

PROYECTOS INTEGRALES

FARMACIA ALBIOL

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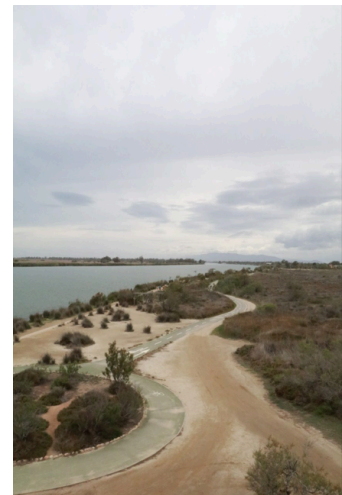
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INVESTIGATE

1. THE PLACE

Farmacia Albiol, located at c/ Bruc 21, Jesús i Maria, Deltebre, is situated within the Delta de l'Ebre, an area of high ecological value classified as a biosphere reserve (UNESCO, n.d.). The region is characterized by its rich wetlands, formed over millennia by the deposition of silt and sediments from the Èbre River. This natural process has created fertile soils that support local rice cultivation, fishing, shellfish production, and nature-based tourism (Wikipedia, n.d.).

The pharmacy is geographically located near a pitch camp and an elementary school, within an area intersected by the Esquerra de l'Ebre canal and an extensive network of drainage systems that create rice and vegetable fields. Local construction materials include riparian forest wood (poplar, willow, tamarisk), reeds (*Phragmites australis*), rice straw, clay and silt, and sand from coastal areas. These materials are historically and culturally significant, often used for eco-friendly and traditional building techniques, including wall plasters, adobe bricks, light timber structures, and eco-insulation panels. Additionally, aromatic and medicinal local plants are utilized in interiors for wellness, aesthetic, and functional purposes, including eco-packaging and artisanal products. The pharmacy also incorporates sustainability practices such as medicine container recycling and prioritizing environmentally responsible materials, reflecting the region's ecological sensitivity.



Delta de l'Ebre, april 2024

2. DEMOGRAPHY AND CULTURE

The population of the Delta de l'Ebre region is approximately 11,941, with men numbering around 6,020 and women slightly over 5,900 (INE, 2024). Age distribution shows an aging population, with 22–23% over 65 years, 62–63% aged 18–64 years, and less than 15% aged 0–17 years. The average age of residents in Terres de l'Ebre is approximately 45 years.

Rural pharmacies like Farmacia Albiol play an essential role as trusted local services, particularly for elderly populations and residents with limited mobility. The culture of Deltebre is strongly linked to its natural environment, rice cultivation, fishing, and unique landscape. Eco-tourism and festivals, such as the Festa de l'Arròs, are integral to the local identity. Historically, the delta was challenging to inhabit due to swamps and disease. Families settled in the 19th century, establishing rice cultivation as the economic foundation. Municipal independence in 1977 enabled the area to develop a strong communal identity centered around agriculture, fishing, and local traditions.

3. *CONTEXT*

Modern pharmacies in rural areas are evolving beyond medication dispensing, embracing integrative health practices, sustainability, and community engagement (UNPF, 2023). Integrative health encompasses classical medicine, phytotherapy, aromatherapy, micronutrition, wellness, prevention, and active listening. These approaches enhance the pharmacist's advisory role, helping manage chronic conditions, stress, and fatigue.

Environmental sustainability is becoming central to pharmacy practice, including eco-conscious formulation, waste reduction, and sourcing responsible raw materials. Collaborative care models, where pharmacists, doctors, and nurses work together, support patient-centered healthcare while addressing staff shortages (Ninane et al., 2010). AI tools are also increasingly applied to enhance promotional strategies and patient guidance.

Magistral preparations and individualized care are key aspects of integrative health, emphasizing the pharmacist's role within the local ecosystem. By integrating natural and conventional therapies, pharmacists can expand their clientele, reinforce community trust, and align with sustainable and economically viable practices (Stefanie, 2025).

4. *ABOUT BIO DESIGN*

Biomimetics, or biomimicry, studies how animals adapt and behave in their environments and applies these principles to human design and construction. Biomimetic construction aims to create buildings that adapt to and respect their surroundings, taking inspiration from nature to achieve harmony and sustainability. Animals are considered ideal builders, achieving environmental balance, whereas human activity often disrupts ecosystems. By learning from natural systems, architects and designers can develop structures that are ecologically sensitive, resilient, and efficient, aligning with sustainable development goals (Biomimicry Institute, n.d.).

Biophilic design is an architectural and interior design approach that seeks to connect people with nature within built environments. It integrates natural elements such as plants, water, natural light, textures, and organic forms to create spaces that enhance well-being, reduce stress, and improve productivity. By incorporating patterns, materials, and colors inspired by the natural world, biophilic design fosters a sense of calm and connection to the environment.

In practice, this can include green walls, indoor gardens, natural ventilation, daylight optimization, and the use of natural materials like wood, stone, or clay. Beyond aesthetics, biophilic design contributes to ecological sustainability, encourages healthier lifestyles, and reinforces the psychological and physical benefits of human-nature interactions.

5. ABOUT THE SHELVING

Efficient shelving is a cornerstone of pharmacy operations, shaping both workflow and customer experience. In a space that must accommodate a wide range of medications, medical supplies, and wellness products, a thoughtfully designed shelving system enhances accessibility, organization, and efficiency. Proper shelving ensures optimal use of space, allowing the pharmacy to maintain a comprehensive inventory without compromising safety or ease of access. Beyond storage, shelving plays a key role in inventory management: categorizing items by type, purpose, or expiration date facilitates stock rotation, prevents errors, and reduces the risk of misplaced or expired products.

Accessibility and speed are equally important. Well-organized shelves with clear labeling enable pharmacy staff to locate and retrieve items quickly, which improves service and customer satisfaction. When selecting shelving, material quality and durability are essential considerations. Shelves constructed from strong, stable materials such as steel or aluminum provide long-term reliability, capable of supporting the weight of pharmaceuticals and other products. Adjustable shelving enhances flexibility, allowing for customization to accommodate items of varying sizes, from large medication bottles to small instruments. Modular and expandable systems further support adaptability, enabling reconfiguration as inventory and spatial needs evolve over time.

Accessories can enhance functionality and organization. Drawer units offer convenient storage for small items like blister packs, syringes, and instruments. Bin dividers help separate loose supplies such as gloves, cotton swabs, or bandages, preventing clutter and simplifying retrieval. Label holders provide clear, adaptable identification for every shelf, ensuring accurate stock management. Wire baskets and hanging bins are ideal for bulkier or irregularly shaped items, keeping them accessible while maintaining visual order.

In Deltebre, the natural environment offers abundant inspiration for shelving design. The Ebro Delta is rich in silica-rich sand and silt, clay, and mud, traditionally used in ceramics and earth-based construction. Locally available materials can be stabilized or combined to create durable, eco-friendly shelving solutions: for example, clay mixed with straw and lime (adobe or cob) provides strength and texture; clay with sand and cement (compressed earth blocks) can form integrated shelving niches within walls; and clay plaster applied over wooden or metal supports creates visually appealing, functional shelving. Shelves built directly into earthen walls, such as rammed earth or adobe, are common in sustainable architecture and lend an organic, sculpted quality to interior spaces.

The Delta's sands also carry symbolic significance. While local sand cannot be used directly for industrial glass production due to impurities, it evokes the natural clarity and transparency of the Delta landscape. By combining recycled Catalan glass with these materials, shelving

and display surfaces can reflect light and openness, connecting the pharmacy's interior to the region's identity and natural beauty. Industrial support from nearby Tarragona enables refinement and supply of key materials for glass production, ensuring that the pharmacy can integrate sustainable, high-quality glass elements while remaining locally rooted.

In sum, pharmacy shelving in Deltebre is not merely functional; it becomes a design element that supports workflow, enhances customer experience, and expresses a sense of place. By blending accessibility, durability, modularity, and locally inspired materials, shelving can embody both practicality and the unique ecological and cultural identity of the Ebro Delta.

OBSERVE

1. QUESTION TO A PHARMACIST

Q: How do you see the balance between being a healthcare space and a retail space?

A: Healthcare always comes first. Our priority is providing safe advice, integrative health solutions, and personalized care. At the same time, we understand that product presentation and accessibility are part of the retail aspect. To balance both, we separate counseling areas from product displays, making sure the commercial side doesn't interfere with privacy or trust.

Q: What's most important for you behind the counter?

A: Listening and understanding. Every interaction is an opportunity to guide patients, detect potential health concerns, and provide tailored recommendations. Accuracy, empathy, and confidentiality are the pillars of our work.

Q: What kind of environment would make customers more comfortable discussing health issues?

A: A calm, safe, and private environment. We use small consultation spaces, partitions, and natural materials inspired by the Delta, like wood and silt tones, to create warmth. Soft lighting and acoustic separation help clients feel secure and focused during conversations.

Q: How do you ensure privacy when clients have to discuss medical and personal issues?

A: We have dedicated consultation areas away from the main floor. We also modulate our voice and use partitions or furniture to create discreet spaces. Clients are offered quieter corners if the pharmacy is busy. Every step is taken to maintain confidentiality.

Q: How do you handle situations when the pharmacy is crowded and people can hear your conversations with other clients?

A: We ask clients if they prefer moving to a quieter area or scheduling a later consultation. Acoustic design elements and strategic furniture placement help reduce noise, and staff are trained to be aware of privacy at all times.

Q: Would you think of any visual or spatial designs or organization in the pharmacy to help client privacy?

A: Yes. Natural screens, consultation booths, soft lighting, and intuitive layouts are very useful. Materials that give a sense of comfort and connection with nature, encourages openness.

Q: Is your pharmacy accessible for people with wheelchairs, visual impairments, or hearing impairments?

A: Yes, it is fully accessible. Aisles are wide for mobility devices, signage is clear, and staff assist discreetly when needed. We also provide seating areas for elderly clients or those waiting for consultations.

Q: Do you always need to help people reach products on different heights?

A: We try to place most products within easy reach, but staff are always ready to assist

respectfully when needed. This ensures that everyone can access products safely without feeling uncomfortable.

Q: Do you offer nutritional advice, dermoanalysis, or personalized consultations? Where are these done?

A: Yes, we offer nutritional advice, dermoanalysis, and personalized consultations in dedicated private areas. This allows for focused attention and confidentiality, reinforcing trust and professionalism.

Q: How close are you with your clients?

A: In a small community, trust and familiarity are essential. Many clients share lifestyle, dietary, and health information openly because they know we respect confidentiality and care about their wellbeing. Our relationships often extend beyond transactions, supporting long-term health and integrative care.

2. REFERENCES / INSPIRATIONS



Maggies center, Manchester



Pharmacy in Bad Leonfelden, Austria (2012)



Une Farmacia, Valencia, Spain

DEFINE

1. CONCEPT

Integrative Pharmacy

"I listen and I forget, I see and I understand, I do and I remember."

An integrative pharmacy combines conventional medicine with complementary therapies to support overall health and wellness. Rather than focusing solely on treating symptoms with prescription drugs, it considers the patient's physical, mental, and sometimes emotional well-being. Treatment plans may include natural remedies, lifestyle modifications, and preventative strategies alongside traditional medications, creating a holistic approach to care.

The pharmacy's aesthetic reinforces this philosophy through the use of natural, locally sourced materials such as riparian wood, clay, silt, rice straw, and reeds. These materials, combined with abundant natural light, plants, and organic textures, create a calming, restorative, and biophilic environment. The design fosters a sense of connection to nature, promotes well-being, and reflects the Delta de l'Ebre's ecological and cultural identity, making the space not only functional but also visually and emotionally supportive for patients / clients.

2. NEEDS - PROGRAM

Accessibility, clarity, and a welcoming atmosphere are key priorities. A dedicated space for integrative health, organized around a smart counter, provides a distinctive and highly valued feature where patients can receive advice, personalized consultations, and guidance on natural or lifestyle-based therapies. This design emphasizes both functionality and comfort, reflecting the pharmacy's holistic and community-centered philosophy.



IDEATE

1. MATERIALITY

Moodboard



Walls.

The Ebro Delta provides all the essential ingredients for an earthen architecture deeply rooted in place. The pharmacy's interior walls are constructed using cob, a traditional technique that blends clay-rich soil, silt, sand, water, and rice straw harvested from the surrounding agricultural landscape. These materials, shaped by centuries of river deposits and farming practices, transform the walls into a direct extension of the Delta itself.

Historically, earthen construction has been part of local vernacular architecture, particularly in rural houses where thick clay-based walls offered natural comfort without mechanical systems. Reintroducing cob in a contemporary pharmacy setting revives this knowledge while adapting it to modern functional requirements.

Cob walls act as a breathing skin, constantly regulating moisture and contributing to a stable indoor climate. This is especially valuable in a pharmacy, where humidity control supports both pharmaceutical preservation and user comfort.

Humidity regulation: Clay absorbs and releases moisture naturally, reducing condensation and creating a stable environment.

Low environmental impact: Cob relies on minimally processed, local materials with extremely low embodied energy.

Thermal and acoustic comfort: Thick earthen walls store heat and dampen sound, enhancing spatial quality.

Material honesty: The sculptural, hand-formed character reinforces the biophilic design concept.

While cob is strong and durable, exposed earth surfaces require protection in a public interior. A lime plaster finish is applied to all walls, strengthening the surface while remaining fully compatible with the earthen substrate.

Lime plaster enhances durability, reduces surface wear, and prevents staining, all while maintaining breathability. Its natural antibacterial properties make it particularly suitable for healthcare-related spaces, where hygiene and cleanability are essential. As it cures, lime absorbs CO₂ from the air, further reinforcing the project's low-impact approach.

This combination of cob and lime plaster has been tested across cultures and climates. A notable reference is the METI Handmade School in Bangladesh, where clay-and-straw walls finished with plaster demonstrate how earthen construction can perform reliably in public buildings. Similar techniques appear throughout Mediterranean vernacular architecture, where earth and lime were historically paired to create resilient, long-lasting interiors.

Floor.

The pharmacy floor continues the dialogue with the landscape through a stabilized earthen floor, composed of local clay, silt, sand, and lime. Compacted in layers, this floor becomes a continuous, seamless surface that feels both solid and grounded underfoot.

Lime stabilization improves resistance to wear and cracking, allowing the floor to perform well in a high-traffic public environment. Like the walls, the earthen floor contributes thermal mass and humidity regulation, enhancing indoor comfort naturally.

To meet the functional demands of a pharmacy, the floor is sealed with a natural oil or wax finish. This protective layer reduces dust, limits absorption, and simplifies cleaning, while preserving the natural texture and breathability of the earth.

Benefits of the stabilized earthen floor:

Durability: Compaction and lime stabilization create a hard, long-lasting surface.

Thermal comfort: High thermal mass supports passive temperature regulation.

Low-impact construction: Minimal processing and local sourcing reduce environmental footprint.

Visual continuity: The floor reinforces the biophilic identity of the interior.

A strong precedent for this approach can be found again at the METI Handmade School, as well as in the Japanese Tataki technique, where earth mixed with lime is compacted to form robust, enduring floors. Though culturally distinct, Tataki shares the same material logic and performance principles as the proposed pharmacy floor.

Surfaces.

While earth defines the structure and storage elements of the pharmacy, work surfaces require a material that can withstand frequent contact, cleaning, and daily use. For this reason, the countertops are finished with álamo (poplar) wood, a locally sourced material traditionally found along the riverbanks of the Ebro Delta.

Álamo is lightweight, renewable, and easy to work with, making it ideal for precise carpentry applications. Though naturally pale in color, the wood is treated with natural finishes to achieve a deeper tone, enhancing durability and creating a visual contrast with the earthen surroundings.

Comfort and hygiene: Provides a smooth, warm surface suitable for daily handling and cleaning.

Local sourcing: Reinforces the project's commitment to regional materials and craftsmanship.

Visual balance: The refined wooden surface complements the tactile earth walls and shelves.

Renewability: A fast-growing species with a low environmental footprint.

Together, the cob structure and álamo countertops create a balanced dialogue between raw, earthen mass and precise, human-scale surfaces. This combination ensures that the pharmacy is not only sustainable and locally grounded, but also practical, hygienic, and welcoming for everyday use.

Shelves.

The pharmacy shelving system is not added onto the space but grown from the walls themselves. Formed directly from cob, the shelves become an integral part of the interior architecture,—while reducing the need for additional materials or manufactured furniture.

Cob's compressive strength and moldability allow shelves to be shaped into soft, organic forms that reflect the handmade character of the space. To ensure safety and performance in a pharmacy context, where shelves must support significant loads, a concealed metal reinforcement is embedded within the cob structure. This hidden support system guarantees structural reliability without compromising the natural aesthetic.

Material continuity: Using the same earth mixture for walls and shelves reinforces visual and tactile unity.

Structural efficiency: Built-in elements reduce material waste and simplify construction.

Biophilic expression: Curved, earthen forms soften the interior and strengthen the connection to nature.

Low environmental impact: Earth and straw form the primary structure, with metal used only where necessary.

As with the walls, all shelves are finished with lime plaster, creating a smooth, hygienic surface that resists wear and staining while remaining breathable. Lime plaster also makes routine cleaning easy, ensuring that the shelves meet healthcare standards without losing their natural character.

By combining cob walls, stabilized earthen floors, integrated earthen shelving, lime plaster finishes, and locally sourced álamo wood, the pharmacy interior becomes a coherent material ecosystem. Each element supports the biophilic concept, responds to functional healthcare requirements, and draws directly from the landscapes and traditions of the Ebro Delta. The result is a space that feels rooted, healthy, and contemporary—where architecture, nature, and care intersect.

This approach not only reduces the pharmacy's environmental footprint but also strengthens its connection to the community and landscape.

Local Craftsmanship: By engaging local artisans, the project supports regional traditions and creates a unique, handcrafted space.

Educational Value: The use of natural materials can become a conversation piece, educating customers about sustainable practices and the Delta's natural resources.

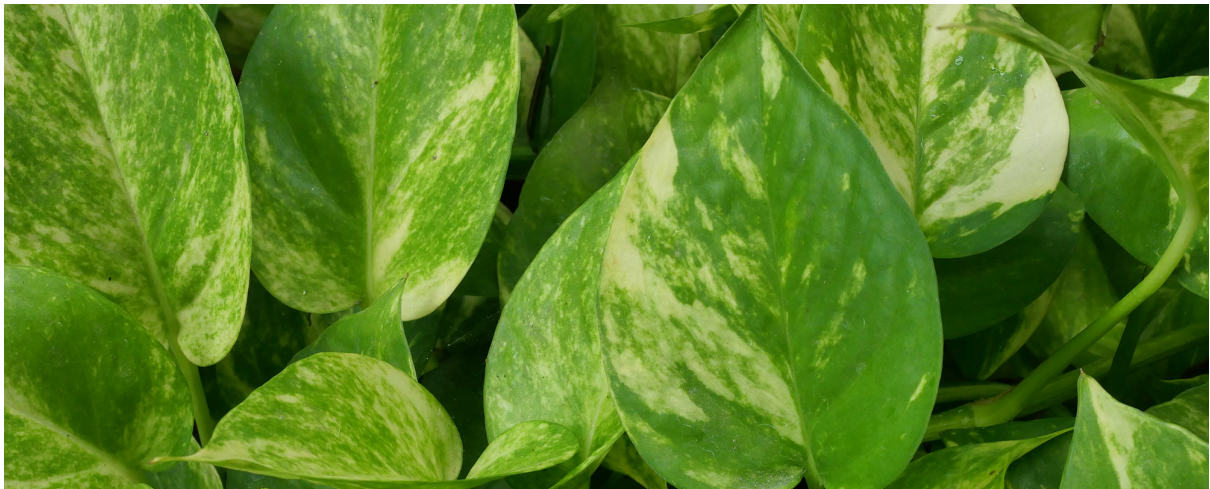
2. *BIOPHILIC DESIGN*

Fern: Ferns like *Nephrolepis exaltata* (Boston fern) or *Adiantum* (maidenhair fern) are ideal for indoor spaces because they purify the air, are easy to maintain, and add a touch of natural greenery.



Pothos (*Epipremnum aureum*): A versatile climbing or trailing plant that thrives indoors and purifies the air. It can be used to create "living walls" or suspended decor.

Philodendron: These plants are robust, purify the air, and varieties like 'Brasil' or 'Moonlight' are excellent for indoor spaces.



Sansevieria (Snake Plant): Very resilient, requiring little water and effective at air purification. It's ideal for areas with lower light conditions.



The Ebro Delta pharmacy can be more than just a healthcare facility, it can be a living example of how local materials and biophilic design can elevate both well-being and sustainability. By embracing the region's natural offerings, it becomes a space that respects the land, supports local economies, and provides a healthier environment for all.

In a world where wellness and environmental care are increasingly intertwined, this pharmacy stands as a beacon of innovative, place-based design, a place where the natural and the necessary blend seamlessly together.

3. AIR FILTRATION, SMART LIGHTING, AND CLIMATE CONTROL SYSTEMS

In our biophilic pharmacy project, we plan to incorporate advanced systems to enhance air quality and well-being for both customers and staff. Here's how we intend to apply these technologies:

Enhanced Air Filtration Systems

Air-Purifying Plants: We will integrate plants known for their air-purifying abilities, such as Pothos (*Epipremnum aureum*), Philodendron, and Sansevieria (Snake Plant). These plants not only beautify the space but also contribute to natural air purification, removing pollutants and improving indoor air quality. For example, the Peace Lily is effective in removing benzene, formaldehyde, and trichloroethylene from the air.

Technological Air Purification Systems

HEPA Filters and Air Purifiers: In addition to natural methods, we will use HEPA filters and air purifiers to remove airborne particles, allergens, and pollutants. These systems can be placed strategically in high-traffic areas or near products that may release chemicals or particles.

Smart Lighting Systems

Circadian Lighting

Circadian Lighting Solutions: We will implement lighting systems that mimic natural daylight patterns. These systems adjust color temperature and brightness throughout the day to support the body's natural circadian rhythms. For example, warmer light in the morning and evening (2700K-3000K) to promote relaxation, and cooler, brighter light during the day (4000K-5000K) to enhance alertness and productivity.

Dimming Capabilities: The lighting system will include dimming features to allow for adjustments based on natural light availability and specific tasks, ensuring energy efficiency and user comfort.

Climate Control :

Smart Thermostats: These will be installed to control the temperature in each zone based on occupancy, time of day, and outdoor temperature. For example, during peak hours (when the pharmacy is busiest), the temperature can be slightly adjusted to maintain comfort and medicine conservation.

Sensors: Sensors will monitor temperature, humidity, and CO2 levels to ensure the indoor air quality is always optimal. This data will also help in optimizing the HVAC system's performance.

Integration & benefits.

The integration of these systems will create a holistic environment that supports both physical and mental well-being. Natural air purification, circadian lighting, and climate control work together to reduce stress, enhance comfort, and improve the overall health of those in the pharmacy.

While the initial investment in these systems may be higher, they contribute to energy efficiency in the long run. For example, smart lighting and zoned climate control reduce unnecessary energy use, and air purifiers lower the load on HVAC systems. A healthier environment translates to a better customer experience. Clean air, comfortable temperatures, and natural lighting can enhance the ambiance and make customers feel more at ease during their visit. By integrating advanced air filtration, smart lighting, and climate control systems, the pharmacy will not only meet the functional needs of a healthcare setting but also create a welcoming, healthy environment that supports the well-being of everyone who enters. These systems, combined with biophilic design elements like natural materials and abundant natural light, will set a new standard for pharmacy design, demonstrating a commitment to health, sustainability, and customer care.

4. PRODUCTS

Main service counters.

The pharmacy includes two main service counters designed to support fast, efficient, and organized daily work. These counters are used for standard customer service and are fully integrated with computers and digital systems.

When a customer arrives with a doctor's prescription (printed paper), the counter includes a document scanner, similar to a product barcode scanner. The prescription is scanned and immediately appears on the computer screen, reducing manual input and saving time. At the same time, the system shows the exact location of the medicine inside the storage drawers. The drawer containing the medicine is highlighted on the screen in red, allowing the pharmacist to locate it quickly without searching, maintaining a fast and smooth workflow.

The counters include multiple drawers and large storage compartments to store medicines and larger pharmacy items in an organized way. This layout improves efficiency and keeps the workspace clean and easy to manage. All corners of the counters are rounded, both to improve circulation and safety and to match the organic, biophilic language of the interior. The chosen materials make it easy to achieve these soft, curved forms.

The counter structure is made from cob, composed of clay, silt, sand, and straw, which allows sculptural shaping and rounded edges while maintaining a strong and stable base. The working surface is finished with álamo (poplar) wood, a lightweight and locally available material from the Ebro Delta. Although naturally light in color, the wood is treated with finishes to achieve a darker tone, improving durability, hygiene, and visual contrast.

This combination of natural materials and smart digital integration creates counters that are warm and human-centered, while still fully supporting the technical and functional needs of a modern pharmacy.

Smart counter.

The smart counter is located in a corner of the pharmacy to provide greater privacy and comfort for customers during consultations. Its position creates a semi-enclosed area that reduces visual and acoustic exposure, allowing more personal interaction between the customer and the pharmacist.

The counter includes an integrated standing platform that measures the customer's weight. The height measurement is carried out through a vertical element that rises from the counter and is attached to the ceiling. This upper element contains the height-measuring device, ensuring accurate measurement while keeping all technical components integrated into the design.

The upper structure also serves as a support for integrated lighting and plants, combining technical functions with biophilic elements. The lighting provides focused illumination for the consultation area, while the plants improve the atmosphere and reinforce a calm, natural environment.

A lower curved surface is incorporated into the counter design, allowing customers to comfortably place personal items during the consultation. The smart counter also includes an interactive tablet screen, enabling customers to search for medicines and products and

check their availability in the pharmacy, reducing waiting time and supporting efficient service.

The structure of the smart counter is made from cob (clay, silt, sand, and straw), which allows smooth, rounded forms that align with the overall interior concept. All cob surfaces are finished with lime plaster for durability and hygiene. The working and touch surfaces are finished with álamo (poplar) wood, treated to a darker tone for improved resistance and visual contrast.

This smart counter combines privacy, health monitoring, digital support, and biophilic design, creating an efficient and human-centered element within the pharmacy interior.

Shelving system.

The pharmacy interior includes a diverse shelving system composed of multiple shelf types, all designed to work together as a coherent and unified system. While the shapes, positions, and functions vary, all shelves follow the same curved, organic design language and material strategy, reinforcing the biophilic concept of the space.

The shelving system includes semi-freestanding rounded shelves positioned near the entrance, which help define space and guide circulation while acting as product display elements. These shelves are partially detached from the wall and act as sculptural objects within the interior.

Along the walls, there are wall-mounted shelving units with a straight rear surface for secure fixing and a curved front profile that softens the space and improves circulation. These units maximize storage while maintaining visual continuity with the rest of the interior.

The pharmacy also includes compact rounded display shelves, designed for small and lightweight products. These shelves create a rhythmic and modular presentation, adding visual interest without overcrowding the space

In the central areas, large rounded shelving structures extend from floor to ceiling, acting as strong vertical display elements and spatial markers within the pharmacy. These shelves emphasize height and visibility while maintaining a sculptural and organic presence

In addition, the pharmacy includes a movable shelving system placed in front of a large window. This unit extends from floor to ceiling and is designed with sliding panels that adjust depth, allowing flexible display and light filtering. A rear glass enclosure preserves natural light, while lockable wheels allow the unit to be repositioned as needed while maintaining stability

Finally, a continuous modular shelving system wraps across one of the pharmacy walls, combining vertical shelving with integrated lower cabinets for efficient storage and organization

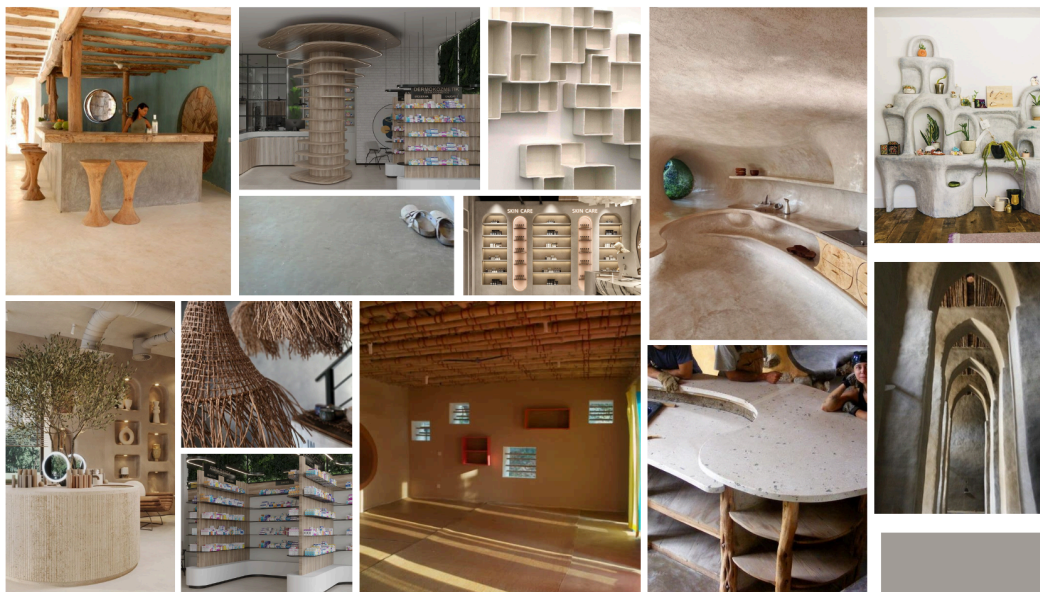
All shelves are visually made from cob, composed of clay, silt, sand, water, and straw, maintaining material continuity with the walls and counters. The shelves appear monolithic and natural, but their structural performance is ensured by a concealed internal metal

structure. This metal reinforcement is fully hidden inside the cob and is responsible for carrying both light and heavy pharmacy products, making the shelves suitable for everyday use without risk of cracking or deformation.

The internal metal structure follows the curved geometry of each shelf, allowing organic forms while ensuring strength and stability. This system allows the cob to act as the visible material and form, while the metal provides the necessary load-bearing capacity. No wooden shelving elements are used; all products are placed directly on the cob shelves, which are structurally reinforced from within.

All cob shelving surfaces are finished with lime plaster, which improves durability, reduces surface cracking, and creates a smooth, hygienic, and easy-to-clean finish appropriate for a pharmacy interior. The rounded edges of the shelves improve safety, circulation, and visual softness, and are easily achieved thanks to the plastic nature of cob.

The same construction logic is applied to fixed shelves, freestanding central shelves, vertical floor-to-ceiling shelving elements, and movable shelving units, ensuring consistency across the entire interior. This approach allows flexibility in layout while maintaining a strong material and conceptual coherence.



CONCLUSION

This pharmacy project demonstrates how architecture, materiality, and healthcare can converge into a single, coherent vision rooted in place, care, and sustainability. By drawing directly from the natural and cultural landscape of the Ebro Delta, the design transforms local materials—clay, silt, rice straw, lime, and poplar wood—into a contemporary interior that supports both physical well-being and emotional comfort. The use of cob walls, stabilized earthen floors, and integrated earthen shelving creates a continuous, breathable, and tactile environment that naturally regulates humidity, temperature, and acoustics—key factors in a pharmacy setting. Lime plaster finishes ensure durability, hygiene, and ease of maintenance, while maintaining compatibility with earthen substrates. Álamo wood countertops introduce a refined, human-scale surface that balances the raw earth with functional precision.

Beyond material performance, the project embodies the principles of integrative and biophilic design. The interior is conceived not only as a place for dispensing medication, but as a calm, welcoming space for listening, advising, and supporting community health. Natural materials, organic forms, plants, daylight, and smart environmental systems work together to reduce stress, encourage trust, and enhance the overall experience for both clients and staff.

Ultimately, this pharmacy becomes a living extension of the Delta de l'Ebre—a space that respects local ecosystems, values traditional knowledge, and meets contemporary healthcare needs. It stands as an example of how sustainable, place-based design can strengthen community identity, reduce environmental impact, and redefine the role of everyday healthcare spaces.

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