

# Open Geospatial Consortium Strategic Partnership



Science and  
Technology

## OPEN GEOSPATIAL CONSORTIUM: CLIMATE CHANGE AND DISASTER RESILIENCE

The biggest threat facing the Earth, climate change, is continuing to increase in severity. The results are frequent extreme events and disasters that, if nothing changes, will affect the lives of more and more people as time goes on. This is why a strategic membership with Open Geospatial Consortium (OGC) is indispensable. OGC supports a diverse community of businesses, research organizations, universities, and government agencies that all work together to make location information Findable, Accessible, Interoperable, and Reusable (FAIR). Members get access to a world of experts, data, and partnerships that will influence the future of innovation and standards.

The Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) will, as a member, build a strategic partnership with OGC, allowing DHS to gain insight into innovative global climate change adaptation and resilience research. OGC is a leader in the impact resilience space through their development of data-driven strategies informed by predictive models and observations of conditions required for life. Any piece of data regarding climate corresponds to a location and OGC is utilizing the latest technologies to develop standards and guides to make climate data FAIR. This knowledge helps better inform DHS climate research and development initiatives.

## INITIATIVES

OGC is implementing multiple initiatives to increase global resilience and explore the boundaries of what is possible through numerous projects, pilots, sprints, and much more.

### CLIMATE RESILIENCE PILOT

With dire climate-related scenarios becoming increasingly feasible, it is imperative that experts with a wide range of disciplines from around the world can pool their knowledge to come to the right conclusions. This pilot does just that by exploring how climate change-related data can be easily discovered and made available in ways that are directly usable by decision-makers and other non-climate experts. The project will assist the geospatial community with developing more powerful visualization and communication tools, which will provide a means to better manage climate threats such as

droughts, floods, and fires. Through this initiative, OGC is in a unique position to accelerate solution development through collective problem solving.

### DISASTER PILOT: EYES IN THE SKY, FEET ON THE GROUND

The adoption of new technology saves lives. The research community should easily be able to coordinate with the government to model the spread of wildfires through satellite data. This is where OGC's Disaster Pilot comes in. By using standards for sharing geospatial data, web technologies, and cloud computing, responsible stakeholders can collaborate, regardless of location, to manage a disaster of any scale. The only way to effectively limit the impact of disasters is by providing the right people with the best tools to assist them in taking the right actions. Through the use of innovative indicator workflows and virtual collaboration tools, this is exactly what OGC's Disaster Pilot accomplishes.

### TESTBED-19: INTEROPERABILITY AND COLLABORATION FROM OCEANS TO SPACE

Testbed-19 is a collaborative effort to rapidly prototype, design, develop, and test solutions to location-related problems. OGC Testbeds exist at the cutting edge of technology by actively exploring and evaluating future geospatial technologies to solve today's problems. This initiative will explore six tasks, including Geospatial in Space, Machine Learning, Transfer Learning, Geodatacubes, Analysis Ready Data, Agile Reference Architecture, and High-Performance Computing. Through collaboration with sponsors, the OGC team will take real situations and produce systems to solve future global problems.

## IMPACTS

DHS's strategic membership with OGC gives DHS access to knowledge, information, and data from a diverse group of industry leaders, technical experts, and other influencers. The sharing of ideas and innovations between organizations allows for quicker and more advanced development of climate adaptation and resilience solutions. This insight into global climate research and development allows DHS to better protect the nation from climate-related threats.

