Open Data Access Bedrock of Sustainability

"A lot of organizations pushing for sustainable solutions can't afford access to proprietary map solutions or those available under restrictive licensing terms. Open map data changes this equation completely, enabling a level playing field that makes mapping accessible for everyone", says ***Marc Prioleau, Meta – Head of Business Development, Mapping, and Location, in an exclusive interview with Geospatial World.***

The foundation is a collaborative stride towards data interoperability and standardization, much needed at a time when spatial data is truly ubiquitous. What is your vision to promote open-data usage and incubate mapping innovations?

Overture is based on the premise that map data needs to be a shared asset to support future applications. As the requirements for accuracy, timeliness, and advanced features in maps have grown to meet user needs, the costs of collecting and maintaining that data have grown beyond the capability of any single entity.

Beyond the cost of building map data, future applications will increasingly rely on shared spatial data. Whether intended for self-driving cars or climate change mitigation or augmented reality applications, users need a common digital representation of the physical world. That requires open map data that meets the needs of those applications.

The focus begins with collecting the best data from all available signals, including open government data, crowdsourced local mapping data, AI/ML techniques, and more. As AI evolves, we are quickly going to see new ways to generate data from a wide range of sensors and be able to process that data into geospatial data in near real-time.

Overture is based on the proposition that that map of the future can be best built through a collaborative process resulting in an open, shared asset.

Tell us about the philosophy of Overture Map Foundation, and how is the spirit of collaboration fostered among key steering members and stakeholders.

We assume that no single entity has access to all the signals that can tell us how the world is changing. However, if we can combine forces, we can merge the assets from many entities to build a robust ecosystem that can build that fast-changing map.

As an example, in our April demonstration release, we showcased an example of this. Engineers took aerial Lidar data that the US Geological Survey had captured as part of the 3D Elevation program (3DEP) and overlaid it with open datasets of building footprints from Microsoft and OpenStreetMap. Once we developed the process, we were able to build 3D data for over six million buildings in weeks. We hope to complete it for most of the 100 million buildings in the US.

No one organization had all the assets necessary, but through collaboration, we created some new user data. That model can be replicated with different inputs and technologies to build road networks, places, 3D buildings, and a huge variety of other map data.



Where do you think the future of next-gen mapping is headed, and how do you envision the foundation five years down the line?
You can look at the future of mapping by breaking it down into three components: the inputs, the processes, and the outputs.

The outputs are the map data itself. In the last ten years, we have seen amazing advances in the accuracy of data, the requirement that it is constantly updated, and the richer features that users expect. Looking ahead, those requirements will only increase. Applications like autonomous driving, mobility, and the metaverse will drive the need for better and more accurate map data.

We are also seeing an explosion in the inputs that are needed to build the map. Consider the growth of earth observation systems that provide near real-time updates on the state of the world, mobility data derived from aggregated movement data that can determine traffic patterns or road closures, or accelerate the availability of highly valuable map data that governments produce.

These are increasingly made available under open-source licenses to drive higher impact for a wide variety of commercial, environmental, and social use cases.

The processes that take those inputs and convert them into usable map services are perhaps the most dynamic area of all. It is stunning to see how fast computer vision and AI technologies are moving, giving us the ability to process inputs into map data, detect changes and output valuable map services in near-real time.

The combination of expanding map data building inputs and accelerated processes for building that data gives us confidence that we can meet the higher expectations for map data in the future.

What role can the Foundation play in making the world more resilient and sustainable?
Building a map is only the start. Maintaining it as the world changes are the bigger part of the job. The first step towards climate change mitigation is building a historical record of that change, which allows us to understand what is happening, where, the underlying causes, and what can be done.

Sustainability is also about data access. Organizations working for sustainable solutions must have access to the map solutions they need without excessive costs or restrictive licensing terms. Open map data changes the equation and provides a level playing field that democratizes mapping.

Would you be inducting new members anytime soon, and what are the criteria to join? What types of organizations are joining Overture?
Since we launched, we have continually been adding new members. Overture is an open collaboration. The main criteria to join are a strong interest in working towards the goal of building next-generation open map data and a willingness to make some contribution to that effort. There are various levels of participation to accommodate any organization.

The contributions of members are core to the success of Overture. Those contributions can be broadly categorized into four groups.

Data Contributions: This is at the heart of our mission. We welcome contributions of data that can help build the map. That can be primary map data that directly goes into the map or it can be secondary data that can be used in combination with other data or technology to build new map data.

Technology Contributions: Map data building will be heavily dependent on processing pipelines. We welcome technology from advanced AI and CV technologies, map data building, and quality checks.

Engineering: Binding data and technology is engineering. We are building a growing community of engineers working to move open map data forward. That is an area where contribution determines impact; the best ideas driven by the most energy will have the biggest impact.

Financial Support: Membership also has a crucial financial component that varies depending on the level of membership. Map data building is not easy and it is not free. It requires resources to make it happen and we ask the community to fund those efforts. We promise that this model will give the best results with the lowest cost of ownership.

Interviewed by: Aditya Chaturvedi