



TRIUMF PHASE 1 REPORT

LAURIER CENTRE FOR WOMEN IN SCIENCE
(WinS)

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Chairs for Women in Science and Engineering /
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Introduction

TRIUMF Inc. engaged with a third-party research group, the Laurier Centre for Women in Science (WinS) to conduct foundational inclusion work in 2024. To understand how values of inclusion are embedded at TRIUMF, it is imperative to have data to support people's experiences and perceptions. To this end, WinS uses a phased, mixed methods approach, gathering qualitative data through interviews with a subset of the community, and quantitative data, gathered through an organization-wide survey.

This report provides a detailed account of Phase 1 of the assessment, which included a short demographic questionnaire and semi-structured interviews with a sample of the TRIUMF community ($n = 61$). We present an executive summary of Phase 1, followed by detailed methodology, findings, and recommendations for the upcoming quantitative assessment.

For correspondence about this report, please email the researchers at wins@wlu.ca.

Executive Summary of Phase 1

To gain a sense of equity, diversity, and inclusion (EDI) experiences and priorities at TRIUMF, semi-structured interviews were conducted with students, staff, and faculty (invited and volunteers). Participants were asked six questions gauging the general environment at TRIUMF, including perceived positive aspects and areas of improvement. In general, the environment was described as dynamic and unique, but also one in which negative and positive perceptions were concurrent, reflecting variability among respondents. Participants perceived the most positive aspects of being at TRIUMF as 'the people', followed by 'the science.'

When asked to describe TRIUMF's culture, results were also variable – where some people perceived the culture as 'inclusive', others described it as 'divided.' Areas of improvement or challenge included organizational components (i.e., administrative structures and processes, pay and promotions), but also social-psychological components (i.e., gender inequities, underrepresentation and bias). While administrative processes can be more easily addressed than larger societal challenges like gender stereotyping in science fields, both components will be important to assess in the future survey.

Recommendations for the institution-wide survey will therefore include three major areas: 1) a detailed demographic questionnaire including identity and vocational variables, 2) administrative and structural processes, and 3) belonging, safety, and inclusion. Overall, Phase 1 reflected that at least a subset of the community is supportive of the EDI assessment, indicating an opportunity for TRIUMF leadership to embrace evidence-informed decision-making.

Phase 1 Methodology

Recruitment of Respondents

Respondents ($n = 61$) were recruited via email by the third-party research group (WinS) based on available demographic data from Human Resources records (i.e., binary sex, job area, job tenure, race/ethnicity, income, management level, and age bracket). For each job area, we aimed to recruit a proportional number of interviewees. For example, the Physical Science job area comprises 35% of employees, so we aimed for people in this area to comprise approximately 35% of interviewees. However, given demographic information was inconsistent across the community in HR records (and some demographics were not available for consideration, such as sexual orientation or disability), we expanded recruitment to include an additional ~20 volunteers.

Of the 116 people invited to an interview using HR records, 39 accepted (34% response rate), 29 declined, 7 were no longer at TRIUMF/responded with an 'out of office' reply, and 41 did not respond. Expanded recruitment garnered 22 volunteers, bringing the total sample to just above the target of $n = 60$, representing approximately 10% of the TRIUMF community. For qualitative work, this value is appropriate (Saunders & Townsend, 2016). Interviews occurred at the end of March and beginning of April 2024, and 31 interviews were held in-person, whereas 30 interviews were held virtually over Microsoft Teams.

Framing the Findings

For Phase 1, randomly selecting interviews was not ideal because of the inconsistent demographic information in the Human Resources system (i.e., WorkDay). Randomly recruiting therefore would have created a situation wherein not everyone was equally likely to be selected. Thus, the sample reflected in Phase 1 and the subsequent findings should be interpreted with the understanding that results are representative of a subset of those willing to participate (not a random sample).

Furthermore, in Phase 1, some group comparisons were not statistically tested due to small sample sizes (i.e., between job areas by demographic identity). Finally, it is important to note that all feedback is constructive, pointing towards priorities to assess in the organization-wide survey.

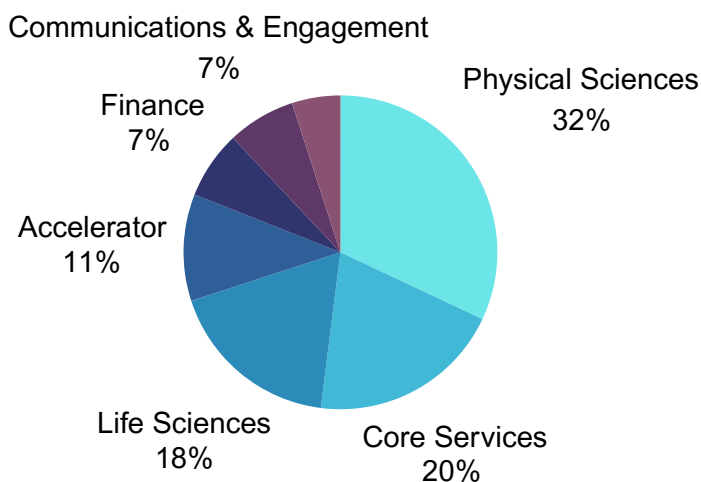
Reference: Saunders, M. N., & Townsend, K. (2016). Reporting and justifying the number of interview participants in organization and workplace research. *British Journal of Management*, 27(4), 836-852.

Phase 1 Sample Characteristics

Job Area. We garnered participation from all areas of the organization, however, some areas were under/overrepresented in terms of our intended targets. For example, in the sample, those from Accelerator and Projects and Infrastructure were underrepresented, whereas those from Core Services, Life Sciences, and Physical Sciences were overrepresented. Those from the Communications and Engagement area and Finance area were adequately represented within the sample. Overall, this distribution underscores the importance of having more robust representation from all areas of the organization in Phase 2.

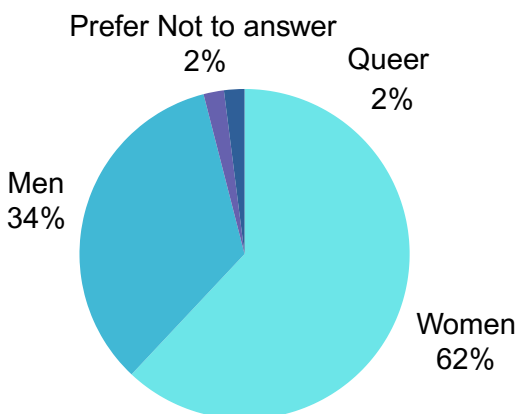
Roles. 41% of the sample were managers; 20% of the sample were students & post-doctoral researchers (80% employees).

Job Areas (%)

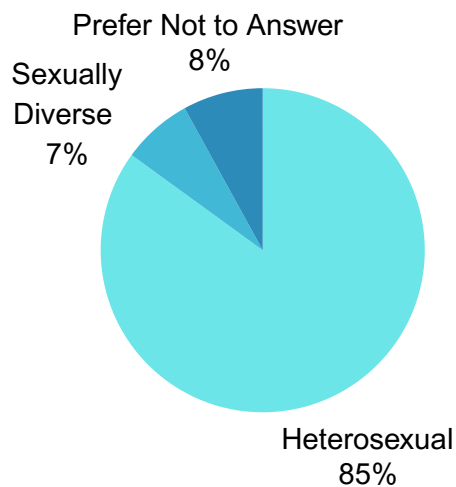


DEMOGRAPHIC VARIABLES

Gender Identity (%)



Sexual Orientation (%)



Phase 1 Sample Characteristics (cont.)

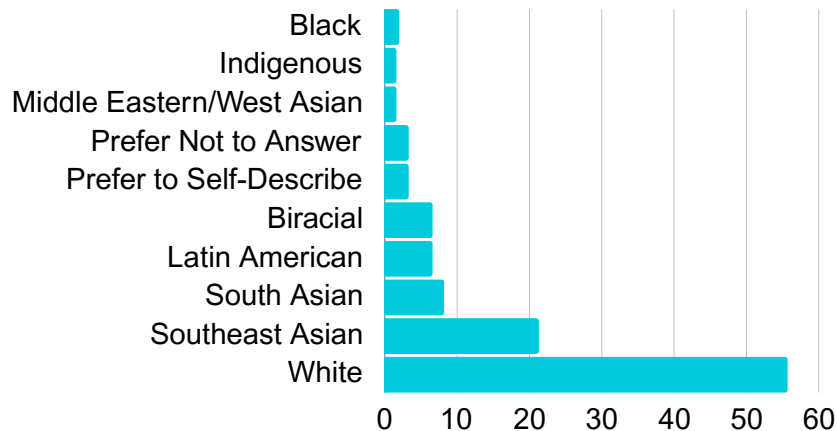
Age. On average, the sample was $M = 40$ years old ($SD = 12$ years, range = 22-81).

Nationality. 71% of the sample were not born in Canada. Of these respondents, 2% preferred not to provide any further information, 48% identified as landed immigrants or permanent residents, 40% identified as Canadian citizens, and 10% identified as international students.

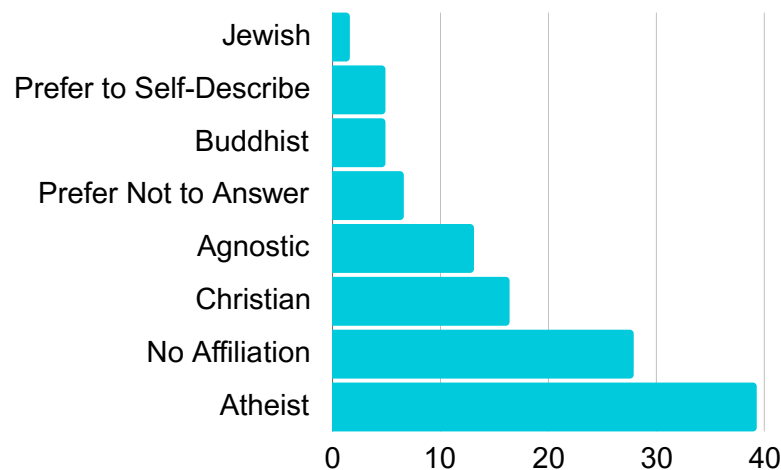
Disability. 12% of the sample identified as disabled (i.e., “Do you identify as a person with a disability, someone with a neurological difference, or someone who has accessibility needs? One does not need a legal or medical status of disability to identify with having a disability. Mental health-related disability is included under this definition”), and 5% preferred not to answer.

Caregivers. 33% of the sample identified as caregivers (i.e., those responsible for the health, upkeep, and well-being of children or adults who need support in their daily lives).

Race (%)



Faith (%)



Please note that respondents could select 'all that apply' on demographic variables so totals \neq 100%.

Phase 1 Analysis Strategy

Interview Data

- Interviews were transcribed verbatim (~540 pages) and coded into themes using Constant Comparative Method (Glaser & Strauss, 1967; Strauss & Corbin, 1990)
- Data were reviewed to group similar themes into categories – consensus reached across raters
- Multiple themes could be present within a single response
- Categories were assigned a numeric value to produce quantifiable outcomes
 - E.g., 60% of respondents discussed X theme
 - Responses can be disaggregated by groups (e.g., gender, race, role)

Procedure

- Participants were invited to a one-on-one semi-structured interview (~25 minutes; in-person or virtual) with the lead researcher
- Prior to interviews, respondents completed a short intake survey containing basic demographics
- To maintain participant confidentiality, in-person interviews were hosted off-site at the nearby National Research Council (NRC) building

Interview Protocol

Based on consultations with leadership and members of the Equity, Diversity, and Inclusion Committee (EDIC; including Early Career/Students [ECS-EDI]), six qualitative items were devised to assess the overall climate at TRIUMF. Respondents could opt out of answering any of the questions.

1. Tell me about your experience at TRIUMF – how would you describe the best aspects of studying/working here?

2. In your opinion, what aspects of TRIUMF could use improvement?
What aspects of TRIUMF do you find challenging?

3. How would you describe the culture at TRIUMF?

4. Based on your experience, what are the most important topics to address at TRIUMF in terms of equity, diversity, and inclusion? If you were designing the upcoming survey, what would you measure?

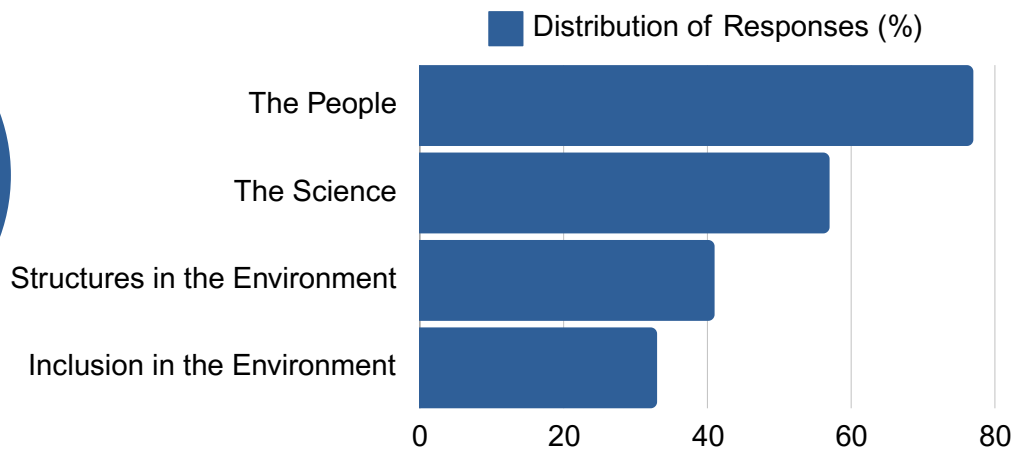
5. What do you know about reporting concerns (e.g., discrimination, unfair treatment) at TRIUMF? Are you familiar with the process?

6. If you could use one word to describe how you feel about the ongoing EDI assessment, what would it be?

1. TELL ME ABOUT YOUR EXPERIENCE AT TRIUMF – HOW WOULD YOU DESCRIBE THE BEST ASPECTS OF STUDYING/WORKING HERE?

Responses were grouped into 4 broad themes:

See the detailed report for trends by demographic groups



Sample Quotes

Results

The People

"I've worked with a lot of students who are extremely impressive, extremely cool, extremely interesting people to know, and I think that because TRIUMF is such a sought-after employer for undergrads in physics, we get access to the best students in Canada, and that's just really rewarding to work with, I like a lot of my colleagues very much, so the other the other people on the floor, you know, the people in my corridor, that people who I talk to in my department meetings, interesting, clever people, who I benefit from knowing, and who I learn a lot from. So, I do think that the people are TRIUMF's greatest strengths." (participant 52)

The Science

"I'm a very valued-based person and what I love is that the work that we do is a very pure mandate, it's very, we're not necessarily in the ambulance saving lives but this is really curing cancer and exploring the universe, and it really aligns with my own value system, and I think a lot of the folks that work at TRIUMF feel the same way. I think that everybody works very hard, not because of a culture of any sort of toxic workplace culture of feeling the need to go beyond what you're asking, or your job description implies, but because people care deeply about the work, and that is a double-edged sword to be clear it seems. I think there's no question that TRIUMF does excellent science." (participant 8)

Structures in the Environment

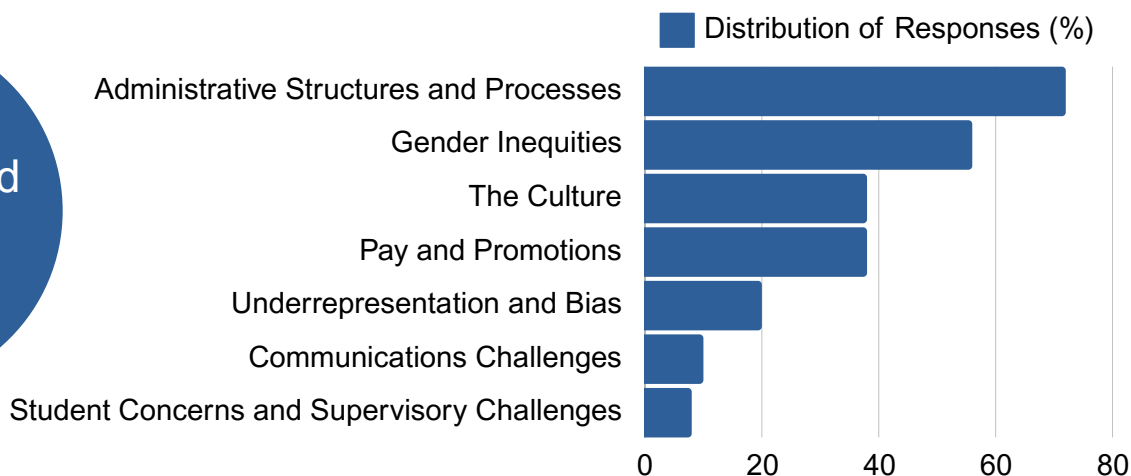
"Flexibility, that's for sure. That's me as a working [parent] having kids. It's very, very convenient to have this flexibility. They are very supportive of development, personal development. This I do get and thankfully I am doing my degree which TRIUMF also covers, which is amazing." (participant 41)

Inclusion in the Environment

"I think TRIUMF is a diverse workplace, we have different, you know, I see women and men, also different gender orientations. I also have a different cultural background. In that sense, I never felt uncomfortable in any situation. Also, the workplace has different educational levels, some people with a PhD ... but perhaps like a high school graduate as well. I think it's different in a way that's really good." (participant 18)

2. IN YOUR OPINION, WHAT ASPECTS OF TRIUMF COULD USE IMPROVEMENT? WHAT ASPECTS OF TRIUMF DO YOU FIND CHALLENGING?

Responses were grouped into 7 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

Administrative Structures and Processes

“Dealing with [administrative processes]. They’re hard to get any info out of. So, what TRIUMF does is they’ll pay for schooling or just a few other things over the years now, where ask questions, and you are just sitting there for like a month or two waiting for an answer. They need a lot of prodding to finally get back an answer, and then the answers are like, not that great.” (participant 16)

Gender Inequities

“TRIUMF is a very male dominated environment. And cisgender male as well. There’s a lot of lip service towards acceptance, but the actual hard work around that does not seem to be evident to me in this workplace. The women that I have engaged with and have had conversations with around these sorts of elements, whether professionally or personally, have all, consistently, highlighted that they do not seem to be treated with respect. If they are assertive, they are looked at as aggressive.” (participant 53)

The Culture

“I think there’s a demographic that could be resistant to change. There’s a lot of people that have been there twenty, thirty, forty years, and often reference to “oh, we used to do it this way,” and I’m like, “we’re not there now,” where there seems to be a kind of shift in, a younger crew coming in, fresh scientists coming in, new ideas, and like, the GAPS team.... That’s more so the resistance to change of they’ve been working in that workplace for twenty plus years, so they’re like, “I know how it works here.” But if you’re trying to make a systemic change within the place, it’s getting everyone on board.” (participant 27)

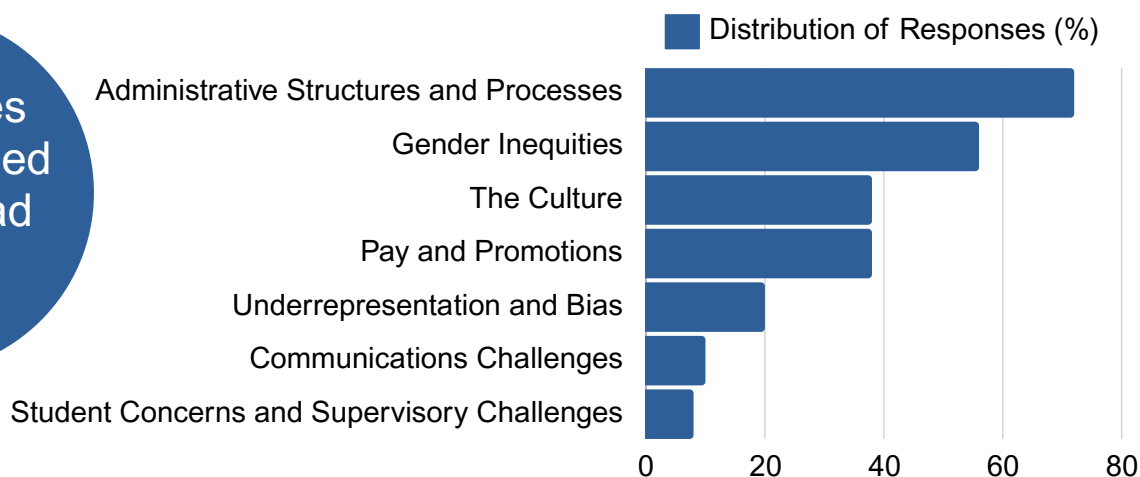
Pay and Promotions

“I think it’s very difficult to get a pay increase at TRIUMF. It’s notoriously extremely difficult to get pay increases even if you have been overperforming on your job, picking up the slack from all of your lazy colleagues for years. And they also try sometimes, they try to get out of it by saying “Oh, we’ll give you a bonus” and then when bonus time comes around they say ‘oh no we didn’t get this funding so you can’t get it.’” (participant 55)

Results

2. IN YOUR OPINION, WHAT ASPECTS OF TRIUMF COULD USE IMPROVEMENT? WHAT ASPECTS OF TRIUMF DO YOU FIND CHALLENGING? (CONTINUED)

Responses were grouped into 7 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

Results

Underrepresentation and Bias

“I do see like for example, English is not my first language, so I at the beginning when I arrived I kind of sense that feeling that people were taking me as a less intelligent or less brilliant because I was not capable of expressing myself in the same way as a native is going to do it. So, at the beginning I kind of sense that the that kind of like language barrier language discrimination, it turns out there is a moment when it's like, okay, yeah, I have an accent. It's not my language.” (participant 7)

Communications Challenges

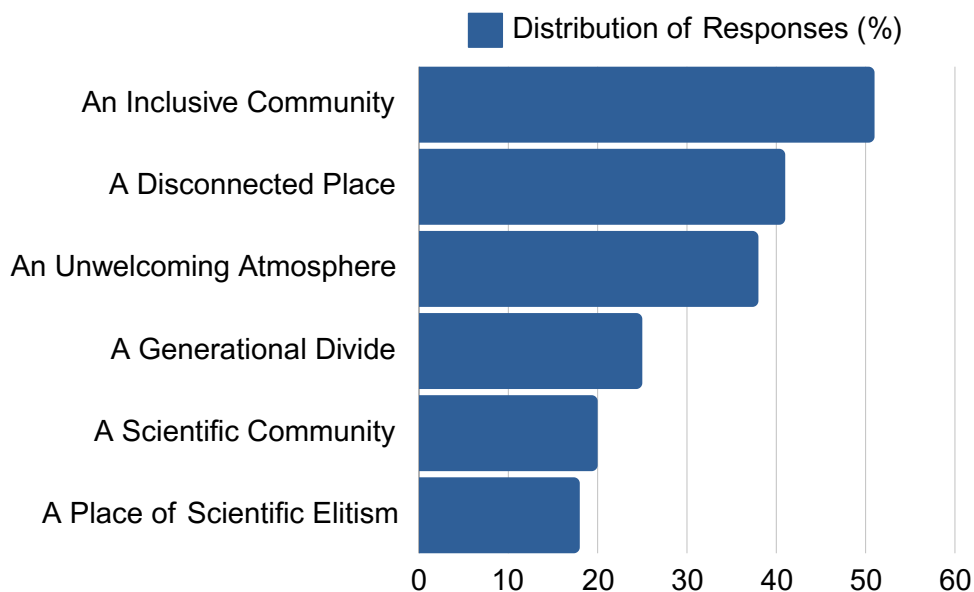
“A lot of words about how a problem is hard, not necessarily a lot of action. And not necessarily the best communication. A lot of people at TRIUMF talk about really valuing the perspective of grads and postdocs and then when it actually comes to actions or communication, things don't necessarily live up to the expectation.” (participant 4)

Student Concerns and Supervisory Challenges

“I've had issues being in, getting a hold of my supervisor for a couple years, my supervisor is an amazing scientist, very kind, very generous with time to an extent, but I guess like, not as hands on as I thought, which is a bit unfortunate because I think I have very high aspirations about myself, and I want to make use of the resources that I have, and I thought this was going to be a resource that I could rely on, and it doesn't seem like I'm getting the most out of it.” (participant 10)

3. HOW WOULD YOU DESCRIBE THE CULTURE AT TRIUMF?

Responses were grouped into 6 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

An Inclusive Community

“At this point in time, I would say TRIUMF is actually very inclusive, because I've been here as co-op, and between now and then I can definitely see there's been a complete shift in how TRIUMF approaches things like EDI and having diverse hires, which is like obviously a trend in a positive direction. There's a lot more focus on having more meetings and seminars and talking about it openly and integrating it into their action plans, like the upper managements action plans. So, all of that is very heartening to see, so I will generally say that TRIUMF, the workplace culture is kind of inclusive and people are trying, people are actually looking into things that they can address and putting in an active effort, which is nice to see.” (participant 10)

A Disconnected Place

“There's a lot of distrust, and there's a big divide between, so a lot of mistrust in leadership and there's a big divide between what goes on in the main office building and what goes on behind the fence.” (participant 15)

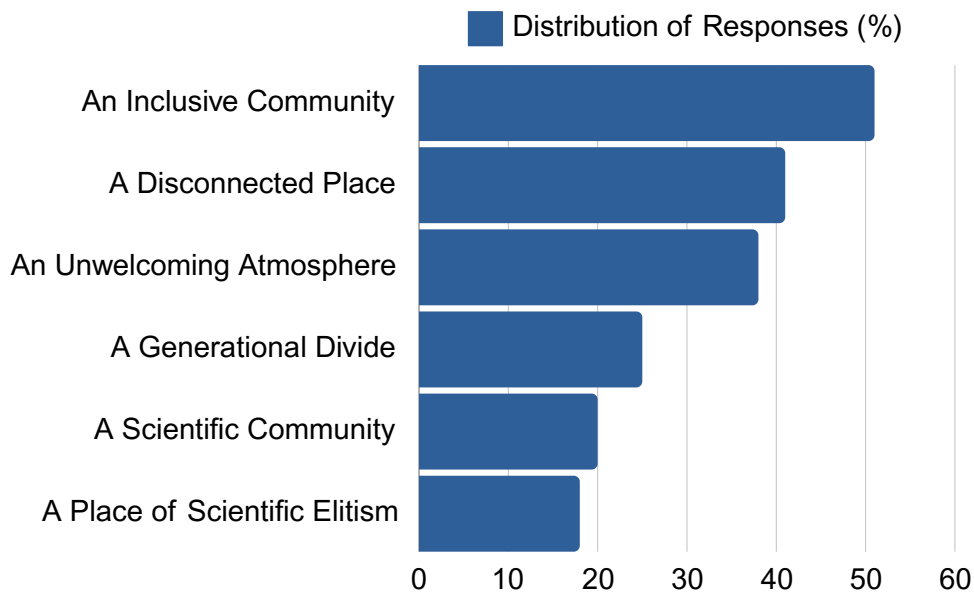
Student Concerns and Supervisory Challenges

“There's a culture, there's a bit of toxic culture, I think, especially on the leadership side. Some toxic behavior is accepted as the norm. It's enabled so that they just continue to. Why should they stop?” (participant 59)

Results

3. HOW WOULD YOU DESCRIBE THE CULTURE AT TRIUMF? (CONTINUED)

Responses were grouped into 6 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

A Generational Divide

“There's, there's a lot of people that are still stuck in the old ways, “we've always done it this way, TRIUMF has always done it this way, so why would we do it a different way, it's worked?” so that is one of the challenges. Now, as time goes on, a lot of people retire, you get new people in and I feel like the scales start tipping, especially at the higher levels of TRIUMF, we've got some new people and I'm pretty optimistic, but in terms of culture, there's that struggle between the old timers that have been here since the early '70s and the younger people, who tend to be underpaid. There's, you know, the old timers that have, you know, come in at 3am on Saturdays more times than they can count, and then some of the new people that may not be as willing and so there's that dynamic.” (participant 19)

A Scientific Community

“Its very logic driven, very data driven. Most of our people, they're physicists or engineers, so if you want to convince somebody of anything, of anything, you have to present facts, and lots of facts, and they need to absorb the facts and think about it, and then they come around. If you want to make changes in the culture based on feelings or perception, you will have a really hard time. Now you can push EDI through with facts, but when I ever go to an EDI talk or conference, there's a lot of emotions involved, and that that just doesn't work in a, in an organization like that, it needs to be backed up with facts.” (participant 44)

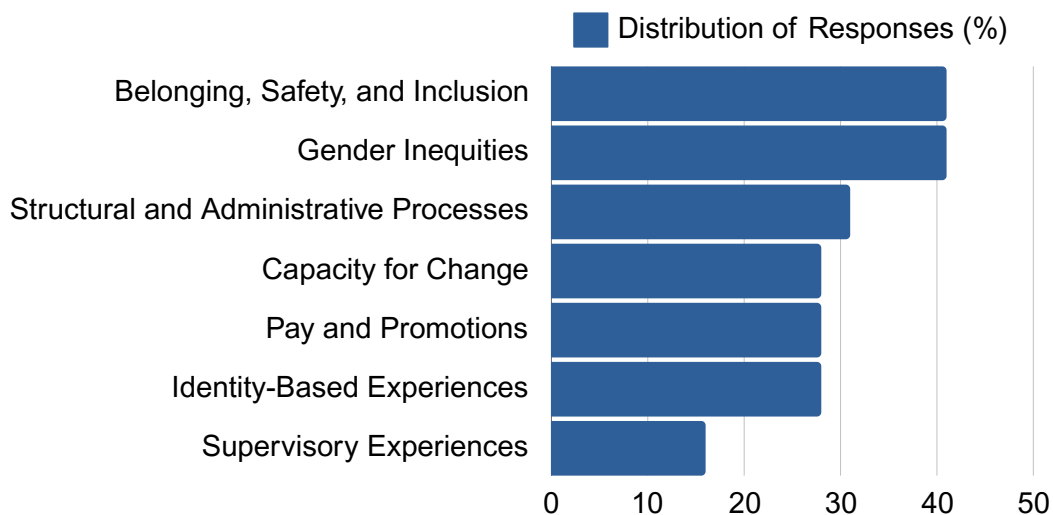
A Place of Scientific Elitism

“I would say one of the unique pieces about TRIUMF is that it's a culture of genius. There are folks who enter those doors as the award of their hard work, of their insight, of their having won the academic competition. So, you can imagine that lends itself to a culture of knowing, which for me is marked by hoarding information, being unable to change our mind, being unable to admit when we're wrong, and then what we do, pursuing a punitive ego-driven action. Because folks have been insulated, you know, within this very elitist space.” (participant 11)

Results

4. BASED ON YOUR EXPERIENCE, WHAT ARE THE MOST IMPORTANT TOPICS TO ADDRESS AT TRIUMF IN TERMS OF EQUITY, DIVERSITY, AND INCLUSION? IF YOU WERE DESIGNING THE UPCOMING SURVEY, WHAT WOULD YOU MEASURE?

Responses were grouped into 7 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

Belonging, Safety, and Inclusion

“In an ideal world, everyone's just naturally inclusive, so you can just do your science and not worry about other things. But it's not always the case. I'm worried about that on a personal level because I'm a woman of colour.... I see things that tell me that of course people are going to look at my colour and people are going to look at who I am in the most superficial sense. That's just a thing that I have to deal with as a scientist, as a woman in science. I would measure how comfortable people feel in their skin at TRIUMF, do I feel comfortable enough to just like show up as the person that I am? Or do I feel the need to change something about myself?” (participant 10)

Gender Inequities

“So, I think persistently gender representation in science is still probably what most people think of and it's of course still very important, and you look at physics and we're nowhere near where we should or could be.” (participant 8)

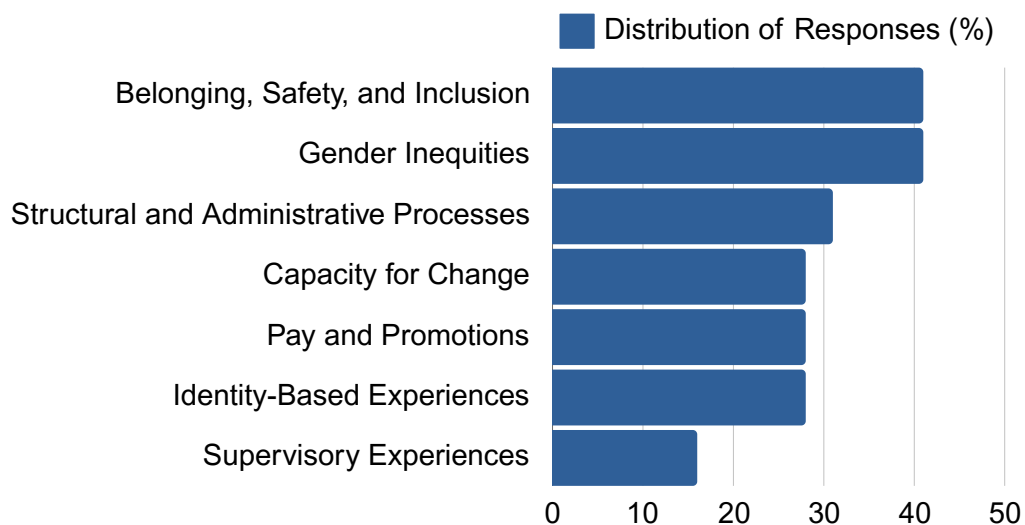
A Structural and Administrative Processes

“I would say that there are some data elements that are pretty sort of, quick, so being able to go and do an external review of all the job descriptions that were posted in recent times, for example, right, and sort of saying, does this skew the actual applicant pool that you're going to get in?” (participant 53)

Results

4. BASED ON YOUR EXPERIENCE, WHAT ARE THE MOST IMPORTANT TOPICS TO ADDRESS AT TRIUMF IN TERMS OF EQUITY, DIVERSITY, AND INCLUSION? IF YOU WERE DESIGNING THE UPCOMING SURVEY, WHAT WOULD YOU MEASURE? (CONTINUED)

Responses were grouped into 7 broad themes:



See the detailed report for trends by demographic groups

Sample Quotes

Results

Capacity for Change

“Folks have been thinking about EDI in terms of gender and STEM and just even the idea of moving beyond that to different dimensions of equity, diversity, has been an interesting challenge and steppingstone. But I think part of the EDI movement, which is now, this is an idea that sort of dawning on folks I think is that one dimension or parameter of EDI is equal to all. And it's not just about like, it's almost equity within EDI, each one of these groups, disenfranchised groups, deserves time, attention, care and so on. I'd be curious to hear and if people would be willing to speak up about their comfort with the idea of progress or change, like how comfortable are you within the areas of EDI.” (participant 8)

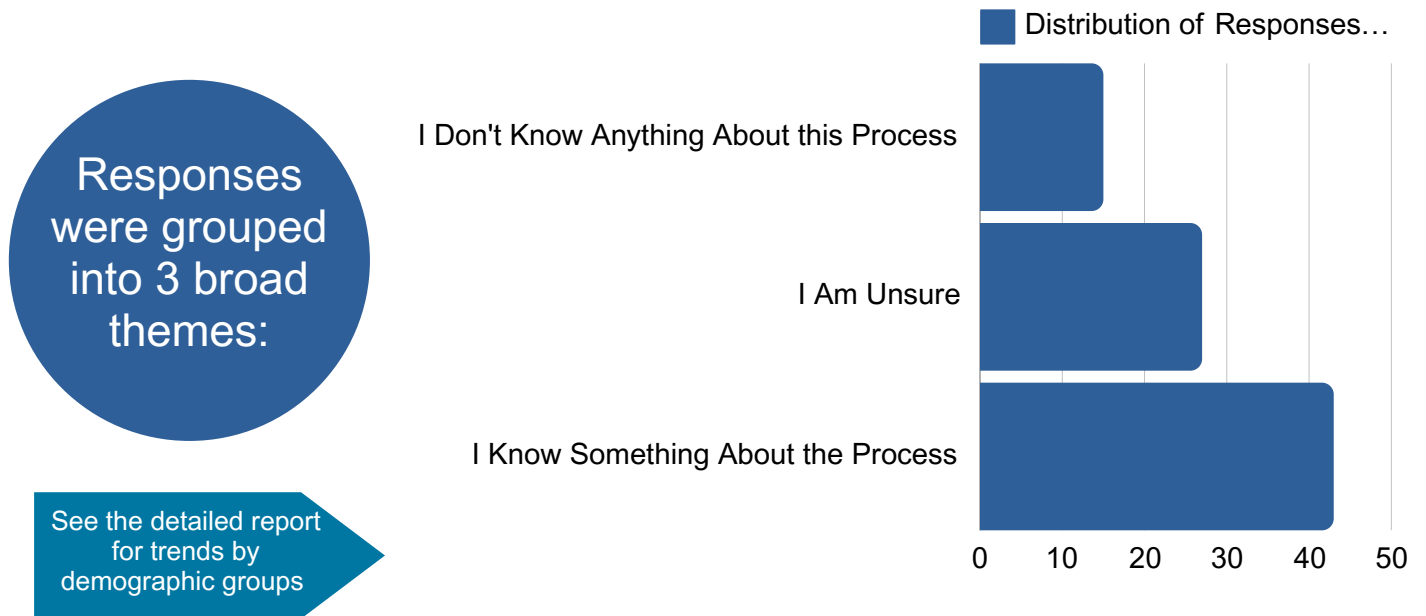
Identity-Based Experiences

“We need anti-racism to be present.... I don't know that people even have a language to understand how to have that conversation without causing harm. My second priority is reconciliation, truth and reconciliation. And those are two, those are the places where I'm fighting, fighting, fighting...” (participant 11)

Supervisory Experiences

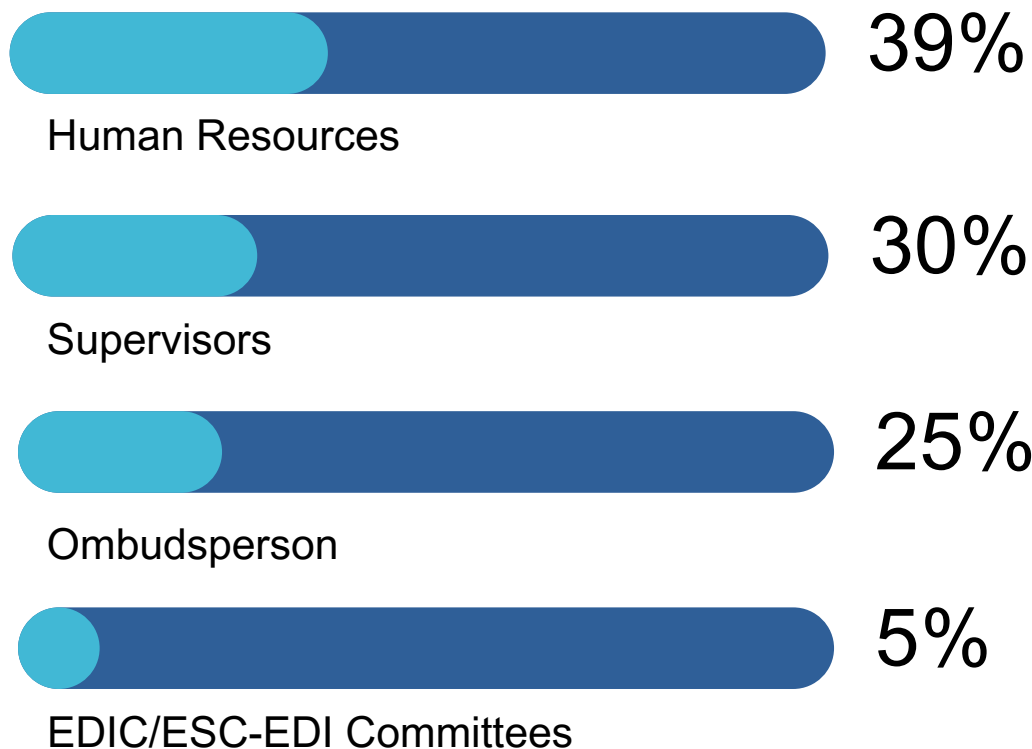
“I would measure satisfaction with your supervisor and like if you feel like you have an issue, do you feel like the supervisory chain can resolve that for you?” (participant 4)

5. WHAT DO YOU KNOW ABOUT REPORTING CONCERNS (E.G., DISCRIMINATION, UNFAIR TREATMENT) AT TRIUMF? ARE YOU FAMILIAR WITH THE PROCESS?



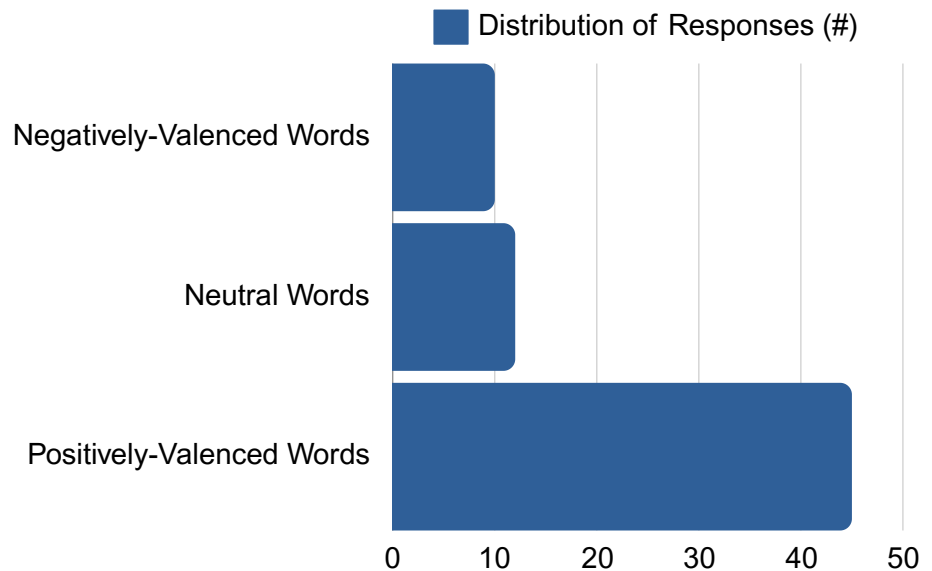
Where are People Reporting Concerns?

Results



6. IF YOU COULD USE ONE WORD TO DESCRIBE HOW YOU FEEL ABOUT THE ONGOING EDI ASSESSMENT, WHAT WOULD IT BE?

Responses were grouped into 3 broad themes:



Sample Quotes

Positively-Valenced Words

“**Hopeful**. I'm not sure I'm quite at the point of optimistic enough to expect change, but I hope it will, because we can't fix what we don't know.” (participant 51)

Neutral Words

“I think we need **clarification**. Yeah, it's like right now it's lack of clarification, it's lack of clear orientation of exactly what we want to accomplish.” (participant 21)

Negatively-Valenced Words

“I think a lot of EDI work is unfortunately, simply **performative** and not actually meaningful. And I think that these performative aspects are why people think that it is not meaningful, and not worth their time. So that's my one word.” (participant 30)

Results

KEY TAKEAWAYS FROM PHASE 1

- 1 Respondents identified the most **positive aspects** of being at TRIUMF as the meaningful scientific work, peers, and colleagues.
- 2 Respondents identified **challenges** around administrative processes, gender inequities, and the overall culture at TRIUMF. Some challenges were unique to TRIUMF, and others were systemic to the academic/research context.
- 3 In general, this subset of the community **expressed support and optimism** about the ongoing assessment. More robust data is needed to make organization-wide recommendations.

Given the positive aspects that the community highlighted in Phase 1, there is an opportunity for TRIUMF to:

STRENGTHEN

structures and processes that respond to the community's needs for transparent communication and responsiveness among leadership.

GALVANIZE

the existing momentum of the assessment process through continued communications, including messages of support from leadership.

PROVIDE

opportunities for the community to engage with each other on a social basis to facilitate relationship-building.

DEVELOP

strategy for creating a cohesive culture across those doing scientific research and those supporting the research ecosystem.

RECOMMENDATIONS FOR PHASE 2

The primary purpose of Phase 1 was two-fold: 1) to **gain a deeper understanding** of people’s perceptions and experiences at TRIUMF, and 2) to **identify areas of priority** to assess in the organization-wide survey in Phase 2.

In Phase 1, disaggregating the data revealed some trends by demographic groups (e.g., students were the largest proportion of those who cited ‘students concerns and supervisory challenges’ when asked about areas of improvement; women were the largest proportion of those who cited ‘gender inequities’ when asked about areas of improvement). To further assess these trends, in Phase 2, the survey will include demographic items so that inferential statistical tests of between-groups differences can be conducted.

Based on the responses from Phase 1, it is recommended to include three major areas in the upcoming assessment: 1) a comprehensive demographic questionnaire asking about people’s identities, education, and role information, 2) questions focused on administrative and structural processes, and 3) questions focused on experiences and perceptions of belonging, safety, and inclusion.

Assessment Areas

1

Demographic Questionnaire

- Identity (e.g., gender identity, race, age)
- Workplace information (e.g., role, job area)

Collecting information about respondents’ identities and roles allows for disaggregation of the data between groups, and inferential statistical comparisons.

2

Structural and Administrative Challenges

- Perceptions of pay equity (e.g., “I am paid fairly.” [1] *Strongly Disagree* to [7] *Strongly Agree*)
- Resource access (e.g., “to what extent do you agree that you have adequate access to the following resources?” [1] *Strongly Disagree* to [7] *Strongly Agree*)

Collecting information about respondents’ perceptions and experiences of pay and promotion-related processes, administrative processes related to reporting concerns, and resource access allows for comparison across job areas and demographic groups.

3

Belonging, Safety, and Inclusion

- Psychological safety (e.g., “It is safe to take a risk on our team.” [1] *Strongly Disagree* to [7] *Strongly Agree*)
- Institutional trust (e.g., “My workplace takes proactive steps to prevent harassment and/or discrimination.” [1] *Strongly Disagree* to [7] *Strongly Agree*)

Collecting information about respondents’ perceptions and experiences of related to belonging, safety, inclusion (and associated concepts) allows for comparison across job areas and demographic groups, providing insights about the organizational culture.