



## Expanded Architecture

Rice School of Architecture students win an international competition with a proposal that imagines a petropolis of offshore oil rigs, agriculture, and recreation.

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OIL FRONTIERS ADVANCE RELENTLESSLY AS EXISTING extraction sites are exhausted. The days of company towns built around coal mines have given way to remote extraction sites. The energy industry is penetrating rain forests (at too high a cost), deserts, ice sheets, and oceans. Pure infrastructure dominates with little provisioning for human needs—a world for engineers with no role for architects.[1] But could that change?

A team from the Rice School of Architecture has won the Odebrecht Award for Sustainable Development for proposing an audacious water-based urbanism. They see an opportunity in the veritable archipelagos of oil rigs being built in the water. In *Drift & Drive*, the Rice team conjures a massive new inhabitable territory: a dynamic, urban, artificial archipelago where industry coexists with schools, libraries, hospitals, houses, novel and well-organized transportation networks, waste management, and agricultural fields (not monocultural, but hybrid and rotational).

The idea of settlement has returned. What had become a mere extraction enclave of minimum provision for human needs is being rethought in terms of inhabitation. This process calls for the re-involvement of the architect.

*Drift & Drive* should not be dismissed as an outlandish academic exercise. Rather, it is an excellent example of a renewed dialogue between industry and design. The backer of the award, Odebrecht, is a renowned transnational corporation of Brazilian origin that specializes in engineering, construction, petrochemical and bio-ener-

gy services. Though the concept is not accompanied by a full business plan, it could catalyze actionable designs in the future.

This type of award helps bridge the gap that has led our transnational cultures to conceive development in generic terms and assume an impossible disjunction between ecology, infrastructure, and city. *Drift & Drive* is holistic in nature. The Rice University students Joanna Luo, Weijia Song, and Alexander Yuen, who worked under the lead of architect and professor Neeraj Bhatia, broke away from the model of enclaves in order to design a networked urbanism. Moreover, they imagine the project living beyond the period of oil extraction, beyond the ghost town of the “bust” condition, towards a post-oil, low-impact utopia. They imagine beyond insularity. The archipelago is conceptualized as a series of complementary and symbiotic hubs, not as naïve Robinson Crusoe-like aspirations of full isolation.

The project stems from a fact: the need of Petrobras, Brazil’s semi-public energy company, to relocate the workforce of its offshore exploration and drilling endeavors in the Campos and Santos basins “as rigs are set up increasingly further from shore.” [2]

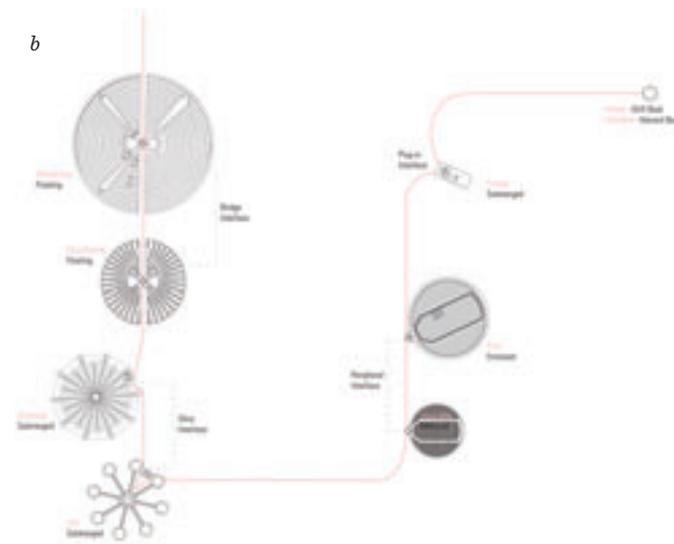
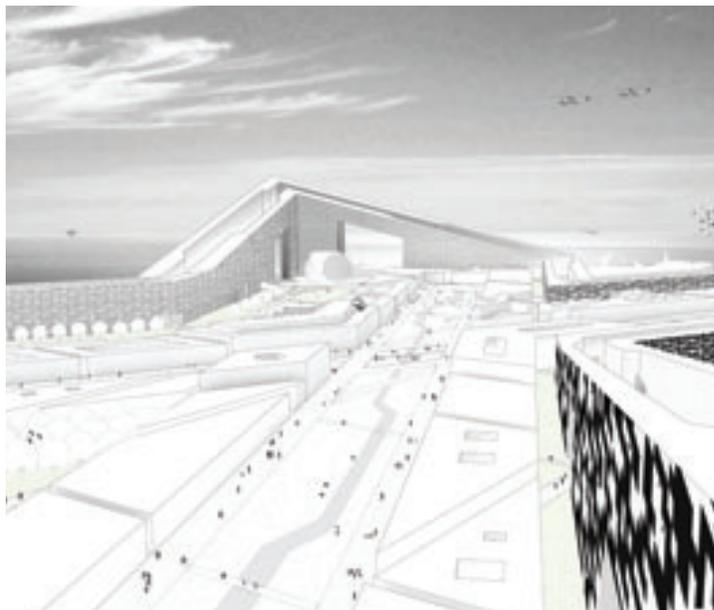
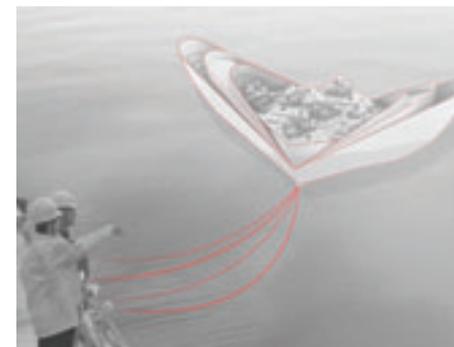
*Drift & Drive* is planned at several scales, from its regional reorganization of fixed and floating hubs and thoroughfares, to the walls of the almost medieval fortresses of its main nodes. The vision of an emerging marine urbanism, capable of sustaining a population of 50,000 inhabitants, is rendered in unison with the natural forces that enhance its performance: boats drift from

1. See Felipe Correa, “A Projective Space for the South American Hinterland: Resource-Extraction Urbanism”, published in *Harvard Design Magazine*, no. 34, April 15, 2011.

2. Executive summary of the winning entry.

platform to platform on the warm-water Brazil current; sun and tides transform into energy and power the boats as they drive against the current to complete a loop; rig foundations and anchorages become supports for life and aquaculture (coral reef-like); islands turn into metamorphic vessels; and architects play the enlarged role of orchestrators, as they attune diverse degrees and types of expertise in an enlarged architectural project.

Drift & Drive also contributes to the goals of the South America Project, an applied research and design network that aspires to reintroduce the Architect into the projection and construction of large territories, such as those the extraction industry engages in South America. We expect to see analogous, fearless, and innovative images of development for the future.

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*a* Masterplan of petropolis along the southeast coast of Brazil.

*b* Drift Boat interfacing with Agricultural and Energy Islands. Design by Weijia Song.

*c* Hub Island's central plaza and perimeter of housing. Design by Alexander Yuen.

*d* Mobile Oil Boat at sea, transporting goods and works from rigs to hubs. Design by Joanna Luo.