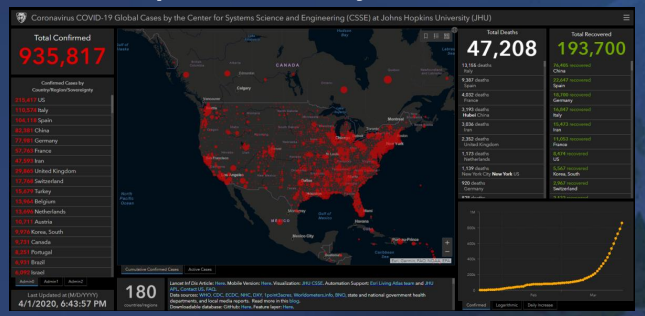
The GIS Community is Responding to the COVID19 Crisis

Collaborating and Sharing Approaches, Models, Apps & Data…

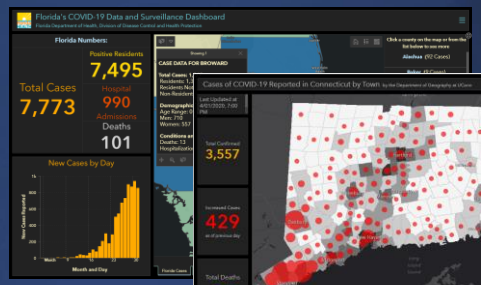
https://coronavirus-resources.esri.com/

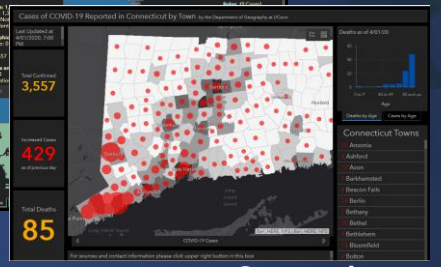
Enterprise GIS For Pandemic Response

Johns Hopkins University



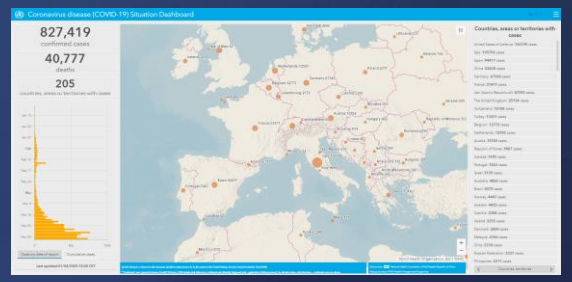
State of Florida





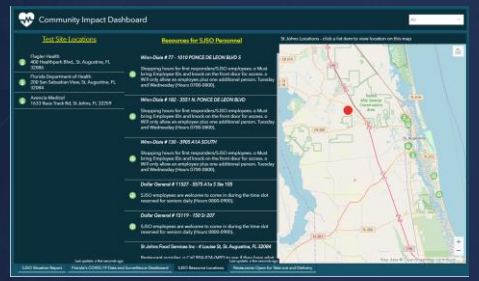
Connecticut

WHO



FEMA

US Military

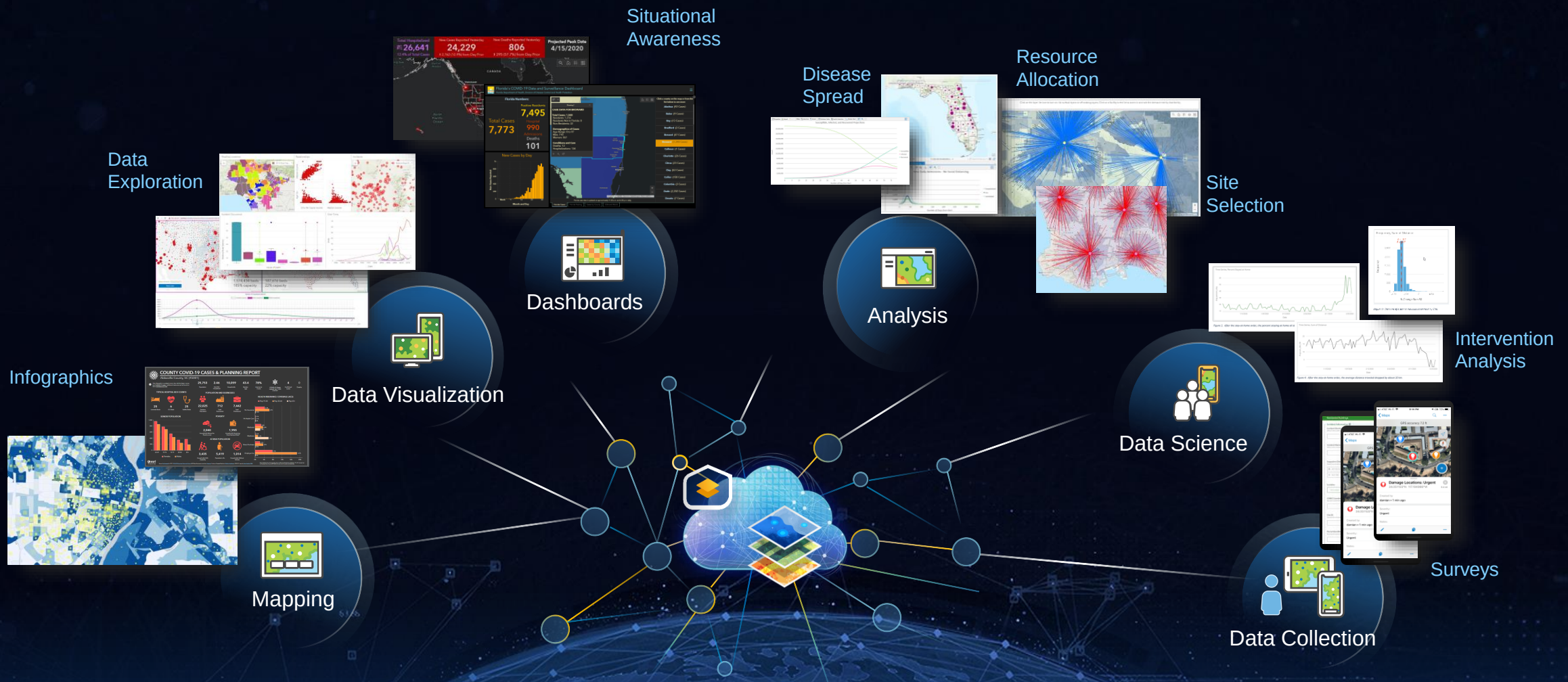


St Johns County, FL

Organizing Content and Applications
. . . Providing Mapping and Analysis
. . . Enabling Sharing and Better Decision Making

Integrating All Types of Relevant Data

Delivering Powerful Capabilities Across Organizations

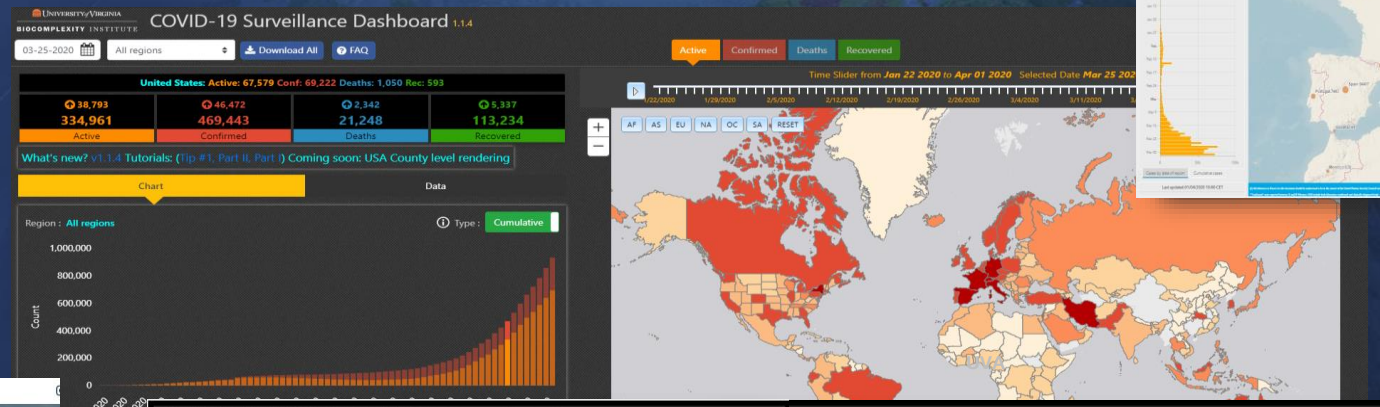


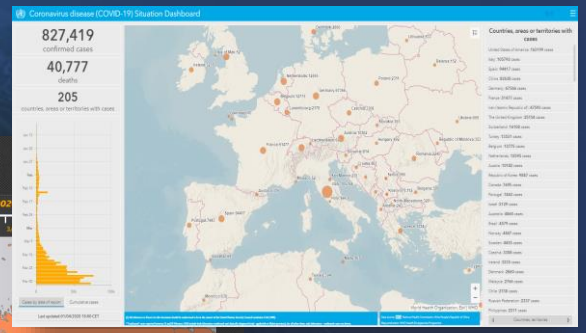
Building Blocks . . .
For a Responsive System

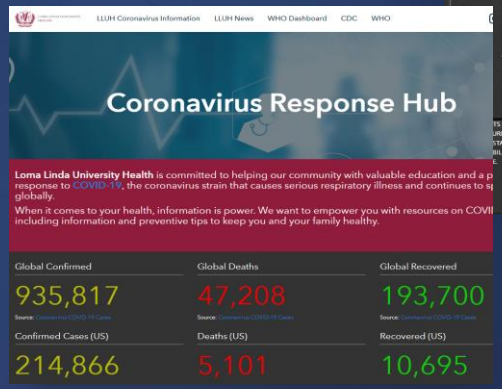
Applications

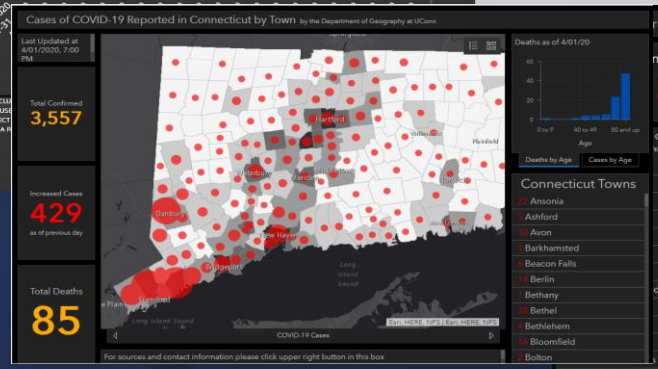
Dashboards

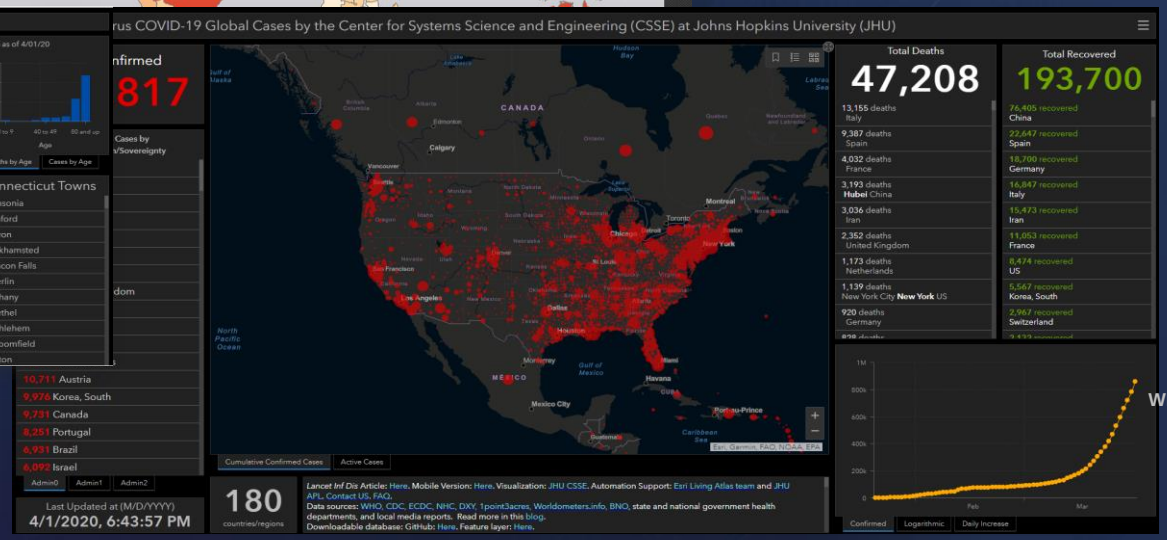
Providing Situation Awareness











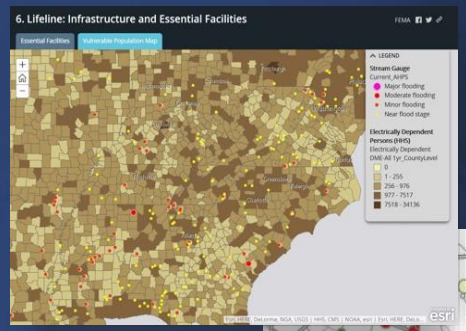
Johns Hopkins
CSSE

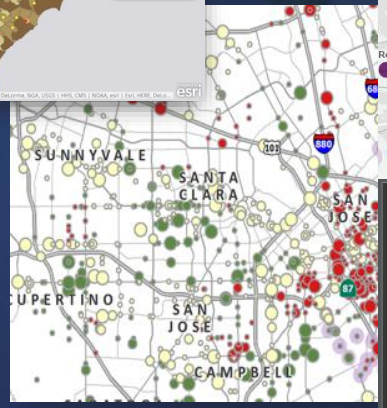
WHO

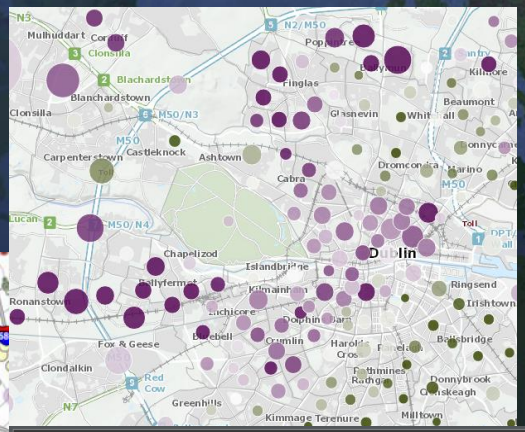
Applications

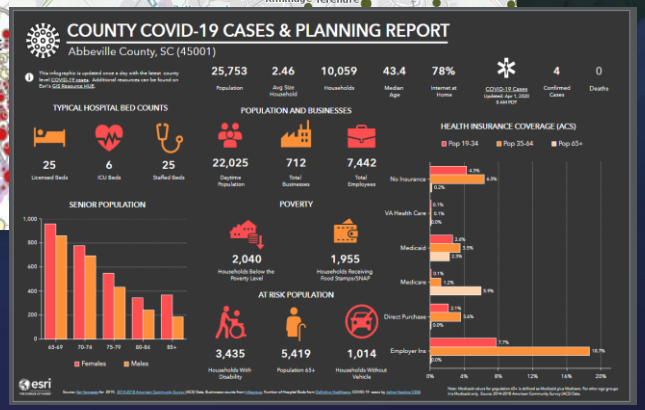
Location & Allocation Analysis

Understanding Vulnerable Populations



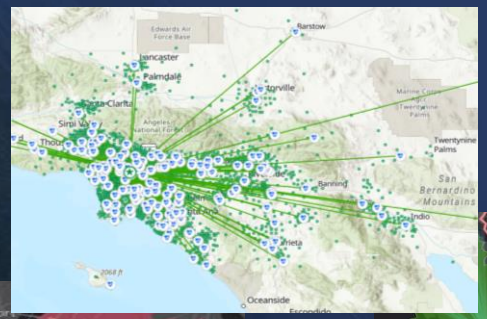






Population Profile

Allocation of Critical Resources

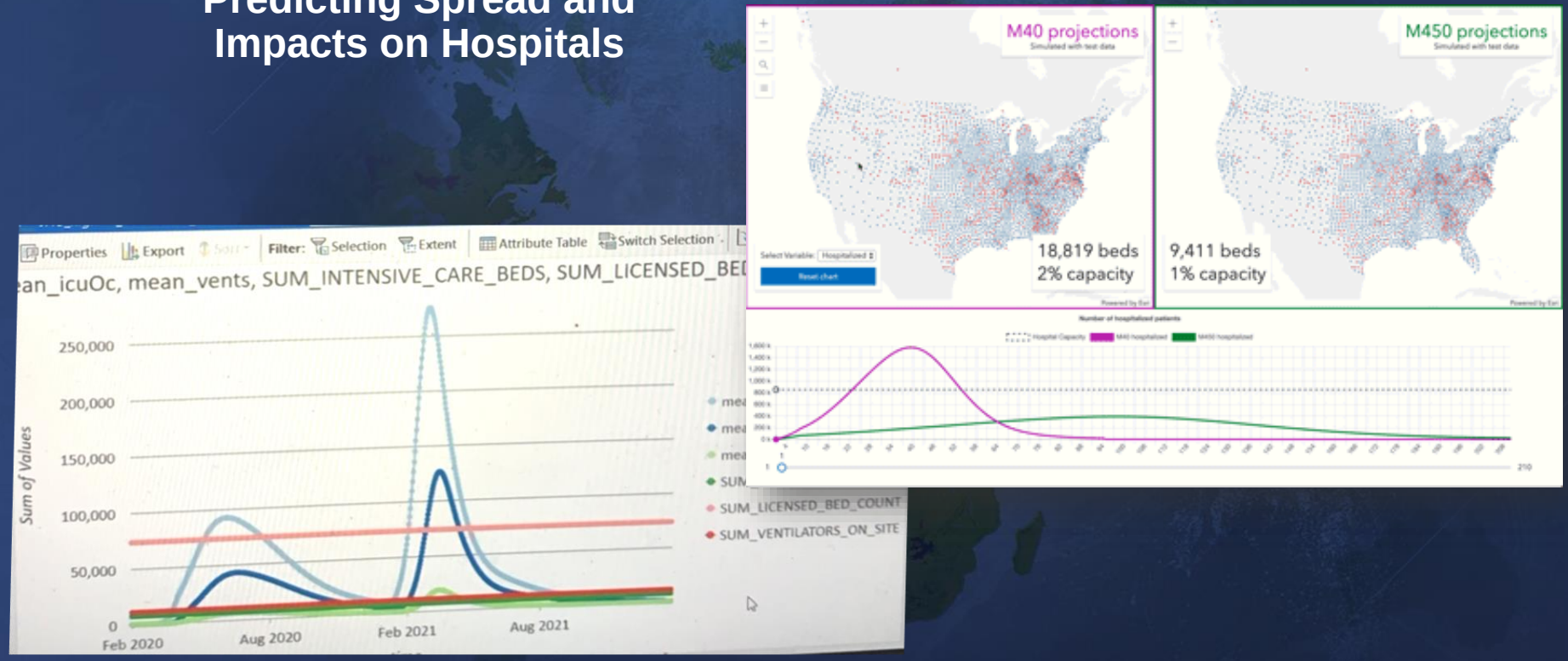


Selecting Centers

Access to Care

Models incorporated into Analytics

Predicting Spread and Impacts on Hospitals

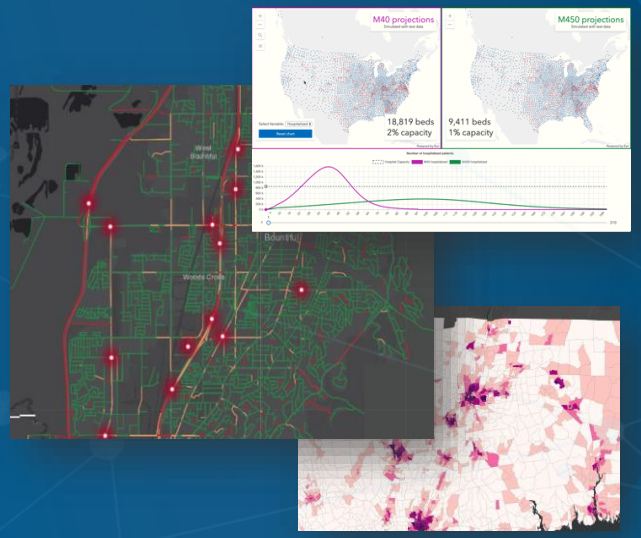


Modeling & Spatial Analysis

Pattern Detection

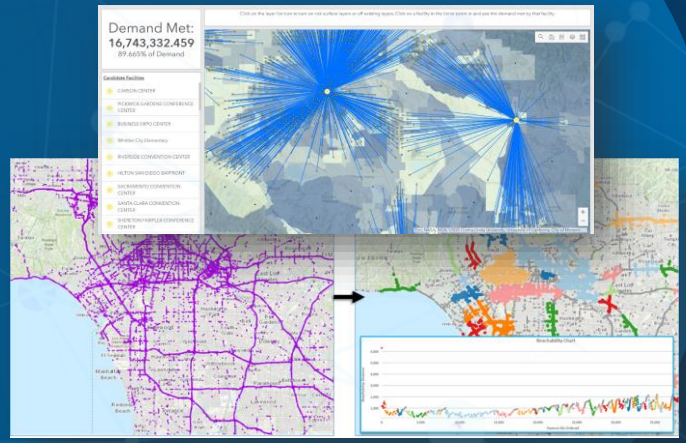
Finding Statistically Significant Clusters & Patterns

Modeling Prediction



Predicting Geospatial Events/Phenomena

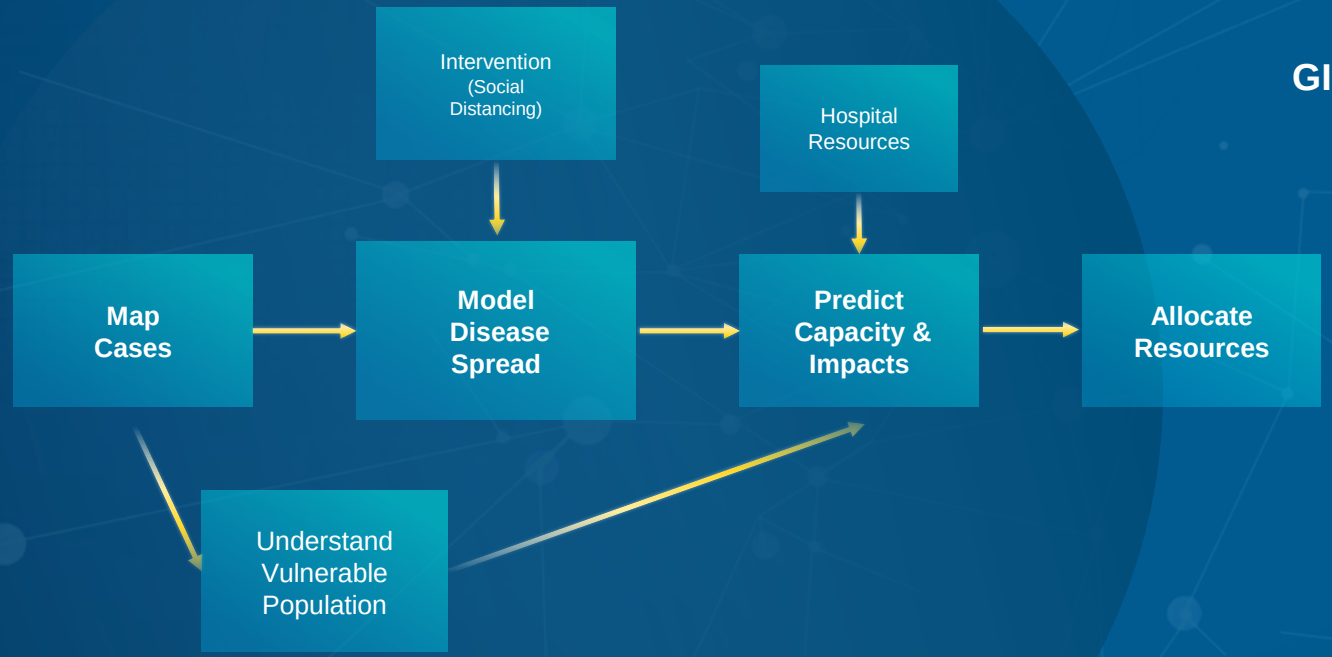
Site Selection and Resource Allocation



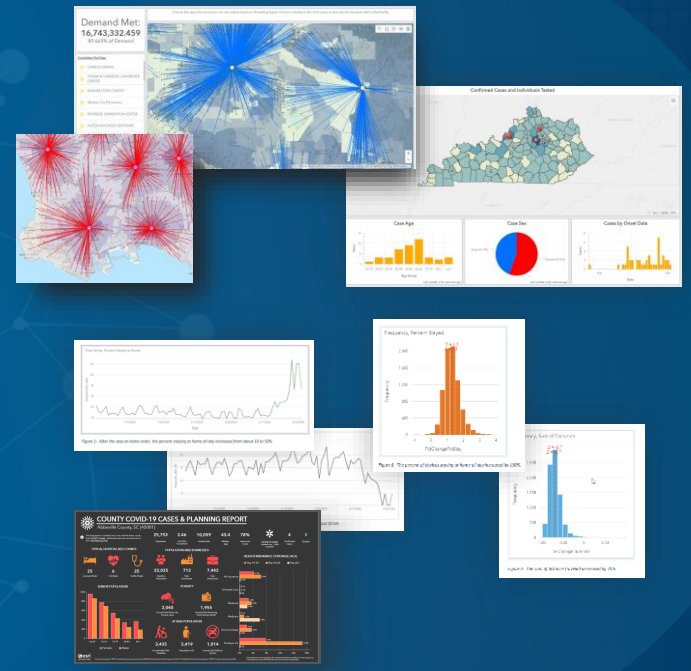
Helping Understand, Predict and Make Decisions . . .
. . . at Many Scales

Specific Approach to Answer Vital Questions

Process and Workflows



GIS Apps



Helping Understand, Predict and Make Decisions . . .
. . . at Many Scales

Summary of Actions underway in GIS context

- Implement COVID-19 Information Model (prepare GIS data layers)
- Analyze health and demographic data (understand community risk)
- Model the Spread Of Disease (Spatial /Temporal modeling)
- Measure social distancing effectiveness (leveraging mobility data)
- Determine When and Where Hospital System Capacity is Exceeded
  - Forecast Impacts on Hospital Bed, ICU, and Ventilator Capacity
- Perform location analytics to
  - Identify optimal testing and treatment sites
  - Allocate resources (beds, equipment, personnel, ...)

ESRI

SERVING OUR USERS

Disaster
Response
Program

COVID – 19 HUB

THE SCIENCE OF WHERE

50 Years
Strong and Growing

Software, Training
…..and Technical Assistance

. . . Helping Our Users Make a Difference