



PDAC PROFESSIONAL DEVELOPMENT WORKSHOP

GIS MAPPING ACROSS THE CURRICULUM

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FRAMING QUESTIONS

How have you used digital tools in the past to help your students pursue research questions in your course?

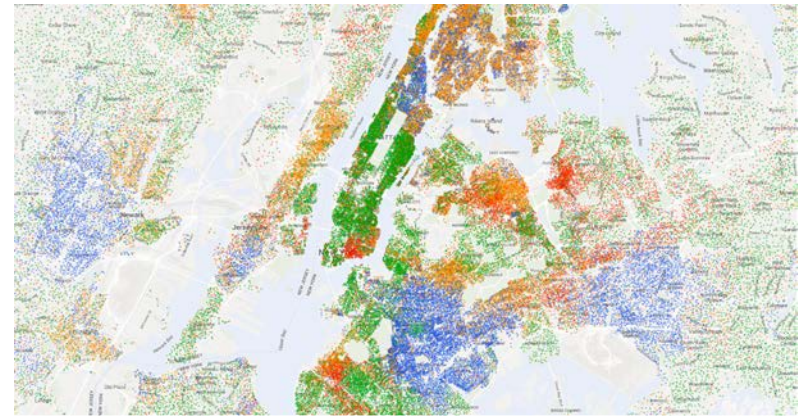
GIS

- A framework for gathering, managing, and analyzing data
- Analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes
- Reveals insights into data, such as patterns, relationships, and situations

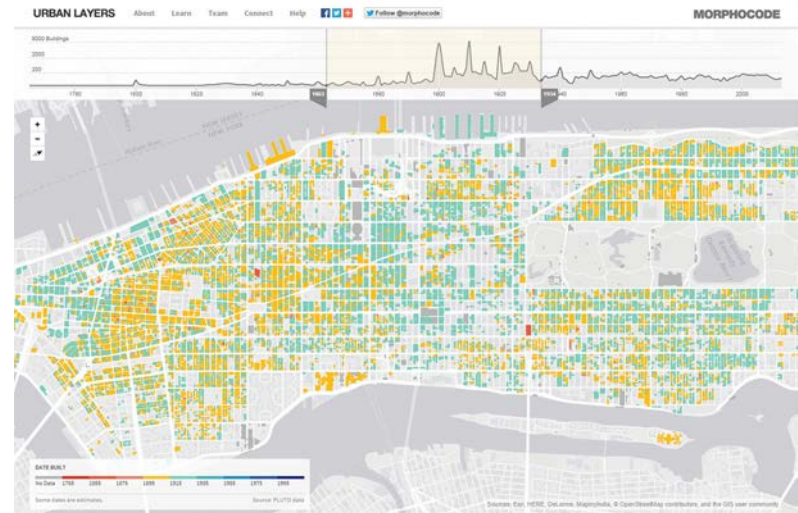
-ESRI

<https://www.esri.com/en-us/what-is-gis/overview>

WHY MAPPING?

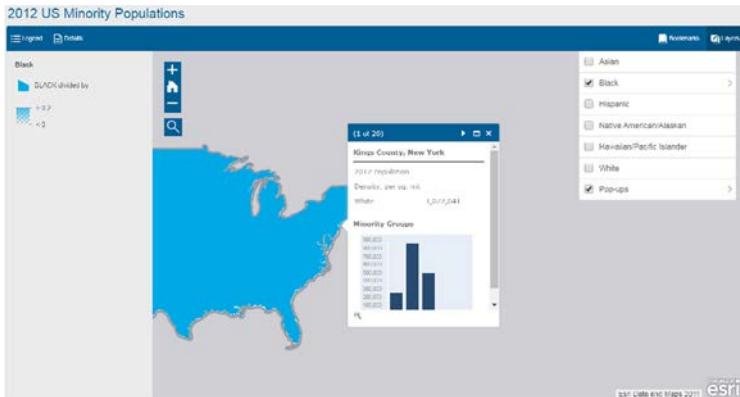


Location of Census Groups by Race- NY Times 2015

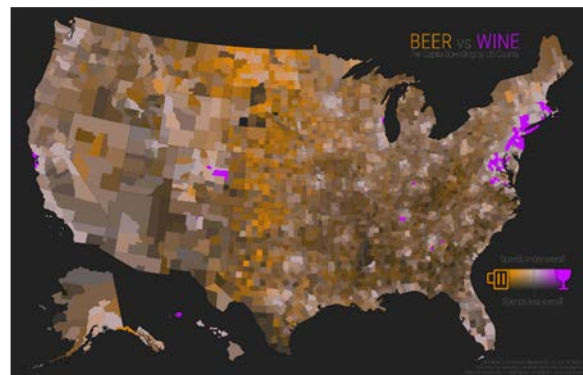


Interactive Timeline of When Building were Built- Morphotcode

GIS ACROSS THE DISCIPLINES



HUMAN SERVICES



HOSPITALITY MANAGEMENT



PHYSICS



HISTORY

GIS and Mapping in Architecture History

- Mapping is used to creatively and critically engage students using sets of data, archival material, and digital media to discover connections between the multitude of forces that impact the development of culture in their built environments.

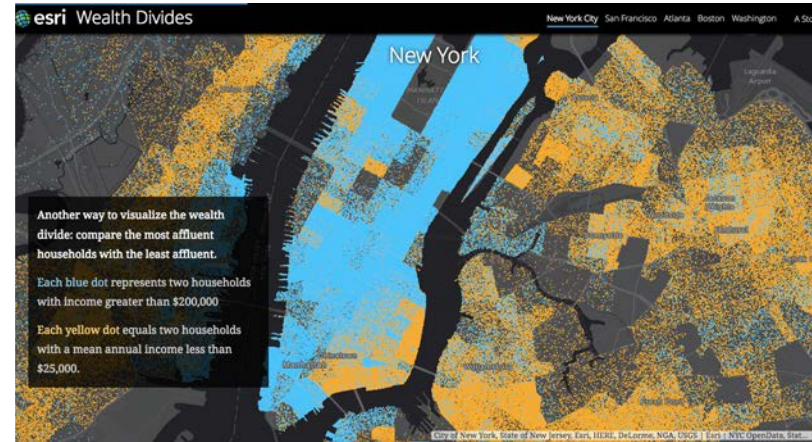


WHY MAPPING?

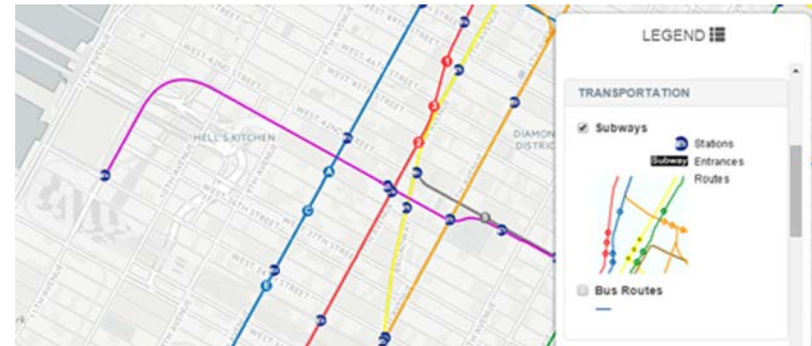
GIS and Mapping in THE2280ID

- GIS mapping application serves as a common mechanism for students to situate the history of theatrical production within the context of the built urban environment.
- In both disciplines—architecture technology and theater history—an understanding of social, economic, political, and technological forces is crucial.
- The act of mapping data relevant to a theater's urban context, such as adjacent building typologies, land use, commercial zoning, average household incomes, location of transportation and municipal infrastructure, and demographics promotes an understanding that the construction of any theater does not happen in isolation

WHY MAPPING?



<http://storymaps.esri.com/stories/2016/wealth-divides/index.html>



<http://storymaps.esri.com/stories/2016/wealth-divides/index.html>

GIS STEP ONE

- Assignment: research history of a theater and identify resources for information and write summary providing insight into theater culture and architectural history.
- Students enter data into spreadsheet, the substructural layer of GIS map.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Title	Facade Image	Architectural Plan	Maximum seating	Purpose Built? (Y/N)	Date Constructed	Date destroyed /closed	Still an active theater? (Y/N)	Summary	Resource	longitude	latitude
2	2nd Stage Uptown/McGinn Cazale			108	N	2002		Y		https://2st.com	-73.980639	40.781828
3	48th Street	https://c1.staticflickr.com/1/123/12345678901.jpg		969	Y	1912	1966	N	Designed by William	http://cinematography.com	-73.983431	40.75977
4	59E59E	https://c1.staticflickr.com/1/123/12345678901.jpg	https://c2.staticflickr.com/1/123/12345678901.jpg	332	Y	2002		Y	The building used	http://www.crotona.com	-73.970503	40.76346
5	Abbey's (Knickerbocker)	https://c1.staticflickr.com/1/123/12345678901.jpg	https://c2.staticflickr.com/1/123/12345678901.jpg	1500	Y	1893	1930	N	Opened as Abbey's		-73.986988	40.752689
6	Aberle's (Germania)			120	Y	1879	1903	N		https://www.iberle.com	-73.9942583	40.7284285
7	Academy of Music	https://c2.staticflickr.com/1/123/12345678901.jpg		4000	Y	1854	1926	N	Opened as an opera	http://daytonian.com	-73.987813	40.733859
8	Acorn (Theatre Row)	https://c2.staticflickr.com/1/123/12345678901.jpg		199	N	1975		Y	The Acorn is 1 of 6	http://www.lort.com	-73.993403	40.758604
9	Adelphi (Craig)	https://c2.staticflickr.com/1/123/12345678901.jpg		1434	Y	1928	1970	N	Later named the Grand	https://www.lort.com	-73.979444	40.7625
10	African Grove			300	N	1821	1823	N	In 1821, the imper	https://blackpoint.com	-74.0075753	40.7154456
11	Agnes Varis Performing Arts Center			250	N	2011		Y	Home of Gibney D	https://gibney.com	-74.005772	40.714429
12	Al Hirschfeld	https://c1.staticflickr.com/1/123/12345678901.jpg		1424	Y	1924		Y	Built in 1924 by G	http://www.plaza.com	-73.98928	40.75943
13	Alhambra	https://c2.staticflickr.com/1/123/12345678901.jpg		2200	Y	1914	2014	N	Situated in the Bus	http://cinematography.com	-73.907853	40.693019
14	Alice Tully Hall	https://c1.staticflickr.com/1/123/12345678901.jpg	https://c2.staticflickr.com/1/123/12345678901.jpg	1086	Y	1969		Y	Originally opened	http://www.lincoln.com	-73.982576	40.77393
15	Alliance of Residents Theatres	https://c1.staticflickr.com/1/123/12345678901.jpg	https://c2.staticflickr.com/1/123/12345678901.jpg	236	N	2017		Y	Developed space i	http://www.art.com	-73.990989	40.766719
16	Ambassador	https://c1.staticflickr.com/1/123/12345678901.jpg		1114	Y	1921		Y	The Shubert broth	http://www.american.com	-73.985085	40.761259
17	American Airlines (Selwyn)	https://c1.staticflickr.com/1/123/12345678901.jpg		740	Y	1918		Y	The American Airli	http://broadway.com	-73.988181	40.756982
18	American Music Hall			2070	Y	1893	1932	N	Home of Henry W.		-73.989518	40.756809
19	Amphion			1800	Y	1882	1940	N	The Amphion Thea		-73.963871	40.7086
20	Anspacher stage	https://c1.staticflickr.com/1/123/12345678901.jpg	https://c1.staticflickr.com/1/123/12345678901.jpg	274	N	1954		Y	The Anspacher Th	https://www.ny.com	-73.991714	40.729284

GIS STEP 2

- Students are taught how to access and map open source data, from sources such as ESRI Open Data and NYC Open Data, in order to collect, analyze, and represent data from diverse perspectives.
- Students then use mapping software such as ArcGIS and the New York Public Library's Digital Mapping Collection to graphically represent this data.

THE MODULE

NYC OpenData

Home Data About Learn Alerts Contact Us Blog Sign In

Open Data for All New Yorkers

Open Data is free public data published by New York City agencies and other partners. Come learn more about Open Data during Open Data Week, March 1-9! Click here for the list of events.

Search Open Data for things like 311, Buildings, Crime

<https://opendata.cityofnewyork.us/>

ArcGIS Hub Community Initiatives Open Data Find

Open Data
/open data/

noun
data that can be freely used, re-used and redistributed by anyone.
(Open Definition)

Search Data

Find Bus Routes, Park Services, Schools

Near City, Country

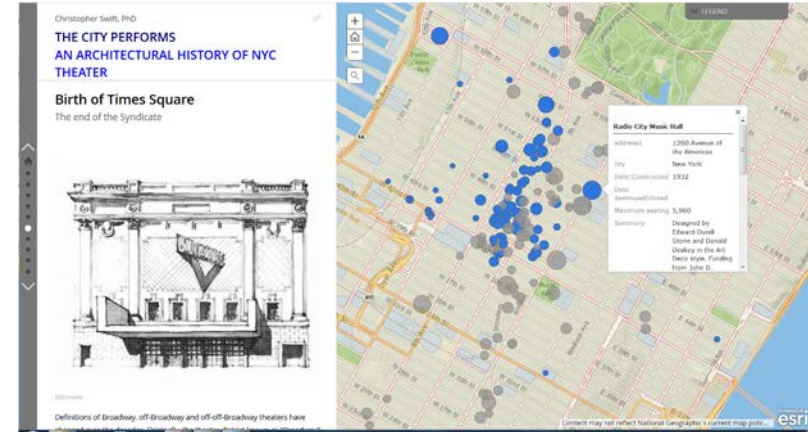
Total Datasets 115,832

Organizations Worldwide Sharing Open Data 6,218

<http://hub.arcgis.com/pages/open-data>

GIS STEP 3

- Mapping is an interdisciplinary tool, a shared pedagogy for analyzing and presenting research findings from different fields.
- Teaching students to collect, analyze, and map data is also a general education skill that can be applied to many disciplines, either independently or as a method for finding common ground between different disciplines.



THE MODULE

Historical overlay:
<https://arcg.is/LW5Sf>

GO TO MAP

NYC theater history

<https://arcg.is/9L8vH>

QUESTIONS FOR CONSIDERATION

1. What are the spatio-temporal dimensions of your course? Are areas of research related to environmental or governmental regions? Topography? Demographics? Historical change?
2. In what ways could cartography help your students engage in the subjects you teach?