

The Rise of Tech in B.C.

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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



The background features a vibrant, multi-colored starry sky. On the left side, a large, bright spiral galaxy is visible, with its core glowing in shades of purple and blue, and its arms extending outwards in various colors including green, yellow, and orange. The rest of the background is filled with numerous individual stars of varying colors, including blue, white, and yellow, scattered across a dark, deep blue space.

'90s



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



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



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





'000's



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





'10s



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 dual-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



The background features a vibrant, swirling galaxy on the left, transitioning from a bright green center to a deep blue outer edge. The rest of the image is filled with a dense field of stars, appearing as thin, elongated streaks of light in various colors, including white, yellow, and blue, set against a dark, deep blue night sky.

future

Life Sciences

- eTreat Medical's smartphone app uses **AI-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 + hybrid-electric vehicles to reduce global emissions
- Currently designing a larger mobile pilot plant for Standard Lithium in Richmond



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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