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Smart Cost Sustainability For Real Estate Developers

How innovative real estate developers use predictive modeling to achieve more sustainable projects, cut costs, and improve revenue

Dear reader, congratulations on your decision.

If you've made it this far, I believe you're curious to know how it's possible to achieve **sustainable results with reduced costs** in your new constructions.

In this way, you can find differentials that few see for the greater competitiveness of your company.

In other words, we're talking about sustainability strategies that **make sense** for your business, helping your company to hit targets and grow every quarter.

And this is precisely where this book can help you.

Some important warnings:

Due to our broad audience in English and Portuguese for the construction market, you may be here because you are part of **one of the following scenarios:**

1. **You are a developer, builder, or entrepreneur** looking to include sustainability in your buildings to obtain differentials and visibility in your business.
2. **You are an architect, engineer, or designer** looking to include sustainable elements to gain a differential and visibility for your business.

I bring good news for any of these scenarios: it is possible to use this methodology for your business.

Therefore, I want to present crucial guidance on the possibilities and requirements so that you can utilize sustainability to extract the most significant benefits.

This way, you can make the most assertive decision possible about whether or not to take this process forward.

Are we settled? Let's go!

Sustainability as a positive (and not harmful) differential in your business

We all know that the civil construction market is increasingly competitive. Therefore, companies need to be **innovative** and bring a future vision to keep growing.

One way to seek innovation is **to invest in sustainability for your business**, thinking about the market transformation that is taking place. After all, this process accelerated after the pandemic, a shift that tends to remain in the coming years.

An example of an indicator of this acceleration is Millennials. Increasingly, they are becoming important decision-makers in buying new properties, and they see sustainability as **a fundamental criterion in** this choice.

According to the National Association of Realtors' 2022 Millennials and Homeownership Report, **80% of Millennial homebuyers** are concerned about energy use in their homes.

This is especially important for Millennials living in urban areas that experience ever-increasing energy costs.

Another indicator of the acceleration of the green economy, which is increasingly on the agenda, is **the ESG agenda**. It is transforming how companies in the financial market work with sustainability and increasingly include these strategies in their processes.

The main reason for this transformation is investors. Everyone wants to invest safely, so companies that think about their environmental, social, and governance spheres will be friendlier to this audience, attracting more investments and keeping them longer in their portfolios.

Therefore, if the financial market – the one that moves the world's capital – is increasingly seeking sustainability for its processes, logically, most other companies will follow these patterns sooner or later.

The other side of the coin: inefficient sustainability

However, if these data are encouraging for our planet's future, there is **another side of the coin**.

Many complain about the cost-effectiveness that sustainable strategies can bring to a business.

One of the main challenges to implementing sustainability practices is that they are **often more expensive** than traditional methods.

This is especially true for new construction, where a building's design and materials must be considered when constructing the facility.

Therefore, many consider that investing in sustainability does not make such substantial sense in their business. In addition, the process can be expensive, and the visibility of this application by the market is often not what was expected, generating disappointments.

So, how can we arrive at buildings **with a balance between cost-effectiveness and sustainability**?

The answer is to find, among all the possible variables of the building, a **combination of elements** that generates a reduction in costs and the highest level of performance, increasing the cost-benefit of implementing sustainability in your business.

But how is this possible? Keep reading to understand the secret.

Doing more with less is the secret to sustainability that positively impacts your business

How do we make projects more sustainable and reduce costs simultaneously? **The answer is simple** but complicated in the equation.

I explain.

The simplicity of the answer is that we need to find **the best combination of the constructive elements** we are specifying in our projects.

After all, each constructive element has a cost and properties that will impact energy consumption.

Simple technical example: comparing a clear with a high-performance glazing

Clear glazing has an SHGC (Solar Heat Gain Coefficient) of approximately 0.8.

Simplistically, this means that of 100% of the solar radiation that reaches the surface of the glazing, 80% of it will pass into the building, generating heat and **increasing the consumption of air conditioning** in the summer.

High-performance glazing has an SHGC of around 0.3. So if 100% solar radiation reaches the glazing surface, only 30% enters the building.

Therefore, energy consumption in summer **tends to be lower.**

So what is the best option for this building?

Generally, **those who do not care** about energy consumption will adopt clear glazing to reduce costs.

Those **who care** about delivering more quality to customers will adopt glazing with higher performance, spending more.

However, they often won't see the return on investment in their pockets.

Now comes the question. Which option would you choose?

And here's the answer:

There aren't just two glazings. **There is a building.**

In other words, the answer lies in the performance of the building and its return on investment, not the most expensive or cheapest glazing.

After all, there are dozens of glazing combinations. Some may be more economical and generate more excellent building performance.

Other glazings will just be a waste of money, as it generates few benefits.

Therefore, among all the glazing options, there is a specification that will be the leanest **for your building**, bringing a greater return on investment and generating a better quality of life for users.

Perhaps the best option might be glazing with an SHGC of 0.5. Or 0.4. Or 0.35. Or even clear glazing!

In short: the high performance of the building with the best cost-benefit will depend **on the best equation** between the properties of the constructive elements and their cost.

So, as I said before...

The answer is simple when we simply look for the best cost-benefit relationship.

However, **the equation gets more complicated** when we enter the hundreds of possible combinations of all the other conditions that affect a building.

Among these variables are:

- The climate where the project is inserted.
- The volume of the building.
- The other constructive elements of the project itself (wall, floor, roof, etc.).
- The systems considered for the building.
- The number of users.
- The neighboring buildings of the building.
- Among other variables.

Still, we cannot assess the possibilities just by analyzing the building at a static time of day.

We must consider the performance of the building **during the 8760 hours of the year**. After all, people deserve to have a quality of life for as long as possible.

The sustainability failure of 95% of developers and our solution

Here we begin to understand why 95% of developers fail when trying to achieve sustainability in their investments.

The main reason is that they simply fail to assess **the hundreds of possibilities** that can arise from combining all the variables, and they often end up disappointing results.

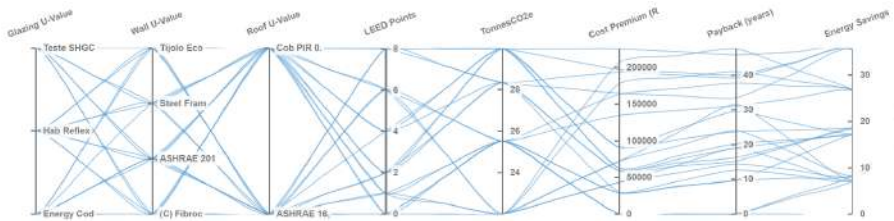
As I said before, **each project will have** the best cost-benefit equation of its constructive elements.

We need to get the ingredients and put them all in a battery of simulations to find the best equation. Thus, we can find **the best combination** of constructive elements with the lowest cost.

Below, we will evaluate all the ingredients entered in a **Cost Optimization report** created by UGREEN.

It is a computational analysis tool that will analyze all possible variables and point out results in terms of:

- Possible credits to be achieved in LEED Certification (LEED Points).
- Carbon Footprint (Tonnes CO₂e).
- Cost of each combination of proposed systems (Cost Premium).
- The payback time for each variety (Payback (years)).
- Energy savings in percentage (Energy Savings).



Notice that we are evaluating three types of glazing, four types of walls, and two types of roofs **in the columns from left to the right**.

Each element has a cost, thermal properties, and a specific carbon footprint.

And each combination generates results on all variables in subsequent columns, from carbon footprint to building energy savings.

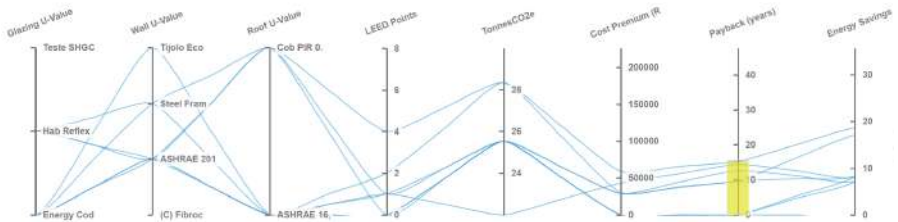
This way, we can evaluate dozens or even hundreds of possibilities.

However, some results will have a return on investment of 30 to 50 years (payback column). Would investing in something

that you would have a 30-50 year return on investment make sense to you?

Often it wouldn't.

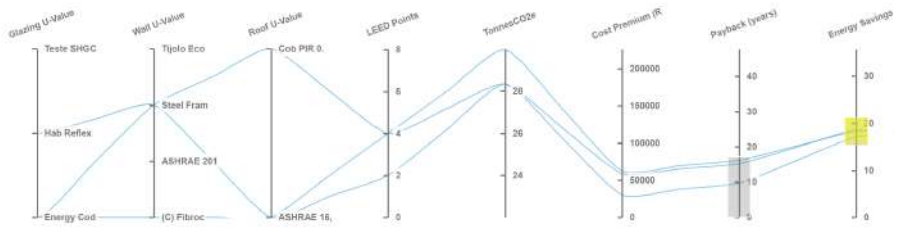
However, we can now isolate all combinations of construction elements with a **maximum return on investment of 15 years**, as shown in the yellow rectangle in the figure below.



We now have fewer combinations, **all of them are within a reasonable payback period**. So combinations start to get more interesting now, right?

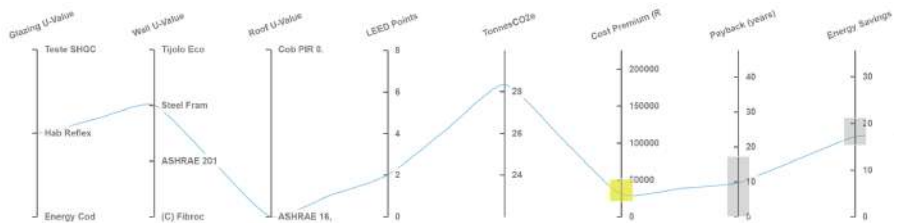
But we need to see now which solutions within the acceptable payback period will have **the most significant energy savings**.

Therefore, we can now select all those combinations generating **the most significant energy savings**, as seen in the yellow rectangle in the figure below.



Now there are only three combinations left for the building. These are our **top 3 results** from the various reviews, generating energy savings with low payback time.

And we can isolate the best of the equations in the yellow rectangle in the image below.



Surprisingly, the equation that generated the best result has a payback period of **only ten years** with an additional cost of only BRL 35,000.

An **energy saving of 18%** is already on top of a project with the optimized architecture. Considering this project since the beginning, the projected energy savings is 42%.

Conclusion of the analysis and two possible benefits for your business

As we can see, it is possible to save energy without dramatically increasing costs in many cases.

And we can also see that an investment in this type of analysis can be **highly profitable** for the building owner, sometimes generating savings rather than cost.

Therefore, you can deliver better results for your customers by solving their problems, but **providing them with an optimized solution** from multiple perspectives.

This also makes it easier for your customers to make decisions, with faster turnaround times and less uncertainty.

There is also the benefit of **sustainable branding** for your company.

You will be seen as an innovative, forward-thinking company capable of providing solutions to problems customers may not even know it exist.

When your customers are satisfied, they will recommend your company to others.

In other words, you will have the opportunity to build a **resilient, sustainable brand**, which will be an excellent foundation for future growth.

The next step towards achieving sustainable results at a reduced cost

Whoever decided to read this material and is on this page is a dedicated, serious, and committed person. **This is the audience we seek to attract.** These are the people who will take the steps towards sustainable innovation.

Now, you need to set a plan.

After all, we can have the most knowledge and willpower. Still, if we don't know how to channel all this into strategies that generate benefits for your business, you may encounter **the same problems** that 95% of builders have in this market when they seek to act with sustainability.

And we say this from our own experience: we work with consulting and education in more than 146 countries today. What we find most are companies full of desire to change the world but that **do not apply the strategies** that generate differentiation for their businesses.

How do you intend to present the sustainability of your projects? How does your brand intend to position itself on this issue? What will be your main differentiator? What opportunities do you want to present?

These are fundamental questions, something you should take time to find the best answers for.

This is the strategy that I indicate, in order of implementation, to define a lean and effective process for a sustainable building with reduced costs:

1. Technical briefing of the project.
2. Building and surrounding data collection.
3. Discovery of the best opportunities for the project.
4. Final design optimization analysis.
5. Debugging of information that will be presented to customers as a business differential.

Starting a sustainability project ignoring these steps can lead to problems in its implementation and in transforming the work into a benefit for your business. Therefore, everything needs to be implemented very carefully.

In this way, you can generate more results for your ventures and company while **impacting the world positively** every day.

I got the plan. How to proceed?

If you've made it this far, chances are you're seeing what process you can follow from now on.

I needed to share all these behind the scenes first and only later **make an exclusive proposal**.

In addition, this proposal (somewhat hidden) is also a way of filtering out those who are always in the middle of the road and are not so committed to the sustainability of their business.

Bi-monthly, we open a few openings for our **Green Optimization Consultancy**. This is one consultation per project, with exclusive Zoom meetings and a unique implementation process.

The consultancy aims to help you optimize your following projects so that you obtain **sustainable strategic differentials** in your business.

I make this kind of proposal for two reasons.

01- Because it is something that we can generate quick results.

After all, it's a direct conversation and a straight-to-the-point analysis of your projects.

02- Projects that reduce at least 25% in energy, water, and carbon footprint savings will obtain the **UGREEN Endorsement**.

This means that projects that achieve these goals can, if you wish, be publicized on our platforms, where we have more than 500,000 people worldwide.

Consider this visibility as a bonus for your best practices.

How are the phases of the consultancy divided?

The consultancy is divided into **five phases**.

In the first phase, there is **a meeting between you (or your team) and our team**. This step takes place in orientation. This is the time to clear up your doubts, define your plan, understand your project, and your budget, and put all the pieces together.

After this orientation, we have a **second phase**, where we will start collecting data for its construction.

Here we evaluate the climate of your building, the surroundings, the conditions that can be positive or negative, the volumetry of the building, and the constructive elements, with all the necessary details.

This is the time to go deep into the project.

Honestly, 15 days is enough time to get all this information, but we leave 30 days in that extra period to make you safer. After all, doubts can arise, and small changes can happen.

And **in the third phase**, we have already started hundreds of simulations with every imaginable scenario for your project. The delivery of the best possibilities that can be applied to your project happens live via Zoom, **in an interactive meeting** with everything well explained—detail by detail.

Here you will have the combination of constructive elements that will generate the best result in energy savings and carbon footprint reduction, always considering the **fastest return on investment** for your situation.

I have had good results with this customer profile who works with us on this optimization in a closer and more detailed way.

Adjustments are made live, improvements are presented, and all this happens quickly and dynamically.

Bearing in mind that, depending on the possible optimizations, some return on investment scenarios make our consulting “free”, due to the savings it generates.

After completing the third phase, we move on to the final report on the building.

In this **fourth stage**, all project specifications will be presented and delivered directly to those involved in the project so that this combination of elements is not lost in the

project's next phases and generates benefits in the final construction.

Here you will have everything that was decided by the team, with all the necessary details.

And **in the fifth and final stage**, if the project reaches the UGREEN Endorsement level, we deliver a set of information that will be presented to customers as a business differential.

This information can be used as marketing material **anywhere in the world**, either by your company or by UGREEN, if it interests you. Sound like a good plan?

When the market is moving **faster and faster towards sustainability**, we decided to create this different experience.

In this way, we generate a stronger impact on the journey of those companies that seek to pursue the path of doing good for the world and that they can use all this as a brand differentiator.

With **Green Optimization Consulting**, we will help you with these goals.

I know it may seem a bit exaggerated what I'm going to say now. But it's 100% true.

The sustainable construction market is still **far below** its real potential.

As I said before, the market is growing consistently every year. However, companies are **just becoming aware** of what they need to do within their business.

Worry only increases everywhere. Whoever stays behind will indeed have problems.

I want to say this: I've been part of this market since 2008. And **I've never seen such a significant growth** as last year.

In other words, the time to grow is now. Seize opportunities, seize market gaps, and scale in this positive direction.

Most are still stuck in outdated methods...

You can take the lead in your region, and create an **efficient** and viable differentiation plan for your company to grow and positively impact the world all at once.

If you want to secure one of the vacancies for **Green Optimization Consulting** with UGREEN, you can [schedule a conversation with my team by clicking here.](#)

If you liked what you read and want to implement this process in your company during the next few months, we will help you with this implementation.

In short: an implementation consultancy to help you in all possibilities to make your ventures sustainable at a reduced cost.

We will work together in the following stages:

6. Technical briefing of the project.
7. Building and surrounding data collection.
8. Discovery of the best opportunities for the project.
9. Final analysis of project optimization.
10. Debugging of information that will be presented to customers as a business differential.

If you want to schedule a conversation with our team, this is your chance.

[Click here to schedule a conversation with our team.](#)

Let's go!

Filipe Boni

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UGREEN

Questions? Send an email to our customer success channel:
contato@ugreen.com.br