

rvtr: systems & speculations

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RVTR is a research-based practice structured to lever new relationships between academy, industry, government agencies, and other disciplines in order to broaden the territories within which architecture might operate and gain efficacy. The practice has emerged as a collaborative work-in-progress with a mandate the cultural, social and educational fields.

The concept of 'matters of concern' outlined by French theorist and critic of science Bruno Latour¹ have been instrumental in defining methods and tactics through which we pursue design and as a way to focus our activity across a range of scales, technologies, and media. The aggregate situations surrounding a subject frame the context for a systems-based approach to both its apprehension, and transformation.

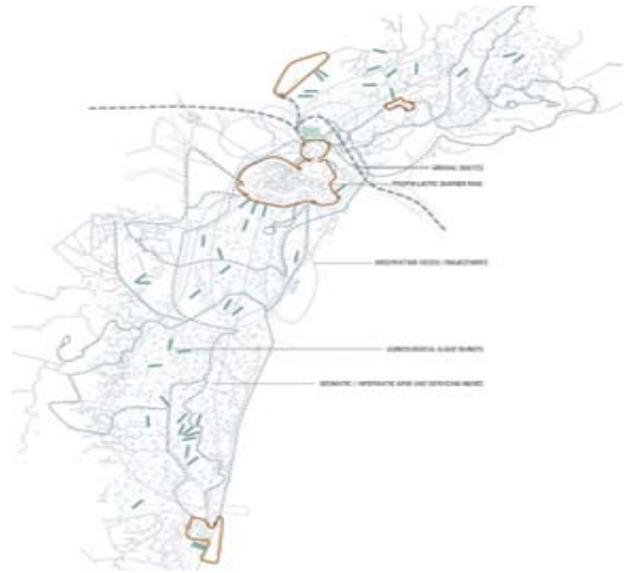
Three interrelated areas that form a framework for our work, and engage with the critical arenas where architecture can offer transformative agency: Future Ecologies, Situated Infrastructures and Emerging Inhabitations. Although the following projects vary widely in intent and content, each deploys complex systemic strategies in undertaking projective design speculation.²

Buoyant Aquacology

Initiated in response to the Venice Park Lagoon Competition of 2007, *Buoyant Aquacology* questions the tacit assumption that the Venetian Lagoon might become a stable condition. The work is situated in a future of radically rising sea levels and asks how we might build, live, operate and create societies within the reality of volatile and unpredictable weather, in a world of flooded cities, new deserts, and collapsing ecosystems. The current condition of the lagoon and its islands, a condition of being neither land nor sea, is sustained only through an immense technological and political tour de force. In an attempt to maintain the condition of the Venetian Lagoon, military and defensive operations began, in the Renaissance to alter the Lagoon's natural evolution, diverting two rivers from emptying fresh water and silt into it, and turning its waters increasingly saline.

In a future where sea levels could rise as much as 14m, Venice could become a city protected by great ringed barrier walls, with locks for access and trade. The Lagoon would become an arm of the sea, with new ecologies – and economies – supplanting those that have disappeared beneath the water. A shifting matrix, a net, of floating energy barges will produce hydrogen algae to be farmed for energy

production, as well as a food and mineral source, while processing sewage from the cities and using it to grow new soil. Other barges will support hydroponic agriculture, fish hatcheries and solar energy collection. The northern portion of the island of Murano will become an ecological preserve where tidal flats and marshlands will be manufactured for the study of marine species in a state of continuous succession, evolving through managed dynamic ecological processes, and through interaction with the sea. Individual floating vessels, controlled by a GPS information network, facilitate access to these new territories. These vessels take the form of transparent bubbles constructed of a chambered high performance skin, allowing unrestricted views of both the new life above and the cities submerged below the water line.



Post-Carbon Highway

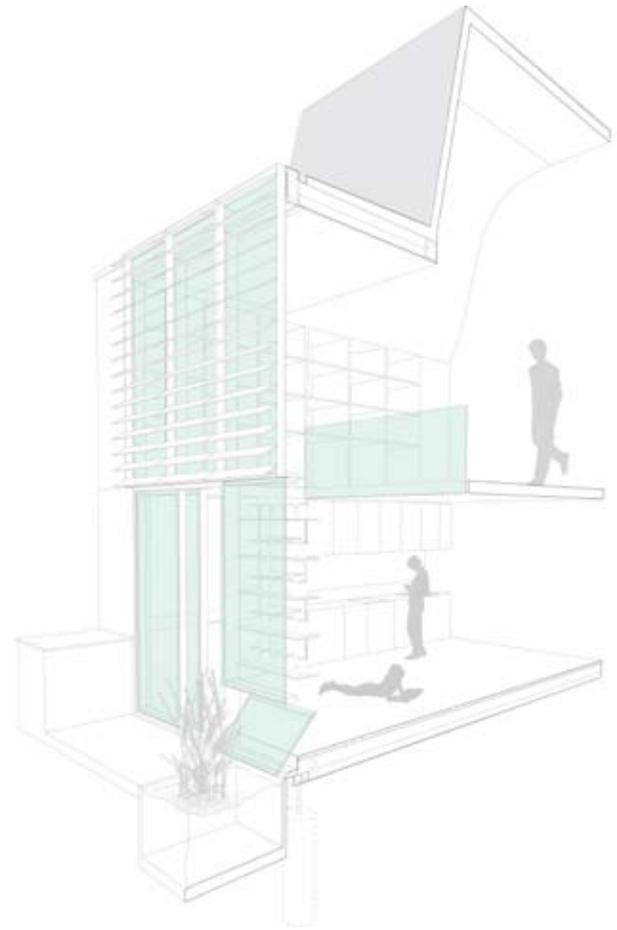
Post Carbon Highway is a regional urban infrastructure design research project that examines the manner in which the exigencies of new fuel based realities might affect the space, operation and micro-economies of the highway. The project synthesizes current thinking and existing research about changing populations, ecologies, technologies and economies within a speculative design project on a massive scale and will visualize ways of understanding and relating the possible experience of mobility in a post-carbon world. The primary focus of this research is Southern Ontario's Highway 401 and the Great Lakes Megaregion, but this work will also have wider implications on similar highway systems in North America and Asia. The project involves two primary phases of activity; the assembly, mapping, and visualization of diverse existing ecological, economic, transportation, and energy data sets into GIS based interactive maps to avail analysis of existing conditions and opportunities along the network's length, and the speculative projection of its transformation as a site for

the distribution of new intermodal transportation systems, fuel types, and population and industry intensification. Existing infrastructural systems at the edge of capacity and on the verge of collapse are retooled according to their existing characteristics in order to foster increased density, mobility and mediate environmental impacts.



Latitude Housing System

The Latitude Housing System develops a line of research in advanced sustainable housing that recognizes the radical potential of the single family house to effect massive change as a product of mass-customized production and agent of sustainable community building capable of evolution in response to socio-economic and environmental need. Latitude is a system of prefabricated highly engineered lightweight steel modular units that perform quadruple-duty as an energy efficient building envelope, integrated structural system, space defining elements and infrastructural chassis for building services such as power, data, water, waste and HVAC. The system allows for a wide variety of configurations and for ready adaptation to respond to future needs. A range of house types support a healthy lifestyle of outdoor living, local food production and communal recreational space, responding to expected long-term change in the local climate. Houses are designed to aggregate in a density supporting sustainable communities that minimize land use and capitalize upon the possibility of cooperative systems, alternative energy generation and waste processing.



1. Latour, B. "Why has Critique Run out of Steam? From Matters of Fact to Matters of Concern." In *Critical Inquiry* (Winter, 2004), p. 246.

2. For information and project credits, see www.rvtr.com

