innovate **BC**

The Rise of Tech in B.C.

Raghwa Gopal, President + CEO, Innovate BC

Hi, I'm Raghwa Gopal President + CEO, Innovate BC

A serial entrepreneur with extensive experience starting, growing + selling numerous businesses.





innovate **BC**

- Represents the Government of BC + B.C.'s innovation ecosystem
- Makes accessing government programs + support simple









Life Sciences

- Life-prolonging HIV/AIDS triple-drug therapy developed to control a patient's viral load
- Amgen received FDA approval for medication to treat low white blood cell count
- **QLT granted market approval** for photosensitive cancer therapy drug



STEMCELL Technologies

- Founded in 1993 by Allen Eaves
- Develop specialty cell culture media, cell isolation systems + accessory products for life science research
- Now the largest biotech company in Canada with more than 1,000 global employees



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Cleantech

- Pacific BioEnergy reduced greenhouse gases emissions by turning residual pulp + paper fibre into carbon neutral renewable fuel
- Moli Energy developed lithium ion battery technology + high capacity energy cells for electronics + communication devices
- Westport replaced diesel with natural gas in heavy-duty trucks without sacrificing performance



Ballard Power Systems

- Developed the 90kW fuel cell engine for transit buses in 1992
- The first fuel cell bus debuted in Vancouver used Ballard technology
- Their fuel cells have since powered buses for 10 million cumulative KMs



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Information + Communication

- Global Relay developed the first cloud email archiving services
- BuildDirect launched the largest online marketplace for home improvement products
- Crystal Decisions' released their **business** intelligence application



Sierra Wireless

- First cellular embedded module launched in 1997
- Provided connected products + technologies globally across industries
- Has since shipped over 130 million devices connecting Internet of Things









Life Sciences

- Pyng Medical developed MAT Tourniquet to stop blood loss in record time + increase survival rates
- Bionic Power created a knee-brace with a revolutionary 12 watts of walking power
- TELUS Health launched their platform to improve healthcare systems



Zymeworks

- Founded in 2003 to address shortcomings in pharmaceutical + chemical markets
- Created the ZymeCAD[™] engine, the most comprehensive platform in silico protein modeling + engineering
- Now the leading biologics platform





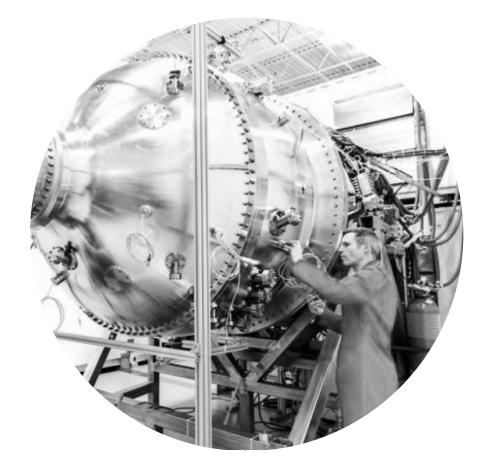
Cleantech

- MDA's Canadarm2 installed on the International Space Station
- Carmanah Technologies brought solar LED lighting to places without reliable power
- Ostara Nutrient Recovery Technologies discovered a process to recover nutrients from waste water + repurpose it for fertilizer



General Fusion

- Founded in 2002 to transform energy supply
- Began proof-of-concept experiments based on a hybrid magneto-inertial approach called Magnetized Target Fusion
- Developed fusion energy technology to create a cleaner, safer form of energy





Information + Communication

- Avigilon founded a partnership of high-def surveillance system with software solutions
- Flickr launched their photo sharing + archiving platform
- Hootsuite developed their Integrated social media management tool to coordinate content across platforms



Slack

- Founded in 2009 in Vancouver
- Communication platform that combines bot technology with an appealing user interface to increase workplace productivity
- Now has 10 million daily active users









Life Sciences

- Arbutus Medical's Reusable medical drill covers allows more patients to undergo surgeries at a lower cost
- Molsescope's mini-microscope + smartphone app allows patients to send high-res photos of suspicious moles to healthcare professionals
- Integrated Nanotherapeutics develops nanoparticles to increase X-ray effectiveness for cancer treatments



Aspect Biosystems

- Able to 3D bio-printed human nerve tissue
- Re-creates pathology of disorders like Parkinson's disease to accelerate drug development + treatment
- Co-developed with researchers at UVic





Cleantech

- Awesense combines software + IoT to reduce electricity loss
- Structurlam develops cross-laminated timber panels 5x lighter than concrete
- Enterra creates a new process that turns food waste into farmed-animal feed



Hydra Energy

- Developed a duel-fuel hydrogen-powered combustion engine in partnership with UBC in 2012
- Retrofits any conventional diesel engine without modifying the engine block
- Increases fuel efficiency + reduces
 CO2 emissions





Information + Communication

- OneFeather's Web-based secret-ballot voting system is introduced to Indigenous communities
- Nanotech Security Corp launches nanotechnology for authentication
 + anti-counterfeiting holograms
- Optigo Networks builds IoT for large building infrastructure to reduce traditional hardware needs



Broadband TV

- Announced web-based digital video network with NBA in 2018
- Original content combines NBA teams
 + players with celebrities + real fans
- NBA Playmakers has an online community of 1.5 billion followers







Life Sciences

- eTreat Medical's smartphone app uses
 Al-algorithms to measure anatomy + skin
- Orbityl's in-ear sensors integrates with earbud headphones to monitor brain activity
- Zennea Technologies creates the first clinically-proven medical device to combat chronic sleep deprivation



Terramera

- Developed a safer generation of plant-based pesticides
- Breakthrough 'Molecular Delivery System' technology amplifies their effectiveness
- Their environmentally-friendly pesticides now outperform the synthetic counterparts





Cleantech

- Acuva's ultra-low maintenance UV-LED water disinfection systems make clean drinking water accessible anywhere
- Anvy Technologies' smart device installed below kitchen sink sorts food waste into compost-ready bins
- Point Three Biotech's closed system converts greenhouse gases into minimal impact proteins



Saltworks

- Developed battery-grade lithium that produces 99.56% pure lithium carbonate
- Key to powering battery-electric + hybridelectric vehicles to reduce global emissions
- Currently designing a larger mobile pilot plant for Standard Lithium in Richmond



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Information + Communication

- VoltSafe's magnetic electric plug senses + controls what it's connected to
- ThisFish's seafood traceability software increases transparency + trust in seafood supply chains
- Norvarc Technologies creates the world's first Spool Welding Robot used for pipe welding around the world



Canada's Digital Technology Supercluster

- Focus areas: precision health, digital twins,
 + data commons
- 7 projects already underway
- Large industry participants: TELUS, Boeing, Microsoft, + Deloitte
- Local B.C. participants: MetaOptima, LlamaZoo,
 D-Wave, + UBC









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