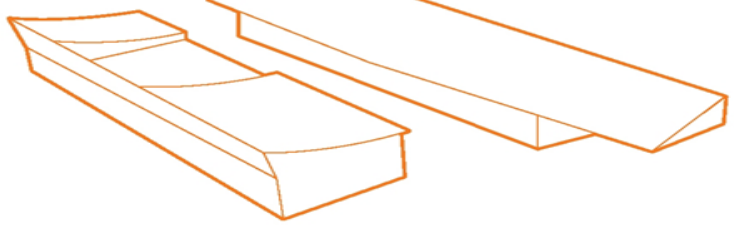

Federico Tartarini

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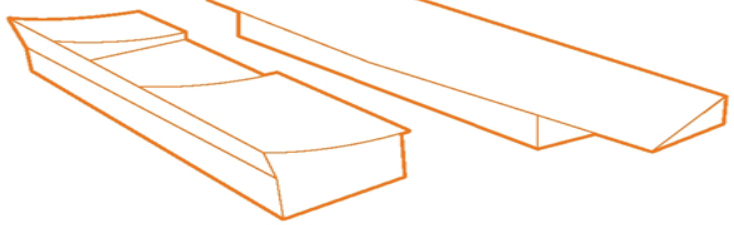
DESERT ROSE



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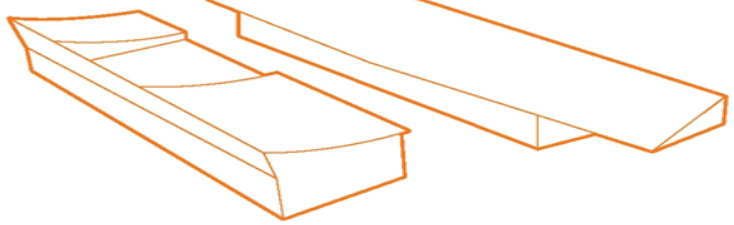
Agenda

- Introduction to the Solar Decathlon (SD) Competition
- SD 2013 Illawarra Flame House
- SD 2018 The Desert Rose House



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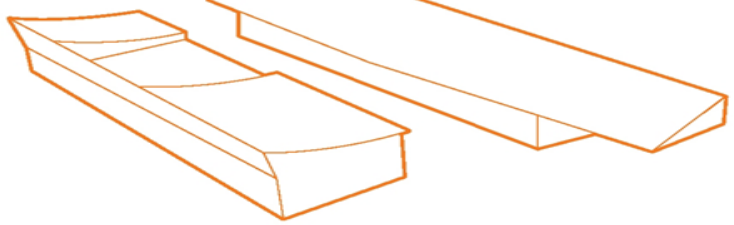
The U.S. Department of Energy Solar Decathlon Competition

- challenges student teams to design and build full-size, solar-powered houses.

- 10 objectives that design have to meet:
  - Architecture and thermal comfort
  - Affordability
  - Net zero energy
  - Innovative technologies
  - Etc.



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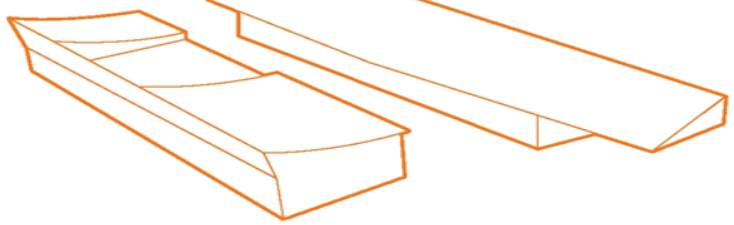
2 Years to Complete Construction



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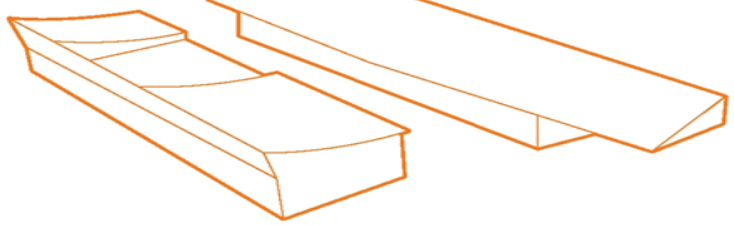
10 Days to Assemble On Site

2 Weeks of Competition



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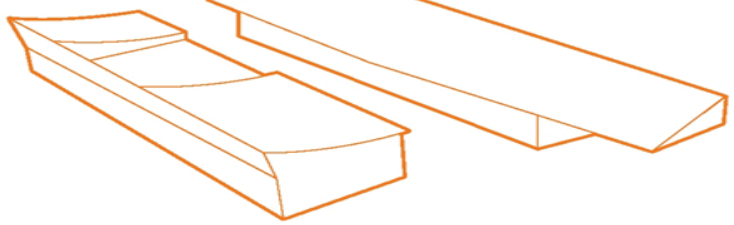
Illawarra Flame Design Philosophy

"The greenest building is the one already built"

Carl Elfante, Director of Sustainable Design, Quinn Evans Architects

Illawarra Flame AUSTRALIA

First team to demonstrate a building retrofit



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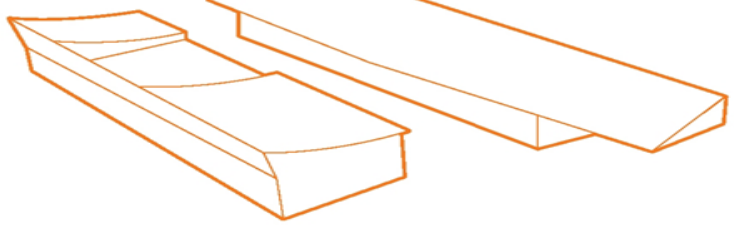
The Illawarra Flame House

- Team UOW holds the highest score in the history of the Solar Decathlon Competition
- Won 10 awards (Sydney Engineering Excellence, API NSW Excellence in Property, Green Gown Awards, AIRAH Awards, etc.)
- Complete scale model of the house in the Australian Powerhouse Museum

Solar Decathlon – Middle East 2018

http://solardecathlonme.com/sdme-2018-teams-welcoming-ceremony.html



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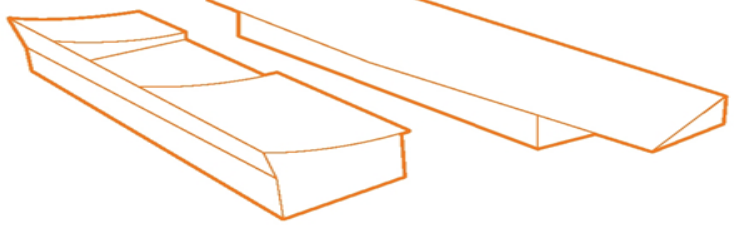
An House For an Elderly Couple

Desert Rose Australia

UNIVERSITY OF WOLLONGONG AUSTRALIA

UNIVERSITY OF WOLLONGONG IN DUBAI

TAFE NSW



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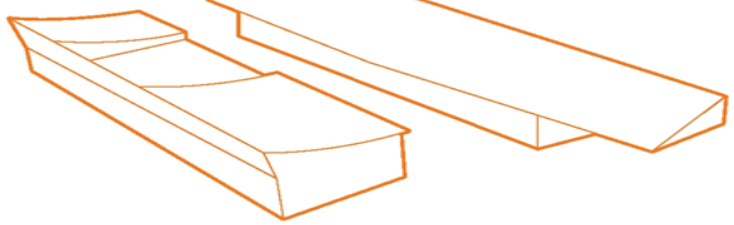
Why A House For Elderly Couple?

ENERGY+ ILLAWARRA

SAVE MONEY, SAVE EARTH, LIVE WELL
AND CREATE A BETTER WORLD FOR TOMORROW

WWW.ENERGYPLUSILLAWARRA.COM.AU

Better care homes



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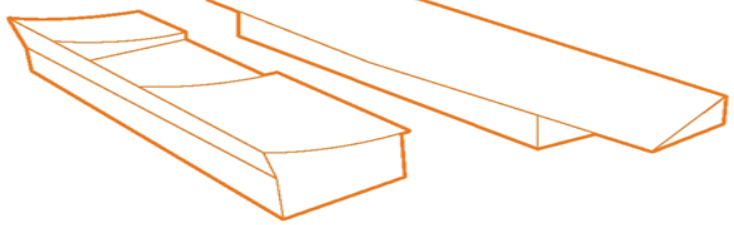
Anecdotes from our visits

- Arthritis – Unable to open or close windows.
- Houses cold in winter and hot in summer.
- Hallways not wide enough for a walking frame.

Are our houses really suitable for what comes tomorrow?



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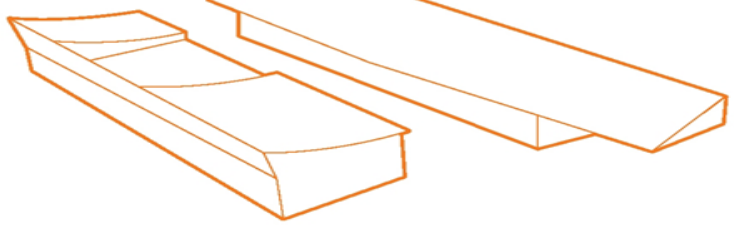
Results

- Many houses in which low income elderly people are living do not provide comfort conditions troughout the year.

- Indoor environmental quality plays a central role in providing comfort and managing agitation in people with dementia.



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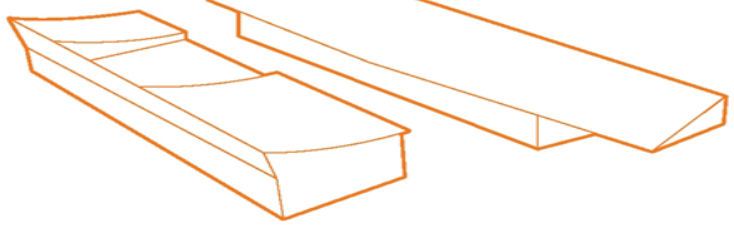
Our Philosophy

"this **architecture celebrates human wellbeing** rather than itself"

The Desert Rose house will **promote wellbeing** and **adapt to the occupants' needs** as they **age**.

The home will **cater** all elderly couples, from those with an active lifestyle to those with **age-related disabilities**.

Help the **elderly to live** in the **comfort** of their **own home** for **as long as they choose**.



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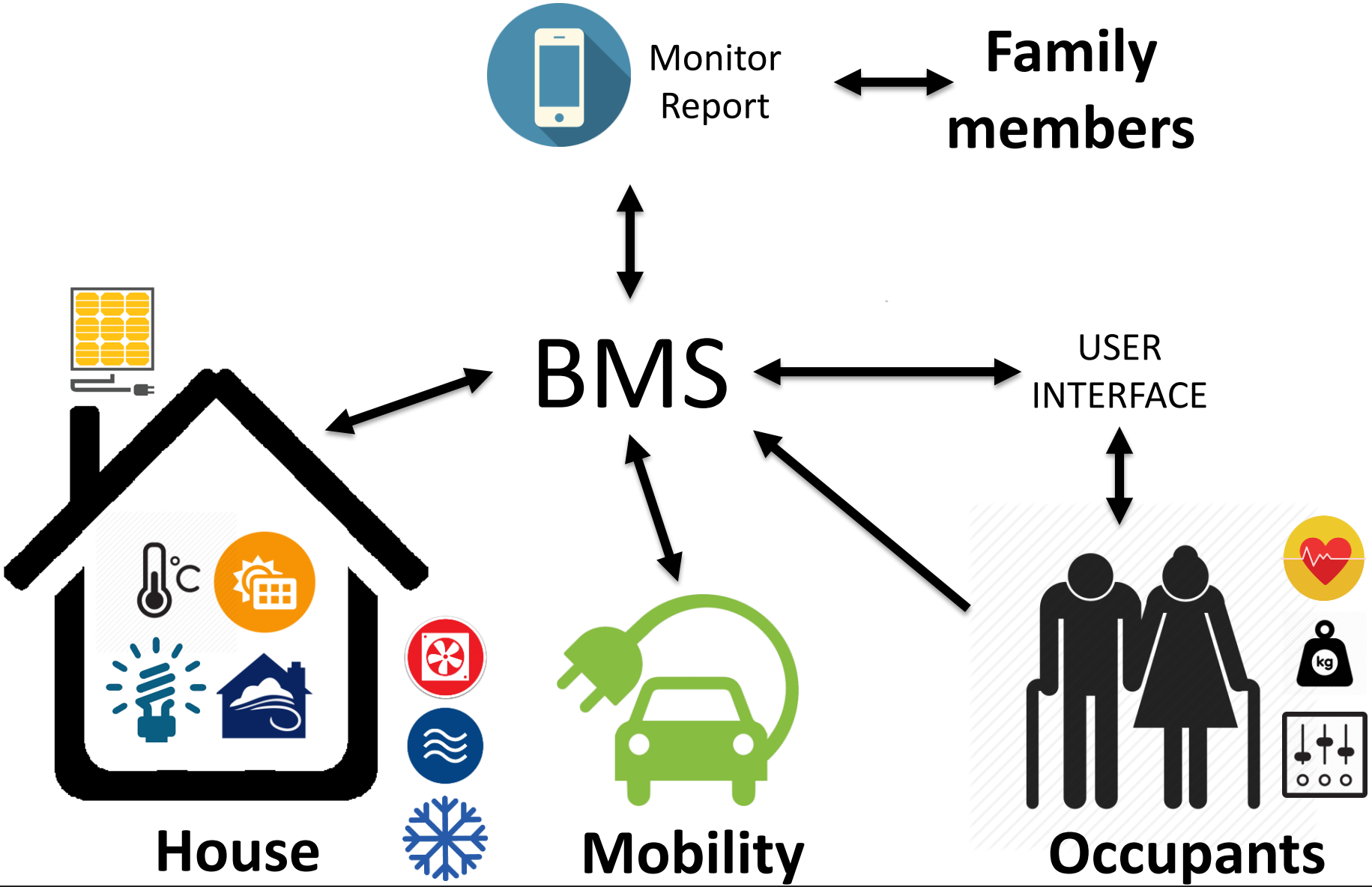
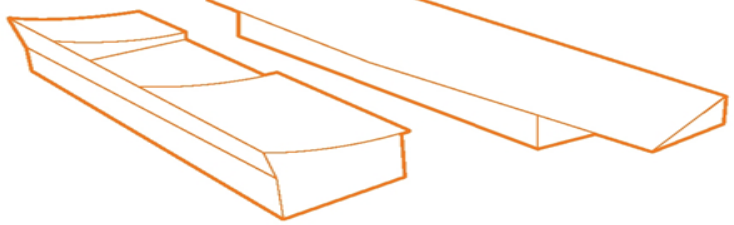
Our Goals for 2018 Competition

1. Change the way the world views homes for the elderly.
2. Reduce the stress on health services through smart design of houses for independent living.
3. Use a smart and innovative building management system.
4. Develop and design an user friendly interface to control the house.

Building Management System (BMS)





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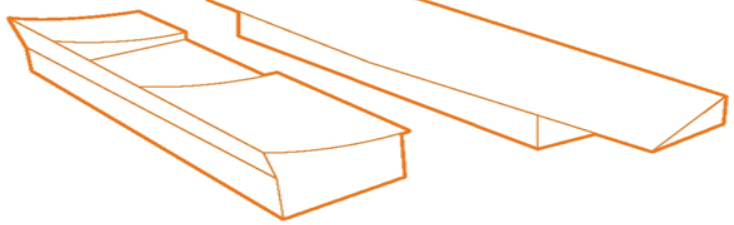
Things We Are Looking For

- Guidance and/or mentoring from experts in the aged care sector.

- Industry partners that may help us to develop innovative and smart solutions to:
  - Help occupants to perform day-to-day activities.
  - Reduce energy consumption.
  - Enhance safety.
  - Improve health and well-being.
  - Connect elderly with their family and carers.



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If You Would Like to Know More

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