



# SMART Competition

[www.smartcompetition.org](http://www.smartcompetition.org)

*The SMART Competition is a high school team-based STEM and CTE education program that provides hands-on learning experience and practical investigation of intelligent building design, renewable technology and the smart grid.*

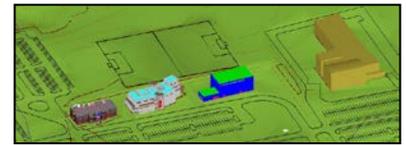
## Real World Design Challenge

The Competition promotes sustainable and environmentally friendly building design, the use of renewable technology, improving energy efficiency and the smart grid.

### The Challenge:

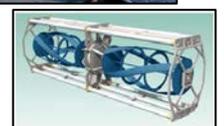
Given a virtual model of a high school campus with a poorly designed gymnasium,

- Redesign the gymnasium using sustainable materials and creative design concepts.
- Use the full spectrum of design changes available including material choices, changes to all roof, wall, door and windows, redesign lighting and air conditioning systems, landscaping, building uses and change the building or campus orientation.
- Add at least one renewable form of energy generation to the campus
- Provide the surplus power by the gymnasium consumption improvements and added power generation system to the communities smart grid.



### The Solutions

Using Bentley design, building information management and energy analysis tools, the student teams make the campus more energy self-sufficient through the use of sustainable materials and renewable technology using cutting edge computer simulation. Solutions will address Energy Conservation, Localized Power Generation, Intelligent Power Distribution, Architecture, Sustainable Technology, Transportation and Electric Vehicles. The competition culminates with team presentations.



### Who can compete

The competition is designed for high school students and is open to all public, private, parochial schools, home-based schools, clubs and sponsored educational entities.

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