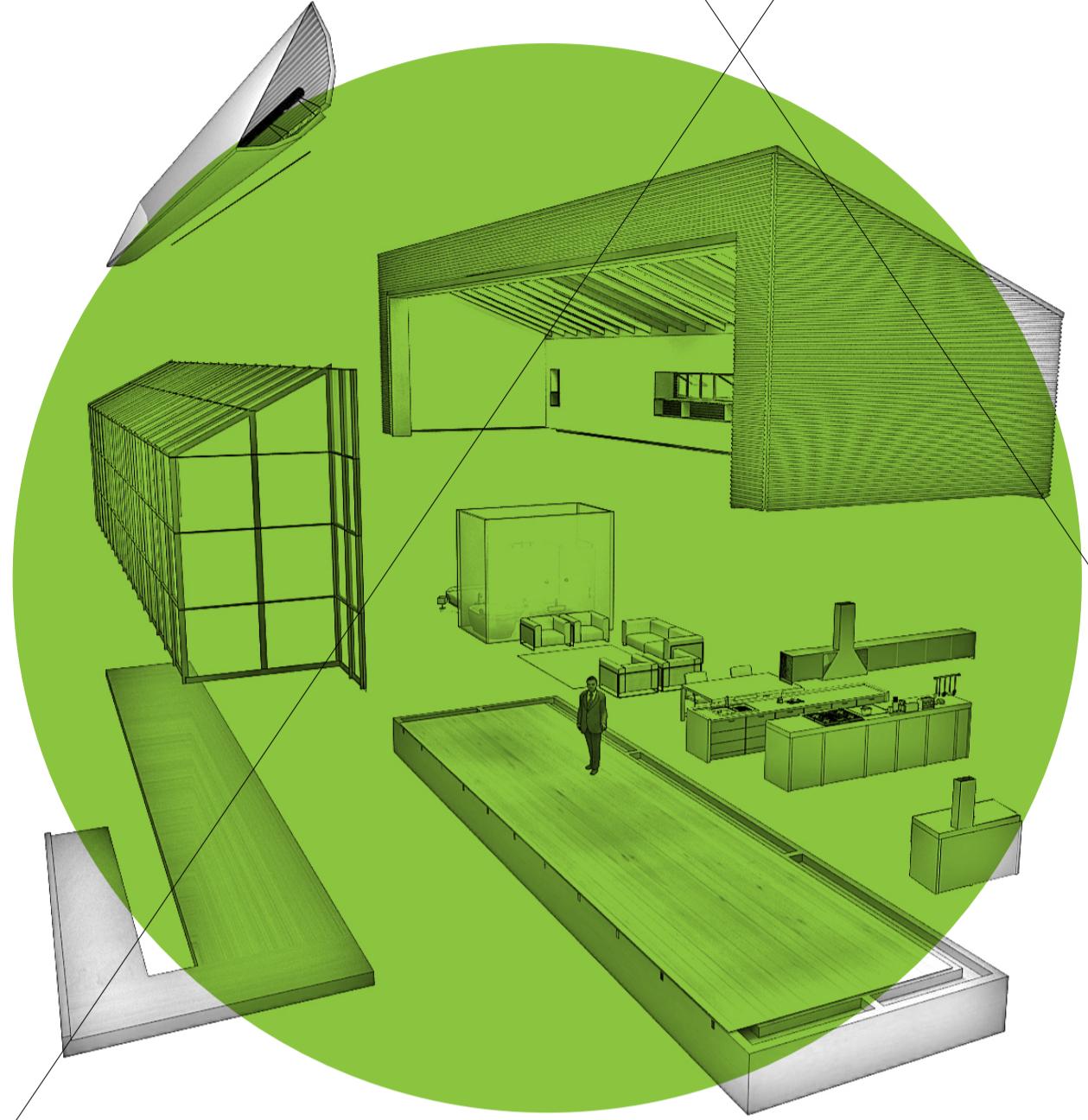


Sustainable Connected Home



GREEN HOME ALLIANCE MOBILE EXPERIENCE LAB, DESIGN LAB

WE ARE DESIGNING AND BUILDING A FULL SCALE PROTOTYPE OF A SUSTAINABLE HOME WITH FOUR DESIGN OBJECTIVES.

SUSTAINABLE ARCHITECTURE: implementation of a vivid and specialized architecture that embodies particular sustainable principles, integrated into the landscape in an efficient and elegant way.

SMART ENERGY SYSTEM: use of natural sources of energy for the energy supply of the home such as solar panels, rainwater retention, biomass and windmills.

INFO AND COMMUNICATION TECHNOLOGIES: integration of information and communication technologies to create a responsive system between users, architecture and energy systems.

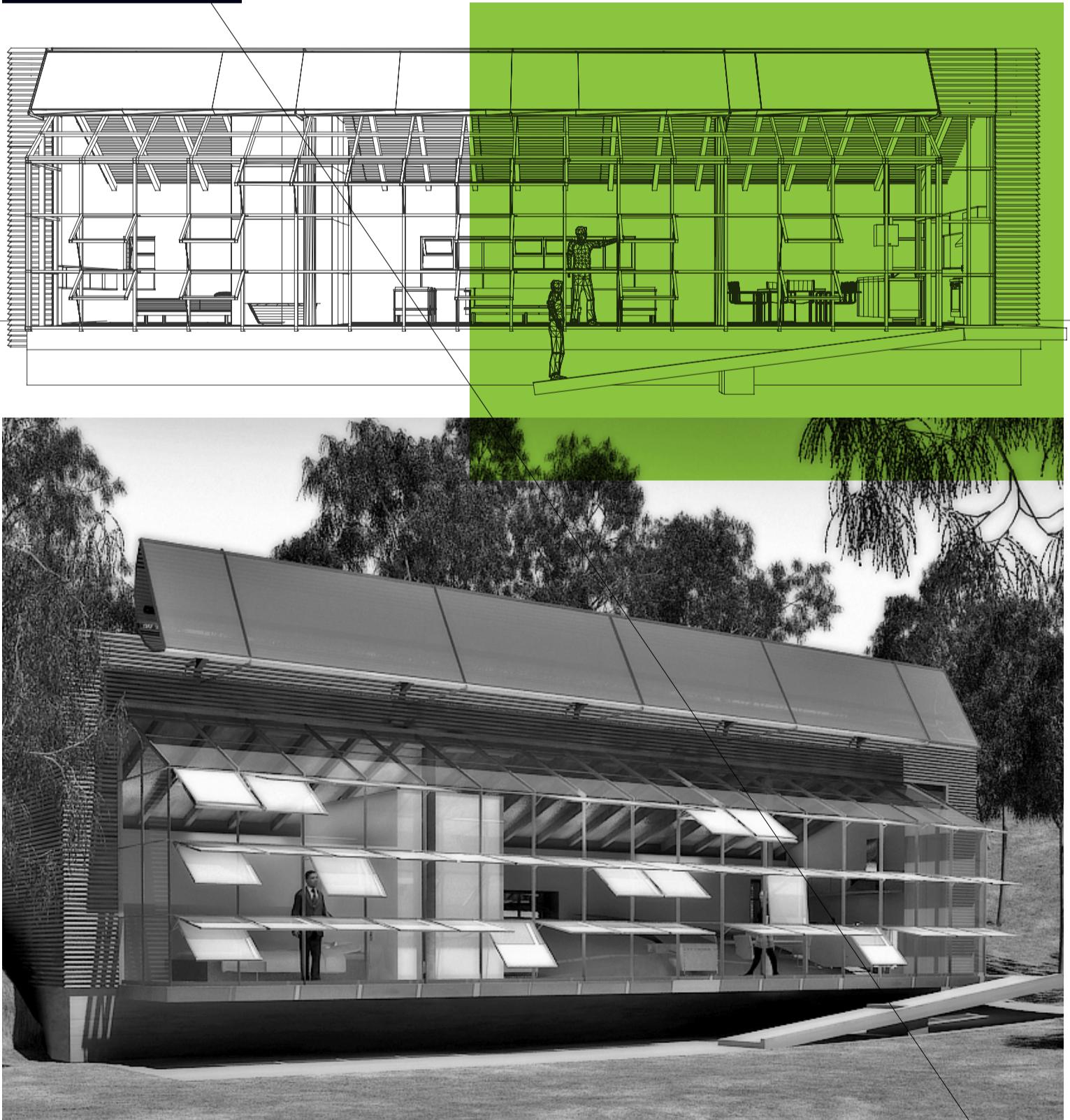
SOCIAL SUSTAINABILITY: integration of the individual home with the community with a focus on the social aspects of sustainable living and the local economy.

The **DYNAMIC WINDOW** that is used on the south facade of the Sustainable Connected Home allows dynamic management and control of visibility, sunlight penetration and cross ventilation. **MICRO CHP TECHNOLOGY** combined with a high performance Solar Concentrator allows the Home to self-sustain its energy needs.

The building is designed to perform sustainably under all

combinations of environmental conditions or user needs. It can dynamically reconfigure its state by taking into account both real-time conditions, long-term goals and user preferences to optimize its performance.

We also investigated methods, techniques and research paradigms from information, communication and media technologies, urban scale sustainability and social sustainability.



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The Green Home Alliance is a three years collaboration between the Mit Mobile Experience Lab and the Fondazione Bruno Kessler. The goal of the Green Home Alliance is to do advance research in sustainable connected homes, including subtopics of renewable energy systems, sustainable architecture, social sustainability, and connected information systems to optimize home behavior and people's lives. For more information: lilyfu@mit.edu