

[4/8/14] FUTURE CITIES LAB @ SMART CITY AWARD, MILAN 2014

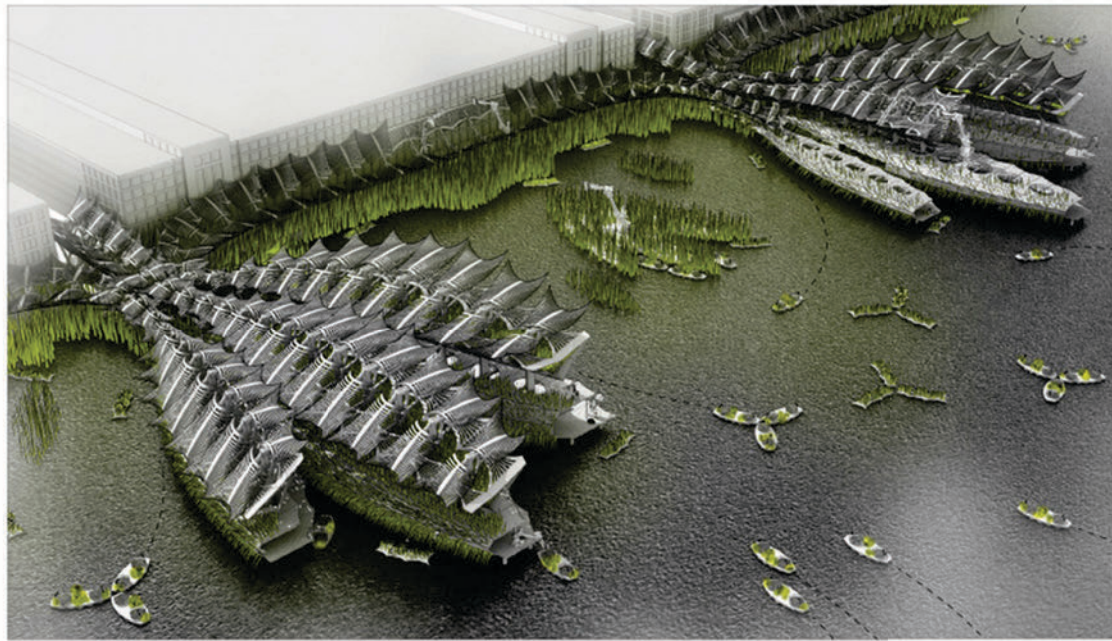
March 28, 2014



Future Cities Lab has been awarded a 2014 SmartCity Award for their [Hydramax Port Machines](#) project. The aim of the award is to, "... reward the most visionary and sustainable ideas and projects to transform in a positive way the urban landscape." The winning projects will be exhibited for six days at the [Palazzo Isimbardi](#) with a prestigious event during [Milan Design Week \(Salone Internazionale del Mobile 2014\)](#). Future Cities Lab will present drawings and a model of the proposal as a part of the public exhibition.



The HYDRAMAX Port Machines project proposes a radical rethinking of San Francisco's urban waterfront post sea-level rise.



HYDRAMAX / PORT MACHINES, productive edges

FUTURE CITIES LAB



HYDRAMAX PORT MACHINES

Exhibited at [SFMOMA](#) from 31 March to 29 July, 2012. Read the 6/11/12 [Press Release](#).

Future Cities Lab's **HYDRAMAX Port Machines** project proposes a radical rethinking of San Francisco's urban waterfront post sea-level rise. The proposal renders the existing hard edges of the waterfront as new "soft systems" that would include aquatic parks, community gardens, wildlife refuges and aquaponic farms. A synthetic architecture is introduced that blurs the distinction between building, landscape, infrastructure and machine. Using thousands of sensors and motorized components, the massive urban scale robotic structure harvests rainwater and fog, while modulating air flow, solar exposure and intelligent building systems.

Design: Jason Kelly Johnson & Nataly Gattegno

Project Manager: Ripon DeLeon

Production Team: Gavin Johns, Cameron Eng

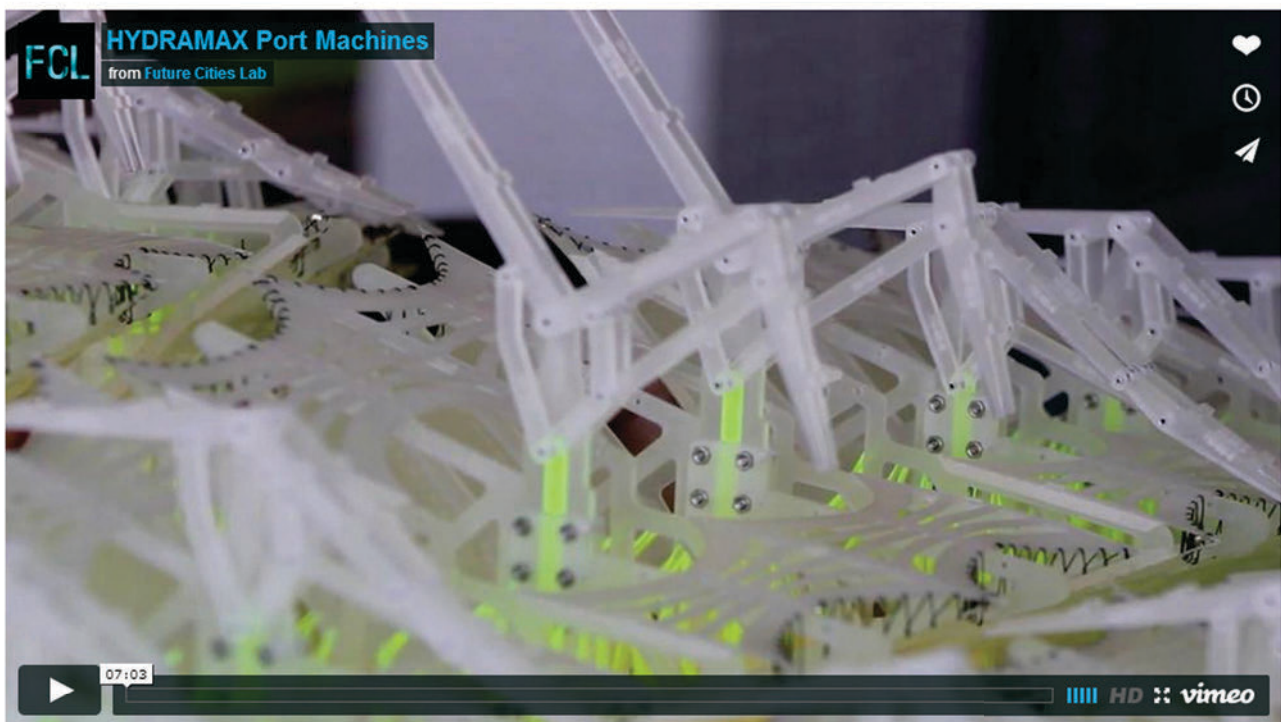
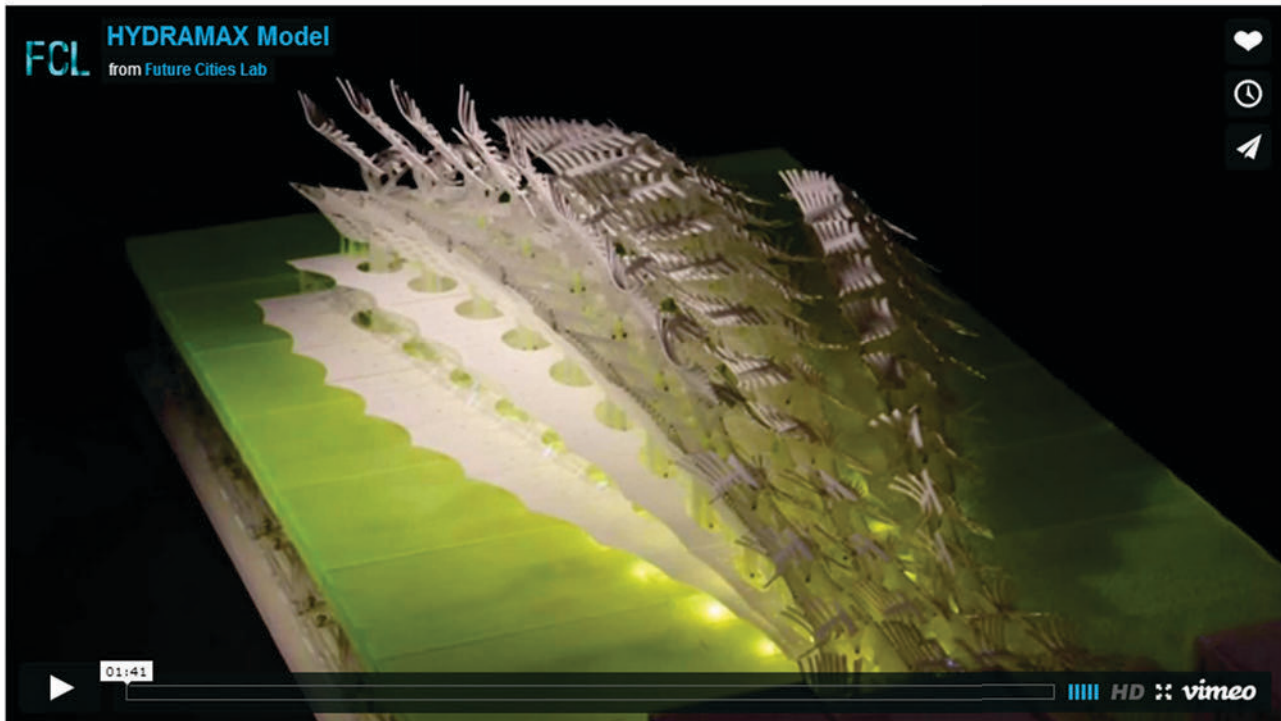
Fabrication: [MACHINIC](#) Digital Fabrication & Consulting, San Francisco

Collaborative Sponsor: [MIGA Motor Company](#) (Dr. Mark Gummin)



Interactive Model Description: A network of infrared proximity sensors has been integrated into the four sides of the physical model. These sensors record the distance of gallery visitors to its edges. Information from these sensors is used to actuate the white feather-like "fog harvesting robots" and control the brightness of embedded LEDs. This model is an example of what Future Cities Labs call "live models". Live models use the interaction of people to explore and simulate the potential effects of environmental forces such as fog, wind and sunlight.

Model Materials and Electronics: Cast and thermoformed acrylic, custom printed circuit boards - layout in [Fritzing](#) and manufactured by [PCB-Pool](#), [Arduino "Mega"](#) microcontrollers, infrared sensors, shape memory alloy motors (Courtesy of [Miga Motor Company](#)), interactive prototyping using [Firefly](#) and [Grasshopper](#).



Film: This short documentary film focuses on the design of the HYDRAMAX Port Machines project exhibited as a part of the "Utopian Impulse" show at SFMOMA from 31 March - 29 July, 2012. Directed and produced by our friend Eddie Lee (Square2 Design). [*We recommend the HD version here.](#)

Resources:

1. [Sea Ice in Retreat](#) (NYT Interactive Map 1/10/07)
2. [If All the Ice Melted](#) (National Geographic 11/13)
3. [Sea Level Rise and Coastal Flooding Impacts](#) (NOAA Website)
4. [NOAA Coastal Services Center](#)
5. [USGS GIS Database](#) (San Francisco Inundation specific data is [here](#))