

Yukon Innovation Plan What We Heard report

June 2021





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Executive summary

This What We Heard report is the result of a public engagement campaign on the Yukon Innovation Plan. This plan is a Government of Yukon (YG) wide strategy, aiming at growing innovative activities across the territory in the next five years. Our engagement invited over 160 industry stakeholders to seek input on defining innovation within Yukon's context, examining what programs and services the government can invest in to encourage the growth of innovation, what trends are important to Yukon businesses and finding ways to measure success for innovation. This engagement is a collaborative effort to provide insight into the needs across all sectors of Yukon's economy and help shape the common goal to grow the knowledge economy within Yukon.



Engagement process

Working collaboratively with Yukon businesses, the technology sector, innovation community, and First Nation partners, the Government of Yukon sought insights, information and perspectives from Yukon and outside stakeholders on the innovation discussion paper and global trends from September 28, 2020, to October 28, 2020.

We used a variety of methods to engage a wide range of people. These methods included focus groups, an online survey and one-on-one meetings. The Government of Yukon hired Patti Balsillie Management Consulting Inc and SMRT Pop Ups to conduct the face-to-face engagement sessions, while the survey was posted on EngageYukon.ca for public participation. Notification of the engagement was done through social media, newspapers and news release.

This What We Heard Report presents themes and summaries from targeted interviews, focus groups, survey responses and written submissions. It will also provide data summaries from the online survey from EngageYukon.ca. This report will share input to the innovation plan and new concepts or ideas not yet captured in the primary research data analysis.





Participation

The Department of Economic Development invited 13 groups of stakeholders to participate in this engagement. The range of this participation group captures the diverse needs of the business sectors across Yukon. The selected participants provided a broad representation of businesses in various stages of the business lifecycle. The sectors we engaged with are listed below:

- Academic
- Technology
- Agriculture
- Environment
- Mining
- Energy
- Climate Change
- First Nation Development Corporations
- Consultants and entrepreneurs
- Tourism
- Media
- Yukon University, and
- Non-Yukon organizations, investors and businesses contribute to innovation and support tomorrow's entrepreneurs, research and development projects and innovation

Engagement by the numbers

- Over 160 stakeholders were invited across 13 sectors to participate in interviews and focus groups.
- 25 interviews and nine focus groups with representatives from the private sector, service providers, non-profit groups, and government.
- 52 stakeholders and representatives participated
- Seven representatives from four First Nations Communities and Development Corporations
- 21 entrepreneurs from across diverse sectors
- Six national experts

Online survey

The online survey link was hosted on the EngageYukon.ca site of Yukon government, inviting all Yukoners to share either perspectives and priorities to a Yukon Innovation Plan. It was live from September 28 to October 28, 2020. In total, 74 participated with 68 based in Whitehorse and six based outside of Whitehorse.

Written submission

In addition to the survey, the Department of Economic Development received four written submissions from industry associations, individual consultants and ecosystem participants. This input is incorporated in this What We Heard report.

Engagement questions

As part of the engagement, the Government of Yukon presented a discussion paper on innovation and another on technology trends as starting points.

During the engagement, participants were asked for input on the following categories:

- Definition of innovation – what would you include/remove from the definition?
- Pillars – what programs and services can the Government of Yukon invest in to foster the growth of innovation in the next five years?
- Trends – which of these technology trends are important to your business/sector?
- Prioritization – how would you prioritize the pillars to grow innovation in your business/sector?
- Other insights – are there any programs or services that will help foster innovation that are not mentioned in the discussion paper?

Several key themes emerged during the engagement. The information is presented in the following order: overall impressions, definition, pillars, additional pillars, trends, success indicators and next steps. As an indication of the number of participants providing a similar or certain type of input, we use the following terminology:

Term	Participants
Several	< 10
Majority	50% or more
Strong	80% or more



Overall impressions

Consistently throughout the engagement, stakeholders provided comments, recommendations and guiding direction to develop a Yukon Innovation Plan. Below summarizes some of the overall feedback that was collected throughout the engagement.

- **Set a vision for Yukon with Yukon**
- **Build partners to support strategic goals – set by the community**
- **Define what a culture of innovation means or an innovation ecosystem**
- **Focus on existing strengths – Yukon is a leader and can be a trendsetter**
- **Collaborate, coordinate and communicate**
- **Inspire curiosity and ideation**
- **Engage Yukoners often**
- **Empower the industry and public to lead innovation**
- **Make sure whatever the big picture is, that the world knows – local, national, global**
- **Be bold, be creative**

*“In the North and Yukon
- there is a stigma of
limited ability or access
seen as capped or not
competitive or not as
networked - and it is not
true - it has to be more
than that.*

It's all who you know.

*DREAM BIG
START SMALL!”*

– ENGAGEMENT SESSION PARTICIPANT



Definition of innovation

As part of the engagement, participants were asked to review the working definition of innovation. The purpose of this question was to set the context of the engagement discussion. The working definition of innovation was presented as:

“New ideas that meet a need while creating value additions throughout the process. Innovation is not limited to the technology sector. It can include the creation of new businesses, social models, or improving processes or service delivery in established businesses and industries.”

Key themes

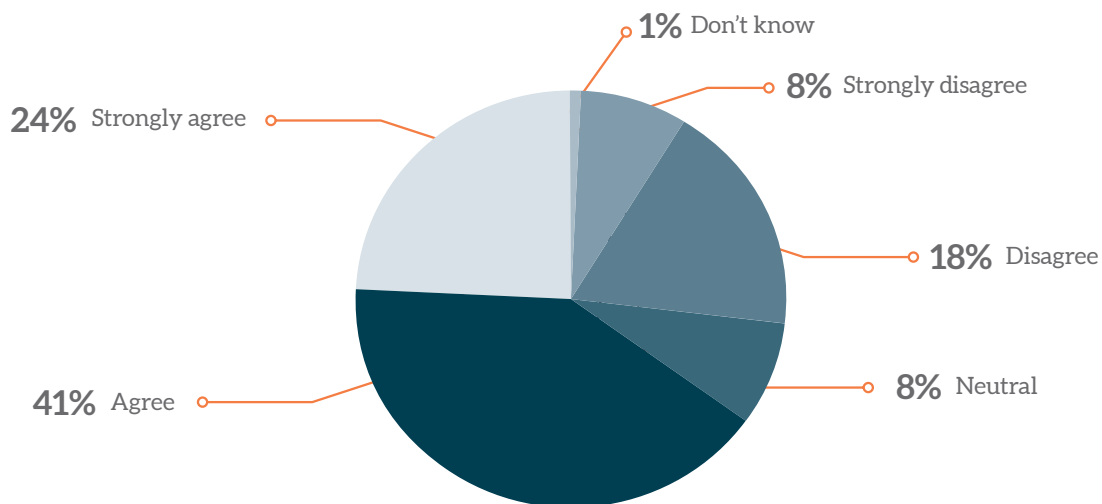
Below are the key themes of the responses on the definition of innovation:

- **New ideas and improvement to old problems:** The majority of the participants suggested the theme of old ideas applied in new and/or improved ways came up. They felt this was an important component of the definition.
- **Action is a key part of innovation:** Several stakeholders felt an action or impact statement was missing from the definition. Some felt that without action, ideas could not be considered innovative. This impact ranged from a social impact to generating revenue.
- **Social and economic values:** Social innovation models were important to have included. Several stakeholders felt challenges to seek funder support on models or processes over products or tangible innovations and the difficulty in qualifying for funding and typical limitations.
- **Commercial over knowledge value:** The idea of innovation being exclusive to commercialization versus knowledge gains was noted – innovation is not just economic value but societal, research and knowledge or northern value.
- **Approved:** The majority of the respondents generally felt the definition was broad and inclusive enough to not limit participation in the innovation economy or access funding or programs for their projects.

The survey resulted in similar input on the definition. 65% of the survey respondents agreed or strongly agreed with the working definition proposed in the discussion paper.

Survey response:

Did you agree with the working definition of innovation?



The Pillars

Participants were presented with four pillars – representing programs and services to grow innovation. They were asked how these pillars could support and drive innovation, their perspective on the importance of these programs to their businesses, and if any programs are missing from their perspective. The four pillars presented for discussion were:



Talent and skills development



Access to capital



Supporting research & innovation



Simpler inclusive programming

Key themes

Each of the pillars were seen as essential to businesses in their own way: Businesses in different stages of the business lifecycle would have different needs. Generalization can be observed to show early-stage start-up companies will have a higher need for capital whereas more established companies would need access to talent. Many stakeholders have expressed that Yukon's ecosystem is in the early stage of development, thus all pillars emphasized an opportunity or gap in growing Yukon's innovation ecosystem.

Of the pillars, Talent and Skills Development was a natural 'people first' sentiment. Simpler Inclusive Program Development required the most explanation; it was interpreted as funding, training, export, programs, coordination across funders, accessible to a diverse clientele, and more.

Pillar 1



Talent

Key themes

Remote workers – reliance and challenges

Majority of the participants felt there is a **reliance on remote workers and external hires** to access skills and talent due to the skills shortage locally. Many of these stakeholders recognize one of the benefits for remote workers is filling short-term talent or skill gaps in the workforce such as technical skills and specialty skills (in technology, marketing and agriculture).

*Remote work can be
used to fill short term
skill gaps.*



*The pandemic has
normalized remote work
globally. This presents a
new opportunity for Yukon
to attract talent to relocate
while working for global
companies.*

While some businesses indicated many of their remote workers or team members would like to relocate to Yukon, most of them experienced challenges that prevent the permanent move. These challenges include housing shortages, high costs of living, competition with Yukon Government jobs and costs associated with moving workers and their families to Yukon.

Currently, the knowledge sector in Yukon consists of a wide variety of people, including authors, lawyers, consultants, engineers, IT specialists, governance experts, scientists, academics, technical specialists, graphic designers and web-marketers. This group of talent view themselves as innovators. They occupy a unique position as they can both live here and work remotely in other jurisdictions.

Majority of the participants suggested future labour planning would help with looking ahead to understand changing labour market needs and the state of the labour force required to support innovation in the future. One strategy to consider is to leverage local alumni. These are people who know the quality of life in the North and have a desire to come home or stay in Yukon.

Other proposed strategy include attracting talent through knowledge exchange programs. These programs take the form of start-up in residence and/or digital nomad programs. To grow Yukon's tech sector, a group of participants expressed strong interest in seeing these programs being offered in the future. Survey participants also suggested having similar incubation/acceleration programs, compared to the south, would be essential for generating talents for start-up companies.



Importance of developing skills locally

Majority of the stakeholders have expressed the **importance of growing skills locally** and having opportunities for ongoing skills development beyond workshops. Local skills will generate a higher local value for the workforce and the economy as a whole. Cited examples of skills required locally include basic technical skills, investment education and financial literacy. Stakeholders felt like the opportunity is here but the existing skill gap meant growth is limited to certain sectors.

Establishing local entrepreneurship education programs is a new action added to the innovation plan.

Stakeholders believe it is essential to **train people of all ages** interested in work or who have an entire career ahead of them. It is necessary that training is done with both the younger generation to ensure they can pursue a full, lustrous career and with the population group over 55 years so that they too have the digital skills to thrive in a modern workplace.

Stakeholders expressed challenges with skills development in the communities. These include high turn-over and limited access to technology. The global pandemic has furthered the gap for entrepreneurs to gain skills. Many of the entrepreneurs had to rely on their savings and time commitment to maintain survivability during the pandemic.

Partnership

Several participants believe **a partnership between businesses and education are essential for skills and talent development**. It was suggested that adopting a community approach will support and facilitate all learners. This approach will support the creation of individualized learning pathways and find creative ways to get more talents into communities.

Currently, Yukon has many non-profits that are delivering inspirational learning. It was suggested that unity was required to identify how to support more community leadership for inspiration, education, awareness of innovation, business and creativity.

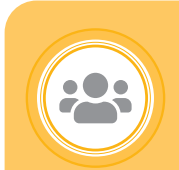
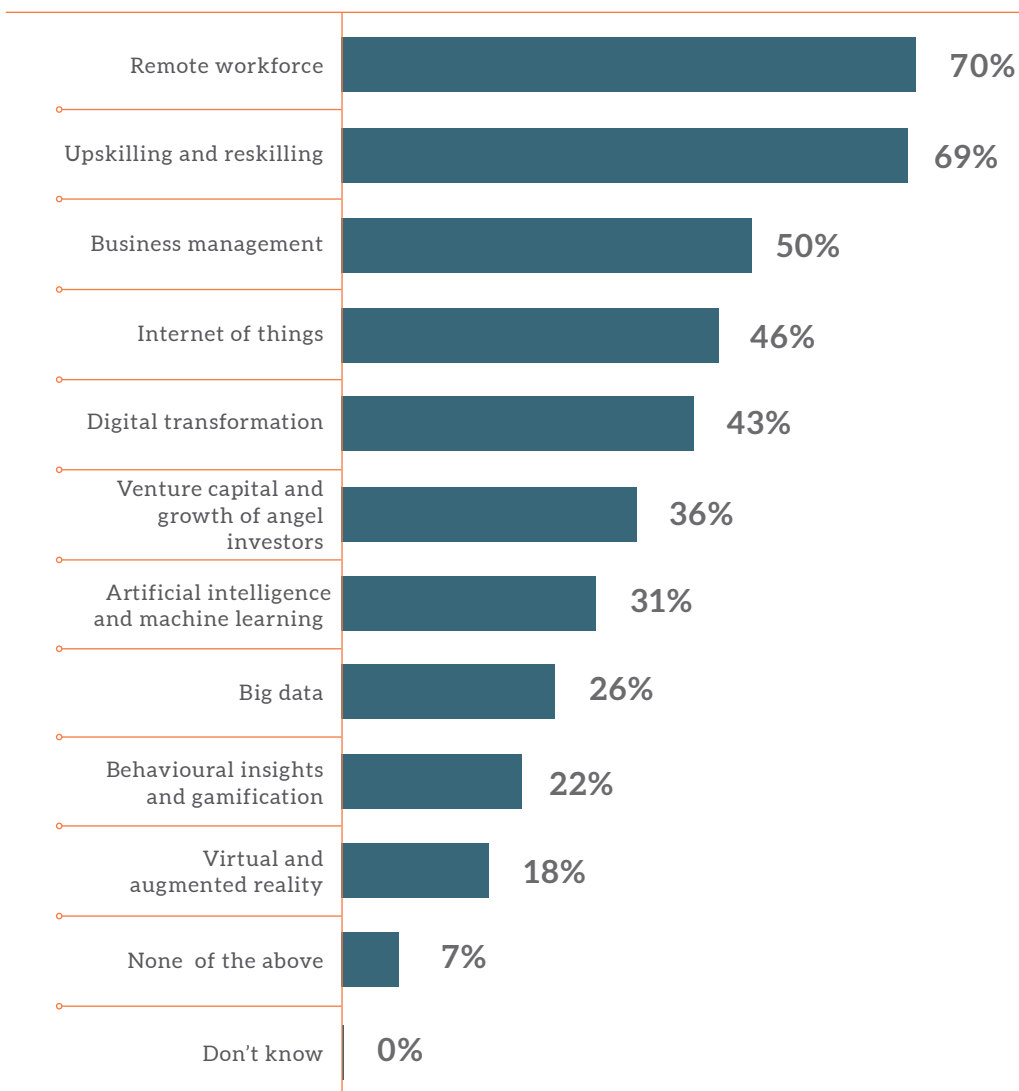
**“Yukon University can be the hub
for innovation, knowledge,
research, incubators, and learning.”**

– ENGAGEMENT SESSION PARTICIPANT

Survey results: Top 3 skills

There are three primary skills that the Yukon innovation ecosystem needs to improve to become a competitor with the rest of Canada. The skills that Yukon needs to improve are remote working, upskilling and reskilling and business management, with 70%, 69%, and 50%, respectively, of recipients saying these skills are essential for innovation and business growth. Remote work is critical to attaining talent that is non-existent in Yukon and, for various reasons, may be hard to get into Yukon. Upskilling and reskilling will help increase the capacity of Yukon's workforce.

Skill sets to focus on building/attracting to grow innovation in the territory?



Pillar 2



Capital

Key themes

Accessibility and barriers of capital

A majority of the start-ups, small businesses and innovators found the investment space to be complex and confusing. They expressed that **support for navigating the investment space** would help improve access to capital. Several entrepreneurs also indicated they experienced barriers in accessing traditional loans and support, which leads them to need to leverage their equity and slowly build up their business as they work through a second job and save up money.

The innovation plan includes a new action to introduce investment education for companies and investors.

Several stakeholders have expressed challenges in accessing capital due to **a lack of alignment on the definition of innovation**. Government funders and other programs, including investors, all use different interpretations of what innovation is. At times, businesses found it difficult to explain their ideas to a representative who does not have expertise in the sector or industry. Having support to help find access to the right capital through an advisor would be extremely helpful to many business owners.

It was suggested that government and ecosystem service providers could support innovation by building relationships with lenders and investors. If Yukoners were aware of the rules, processes, stages, relationships involved in venture capital, finding angel investors, working with funds, etc., there would be many more opportunities for Yukoners to chase their entrepreneurial dreams.

“ *You need a second job to afford all that’s needed to prepare land, which slows everything down. It’s expensive and there is not a lot of support though the right person with the right innovative thinking can make it possible and fantastic.* **”**

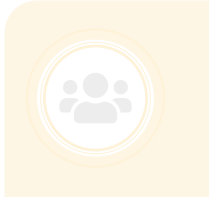
– **ENGAGEMENT SESSION PARTICIPANT**

Investor options

A majority of the **participants agreed Yukon can be the place for doing business**. Tax credits and support programs were cited as effective at attracting angel investors and incentivizing local investors.

Several stakeholders expressed interest in exploring investor impacting models. When Yukoners work with venture capitalists, stakeholders are sometimes concerned that investors will influence a business’s path.

It was felt that if investors understood Yukon’s ecosystem and talent, they could easily navigate Yukon and the entrepreneur or innovation space.



How can governments attract investors?

Several participants believe that when it comes to facilitating investments, the government and ecosystem partners can play a role in attraction and making it easier to invest in Yukon businesses. It is believed governments can influence and lower investors' risk by purchasing equity or contributing to a matching fund.

Stakeholders also believe an organized group of potential local investors centered on awareness building and education could improve access to capital. A cohort educated together and that invests together can reduce the feeling of risk that is a barrier to investors' entry. When an investor has supported a company, it is in the investor's best interest to get someone else to help that company because they have skin in the game. Most investors will purchase equity and put money in and that has a considerable value for start-ups. The government could support a downside risk mitigation fund and encourage local investors to participate in local investment. Yukon innovation is being nurtured and supported within programs and funding. It is critical to ensure that Yukon government procurement practices support products and services innovated in Yukon. Security regulations are put in place to protect individual investors. They are necessary but can squash the idea of local investing.

The Government of Yukon will continue its efforts to develop a local investor group



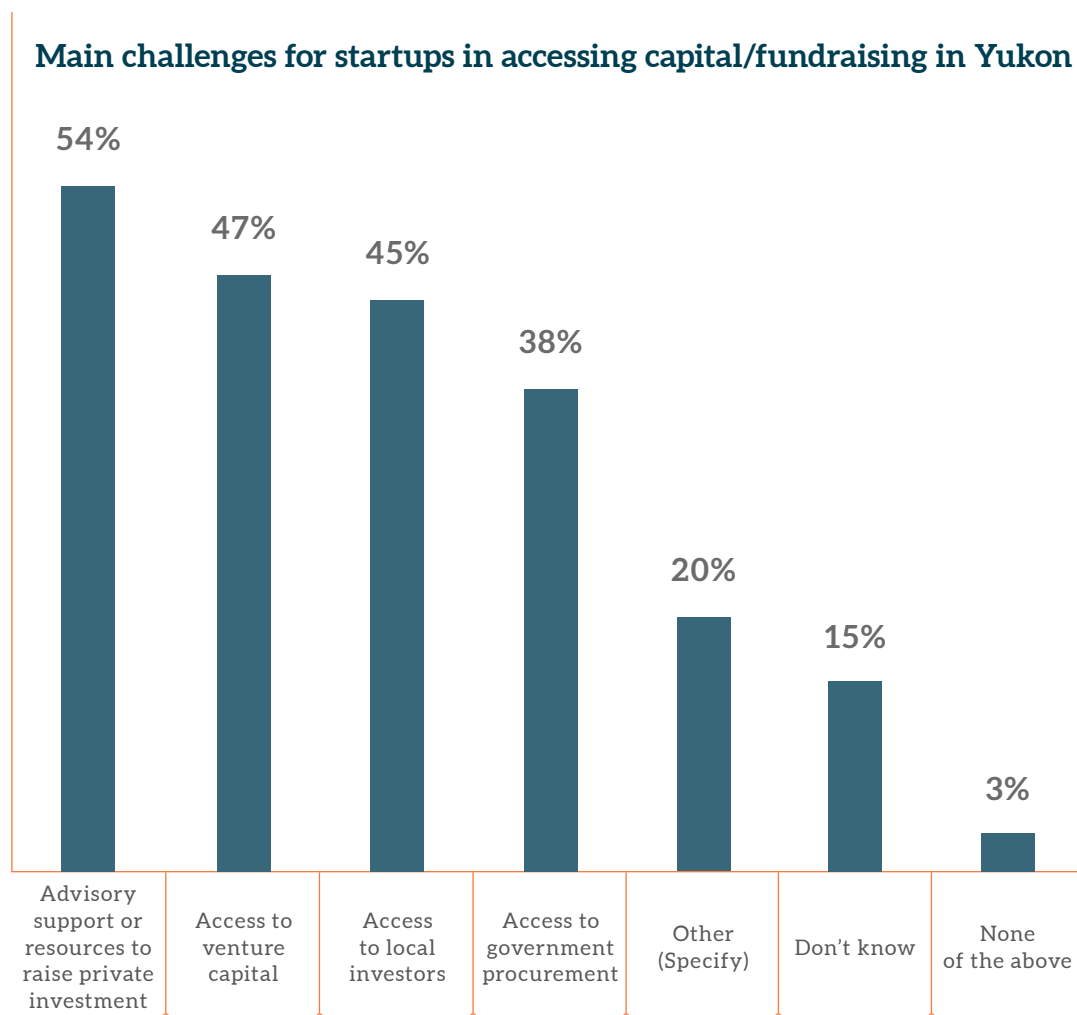
The innovation plan includes a new action to explore a tax credit program to support start-up investments.

“ We need an investor group and an entrepreneurial group – they are often connected. We need prototypes and selling and growing, getting into the market – they are then much better suited for venture capital. ”

– ENGAGEMENT SESSION PARTICIPANT

Survey results: Top 3 challenges in accessing capital

There are three challenges to accessing capital that will help most start-ups get past the break-even point. The three challenges are access to local investors, access to venture capital and advisory support or resources to raise private investment. Having a local investor economy will help innovators build their business quickly with people who understand the North's business context. Having access to a group of venture capital investors in Yukon will drastically improve the number of start-ups. New businesses need help navigating the investor market. Having a support program to find and advise on the right investment partner will help many entrepreneurs start their new business.



Pillar 3



Research

Key themes

Value in knowledge

Several stakeholders expressed value in knowledge and research. It is believed that **knowledge will attract expertise and turn ideas into innovations.**

Stakeholders believe knowledge hubs act as spaces for innovation, links to investment, philanthropy and innovators locally as well as globally. Stakeholders see Yukon University primed to be an incubator for both private sector and social models of innovation. Yukon University needs to be able to react to innovation to create supports. This action might look like a shared or mandated vision, financial and people resources, sector expertise, networks and/or partners.

“ When communities are looking to get into cluster dev, you look at the global trends in the world and parallel, you are looking at the inherent strengths and DNA of a community – what are its strengths, what is it known for, what capacity does it already have. ”

– ENGAGEMENT SESSION PARTICIPANT

Infrastructure

Majority of the stakeholders indicated the infrastructure barrier posed a limit on innovation across sectors. Internet and telecom, small-scale manufacturing and transportation/distribution, hardware, technology and equipment are required.

A single stakeholder reasoned that broadband internet will not be sufficient in the future. Continuous improvement in infrastructure, such as 5G internet, will be required to support connectivity, continuous learning and innovation.

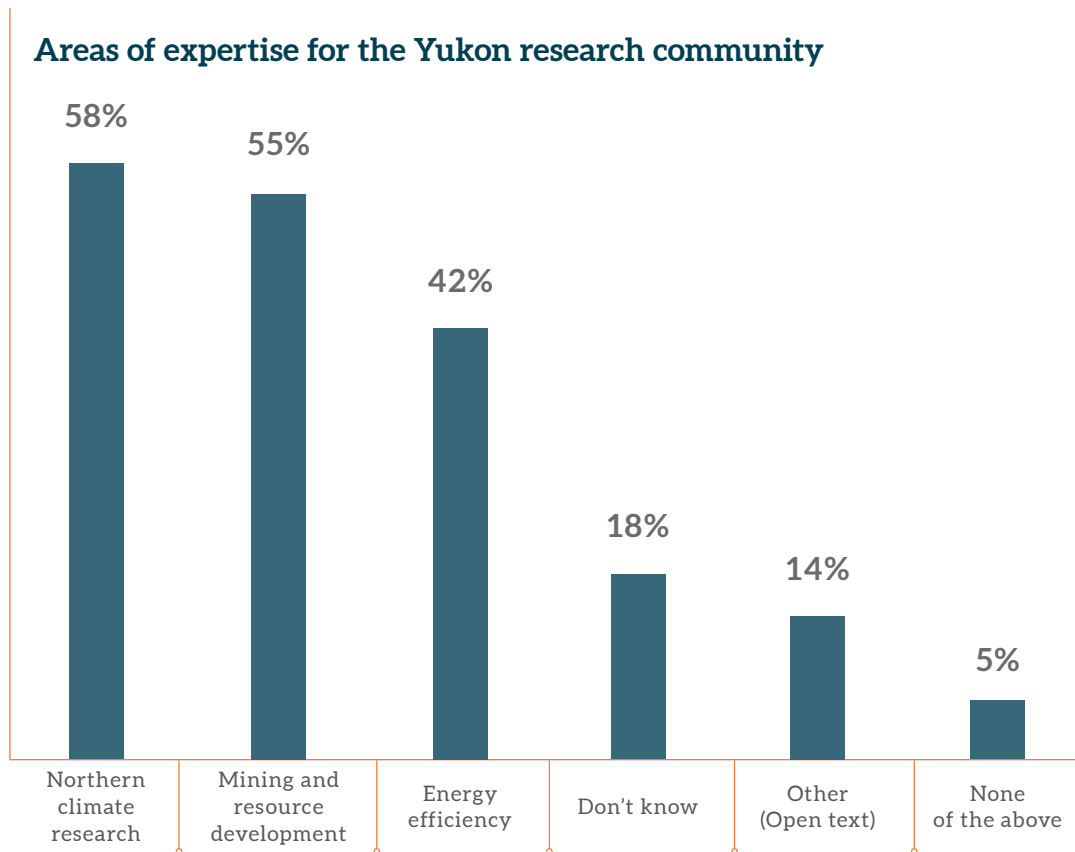
In addition to internet infrastructure, survey participants indicated that land or building infrastructure, basic income support and reduction of red tape are critical resources for start-ups to succeed in Yukon.





Survey results: Top 3 areas of research expertise

Our survey participants indicate the following areas as main areas of research expertise in Yukon. The top three areas are northern climate research, mining and resources and development of energy efficiency, with 58%, 55% and 42% of recipients, respectively. Climate research is becoming more critical with climate change and analyzing what is happening. Mining and resources have been the focal point of Yukon since the gold rush. Energy efficiency ties back to climate research and the effects of climate change. Energy efficiency has a significant impact on emission reductions.



Pillar 4



Simpler, inclusive program development

Key themes

Pillar name is not easy to understand

During the engagement, **most participants required an explanation of the pillar name** and of which it consisted. It was interpreted as the area of recommendations to improve funding, training, programs, coordination across funders, accessibility to a diverse clientele and more.

The innovation plan will reorganize and rename the pillars to better reflect our investment priorities in the next five years.

Navigation

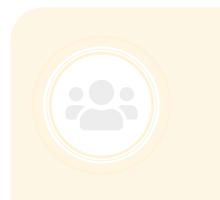
A majority of the participants felt there was **a good availability of funding and programs and they are readily accessible in Yukon**. The existing support from the territorial and federal government has been appreciated, and for some, it was critical for entrepreneurs to get started. They also felt the innovation plan needs to be centralized and a way-finder or navigation service could make it simpler for businesses to access available funding.

“Supporting research and innovation has been huge for us. University has been amazing and has gotten \$40,000 from them and without that, we wouldn’t be where we are at with product development. The direct financial support through the university has been critical and we can use our other money for all the operations stuff that government grants won’t support.”

– ENGAGEMENT SESSION PARTICIPANT

This service would need to be user-friendly, comprehensive, with knowledgeable teams that understand business, sectors and ecosystems. Programs are currently sufficient, but could be centralized. If there was one place or portal that entrepreneurs or stakeholders could go where they’d be navigated to the right programs and services, there will be efficiencies in time and money. This office could also support eligibility criteria and collect data on current and changing needs.

Reporting for funding is challenging, time-consuming and overwhelming. For support organizations/ecosystem providers year to year funding is “extremely time-consuming.” Reporting to diverse funding programs is particularly challenging as each fund requires different metrics and some outcomes result from multiple funds – not an individual one. Even for entrepreneurs with high financial literacy, the reporting is challenging and a barrier. Along with financial reporting, the written application makes the processes of applying for funding even more challenging.



Not fitting the funding

Several participants expressed some funding applications are too stringent with the requirements to receive the funding. Organizations feel like they need to fit into a box to get the necessary funding for their project. This requirement to work within the program's limitations hinders the amount of innovation that can happen as innovation usually doesn't fit into a box. Another challenge is when those administering funding don't understand the business or the sector. This frustration came up across online companies' sectors, fast-moving innovations that require rapid change, and specialized in Science, Technology, Engineering, Arts and Mathematics (STEAM) fields.

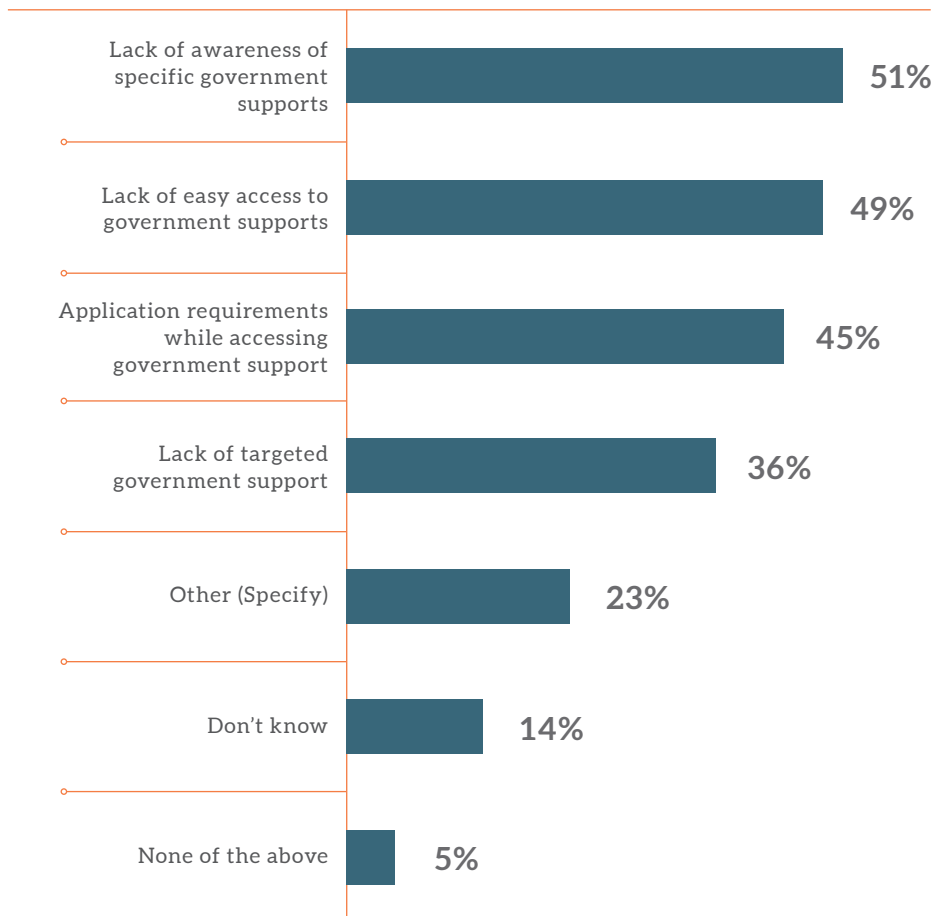
“ Having someone who navigates for me and advocates for businesses would be so great. Even when you meet your bank manager they're talking finance terms you don't understand. It's complicated to understand those terms and concepts. ”

— ENGAGEMENT SESSION PARTICIPANT

Survey results: Top 3 areas of barriers to accessing government programs

There are three areas of barriers to accessing government programs in Yukon. They are: lack of awareness of specific government supports, lack of easy access to government supports, and application requirements while accessing government supports. It is essential to ensure that the individuals the program is targeted toward know the program exists.

Main barriers faced by businesses while accessing government innovation supports



Additional pillars

In addition to the discussion of the four pillars, participants were also asked if there are any additional programs or services that would improve the rate of innovation in their business or sector. Below is a summary of what we heard.

Key themes

Mentorship

Mentorship came up with several participants across sectors and service providers for businesses and youth organizations. Finding the right mentor was vital for ensuring relevant knowledge and experience for businesses to reach their goals. It was seen as necessary for everything from inspiration, to knowing how to use the funding, to strategy. Finding mentors is a time-consuming and expensive process as they are often outside of Yukon. Entrepreneurs need to get introductions and meet them to find the right fit.

“ It is important to facilitate for BIPOC entrepreneurs that may not naturally have the personal connections. ”

– ENGAGEMENT SESSION PARTICIPANT

Collaboration

Participants believe that collaboration can create avenues for knowledge sharing and successful partnerships across sectors and businesses. Entrepreneurs supporting each other with experience and their services can help companies to grow at a faster rate. The government and ecosystem providers can support this through incentivizing partnerships and creating community spaces where sharing happens.

Government support

Throughout the engagement process, it is clear the government needs to support this shift in innovation. It will require marketing to reach outside economies to keep it sustainable. Some participants identified the government as a barrier. For the government to truly become a catalyst of the economy, they will need to remove some of the red tape. The government is one of the largest procurement organizations in Yukon; therefore, the government can significantly impact which organization flourishes and which ones don't.

Sector inclusion

Participants from the screen production and media industry expressed the close ties between the needs of the industry and the concept of innovation. The Department of Economic Development has been an active supporter for this industry and will continue our partnership with this industry for continued growth of this sector.

Access to markets

A handful of survey responses suggested there is limited access to national and global markets and trade opportunities for start-up companies. With cloud computing, this gap can be addressed through eCommerce.



Trends

The Department of Economic Development invited 13 groups of stakeholders to participate in this engagement. The range of this participation group captures the diverse needs of the business sectors across Yukon. The selected participants provided a broad representation of businesses in various stages of the business lifecycle. The sectors we engaged with are listed below:

- Internet of things and digital transformation;
- Big data;
- Artificial Intelligence and machine learning;
- Upskilling and reskilling;
- Moving from CSR to ESG;
- Venture capital and growth of angel investors;
- Behavioral insights and gamification; and
- Remote workforce

Participants discussed the relevance to supporting Yukon innovation, if there were any missing trends and where Yukon could stand out as a leader.



Key themes

- Trends were acknowledged as a possible starting point to expand into different markets or directions, but for participants across sectors, there wasn't consistent or strong expressed support or interest in leveraging trends to advance Yukon innovation planning. Many said the concepts were understood but didn't understand how they would be applied or invested in.
- Artificial Intelligence was interesting in its application to reducing environmental impact from the resource sector and activity.
- There were several trends identified as missing, highlighted by participants as areas where Yukon could be a global trendsetter or leader, and/or a significant participant globally. These were trends currently being pursued in Yukon, or areas of focus in countries with similar climates, demographics or geography. The following trends are presented with a rough indicator of the number of similar input listed in front of each trend:
 - Several - Tourism development
 - Several - Sustainable or alternative energy solutions
 - Several - Social innovation and entrepreneurship
 - A few - Environmental sustainability / responsible resource use
 - A few - Natural products and health
 - A few - Bioscience and green chemistry
 - A few - Creative tech/tech for storytelling
 - A few - Climate change and Northern climate

Success indicators

Based on discussions of the pillars, participants were asked to envision what success looked like and which metrics and indicators were relevant. During this engagement section, stakeholders used these questions to articulate their vision for a successful Yukon innovation plan.

Key themes

Best practices

Several stakeholders expressed the need to establish relevant benchmarks for Yukon. These can be learned from other jurisdictions, however, it was cautioned the indicators need to reflect the uniqueness of the North.

On the other hand, several stakeholders suggested keeping the indicators simple and we should not simply copy what other ecosystems have.

Metrics

Metrics and community outcomes are essential to measuring and are tied to economic well-being. It has been seen that without attracting investors, the number of projects being done will fall. Therefore it is vital to ensure the investment ecosystem is thriving. An important aspect of increased investments is a change in average return on investment across similar sectors from funded projects. It is essential to measure not only the success of, but also the failures, of trying an innovation. There is often more to learn from failure than success.

A critical indicator of a growing and maturing economy is the workforce's number of specialized skills. Therefore, local skills growth and overall capacity should be a key metric when discussing the economy's growth capacity.

Quantitative metrics that look at the ecosystem activity and growth over time:

- Number of start-ups that attract investors
- Number of people in the ecosystem
- Change in Gross Domestic Product or income
- Number of new exports from Yukon
- Number of innovators
- Number of new residents working in innovative environments
- Number of projects across diverse projects being supported, funded, or facilitated

“There are many companies in Northern Europe who, because they are in the circumpolar region and are associated with wilderness and natural products, can capitalize on selling natural products selling high-end natural products. So, I mean, I would immediately say, why would other countries and Europe in kind of our circumpolar area, I don’t think that their global trends would look like our global trends”

– ENGAGEMENT SESSION PARTICIPANT

Next steps

The insights gathered through this engagement will be incorporated into the final version of the innovation plan. Once the plan is ready for publication, it will be available on EngageYukon.ca.

As the Government of Yukon finalizes our innovative plan, we will continue to work with our internal advisory departments and industry stakeholders to further discuss the implementation plans for each of the identified actions.

We thank all of the Yukoners and businesses who shared their thoughts, ideas, and expertise to shape the Yukon Innovation Plan.








Yukon