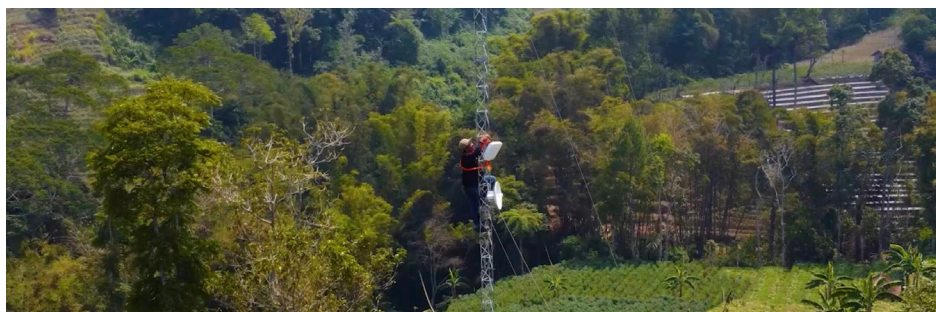


PT Bum  
Desa

## Empowering Education, Health, and Agriculture in a Remote Indonesian Village

The Internet today is no longer a luxury; it's a fundamental tool for education, communication, and economic participation. Yet today, one-third of the world's population lacks affordable internet access. Without broadband access, rural populations miss out on significant opportunities to advance education, healthcare, and agriculture services for their respective communities. Remaining disconnected hinders students and teachers from engaging in online learning. The absence of telehealth services can mean greater challenges in accessing quality healthcare, often having to travel long distances. Without access to precision agriculture tools, farmers are prevented from increasing crop yields and, ultimately, improving food security.

With this in mind, Veeva built a powerful platform that uniquely addresses the digital divide from Latin America to remote locations across Southeast Asia. In Indonesia, the world's fourth most-populous country, Veeva has joined forces with local service provider **PT Bum Desa** to overcome the barriers to affordable service for underserved communities. In Argamukti, a mountainside village at the foot of the extinct Ciremai Volcano in the Majalengka District of West Java, communication services offered by the local service providers (Internet and cellular) are almost non-existent due to its remote location.



### Argamukti Connected: Veeva's Advanced Network Deployment

The initial deployment began in Argamukti in November 2023 as Veeva launched a mesh network consisting of 32 Veeahubs in the central village, a radio Point-to-Multipoint (PtMP) link for mid-range distances to expand to further remote areas. The mesh network is connected to the outside world over redundant broadband-capable satellite links.



#### Partners

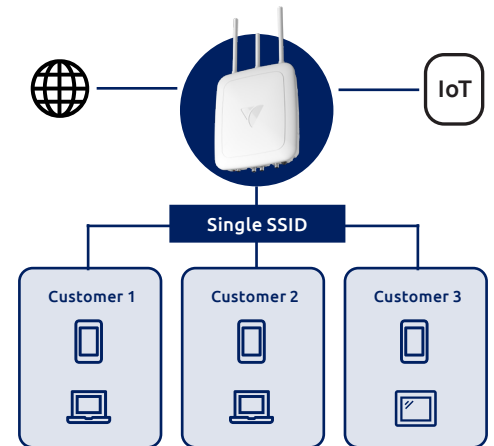
- Veeva Inc.
- PT Bum Desa

#### Outcomes

- Educational content for both primary and secondary school students delivered to multiple large-format devices
- Streaming entertainment content (news, sports, cinema) in full HD
- Telehealth and remote medical services eliminate villagers' need to relocate to other communities for basic care
- Agriculture information on local conditions and market pricing easily available to enable intra-village trade

Of the 32 Veea Hubs, 29 are mounted on outdoor 4m utility poles and used to provide a paid, yet affordable vTBA service to two residential areas with approximately 250 properties and then a part of the Tourist Trail, the popular route that tourists take when visiting. Access to the service is approved via an online portal administered by PT BumDesa. Additional VeeaHubs are used as local hotspots in the PT BumDesa office for the administration town staff, while another is placed in the school to support students and teaching staff. Future plans will add an additional VeeaHub within the local medical center.

There is also a VeeaHub mounted on a small 30m mast that provides Wide Area LoRa Coverage for a Private Low Power Wide Area Network (LoRaWAN) for the Village and the surrounding fields. The BumDesa Organization and farmers are trialing several IOT sensors that measure metrics such as soil temperature, PH, nitrogen, and phosphate levels with the data being forwarded to the farmers for analytics and insights. Future plans for phases of the LoRAWAN Pilot will include additional climate-smart agriculture use cases including greenhouse management, improved forest management, fire detection, animal security, and sustainability initiatives. The deployment plans with PT BumDesa will eventually cover the entire 30,000 PT BumDesa administered villages.



## Enabling Millions: A New Era of Connectivity

Upon inception, the network has averaged 282 registered devices accessing the network and 50 concurrent active sessions per day.

Village life in Argamukti has been transformed since the debut of the new system. By extending the benefits of the Internet to the edge where connectivity occurs, Veea has enabled the villagers of Argamukti to experience a “community cloud” allowing content to be stored locally. With flexible per-device bill capabilities, the product offering meets customers specific needs, as opposed to the traditional ‘one size fits all’ household approach. Veea’s network will eventually provide Internet connectivity and value-added services to a population of over 30 million people across 30,000 towns and villages and 12 million surrounding farms, on the 16,772 islands in Indonesia.

By rethinking the means to deliver broadband access through wireless networking infrastructure, software, and computational tactics, Veea is solving the challenges of affordability, accessibility, and adoption for connecting citizens and machines to the internet. Veea is empowering the people of Indonesia to participate fully in the digital age, fostering a productive and informed global community.



### Learn More About vTBA and Digital Inclusion Solutions from Veea

Find out how your organization can benefit by contacting us at [sales@veea.com](mailto:sales@veea.com) or by visiting [veea.com/resources](https://veea.com/resources)