From: Chris Malmo-Laycock <cmalmo@wearebctech.com>
Sent: Friday, November 16, 2018 1:17 PM
To: Engages-Mobilisation (WD/DEO) <wd.engages-mobilisation.deo@canada.ca>
Subject: input for Western Growth Strategy - BC Tech

Thanks!

--

Chris Malmo-Laycock
Policy Manager
BC Tech Association | T: 778-874-1456
Blog | Events | LinkedIn | @wearebctech

WD Western Canada Growth Strategy Input

BC Tech Association

1. What does a stronger western Canadian economy look like 10 years from now?

A stronger western economy will be technology-centered: as technology adoption grows even further, it will appear as even less of a vertical sector and more of a horizontal enabler and amplifier. This stronger economy will encompass even more diverse economic activities, a higher proportion of value-added output in goods and services, continued resource royalties supporting social programs and emerging economies, and happier, healthier workers who are more productive thanks to technology. A stronger economy must also be greener in overall carbon emissions, carbon intensity, and emit less other pollutants that harm people and ecosystems.

Technology will help overcome demographic trends. Automation of repetitive, low-skill tasks will enable western economies to continue to grow despite a shortage of workers (the demographic change ahead in the coming 10-20 years will result in economic contraction unless we embrace technology and automation).

It is important to remember that automating *tasks* does not mean a reduction in the overall level of jobs or employment. Instead, it frees up human capital and human brains to focus on the roles and functions that human intelligence (cognitive, emotional and social) is optimized for while leveraging machines for those tasks where human error can result in risk, inefficiency, pollution, damage, injury or even death. This represents a tremendous opportunity for human beings and for our planet.

Some examples: In law, computers will scan large volumes of texts to find relevant facts, laws, and information. The lawyer's job will change to involve interpretation, creativity and design of new systems and legal mechanisms. In the resource sector, some jobs are already being automated. Trucks on mine sites can now be autonomous significantly reducing injury rates, and improving safety while extending the number of hours the capital asset can be efficiently operated.

Advances in machine learning and AI will further empower those who collect data to make more informed decisions, spot unseen patterns, and drive efficiencies. Data will unlock connections and patterns the human brain has not been able to detect – pinpointing key causal factors of major diseases and enabling faster, more effective medical research for treatment and perhaps even eradication of that disease.

This more sustainable, productive, networked, distributed, and connected future will not be without its challenges, but we are confident that social innovations to redefine work and value for everyone will help people adapt and thrive.

2. What are the best ways to spur new growth in western Canada?

With the technology sector seeing much faster growth than others, it will be important to continue supporting innovation by helping companies face scaling challenges and talent shortages in the short- to medium-term. The global race to develop, commercialize, and capture wealth from technologies of the future will not stop to wait for Canada.

Canada has excellent government programs to support research and development, but we have tremendous room for to improve support for turning those ideas back into wealth for our country. Creating this wealth means investing at the ecosystem level to support scaling small and medium-sized businesses into large ones with 100-300+ employees.

Agencies like western Economic Diversification can, and should, play a role in supporting high-growth companies to scale and become firms that anchor their ecosystems and local economies. WED can accomplish this by investing in programs in addition to current investments like subsidies.

Once established, these companies attract top talent, enrich regions, fund valuable social goods, and provide numerous other cluster and ecosystem benefits.

Education will continue to be a critical investment to ensure western Canada produces graduates with the skills and attributes it takes to continuously learn and adapt to changing conditions. This means that graduating more STEAM majors to catch up to our OECD and G20 rivals, but also ensuring that vital business roles like sales, product management, operations, marketing and communication are part of the picture, too.

K-12 education is another key piece to the puzzle. We must support children, and especially girls and other underrepresented groups, to be interested in STEAM and see no boundaries when it comes to careers in technology, science, business, and more.

3. What will help the Indigenous economy continue to grow?

Indigenous communities can benefit from the reduced barriers to entry provided by the internet, and take part in the emerging economy through continued investments in education and connectivity. For example, RightMesh, a BC company, just announced a significant Mitacs grant to improve connectivity in remote and indigenous communities using mesh networking technology.

Government infrastructure investments can counteract market gaps that have left remote indigenous communities disconnected from high-speed broadband service. As a society, we will need to consider if perhaps connectivity should be regarded as a human right – as critical to realizing human potential as water and clean air are to realizing good health.

Increasing connectivity and connection quality (25/5 Mbps broadband should be the *minimum* standard for taking part in the modern digital economy) would begin to fulfill this obligation. Online education and remote work opportunities provide students and job-seekers further options to learn and earn where they live, on their terms, and on their land.

4. How can we improve economic participation in the west of underrepresented groups, including women, youth and new immigrants?

Economic participation by underrepresented groups is vital to increasing the size and quality of western Canada's talent pool across all industries. Increasing diversity and inclusion is proven to drive significant, positive business outcomes. It is as simple as that – and well understood in the business community. By increasing diversity, products and services become more thoughtful, profitability increases, and workplaces are enriched through diverse perspectives and life experiences.

Representation of women and underrepresented groups in technology companies must increase at highly visible levels, such as on Boards and in executive roles. These leaders will then mentor others and serve as role models for younger Canadians, accelerating the cultural change we need.

For its part, the technology industry stands ready and determined to meet the challenge of hiring more women, new immigrants, and underrepresented groups; the challenge is finding the talent to fill openings. Education policymakers, practitioners, and administrators must work together with industry to showcase diverse role models and encourage girls and underrepresented children to break down barriers and expectations of what careers are for them.

5. How can governments, industry and western Canadians work together to grow the regional economy?

Government can play an expanded role as a reference customer for western businesses looking to scale up: many procurement processes and weightings inherently favour large (often foreign) vendors with established procurement teams who know how to play the game. WED and western procurement ministries can do more to pilot effective programs that engage small and medium-sized businesses, who can then leverage the stability and reputational effects of a government contract to scale up, export, and become anchor companies.

Within our organizations, Government, innovation intermediaries, and industry must work together to expand and accelerate the overall ecosystem. We must look at not only technology creation but also technology adoption to drive the productivity increases required to remain globally competitive.

Externally, we must promote technology adoption particularly amongst mid-size non-technology businesses and communities who lack internal resources to make technology decisions. Programs that deliver awareness, education and advisory services will be effective in getting organizations over adoption hurdles. This will improve metrics on productivity across the economy and help businesses scale beyond 100 employees.

Governments can also encourage technology adoption and investment across all industries with targeted incentives that go beyond the successful SR&ED program. We must also remove barriers to commercializing our ideas and products in order to build on our successful research efforts. Canada is very good at turning money into ideas—we have room for improvement when turning ideas back into money.

When it comes to the long term, governments must also ask: what plans are we making for a future economy – even if that is 20 or 40 years away – when our resource sector royalties may no longer be able to support the level of prosperity we enjoy today? Economic transformation away from a resource driven model doesn't happen overnight. It needs investment and it deploys over a generational timeframe. We have already lost momentum due to a lack of investment, so we cannot afford to continue on our current path and think we will still have an option to invest later.