15th Meeting of the Hydrographic Services and Standards Committee

Report of the Open Geospatial Consortium (OGC)

Scott Simmons, OGC
Sina Taghavikish, OGC
… and presented by Jens Schröder-Fürstenberg, Nautischer Informationsdienst

Agenda Item 7.7

HSSC-15, Helsinki, Finland, 5 – 9 June 2023

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SINCE HSSC-14

- 10 Standards approved
- 1 Best Practice approved
- 12 Engineering Reports approved
- 3 Discussion Papers approved
- 6 new Working Groups

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STANDARDS APPROVED

- **OGC 21-056r9: OGC GeoPose – location and orientation of objects**
- **OGC 20-050r1: Zarr Storage Specification 2.0 Community Standard – cloud-native datacubes**
- OGC 21-057r1: GeoPackage CRS for WKT Extension 1.1
- **OGC 20-057: OGC API - Tiles: Part 1 – Core – tiled raster and vector data**
- **OGC 21-053r1: Abstract Specification Topic 23 – GeoPackage Conceptual and Logical Model – GeoPackage can now be implemented in other databases than SQLite**
- **OGC 21-069r2: CoverageJSON Community Standard – more datacubes**
- OGC 17-014r10: I3S 1.3 Community Standard
- OGC 22-025r2: 3D Tiles 1.1 Community Standard
- OGC 21-026 Cloud Optimized GeoTIFF (COG)
- OGC 21-006r2 CityGML 3.0 - Part 2: GML Encoding

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BEST AND COMMUNITY PRACTICES APPROVED

- **OGC 21-068: OGC Best Practice for using SensorThings API with Citizen Science – integration of Internet of Things technology with field observations**

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ENGINEERING REPORTS PUBLISHED (1/2)

- **OGC 22-013r3: Towards a Federated Marine SDI: IHO and OGC standards applied to Marine Protected Area Data Engineering Report**
- OGC 22-004: Joint OGC OSGeo ASF Code Sprint 2022 Summary Engineering Report
- OGC 22-043r1: Joint OGC and ISO Code Sprint 2022 Summary Engineering Report
- OGC 22-031r1: Testbed-18: Reproducible FAIR Best Practices Engineering Report
- OGC 22-014: Testbed-18: Key Management Service Engineering Report
- OGC 22-018: Testbed-18: Secure Asynchronous Catalog Engineering Report

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ENGINEERING REPORTS PUBLISHED (2/2)

- OGC 21-054: OGC Disaster Pilot JSON-LD Structured Data Engineering Report
- OGC 21-064: OGC Disaster Pilot 2021 Engineering Report
- OGC 22-040: Hydrologic Modeling and River Corridor Applications of HY_Features Concepts
- OGC 22-038r2: Testbed-18: Reference Frame Transformation Engineering Report
- OGC 22-017: Testbed-18: Machine Learning Training Data ER
- OGC 22-020r1: Testbed-18: Identifiers for Reproducible Science Summary Engineering Report

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DISCUSSION PAPERS PUBLISHED

- OGC 21-010r2: Extensions of IndoorGML 1.1 - Indoor Affordance Spaces
- **OGC 21-077: The HDF5 profile for labeled point cloud data – massive point cloud data management**
- OGC 20-092: CDB X Conceptual Model with Prototyping Examples and Recommendations

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WORKING GROUPS CHARTERED

- Climate Resilience Domain Working Group
- **Geo for the Metaverse Domain Working Group – getting the real world into any metaverse**
- GeoDataCube Standards Working Group
- Analysis Ready Data Standards Working Group
- Agriculture Information Model Standards Working Group
- **GeoDCAT Standards Working Group – web-native metadata**

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OGC MEMBER MEETINGS

Date	Location	Host/Sponsor
13-17 June 2022	Madrid, Spain	SatCen
3-7 October 2022	Singapore	Singapore Land Authority
20-23 February 2023	Frascati, Italy	European Space Agency
5-9 June 2023	Huntsville, AL USA	Geo Huntsville
25-29 September 2023	Singapore	Singapore Land Authority
25-29 March 2024	Delft, Netherlands	Geonovum
June 2024 – 30 years of OGC	Montreal, Canada	NRCan

OGC Standards Roadmap

Progress of Official OGC Standards OGC & Community Standards Community 2022-11-21

Show Previously Completed Standards

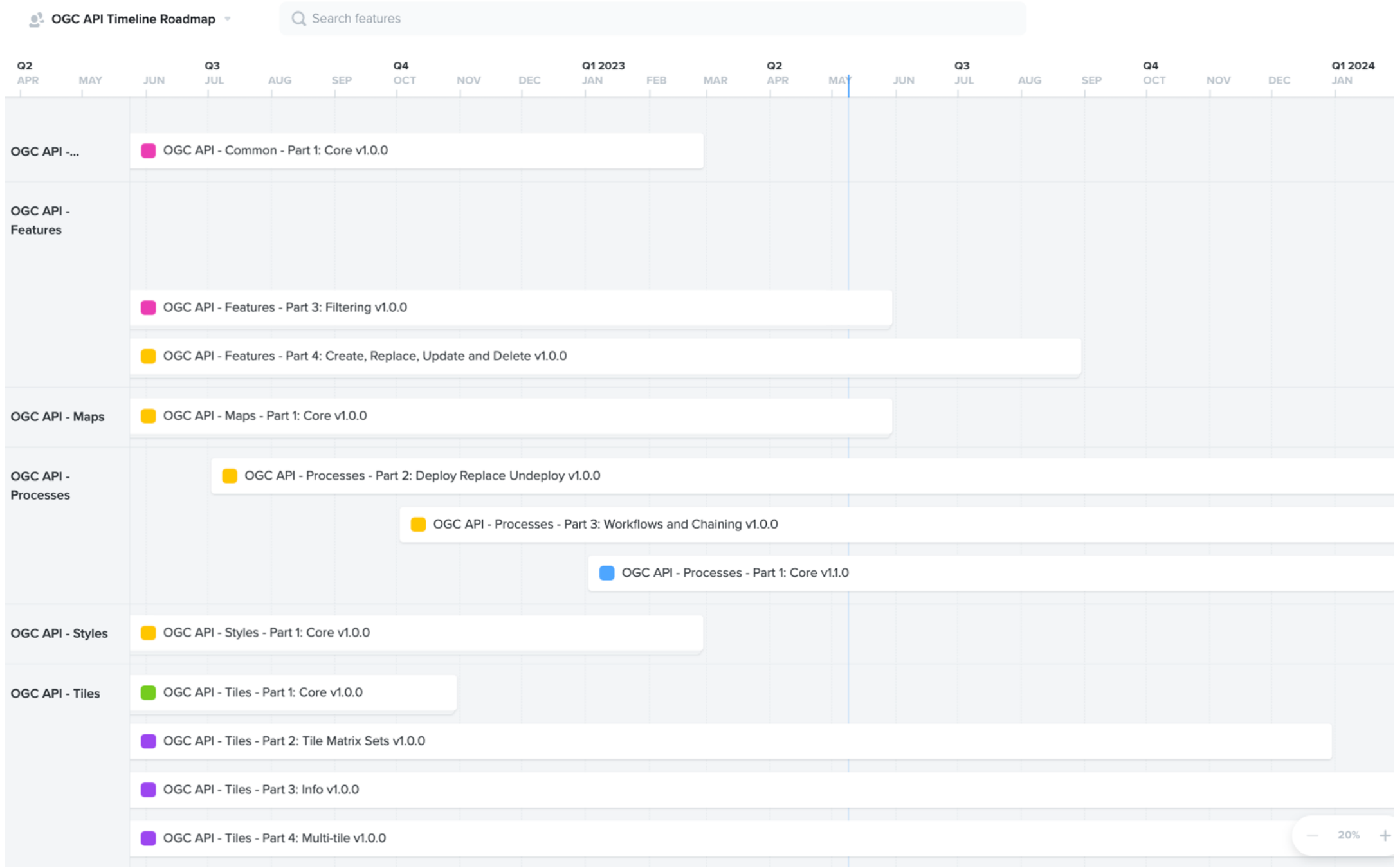
Proposed Standards

	SWG Work / Work Item	OAB Review	OGC-NA Review	Public Review	Prepare for Approval	TC Approval to Vote	TC Vote	PC Vote	Public Release		
Community 3D Tiles 1.1	✔		✔28d	?118d	✔59d	✔13d	✔	?46d			
OGC Abstract Spec Topic 20 - Observations, Measurements and Samples 20-082	✔48d	✔49d	✔7d	✔32d	✔326d	✔	✔71d	✔16d	?259d		
OGC Abstract Spec Topic 6 - Schema for coverage geometry and functions	?878d										
OGC CDB 2.0	?1502d										
OGC CityGML 3.0 GML Encoding	✔91d	✔	?90d	✔66d	?24d						
OGC Cloud Optimized GeoTIFF 21-026	✔	✔42d	?132d	✔67d	?65d						
OGC Common Object Model Container SWG	?1498d										
OGC Coverage Implementation Schema - ReferenceableGridCoverage Extension 1.1 16-083r6	✔94d	✔39d	✔63d	✔155d	✔58d	✔14d	✔135d	✔15d	?436d		
Community CoverageJSON	✔71d	✔29d	?132d	✔60d	✔26d	✔	?46d				
OGC Encoding Linked Data Graphs in NetCDF Files 19-002	✔10d	✔14d	✔24d	✔66d	?150d						
OGC GeoAPI 09-083r4	?1098d										
OGC GeoPackage Conceptual and Logical Model 21-05	✔252d	✔27d	✔225d	✔335d	✔66d	✔	?46d				
OGC GeoPackage WKT for Coordinate Reference Sys[illegible] Extension 1.1 21-057	✔219d	✔35d	✔	✔234d	✔13d	✔	✔50d	✔15d	✔55d		
OGC GeoPose	✔251d	✔33d	✔13d	✔46d	✔76d	✔14d	✔58d	✔68d	?157d		
OGC GeoSPARQL 1.1	✔	✔14d	?76d	?76d							
Community Indexed 3D Scen[illegible] Layers (I3S) 1.3	✔	✔14d	?104d	✔40d	✔18d	✔	?46d				
OGC OGC API - [illegible] Part 1: Core 19-072	✔3d	✔32d	✔112d	✔74d	✔541d	✔	✔49d	✔86d	?292d		
OGC OGC API - Common - Part 2: Geospatial Data 20-024	✔191d	✔20d	✔182d	✔71d	?320d						
OGC OGC API - Coverages	?928d										
OGC OGC API - Features - Part 3: Filtering and the Common Query Language (CQL) 19-079	✔167d	✔20d	?678d	✔97d	?581d						

OUT OF DATE – see next slides

Now managing roadmap in Productboard

https://ogcapi.ogc.org/ - request access


OGC API Timeline Roadmap
Search features
Q2 APR MAY JUN
Q3 JUL AUG SEP
Q4 OCT NOV DEC
Q1 2023 JAN FEB MAR
Q2 APR MAY JUN
Q3 JUL AUG SEP
Q4 OCT NOV DEC
Q1 2024 JAN
OGC API -...
OGC API - Common - Part 1: Core v1.0.0
OGC API - Features
OGC API - Features - Part 3: Filtering v1.0.0
OGC API - Features - Part 4: Create, Replace, Update and Delete v1.0.0
OGC API - Maps
OGC API - Maps - Part 1: Core v1.0.0
OGC API - Processes
OGC API - Processes - Part 2: Deploy Replace Undeploy v1.0.0
OGC API - Processes - Part 3: Workflows and Chaining v1.0.0
OGC API - Processes - Part 1: Core v1.1.0
OGC API - Styles
OGC API - Styles - Part 1: Core v1.0.0
OGC API - Tiles
OGC API - Tiles - Part 1: Core v1.0.0
OGC API - Tiles - Part 2: Tile Matrix Sets v1.0.0
OGC API - Tiles - Part 3: Info v1.0.0
OGC API - Tiles - Part 4: Multi-tile v1.0.0
20%

New developer website

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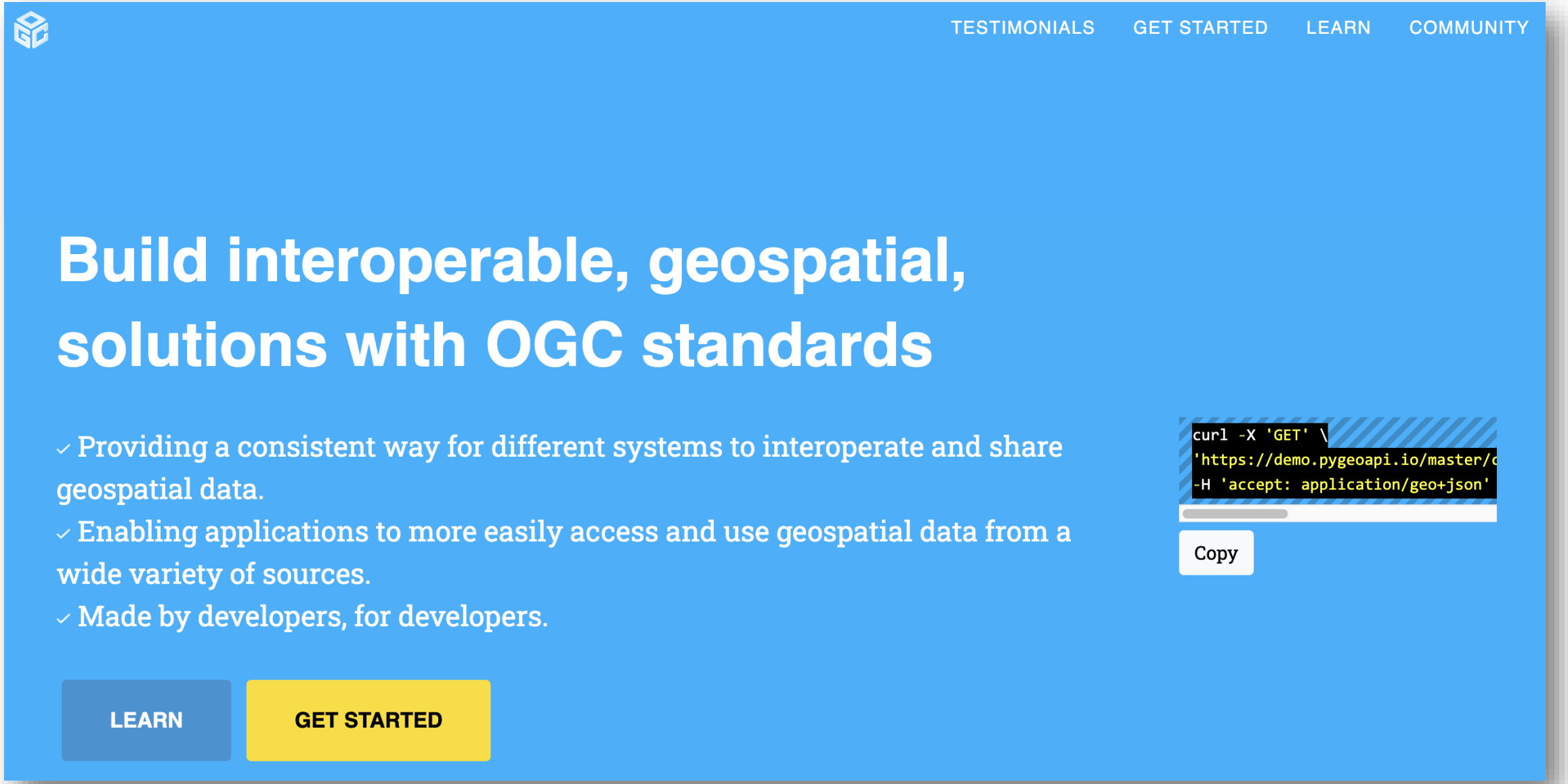
https://developer.ogc.org/



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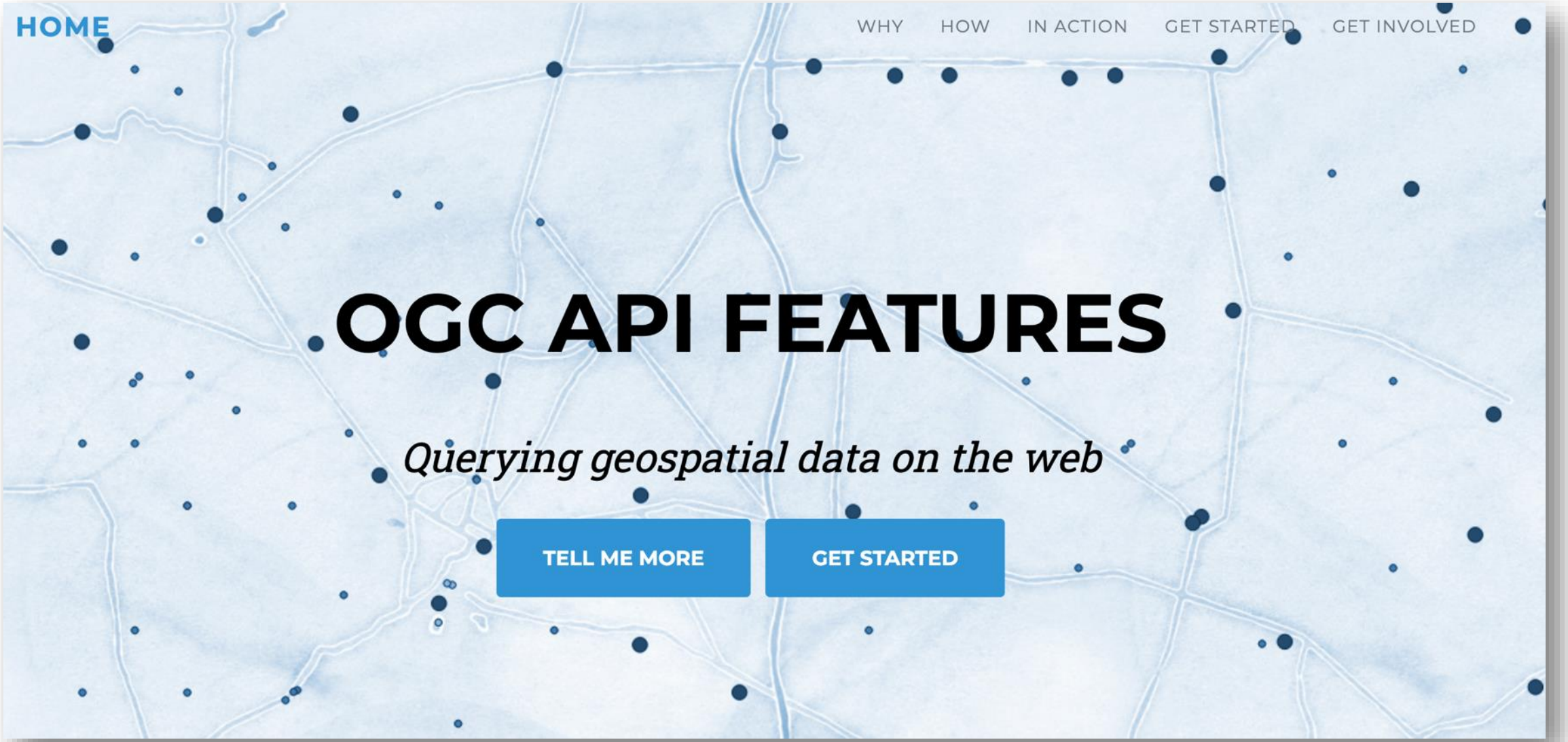

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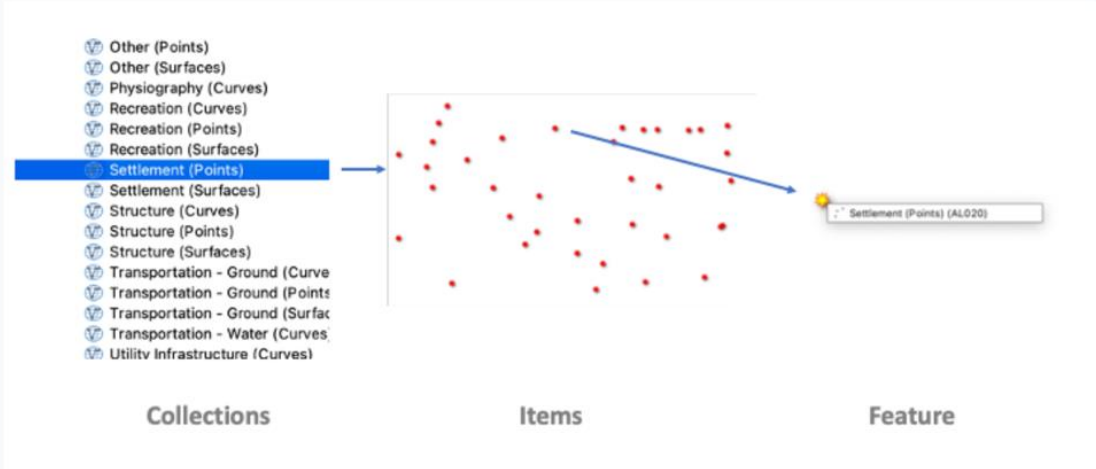
OVERVIEW

OGC API Features provides access to collections of geospatial data.



- **Get collections**

  Lists the collections of data on the server that can be queried, and each describes basic information about the geospatial data collection, like its id and description, as well as the spatial and temporal extents of all the data contained.

- **Get items**

  Requests all the data in a given collection. The response format (typically HTML or a GeoJSON feature collection, but GML is supported, too, and extensions can easily supply others) is determined using HTTP content negotiation.

- **Get feature**

  Returns a single 'feature' - something in the real-world (a building, a stream, a county, etc.) that typically is described by a geometry plus other properties. This provides a stable, canonical URL to link to the 'thing'.

SEE IT IN ACTION

This is a list of demo server implementations, that provide sample data. Please get in touch , if you would like to add your server to the list.

Vineyards in Rhineland-Palatinate, Germany

Powered by Ldproxy

Have you ever wondered where the wine that you are drinking comes from? If the wine comes from the wine-growing regions Mosel, Nahe, Rheinhessen, Pfalz, Ahr, or Mittelrhein you can find this information in this API.

Portuguese Points of Interest

Powered by Pygeoapi

Portuguese Points of Interest obtained from OpenStreetMap. Dataset includes Madeira and Azores islands. Uses GeoPackage backend via OGR provider.

Zaatari Refugee Camp مخيم الزعتري

Powered by CubeWerx

Zaatari is a refugee camp in Jordan, located 10 kilometres east of Mafraq, which has gradually evolved into a permanent settlement; it is the world's largest camp for Syrian refugees.

Connecting Land and Sea for Global Awareness
Federated Marine Spatial Data Infrastructure Pilot 2023
Singapore - Arctic - Caribbean
Open Geospatial Consortium

Open Geospatial Consortium

Collaborative Solution & Innovation Program

https://www.ogc.org/ogc/innovation

Marine Spatial Data Infrastructure (MSDI) – CDS

For more information please contact innovation@ogc.org

Maritime Limits and Boundaries (MLB) Pilot

For more information please contact innovation@ogc.org

Arctic Spatial Data Pilot

For more information please contact innovation@ogc.org

FMSDI Initiative

Phase 1 (Sep-Dec 2021)	Phase 2 (Jan-Jun 2022)	Phase 3 (Jun 2022-Feb 2023)	FMSDI 2023 Feb 2023-Oct 2023)
Understand status quo Running an RFI on resource collection focus on MPA Availability of S-122 (Marine Protected Areas) data, who produces it, where is it held	**Demonstrate marine protected areas at OGC API endpoints** Demonstrating S-122 Standard for MPA in Baltic and North Demonstrate S-1XX and other marine standards and data **UNGGIM-IGIF derived maturity model for Marine SDIs**	**Extend to new location: Arctic** **Add more data, more services to address more complex scenarios**	**Extend to new locations: Singapore Arctic Canada Caribbean** **Demonstrating interoperability between land and marine data, general sensitivity to climate change, and storm surge, and different use-cases**

Project Overview: Sponsors

5 Sponsors

Maritime & Port Authority of Singapore (MPA)

Singapore Land Authority (SLA)

Natural Resources Canada (NRCan)

UK Hydrographic Office (UKHO)

National Oceanic and Atmospheric Administration (NOAA)

Project Overview: Participants

10 Participants

Compusult Limited

Ecere Corporation

ESRI Canada

Geomatys

Global Geo-Intelligence Solutions Ltd. (GGIS)

Health Solutions Research, Inc.

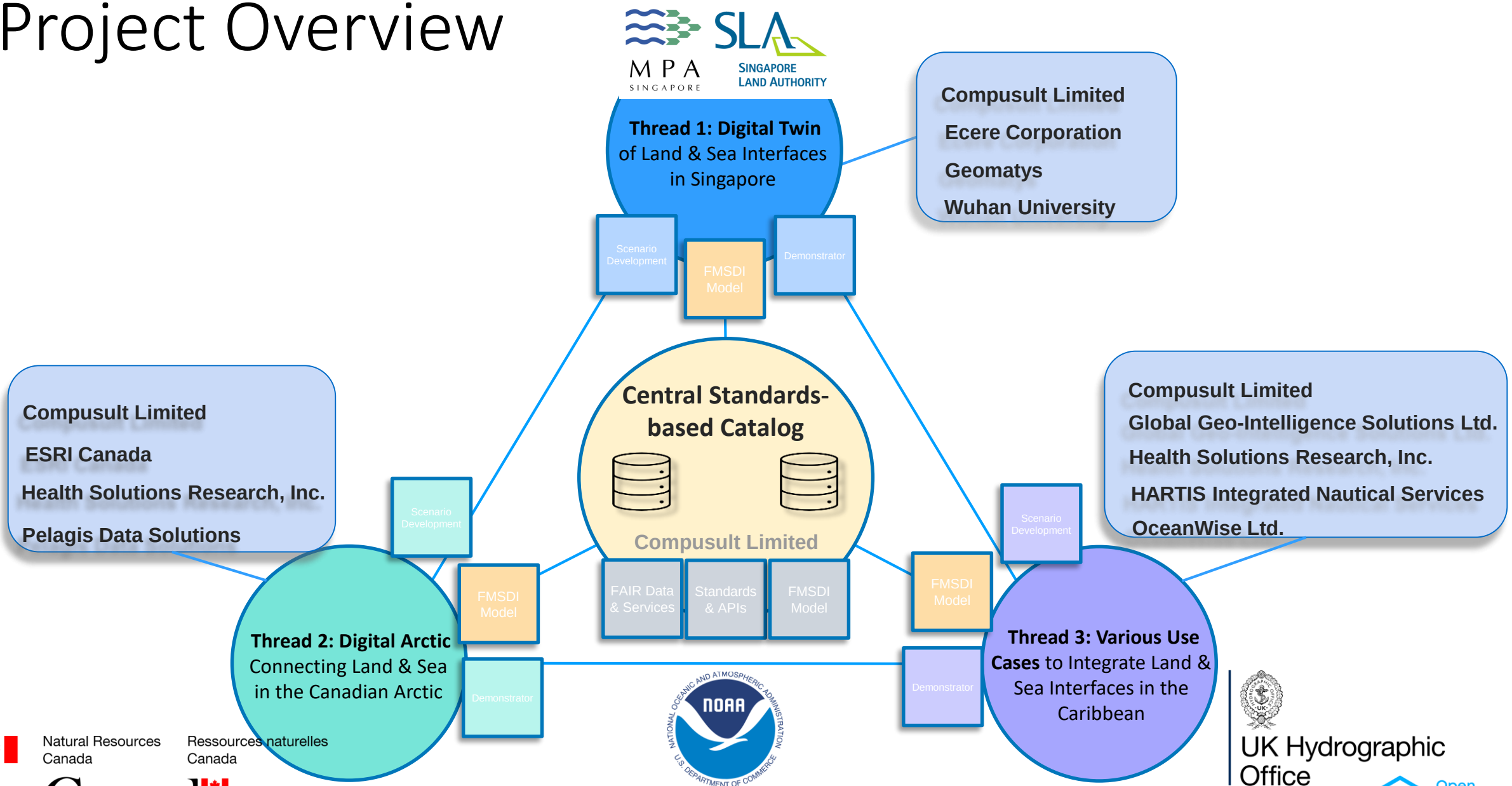
HARTIS Integrated Nautical Services Ltd

OceanWise Ltd.

Pelagis Data Solutions

Wuhan University

Project Overview



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ACTIONS REQUESTED FROM HSSC

1. Take note of the report.
2. Contact OGC with any questions or comments:

   Scott Simmons – ssimmons@ogc.org

   Trevor Taylor – ttaylor@ogc.org