The Changing Urban Environment

September 10, 2020 11:00 am - 12:10 pm
Kent Larson directs the Changing Places research group and the City Science Initiative at the MIT Media Laboratory. His recent work has focused on four areas:

Responsive Housing. Strategies to create high-performance, technology-enabled personalized, places of living that respond to an aging population and new ways of living and working. In this approach, buildings are disentangled into four independently configured layers: high performance chassis, integrated infill, agile technology, and responsive façade modules. These concepts are being deployed in the CityHome: a compact, transformable apartment for urban dwellers that functions as if a much larger space.

Urban Mobility-on-Demand. Concepts for shared-use light electric vehicles and intelligent fleet management to provide high-levels of service through sensor networks, dynamic incentives, and intelligent charging. The group worked with automotive suppliers in Spain to develop a commercial version of the MIT CityCar called Hiriko: a folding two-passenger vehicle with robot wheels and drive-by-wire control for urban mobility and highly efficient parking.

Living Labs. Computational tools to understand human behavior in natural environments, including the necessary sensing, interfaces, data collection methods, and visualization capabilities. They have developed prototypical applications that respond to human behavior, with an emphasis on proactive health, energy conservation, and the support of new ways of living and working. This work includes the exploration of data collection and analysis tools to understand the fine-grained attributes of a healthy, high-functioning community or city, and strategies to use this information to inform the design of new communities.

City Science. Design and technology-driven solutions that address the challenges of current and future cities. The City Science Initiative's research spans a variety of fields including urban mobility and vehicle design, modular and transformable housing, resilient energy networks, and urban design.

Larson practiced architecture for 15 years in New York City, with work published in Architectural Record, Progressive Architecture, Global Architecture, the New York Times, A+U, and Architectural Digest. His book, Louis I. Kahn: Unbuilt Masterworks was selected as one of the Ten Best Books in Architecture, 2000 by the New York Times Review of Books. Related work was selected by Time magazine as a "Best Design of the Year" project.

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Sarah Williams is currently an Associate Professor of Technology and Urban Planning. She also is Director of the Civic Data Design Lab at MIT's School of Architecture and Planning. The Civic Data Design Lab works with data, maps, and mobile technologies to develop interactive design and communication strategies that expose urban policy issues to broader audiences. She has worked for the World Bank, UNDP, and the U.S. government, and has taught at the University of Pennsylvania and MIT.