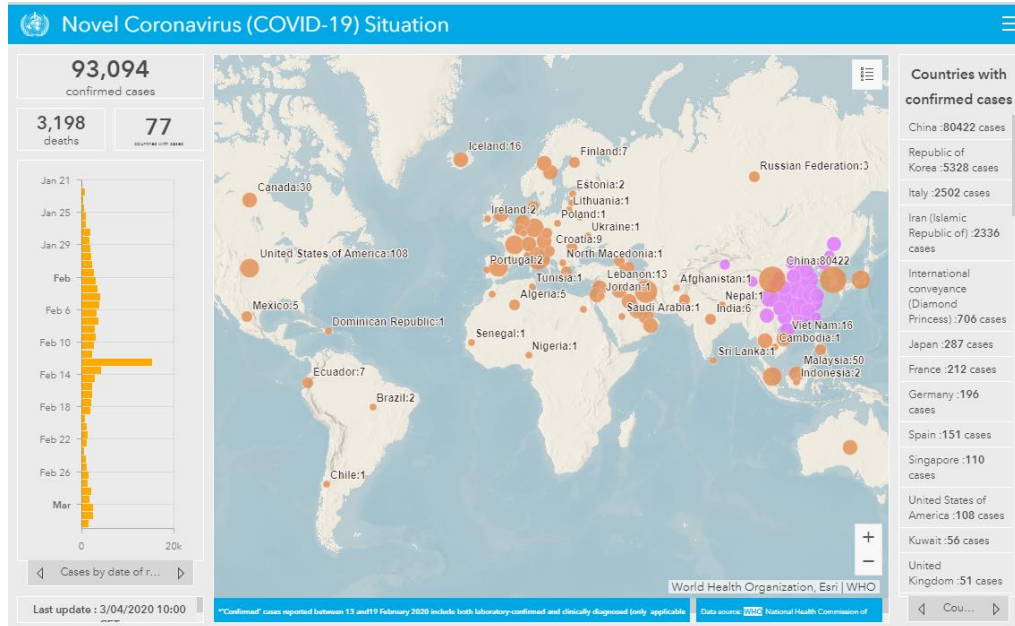


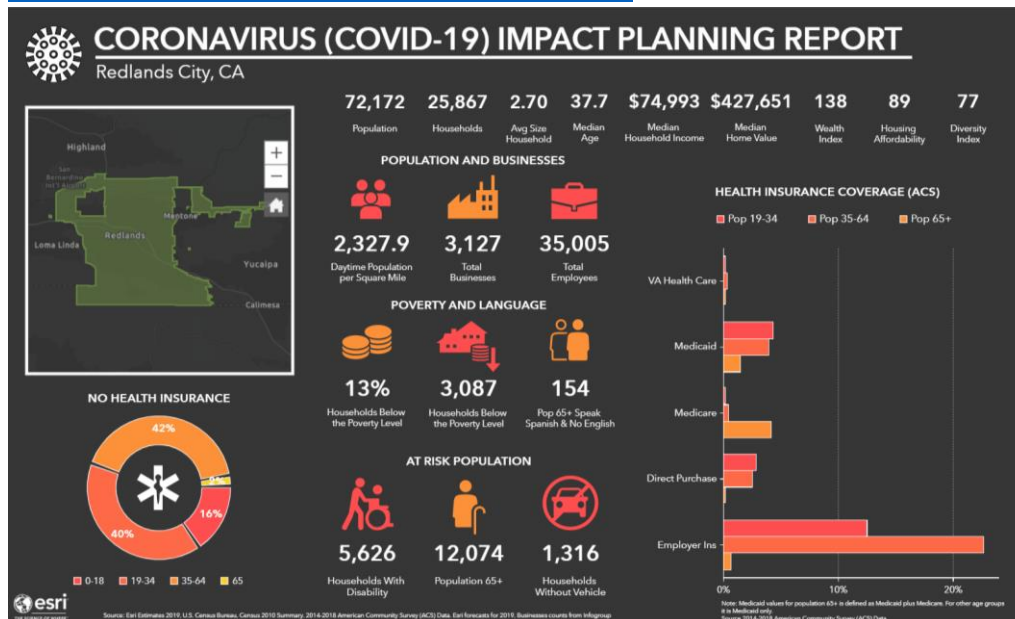
COVID-19 PREPAREDNESS USING ARCGIS

Link to [COVID-19 GIS Hub](https://go.esri.com/Coronavirus): <https://go.esri.com/Coronavirus>

[WORLD HEALTH ORGANIZATION OPERATIONS DASHBOARD \(CLICK HERE\)](#)



[COVID-19 BUSINESS ANALYST TEMPLATE \(CLICK HERE\)](#)



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GOAL: Use spatial analytics to better understand COVID-19 to facilitate smarter decisions on mitigation and resource allocation.

Geographic Information Systems (GIS) can help you answer

Where do we start? Where are our priority targets?

- **Where are our most vulnerable populations?**
Most people have nothing to fear; the most at-risk are those with poor access to care, are already ill, or are immunocompromised.
- **Understand the spreading patterns – where should we send our resources now and possibly in the future?**
Know the best places to send your staff, tests, supplies, etc.

Where do we send people?

- **Keep the vulnerable safe (separated).**
Even in hospitals, you will want to keep the immunosuppressed, those on certain medications (ex. chemotherapy), those with certain conditions (ex. HIV/AIDS), and those in certain states (ex. transplant/surgery) separated from those who may be infectious.
- **Quarantine the most at-risk.**
Have, or know, a dedicated area (internally or externally) for the most at-risk for spreading or for experiencing mortality.
- **Know where the best place is to send people for testing outside of a hospital (where the vulnerable are), but within your system.**
The best place for people to get tested may be at a mobile site based on location (airport, public transport hub, school) or demographics (homeless, nursing home, etc.).

What do we share?

- **Know what messaging to provide to certain audiences in specific locations (marketing/education).**
Different content resonates with different demographics; know what to say that will encourage different community members to act.
- **Share pertinent data – work together within your communities to track potentially moving targets.**
Use the COVID-19 Hub to add your data to existing layers or share layers that would be helpful for your community.

Public Health Preparedness: A Geographic Approach (Summary Below) | | The Six Domains of Preparedness (CDC)

Domain	Concept	Need (COVID-19 Context)	Implementation
Community Resilience PREPARATION	Preparing for and recovering from emergencies	<ul style="list-style-type: none"> Put all resources on map Have a data infrastructure Answer: Where are our vendors, staff, hospitals, ambulances, airports, etc.? 	Software Requirement: ArcGIS Desktop Pro Hosting: ArcGIS Online or Enterprise Workflow: Hazard Assessment & Analysis Configuration
Information Management INFORMATION & ACTION	Making sure people have information to take action	<ul style="list-style-type: none"> Visualization Sharing with public Have and be able to share the right data Data integration Tailored communications that resonate with different audiences 	Software Requirement: ArcGIS Desktop Pro , ArcGIS Creator License (x1 comes with Desktop) Hosting: ArcGIS Online (public); Enterprise (internal) Workflow: Operations Dashboard App , StoryMaps App , Public Information Maps Configurable App Template (Web AppBuilder) ; Dashboard Best Practices
Countermeasures & Mitigation SUPPLY	Getting medicines and supplies where they are needed	<ul style="list-style-type: none"> Understand interactions, clinical placement Real-time pulse on resources: medicine, PPE, testing kits, and other supplies. Ability to monitor human and material assets 	Software Requirement: ArcGIS Desktop Pro , ArcGIS Creator License (x1 comes with Desktop) Hosting: ArcGIS Online or Enterprise Workflow: Survey123 App , Ex. Special Needs Requests
Surge Management MAXIMIZATION (CAPACITY)	Expanding medical services to handle large events	<ul style="list-style-type: none"> Determining where to expand medical services (safety materials, quarantine sites, temporary medical clinics). Provide tools to partners and citizens to locate resources 	Software Requirement: ArcGIS Desktop Pro Hosting: ArcGIS Online or Enterprise Workflow: Web AppBuilder, Ex. My Hazard Information
Biosurveillance PREDICTION	Investigating and identifying health threats	<ul style="list-style-type: none"> Understand patterns in space and time Turn raw data into actionable info Have the ability to detect emerging threats Predict outbreak spread 	Software Requirement: ArcGIS Desktop Pro , ArcGIS Creator License Hosting: ArcGIS Online or Enterprise Workflow: Predictive Analysis, Ex. Vector-Borne Disease
Incident Management COORDINATION	Coordinating and effective response	<ul style="list-style-type: none"> Know where there is an incident event and its perimeters Put all data in one place 	Software Requirement: ArcGIS Desktop Pro Hosting: ArcGIS Online or Enterprise Workflow: Web AppBuilder, Situational Awareness Viewer
Community Events GATHERING CROWDS (Extra; not CDC Domain)	Planning community or special events	<ul style="list-style-type: none"> Safe management and gathering of groups Large-scale isolation prevention 	Software Requirement: ArcGIS Desktop Pro Hosting: ArcGIS Online or Enterprise Workflow: Manage Community Events

Recommendations	Examples	Next Steps
Software Necessities: Desktop, Business Analyst Collaboration: Enterprise, ArcGIS Hub Services: Training, Advantage Program	COVID-19 GIS Hub Oregon Emergency Management Kentucky COVID-19 AZ ESF/RSF Operations Dashboard	Contact Samantha Williams swilliams@esri.com for: <ul style="list-style-type: none"> Organization current resources & needs Capabilities (more than surveillance) Investment