



Enabling and Transforming Remote Connectivity with Innominds and Bullitt



Success Highlights



Initiated a project to change communication in rural areas.



Leveraged expertise from Skylo and Viasat.



Bullitt enables interaction beyond the Earth's digital networks



Problem

One of Bullitt's main goals is to communicate with people in remote areas where cellular network signals are not available. Cellular towers and existing terrestrial networks have limited coverage, with millions of square miles of poorly served and sometimes unserved areas throughout the world. This lack of connectivity can be very risky for industries, people operating in such extreme situations, and those living in far-flung areas.

In this regard, Bullitt needed to begin transitioning towards non-terrestrial networks, focusing on satellites and other advanced communication methods that bypass the ground infrastructure. This transition called for not only radical new ideas but also technological skills to design and deploy solutions. The challenge was to provide users with connectivity, critical services, and communication, no matter where they were located.



Challenge

This became a challenge for Bullitt, as the company had to come up with a solution that would meet the communication needs of users in remote and off-grid locations. There was also a need to offer the basics of messaging and emojis, along with heavy investments for users to survive the lack of internet and conventional communications.

However, it was still necessary to incorporate critical features to ensure safety and meet emergency requirements. In the event of an emergency, users could quickly request help using SOS buttons, and location-based access would allow them to share their location and request assistance if they were in a remote or unsafe location.

Meeting these requirements necessitated a broad focus on the product's design, from the user interface to the backend structure and underlying data management systems. We had to achieve both without limiting the technical capabilities to offer these functions and without drastically changing the user experience. In addition, a solution had to be sustainable and operational in remote or rural areas where network connectivity cannot facilitate communication.

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Bullitt exemplifies our "**One Innominds**" story and demonstrates our ability to provide services across various domains.



Application Development

Our team created an easy-to-use application for Android and iOS systems to provide convenience on Bullitt's phones and other unique gadgets. This application is a lifesaver for people who live in rural areas, as they would be able to communicate as required.



Middleware and Cloud Solutions

The app's creation alone was not enough to solve the problem. The development of middleware that would help link the app, modem, and satellites was essential. Additionally, the organizers created the OTT Cloud, through which two-way communication is possible—another technical innovation that serves as the foundation of this project.



Engineering and Quality Assurance

A team of 45 employees—developers, QA and automation engineers, and backend engineers with Node.js experience—applied their skills in the process. We used key tools such as JMeter for performance testing and Appium for mobile automation to achieve the reliability and scalability of the solution.



Observability and Reliability

The adoption of observability in an OTT cloud was critical to ensuring the IT infrastructure's stability and reliability. This is an indication of our desire to give users high-quality, reliable interfaces in an emergency.

Innominds Mosaic: Diverse Teams, Unified Solutions



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We successfully implemented the project to overcome communication accessibility issues in remote areas and advance in the field of enterprise solutions. By documenting the successful implementation of non-terrestrial solutions and their impact on network performance, the project has set the stage for future innovations.

In the coming years, there are plans to build upon the solution with functions such as multi-tenancy. This means that the communication platform will have many users who can share and use it simultaneously, making it widely applicable across different fields and sectors.

The collaboration between Innominds and Bullitt has significantly bolstered their market standing. This partnership merges Innominds' technological expertise with Bullitt's industry insights, enabling the joint development of innovative connectivity solutions. Together, they are poised to address specialized challenges across different fields, including adventure tourism and rescue operations.

**Conclusion**

Through its transformative partnership with Bullitt, Innominds has demonstrated its ability to deliver comprehensive, end-to-end solutions. The project not only addresses the challenge of communication in remote areas but also highlights the power of collaboration and innovation in driving digital transformation. Innominds remains committed to pushing the boundaries of technology to empower connectivity in even the most challenging environments.

About Innominds

Innominds is a Silicon Valley-based company that provides product engineering services and solutions. The company, headquartered in San Jose, CA, provides co-creation services to businesses that are building solutions using digital technologies focused on devices, apps, and analytics. Innominds provides expertise in cognitive analytics, connected devices, and cloud apps, as well as assisting enterprises in their digital transformation initiatives.



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