

URBAN LAYERS

Exploring NYC's Urban Fabric

Urban Layers is an interactive visualization created by Morphocode that explores the structure of Manhattan's urban fabric.

The map lets you navigate through historical fragments of the city that have been

preserved and are now embedded in Manhattan's densely built environment.

The rigid archipelago of building blocks has been mapped as a succession of structural episodes starting from 1765.

ONLINE

<http://io.morphocode.com/urban-layers/>

TECHNOLOGIES

- Mapbox GL JS
- d3.js
- HTML5, CSS, jQuery
- Bootstrap, Font Awesome

RESPONSIBILITIES

- Concept
- Visualization
- GIS
- Data Mining
- Web Development

CLIENT

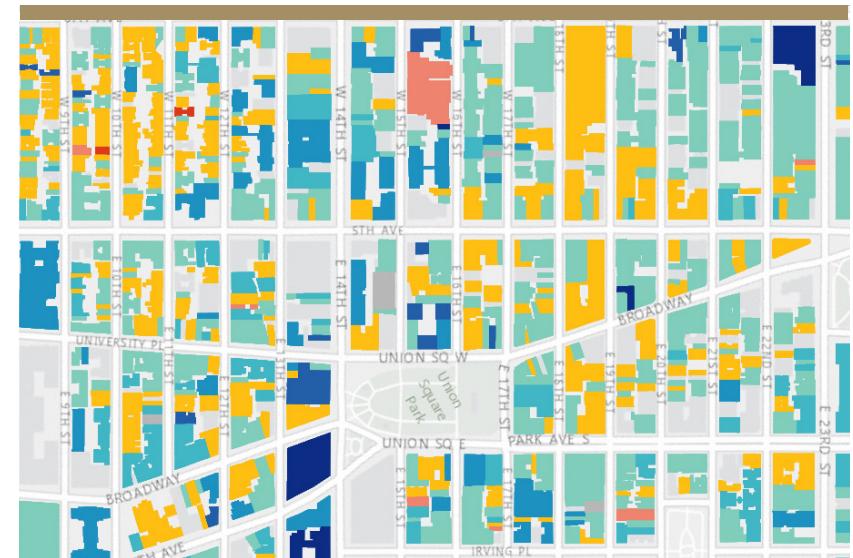
- Morphocode

DATA

The basis of Urban Layers is the PLUTO data set.

It was released to the public in 2013 and contains information about the age of NYC's buildings.

Each building is identified by its unique number - the BIN.

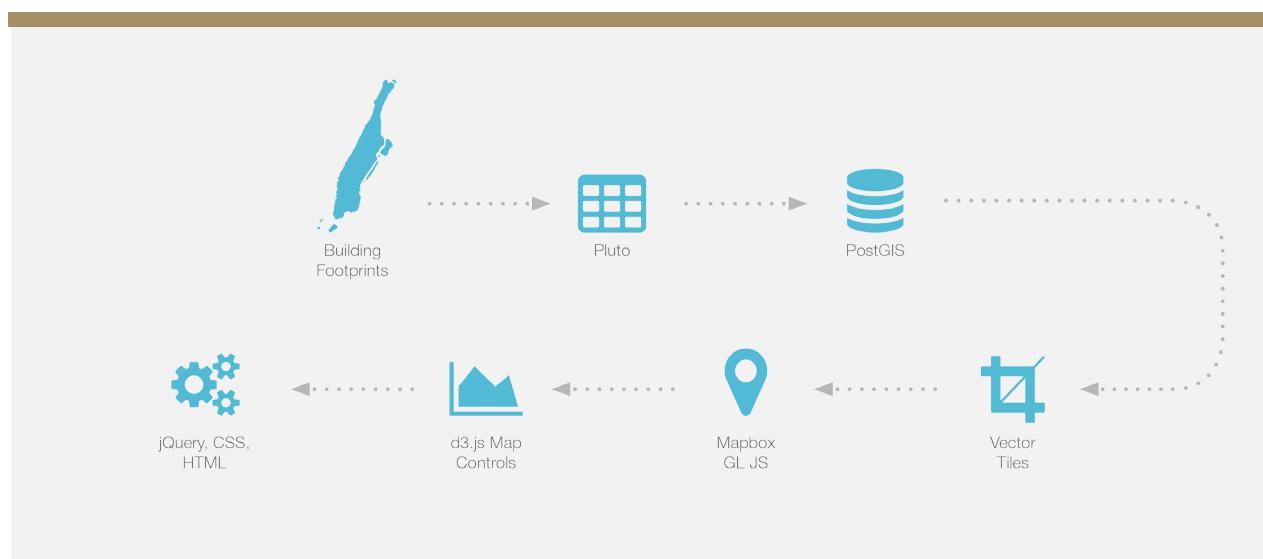


A PROJECT BY
MORPHOCODE

VISUALIZATION

Mapbox-gl.js was used to create the visualization. It is based on WebGL and provides great performance.

The data is stored as vector tiles using vector.pbf - an optimized file format based on Protocol Buffers. Combined with the powerful webgl renderer, this allowed to create a highly interactive map.



WEB DEVELOPMENT

The web layout was built using Bootstrap. JQuery was used to glue all components together.

d3.js was used to draw the Graph that shows when were current buildings of Manhattan built.

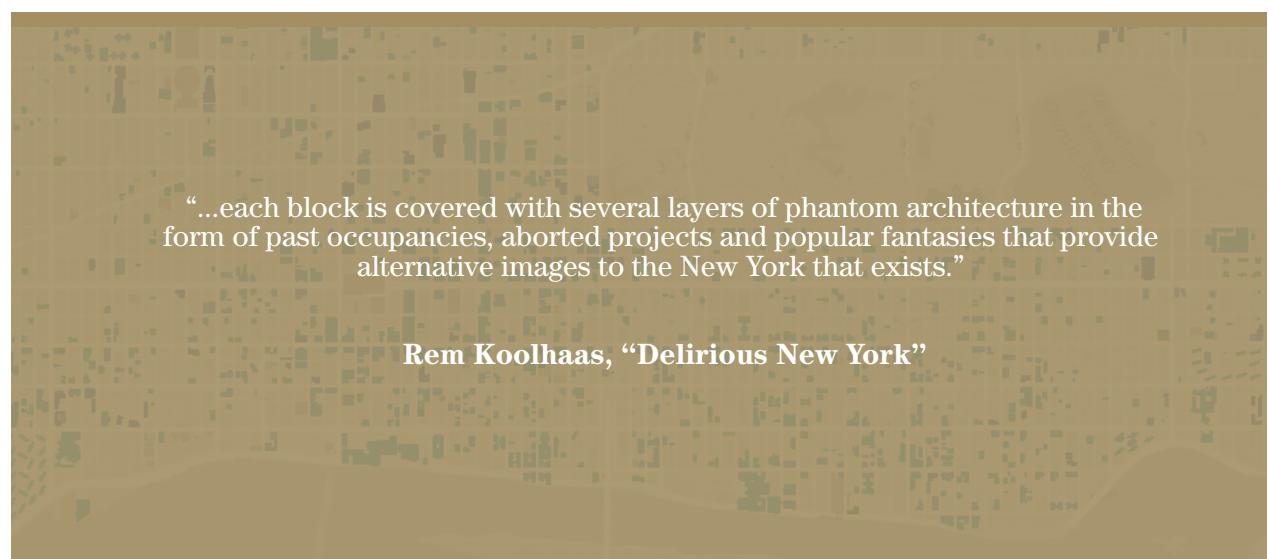
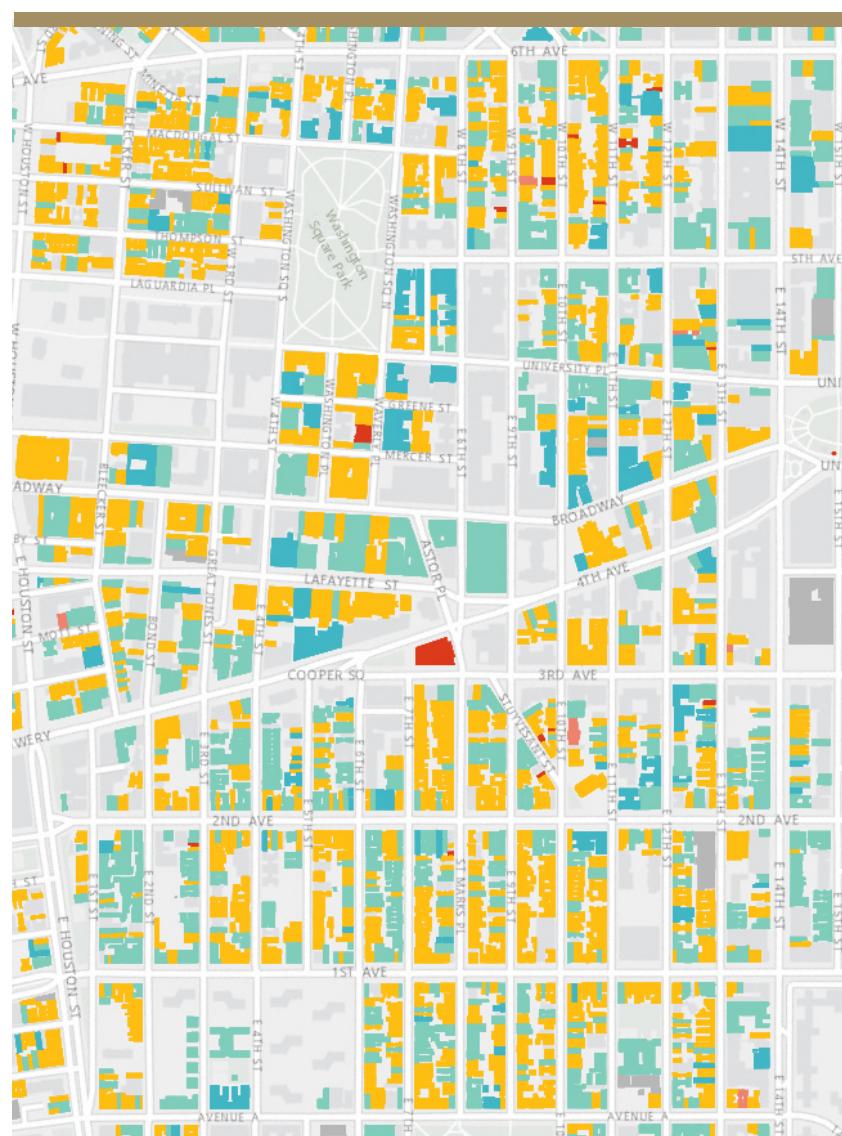
The X axis represents the year of construction, while the Y axis shows the number of buildings.

The Sliders allow you to isolate buildings built during a selected time frame.

The color palette is based on colors from colorbrewer.

The map legend was built using advice from Chris Amico.

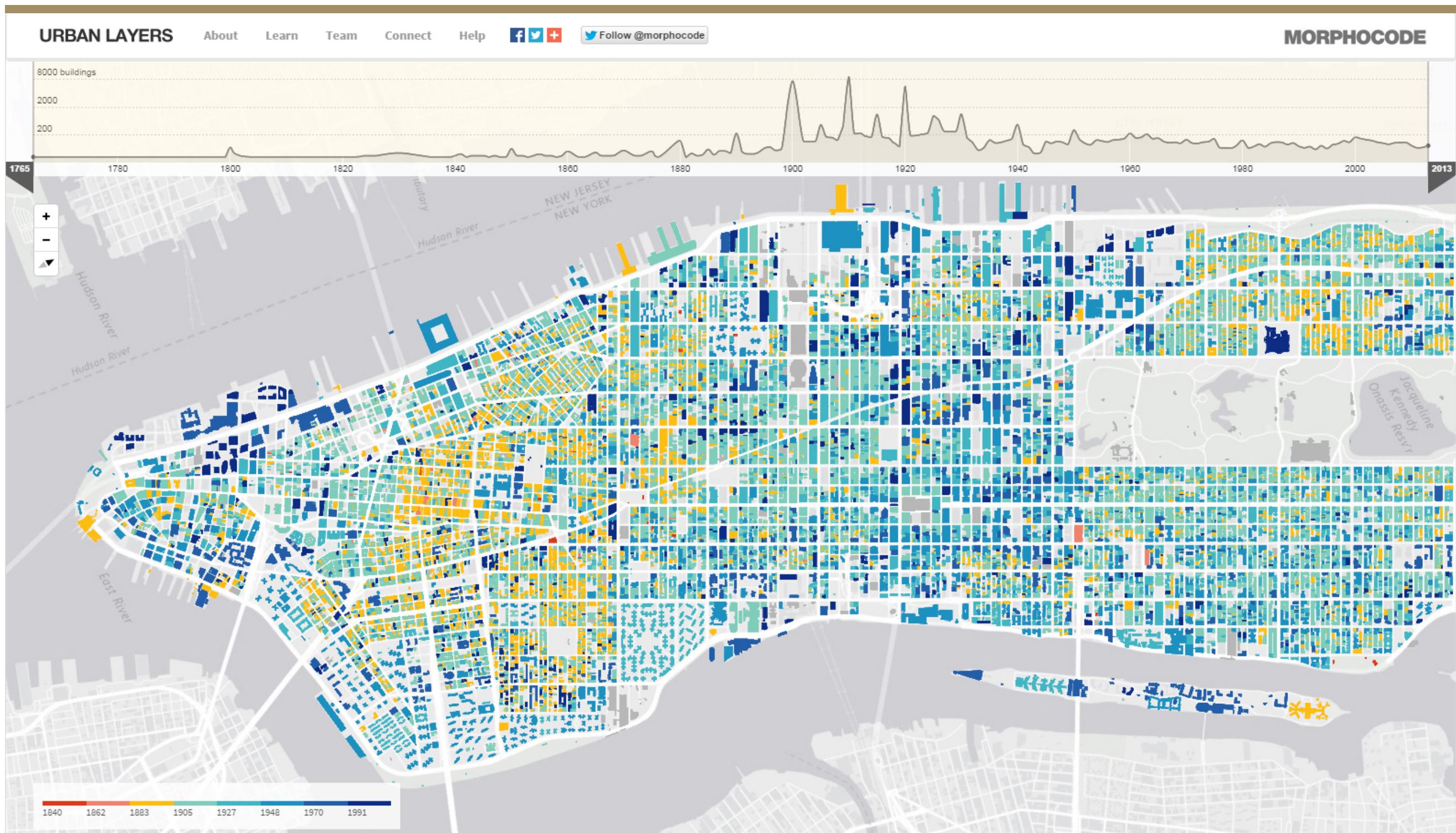
Intro.js was used for the introductory tutorial.



The screenshot shows the 'Delirious New York' application interface. At the top, there is a large map of Manhattan with a grid overlay. Below the map are three panels: the left one has a circular loading icon, the middle one shows a similar icon with the text 'MANHATTAN ISLAND' below it, and the right one has a white button labeled 'GET STARTED' with a 'MANHATTAN ISLAND' watermark. Below these panels is a timeline graph showing building activity over time, with specific points labeled '153 buildings' at 1916 and 1939. The timeline spans from 1880 to 2000. At the bottom, there is another map of Manhattan with a timeline slider, and a callout box with the text:

TIMELINE
Drag the sliders to change the time period.
Only buildings built during the selected time frame will be visible on the map.

Next →



Overview of the Map

INTERACTIVE FIELD

Playing with Kinect & Cinder

Interactive Field is a study inspired by the work of Annica Cuppetelli and Cristobal Mendoza.

Users can interact with a kinetic system of strings by moving their hands. The movement is captured by a

Kinect device, which thanks to its infrared camera can recognize skeletons and gestures.

A C++ application, based on Lib Cinder uses this information to apply force over the digital model in real-time.

ONLINE

<http://morphocode.com/interaction-study-with-kinect-and-cinder/>

VIDEO

<https://vimeo.com/64043605>

TECHNOLOGIES

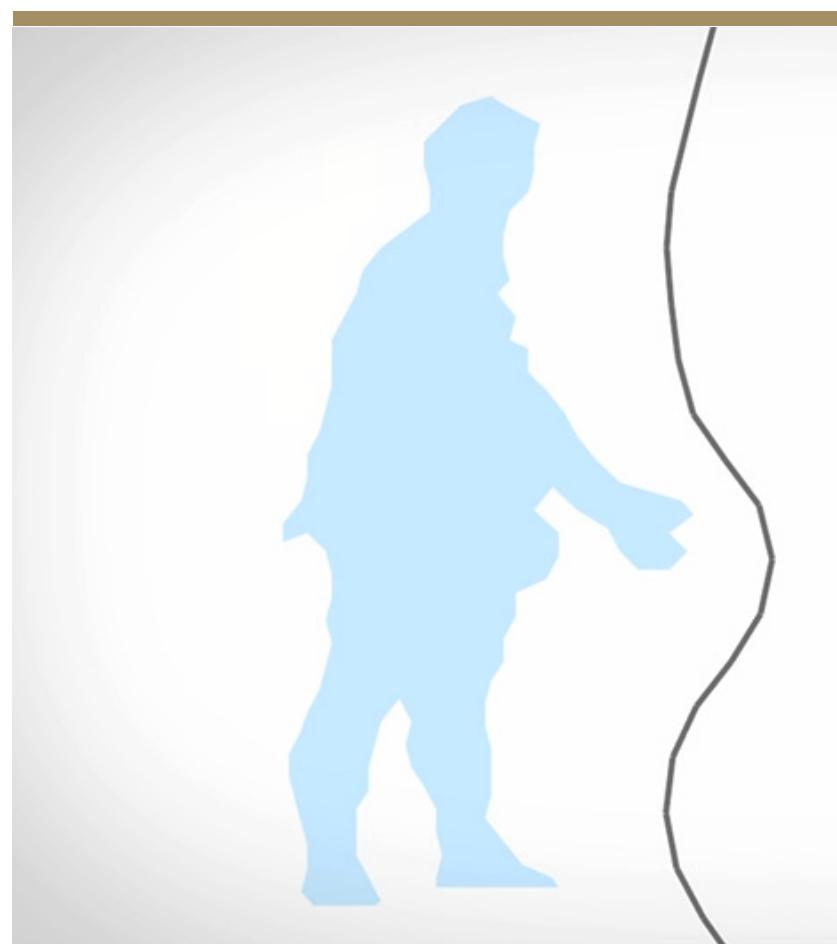
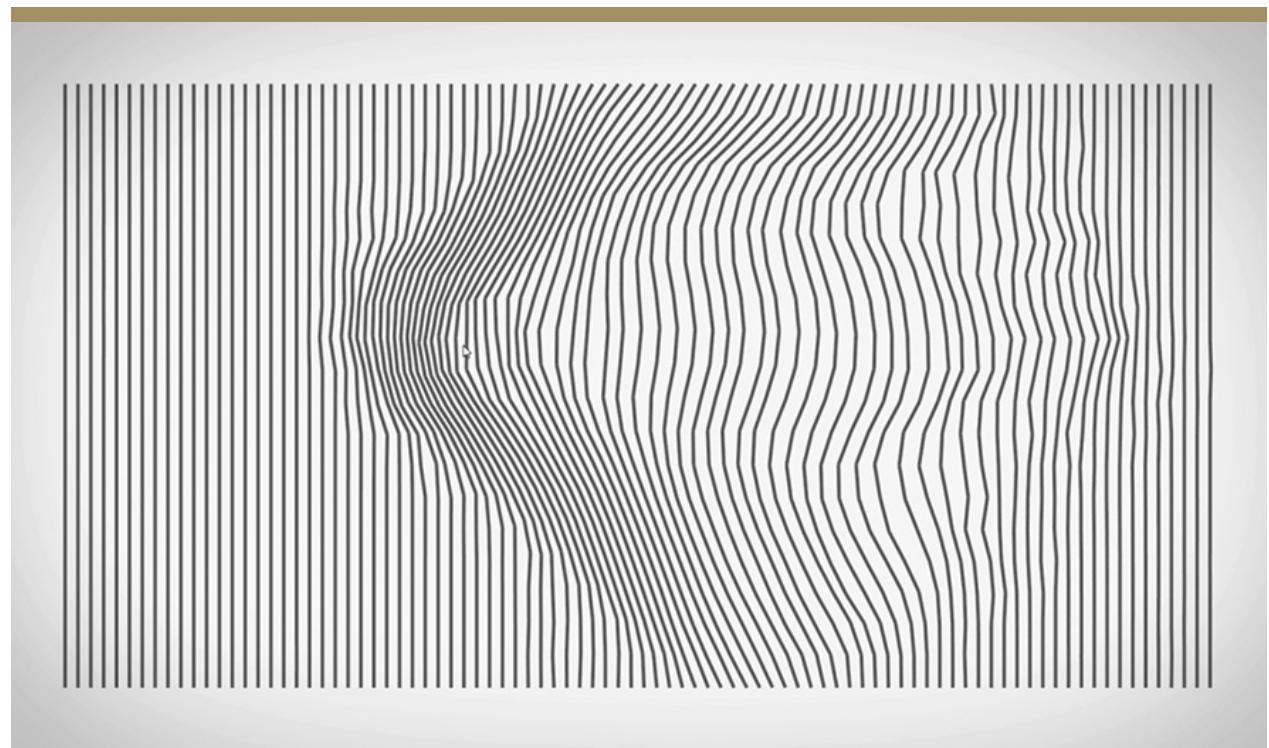
- C++
- Kinect / Kinect SDK
- Box2D
- Lib Cinder
- Visual Studio

RESPONSIBILITIES

- Concept
- Visualization
- Programming
- Video

CLIENT

- Morphocode



INTERACTION

Hand motion is used to apply force to the digital model. Movement is detected by a Kinect device.