saver has joined forces with the Mu Cooperative, eco-design engineers.
From this collaboration was born the Bat'Impact ®: a concept imagined by Carbon Saver and which has become a reality thanks to the expertise of Coopérative Mu. Today, the **Bat'Impact ® is operational**, it works, and we have **already tested** it with architects from our community.

Of course, our Bat'Impact® is based on scientific standards and incorporates the concept of Life Cycle Analysis of Materials. This visual indicator, accessible at all times, allows the user to improve the impact of his project interactively and to determine priorities for optimizing it. **If you invest, you will help turn the Bat'Impact® into a real application**. Later we will add other more advanced features.

Ultimately, **eco-design skills will be internalized**, we will recruit our own team of eco-design engineers. Coopérative Mu will continue to support Carbon Saver in a more punctual and targeted manner.

Eco-design: use case

Help me choose environmental prorities

Tanks to **Bat'Impact**, I can **easily select the most sustainable solution**
for each part of my project.
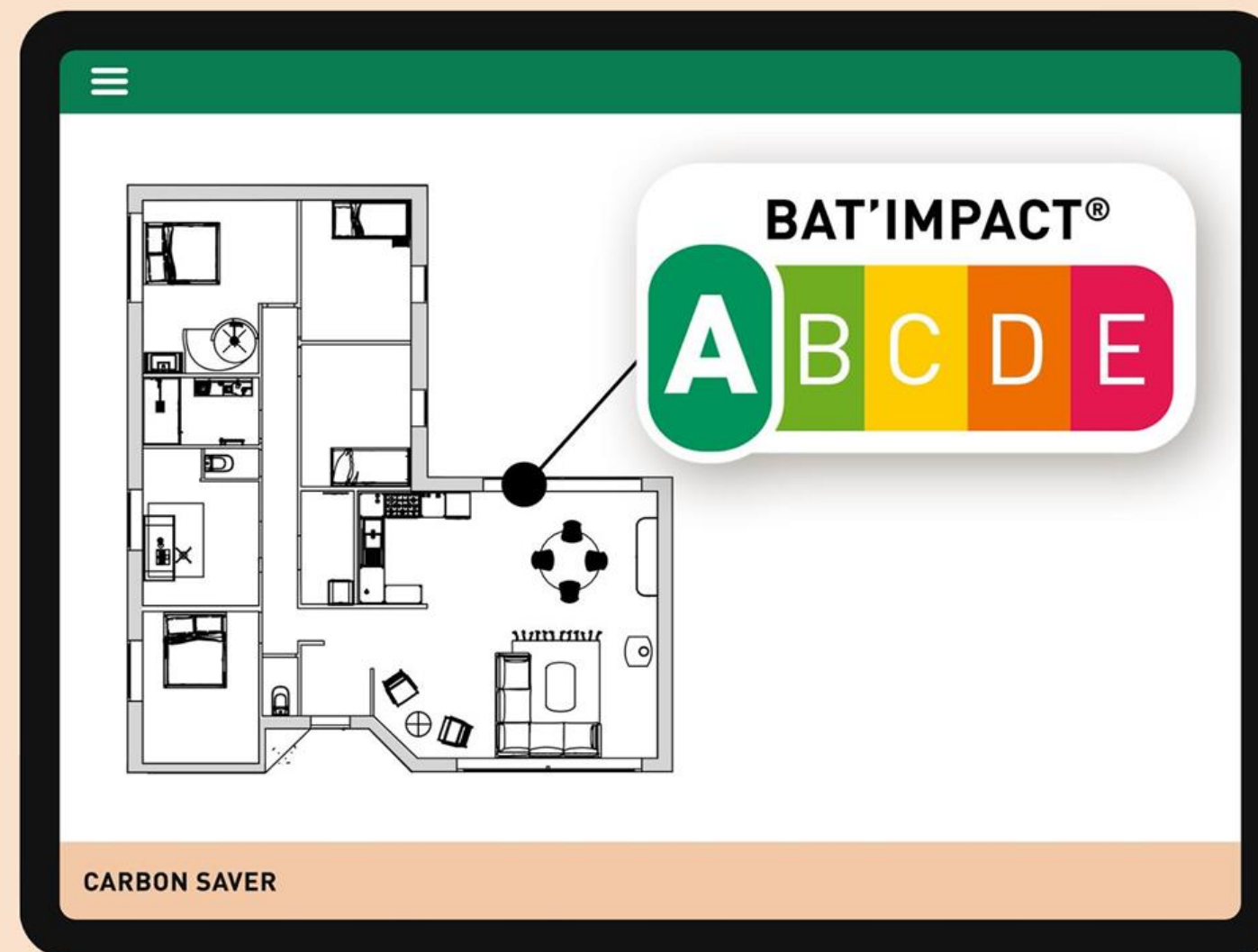
Eco-design: use case

Calculate the cost of my project during its design

My supply list and its total **amount** are updated with each modification on my plans. CARBON SAVER offers me **bio-based materials** available **near my site**.

Eco-design: use case

Perform low value-added tasks on my layouts

CARBON SAVER automatically **generates** my electricity or plumbing layouts and offers me sustainable insulation solutions **directly on my architectural plans**.

"Artificial Vision", the technological lock that differentiates Carbon Saver

The functionality of recognizing the content of the plan drawn by an architect does not currently exist.

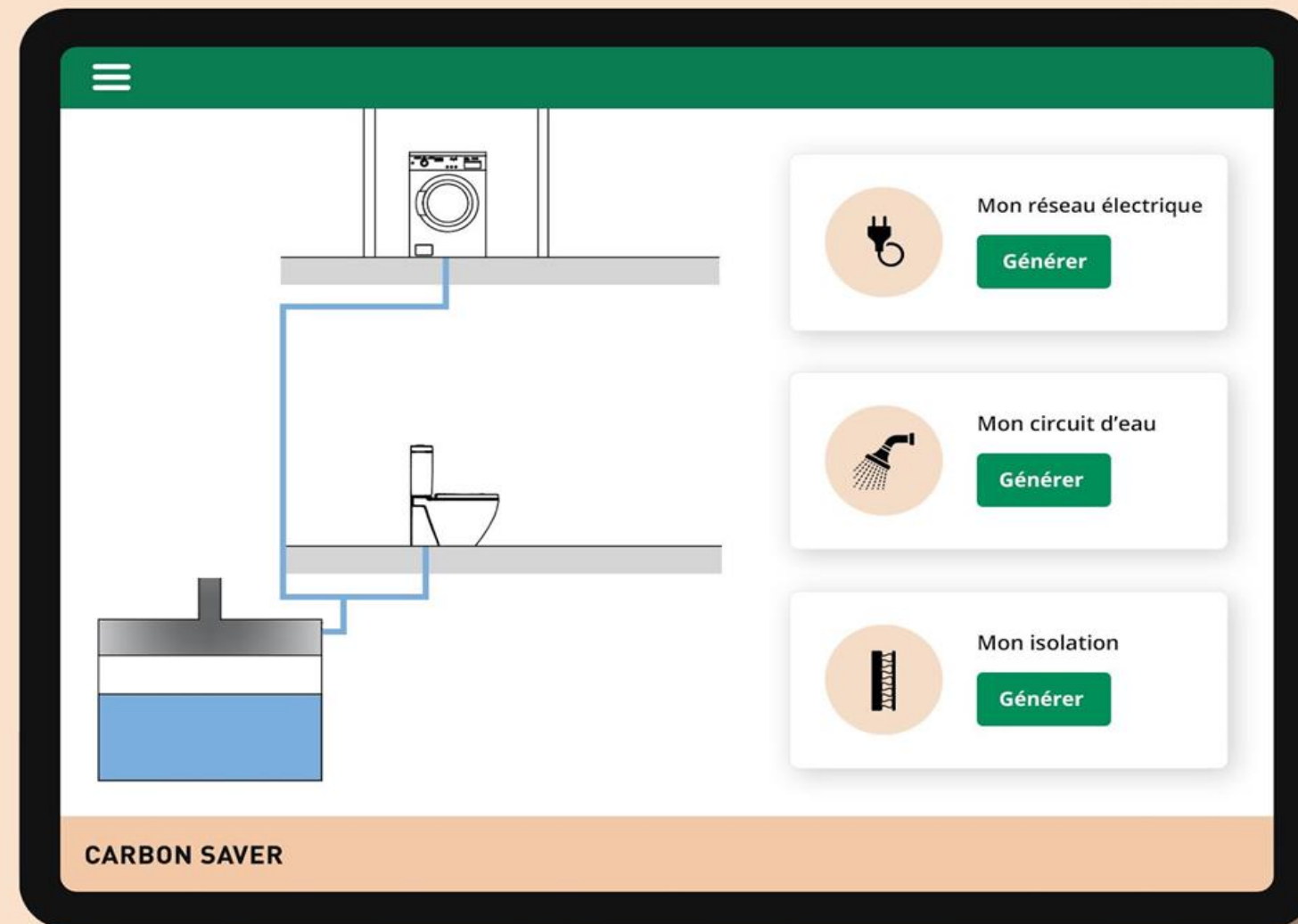This problem has for example been solved in the field of medicine: the combination of human expertise and "Artificial Intelligence" have made it possible to create solutions capable of analyzing medical images and detecting certain types of cancer with lower error rate than the human eye. Having an architectural plan interpreted by a machine calls upon comparable technological levers and human expertise.

In the illustration below, from the 2D plan drawn on the left, our prototype program obtained the 3D version located to its right.

> Plan en 2D
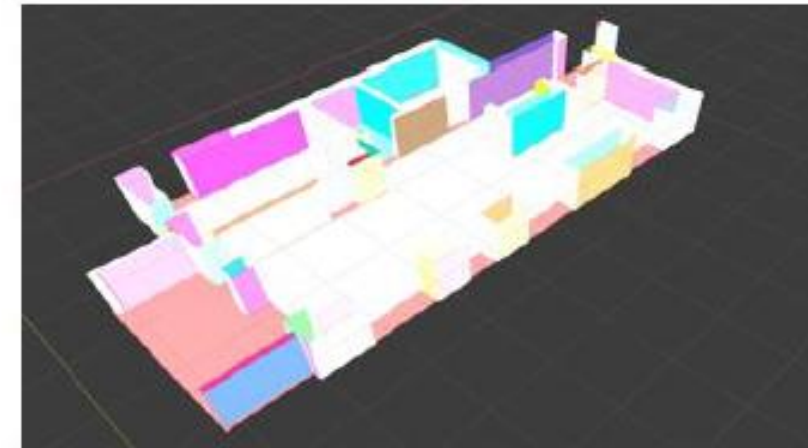
> Plan en 3D

Our first prototype allowed us to conclude that the academic world is essential for the realization of Carbon Saver. This is how the **partnership** was established with the **University of Orleans and its PRISME Laboratory**, which specializes in signal and image processing. The opportunity to conduct joint research has emerged very quickly and work is in progress.

« Artificial Vision »: use case

Generate my 3D and texture them in a few clicks

From my 2D plan, CARBON SAVER **creates my 3D under my eyes**.
My choice of **texture** is facilitated by a **powerful search engine.**

Artificial Vision develops for 2 years
before being integrated into the SaaS platform

Lean UX / Lean start-up

T4 2020
1st UX works with
our community

T2 2021
Carbon Saver
'Beta' - Bat'Impact

T3 2021
1st Carbon Saver
SaaS

T4 2021... T1 2022...
Updated versions of
carbon Saver SaaS

2023
Carbon Saver 'AI'
embedded

S2 2022
Carbon Saver 'AI'
V1

University partnership
Artificial vision and Deep Learning

S1 2020
Our 1st trials
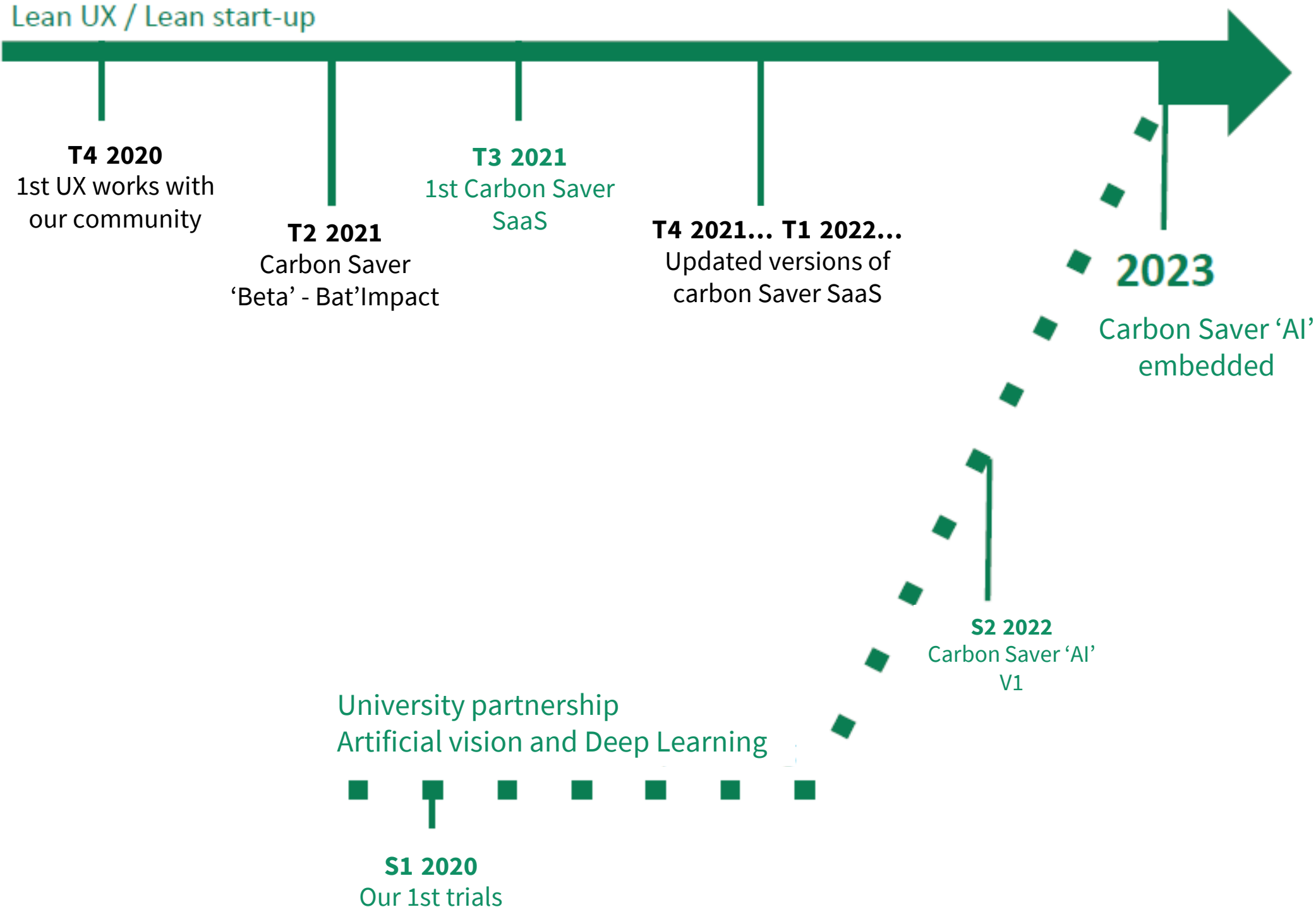
Key financial steps 2020 - 2021

T 4 2020	T1 2021	T2 2021	S1 2022

Company creation
90% held by Nurra Barry

Bank loan

Grant – 'BPI French Tech'
(French Public Bank of Investment)
Most of the grant has been dedicated to eco-design

Key partners become shareholders
82% held by Nurra Barry

120K at the launch of the company
Including 90K€ in cash

190 K€
Bank Loan
Tech team & marketing to deliver SaaS V1

200 K€
With you ;)

200 K€
BPI Loan

1,5M€
BPI + Fundraise

Soutenu par
MINISTÈRE DE LA TRANSITION ÉCOLOGIQUE
Liberté Égalité Fraternité

GREENTECH INNOVATION

17

Carbon Saver's Dream Team

Nurra Barry
Founder & CEO

Loïc Calvy
Co-founder - CTO

Frédéric Ros
Mentor & 'AI' Researcher

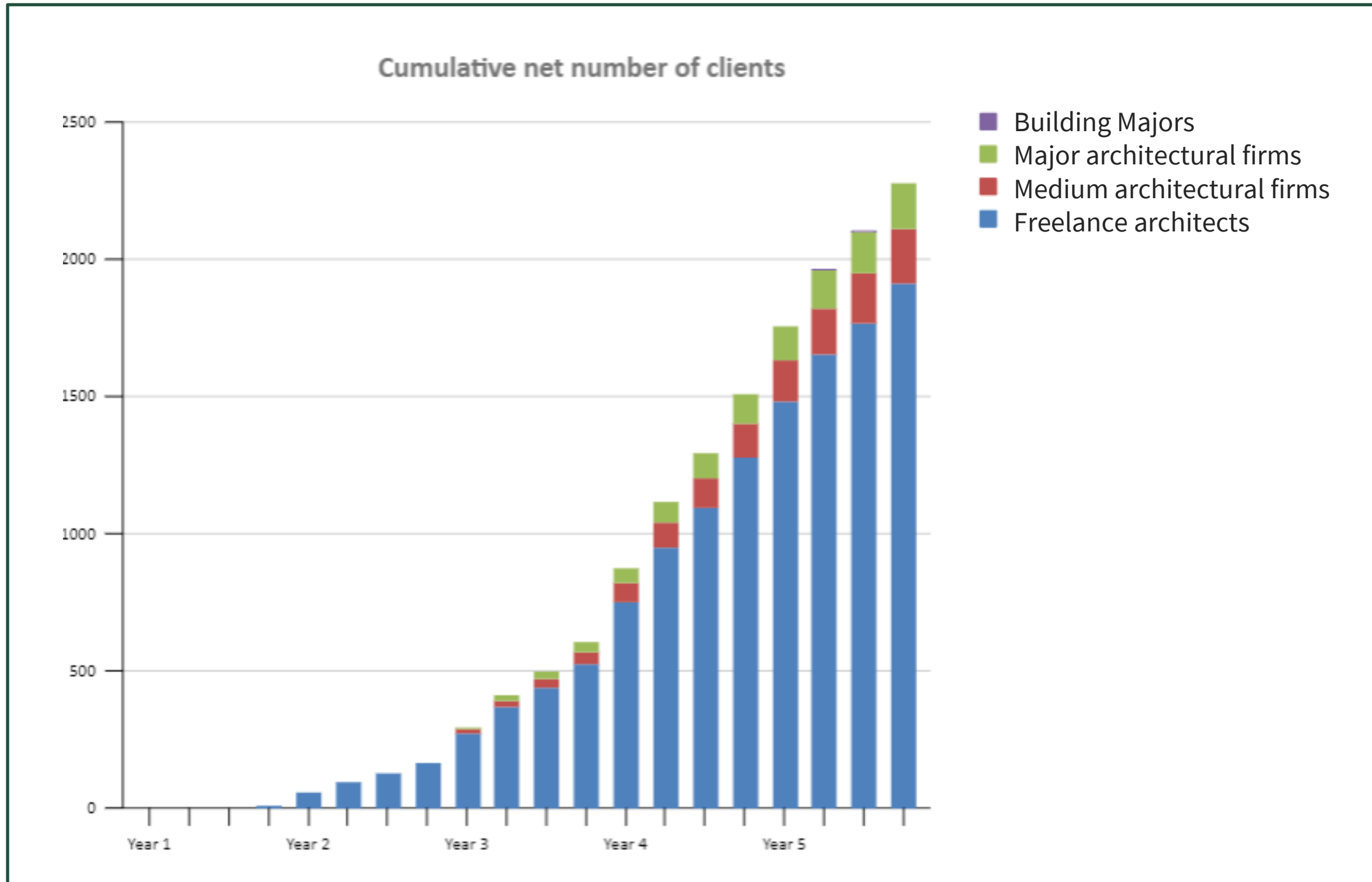**Amélie Marchand**
Marketing

Jérémie Taubes
Digital Product Design

Emilie Rozas
Interior Designer

Economic model : subscription /Mo / Year
Format : existing software add-on & SaaS

Cumulative net number of clients

Legend:
- Building Majors
- Major architectural firms
- Medium architectural firms
- Freelance architects

Market penetration strategy
Free eco-design & paid productivist features

Our *raison d'être* is to to spread eco-designed architecture as quickly as possible.

Therefore we intend to partner with:
- National authorities
- Architectural schools
- Architecture unions

Building a comitted community of architects in each targetted country is part of Carbon Saver's DNA.

We generate income thanks to the new perspectives that our R&D allows.

P&L

CARBONSAVER

Questions?

calendly.com/nurra-barry/meeting

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In Europe, 72% of architects work on their own

L'Architecture en Europe est une profession en pleine croissance
Le nombre total d'architectes a augmenté de 24% en 10 ans

2008 +24% 2018

5 pays dominent
Deux tiers des architectes sont ressortissants de cinq pays

Italie	160 000
Allemagne	111 000
Espagne	56 000
Royaume-Uni	41 000
France	30 000

562 000
le nombre d'architecte en Europe en 2018

Professionnels indépendants
Plus de la moitié de la profession sont des dirigeants uniques, des architectes « indépendants » ou des partenaires/directeurs

Dirigeant unique
salarié - privé
Autre secteur privé
Indé-pendant
Partenaire / Dirigeant
Gouverne-ment local / central
Autre secteur public

Our past experiences and the recruitment of 400 architects to strengthen our community and the workshops already conducted with them confirm our initial intuition: they are helpless when it comes to eco-designing an individual home. It is a market that largely escapes standards and has no solutions.