

## Company Case Study: High-tech



### About Lumotive

Lumotive, a deep-tech semiconductor company, is revolutionizing optical technologies with its groundbreaking innovations in active optical metasurfaces with applications in 3D sensing and optical circuit switching for AI data centers. Founded in Redmond, Washington, with seed funding from the Gates Foundation, Lumotive has expanded its footprint across North America, including its fastest-growing site in the Metro Vancouver region. Since opening its office in Burnaby in 2023, Lumotive has rapidly scaled operations, growing to 25 team members with plans to expand further. The company's Canadian subsidiary focuses on leveraging local talent to drive semiconductor product design and application development.

**“The Metro Vancouver region offers a startup-friendly environment where entrepreneurs feel supported and encouraged to take risks.”**

**– Apurva Jain, General Manager of Lumotive's Canadian corporation**

### Why the Metro Vancouver Region?

The Metro Vancouver region emerged as the ideal expansion location for Lumotive, addressing the critical challenges faced by the company: accessing specialized engineering talent, proximity to its existing locations on the pacific coast, and managing costs effectively. The costs of setting up operations in the Bay Area were prohibitive, and the Seattle ecosystem is crowded with several global head offices of tech giants, making it difficult for startups to compete for top talent. In contrast, the Metro Vancouver region offered a robust and growing pool of engineers with semiconductor and hardware design skills, complemented by affordable operational costs and a welcoming start-up environment.

“Vancouver not only solved our talent challenge but also provided an active and collaborative ecosystem. It's at a stage of growth where companies can interact meaningfully, much like the Bay Area in its earlier days,” said Apurva Jain, General Manager of Lumotive's Canadian corporation. The region also attracted returning Canadian talent – about one-third of Lumotive's Burnaby team are local professionals who moved back from the Bay Area to join the company.



## Leveraging Local Talent and Research

Lumotive has actively engaged with the region's academic institutions like Simon Fraser University (SFU) to collaborate on R&D projects. The company utilizes co-op programs to bring in engineering students, providing real-world experience and grooming future team members.

"We've had great success in collaborating with Dr. Xing-Dong Yang's XDiscovery Lab at SFU to advance the field of human-computer interactions using our LCM technology. We are also actively exploring collaborations with UBC and Northeastern to expand our research capabilities," Jain added. These initiatives ensure a steady pipeline of talent and innovation, enabling Lumotive to accelerate its mission of advancing optical semiconductor technologies.



## A Thriving Ecosystem for Growth

The Metro Vancouver region's burgeoning tech ecosystem has played a pivotal role in Lumotive's success. The region's emphasis on AI, robotics, and computer vision aligns well with Lumotive's core technologies. Local events, meetups, and collaborative forums provide opportunities for interaction and partnership. "This ecosystem fosters collaboration in a way that's rare in larger, more established tech hubs," Jain remarked.

Lumotive has also benefited from local customers in the nearby city of Richmond and a supportive network

of companies specializing in AI and computer vision. These connections further integrate Lumotive into the regional tech landscape, enhancing its product development and market outreach.

Continuing to build its regional presence, the company hosted an open house event that attracted over 35 relevant attendees, demonstrating a strong interest in its technology. Looking ahead, Lumotive sees potential in engaging with larger regional events, such as Web Summit Vancouver, which showcases Vancouver's growing technology ecosystem.

Metro Vancouver's culture of innovation and sustainability has also inspired entrepreneurial passion beyond deep-tech. Jain was inspired by the region's vibrant energy to start a social impact venture called CCoffee ([www.ccoffee.ca](http://www.ccoffee.ca)). The company roasts artisan specialty coffee in Vancouver for offices across North America – including Lumotive – and donates 100% of profits toward children's education. "This would not have happened if I were not in Vancouver," says Jain. "This city is the perfect combination of entrepreneurial spirit, culture, and sustainability – it made me ask how I can give back." CCoffee currently employs one full-time staff member and two interns, with growth plans to support its vision of educating 10,000 children.

The support from Invest Vancouver has been instrumental in helping both Lumotive & CCoffee navigate the local business landscape, providing connections to local partners and provincial funding opportunities such as BDC, PacificCan, and IRAP. These resources have been critical in scaling Lumotive's Canadian operations.

## Looking Ahead

With its Burnaby office providing a cornerstone of growth, Lumotive is poised to expand its semiconductor design team and deepen its engagement within the broader Canadian tech ecosystem. The company plans to develop reference designs and offer hardware and software application support from its Canadian base, solidifying its role in the global semiconductor industry.

Over the next few years, Lumotive aims to bridge talent and innovation between Canada's east and west coasts, leveraging partnerships with other established semiconductor hubs while continuing to scale operations in the Metro Vancouver region. "Our vision is to create a robust ecosystem that enables talent development and innovation across Canada," Jain concluded.



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