

Achievements in medicine and changes in modern lifestyles have resulted in longer average life expectancies, necessitating a type of housing that can support the dweller through various stages of life, in particular accounting for the demands of old age. Currently, health care practices and housing design compel the elderly to relocate, often to an institutional facility, to receive proper care and accommodation. Given the rising numbers of elderly, this practice raises serious questions of affordability, availability, and accessibility. As a solution to these issues, Thinking Ahead! proposes a new type of domestic space that through its form, materials, and new technologies can satisfy the needs of a dweller from birth to life's end. At its physical core, this new type of dwelling features a health center that can support the resident's independence in their advanced years.

Since 1980, Mexico has seen a considerable increase—26 percent—in its over sixty-five population. This dramatic demographic shift redirected attention to the question of aging in a way that is unprecedented in Mexico, ushering in a period where it will soon become unfeasible to apply current healthcare models in the face of the drastic increase in demand on the system. Furthermore the current healthcare model of institutionalized housing for the elderly runs counter to deep Mexican tradition of living in the same home from birth to death. Thinking Ahead! thus proposes a new model, where this increase in demand will be met through the necessary convergence of healthcare and housing, manifested in a newly conceived home. This home will take on the role of surrogate caregiver, adapting to the various needs of the dweller in terms of form, materials, and new technologies.

While the Thinking Ahead! model is a response to Mexico's population, weather, culture and infrastructure, Thinking Ahead has a global resonance given that the twenty year projections for populations over the age of 65 show a dramatic increase worldwide: a 65 percent increase in Latin America, a 59 percent increase in Asia, a 45 percent increase in the United States, and a 32 increase percent in Europe.

The architectural form of the Thinking Ahead! house is generated by the consideration that while the need for social spaces, workspaces, and entertainment spaces fluctuate during a person's lifetime, the need for spaces for resting (bedroom) and hygiene (bathroom) remains constant or even increases as the dweller ages. Informed by this programmatic analysis, the Thinking Ahead house creates a central structural core around

the bathroom containing all the mechanical and digital technology required for the dwellers. A continuous belt envelops the core creating a kitchen that evolves into a bed that then evolves into the memory space—a space where the dweller downloads images, videos, voices, etc, that he or she can later share with family and friends—leaving the rest of the space and program flexible enough to accommodate any type of dweller.

The bathroom, as currently designed in most houses, poses the most difficulties in adapting to the aging body, often prompting the dweller to leave their house for a more accessible environment. Thinking Ahead! re-conceives the bathroom as a health center, responsive to functions of hygiene, health testing, medical recording, and well-being, alleviating the difficulties posed by such simple tasks as bathing, maintaining cleanliness, and fostering mobility. With this in mind, in designing the form of the space sharp corners are avoided, since they would be harder to keep clean and are potentially dangerous in the case of a fall.

The use of new technologies within the Thinking Ahead! health center is informed by the fundamental belief that prevention is the best form of health care. Therefore, the architecture is imbedded with technologies that in various ways record the patterns of health of the dweller throughout his or her lifetime, thereby developing a personal lifetime medical record. When the dweller finally is infirmed or aging, these same systems are able to utilize this accumulation of information to better respond to fluctuations in normal health patterns. Specifically, these devices include:

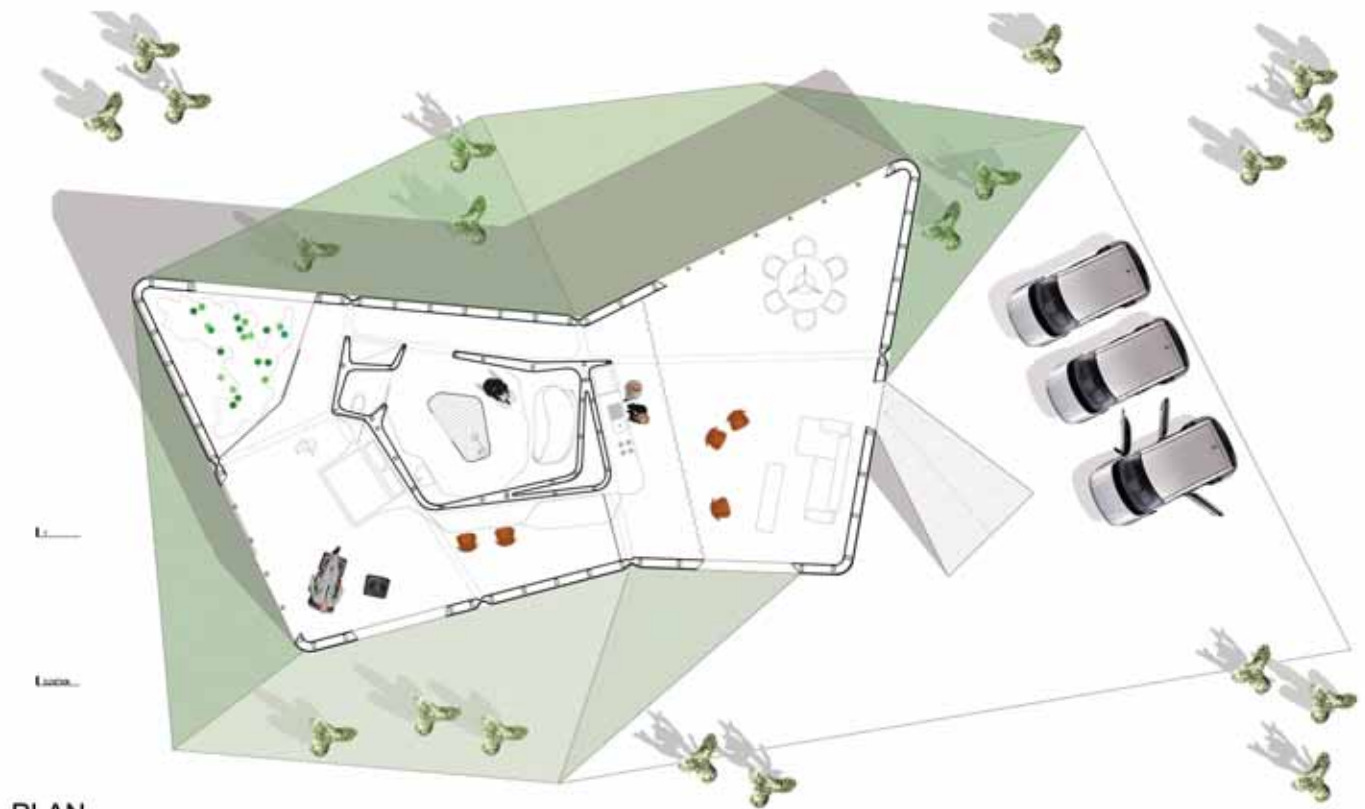
Body scanning showers: these showers create ultrasound images of the body that can be projected onto the glass enclosure, taking advantage of the capacity of water to transmit electrical signals.

Medical testing toilets: bodily chemical levels are monitored through evaluating their concentration within the urine on a daily basis and projected on an image mesh that is enclosing the space.

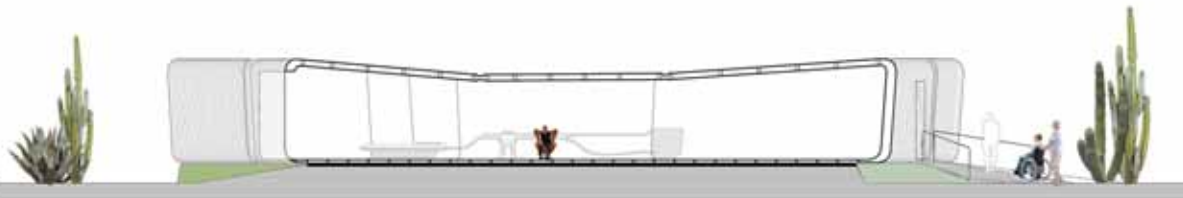
Floors that adjust to changing posture: through optical detection technology, the height of the floor adjusts to accommodate changing posture of the body over time. Additionally, pressure sensitive floors build profiles of normal gait patterns and detect when fluctuations in weight and bone alignment occur.

Medicine chests that monitor prescriptions: medicine chests

LAYOUT, SECTION, AND ELEVATION OF THINKING AHEAD!



PLAN

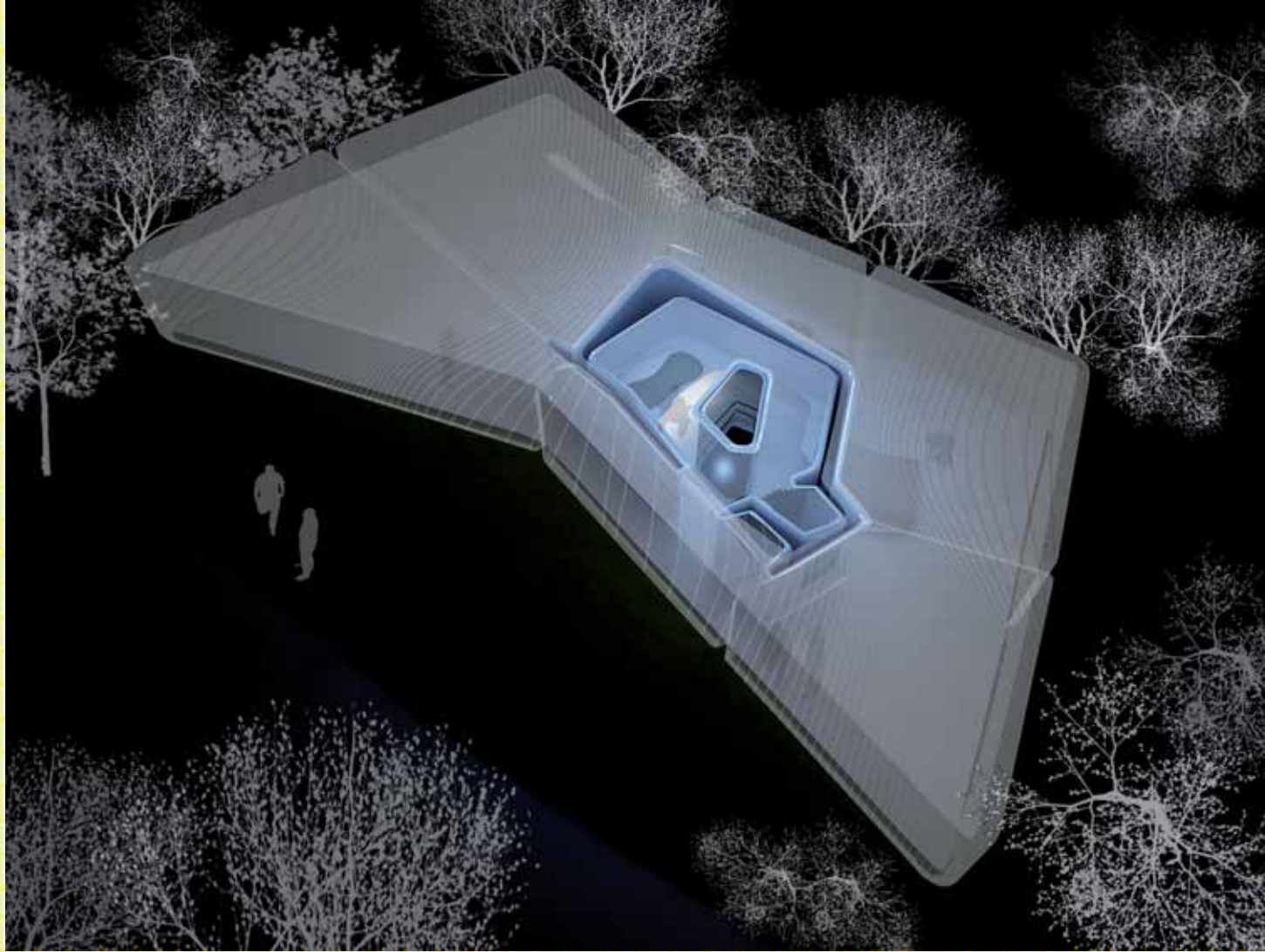


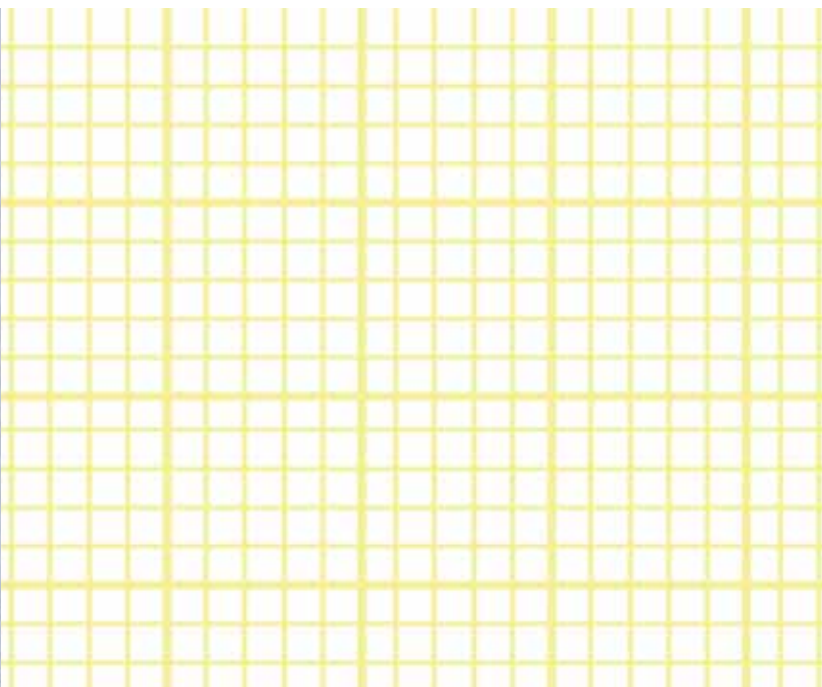
SECTION 1



ELEVATION

THE THINKING AHEAD! HOUSE CREATES A CENTRAL STRUCTURAL CORE AROUND THE BATHROOM, CONTAINING ALL THE MECHANICAL AND DIGITAL TECHNOLOGY REQUIRED FOR THE DWELLERS.





IN THE MEMORY SPACE DWELLERS DOWNLOAD IMAGES, VIDEOS, VOICES, THAT THEY CAN LATER SHARE WITH FAMILY AND FRIENDS.

A CONTINUOUS BELT ENVELOPS THE CORE OF THE HOUSE CREATING A KITCHEN THAT EVOLVES INTO A BED THAT THEN EVOLVES INTO THE MEMORY SPACE.

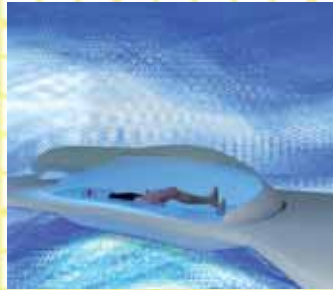


are combined with user interfaces to create a display that reminds the inhabitant of when to take medicines and perform procedures related to well-being. Additionally, these medicine chests create wellness portraits that monitor and save medical records.

Hydro/light therapy flotarium: A flotarium with built in digital communications access that can compensate for eight hours of regular sleep in a half hour session. For better rest, light emissions stimulate the brain during the resting period. The window that encloses the flotarium has built-in technology so the user can communicate to any cellular phone, computer, etc. and contact their loved ones.

Additionally, the Thinking Ahead! health center acknowledges the therapeutic value of natural light, incorporated as one of its most crucial systems. Through the use of a semi-opaque, light transmitting wall cladding in concert with fiber optic cables that carry natural light directly to these surfaces, the walls, ceiling, and floors themselves become the source of light. Thus, the ability to modulate the quality of light in the space becomes manifold with the move away from traditional isolated light sources to a space which itself emits light. As therapeutic as natural light is, its harshness can also be difficult to adjust to with failing eyes, causing discomfort and possible risk of falling or other dangers. Therefore, another critical feature of the Thinking Ahead! health center is an iris scanner that reads the eye's ability to adjust to light and feeds this information into the lighting system, automatically making the necessary adjustments.

The material used in the interior of the house is mainly resin flooring and Corian surfaces that are ergonomically shaped for each use and perfect for aseptic reasons. The use of special texture carpeting gives warmth to the space while the lighting of all the house comes from the surfaces (milled patterns in the back of the materials that work with a LED system) rather than an a traditional lamp system. The bedroom has additional stainless steel railings that adjust to help the dweller up or down.



THE FLOATARIUM OF THE THINKING AHEAD! HOUSE OFFERS A SPECIAL HYDRO/LIGHT THERAPY THAT CAN COMPENSATE FOR EIGHT HOURS OF REGULAR SLEEP IN A HALF HOUR SESSION.

FLOATARIUM WITH GRAPHIC WALL DESIGN BY MEXICAN ARTIST ANTONIO SANCHEZ

**Rojkind Arquitectos
(Michel Rojkind with Arturo Ortiz)
Thinking Ahead!**

Team
Agustin Pereyra, Andrew Pribuss, Moritz Melchert, Ulises del Ilano, Juan Carlos Vidals, Victor Hugo Jimenez, Gerardo Suarez, Rodrigo Segura & Tania Guerrero.

Graphics: Antonio Sanchez

Michel Rojkind was born in Mexico City in 1969 and studied architecture and urban planning at the Universidad Iberoamericana from 1989–94. After working on his own for four years, he teamed up with Isaac Broid and Miquel Adria in 1998 to establish Adria+Broid+Rojkind; he left the firm in 2002. With the idea of taking on new challenges that address contemporary society and design compelling experiences that go beyond mere functionality to connect at a deeper level with various needs, he established his independent firm rojkind arquitectos in 2002, listed by Architectural Record in 2005 as one of the best ten “Design Vanguard” firms of the year.

By addressing users’ needs directly and seeing them as potential sources of inspiration and strength, rojkind arquitectos seeks new directions in architectural practice by evoking common identities through the exploration of uncharted geometries that address questions of technology, materials, structure, and construction methods related directly to geography, climate, and local building conditions. By pursuing all projects that represent a particular challenge to design, Rojkind Arquitectos has been able to avoid any single specialization in any one field of architecture.

Together with Arturo Ortiz, Derek Dellekamp, and Tatiana Bilbao, Michel Rojkind founded MXDF Urban Research Center in 2004. The main object of MXDF is to

intervene in specific areas of the urban development, modifying the production of space in Mexico through the systematic study of social, political, environmental, global, and cultural conditions. In order to achieve this, MXDF has been collaborating with several universities in Mexico, Studio Basel, ETH Zürich, the Architectural Association in London, and MIT in Boston Massachusetts. MXDF is a non-profit organization.

Michel Rojkind has also served as the editor of the technology section “FWD” in the architecture journal Arquine international, and has been held several visiting professorships at several universities.

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