

**F** **H** **O** **T** **O**  
**N** **A** **S** **T** **E** **C**  
(INNOVATIVE FACADE TECHNOLOGY)

## **GOALS AND OBJECTIVES**

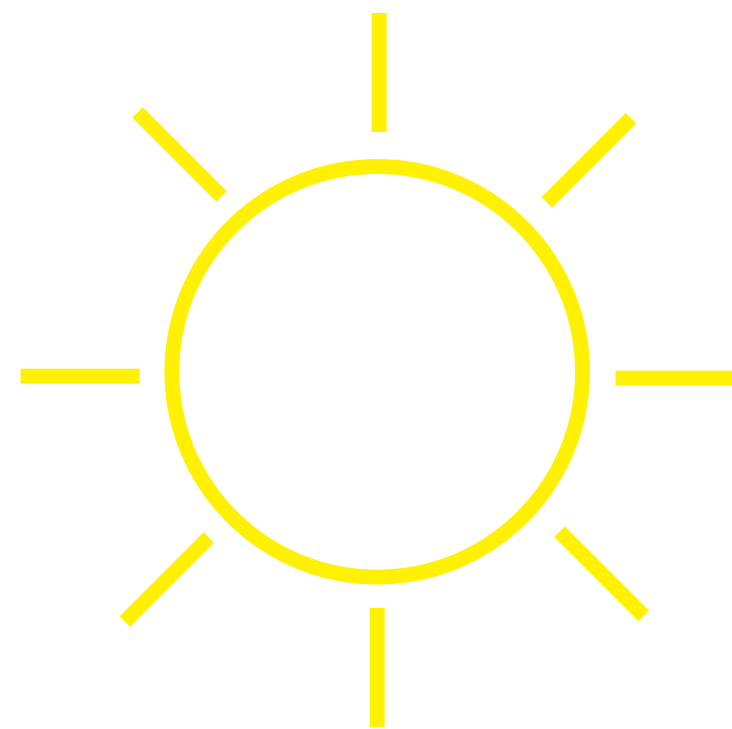
**PHOTONASTIC** WILL ENGAGE THE BUILDING AND FACADE MARKET WITH A BUILDING INTEGRATED ADAPTIVE TECHNOLOGY.

Designed as an architectural day lighting system the **PHOTONASTIC** facade will respond to exterior lighting conditions and internal temperature comfortability.

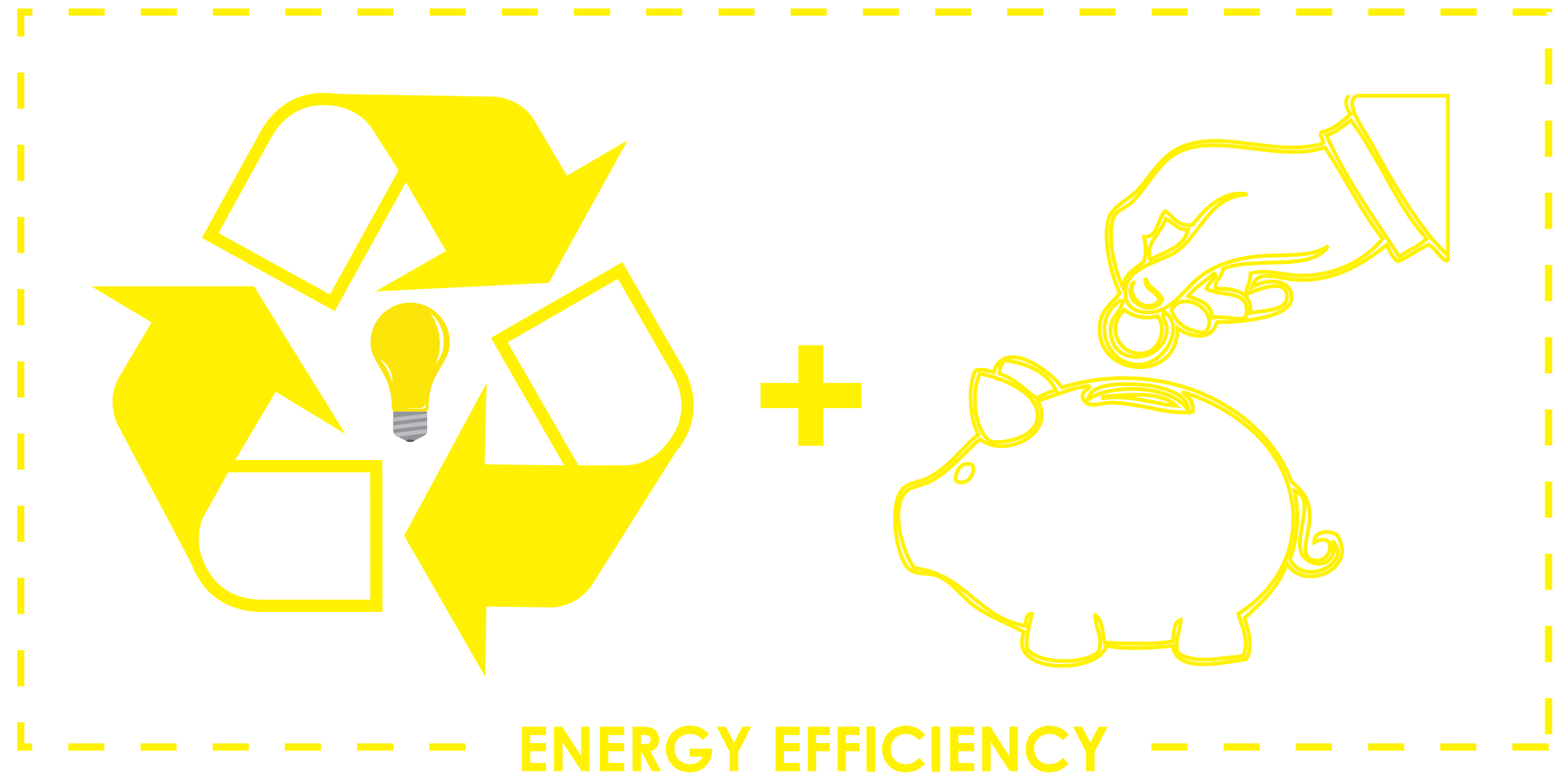
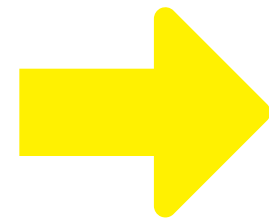
- The system performs as a dynamic shading device to reduce solar gain and enhance interior lighting conditions. This system will effectively reduce operating expenses associated with cooling and lighting demands.
- As a result of lowering heating and cooling loads on the building, this system will allow for reductions in initial cost associated with sizing of mechanical equipment during the design process.
- **PHOTONASTIC** will attract tenants in a vast array of building markets and typologies , who demand energy efficient buildings through sustainable upgrades along with creating an alternative approach to adapt existing buildings for the 2030 challenge, or other goal oriented future building energy conservation programs.

## PROJECT DESCRIPTION

PHOTONASTIC IS A CONCEPT ADDRESSING THE INVENTION, DESIGN, PRODUCTION AND POTENTIAL IMPLEMENTATION OF A MULTI-FUNCTIONAL BUILDING INTEGRATED SYSTEM. THE SYSTEM ATTEMPTS TO DRAMATICALLY ADDRESS THE RELATIONSHIP BETWEEN ENERGY CONSERVATION AND ARCHITECTURAL FACADE INNOVATION. THE SKIN AFFECTS BOTH THE APPEARANCE AND PERFORMANCE IN SUCH A WAY THAT THESE DIVERSE ESSENTIAL FEATURES PROMOTE NEW DESIGN CONCEPTS AND STIMULATE TECHNICAL DEVELOPMENTS FOR THE ARCHITECTURE OF THE FUTURE.

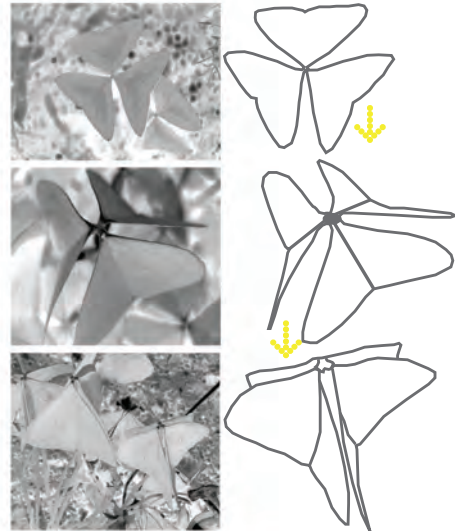


SOLAR

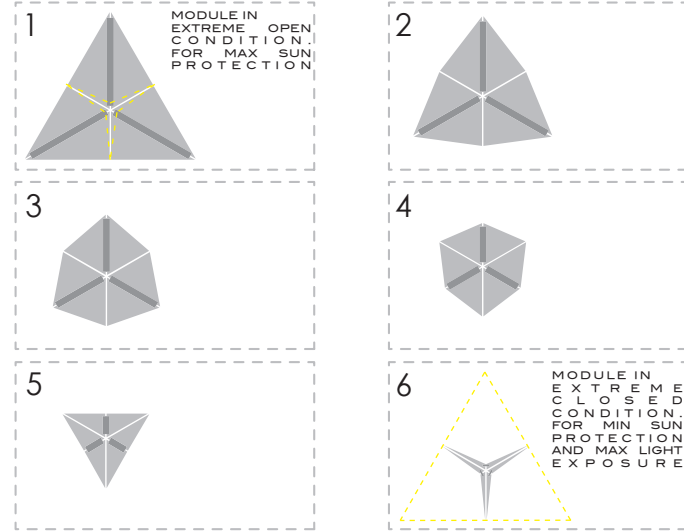


ENERGY EFFICIENCY

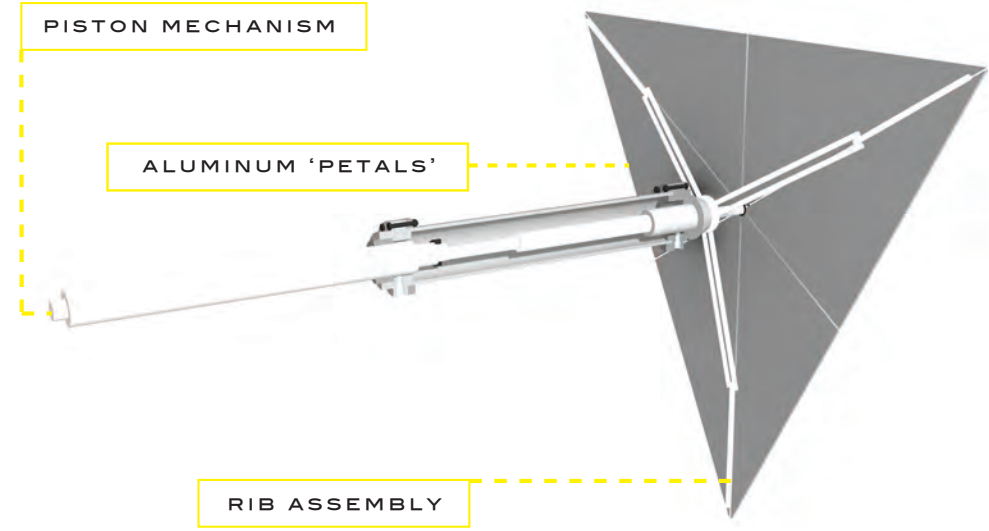
PHOTONASTIC RESPONSE IN NATURE



POTENTIAL MODULE POSITIONS

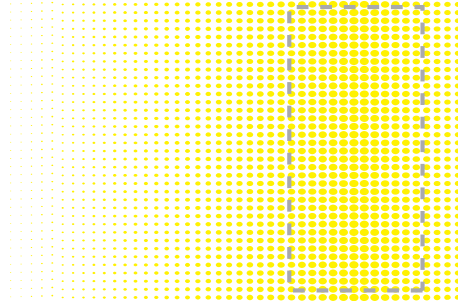
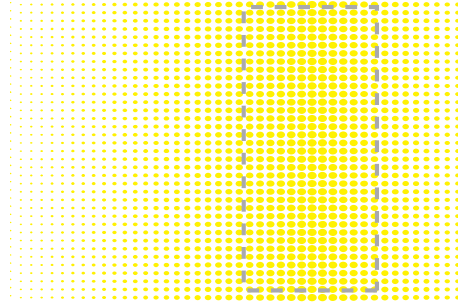
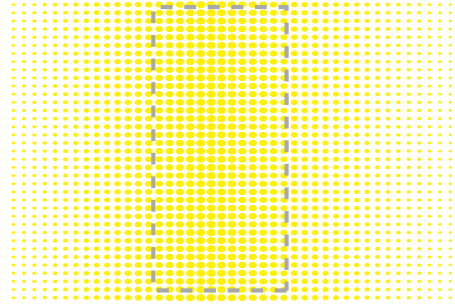
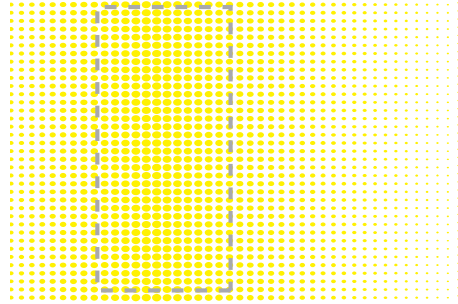
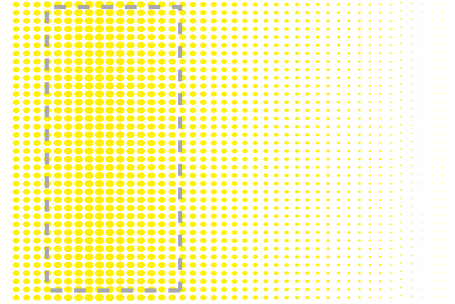


MODULAR EXTREMES



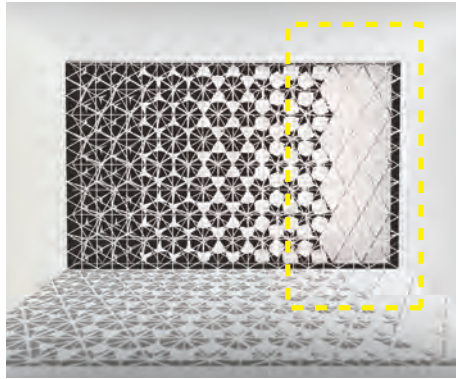
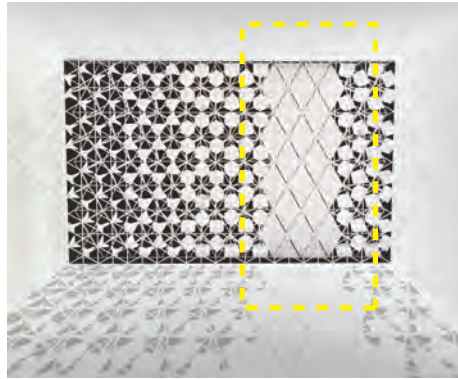
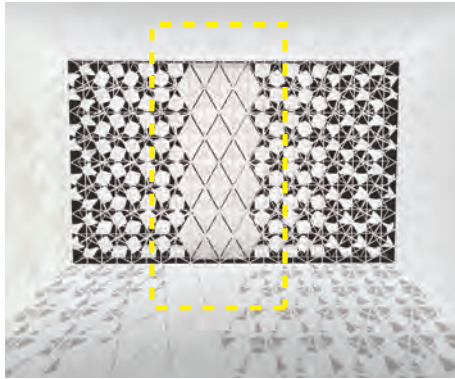
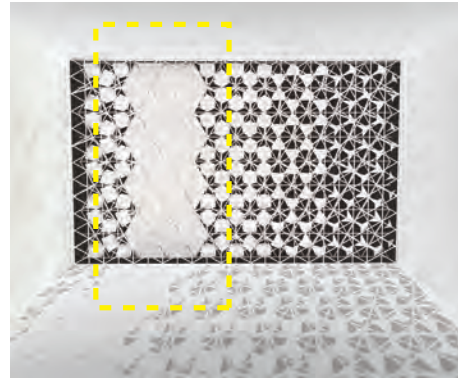
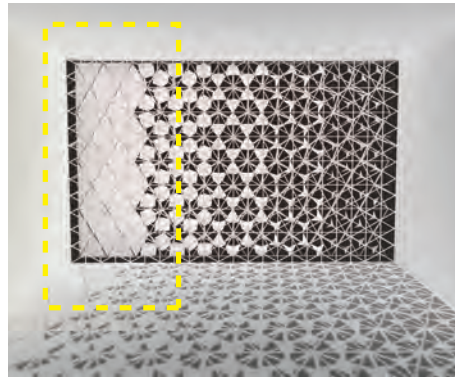
MODULE MECHANICS AND STRUCTURE

SOLAR INTENSITY



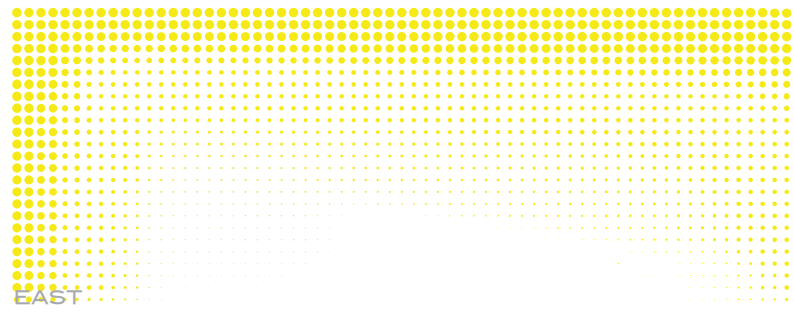
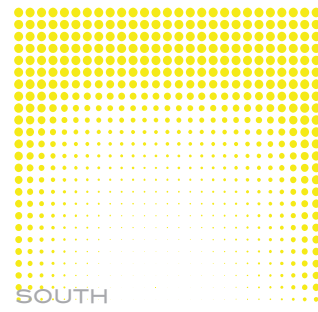
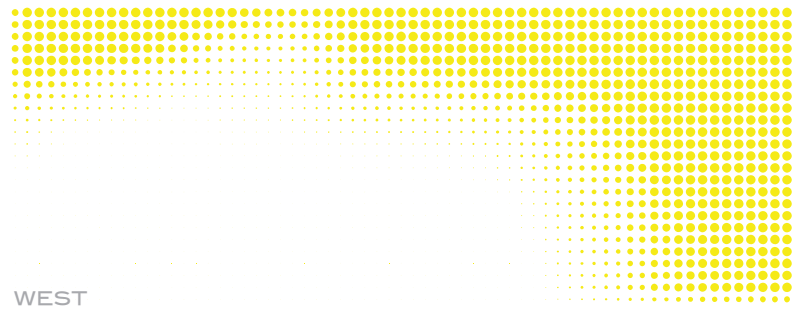
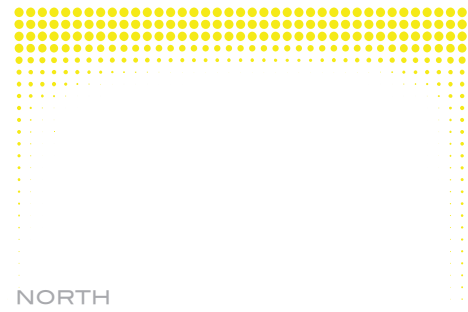
SOLAR INTENSITY

FACADE RESPONSE



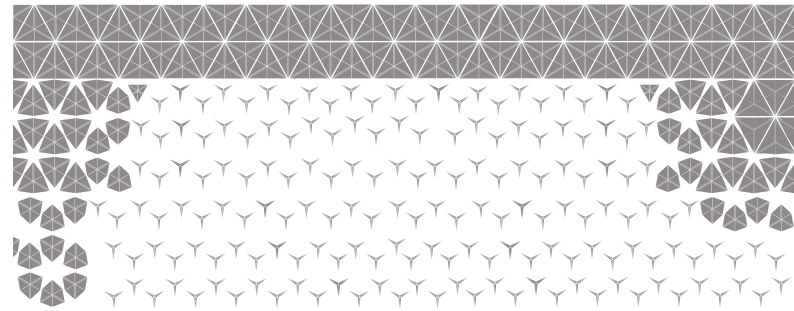
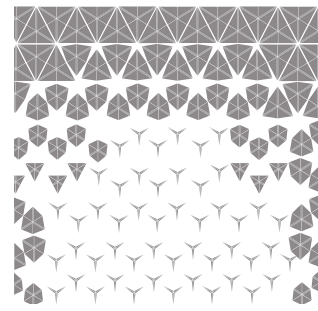
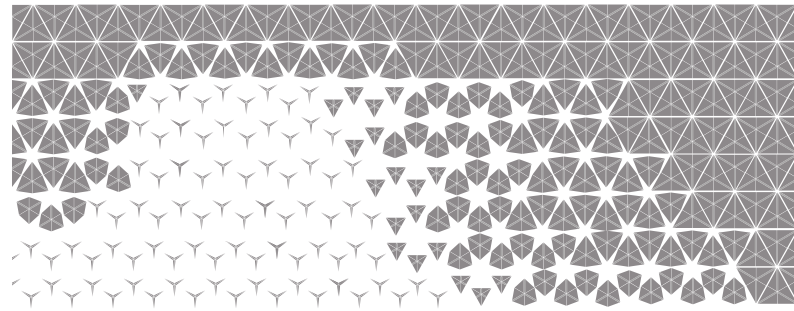
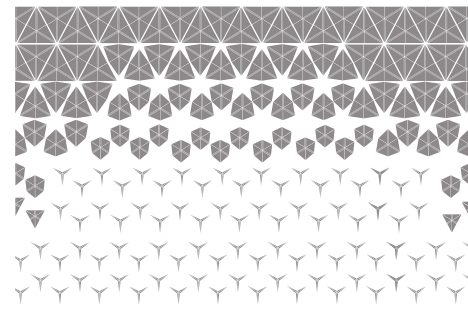
FACADE RESPONSE

ECOTECH ANALYSIS

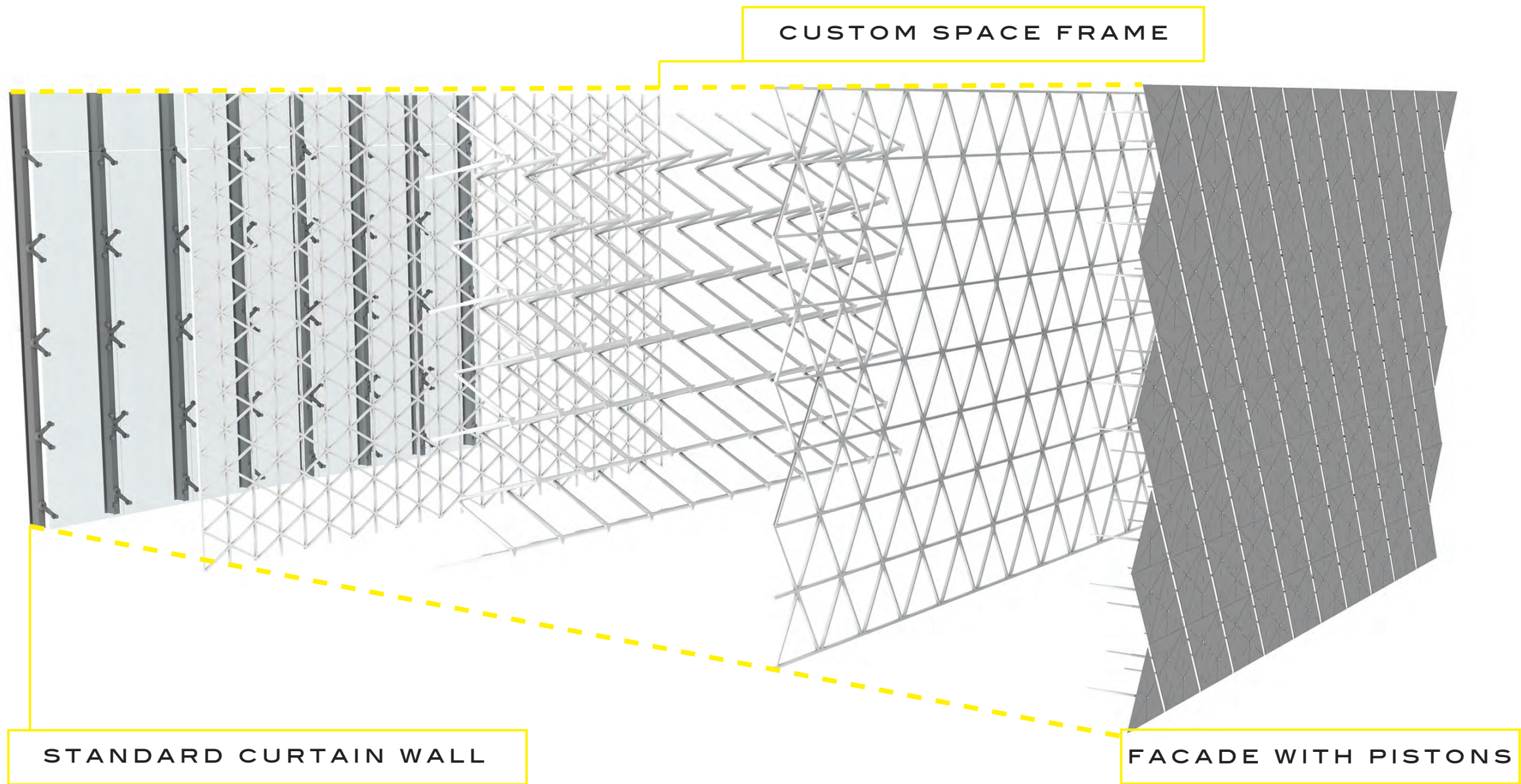


CHICAGO, IL

FACADE RESPONSE



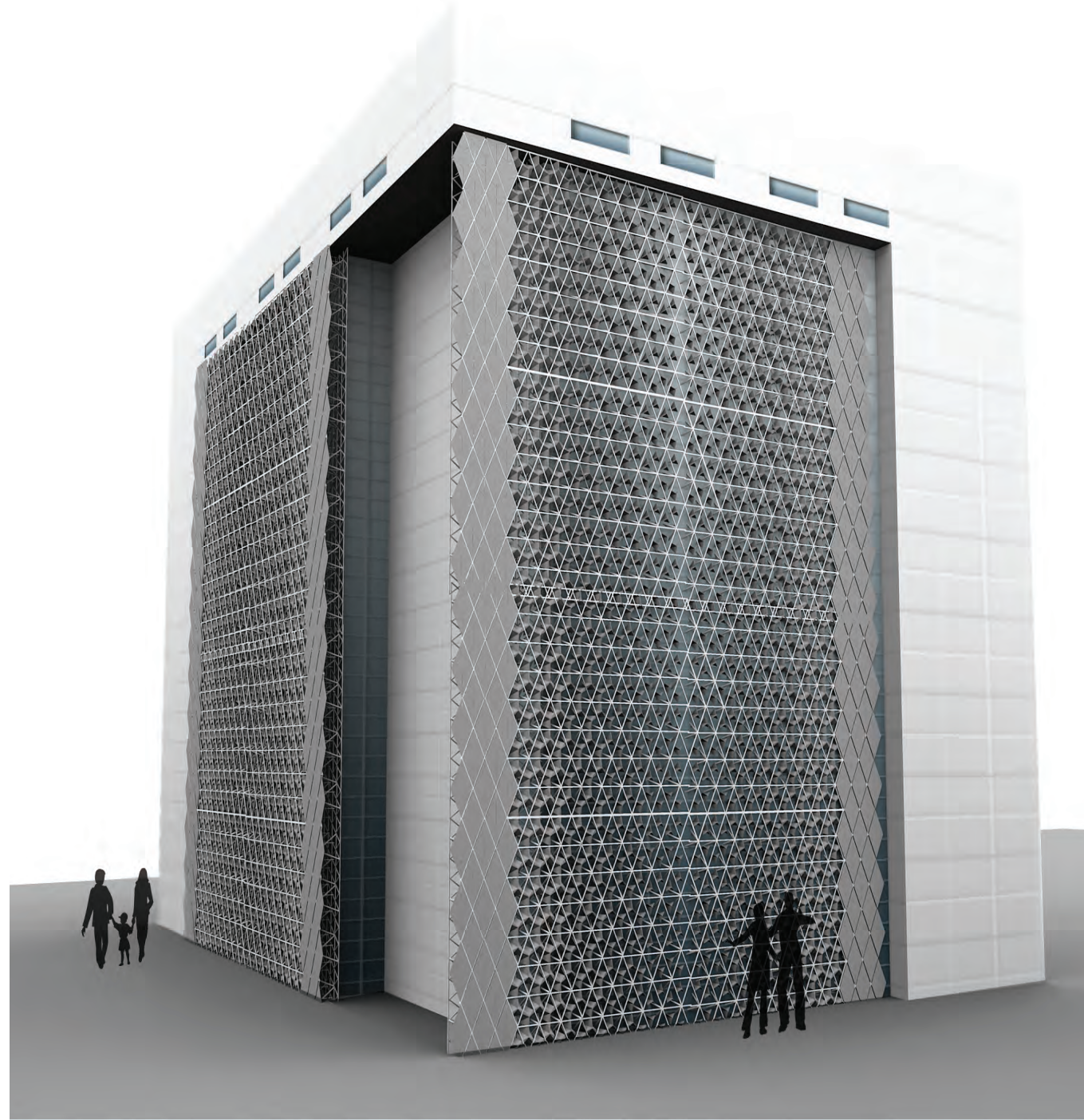
FACADE RESPONSE



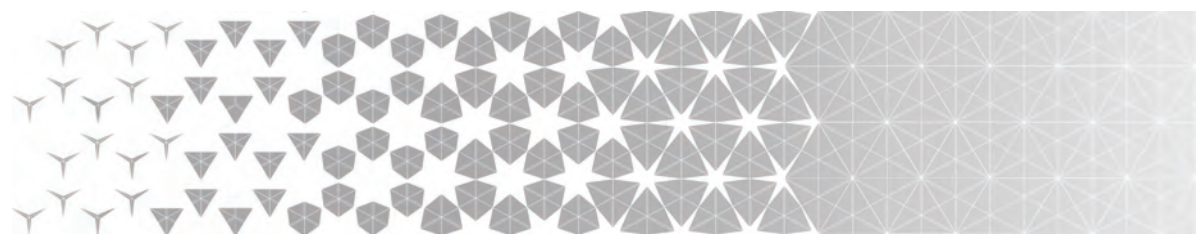


INTERIOR RENDERING WITH FACADE





EXTERIOR FACADE APPLICATION



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