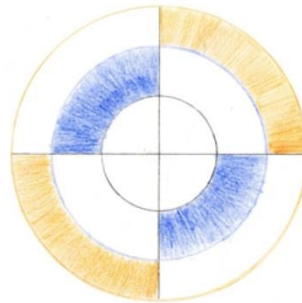


# GUIDE ON THE SIDE:

## SOLAR

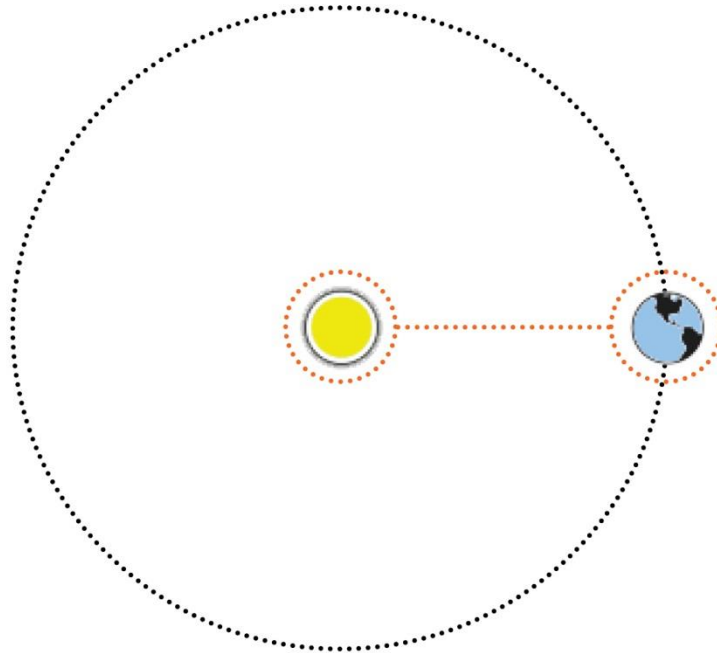
HOUSE AND GARAGE



SOLAR 2015

JULY 2015

KENNETH BLACK + THOMAS DOORN



## GOALS

### SOLAR:

INTRODUCTION TO A THEME

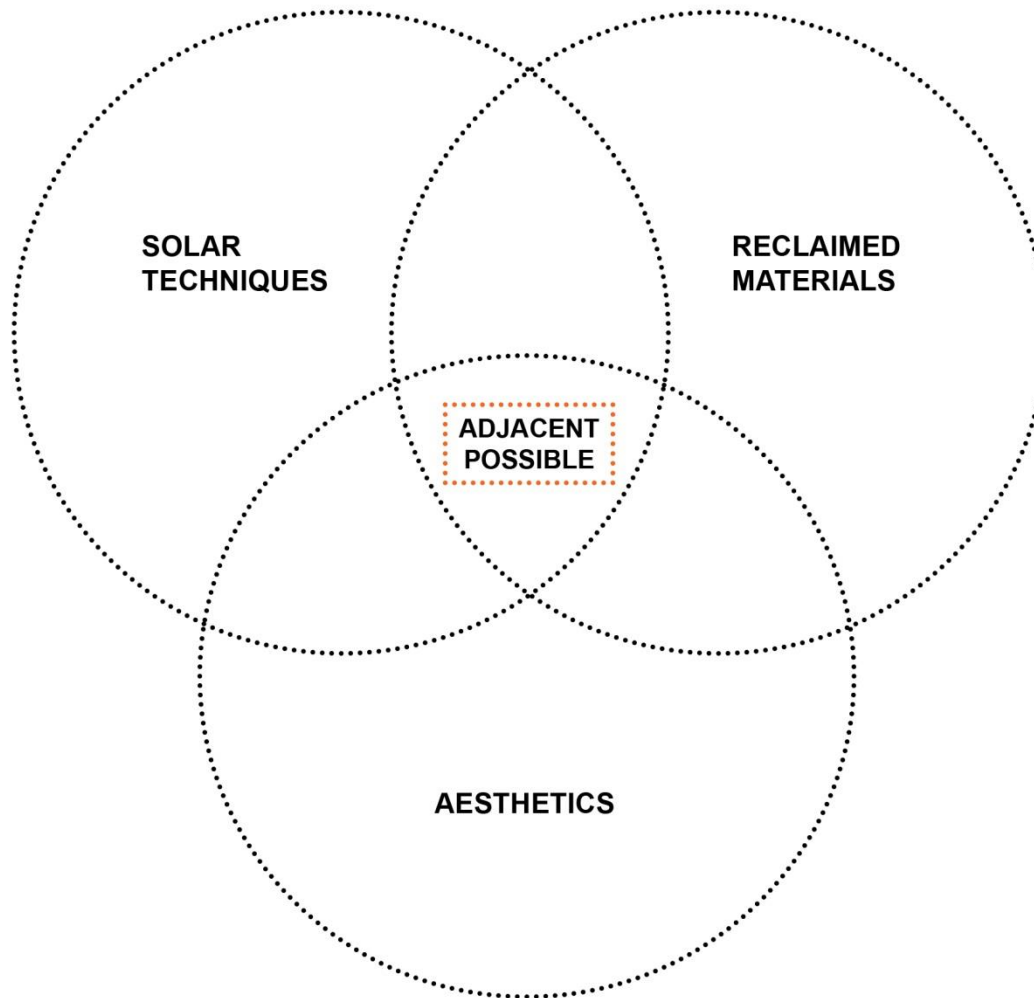
LOOK  
LISTEN  
LEARN

THINK  
DESIGN  
ACT

YIELDS:

SOLAR GARAGE

REDESIGNED SOLAR HOUSE

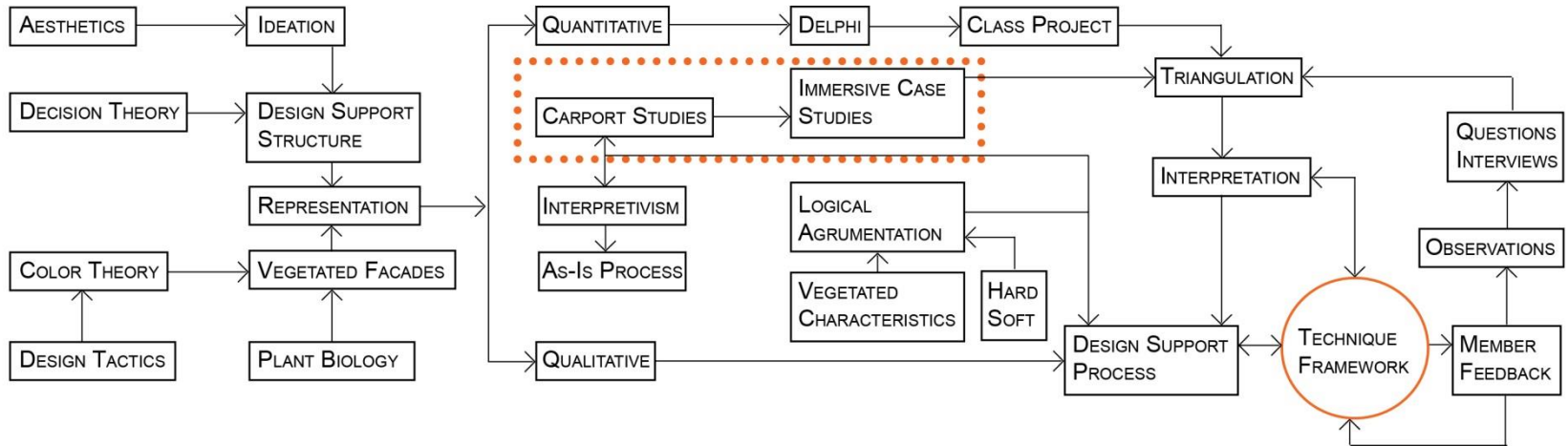


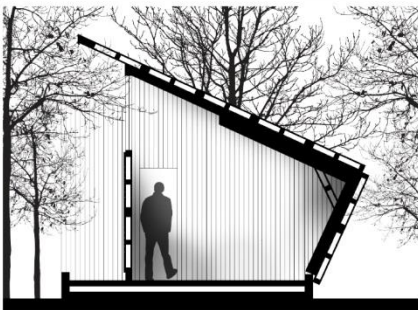
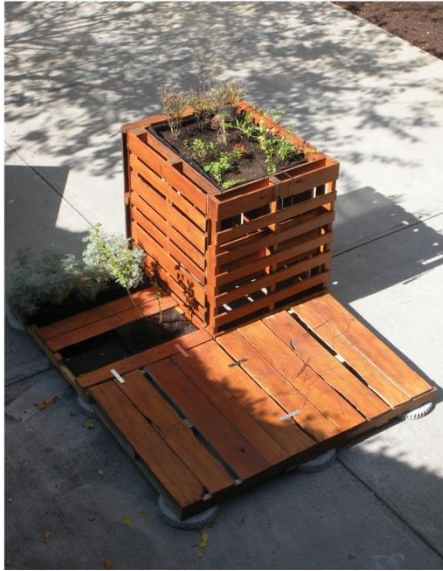
BACKGROUND

SOLAR:

HOW DO WE FUNCTION IN DESIGN

COMBINE TOPICS TO FIND NEW OPPORTUNITIES





## KEN

### SOLAR:

#### PROJECTS:

PALLET DECK AND PLANTER

WALL SECTION PROOF OF CONCEPT

DRAWINGS OF WALL SECTIONS

SECTION STUDIES FOR GARAGE



## KEN

### SOLAR:

#### PROJECTS:

NOT ONLY ABOUT THE WORK  
ABOUT THE PEOPLE INVOLVED

KEN

SOLAR:

THE SOLAR GARAGE  
AT A GLANCE OVER TIME





## THOMAS

### SOLAR:

**VIRGINIA TECH'S INVOLVEMENT IN THE SOLAR DECATHLON COMPETITION**

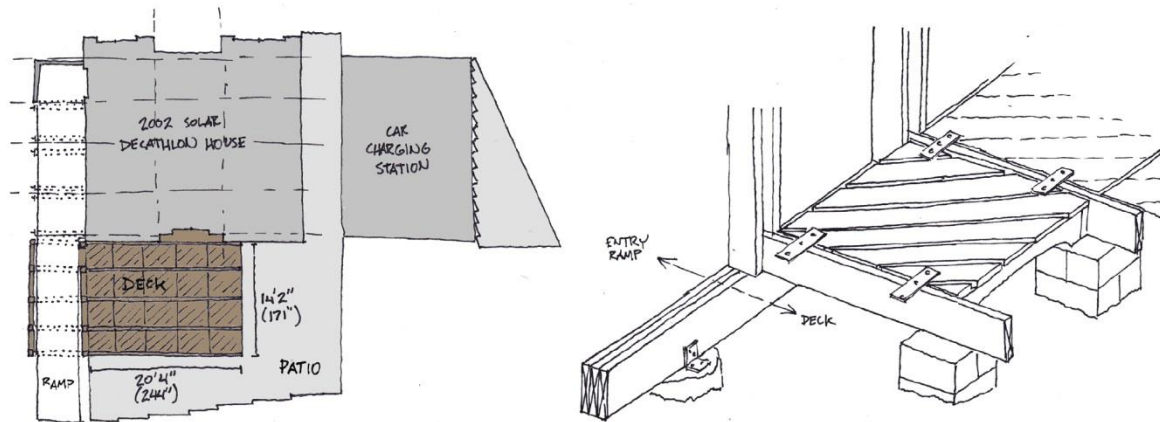
**PLACEMENT OF THE 2002 HOUSE AT VIRGINIA TECH'S RESEARCH AND DEVELOPMENT FACILITY (RDF)**

**CURRENT STATE OF THE 2002 HOUSE AFTER 13 YEARS AT THE RDF**

**2002 SOLAR HOUSE'S FUTURE CONTRIBUTIONS TO THE GROWTH OF THE RDF**







## THOMAS

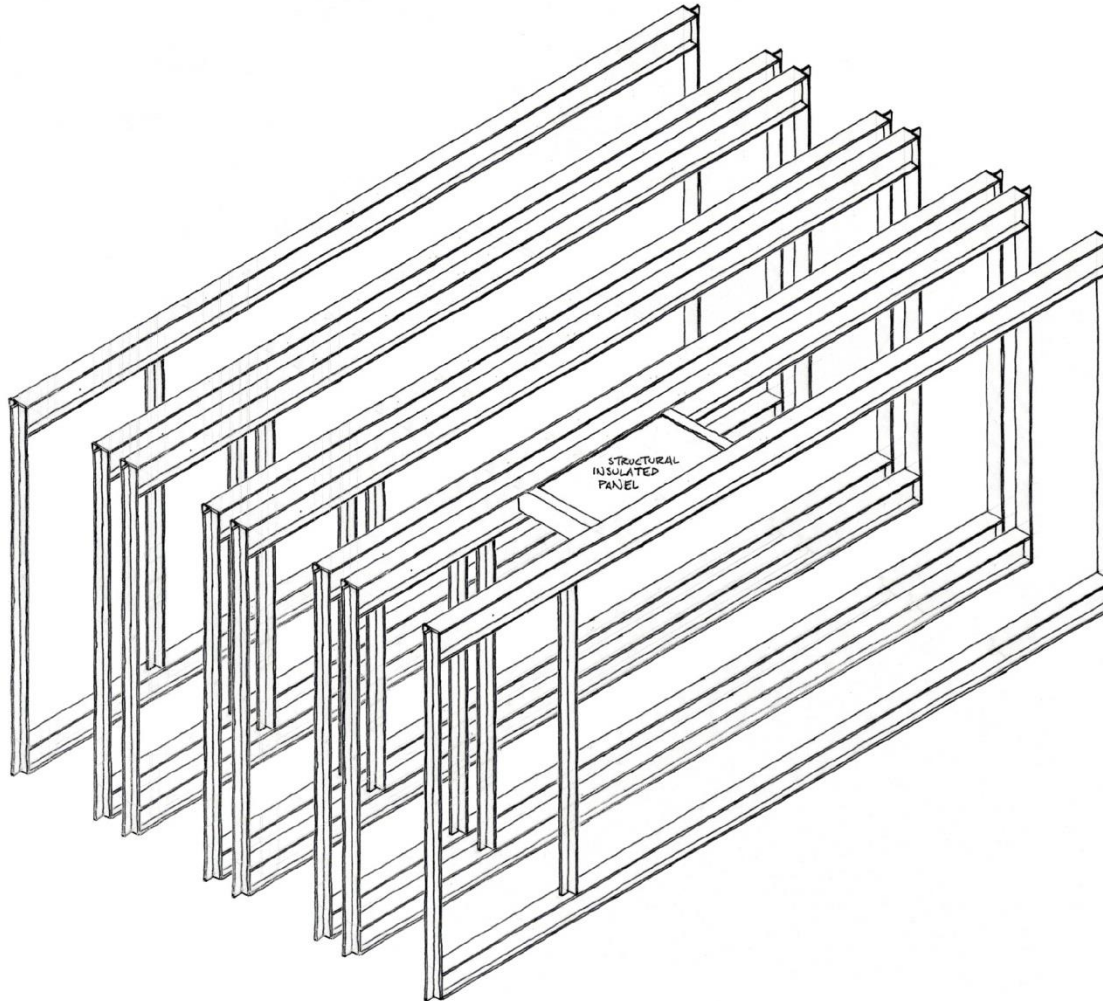
### RENOVATING EXTERIOR:

### IDEAS FOR RENOVATING THE 2002 SOLAR DECATHLON HOUSE

### REVITALIZING THE SITE

### USING PALLETS TO STRENGTHEN THE RELATIONSHIP BETWEEN THE CAR CHARGING STATION AND THE HOUSE

### EXPERIENCE THROUGH MAKING



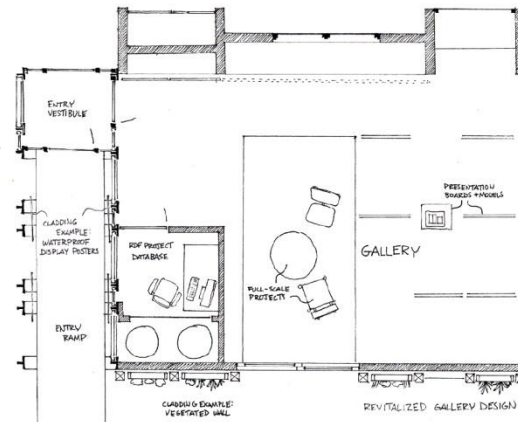
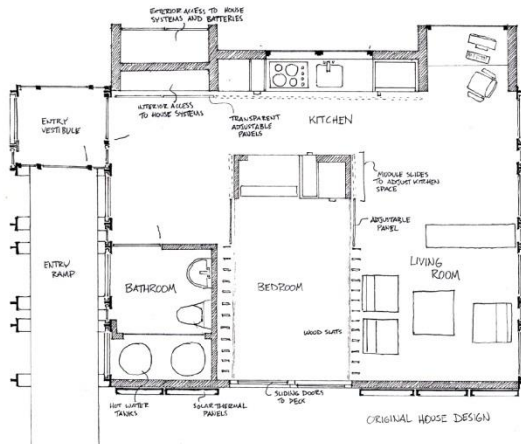
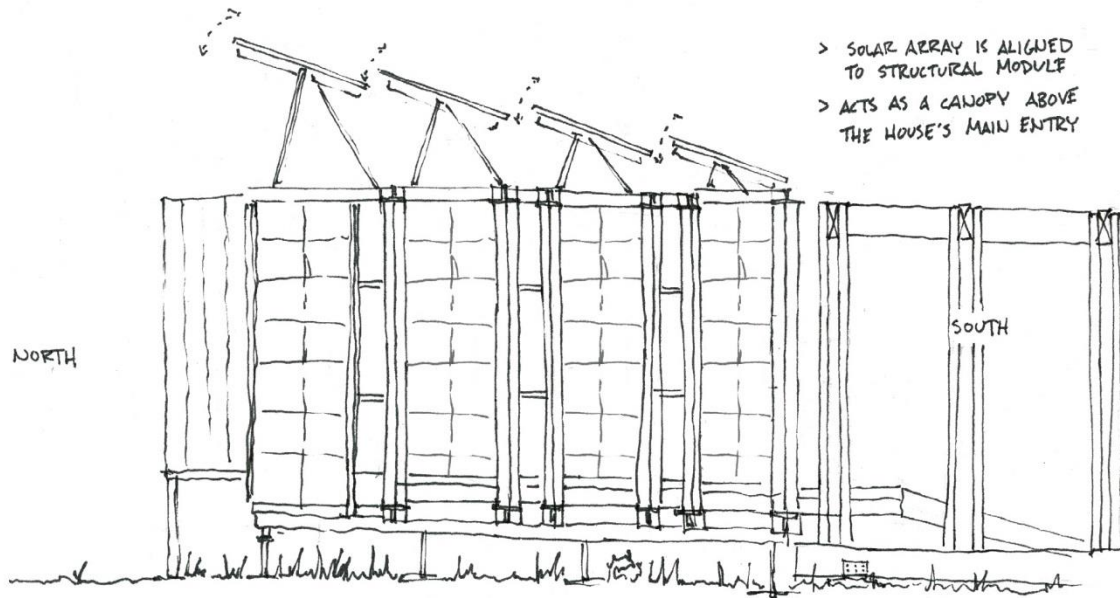
## THOMAS

DESIGN ORIGIN:

CHALLENGES PRESENTED BY THE  
SOLAR DECATHLON COMPETITION

TENSION BETWEEN THE  
RESPONSIBILITY TO DESIGN A  
BEAUTIFUL SPACE AND THE NECESSITY  
TO CREATE A HIGHLY EFFICIENT ONE

EXAMPLE: TRANSPORTING THE HOUSE



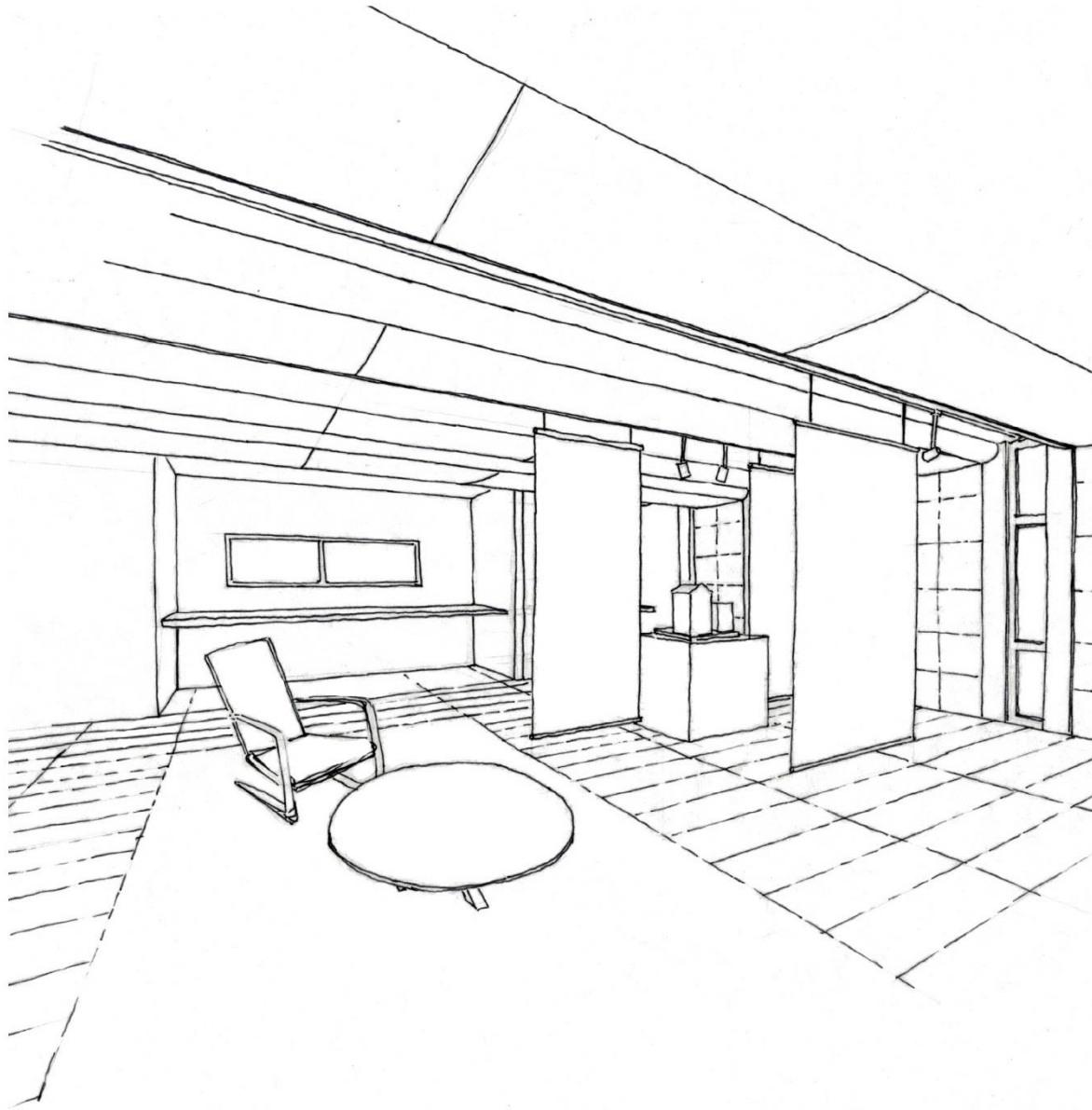
## THOMAS

### DESIGN ORIGIN:

TEAM DEVELOPED SOLUTIONS THAT PRIORITIZED DESIGN WHILE CELEBRATING THE RIGOROUS EFFICIENCY OF THE HOUSE

COOPERATION BETWEEN ARCHITECTS AND ENGINEERS

EXAMPLES: ARRANGEMENT OF PV PANELS, USE OF NANOGEL INSULATION, AND PRODUCING EVEN LIGHTING WITHIN A TIGHT SPACE



## THOMAS

### SOLAR:

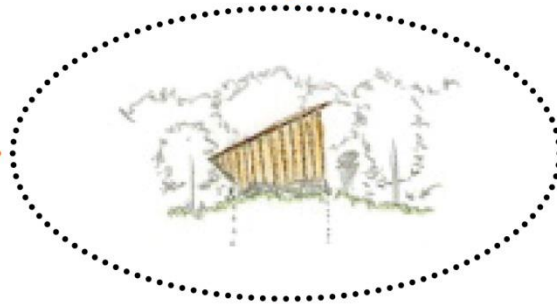
SHARING OF KNOWLEDGE  
AND EXPERIENCES BETWEEN  
PROFESSIONALS OF DIFFERENT  
BACKGROUNDS

'ADJACENT POSSIBLE' IN THE  
HOUSE'S ORIGINAL DESIGN AND  
RENOVATION PROJECT

IMPACT OF THE 'GUIDE ON THE SIDE'  
MENTALITY ON THE PROJECT AND  
PERSONAL EXPERIENCE

TEACHING

RESEARCH



MENTORING

DESIGN

## DISCUSSION

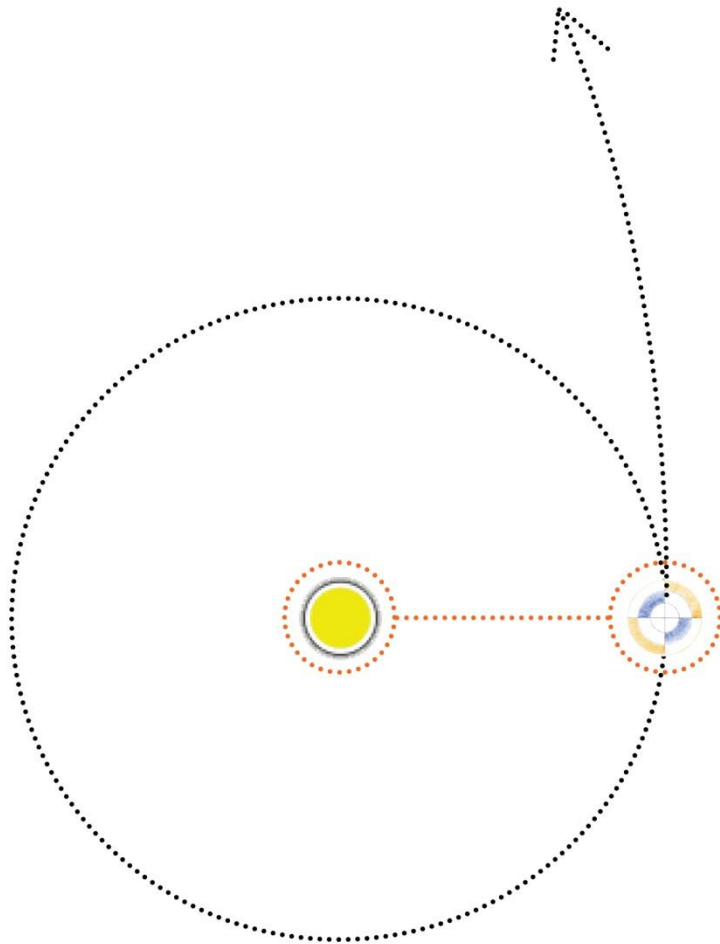
### SOLAR:

DESIGN AS A CONTINUUM  
PREVIOUS PROJECT COMBINE  
ADJACENT POSSIBLE

PEER MENTORING  
INDEPENDENT STUDY  
ATYPICAL EXPERIENCES

INTER- AND MULTI-DISCIPLINARY  
COMBINE SKILL IN THE INDIVIDUAL  
COMBINE DISCIPLINES IN A TEAM

TIME AND ANALYSIS FOR SYNTHESIS  
OVER TIME EXPERTISE CAN GROW



CONTINUATION

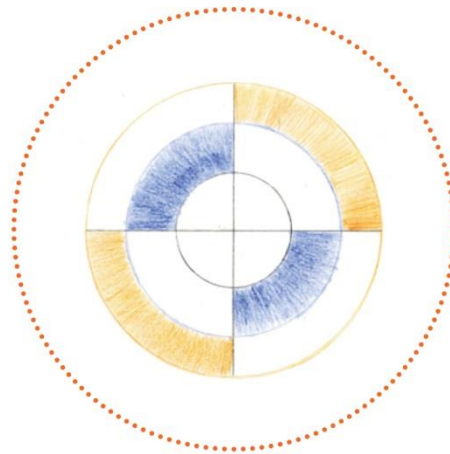
SOLAR:

BREAKING INTO THE NEXT PATH

INDOOR-OUTDOOR

MATERIALS RESEARCH

TEACHING AND MENTORING



QUESTIONS

SOLAR:

THANKS FOR LISTENING