



Targeted call for FSC Project Partners

Instructions to complete the application form

Please refer to the Future Skills Centre's (FSC) **Targeted Call for FSC Project Partners Guidelines** document when preparing your application.

This application form is structured to help you address the selection criteria for this call and give reviewers easy access to your project information. This form is divided into the following sections:

- Part 1 - General information
- Part 2 - Project summary
- Part 3 - Project details
- Part 4 - Project work plan and budget
- Part 5 - Declaration

If you would like to request accommodations or other types of support, please contact Maysa Mourad by email at targetedcall@fsc-ccf.ca or by phone at 437-331-0613.

If you have any questions while compiling your application, you may contact our team at targetedcall@fsc-ccf.ca. We would be happy to answer any questions.

PART 1 - GENERAL INFORMATION

1. Lead organization

Name of lead organization

Ontario Tech University (UOIT)

Name of project lead

Sue Coffey

Project lead's preferred method of contact (email address and/or phone number)

Sue.coffey@ontariotechu.ca 647-919-5576

2. Proposed project

Project title

Extending Our Reach: Sustaining Support for Mid-Career Workers with Disabilities and their Employers

Project start and end dates

July 1, 2022 – Sept 30, 2023

Projects must end no later than September 30, 2023.

Amount requested from FSC (total)

\$795,872

Project partners and their location

Ontario Tech University (Oshawa)
York University (Toronto)
Durham College (Oshawa)
Nipissing University (North Bay)
NEADS- National Educational Association of Disabled Students (Ontario)
AQEIPS- Quebec Association for Equity and Inclusion in Post-Secondary

Education (Quebec)

MLPD- Manitoba League of Persons with Disabilities (Manitoba)

CCD- Council of Canadians with Disabilities (Manitoba with National membership)

***Note: Potential additional member anticipated**

PART 2 - PROJECT SUMMARY

1. Proposed project “one-liner”

How would you describe your new project in one sentence?

This project extends the reach of the MCWD FSC funded project through impact analysis research, upscaling for sustainability, and development of a parallel stream within the MCWD website/app for employers.

(30 words maximum)

2. Proposed project summary

How would you describe your new project and how it builds on the testing and learning of your current project to date?

We suggest that this summary covers the main information about how your new project addresses all selection criteria of this targeted call.

The proposed project represents an important opportunity to invest in the career development and well-being of mid-career workers with disabilities (MCWD) and support efforts to move towards a more equitable and inclusive economy by building upon the knowledge and resources developed in the first phase of this research. First and foremost, the project will adopt a quasi-experimental approach to evaluate the impacts of web-based tools and resources developed in the first phase of this research on the career adaptability and employment outcomes of MCWD, the results of which may be used to inform the replication of this approach for other communities facing barriers to employment. Second, the project will invest in the development of additional content and resources, including podcasts and webinars, which will enhance the reach of the material and enhance the overall user experience by providing timely updates in rapidly changing labour markets. Third and finally, the proposed project will address major barriers identified by MCWD in the first phase of research concerning employers lack of awareness and knowledge concerning legal requirements and best practices for accommodating and supporting MCWD. The

project will therefore develop content and resources for employers of MCWD and share these on an employer portal on the MCWD website. Collectively these activities provide an important foundation for enabling and sustaining support for MCWD through evidence-based and adaptive resources.

(250 words maximum)

3. Additional scope

How does your new project go beyond the scope of your current FSC-funded project?

The additional scope may include expanding or extending a project model, its principles and/or components. For example, it may include expanding the project to new regions or jurisdictions, including new or larger target populations, and testing different delivery formats to understand what works to address demands. This would assume the potential for bringing additional partners to deliver the project at a broader scale. The additional scope must be grounded in new concrete learning questions to contribute to your work and of others in the skills ecosystem.

This proposal extends the MCWD FSC funded project through three primary activities, including an impact analysis, investing in the user experience through further content development and continuous improvement, and developing an employer portal with resources for employers seeking to hire MCWD. First, by evaluating impacts of the website tools and resources on the career adaptability and employment outcomes of MCWD we will generate evidence about the effectiveness of web-based interventions and develop insights for improving content and design. Second, by investing in the development of additional resources, including podcasts and webinars, we will foster greater user engagement by providing regular updates, covering emerging topics of relevance to MCWD, and helping to ensure the long-term sustainability of the website. Third and finally, by developing a web-based portal for employers we will address concerns raised by MCWD in our research concerning their lack of awareness and knowledge about employing persons with disabilities.

(150 words maximum)

4. Importance of the additional scope

Why is the additional scope of your project important to your organization, sector and target populations? Why is it timely?

Persons with disabilities face immense and longstanding challenges in finding and maintaining employment, resulting in high levels of unemployment and underemployment. At the same time, we know that full participation in society for all persons, including those with disabilities, is essential for supporting economic growth and productivity, health and social

justice. However, labour markets are changing swiftly and have been impacted greatly by the COVID-19 pandemic. These changes present both new opportunities for persons with disabilities, such as increased acceptance of remote work, as well as new challenges, including the loss of in-person supports. While data are not yet available to determine the actual impact on persons with disabilities, it can be extrapolated from existing evidence (e.g., Canadian Survey on Disabilities, 2017) that the need to extend employment supports for persons with disabilities and employers seeking to hire persons with disabilities could not be more timely or more urgently required.

(150 words maximum)

PART 3 - PROJECT DETAILS

In this section, please provide information about how your new project supports each of the selection criteria of this targeted call.

We provide prompting questions to help you address all criteria in the application guidelines. You may prepare this section following the prompting questions in sequence or using your own sections and narrative.

Although you have flexibility regarding the format for this section, please make sure that you address all criteria according to the prompting questions. Reviewers will assess your application by scoring each criterion individually.

This section should not exceed **seven** pages. We anticipate that most proposals will present this section in **five** pages.

A. RELEVANCE

a. How does your new project align with FSC's Strategic Priorities? The project to provide MCWD with supports for job transitions demonstrates a commitment to agility in the present climate and as well as attention to how a project impacts its intended audiences. This extended project will allow the researchers to identify "what works" in apps and websites developed for workers and employers, including those MCWD who are self-employed. With the changes associated with the pandemic working conditions, employment opportunities and processes for finding and changing employment are dynamic. This extended project aligns well with the FSC focus areas of excellence, collaboration, inclusivity, agility and responsiveness.

b. How does your new project address recognized systemic challenges about future skills in Canada?

Twenty two percent (6.4 million) of Canadians age 15-64 have a disability (Statistics Canada, 2019). Workers with disabilities face lower employment rates and are more likely to be displaced in today's challenging and changing labour market. The audience the proposed project aims to support is mid-career workers with disabilities, an under-represented and vulnerable group within the Canadian labour market, as well as employers of mid-career workers with disabilities.

Mid-career workers with disabilities are not a homogenous population. This category of workers includes individuals with pre-career and mid-career onset of disability. They vary in age, type, severity of disability and level of education- all of which are factors that have been identified as determinants of the extent and quality of labour market participant (Statistics Canada, 2019). While the work-related experiences of an individual mid-career worker with a disability is unique, collectively this sub-population faces many of the same challenges and issues as other of persons with disabilities in the labour market when attempting to establish, sustain and grow their careers. These issues have been well documented within the Canadian literature and supported by literature from other countries. Compared to employees without disabilities, workers with disabilities experience a number of disparities such as, report lower pay levels, job insecurity as well as poorer treatment in the workplace. Thus, workers with disabilities are all the more vulnerable in the current unpredictable and unstable labour market (Santilli et al., 2014).

This project presents an opportunity to extend and further potentiate our previously funded FSC project in which we developed resources and a website/app for MCWD. The ongoing broad focus being to ameliorate these barriers through on fostering and strengthening the career adaptability of MCWD.

Specifically, this project further identifies and builds on the skills development needs of mid-career workers with disabilities relating to career adaptive responses, a key aspect of career adaptability integral to building and progressing through one's career (Rudolph et al., 2017; Savickis, 2013, 2005; Zacher, 2014). Additionally, this project moves beyond the initial focus, by adding components of impact analysis through a quasi-experimental design to determine the effect of interaction with the website/app and the resources found therein.

This project aligns with FSC's recognition of the need for systemic change at all levels of employment in Canada to include all persons. In the first phase of this project, we found that MCWD are finding acceptance in non-profit organizations and government employment. They also indicated that the job seeking was more precarious for them than for persons who do not identify as having a disability. This project wants to focus on career adaptability, so the extended research on the impact of the apps will build on that. Another challenge will be to reach more employers across sectors other than government and non-profits to gain more understanding of barriers and success stories of MCWD in those sectors. This will increase our understanding of what works.

c. Explain how your proposed project fulfills the demand for your service. Who is demanding this and how do you know? Why is it timely?

Based directly on our findings from our initial FSC funded project, including online survey data and focus group responses from mid-career workers with disabilities, employers, and advocate groups. We have developed a proposal that extends the initial website/app resource development, while focusing on impact analysis for users of the website/app and its resources. Additionally, we will extend these resources and tools to promote sustainability of the website/app and increased user engagement. We will also create a parallel stream within the website/app for employers, with tools and resources, including a focus on national standards and regulation around employment and accessibility for persons with disabilities.

The project aligns with FSC's role in the Canadian skills development ecosystem. Our partnership with FSC continues to emphasize the importance of cross-sectorial collaboration to ensure an evidence-based and MCWD-informed website/app to improve and build the skills, information, and tools that MCWD require to flourish in the future and transition effectively into the workplace.

B Innovation and evidence

a. In what way is your project innovative by pursuing a new way of doing things? If

applicable, how is your project model informed by evidence?

This project is innovative because it addresses the gaps in knowledge identified by mid-career workers with disabilities and employers. The evaluation of outcomes through impact analysis and tool/resource evaluation will fill knowledge gaps regarding workers perceptions of skills and support required for a mid-career transition change.

This innovative project addresses issues of mid-career change and creates knowledge, which in turn can shape policy and lead to the design of innovative resources, practices, and education reform geared for mid-career workers living with disability. This is particularly important in this unprecedented juncture in the labour market history in Canada and elsewhere in which technology and social change are remapping the landscape of work and population trends, and legislation and policy are reshaping the demographics of the workforce. Persons with disabilities stand to make significant gains (Prince, 2014) and make contributions to Canada's economic growth; yet at the same time their market participation is threatened by factors such as economic austerity measures, workplace discrimination, and employment fluctuations during and following the Covid-19 epidemic.

b. How do you plan to generate evidence and insights during your project? What new knowledge will it generate and what are the potential implications of your approach for the broader skills ecosystem?

Evidence will be generated through a formal evaluative process applied to all components of the project. Focus 1 is designed to gain insight into the impact of the website/app and its resources and tools on participants through a quasi-experimental approach. All tools and resources are based on a framework drawn from the literature (e.g., career adaptability factors) or directly on our participant feedback. New insight into the effect of these types of resources and tools and the way they are made available to participants (website/app) as well as the target audience (MCWD and employers) will all be gained through this thoughtfully developed protocol.

C. Learning

a. What learning has your current project with FSC generated and how has this learning informed the scope of your new project?

Learning from our current project with FSC generated important insights into the experiences and needs of mid-career workers with disabilities. These insights helped to support the development of some of the resources for MCWD on the website/app, as well as technical and functional components of the app itself. Additionally, participants were explicit in describing the need to extend our reach beyond just MCWD to provide a place where both employers and potential employees would seek out relevant information. The focus for development of additional MCWD and employer resources is based on participant feedback. Also, understanding user experience of the website/app, beyond initial usability testing is critical to gaining insight into the outcomes of the project and how they may be transferrable to other types of users.

b. What are additional learning questions that your new project will address?

The objectives of the project are listed below, each defined based on new learning questions:

Focus 1: Impact Analysis and Identifying Topics/Trends in Literature

- a) To identify topics and trends using a natural language processing tool approach to inform further development of resources
- b) To conduct a quasi-experimental study and evaluate the impact of the website/app on career adaptability, user knowledge and skill, job seeking behaviours and outcomes

Focus 2: Investing in the User Experience through Further Content Development and Continuous Improvement

- a) To develop and evaluate additional resources for mid-career workers with disabilities to be housed on the website/app
- b) To increase participant engagement on the website/app through the enhanced focus on community engagement tools (e.g., forums)

Focus 3: Developing an Employer Portal with Resources for Employers Seeking to Hire MCWD

- a) To create a parallel employer focussed stream on the website/app
- b) To develop and evaluate employer-focused resources

D. Equity, diversity and inclusion

a. Does your project incorporate in its design and execution the perspectives of end-users and other stakeholders, particularly groups facing barriers? If so,

how? If not, why not?

b. What are the practices and activities of your project that directly support and are grounded in principles of equity, diversity and inclusion?

c. Will your project further equity, diversity and inclusion in the field or sector of your project? If so, how? If not, why not?

The target population of the project, mid-career worker with disabilities, represent a heterogeneous equity-seeking group consisting of individuals with intersectional identities. The project incorporates the perspectives of these end-users and other stakeholders through its full partnership with NGOs that provide support and advocate for persons with disabilities. The project has an advisory group with members with different intersectional identities within the disability community. These stakeholders will be actively involved in the various stages of the project as developers, contributors, and advisors. To ensure that the project is grounded and supports the principles of equity, diversity, and inclusion, we have devised and will implement several practices/strategies.

- Reorient the team member recruitment process by working within an equity framework to re-evaluate our notions of fit and merit, connecting equity-minded competencies with the skills and abilities required for the project. For example, rather than focusing on whether a particular degree level is needed by an individual to participate or support the project, we will continue to examine and challenge our ideas and perceptions to unearth biases. We will also engage in discussion to identify the knowledge, skills, abilities and perspectives that are needed and will potentiate project success.
- To ensure that team members with development needs have equitable access to training/development opportunities, the project has set the objective to promote and support development opportunities for all team members that are intended to improve their research capabilities and potentiate the success of the project. The project leads will take responsibility to coach team members to identify development needs, openly communicate training/development opportunities directly or indirectly associated with the project, and facilitate the match of needs with opportunities.
- A member of the team who holds an institutional Teaching Chair in EDI position will take on the role of EDI advocate. They will work to raise awareness of issues related to inclusion and ensure that, as an emotional skill, being inclusive is top of mind and is being continually practiced.

Through its aim to support and sustain MCWD's career adaptive skills and provide employers tools and resources to welcome these individuals into their workforces, the project will further equity and diversity within the employment sector. The expected impact is to potentiate the likelihood that MCWD experiencing challenges accessing or maintaining employment will achieve their goals.

E. Capacity

a. What are the skills, experience and resources available within the lead organization (and partners, if applicable)? How will these elements support the successful execution of the project?

The project team includes researchers from four academic institutions and four national and not-for-profit organizations. We have an ongoing collaboration and have strong backgrounds and track records, individually and in smaller collaborations among parts of the team, in requisite areas for this project. Coffey, Anyinam, and Da Silva use their expertise in supporting students with disability in higher education domain. The team has extensive experience with technology and application development for post secondary students with disability (psdnet).

Our project builds on a number of long-term collaborations between the team members and partner organizations who have a proven ability to successfully propose and manage large research projects, i.e. ONCAT. Space does not permit a full list of the current set of interactions but a selected set is provided here. Many of the team members are from the partner organizations such as the National Education Association of Disable Students (NEADS), Manitoba League of Persons with Disabilities (MLPD), Quebec Association of Post-secondary Students with Disabilities and Council of Canadians with Disabilities (CCD) and collaborated on phase 1 of the project and on developing the educational resources.

b. Does your current project with FSC hold a good track record? Have you faced any challenges? If yes, how have you addressed them?

Our project faced some challenges associated with timelines for REB approval, the prospect of data sharing and what that might look like, and ultimately the challenges associated with the Covid-19 pandemic and subsequent changes to virtually all aspects of Canadian life. We have been able to overcome our challenges through a project extension and have developed processes to move through any future challenges.

F Coherence

a. What are the main project activities that will enable you to meet the project objectives?

1. Identifying Topics and Trends

The peer-reviewed literature on disability and employment, like most academic literatures is facing, an emerging paradox involving rapid growth in the availability of information alongside a relatively slow pace in terms of meaningful advances in policies and practices to address barriers to employment. Although most reviews of scientific literature include a

relatively small subset of papers, with recent advances and increased accessibility of natural language processing tools it is now possible to provide a more comprehensive analysis of a set of text documents, known as a corpus (Lin and He 2009, Rosenthal et al. 2017, Dieng et al. 2019), potentially resulting in novel insights about the topics and trends that exist within scientific literature. For example, topic models have been used in recent years to provide real-time supportive resources for crisis counsellors (Dinakar et al. 2014), quantify the effects of COVID-19 on mental health (Biestler et al. 2020) and identify public health trends (Paul and Dredze 2012).

Therefore, this research will use dynamic topic models to identify and track the evolution of topics within scientific literature (Blei et al., 2003, Dieng et al., 2019) and complement the expert-guided scoping review conducted previously. Dynamic topics models are generative, identify topics based on the co-occurrence of words within documents and represent topics as a mixture of words. Dynamic topics models unfold over several steps, including pre-processing where generally uninformative stop words such as the, is and are removed; words are lemmatized, which is a process that groups together words with different inflections (i.e. talked, talking are adjusted to talk), tuning the number of topics based on topic coherence (Mimno et al. 2011, Stevens et al. 2012), and then estimating the model which represents topics as a mixture of words and provides estimates of the relative distribution of those topics over time. A data science consultant, already identified by the project team will be hired to perform the analysis. This will enable the team to include new literature continuously as it is published. This process will provide a resource for researchers studying workers with disabilities and for organizations to guide and inform development of more educational resources, policy and procedures.

Impact Evaluation

The impacts of the website/app on career adaptability and employment of mid-career workers with disabilities will be examined using a quasi-experimental design. More specifically, we will use an untreated control group design with dependent pre-test and post-test samples with switching replications (Shadish et al. 2002) to assess the extent to which usage of the website and its content is associated with changes in the foundational ingredients of career adaptability, including concern, control, curiosity and confidence; career satisfaction and employment status. This design, which is outlined in figure 1, involves collecting data at least three points during the research process and switching treatment groups across replications has several desirable characteristics. First, by including pretests and post-tests with a randomly selected control group we will be better equipped to estimate the effects of the website/App tools and content on career adaptability and employment outcomes by addressing threats to validity related to maturation, history, repeat testing and selection (Shadish et al. 2002). Second, by providing treatment to the control group at a later stage of the research process, we will address potential ethical concerns about withholding potentially valuable information, knowledge and resources from individuals. Third and finally, by assessing the impacts of treatment in the first group at two-time points,

we will develop insights about the longer-term effects of the treatment on career adaptability and employment outcomes.

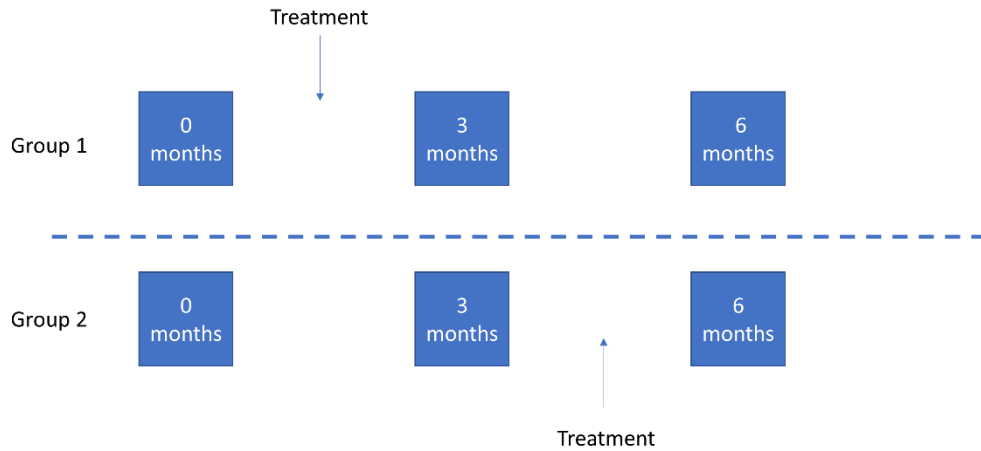


Figure 1: Untreated control group design with switching replications

A total of 120-150 mid-career workers with disabilities (35-49 years of age) will be recruited to participate in this study through partner organizations and will be offered compensation for their participation at each stage of the research process (i.e. mixed method data collection at 0, 3 and 6 months). Participants will be randomly assigned to treatment (group 1) or control (group 2) groups and will complete a pretest survey which will collect information about the respondent, including their age, disability(es), employment status, career satisfaction, work experience and sector, job seeking history and behaviours, as well as measures that will allow us to assess their career adaptability and measure changes over time. Participants in group 1 will receive instructions about accessing and using the website/App and will be required to participate in an online forum during the treatment period. Participants in group 2 will be provided links to readings on career adaptability and general resources focusing on employment that are not specifically tailored to mid-career workers with disabilities. The first post-treatment survey will then collect information on career adaptability, career satisfaction and employment outcomes to evaluate impacts while also inquiring about their perspectives on the relevance and utility of content, tools, and resources. This will then be followed by providing treatment to group 2 and evaluating the longer-term impacts of treatment within group 1 and the impacts of tailored content and resources for mid-career workers with disabilities in group 2. Basic website/App usage statistics (i.e. logins, duration of usage) and participation in peer mentoring sessions will be tracked as part of the research process, and thresholds may be established to address potential threats related to adherence to treatment.

Focus 2: Development of additional resources for mid-career workers with disabilities

Second additional resources provided through the targeted call will be used to develop additional resources and support continuous improvement of web-based resources for MCWD. Specifically, resources will be used to support the development of 4 podcasts and 4 webinars to share the experiences and insights of MCWD and improve, update and enhance the online experiences of users. Podcasts and webinars will serve several critically important functions, including providing opportunities to promote the website and its resources, disseminating knowledge through additional media to enhance accessibility, and providing regular updates to materials to encourage increased and regular use of website resources.

Focus 3: Development of employer-focused resources

Third, the results of the first stage of this research clearly highlighted gaps in terms of the availability of tools and resources for employers of Mid-Career Workers with Disabilities to understand their legal requirements and opportunities to remove barriers. Many MCWD expressed frustrations and challenges in securing employment, feeling that employers choose to avoid hiring MCWD as a result of their misperceptions about the costs and complexity of accommodation measures. They also expressed concerns about the constant need to educate staff, management and ownership.

b. Explain how your project presents good value for money. How is your budget reasonable, appropriate and aligned with your work plan?

This project provides value for money through the breadth of deliverables. Through each phase of the proposed workplan, the investment in the initial FSC funded project is expanded and insight is gained into how best to support MCWD and employers. Impact analysis will provide significant insight into both this project, as well as the overall conception of such a resource repository. New resources available for mid-career workers with disabilities and employers, designed based on the identified needs in the literature as well as data collected in our initial FSC funded project, will have important utility in promoting the website/app, in filling a gap identified in the availability of such supports, and in evaluating what works best.

(3,500 words maximum)

PART 4 - PROJECT WORK PLAN AND BUDGET

1. Please submit a **one-page work plan** with key milestones and their timeline. **Do not** include detailed activities at this time. If your proposal is selected, we will work with you to develop a detailed work plan.

2. Please complete the project budget template provided to you as part of the application material.
 - a. Include only **new funding** associated with your new project and its additional scope. Please do not include the existing funding that is already part of your current funding agreement with FSC.
 - b. If applicable, identify new funding pending or confirmed for this project from other sources. **This funding should be included as in-kind contributions. (Please note that funding from other federal sources cannot be counted towards in-kind contributions)**
3. Please submit your work plan and budget by sending these files, along with this completed form, to targetedcall@fsc-ccf.ca.
4. You may use the space below to provide comments to accompany your work plan and/or budget.


(100 words maximum)

PART 5 - DECLARATION

By submitting an application, the lead organization and its partners agree to the requirements of the following sections, detailed in the guidelines outlined for this funding call, and they affirm that they comply with and/or commit to the following:

- Organization eligibility.
- Active support for co-creating and carrying out an evaluation with an FSC-approved evaluator, if FSC decides an evaluation is appropriate for this project.
- Active engagement in knowledge mobilization activities related to the project.
- Compliance with the Tri-Council Policy Statement on the Ethical Conduct of Research Involving Humans.
- Confidential due diligence inquiries from Future Skills Centre into the applicant.

Signature



Name of signing authority

Carol D Rodgers, PhD

Dean, Faculty of Health Sciences

Date

November 2, 2021