

NEW SOLUTION

FROM

NORMECA

Quick Eco House

**Guide Book of Quick Eco House
of Cold-formed Steel Structure**



Normeca AS

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COMFORT

SAFETY

ECOLOGY

Comfort, ecological and energy saving residential and commercial buildings are the pursuit of ECONOVO. We transferred these miscellaneous works used to do on-site into our factory to present buildings with better quality, less and simple on-site work and shortened erection time.

We comprehensively utilizing green technics such as PV, solar heater, rain collection, sewage treatment and reuse together with high standard thermal insulation to built the zero energy building.

High Efficiency

- Pre-fab, integration, modularize minimizes on site jobs
- Easy to erect, maintenance and demolish

High Performance

- Excellent seismic resistance performance
- Better insulation with even thicker structure

Low Consumption

- Harness the sun for electricity and heat
- High standard insulation and air tightness

Low Emission

- Rain collection, sewage treatment, gray water reuse
- No pollution during manufacture and installation

Pre-fabricated Cold-formed Steel Panel Structure System

PRE-FAB

EFFICIENCY

FLEXIBILITY



Quick Eco House

COMFORT

Thermal Insulation

High performance external insulation system and other insulation measures

Ceiling /roof

Roof insulation and ceiling insulation are optional

glazing

Double low-e glazing to satisfy insulation requirement, PVC and Aluminum frames are optional

wall

Utilize PU, the rigid foam with the best thermal performance, as wall insulation

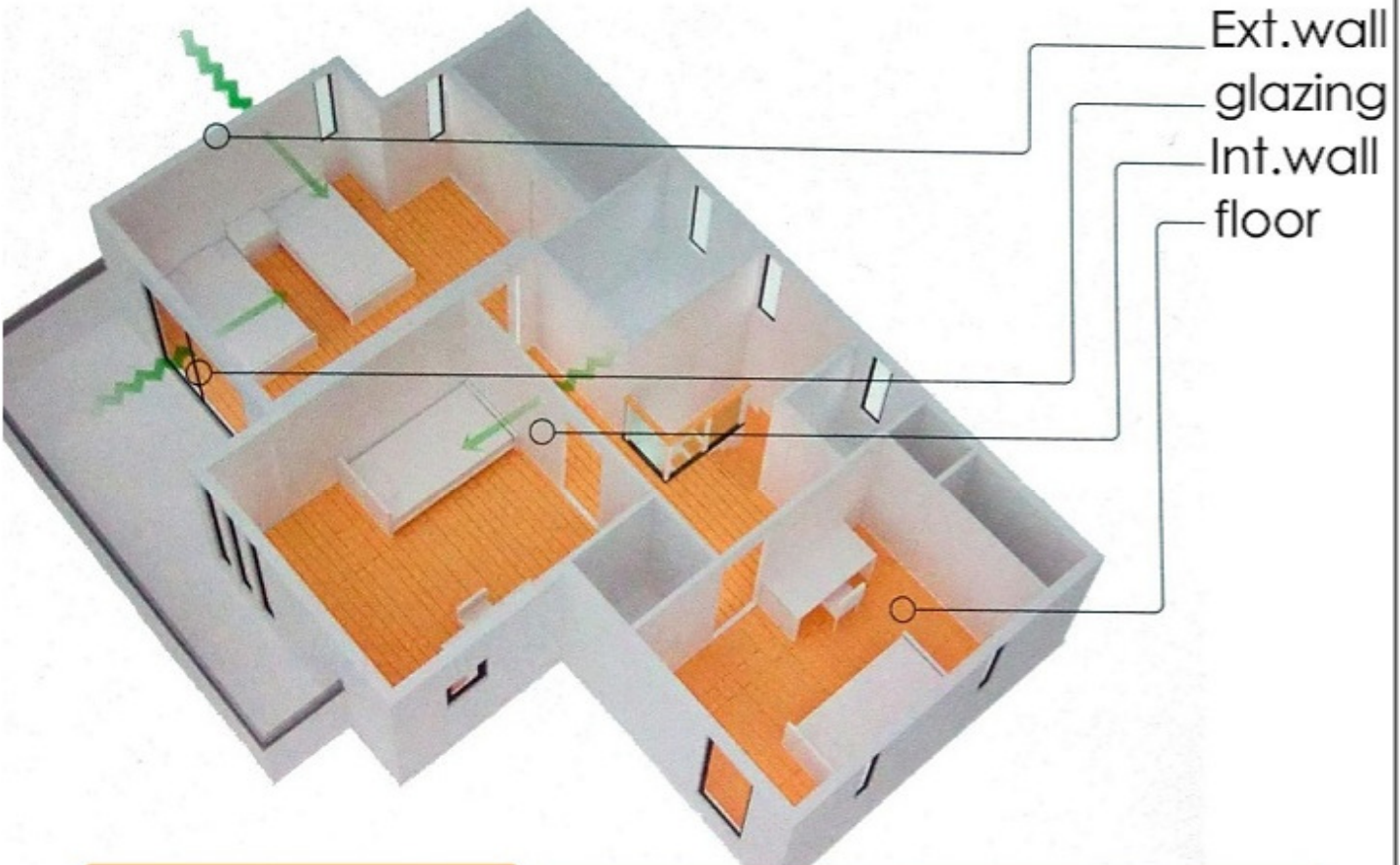
foundation

External insulated foundation with ventilation

Acoustic Insulation

Multi-layer structure panel and double glazing reduced sound transmission

COMFORT



Exterior wall

• Dr-30 ~ Dr-40

glazing

• Ts-15 ~ Ts-20

Interior wall

• Dm-25 ~ Dm-35

floor

• Law-40 ~ Law-60



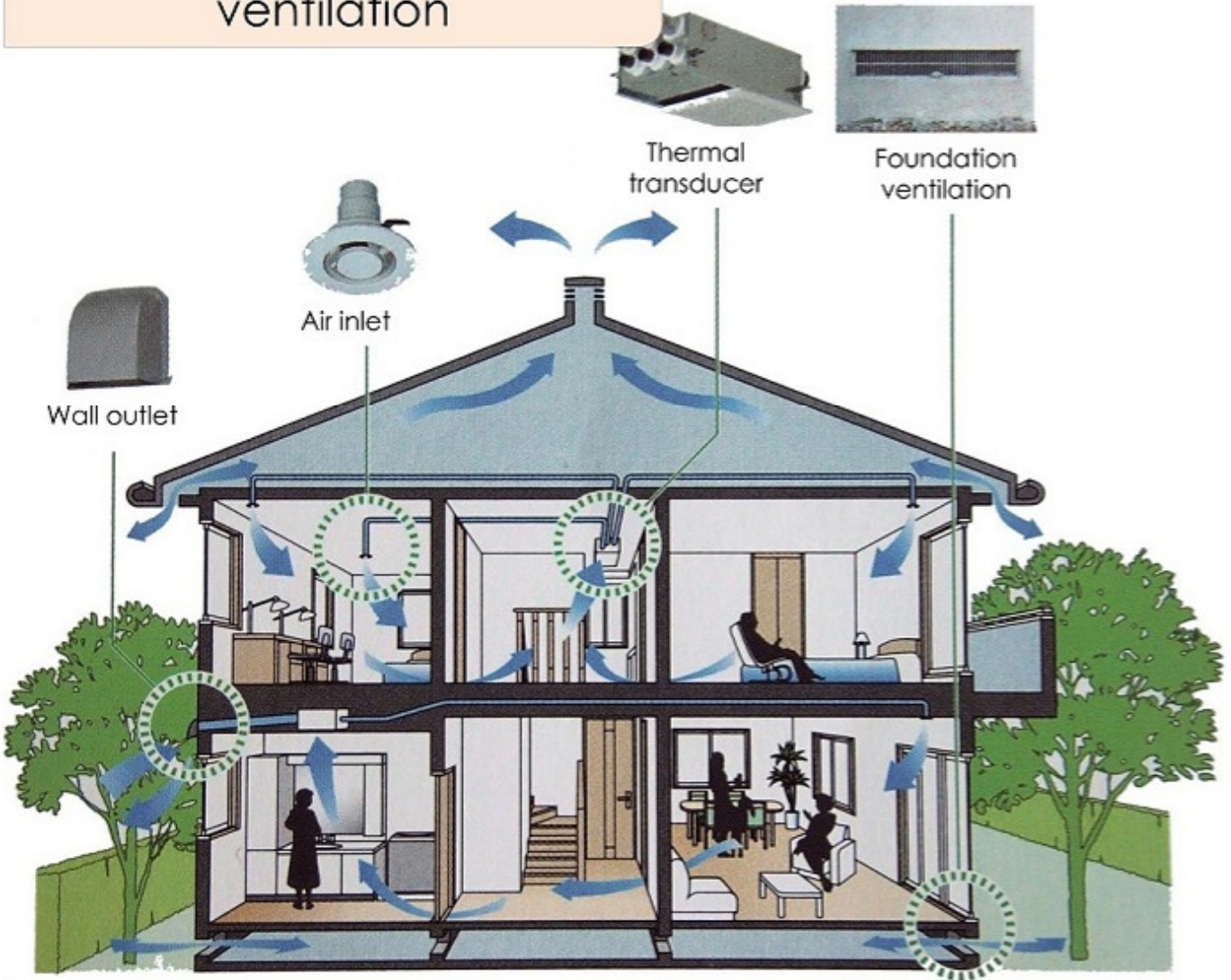
*同济大学为ECO-CABIN进行声学测试

COMFORT

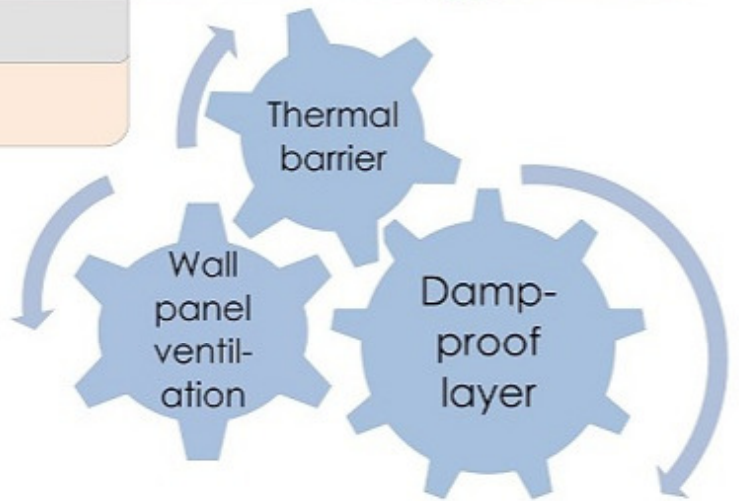
Ventilation

Natural and mechanical ventilation makes the room clean and dry

ventilation



Damp proof



Health

Strictly limit the VOC of materials used in the house to ensure indoor air quality

COMFORT

frame

Galvanized steel frame is termite-proof and rot-proof

structural board

JAS F☆☆☆☆ standard or CARB certified structural board

insulation

E1 or above PIR or PUR thermal insulation board

decoration

E1 or above plasterboard and floor board

SAFETY

Seismic Resistance

Light gauge cold-formed steel is a mature system with excellent seismic performance

Light weight

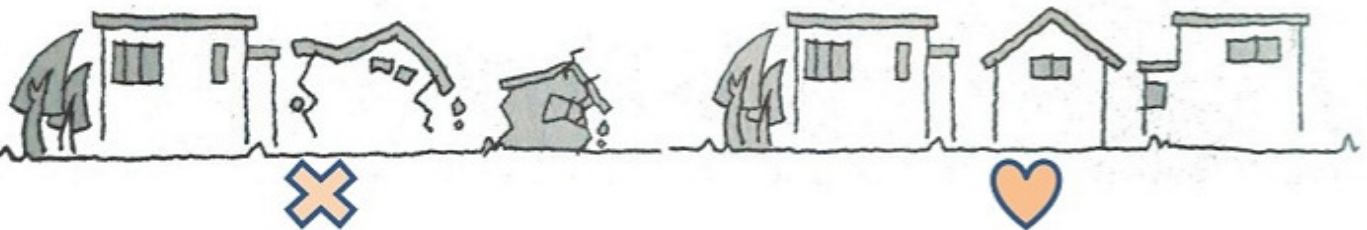
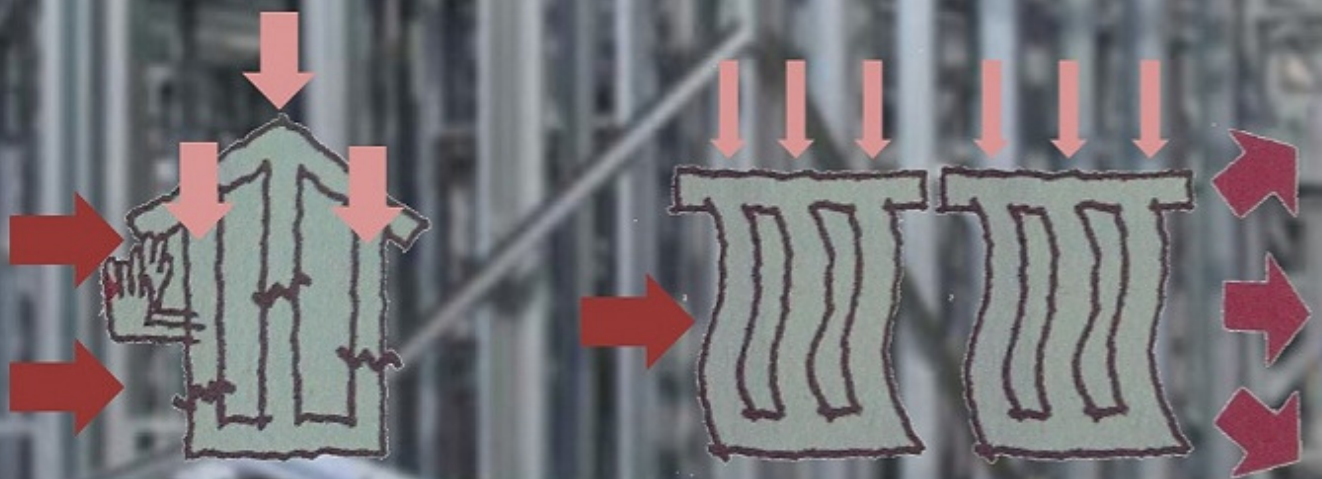
Less seismic load under the same intensity due to its light weight

Flexible stud

Non-rigid frame absorbs seismic load through its deformation to prevent corruption

Stud wall

Load transfers through studs and there is no columns and beams to bear concentrated load

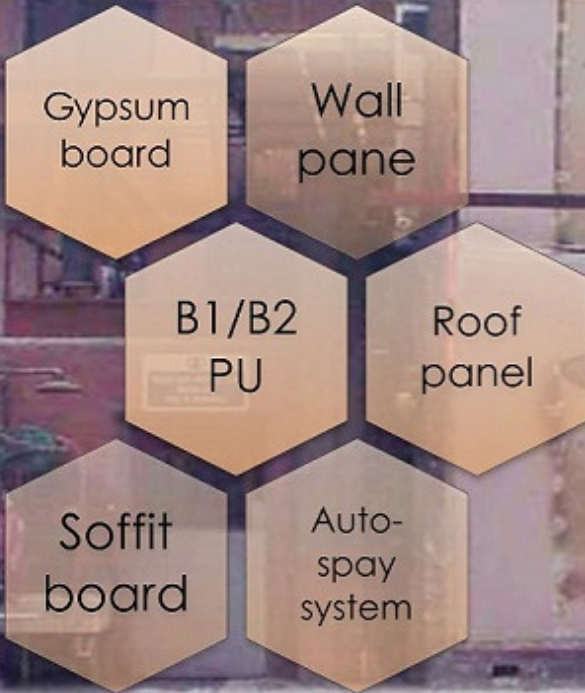


Fire resistance/Durability

Galvanizing will inhibit steel frame from the attack of high humidity and high salinity environment

SAFETY

Fire resistance



Durability

Zinc-coated or zinc-alum coated steel can maintain 25 to 70 years of life span

ECOLOGY

Solar System

The comprehensive utilize of PV and solar heater systems reduce the demand of external energy

Solar panel

Flexible photovoltaic

Silicon photovoltaic

BIPV insulation roof

Inverter and battery system

Solar heater

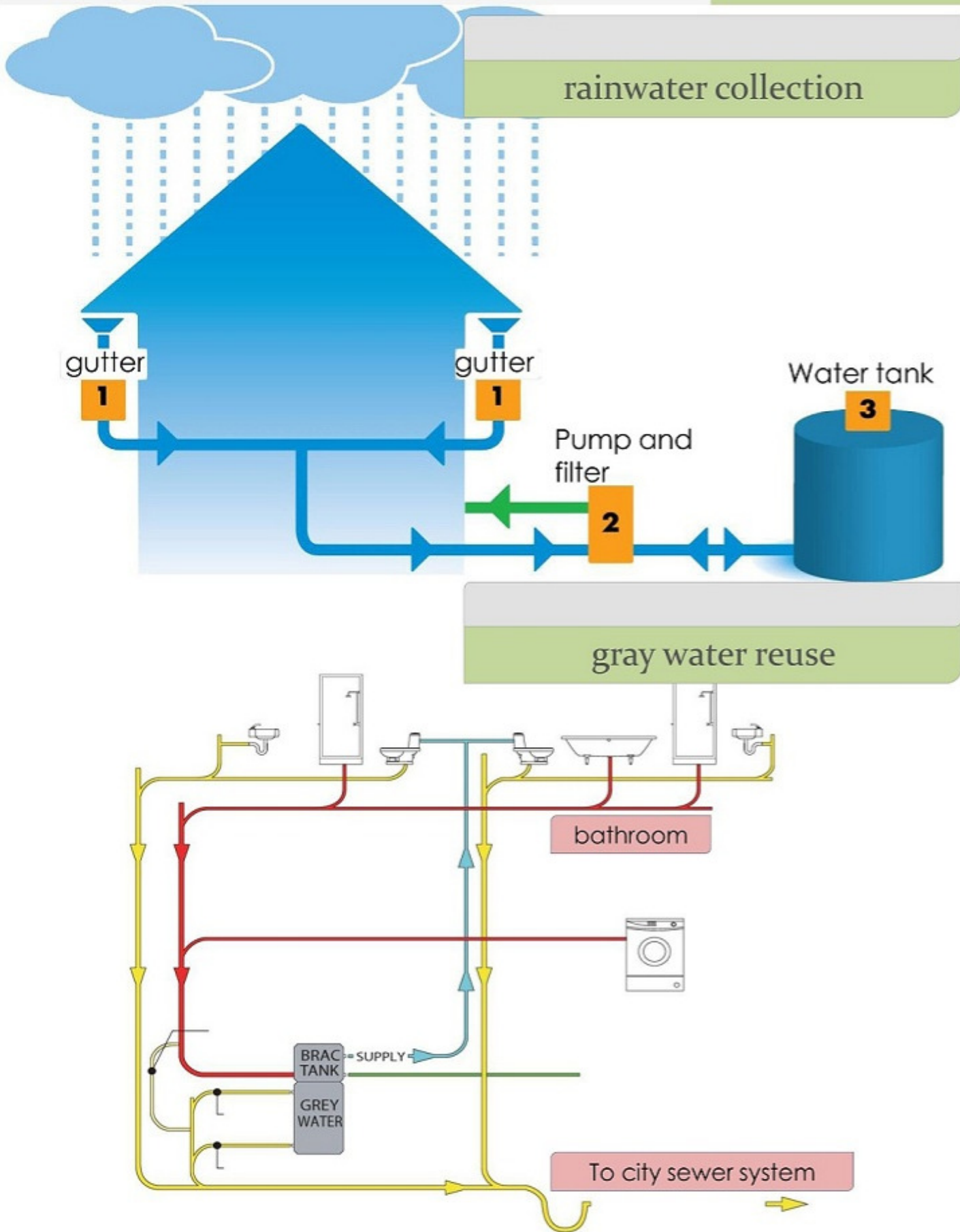
Discrete solar heater

Integrated solar heater

Water Reserve

Integrated rainwater collection, gray water reuse and sewage treatment system

ECOLOGY



PRE-FAB

Design

CAD and CAM coordinated design to improve efficiency and accuracy

Building model

concept

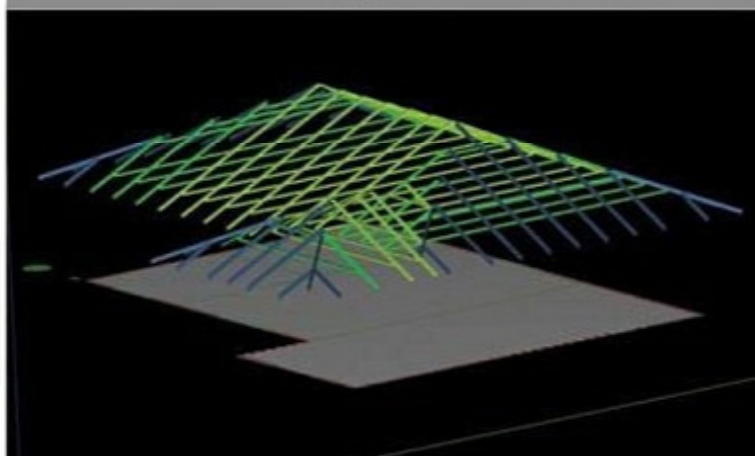
Detailed model



Structural model

Structural split

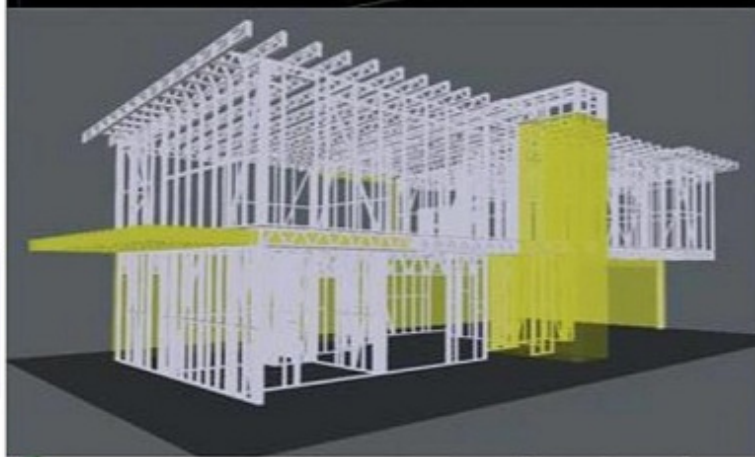
Structural optimize



Frame model

check

Material list



Manufacture data

Roll former data

Assembly data



Precise Assembly

Production technique and quality control of the prefabricated parts

PRE-FAB

Roll former

High performance roll former is the guarantee of precise product



Quality control

Assembly line precision control target is less than 1mm



EFFICIENCY

Fast Installation

Panelized structure members minimized on-site works

Design and
manufacture

Cargo/truck
transportation

Installation on site

Wiring/plumbing
and decoration

Solar system
installation



Simple Installation

The installation of prefab building is pretty simple and time saving compares to traditional constructions.

EFFICIENCY

The advantages

None-water installation

None-welding installation

No disposal and dust

No construction noises

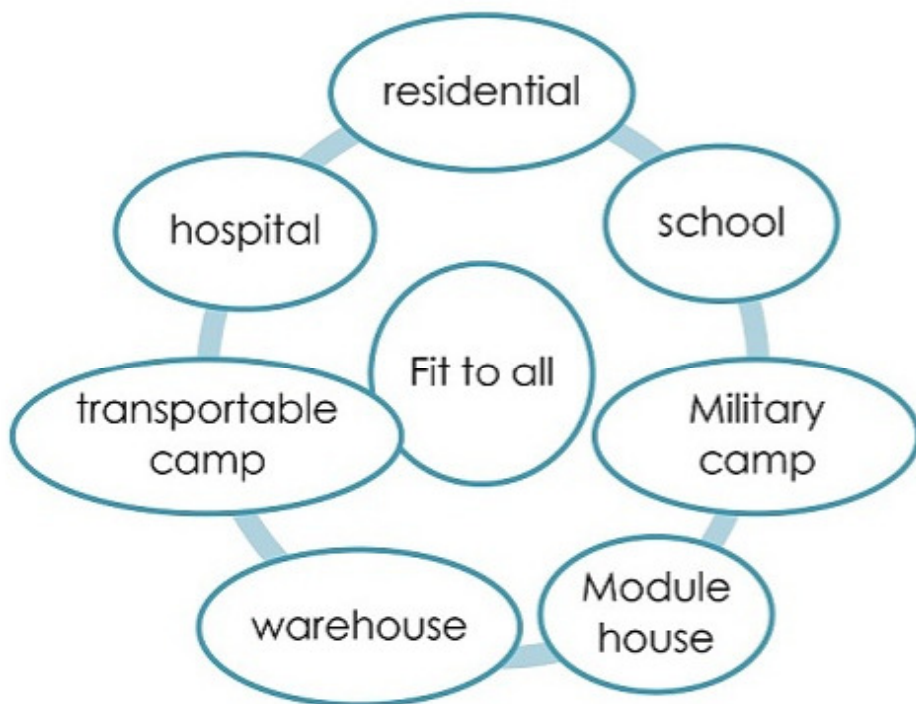
Constantly installation

FLEXIBILITY

Flexible Structure

The flexibility of CFS light gauge steel makes it the best choice for residential and commercial buildings of and below 3 stories.

Building type



ECO-CABIN Prototype

Welcome to visit our Japanese style prototype house

PROTOTYPE

ECO-CABIN



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GLOBAL DISASTER MANAGEMENT TEAM



Thai Tsunami Victim Identification Centre



KAITIKO Referral Hospital, Southern Sudan



MSF Hospital, Hattian Bala, Pakistan



Inside OT in KAITIKO Referral Hospital

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Number one
in
the world
for
partial and turn-key
mobile and
semi-permanent
health care solutions
incl.

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Erection,
Management,
Training,
Maintenance,
Storage,
Medevac,
etc.



MSF Mother/Child Hospital in PAP, Haiti



ALL Kinds of clinics or hospitals in MultiSpace



Cucan Hospital, Muzaffarabad, Pakistan



Ambulance boats



Ambulance



NorBase single and expandable containers



Decontamination Units



Rofi inflatable tents

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