**Toward an OGC Health Domain Working Group**

**Discussion Paper**

# Purpose of an OGC Health Domain Working Group

An **OGC Health Domain Working Group** would enable OGC to identify and work with a representative group of market participants in the identification and prioritization of use cases, business and technical requirements that will provide the most significant value, or mitigate the most significant risks in this arena. Through efforts to identify requirements, gaps in standards and opportunities for demonstration, a Health Domain Working Group will contribute to development of open mapping standards in support of public health requirements. Through bringing together geospatial vendors and end-users, an OGC Health Domain Working Group will cultivate technical solutions which support interoperable concepts, data definitions, formats and services for publishing, search, and exchange of geospatial information.

# Proposed Activities / Roles

This Discussion Paper aims to outline potential roles for an OGC Health Domain Working Group. This may include but is not limited to, activities to:

1. **Convene** OGC members and non-members in the public health domain
2. **Build Capacity** for technical solutions, knowledge exchange, requirements gathering and prioritization
3. **Assimilate Inputs** toward geospatial standards development, including data definitions, formats, and services for publishing, discovery, exchange, and queryability of geospatial information
4. **Spawn** **Demonstration Projects**, Interoperability Experiments, and Interoperability Pilots
5. **Educate** **and Inform** Public Health communities-of-practice

# Proposed Format / Membership

The suggested format for an OGC Health Domain Working Group is **Public** – i.e. open to OGC members and non-members. This will enhance the opportunity for health sector, government agencies, and geospatial community to collaborate in user/technical requirements gathering, development of standards, knowledge exchange, demonstration through interoperability projects of open mapping standards in support of public health requirements.

# Statement of Needs / Strategic Objectives

Based on previous research, health stakeholder consultation, and implementations of OGC web map standards in support of health, the following list summarizes potential focus areas / marketplace needs to be addressed by an OGC Health Domain Working Group:

1. **Address interoperability requirements** – e.g. support more effective health surveillance using open mapping standards to access distributed geospatial data pertaining to disease, disease vectors and vulnerable communities / populations. The WHO has called for systemic approaches to monitoring environmental determinants of public health, reducing population vulnerability and mitigating risks or impacts from infectious and vector borne diseases.
2. **Support collaborative research** into cumulative, synergistic, non-linear impacts (e.g. ecosystem fragmentation) to public health, for risk assessment and reduction
3. **Develop and support communication** **strategies and market research**, including for take-to-market of OGC standards / OGC-compliant technologies which serve the health marketplace
4. **Support Policy, Research, Education** – e.g. support development of policy, research, best practices, and education in the use of open mapping standards to monitor trends and changes in public health, for risk identification, communication, and disease prevention.
5. **Support Cross-Border Surveillance initiatives** – e.g. support modeling, exercising, responding to cross-border health risks
6. **Advance best practices for visualization of Chronic and Infectious Diseases using open mapping standards** – e.g. to support epidemiology, surveillance, control, treatment, prevention, and education activities
7. **Advance best practices for Public Health Management and Cost Reduction** **using open mapping standards** – e.g. to support resource allocation for health emergencies, to protect vulnerable populations, and in response to changing geo-demographics (e.g. older populations with higher prevalence of chronic respiratory illness, diabetes, and cancer, among others).
8. **Advance best practices for Adapting to Climate Change Impacts to Public Health** **using open mapping standards** – e.g. to support modeling of climate impacts on public health, risk assessment and reduction (e.g. to heat events, reduced air quality, vector borne disease, floods, drought, fire, extreme weather, changes in food production and water quality, social impacts of displacement and exposure of vulnerable populations). This includes supporting efforts to standardize interoperable interfaces for health and climate models at a scale appropriate to decision making (regional and temporal) while protecting privacy of personal health information. Some climate sensitive diseases include: chronic respiratory illness, such as asthma, chronic bronchitis, and communicable influenza; as well as other infectious diseases like West Nile Virus, cholera, malaria; meningococcal meningitis, dengue hemorrhagic fever, encephalitis, rift valley fever, Yellow fever.

## Additional Resources

1. **Serving Public Health through Open Health Mapping Services**, GovFuture webinar: <https://www2.gotomeeting.com/register/803074466> (recording) This included a presentation on the implementation of OGC WMS, WFS, WPS, and Health XML Schema, for use/applications for cross-border influenza pandemic, chronic respiratory illness, environmental and community programs.
2. **Mapping for our health,** by Eddie Oldfield - article in Colleen Young Health Communications Blog <http://cyhealthcommunications.wordpress.com/2012/09/23/mapping-for-our-health/>   
   Colleen Young, host of this blog supports a Canadian Health Care Social Media network and regular ‘tweet-ups’ or moderated chats online using hashtag #hcsmca.
3. **Towards Web-based representation and processing of health information  
   Sheng Gao**[**1**](http://www.ij-healthgeographics.com/content/8/1/3/#ins1)**\*, Darka Mioc**[**1**](http://www.ij-healthgeographics.com/content/8/1/3/#ins1)**, Xiaolun Yi**[**2**](http://www.ij-healthgeographics.com/content/8/1/3/#ins2)**, Francois Anton**[**3**](http://www.ij-healthgeographics.com/content/8/1/3/#ins3)**, Eddie Oldfield**[**4**](http://www.ij-healthgeographics.com/content/8/1/3/#ins4) **and David J Coleman**[**1**](http://www.ij-healthgeographics.com/content/8/1/3/#ins1)<http://www.ij-healthgeographics.com/content/8/1/3> International Journal of Health Geographics
4. **The Canadian Geospatial Data Infrastructure and Public Health:** <http://ow.ly/d/goa> A report commissioned by GeoConnections, Natural Resources Canada.

## Pertinent OGC Standards

Many existing OGC standards may support public health users, such as GML, WMS, WFS, WPS, WCS, SLD, WXXM, SWE, CityGML, to name a few. In addition, a Health Domain Working Group would assimilate inputs for new encodings, interfaces, applications and extensions to geospatial standards serving the marketplace.

## Pertinent OGC Partners, Members, Alliances, and SWGs

To be identified. Consult OGC website: [www.opengeospatial.org](http://www.opengeospatial.org) It should be noted that health applications may crosscut with possible work activities in the Geosciences and Environment, Emergency and Disaster Management, and Law Enforcement and Public Safety Domain Working Groups.

## Pertinent Non-Member Agencies

* World Health Organization
* National and International Disease Surveillance Agencies
* Health Research Institutes
* Provincial/State Health Authorities
* Health Informatics solution providers
* Professional Health / Medical Associations
* Academic Institutions, Nursing Faculty, Geomatics Faculty Computer Sciences Faculty

## Please send Inquiries and Expressions of Interest to:

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