Open Building for Resilient Cities

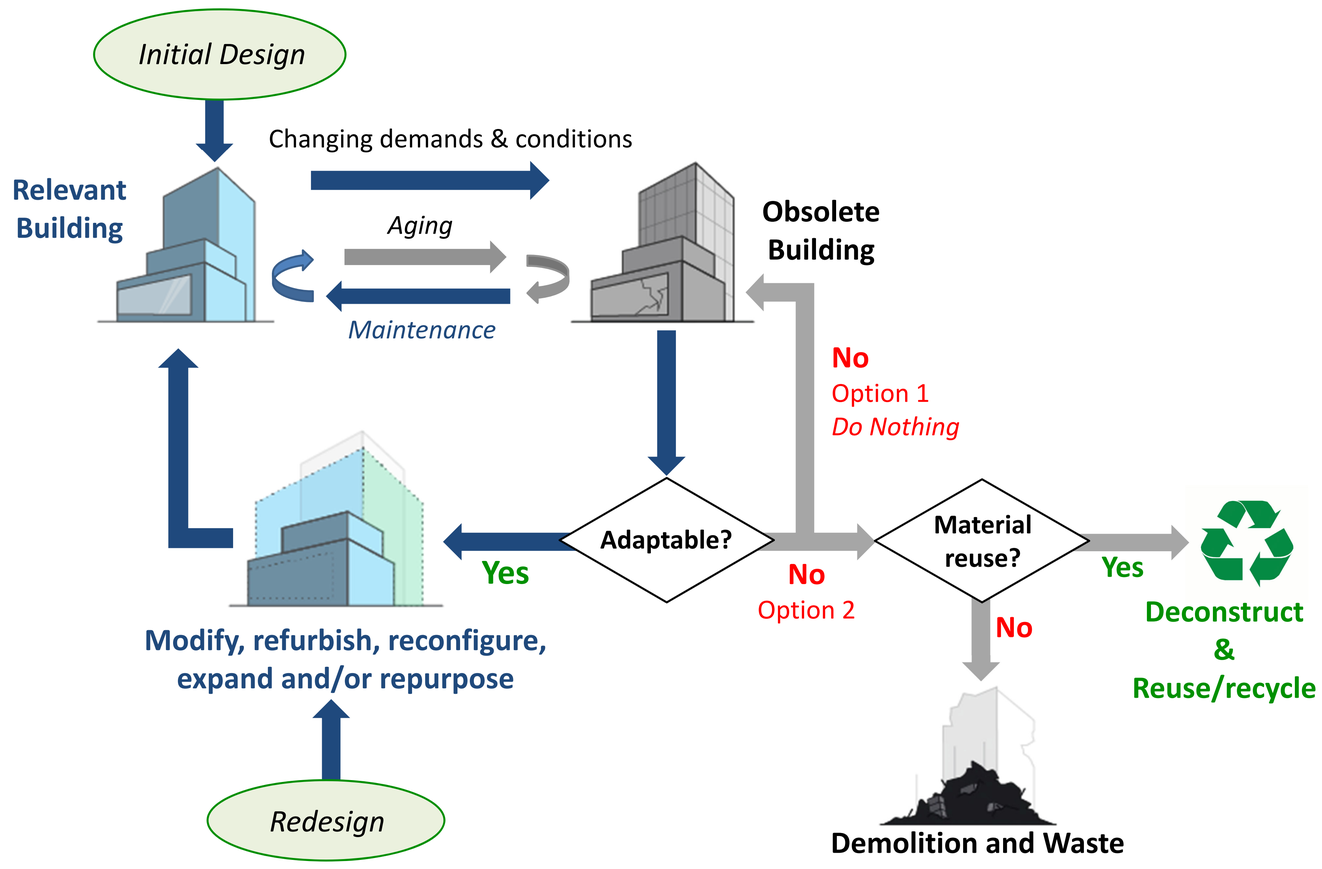
DEMOLITION & ADAPTATION DATABASE

An Open Resource for the International AEC community

DEMOLITION & ADAPTATION

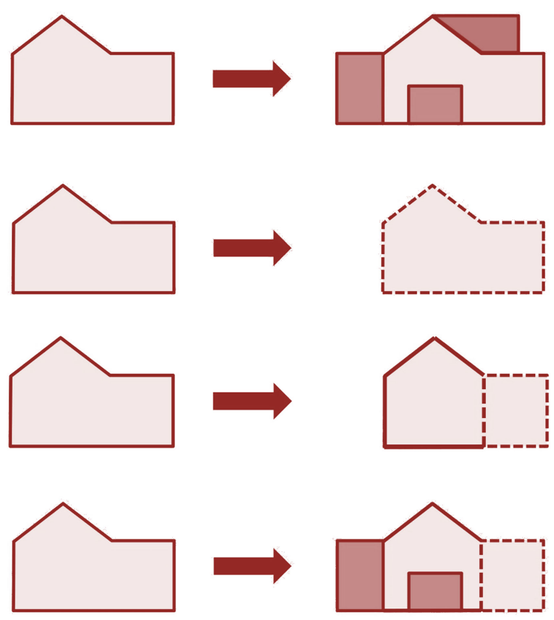
"Every building is a prediction. All predictions are wrong." – Stuart Brand. Too much of building design is short-sighted, focusing only on immediate needs. But as technology, politics, social needs, and climate change accelerate, it becomes increasingly clear that for our building to be truly sustainable, they must be able to adapt to changing demands. Otherwise they will join the countless buildings that are demolished not because of physical problems, but simply because they are no longer useful. If we can design buildings with future adaptations in mind, we can prevent the wasted energy and materials of premature demolition.

Clemson House (built 1950) was demolished in 2017 despite strong social importance, because it could not physically be adapted to new campus needs. (photo credit: www.clemsonsportstalk.com)



Building life cycle. (Rockow et al. 2018)

GET INVOLVED WITH THE DaAD



Adaptation Project

Demolition Project

Section/Wing Demolition Project

Mixed Adaptation/Demolition Project

Project types for the DaAD.

MIT's Building 20 was originally built as a temporary wood structure during WWII and then spent 55 years as the home of many of MIT's programs, which earned it the name "The Magic Incubator." It has been the subject of much study as a prime example of adaptability through open space and simplicity. (photo credit: www.americaninno.com)

We believe that the best way to accelerate the design of more adaptable buildings is to empirically quantify what makes buildings adaptable. This will allow designers to know exactly what they need to do to make a new design as adaptable as possible.

To that end, we are collecting detailed data about demolished and adapted buildings through our International Demolition and Adaptation Database (DaAD). Our team is collecting project data from AEC professionals around the world on our online database.

The end-goal of our research is to create a tool that measures adaptability much like existing sustainability measurement tools (LEED, GreenStar, etc) measure sustainability.

We are seeking data about buildings that have been adapted, demolished, partially demolished, or a mixture of adaptation/demolition (see figure above). The database will be an open resource to the AEC community for the study of adaptability.

Anyone with specific knowledge about an adapted/demolished building can participate. We invite participation from:

- Building owners/managers,
- Architects,
- Engineers,
- Developers,
- Contractors,
- Project managers, and
- Public officials.

In addition to the significant indirect benefits arising from this research endeavor, participants may also receive gift cards **up to $100** for entry of suitable projects.

If you or your design office are interested in entering project data, please contact us at **zrockow@clemson.edu**. We will guide you (via phone/email) through the process of creating an online account and making a project entry. Data entry takes approximately 1 – 1.5 hours to complete (though it need not be finished in one sitting).

In some cases, a team member may travel to a design office to assist data entry in-person (usually for multiple projects), and if desired, teach a 1-hour AIA-accredited HSW course on adaptability.

DaAD

NSF

CLEMSON
GLENN DEPARTMENT OF CIVIL ENGINEERING

LEARNING BUILDINGS RESEARCH GROUP

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