

From Nothing to Nationwide Operations

"Kudos to Ardent for collaborating with the government to develop and field a geospatial dashboard for the operations center and senior leaders....This effort went from conception to operational in a mere two weeks! BRAVO ZULU "WELL DONE!"

~Deputy Director, DHS Client



THE CHALLENGE

A Department of Homeland Security (DHS) component needed a better way of gathering and visualizing metrics used for reporting COVID-19 data. In the early days of the pandemic, federal agency staff were manually responding to data calls using Microsoft Excel spreadsheets. Manual data submission is inherently time-consuming and error-prone. Further, the delays in receiving current data and then reviewing in a tabular format thwarted the client's need for timely situational awareness. The DHS component asked the Geospatial Management Office (GMO) to create a way to ingest COVID-19 data dynamically and deliver tools that could enhance executive leadership decision making during a rapidly evolving pandemic.



THE SOLUTION

Team Ardent tapped into their Esri ArcGIS Enterprise and Python Scripting expertise to create the following innovations:

- Automated the ingest of DHS component data into the Geospatial Information Infrastructure (GII).
- Integrated previously unavailable analysis tools and created real-time data visualizations in a single, dynamic dashboard.
- Scripted data exports to automate updates to the data layers incorporated in the operations dashboard.
- Created filters to answer ad hoc questions.



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THE OUTCOME

From nothing to nationwide operations dashboard in 2 weeks!

In less than two weeks we enhanced the DHS component's mission capability by:

- Delivering real-time reporting of the latest COVID-19 data in an operations dashboard now used extensively by the client's executive leadership to inform better decision making.
- Making spatial patterns more readily apparent by presenting data in a map format.
- Producing more accurate data with improved fidelity.
- Reducing level of effort by eliminating manual entry into spreadsheets.
- Validating and establishing Esri ArcGIS Enterprise compatibility with WebEOC, an industry standard emergency management application.

Tools used to achieve these outcomes:

- WebEOC
- Esri ArcGIS Enterprise
- Esri Dashboards
- Python
- Portal for ArcGIS
- Esri Feature Services
- Windows Server 2016

Ardent ABOUT ARDENT

Virginia-based Digital Transformation, Location Intelligence, and Data Analytics firm, Ardent Management Consulting (Ardent) is a certified HUBZone Small Business, CMMI-Dev Level 3, v2.0, and ISO 9001:2015; 27001:2013; 270001; ISO 20000-1:2018 with offices in Arlington, VA and Tulsa, OK. Ardent brings a significant history of innovative and "at the speed of the mission" proven best practices in geospatial analytics, cloud services and modernization, and software development. Ardent is the "All In" trusted provider to many government agencies, DHS mission components, state and local projects, and the commercial and non-profit sectors. For more information, visit www.ardentmc.com.



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