

# Public or Perish

Lisel Record  
recorde@Indiana.edu

CNS  
School of Informatics , Computing, and Engineering  
Indiana University

September 29, 2018  
ASTC

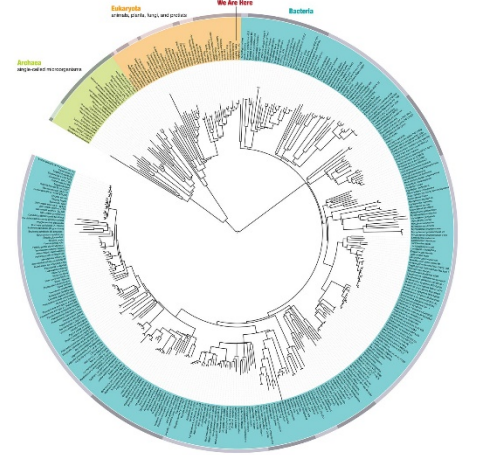


# PLACES & SPACES

MAPPING SCIENCE



## Tree of Life



Map of Scientific Collaborations from 2005-2009



[scimaps.org](http://scimaps.org)

Computed Using Data from Eisenberg's Gossip

100

**MAPS**

in large format, full color, and high resolution.

215

**MAPMAKERS**

from fields as disparate as art, urban planning, engineering, and the history of science.



24



**MACROSCOPE MAKERS**

including one whose job title is "Truth and Beauty Operator."

8

**MACROSCOPES**

for touching all kinds of data.



354

**DISPLAY VENUES AND EVENTS**

from the Cannes Film Festival to the World Economic Forum.

214



**PRESS ITEMS**

including articles in *Nature*, *Science*, *USA Today*, and *Wired*.



5



**NEW CITIES**

visited in 2016 including Ghent, Belgium, and Valencia, Spain.

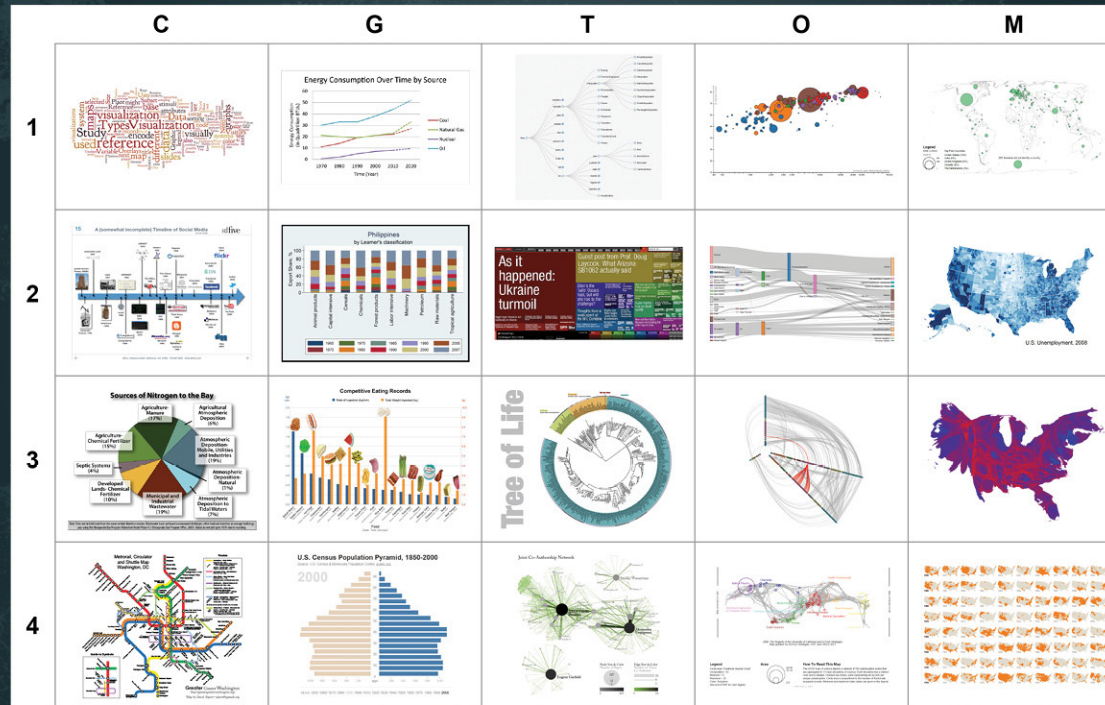
4,378,916

**WEBSITE VISITS**

to [scimaps.org](http://scimaps.org) since 2005.



# Data Visualization Literacy: Can 273 Science Museum Visitors Read 20 Information Visualizations?



Börner, Katy, Joe E. Heimlich, Russell Balliet, and Adam V. Maltese. (Submitted). "Investigating Aspects of Data Visualization Literacy Using 20 Information Visualizations and 273 Science Museum Visitors". Information Visualization.

# Pathways

## Sense-Making of Big Data

The project examined the data visualization literacy of over 900 youth and adult visitors across five US science museums. The New York Hall of Science and Science Museum of Minnesota are both involved as partner institutions, providing financial support, facilities, and collaborative research. Data collection took place at the New York Hall of Science, the Marian Koshland Science Museum, COSI in Columbus Ohio, and Wonderlab Museum in Bloomington, IN.



Pathways: Sense-Making of Big Data. NSF ISE DRL-1223698 Award (Katy Börner, Adam V. Maltese, Joe E. Heimlich, Stephen Miles Uzzo, Paul Martin, and Sasha Palmquist, \$250,000) 2012.07.01 - 2015.06.30.



Participants from the November 2013 Pathways Workshop at the Science Museum of Minnesota

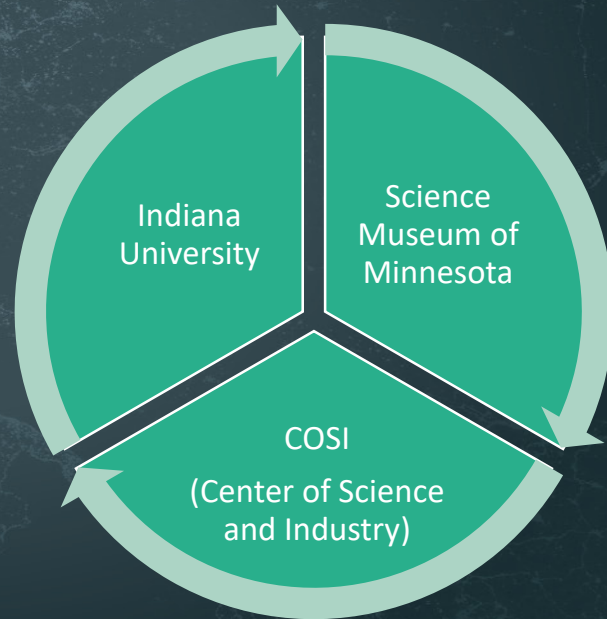


Jax and the Big Data Beanstalk, a Science Museum of Minnesota theater piece funded by the NSF, introduces museum visitors to big data visualizations and science maps

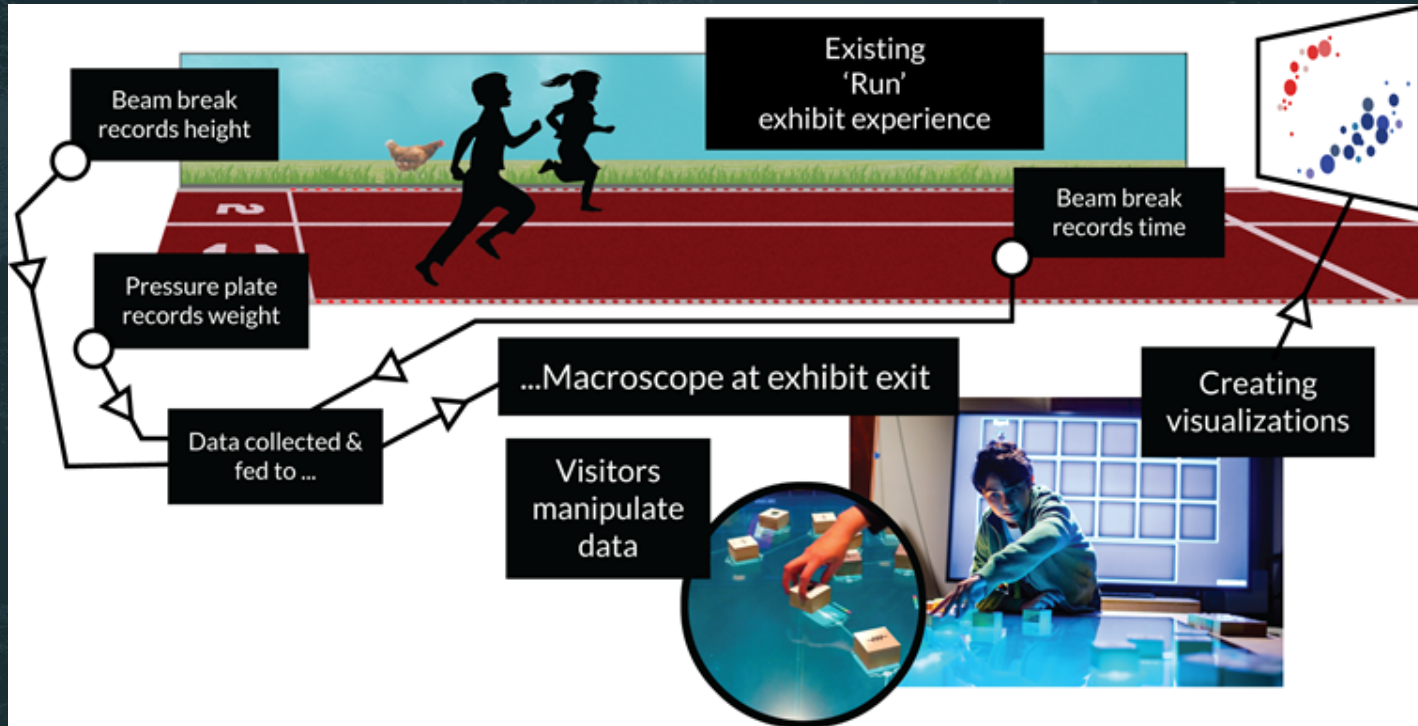
# Data Visualization Literacy: Research and Tools that Advance Public Understanding of Scientific Data

NSF AISL 1713567 Award (Katy Börner, Kylie Pepler, Joseph Heimlich, Bryan Kennedy, and Stephen M Uzzo) Sept. 2017 – Aug. 2020.

- Improve data visualization literacy
- Develop the xMacroScope, a platform for building data visualizations
- Find yourself in the data, build visualizations








Sketch of the *Run* exhibit including data collection (top) and macrocope add-on at exhibit exit that lets interested visitors explore more complex data visualizations (lower right).

# Lessons learned . . .



Museums are great at engaging people and demonstrating impact.

Be explicit about the metrics used to measure success.



Help each other find your expert blind spots.





Lisel Record  
[recorde@Indiana.edu](mailto:recorde@Indiana.edu)

School of Informatics , Computing, and Engineering  
Indiana University, Bloomington, USA

September 29, 2018  
ASTC