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If the technology you need doesn't exist, build it yourself

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Plan de Recuperación, Transformación y Resiliencia

We spoke with Ana Lozano, CEO of Nidus Lab, about how artificial intelligence (AI), sustainability and innovation can transform decision-making in the real estate sector, especially at a time when Spain is facing an unprecedented structural challenge: ensuring access to efficient, affordable and sustainable housing.

Housing has become one of the major current issues in Spain. In addition to the lack of supply, there are increasingly demanding regulations, which force us to rethink how we design, build and rehabilitate the spaces where we live. In this context, **Ana Lozano** offers a strategic vision from the intersection between **architecture, technology and sustainability**.

During the interview, Ana tells us how her company, **Nidus Lab**, has developed a tool that helps make **key decisions from the early stages of a project. This allows us to optimise resources and better adapt to what the market really needs**. Their approach is based on a clear premise: *"if we do not act with a vision of the future, millions of homes will be left out of the legal and economic circuit".*

He also talks about **industrialisation as a way to scale solutions**, and about how to integrate sustainability criteria without losing sight of economic viability.

Read the full interview to discover an innovative perspective on how to face the challenge of housing from entrepreneurship and technology.

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About Ana Lozano Portillo

"My greatest aspiration has been to be the best example for my children," says **Ana Lozano**, an architect, mother of three and tireless entrepreneur, who has made innovation her tool to **transform the real estate sector**.

After leading her own architecture studio, Ana detected a major shortcoming: many decisions with a large economic impact were still made with outdated methods. This concern led her to train in finance and to transform her firm into a **consulting firm specialising in strategic investment.**

It was then that he began to explore technological solutions that would help make **faster and more reliable decisions**. Unable to find tools that would meet that need, she decided to create it herself. This is how **Nidus Lab was born**, in the midst of the expansion of artificial intelligence (AI), with a clear idea: *"if the technology you need doesn't exist, build it yourself".*

Far from being satisfied with what she has learned, Ana has made curiosity, responsibility and the search for impact her professional engine. Its experience shows that, with a critical and transformative vision, it is possible to break new ground even in sectors as consolidated as real estate.

About Nidus Lab

Nidus Lab was born in 2023 as a response to a specific need: to make faster and more reliable decisions in a sector that continued to operate with traditional methods. Ana, with experience in architecture and strategic consulting, did not find the technology she needed in the market, so she decided to develop it herself: a technological solution that does not seek to replace, but rather to enhance human talent.

> *Nidus Lab was born from architects for architects, but it has been the industry that first opted for the tool*

Nidus Lab goes beyond automating repetitive tasks. **Its optimisation engine allows multiple design scenarios to be explored in real time,** respecting the creative intent of the architect and helping to make faster, better-informed decisions.

In addition, it guarantees data privacy, an aspect that Ana considers essential: *"We are anticipating a concern that is key today: data governance".*

ConTech: the technology that acts before it is built

For years, any technological advance in the real estate sector has been labelled as ***PropTech***, a term that encompasses solutions applied to buildings that have already been built, such as buying and selling platforms or management tools. However, Ana Lozano clarifies that this classification does not reflect the whole reality. *"Nidus Lab is part of ConTech, which is the technology applied to the pre-construction phase,"* he explains. It is at this moment – when you decide whether to invest in land or develop a project – where the greatest risk and, at the same time, the greatest potential for transformation is concentrated.

Keywords:

PropTech (Property Technology): *refers to all those technological solutions applied to the management, marketing and use of properties that have already been built. It includes everything from real estate marketplaces to asset management tools, rental platforms, tokenization or digital services for owners and tenants.*

ConTech (Construction Technology): *covers the technologies applied to the phases prior to the construction of a building. It focuses on processes such as feasibility analysis, decision-making on the ground, architectural design or construction planning. Its objective is to optimise development from the source, reducing risks, times and costs.*

Innovate in decision-making

Innovation **in real estate is** not only about incorporating technology, but also about changing the way strategic decisions are made. Ana Lozano detected a structural shortcoming: many decisions with a high economic impact were still based on traditional models, with little capacity for anticipation and a high margin for error. Faced with this scenario, Nidus Lab proposes a change of approach. *"We wanted an engine for optimisation, not just automation,"* Ana explains, underlining the difference between speeding up repetitive tasks and offering solutions that actually improve the quality of the process.

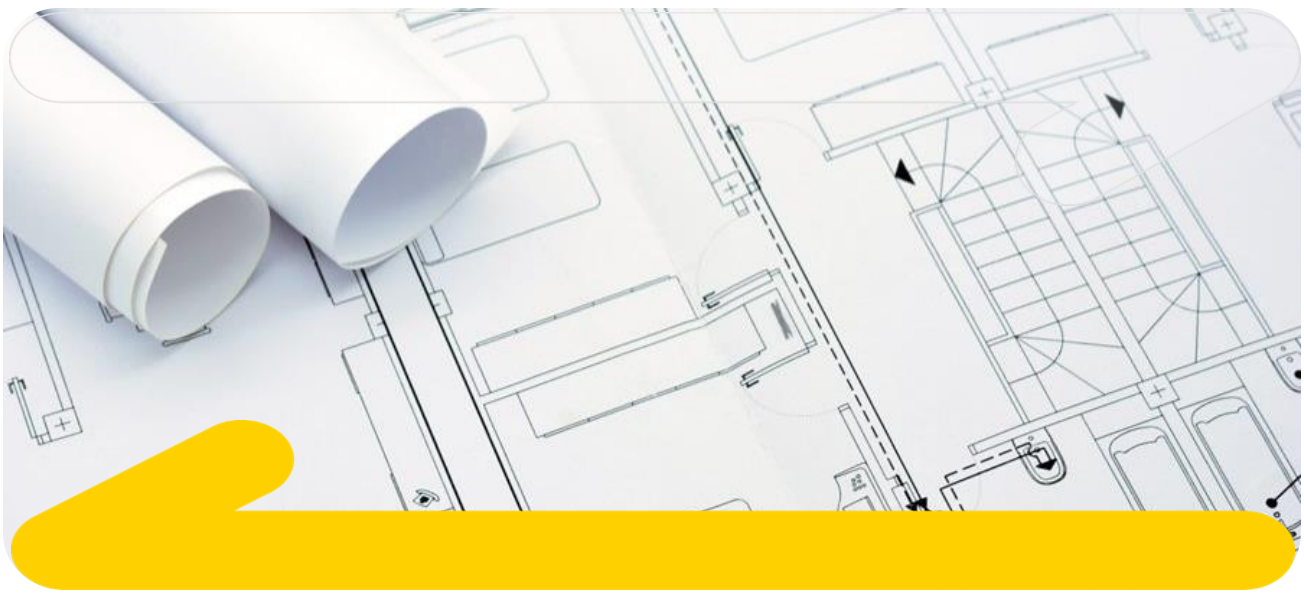
The tool developed by Nidus Lab **allows multiple optimal scenarios to be explored in real time**, which represents a key competitive advantage in an environment where each decision can condition the success of an investment. This advanced analysis capability **does not replace human judgement, but reinforces it, giving technical teams a more solid and agile basis for decision-making.** Thus, innovation becomes a strategic ally, not only technological, in a sector that increasingly demands precision, agility and vision of the future.

Artificial intelligence (AI) as an ally of the creative process

In a sector where creativity is key, but processes are long and complex, AI can become a strategic ally. This is how Ana understands it, who from the beginning conceived Nidus Lab as a tool that does not replace the architect, but expands their creative capacity.

"Nidus Lab was born from architects for architects," he says, stressing that the goal is not to automate design, but to free architecture professionals from the most tedious and repetitive tasks so that they can focus on what really adds value.

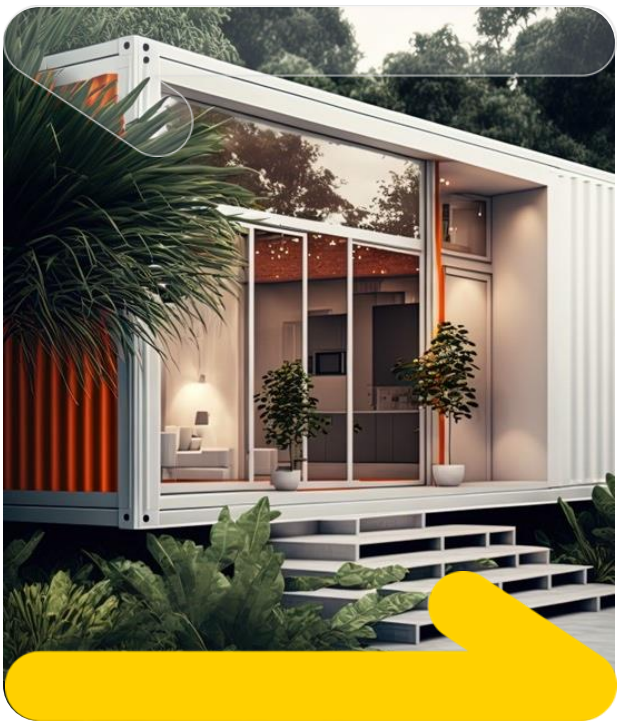
Nidus Lab's AI **does not impose solutions, but proposes multiple optimal scenarios based on the creative intention of the user**. This way of working allows alternatives to be explored in an agile way, without losing quality or the uniqueness of the project. In addition, the tool has been designed to avoid the "black box" effect: **the user maintains full control over the process and data, which reinforces confidence in the technology and facilitates its adoption in demanding professional environments.** In this sense, AI does not replace human thinking, but accompanies, accelerates and enriches it.



Sustainability as a driver of change in the real estate sector

Sustainability is no longer an option, but an urgent need. Ana expresses it clearly: *"we have to have a much more responsible policy with the planet"*, and adds that this commitment must go hand in hand with economic sustainability.

At Nidus Lab, this vision translates into a tool that **allows responsible decisions to be made from the earliest phases of the project**, when it is still possible to influence the environmental impact without driving up costs.



Nidus Lab's approach is based on a key idea**: the best decisions are those made as soon as possible, when they are most efficient and least expensive**. For this reason, the tool integrates environmental criteria from the outset, helping experts to design more sustainable projects without compromising their economic viability. In addition, Nidus Lab has expanded its scope to industrialised construction, a solution that **reduces material waste from 38% to 5% and optimises the use of resources such as water and energy.**

This tangible impact shows that **sustainability is not only compatible with innovation but can be its main driver**. From architectural design to component manufacturing, Nidus Lab contributes to transforming the real estate sector towards a more efficient, responsible model aligned with the climate and social challenges of today.

How to scale innovative solutions in a fragmented environment

Scaling an innovative solution in the real estate sector involves facing a complex ecosystem, marked by its high fragmentation and uncollaborative work dynamics. In this context, the **ability to adapt** becomes a decisive factor. As Ana points out, "each project is a prototype", which **requires flexible tools that respond to the particularities of each case.**

Nidus Lab has managed to consolidate itself thanks to a **modular approach**, which allows its technology to be applied in different areas, from affordable housing to industrialised construction, without losing efficiency or precision. This versatility has been key to **overcoming barriers to entry in a market that is traditionally resistant to change**. In addition, the deep knowledge of the sector on the part of the founding team has facilitated the integration of the tool into real processes, generating trust and concrete results.

The structural challenge of housing in Spain

The housing situation **in Spain** is one of the country's great social and economic challenges. Ana explains it clearly, providing data that reflect the magnitude of the problem: "By 2050 there will be more than 13 million homes that will not be able to be rented or sold". This statement, based on the energy efficiency requirements imposed by European legislation, underlines the urgency of acting today with solutions that allow us to anticipate this scenario.

From her experience, Ana identifies two major bottlenecks: on the one hand, the lack of industrial capacity to respond to demand; and, on the other hand, the need to make sustainable decisions in earlier phases of the project.

"Spain does not have the industrial capacity to build more than 80,000 homes a year, knowing that 200,000 homes are being formed annually," he warns. This gap between supply and demand not only compromises access to housing, but also limits the possibility of scaling innovative solutions.

In this context, Nidus Lab is committed to tools that help accelerate and optimise decision-making, especially in affordable housing projects. As Ana explains, *"we think that affordable housing is going to be a fundamental contribution",* and that is why they have adapted their technology to respond to the particularities of this segment.

Its proposal is not only technological, but also strategic: **anticipating, industrialising and facilitating responsible decision-making to move towards a more accessible, efficient and sustainable housing model**.

Tips for entrepreneurs in the real estate sector

Entrepreneurship in a traditional sector such as real estate involves facing multiple challenges, from resistance to change to regulatory complexity. Ana avoids talking about advice as universal formulas, and prefers to share lessons based on her experience. "Advice is like salt, it is only given when it is requested," he says, claiming the **value of shared experience in the face of closed recipes.**

One of the elements that stands out is the importance of **knowing the sector in depth**. Having experienced the **real problems** up close allows us to identify opportunities more clearly and design solutions that respond to specific needs.

It also underlines **the value of reputation and credibility**, especially in sectors where trust is key to opening doors and consolidating alliances. In its case, **having the support of relevant actors in the sector was decisive in validating Nidus Lab's proposal and accelerating its adoption.**

In addition to knowledge and experience, Ana values **personal attributes such as resilience, perseverance and the ability to inspire with a clear vision**.

In its history, these elements have been as important as technology, allowing it to move forward in a demanding environment and build a proposal that connects with people and with the real challenges of the sector.

The role of public initiatives in supporting entrepreneurship

Public initiatives have played a key role in driving projects like Nidus Lab, especially in their early stages. Ana highlights the value of programmes such as those of **ICEX and Red.es** and the **ONE Platform**, which not only offer **financial support, but also access to strategic knowledge, international networks and spaces for visibility.** *"They put a springboard for you, but the one who jumps is you,"* he says, acknowledging that, although these tools are essential to generate opportunities, it is the initiative of the entrepreneur that turns that impulse into concrete results.

Beyond financial **support**, what makes the difference is the firm commitment to entrepreneurship, regardless of the size of the companies. This vision allows innovative and disruptive solutions, often developed in small and agile structures, to reach traditional sectors and generate real impact. In the case of Nidus Lab, **institutional support has been essential to validate the proposal**, open doors and accelerate its positioning in the market.

This type of support, when articulated with a vision of the future and sensitivity to the entrepreneurial ecosystem, helps to energise sectors that need to be renewed without losing their essence. And, above all, **it allows talent and innovation to find ways to grow solidly.**

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