



The Circular Economy: The Business and Science of Construction

**Spring 2021 SEMINAR // ARCH 4619/6505
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Globally, the construction industry is the biggest consumer of energy and resources, as well as the biggest producer of emissions and waste. As a way to overcome the social, economic, and environmental problems of the current linear economic system, the concept of the circular economy is increasingly gaining attention, defined as one that is “restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times.” The consequent closing of production and consumption loops offers not only the possibility to end the loss of valuable finite resources, but also to reduce dependencies on global, volatile resource markets, prevent greenhouse gas emissions, mitigate the effects of the climate crisis, and support new business models and green job opportunities.

Unfortunately, although much of the theory seems to be known, the implementation of a circular economy into construction practice has only just started. Currently limited by the needs for data on material availability and specifications, new construction methods and technologies, and circular business models, the circular economy requires a fundamental paradigm shift in the way we design, construct and manage our built environment. The seminar *The Circular Economy: The Business and Science of Construction* aims to provide some of the missing answers: starting with local case study analyses, students will map material stocks and flows, stakeholder interests and economic conditions in order to reinvent both the business and science of construction.

As part of the Engaged Cornell Grant **CIRCLE** - Circular Ithaca: Researching Construction in the Local Economy, a collaboration of the **Cornell AAP Department of Architecture** and the **Samuel Curtis Johnson College of Business** with community partners **Finger Lakes Reuse, Ithaca NHS, Trade Design Build and Taitem Engineering**, this semester engages a multitude of local industry partners along the construction value chain and combines this knowledge with hands-on components and external insights through national and international guests.