



~ planting seeds, harvesting balance ~

In the future, our way of life will be different as a result of our actions today. The population will be substantially larger, especially in developed countries, and significantly older. Natural disasters such as earthquakes, droughts and floods will become part of our daily routine.

Adaptation will be the greatest virtue in the middle of this century. The application of technology in future life systems will be a key to achieving this. In particular, the household system must be modified, due to the short time available to achieve home tasks, the space used for living, available natural resources and lifestyle. The preparation and storage of food and cleaning dishes and clothes will be presented in a different way to how we live today, hence the reason for this project.

The generation of the final concept was achieved through an appropriate methodology for an impalpable time, designing products for 2050. Through tools like Persona and Scenarios Analysis, we achieve insight into that world. Luis David (Persona) was beside us in every moment of the concept creation; his desires, fears, hobbies and lifestyle, went in our mind until the last minute.

"Luis David is a man of 45 years, owner of an import product company. The key to enter to Luis David life was his recent divorce and its complexity. What he needed was something that could begin again, with new strength and new opportunities. One of its main goals was to undertake the formation of a new home, where he felt relaxed, comfortable and had the opportunity to enjoy alone or with their children, now that everything had changed"

To achieve a concept that could express itself, was necessary an element collection of the known worlds, like the identity of Electrolux, symbols and components of products used for the same functions today and diverse metaphors. In order to achieve the full system design interaction, interface, information management and brand driven and the usability of this. As we mentioned before, the used technology - nanotechnology, superconducting materials and teleportation, to name a few - formed part of the project.

Finally, it was created Xilonen, a home system that meets the needs of the future, creating a perfect combination of the elements that compose it.

The perfect understanding between Xilonen and the user, get the right balance to leave aside the tedious tasks to venture to the magnificence of life.

Xilonen household atmosphere,

provides the user vital elements to grow from basic functional home appliances to a self-sufficient organism, environmentally committed, where the evolving agent is the user it-self. Like the breeder plants a seed, fertilizes it and picks the harvest, the user settles the appliance, grows it and achieves physical, mental, familiar and collective balance.

Xilonen is composed of 6 appliance seeds: the Wellness Canaliser, the Meal Guider, the Easy Dinning, the Outfit Renewer, the Energy Fields and the Comm' Impulser. The seeds perform 3 essential functions: Gathering-Feeding, Processing and Refreshing, which could be expanded thanks to 4 acquirable growers: Planning-Managing, Recognizing-Reacting, Involving and Assisting. The user, like a sower, carefully nourishes his seeds with applications adapted to his personal lifestyle.

Xilonen generates a power cascade by converting every single movement within the house into transferable energy for the seeds to function. If extra load of energy is generated, Xilonen gives them back to the common (neighborhood) energy source. It is a fair way to contribute and ensure the entire community.

The dynamism of Xilonen is primarily captured in the seeds' free movement through superconducting paths, placed at the Energy Fields and the Comm' Impulser panels. On the other hand, the system uses a more abstract form of dynamism, teleportation, which contributes the possibility of transferring the standard units from one seed to another.

Nanotechnology is represented in some materials applied in the seeds, which allows the necessary expansion to adapt to the user requirements, playing with the elasticity of its components. The nanomachines can create the seed once planted, as well as the creation of food in one of the stations in the Meal Guider.

The user is the center of Xilonen universe, therefore, each and every one of the functions are committed to his requirements. From the iris health check, to appropriate exercise recommendation, addition of vitamins in food or clothing, environment customization of the house, and the recognition of his favorite functions, among others.

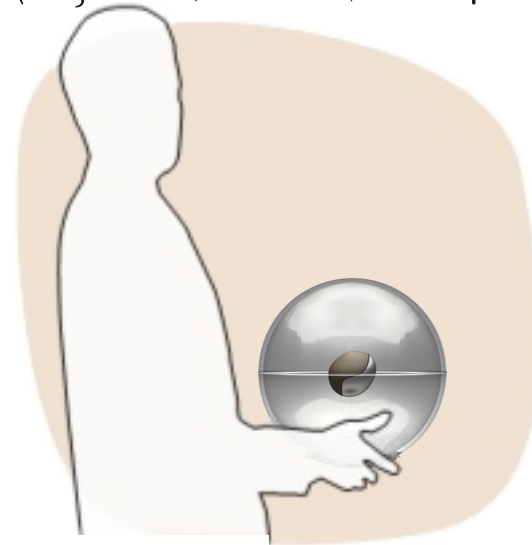
Xilonen household atmosphere...

~ **planting SEEDs, HARVESTING BALANCE** ~

"Recent changes in my life and the extreme conditions of daily eventualities had unbalanced my self. I wish I could enjoy moments like in my childhood and share that instances with my loved ones and the people around me. Time wont let me take care of vital details and I know, that I have to achieve first, a calm state of mind, in order to take care of my surroundings "

Luis David

Luis David acquires his first seed: The **wellness CANALISER**.
(every new seed comes with a **comm impusler**)



comm impulser panel is placed where needed



...seed is settled (nanomachines start constructing the **wellness CANALISER**)... it starts to grow

wellness CANALISER basic functions

Identifies quantities, recipes and adecquate food preservation

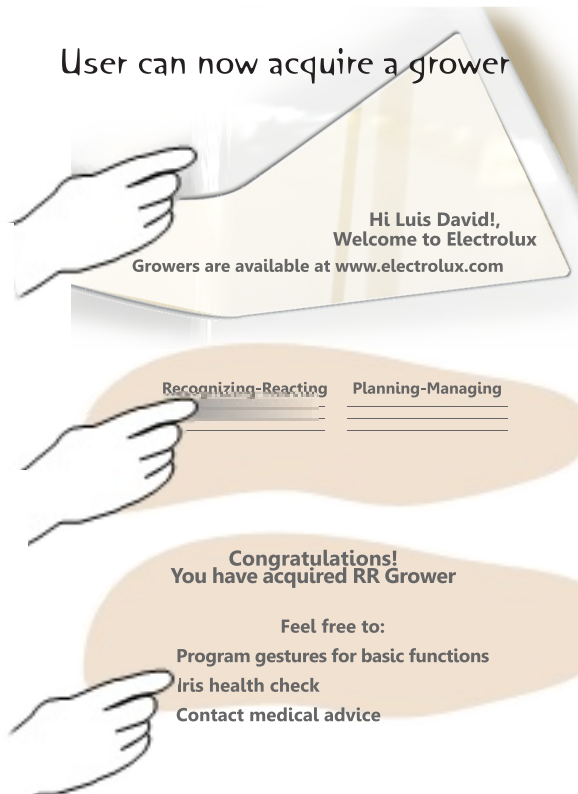
Self-cleanning system

Gathers and feeds kinetic and communitary energy (power cascade)

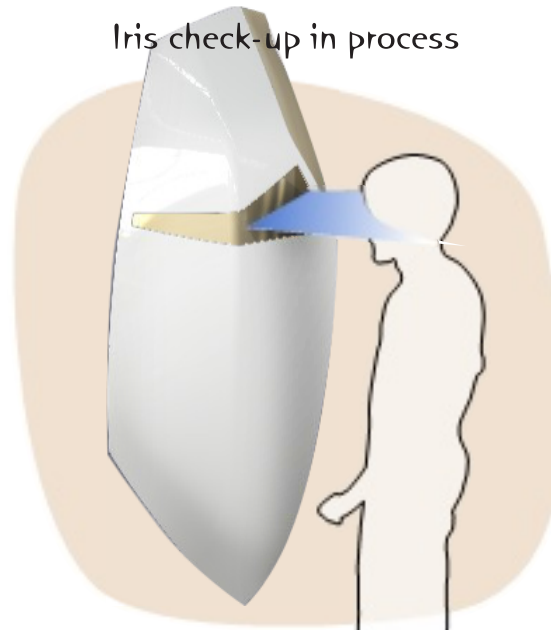
Flexible nanopolymer surfaces for space and energy savings



User can now acquire a grower



Iris check-up in process



Iris check up COMPLETED!

Luis David, your body presents:
Mild fatigue
Susceptible to kidney infection
Calcium deficiency

Recommended actions:
List of recommended food
Recipes

Home delivery food service



Unavailable options are activated when acquiring more seeds

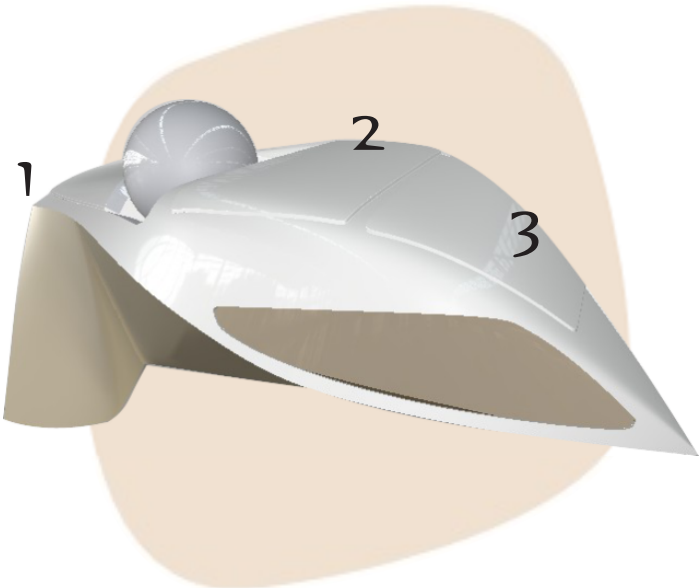
User acquires a new seed...



Delivering your seed in 5..4..3..2..1



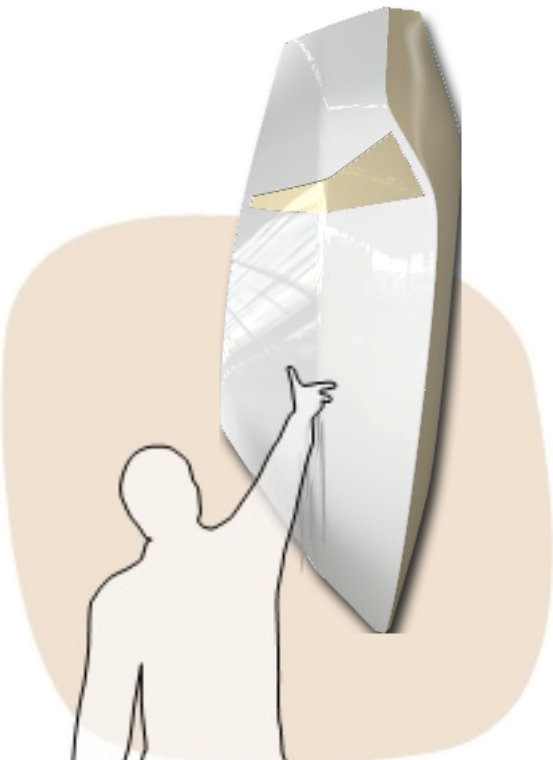
Teleportation net-working area is expanded by near seeds. Seeds are delivered by this method.



Food travels through the different stations on the **MEAL guider**

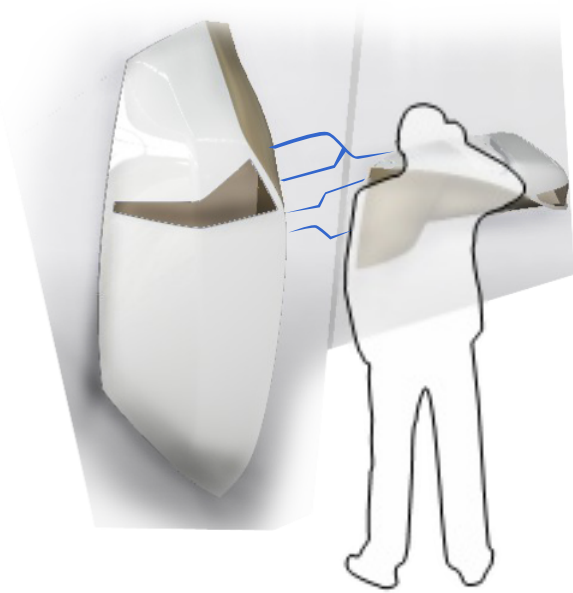


...Seed is settled, basic functions activate



To save space, user can place seeds on different locations (metamaterials allow this functions)

Seeds contact each other



Food containers are filled and disposed by Xilonen in the **wellness canaliser**



They now can be transferred to the **meal guider**

ENERGY AND DYNAMISM

basic functions



gathering and feeding food through ICU

Size adaptation depending of number or ICU used (EFTE)

meal guider

Composed of 3 stages: cutting, heating and creating food with nanomachines



comm impulser

Contains superconducting paths for seeds dynamism

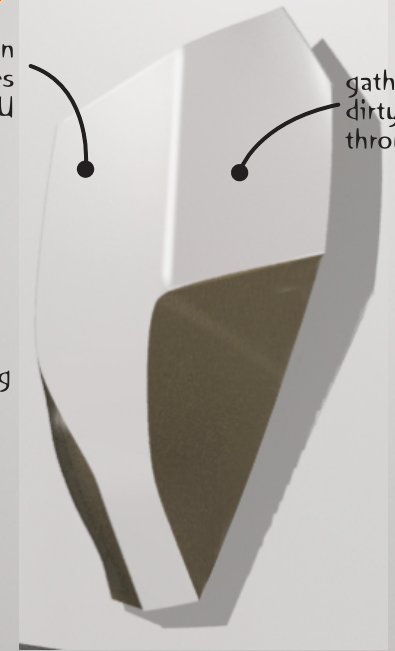
outfit renewer

feeding clean clothes through ICU

gathering dirty clothes through ICU

Clothes cleaning with UV rays and titanium dioxide

Quick searching clothing



wellness canalisier

Identifies, catalogues, recommends preserves and supplies food

tableware container with self cleaning system through a system combining nanodishes and steam

nanosurface with heating /cooling capacity and self-cleaning

Size adaptation depending of need (heigh and area)

easy dining

energy fields

kinetic energy concentration (walk, exercise, dance)

Contains superconducting paths for seeds dynamism

kinetic energy return to community in contribution

WIRELESS ENERGY CASCADE

Individual Container Units (ICU)

- Made of EFTE material (can be expanded or contracted)
- Self-cleaning
- Used for food and clothes
- Transferred from one seed to another manually or by teleportation
- Commercially generic packaging



ICU

GROWING AND WELFARE

growers

 **outfit renewer**
Smart fabric with changeable color or patter
(minimum clothes styles are required)

 **meal guider**
Guides the user to transfer
ICU manually

 **comm impulser**
Ambient control (images,
colors, ligths)

recognizes favorite
clothes (voice
recognizing)

Chemical addition to
clthes to improve mood
or health

rest/sleep
manager

 **wellness canaliser**
Recommends diets and vitamins
acoording deficiencies

Identification of aesthetics body
status (mass, fat) suggest
exercrise.

 **EASY dining**
recognizes favorite dishes
(voice recognizing)

 **energy fields**
Measurement of weighth
and posture

Social alternative spaces

Gathers food from
store and collective
urban cultive

Iris Check

		SEEDS					
		 wellness canaliser <i>The brain of the house, which contains food individually, executing several tasks with different programs within it to provide you wellness everyday.</i>	 meal guider <i>A food preparation system which helps you to cook following its instructions or by itself.</i>	 easy dining <i>A space to enjoy the dining time, making it easier having in it the dinner service to use and leave.</i>	 outfit renewer <i>A cleaning, storage and fashion changing system for your everyday clothes</i>	 energy field <i>Floor panels which gather and storage kinetic energy from human movements and provide enery to the seeds</i>	 comm impulser <i>Interactive wall panels which gather and storage kinetic and thermal energy, providing it to the seeds making a cascade.</i>
BASIC FUNCTIONS	gathering/feeding <i>eg. taking energy and distribute them (energy cascade), taling food from the store and distribute in wellness canaliser, taking and distributing information.</i>	Gathers energy from kinetic energy source or common energy bank. Wireless electromagnetic waves transmission.	Gathers energy from kinetic energy source or common energy bank. Wireless electromagnetic waves transmission.	Gathers energy from kinetic energy source or common energy bank. Wireless electromagnetic waves transmission	Gathers energy from cinetic energy source or common energy bank	Power supply to the batteries (battery for an indefinite time)	Gathers energy from cinetic energy source or common energy bank
		Identifies the food quantities and supplies when they run out (asking the store). Scan Closet 3D laser scanning and RFID tagging system and internet.	Receives food for cooking from the wellness canaliser or create it itself and delivers complete meals. Manual or teleportation	Tableware container. nanostructured surface with nanoparticle called micelles.	Contain clothes in ICU		Energy cascade through panels
		Provides the food in a Individual Container Unit "ICU" (visible access only to a one container). Superconducting materials.	Adds to food dressings and spices.	Provides a place where individual containers can fit to add extra portions of a dressing, sausage or others. Place containers with superconducting materials.			
		Solid food will have biodegradable packaging (corn polymer) in ICU on the wellness canaliser will disappear.		Provides an extension of the table where you can take to other location what you are eating or drinking and keep it hot only in the spot of the beverage (eg. coffee in the bedroom). nanomaterials			
	processing <i>eg. transforming food and clothes in to complete meals and clean outfits.</i>	Identifies the food type or category to apply the appropriate type of preservation. Eg. High hydrostatic pressure treatment, high intensity light and titanium oxide nano-particles, freezing with nitrogen or argon.	Guide to prepare meals and divide portions according to dietary and number of diners	Heating and cooling capacity as needed. Nanomaterials.	Quick search clothing	kinetic energy concentration	Each appliance comes with a panel. Add independent panels to complement system.
		Weight the food to make servings and indicates food calories in the serving.	Cut / Blend / knead / Chop / Mix / Grind / Beat and Whip. Laser cutting system.	Distributing meals all around the surface. Superconducting materials.		Energy level warning track history to see if it is needed to produce more energy	Energy level warning track history to see if it is needed to produce more energy
		Indicates which recipes can be made with available food	Heat / roast / grill / fry . Radio-frequency identification chip and a thermometer: Anti Bacterial Coating, Intellrowave System.			Adequate voltage and amperage	
		Space for free cooking (special manual cooking). Adaptable cooking surface - flexible EFTE and nanomaterials.	Space for free cooking (special manual cooking). Adaptable cooking surface - flexible EFTE and nanomaterials.				
	refreshing <i>cleaning, recycling, distributing, reconfiguring, throwing away</i>	Sanitizes the food. Titanium oxide (photo-catalysis)	Separates waste to forward it to the energy collector or compost collector. Through the use of staged, hermetically sealing airlocks and localized sterilization treatment.	Separates waste to forward them to the energy collector or compost collector.	Clothes cleaning. Titanium oxide (photo-catalysis)	Distribute to each system (function) only the neccesary energy	Panels collect the energy generated (thermal and kinetic).
		Identifies food status (spoiled or on the usage limit). High-sensitivity biosensors	Self-cleans iindividual food containers. Through the use of staged, hermetically sealing airlocks and localized sterilization treatment.	Tableware cleaning. nanostructured surface on plates and steam and titanium oxide for self sanitizing with lighth.	Feeds energy back to other seeds of the system.		
		Self-cleans ICU. Nanostructured surface and photocatalysis.	Feeds energy back to other seeds of the system. Wireless electromagnetic cascade.	Self-cleans surfaces. nanostructured surface			
		Feeds energy back to other seeds of the system		Feeds energy back to other seeds of the system			
		Adapts it space for energy saving (if there is no food on the space, it contracts to reduce the shape). Nanomaterials and EFTE.					

		SEEDS					
		 wellness canaliser A system which contains food individually, executing several tasks with different programs within it to provide you health everyday	 meal guider A food preparation system which helps you to cook following its instructions.	 easy dining A space to enjoy the dining time, making it easier having in it the dinner service to use and leave.	 outfit renewer A cleaning and storage system for your everyday clothes	 energy field <i>Floor panels which gather and storage kinetic energy from human movements and provide enery to the seeds</i>	 comm impluser <i>Interactive wall panels which gather and storage kinetic and thermal energy, providing it to the seeds making a cascade.</i>
EXPANDING GROWERS	planning/managing eg. system managing of the house through voice, gesture, remote control	Blocking devices. Network enabler, programmed chip, haptic technology and gestures recognition.	Blocking devices. Network enabler, programmed chip, haptic technology and gestures recognition.	Blocking devices	Blocking devices	Mode energy control	Blocking devices and reminders
		Registered information from existing foods. Scan Closet 3D laser scanning and RFID tagging system.	Features cooking preparation	Check the technical and operational status of equipment/system	Check the technical and operational status of equipment/system	Blocking devices	Ambient control. Relaxation and food/meals smells
		Check the technical and operational status of equipment/system	Check the technical and operational status of equipment/system. auto-check periodic system	Sends technical information of the status if necessary, to electrolux maintenance center	Sends technical information of the status if necessary, to electrolux maintenance center	Check the technical and operational status of equipment/system	Ambient control
		Sends technical information of the status if necessary, to electrolux maintenance center	Sends technical information of the status if necessary, to electrolux maintenance center. Network enabler	Teletransport containers to health canaliser	Smart clothes with changeble pattern (minimum clothe styles are required). Patterns are in Electrolux webpage. Connect clothes through ICU. (like a screen)	Sends technical information of the status if necessary, to electrolux maintenance center	Check the technical and operational status of equipment/system
		Teletransport containers to meal guider or easy dining	Teletransport containers to health canaliser or easy dining				Sends technical information of the status if necessary, to electrolux maintenance center
	recognizing/reacting e.g. health, mood, number of people visiting home, adaptation	Checks the health state of the user with an iris check up, suggesting several treatments or tasks and eliminating harming complements (lactose, irritators). Scan Closet 3D laser scanning.	Recognizes information signals from the wellness canalizer and the easy dinning. Network enabler	Recognize the favorite dishes and send them to FAV. voice recognizing programm (agregar a otros devices)	Addition of chemicals to clothing to improve mood or health	Measurement of weight and posture	Relaxation and food/meals smells
		Buys food according to user health deficiencies	Recognizes the user to create a level of guidance on the interface. haptic technology and gestures recognition	Space adaptation according to the number of people. nanosensors	Outfit suggestions according to the complexion, skin, state of the body, mood		
		Indicates which vitamins and medications are needed by the user when there is a greater deficiency or basic disease		Identification of health status (body mass, fat). nanosensors (heat, fat)	Rest/sleep manager	Exercise promotion with games, dance or sports	
		Suggests the user what kind of food he/she needs to include or leave (custom balanced diet).		Suggests the user what kind of excersice will help her/him to improve health with a custom training	Suggest the user what kind of thoughts and emotions must include or leave		
		Indicates if the user must seek for medical advice			Recognize the favorite outfit and send them to FAV		
	involving eg. Exercising, relaxation, communication, mood changes	Environmental management (images, colors, ligths, sounds)	Environmental management (images, colors, ligths, sounds)	Communication promotion	Environmental management (images, colors, ligths, sounds)	Alternative spaces	Environmental management (images, colors, ligths, sounds) and alternative spaces (events)
		Community will have an urban cultive that will be self-sustainable and shared by each building		Environmental management (images, colors, ligths, sounds)		Textured 3D effects	Information / interface with appliance. characters to interact with different users
							Write and draw on the panel
							Textures (ambient wood, brick, material or other things)
	assisting e.g. providing diets, recipes, clothes suggestions, information needed	Ask for more recipes (new or for kids)	Ask for more help at cooking. Network enabler	Display news or work information on surface	Ask for fashion tips	Ask for dance, games and sports information	Display news or work information on surface
		Ask por food and beverage information (history, types)	Ask for virtual help for a sophisticated meal on the GE assisting center. Network enabler	Sincronize with agenda			Ask for weather

http://www.skwirk.com/p-c_s-14_u-189_t-505_c-1863/home-appliances/nsw/homeappliances/australia-s-social-and-cultural-history-in-the-post-war-period/the-impact-ofchanging-technology-on-everyday-life

www.ge.com

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Book:

Plant Biotechnology current and future applications of genetically modified crops

Book:

Changing food technology 3

<http://www.allbusiness.com/professional-scientific/scientific-research/658041-1.html>

<http://www.guardian.co.uk/media/2009/jan/19/internet-generation-parents>

On the Sushouse project:

http://www.sustainable-everyday.net/main/?page_id/2

On household scenarios:

<http://www.cbs.nl/NR/rdonlyres/EF9974D0-C3A5-4BEF-A898-FF57B67C18FF/O/householdscenarios.pdf>