ArcGIS Solutions, Workflows, Tools, and Examples for COVID-19 Response: Experiences and Use Cases

Mark Scott | mscott@esri.com | May-19 2020
• Do your citizens know where their nearest COVID-19 testing facility is?

• Is there one place that people can go for information on school closures?

• Are the statuses of community resources—like libraries, museums, lunch programs, and community centers—communicated to citizens in a resource that is updated frequently?

• Does the information being distributed to citizens come from an authoritative source?
The Technical Challenges Faced by Communities

They are many, and vary greatly...

IT infrastructure and resources
Development and configuration time
Data accuracy and timeliness

Pressure to produce something quickly
Each community is unique, and appropriate mitigation strategies will vary based on the level of community transmission, characteristics of the community and their populations, and the local capacity to implement strategies.
Possible Coronavirus Response Workflows
Ideas explored with Counties and Municipalities in New England and New York

• Conversations started before the Solutions had been made available

• Several options were investigated
  - ArcGIS Maps for Office (initially considered)
  - Survey 123, both using the Solution, or independently
  - Simple web map with editing app from Web App Builder
  - ArcGIS Online Hosted Feature Layers and Tables

• Most important user need: Coronavirus Operations Dashboard

• Now, Esri has several packaged Solutions
Coronavirus Related Solutions

Adding more by the week

Coronavirus Small Business Recovery
May 18, 2020

Coronavirus Wellness Checks
May 18, 2020

Coronavirus Testing Sites
May 7, 2020

Coronavirus Recovery Dashboard
May 7, 2020

Coronavirus Response
May 7, 2020

Coronavirus Force Readiness
May 5, 2020

Hospitalization and PPE Inventory
May 5, 2020

Coronavirus Business Continuity
May 4, 2020

... by state and local health agencies
Deployment of Coronavirus Related ArcGIS Solutions

2 methods

• ArcGIS Solutions Deployment Tool in ArcGIS Pro

• ArcGIS Solutions Deployment Tool on ArcGIS Online
  - Work in progress, rolling out more content daily
  - Will eventually support most Solutions
  - https://hub.arcgis.com/apps/solutions/?sortField=Newest#home

Both are supported
Coronavirus Response Solution
Coronavirus Response Solution

Will help you

• Monitor coronavirus cases

• Track the impact on public gathering places
  - Schools, government buildings, and other common places

• Inventory places where people can get testing and treatment
  - Testing sites, hospitals, and clinics

• Share information with the public to increase public awareness
Apps for Health and Human Services Staff

What you get

- Case Reporter
- Facilities Status Manager
- Testing Sites Manager
Apps for the Community

What you get

• School Closings
• Community Closings
• Medical Facilities Locator
• Testing Sites Locator
App for Incident Commanders – and the Community

What you get

- Community Impact Dashboard
Coronavirus Response Hub
Your Destination for Coronavirus Resources

Website template for ArcGIS Hub

- Share information and resources about coronavirus response in your community
- Provide a central web destination for Coronavirus Response maps and apps
- Available to all ArcGIS Online users
Integrated Solution
Delivered as a SaaS offering

Health and Human Services Staff
- Case Reporter
- Community Impact Dashboard
- Testing Sites Locator
- Medical Facilities Locator
- School Closings
- Community Closings

Incident Commanders & Executives
- Facilities Status Manager

General Public
- Coronavirus Response Hub

GIS Professionals
- Schools
- Testing Locations
- Public Places

Facility Data
Coronavirus Response Solution Components

Communicate Impact
- Community Impact Dashboard
- Powers Map
- Cases_public
- Cases_current
- Cases_reporter
  Edit Survey123 form to add boundaries
- Append zip Boundary file to Cases layer

Track Status and Find Critical Facilities
- School Closings (WAB/Near Me)
- Medical Facilities Locator (WAB/Near Me)
- Community Closings (WAB/Near Me)
- EducationalFacilities_public
- Hospitals_public
- PublicPlaces_public
- Facilities Status Manager (Crowdsoure Manager)
- EducationalFacilities
  - Educational Facilities
  - School Districts
- Hospitals
- PublicPlaces
  - Government Facilities
  - Landmark Facilities

Track Status and Find Testing Sites
- Testing Sites Locator (WAB/Near Me)
- TestingLocations_Public
- Testing Locations
- Public Apps
- Data Mgmt
- Layers
Coronavirus Response — Putting It All Together

What you get

Software

• Coronavirus Response Maps and Apps
  - Use configurable maps and apps that leverage your authoritative location-based data

• Coronavirus Response Template for ArcGIS Hub
  - Deploy your own Coronavirus Response Hub site

• ArcGIS Online Subscription and ArcGIS Hub Basic
  - Power your solution with ArcGIS platform software

Support

• Implementation and Enablement Activities (optional)
  - Get help from Esri to load your content, configure solutions, and educate your team

• Technical Support
  - Get tech support from Esri to maintain the solution and incorporate new capabilities
Getting Started

What to do next

Launch your Coronavirus Response Hub:


- **Website:** ArcGIS Hub - COVID-19 Featured Sites (https://hub.arcgis.com/pages/covid-19)

Deploy the Coronavirus Response Solution:


- **Solution Webinar:** Discuss the New Coronavirus Response Solution (Virtually) https://www.meetup.com/ArcGIS-for-Local-Government/events/269486877/
Other COVID-19 Resources

What to do next

Some helpful resources:

- **Website:** COVID-19 Resources Hub (https://coronavirus-resources.esri.com/)
Examples of Coronavirus Response

See How ArcGIS is Supporting Coronavirus Response

Coronavirus Response Hub
Montgomery County, Texas

Florida COVID-19 Hub
University of South Florida Libraries

Oswego County Coronavirus Response Dashboard
Oswego County, New York

COVID-19 Rwanda
Rwanda Ministry of Health and Rwanda Biomedical Centre
Example: Saratoga County, New York

Supporting Saratoga County Municipalities

• Conversation started before the Solutions had been made available

• County applied for Disaster Assistance from Esri for ArcGIS Online, Community Analyst, etc.

• Motivated Staff at Saratoga County were critical to success
  - Meg O’Leary, Saratoga County Public Health Services
  - Troy Hilts, Saratoga County Planning

• Most important user need: Coronavirus Public Dashboard to communicate status

• Maintaining the data in Excel spreadsheets
  - Summary statistics for the County and the Municipalities (Cities, Towns, Villages)
  - Daily testing numbers
  - Daily case statistics
Saratoga County Department of Public Health Services COVID-19 Dashboard

- [https://www.saratogacountyny.gov/departments/publichealth/covid19/](https://www.saratogacountyny.gov/departments/publichealth/covid19/)
Esri Boston’s Hub: [https://go.esri.com/bostonhub](https://go.esri.com/bostonhub)

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1:45 – 2:15 p.m.

Esri Session #7:
ArcGIS Hub: Bringing the Community Together

Presenter: Tom Schwartzman

Part of Esri Geospatial Cloud, ArcGIS Hub is an easy-to-configure community engagement platform that organizes people, data, and tools through information-driven initiatives.