

I PRO 352

SOLAR DECATHLON

2011



What Is SolarD?

- International collegiate competition
- 20 students teams
- **Design, Build, and Showcase** small homes powered by building-integrated photovoltaics (BIPV)
- Highlight sustainable solutions to everyday living

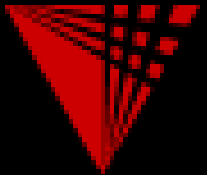
-**Educate** the public in viable sustainable technologies

-**Innovate** on current green building practices

-**Collaborate** among university departments and local professionals

Why at IIT?

- **Participate in Chicago's green building initiatives**
- **Community networking and involvement**
- **Entrepreneurship possibilities**
- **Hands-on experience for students**
- **Interdisciplinary work**
- **Coordinate university research efforts**
- **Publicity**



Team Structure



Team Structure

- **Architecture**
- **Engineering**
- **Public Relations & Business**
- **Website Development**
- **Database**

Team Structure

- Architecture
 - Research previous Solar Decathlon Projects
 - Design techniques used
 - Construction costs
 - Implement questionnaires
 - Provide initial design concept



Team Structure

- Engineering
 - Research sustainable technologies
 - Research available materials
 - Locate helpful sources and contacts



Team Structure

- Public Relations and Business
 - Create informational pamphlet
 - Begin networking process
 - Provide initial business plan

Team Structure


- Database
 - Compiles research, contacts, websites and questionnaires into organized format
 - Allows future IPRO's to use and add documents
 - One-Stop informational source

Team Structure

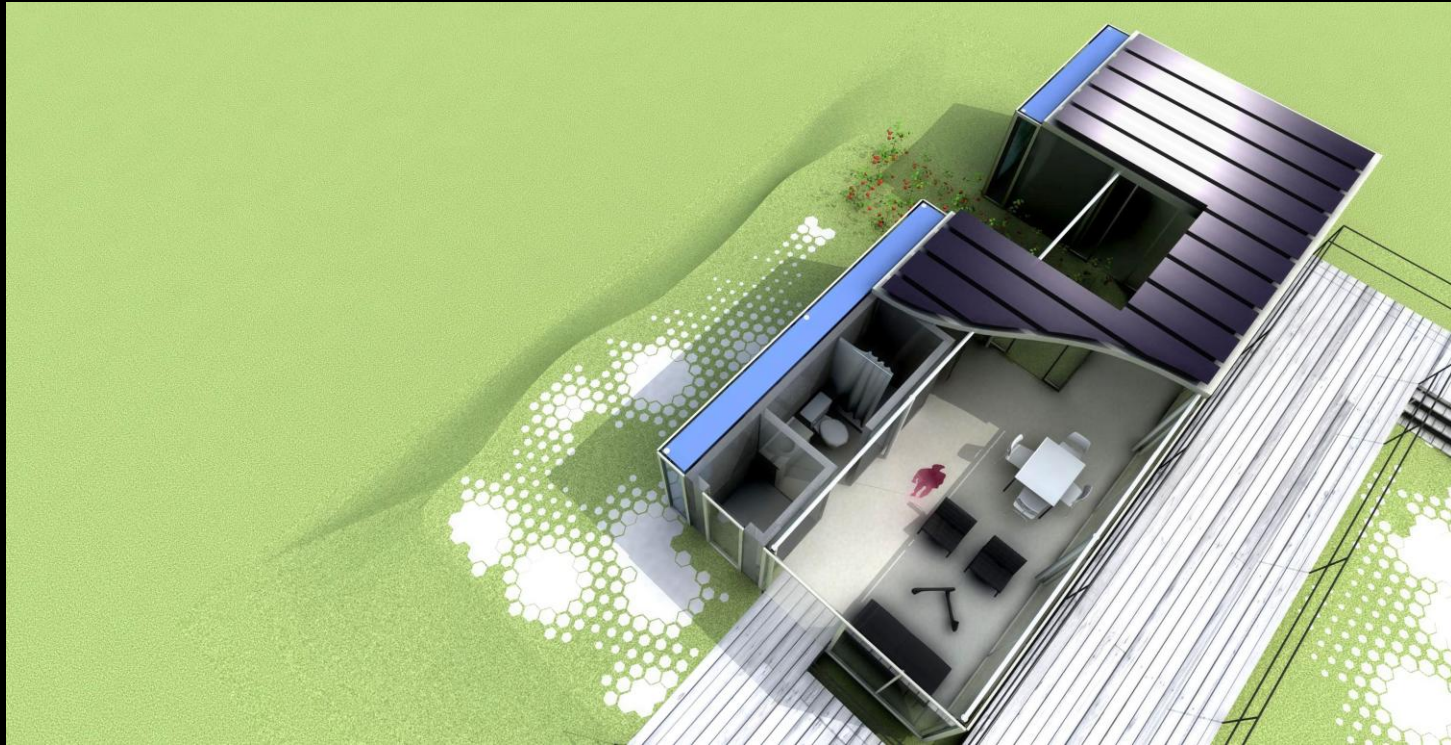
- Website
 - Allows information database to be available at all times
 - Provides information for potential sponsors
 - Increases visibility

Green Technology Database

- Research of both commercially available and fringe technologies
- Creation of database including relevance, costs, advantages, and availability of products

Site URL:	sun tracking skylights
Website Name:	Ciralight
Product:	Sun tracking skylights
Image:	
Relevance:	These skylights have solar powered motors to move the mirrors which follow the sun and bounce the light down into the building
Cost:	roughly \$4,000
Misc. Information:	

Implementation



- Roof mounted photovoltaic panels
- Translucent insulating panels
- Grey water thermal mass and passive solar
- Water recycling strategies
- Recycled materials

REASON/IMPORTANCE

- EVER INCREASING PRICES OF OIL
- GLOBAL WARMING
- A NEED FOR USE OF RENEWABLE SOURCE OF ENERGY (SUN)
- A FAIRLY FRAGMENTED OR GROWING INDUSTRY

THE BUSINESS PLAN

- **FOCUS:** COMPETE AT SOLAR DEACTHLON 2011 TO BE HELD IN WASHINGTON DC
- **STRATEGY:** BUILD A SOLAR POWERED HOUSE WITH MERGER OF INNOVATION IN TECHNOLOGY AND ART ON IIT CAMPUS AND USE IT FOR RESEARCH/DEMONSTRATION PURPOSE. THE HOUSE WILL BE SHIPPED FOR THE COMPETITION TO WASHINGTON.IT WILL BE USED FOR COMMERCIAL PURPOSE ON CAMPUS FOR GENERATING REVENUES AFTER THE COMPETITION.

ESTIMATED BUDGET

- PRIMARY HOUSE COSTS - \$ 350,000
- SECONDARY COSTS - \$ 35,000
- OTHER COSTS – \$350,000

MARKETING STRATEGY

- BROCHURES
- YOUTUBE
- FACEBOOK
- ADVERTISEMENTS
- MARKET RESEARCH

COMPETITIVE ADVANTAGES

- WHY IIT WHY NOT ANY OTHER UNIVERSITY?
- SMALLER INSTITUTION
- DETAILED ATTENTION TO THE DECATHLON PROJECT
- EXCELLENT TECH AND ARCHITECTURE SCHOOL
- INVOLVEMENT OF SPONSORS IN THE PROJECT
- GREAT PROMOTIONAL STRATEGIES
- REVENUE GENERATING PROJECT IN THE LATTER STAGES

Path to Solar Decathlon 2011

- IPRO Fall '08
- Independent Study Spring '09
- Independent Study Fall '09
- Dec '09 - due date for Solar Decathlon documents

Fall '08 Continuing IPRO

- Continue research in specific sustainable design and technologies
- Continue to build the list of local resources and contacts for sponsorship and collaboration
- Organize and host a symposium to highlight sustainable building and solar technology

Spring '09 independent Study

- Three small specialized groups Architects, Engineers and Psychology/Business (lead by masters students)
- Architects and engineers would be further researching technology designing the actual solar house
- Psychology and Business students would be further developing contacts and raising sponsorship and support in the Chicago area

Fall '09 independent Study

- Once again Three small specialized groups
- Finalize schematics and building plan
- Business plan completed
- Compile final proposal and documents needed for submission into the Solar Decathlon office

Stretch Goal

- If all goes well perhaps to turn this project into a LLC under IIT's heading

Questions?