

DESIS
NETWORK
Design for
Social Innovation
and Sustainability

Urban Farming Nomad.

Autonomous self-feeding.

EASD | Escola d'Art i Superior
de Disseny de València

**School of art and design of
Valencia**

EASD Desis Lab
Spain

Ricardo Moreno Cuesta, Jose Martinez Escutia

Promoter(s).
City Hall of Valencia
Council of sustainable
mobility

Funder(s).
Council of
sustainable mobility

Aknowledgements.
City Hall of Valencia
Council of sustainable mobility

Urban
Farming
Nomad
Autonomous
Self-feeding

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de l'horta a la plaça

diumenge 31 de gener 2016

**MERCAT DE PRODUCCIÓ LOCAL
TALLERS INFANTILS
PRESENTACIÓ DE PROJECTES
ACTIVITATS MUSICALS**

**DES DE LES 10H FINS LES 17H.
PLAÇA DE L'AJUNTAMENT**

Context.

Due to the exponential growth of the number of human beings and the constant deterioration of the environment, the development and dissemination of projects and activities that promote responsible agricultural practices is fundamental. In the most industrialized countries, it is notorious the increased interest in the population to take care of food and have healthy habits, as well as the consumption of products of the highest quality.

The project.

The objective of this project is the design of alternative self-feeding systems to the simple cultivation of vegetables in a pot. Methods are studied to make these crops with products and methods that allow them to do it self-managed at home. They are small contributions with the intention of generating synergies that allow to improve ways of life.



The design process.

STRATEGY. Organization, development and applications for planning, research and evaluation.

IDEATION Organization, development and applications for data analysis, assessment of improvement ideas, environmental and creative.

PRODUCT DEVELOPMENT. visualization, verification, evaluation and representation.

PRODUCTION. cost analysis, feasibility, verification and improvement of the prototype.

COMMUNICATION AND DISTRIBUTION: Product communication and product presentation, production management, marketing strategies and sales and distribution management.

XARXA
LLAURADORA

Governance and Policy Making



sustainable city

citizen use

How the project relates to governance and policymaking: the interplay between top-down and bottom up actions and its implications on governance and planning; the way diverse stakeholders participate in decision making

Activism and Civic Participation



home grown

self-sufficient nutrition

How the project relates to activism and civic participation: the capacity of individuals, groups and organisations to undertake initiatives and foster change at an higher level; the democratization and openness of the processes.

Social Interactions and Relations



**learn to cultivate
alternative ways of eating**

How the project relates to social interactions and relations: the potential of the initiatives to enhance, collaboration, social cohesion, conviviality, connections and sustainability.

City and Environmental Planning



we create self-sufficient home

rethink the food

How the project relates to city and environmental planning: the impact of social innovation projects on the city, the media, the private and public space.

Production, Distribution and Consumption



healthy food

adapted to my needs

How the project relates to production, distribution and consumption: the new production/distribution/consumption chains, the new technologies and the local assets/resources for more sustainable value creation systems.

Skill Training and Design Education



adapted design

the family sees it on time

non-industrial crops

How the project relates to skill training and design education: the new design education; the need and opportunity of building new competences with and the project stakeholders.

Job Creation



use of everyday elements

easy drive

How the project relates to job creation: the potential of the initiatives to create new job opportunities and social orientated business.

Storytelling and Visualisation

envisioning in co-design sessions

ideas sharing

How storytelling and visualisation are used to describe the project: the stories design tells and the tools/formats it uses, the aims and the target of the communication.

The Projects



HOME COMPOSTING



- Simple shape
- Easy to use
- Facilitate the mixing process
- Usable indoors and outdoors
- Easy to clean
- Odor free
- Long life product





Worn farm

New food concept

Worn farm is indicated for the cultivation of mealworms in your own home, you will be able to see their growth process through their three life stages.

Worn Farm consists of four cubicles, three for hosting and the base as a refrigerating drawer, all covered in solar panels to provide energy and maintain the interior at 25°C.

Thanks to the refrigerating drawer it is not necessary to move the adult mealworms to your home freezer for 48hrs, they leave the product ready for consumption.

All electrical feed that Worm Farm possesses is provided by the solar panels, which give enough energy to maintain the interior of the product at 25°C and enough to freeze the mealworms in their final stage



your strong protein

What is it?

Aquaponics is a system that combines raising fish and growing plants.



Why for kids?

Because it's an easy, different and enjoyable way to teach kids how to be responsible, constant and committed. This is also a good first touch with nature.



AQUAPONICS
for KIDS

How?

Kids/ Parents will buy the Aquapokids kit that includes all the things they need to build this system. They also will be given a link to a website where they would read some interesting and useful things about aquaponis and how to build it.



inter green

urban agriculture in your city.

CIUTAT VELLA
VALENCIA



A fair and sustainable **future** for society entails an immediate ecological urban regeneration. In this process, **urban agriculture** plays a strategic role.

The most feasible answer to the necessity of valuable **spaces** that could trigger our common welfare and the prosperity of disadvantaged social classes is the reuse of abandoned lots which, in most cases, are residual spaces lacking, in this way, any kind of social or economic profit. The idea and intention of creating **social organic gardens** can be considered as a solution to improve the social, economic and **environmental sustainability** of these lots. For this purpose, it is necessary the cooperation of city halls, different collaborators, neighbourhood associations and the owners of the lots.





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your strong protein

MINI SOLAR HYDROPONIC SYSTEM

ISAAC
CORES
IRAGO



RECYCLED
AND EASY TO GET
MATERIALS



IT TAKES ADVANTAGE OF SUNLIGHT TO PROVIDE
ENERGY AND PURIFY WATER



- ★ BENEFITS:
- HYDROPONIC SYSTEM
 - ENERGY SELF-SUFFICIENCY
 - S.O.D.I.S SYSTEM





NATURE'S BALANCE

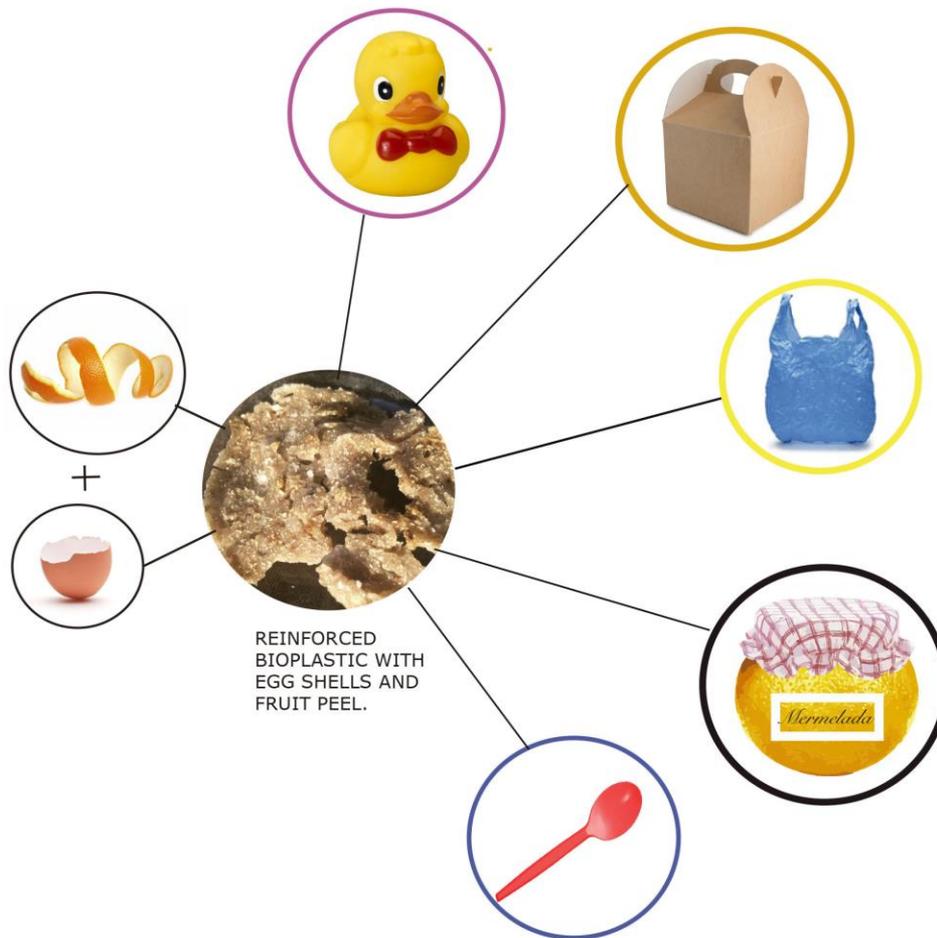
EVERY DAY WE GENERATE THOUSANDS OF NON RECYCLABLE DEBRIS, WHILE OUR PLANET'S SPACE IS NOT GETTING ANY BIGGER. THAT'S THE PROBLEM THIS EGG SHELL AND FRUIT PEEL BIOPLASTIC PROJECT IS TRYING TO SOLVE.



WHAT IF WE ATE JAM OUT OF A 'JAR' MADE FROM THE VERY SAME FRUIT WE ARE EATING, EXCEPT IT WOULD BE THE PART THAT USUALLY GETS THROWN AWAY.

BY FABRICATING WITH BIOPLASTIC INSTEAD OF THE CHEMICAL ONE, BESIDES THE KINDNESS WE'D BE SHOWING OUR ENVIRONMENT, COMPANIES AROUND THE WORLD WOULD BE SAVING A BIG AMOUNT OF MONEY OTHERWISE SPENT GETTING RID OF THEIR NON RECYCLABLE RESIDUAL GARBAGE AS WELL AS USING THEIR OWN BIO RESIDUES FOR THE TRANSPORT OR PACKAGING OF THEIR OWN PRODUCTS.

THIS BIOPLASTIC COULD BE USED IN THE FUTURE IN THE FABRICATION OF CLOTHES, TOYS AND EVERYDAY OBJECTS, SINCE THE EGG SHELL THAT IT CONTAINS MAKES IT A STRONGER STRUCTURE.



Cultivar-t

Autoculture of mushrooms

Compact desing, reduced size, perfect for home.
Two recipients with different positions at two heights.
Different kinds of mushrooms can be grown here : Enoki,
Ostra, Paris mushroom.

With test tubes adapted to bring the daily wáter dose.
Metalic estructure covered with plastic, allows
the product to beeing well cleaned, ideal for
the alimentation sector.

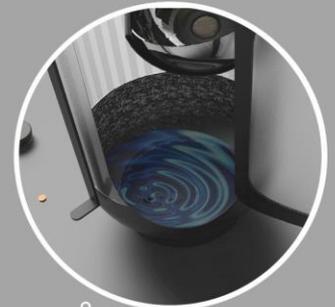
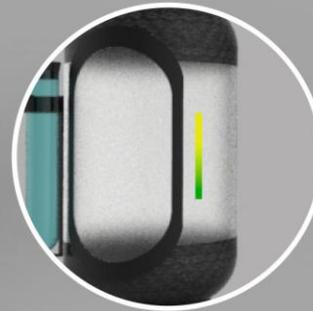


Silicone surface drilled at the top,
designed for watering and ventilation.



A big folding door that allows manipulation of
the mushrooms and containers.

With thermocromatic paint used for being
able to check the dampness level.

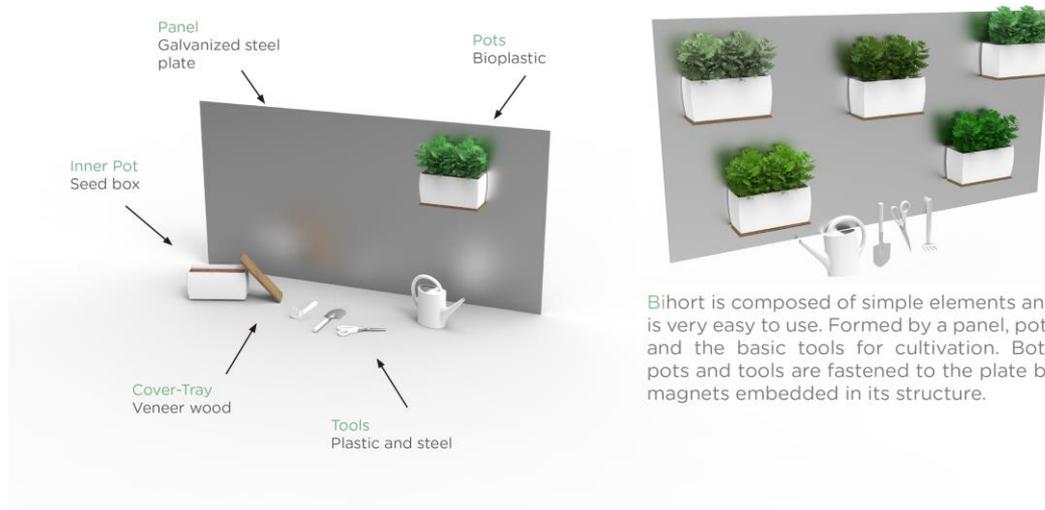


With a cork at the bottom of the
product for the excess of wáter.



BIHORT

Product for cultivation of sprouts, herbs and small vegetables for own consumption. Intended for anyone with interest in agriculture and organic farming. It can be placed in different rooms of the house whenever the plants receive sunlight.



Each pot has a bag of seeds and substrate cultivation. As an extra the packaging has a brief explanation of the benefits of the plant that houses and how to grow it.





Discovering the *prickly pear*

Species: Cactus

Country of origin: Mexico

Objectives: Searching for sustainable alternatives for a near future



BENEFITS OF INTRUDING IT IN THE KITCHEN



Glucose control
Inhibits cancerous cells



Hydrating
Source of Calcium
and vitamins C and E



Source of digestive fiber
Weight control



María Álvarez Mora

CULTIVATION

Drows well in harsh conditions

Easy to grow and haerest

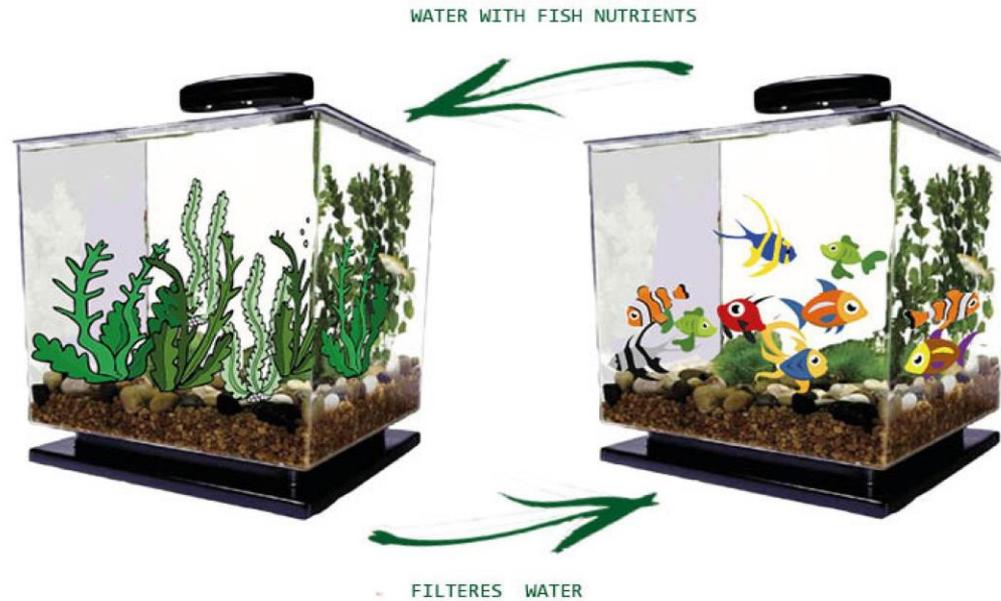
Farth growth

Doesn't need water

FISHGAE

Seaweed Self-cultivation with nutrients exchange between two containers, one with fish, the other with seaweed

NUTRIENTS EXCHANGE



Seaweed: Biofuel, **inexhaustible and non-polluting** energy source
Food: Alternative source for **nutrients, vitamins and calcium**
Very effective when anaemia, demineralization and exhaustion
It doesn't need fertile land, allows **new alternatives** and cultivation ways

ALIMENTACIÓN DE AGRADECIMIENTO

koopera

CONSCIOUS,
re-give value

SELF-SUFFICIENT

LINK

Aimed at **PEOPLE**
who are or are at risk
of social exclusion

revive

Second life



SOCIAL
DESIGN

Possible
SOLUTIONS at the
local level to benefit
globally

RECONCILIATION
with the life
With the **BEES**

Training as a
BEEKEEPER



SUSTAINABILITY

Production:
hive
HONEY
Packaging
suit

UPCYCLING
Objects
Clothes
Second hand



Implantation
Hives in
EKOHUERTAS
and
ROOFS city



ROSEMARY benefits



Maskot.

Adopt your kefir.

¿What a kefir is?

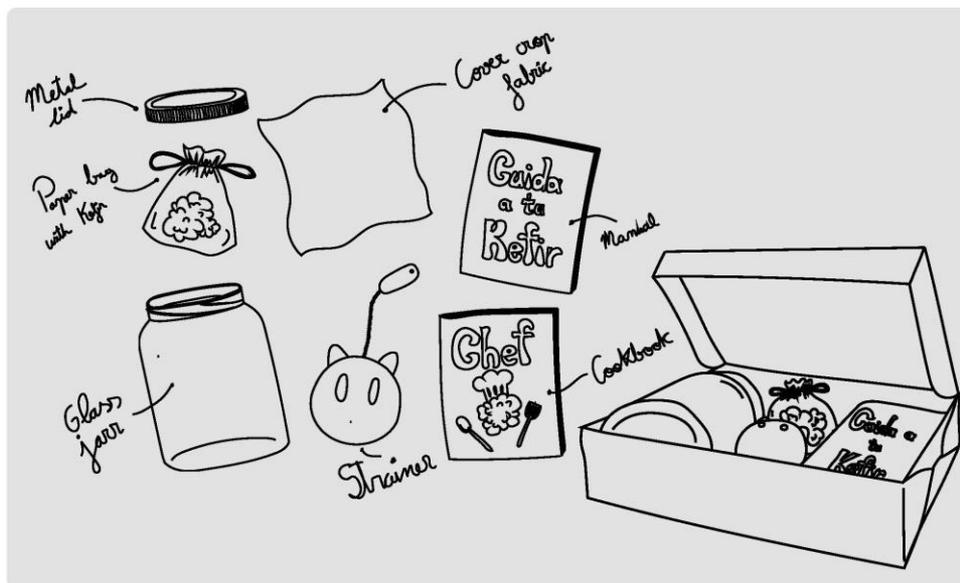
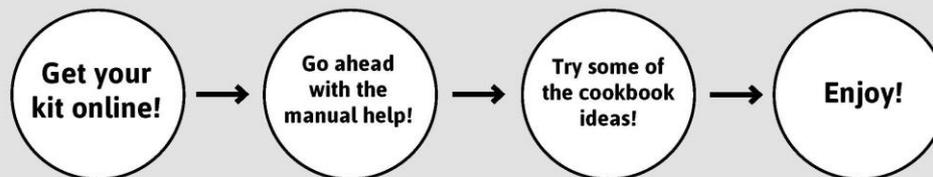
A probiotic mass, which has its origins in the Caucasus and which brings amounts of healthy benefits that appear during the fermentation process.

In addition, kefir, with a proper care, grows and can be divided, so we can share it!

¿What benefits does it bring?

- It prevents colon cancer.
- Healing.
- It improves immune response.
- Improves lactose tolerance.
- Antibacterial and antifungal.

Proposal:



SUPPLIES AND HOSPITALS

SUPERFOODS

- Foods nutritionally used for thousands of years.
- More nutrient dense than processed foods.
- Lens of antioxidants that support the immune system.
- Helps detoxify and reduce the risk of chronic diseases.



TYPES

ALGAE AND MICROWAVES



Espirulina



Chlorella



Klamath



Wakame



Echinacea



Maca Andina



Kale

MEDICINAL PLANTS

MUSHROOMS



Nori



Kombu



Shiitake



Reishi

HOW TO CULTIVATE THEM

HYDROPONIC
CULTIVATION

ACUAPONIC
CULTIVATION

SOLUTION IN FRONT OF HOSPITALS

PROBLEM

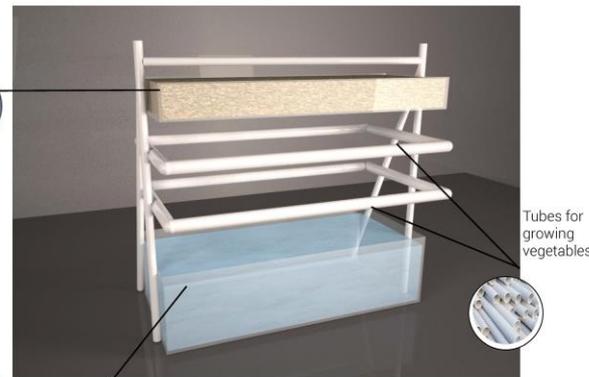
- HOSPITALS
 - Catering
 - Own kitchen

SOLUTION

- Realization of shelves for indoor cultivation
- Easy transportation and assembly for placement in hospitals.
- To achieve a totally self-sufficient agriculture
- To achieve a change in the meals of the same, mainly focusing on the people with nutritional problems.

PEOPLE WITH FOOD DISORDERS

- Food by means of a probe that contains nutrients of easy absorption.



Substrate for the cultivation of fungi

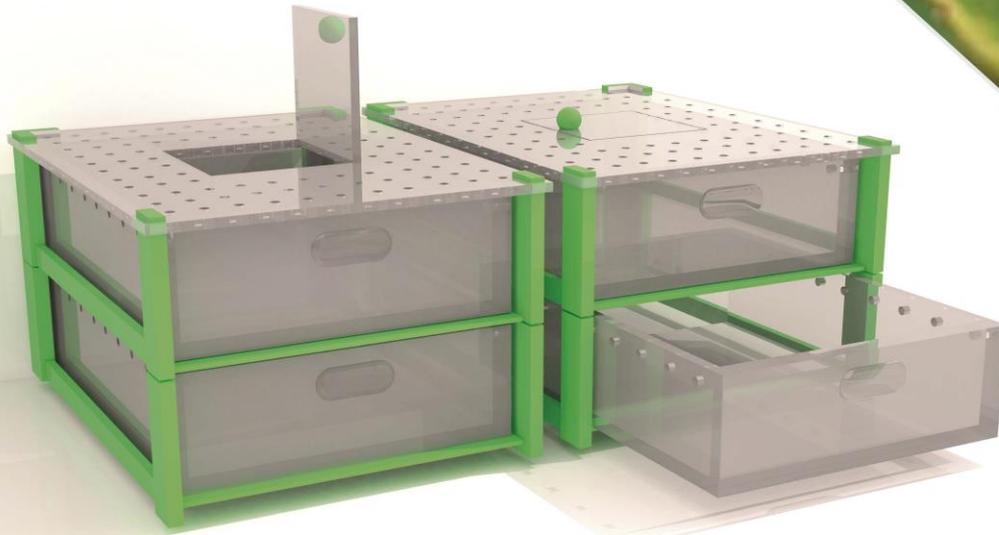


Algae culture container



Tubes for growing vegetables

- Materials easy to acquire
- Montage
- Easy transportation
- Economic



Brings the population the possibility of being able to raise frogs for their subsequent consumption and drawn near the nature to children and adults.

Furniture with four compartments, designed to accommodate the amphibians in each of their different phases of metamorphosis.

Designed with functionality in mind, to make it easier to care for animals and always thinking about their safety and well-being.

TCH BOX

A new vision of frog breeding.

SOCIAL INNOVATION

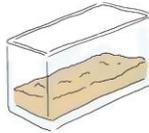
Social innovation in the diet field

ACUAPONICS SYSTEMS MOLLUSC AND SEAWEED

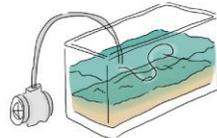


SELF FARMING CLAM AND WAKAME

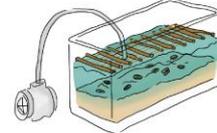
- Implementation of new forms to eat vegetables.
- Home self-supply.
- Natural and organic farming.
- Adaptation of different territorial zones.
- Improvement of responsible consumption.
- Controlled automatic production.
- Availability of fresh products.
- Take advantage of beneficial health properties of sea vegetables.



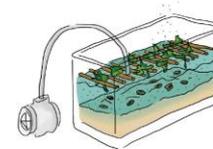
- 1- Recipient which contains both species.
2- Clean sand and rubble.



- 3- Raw seawater.
4- Water flow.



- 5- Ropes and frames to attach the seaweed.
6- Photoperiod possibilities.



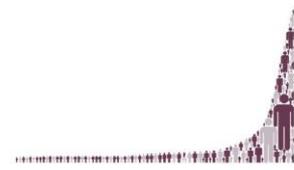
- 7- Food additives.
8- Water temperature control.



THE PROBLEM



On average vegetables travel 2.400 km or 1.500 miles from farm to consumer, causing an extra 12% emissions prior to consumption.



With a growing population and an emerging middle class, demand for food is ever increasing, calling for smarter and more resilient solutions to feed the world.

Emissions for agriculture projected to increase 80% by 2050

Agriculture is responsible for 80-90% of US water consumption

"Modern agriculture cultivates climate change - we have to take care of biodiversity

"The needs of water and food of the populations can only be satisfied if the means offered by Nature are protected. Dead lands and contaminated rivers can not provide food or water"

MOVEMENTS

**FOOD
AUTONOMY**

AGROECOLOGY

**ECOLOGICAL
AGRICULTURE**

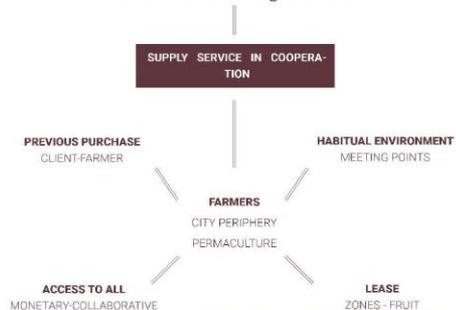
PERMACULTURE

SLOW FOOD
zero waste

**TRANSITION
TOWNS**

THE SOLUTION

The local solution to a global disaster



WEBSITE



T U E C O
P U N T O

FUNCTIONING



1 local farmers



2 direct sale



3 eco basket



4 group - ecopunt

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rmoreno@easdvalencia.com

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Spain