Public Library-University/College Research Partnership Toolkit

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Introduction

Amid the COVID-19 pandemic, economic shifts, the ageing of the population, technological advancements, and climate change, public sector institutions can draw on credible research to help navigate evolving societal challenges and opportunities.[1-2] Within the context of this toolkit, research is broadly understood as the systematic collection and analysis of materials or information to develop informed conclusions. To be systematic, research typically entails developing a research question, selecting appropriate methods for collecting and analyzing materials or information, and testing, revising, or developing a theory or an explanation that responds to the research question. Public libraries and publicly-funded universities and colleges (referred to as campuses for brevity) are both well-suited to and have much to gain in partnering to conduct research. These two institutions share a commitment to disseminating trustworthy information and contributing to the public good.[3-6] Likewise, they have distinct but potentially complementary mandates, strengths, and resources. As trusted community hubs, public libraries can support campuses in connecting with research participants, disseminating research findings, and identifying the needs, strengths, and challenges of their broader communities.[7-9] By sharing research expertise and resources, campuses can assist public libraries in collecting, using, or sharing raw data and information to enhance, expand, and make strategic decisions about services and organizational practices.[10-11] Likewise, engaging in research can be a way that public libraries seek to address a community problem or need.

Public libraries often have strong relationships with Library and Information Sciences (LIS) departments and academic libraries.[12-13] Grounded in a shared understanding of the practices, knowledge, and purposes of libraries; these partnerships can form naturally. With this shared foundation, public libraries and LIS departments can easily identify areas where each partner can support one another to achieve mutually-beneficial outcomes. What is less frequent, however, is partnerships with other campus divisions, such as social science, business, and engineering faculties. Despite lacking a common foundation in LIS, these partnerships promise to provide unique vantage points for investigating and understanding library services as they relate to community needs, challenges, and strengths (see for example Lenstra & D'Arpa's (2020) work on food justice).[14] Because partnerships with campus faculties external to LIS are less common, this toolkit aims to be a resource that supports public libraries throughout the process of forming and carrying out this type of public library-campus partnership.

Library workers can use this toolkit to help guide their efforts in identifying research needs, strategically selecting campus partners, and developing research plans collaboratively that address each organization's roles and responsibilities. This toolkit is informed by a synthesis of literature relevant to supporting strong research partnerships. Several frameworks exist to promote sustainable, meaningful, and mutually-beneficial collaboration between distinct organizations.[15-18] While there is a wealth of knowledge on community partnerships, there is little tailored specifically to the context of public library-campus partnerships. In addition to relying on scholarly literature, the principal author also draws on personal experience working within research partnerships between McMaster University and Hamilton Public Library (HPL) over a year (May 2021-May 2022) and surveyed public library workers about their research needs and practices at Hamilton Public Library. The examples of public library-university research partnerships, common documents used to develop partnerships, and templates found here were generously provided by or informed by McMaster scholars, McMaster's Industry Liaison Office, and HPL staff.

The toolkit is divided into three sections that contain lists of items to consider when developing partnerships and a list of annotations for suggested reading or resources. The first section is intended to help prime readers to identify research needs, consider the benefits and challenges of pursuing a research partnership, and reflect on how and to what extent they wish to be involved in a partnership. The second section is intended to help guide readers in planning and carrying out a partnership. The final section offers guidance on developing formal agreements, such as Memorandums of Understanding and data-sharing agreements. As partnerships between organizations are comprised of distinct individuals and are shaped by unique and dynamic external and internal contexts, no two research partnerships are likely to be the same. Rather than a prescriptive list of best practices or steps, this toolkit can be thought of as a platform for intentionally and strategically plotting out public library-campus partnered research.

Acknowledgement

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Section 1: Considering Partnerships

The first section of the toolkit provides the groundwork for considering what an impactful partnership might look like, along with the factors that can advance or encumber the development of this partnership. This section's 'tools' include a list of four overarching elements of impactful research partnerships discussed in scholarly literature on community-university engagement and public library partnerships. This list is followed by a comparison of the external and internal factors that shape a public library and a university's approach to research. Recognizing that research partnerships will differ in relation to a public library's goals and capacity, this section also describes common approaches to partnership ranging from minor to extensive public library engagement in the research process. As noted in the introduction, several frameworks exist to support community-university partnerships. Although these toolkits are not specific to public libraries, they may still be applicable and offer helpful guidance. In this section, we, therefore, include an annotated list of resources to support research partnerships. The section concludes with a checklist to aid public libraries in identifying the factors that may shape their future research partnerships.

1A. Elements of Impactful Research Partnerships

Community-university research partnerships (CUP) are 'alliances' between a campus and one or more community organizations (non-profit or public sector). In such a partnership, each organization recognizes that they can accomplish together what might be difficult or even impossible alone.[1] CUP is "a method for ensuring research is useable and helpful."[2] There is a wealth of scholarly literature that delineates the elements of partnerships that have a positive community impact. In their book focused on Participatory Action Research (PAR), an approach to CUP, Chevlier and Buckles (2019) describe doing justice to the literature on PAR to be both "a formidable task" and potentially "a foolish" one because this task reduces the varied and diverse field of research partnerships to a single phenomenon.[3] Rather than systematically mapping out literature on CUP, this tool provides an overview of the common elements discussed in this vast field of knowledge.

Common elements of impactful research partnerships discussed in CUP literature are shared goals and complementary interests, trust and reciprocity, sustainability, and equity. While these elements are separated here, they are in practice intertwined. For example, Maiter, Simich, and Jacobson (2008) make a compelling case for positioning reciprocity as a safeguard against ethical risks of community-based research (see Equity).[4] A one-sided partnership, where a partner is giving more and benefiting less than their counterpart may not survive the research project or will compromise the possibility of future collaborations (see Sustainability).[3] Sustainable research relationships between organizations that persist over time and amongst challenges may both be grounded in trust and facilitate opportunities for building trust between the partners (see Trust and Reciprocity).[5] The list below provides a brief description of each element.

Shared Goals and Complementary Interests. For a partnership to function, partners need to want, be working towards, and be willing to share resources to accomplish the same ends.[6-7] Researchers commonly emphasize the importance of partnerships being mutually-beneficial. Partnerships should thereby be built upon shared goals and complementary

interests. Goals in a CUP are the desired outcomes and impacts of the research activities, while complementary interests are the reasons or motivations distinct organizations contribute to a joint initiative.[8-10] For example, a shared goal might be to advance digital literacy skills in a community via a research project. While the university researcher is interested in building a theory related to digital skills, a public library worker may be interested in enhancing the quality of their digital programming.

An organization's interests naturally determine the skill sets of employees and volunteers, the nature of their physical and social spaces, their community reputation, and the products or services they offer. Universities and colleges are interested in advancing science, innovation, training, and knowledge, and therefore have members who are equipped to do research. Public libraries are interested in ensuring equitable access to community resources, culture, and information for their communities, and therefore have employees who are skilled at community engagement, managing, and using information systems. Each organization with its differing interests thus has different expertise and resources to bring to the shared research endeavour. An organization's interest in a project will likely influence what and how they contribute. While shared goals ensure that partners want and are working towards the same ends, complementary interests help partners cultivate synergy.[7]

To ensure a partnership is grounded in shared goals and complementary interests, each organization should communicate transparently and establish that they are on the same page in the initial planning stages.[3,5] This process may take place while discussing a governance structure for the project, developing a Memorandum of Understanding (MOU), or creating a data-sharing agreement.[11] Before entering a research partnership with a university or college, public library workers can reflect on how the proposed research aligns with their library's mission, vision and values.

Trust and Reciprocity. In mutually-beneficial impactful partnerships, both organizations foster a sense of trust and reciprocity. In such partnerships, there is a give and take in the relationship and all stakeholders are willing to share in both the risks and rewards of partnering.[12-14] In CUPs, trust is the expectation that partners will do what they say they will do and will not betray or harm the other.[5] In partnerships characterized by reciprocity, each organization gives of their knowledge and resources while benefiting from those belonging to their partner.[12] Without trust, organizations may be reluctant to share resources.[15] Trust and reciprocity are thereby linked.

Central to building trust and encouraging reciprocity is establishing transparent and clear channels of communication.[16-17] In research partnerships that require substantial resources and time, partners may establish an advisory committee or appoint a research coordinator who can help facilitate communication.[16] An advisory committee or coordinator can ease the process of communicating across organizational cultural differences.[18] Partners may also build trust and encourage reciprocity via the process of drafting written agreements, such as but not limited to a Memorandum of Understanding (MOU), a data-sharing agreement, a data-management plan or protocols for engaging in the partnership (see Section 3 for definitions). To foster reciprocity, partners can develop a clear plan on how to disseminate findings and create research outputs that are useable and relevant to all stakeholders.[19-20] Throughout the research process, partners should consistently communicate as research is often an iterative process that moves back and forth between planning, doing the research, disseminating the findings, and measuring success.[11,17] This consistent communication may take the form of regularly scheduled meetings.

Sustainable: Partners should ensure that they have the collective capacity to see the project from its conception to its completion. The sustainability of a partnership is dependent on several factors, such as sufficient finances, space, staff capacity, trust and reciprocity, a strong foundation for partnership (shared goals), and organizational and institutional support.[21-23] When there is a lack of organizational and institutional support, the project may be delayed if a member of the research team experiences tensions between their research and workplace duties and responsibilities. As research projects often target only an aspect of a complex social or community phenomenon, sustainability also encompasses the continuation of the relationship between partner organizations after the research project has come to end.[24-25] Partnerships built solely on relationships between individuals, thereby lacking organizational and institutional support, run the risk of falling apart when an individual leaves their organization.[21]

Strategies for fostering sustainability include establishing strong project management, drafting realistic timelines for all stakeholders, and amassing the necessary resources to achieve the project's outcomes.[3] To ensure the necessary finances and to bolster institutional support, partners may collaborate on acquiring a grant.[2] Likewise, partners may seek to identify and have a plan to overcome institutional barriers to research upfront, such as securing a grant that provides a salary replacement for a public library worker if a project requires extensive staff time.[14] Lastly, partners can discuss and develop agreed-upon methods for dealing with conflict or staff turnover. [5,26]

Equity between partner organizations: Equity within a research context is generally understood as the task of identifying and removing the barriers and biases that prevent people and communities from benefiting and participating in research.[3,27] Equitable community-engaged research projects are those where both partners can equally contribute to and shape the research process and outcomes.[3] Diversity and inclusion are likewise two concepts that are intertwined with the principle of equity. The Research Council of Canada defines diversity as "differences in race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression, and age" and inclusion as "the practice of ensuring that all individuals are valued and respected for their contributions and are equally supported".[27] Promoting equity within a research partnership helps to ensure that diverse partner organizations and the individual research team members can contribute their knowledge and expertise to the project in ways that advance their shared goals. Equity is an essential component of robust community-engaged research because it helps to ensure that a project benefits from the strengths and knowledge of all stakeholders, a phenomenon often referred to as "inclusive excellence".[3,28] Community-engaged researchers often use the terms, 'co-production' or 'co-creation' of knowledge to draw attention to this important facet of CUPs.[29-31]

To be equitable, partners need to identify and mitigate unequal power relations between the individuals, organizations, and communities that comprise the partnership.[32-33] Power can be understood as the ability to influence.[34] Mitigating unequal power relationships can take the form of sharing resources, expertise, and decision-making responsibilities to ensure that partners are acting together in a manner that increases their ability to influence. Drawing on the critical philosopher Michel Foucault, Heisler, Beckie and Markey (2011) write that "what constitutes knowledge, what is to be excluded, and who is designated as qualified to know all involve acts of power."[32(p.161)] In Western cultures, for example, the university's knowledge and 'ways of knowing' are often thought to be more credible than those of community groups. A CUP needs to identify this privilege and ensure that both partners are valued for their unique expertise.[33,35]

Identifying unequal power relations within a partnership requires "self-awareness, flexibility, and humility" on the part of each partner.[16(p.130)] By acknowledging and addressing unequal power relations, CUPs can support the democratization of knowledge, where research findings are communicated broadly, accessibly, and in ways that are usable to all potential stakeholders.

To be equitable, CUPs also need to produce ethical research. Ethical research adheres to and honours the core principles of Canada's Tri-Council ethical framework for research: "respect for persons, concern for welfare, and justice." Sharing power and ensuring that each partner is involved in decision-making can help facilitate ethical research.[4,35] A community organization's knowledge of its community can make up for an academic's ethical blind spots. Their knowledge is likewise invaluable in efforts to construct research protocols that benefit and protect research participants and their broader communities.

1B. Comparison of Public Library-Campus Contexts

Public libraries and public universities/colleges are both supported by public taxes and thereby accountable to their broader publics and share a common institutional goal of making information accessible and contributing to the public good. However, they differ in significant ways. This tool summarizes the overarching differences between public libraries and their campus partners. Differences can render two organizations to be natural partners, where one's resources and expertise strengthen the capacity of the other and vice versa. When left unacknowledged, however, differences can also encumber effective communication.

Research. Public libraries and universities/colleges differ significantly in how they perceive research, their motivations for researching, and the research barriers or constraints they experience. In public libraries, research is a highly pragmatic task. As public libraries are funded and mandated to support community development and address a community's informational needs, they usually do not have a formal research agenda.[1] When public libraries engage in or seek out research, it is often an ad-hoc effort to improve or report on their operations and services. For example, a public library may want to create an evidence base to make informed decisions about whether to develop or continue a particular service. Many public libraries operate in a fragile policy landscape, where they need to continually justify their presence and advocate for funding.[2] Libraries, like other non-profit and public sector organizations, may turn to research as a means of demonstrating value.[3-4] They likewise may engage in research partnerships if they see the research aligning with their values or mandate and benefiting their broader communities.

In contrast, research is a central pillar of a university or college's mandate. Campuses engage in research to pursue science, innovation, and knowledge. Unlike public libraries, research can be and generally is unrelated to organizational needs. Due to their public mandate to produce credible research, campuses can bring to a research partnership the expertise, time, and access to research funds, technologies, spaces, and knowledge to carry out a robust scholarly study. Furthermore, these institutions have a strong public reputation for being institutions that produce credible and trustworthy knowledge.

On an individual level, librarians and library workers are primarily trained in managing, curating, and using information to foster community development or in addressing the leisure, social, and informational needs of community members. Conducting or managing research projects is thus not likely to figure prominently in a public library worker's job description, as it would in the job descriptions of academics.[5] Both academics and public library workers thereby have distinct training, expertise, and responsibilities that can be useful in research endeavours.

Relationship to/with External Communities*.* Public libraries are adept at making information, technology, learning, and leisure/social opportunities accessible to diverse publics. They are thereby nimble organizations that seek to meet community needs and cultivate community strengths. To strengthen the City of Hamilton's emergency response to the COVID-19 pandemic, for example, HPL deployed staff members to aid in vaccine clinics.[6] Due to their focus on providing accessible community resources, spaces, and opportunities and addressing community needs, public libraries often have a positive public reputation as welcoming 'community hubs' or the 'people's place'.[7] When it comes to research, a key strength of a public library is that it offers financially and socially accessible spaces for diverse groups. Public libraries can provide an avenue for researchers to connect with community members, either to recruit for data collection or to share research findings among their knowledge users.

As public libraries are trusted community spaces that aim to meet community needs, public libraries also have a good understanding of the 'pulse of a community.'[8] While developing and managing collections, providing access to technology and the internet, maintaining a welcoming space for people from diverse backgrounds, and offering storytimes, clubs, classes, and events, public library workers can develop an acute sense of a community's interests, capacities, needs, and challenges. Public library-campus partners may leverage this 'community pulse' to develop a strategic community-orientated research agenda.

Although universities have a positive public reputation as 'producers of credible research', they also have a reputation for being elitist and exclusive. Canadian universities and colleges were built to cater to the wealthy, white, and privileged.[9-10] This history and its resulting policies and organizational structures continue to marginalize many populations within the university and college context, such as Black, Indigenous, and People of Colour, low-income, women, people with disabilities, and LGBT2QI + communities.[11-12] While many campuses are seeking to rectify policies and organizational structures to become more equitable, inclusive, and accessible, their reputation as elitist and exclusive can be a significant barrier to doing community research. The reputation of universities and colleges as elitist and exclusive can lead external communities to distrust or avoid invitations to engage in or learn about research.[14] Universities and colleges may partner with community organizations, such as public libraries, as a way of connecting with their broader community.

Interests in Partnership. Public libraries and campuses likely differ in their interest in partnerships. As noted in the introduction, public libraries can benefit from participating in research that supports informed decision-making, demonstrates the value of public library services, and/or benefits the communities in which a public library serves. As research is not within the public library's mandate, a potential challenge for public libraries is recognizing the benefits of engaging in research on one hand, yet lacking the staff capacity, funding, and in some cases research training and technology to produce it on the other. Partnerships with a campus can help address these challenges. A key interest for many public libraries is also increasing membership and circulation.[14] Partnerships, whether to conduct research or not, can be an avenue to cross-marketing.[15] Both public libraries and campuses can benefit from publicly connecting themselves to the reputation or 'brand' of the other.

For universities and colleges, engaging with the community is an institutional priority. As noted above, many campuses are seeking to rectify inequitable policies and structures. The 2008 recession put pressure on publicly-funded universities and colleges to produce public-benefitting outputs.[16] Partnering with a community that is in tune with their broader communities' challenges and strengths, such as a public library, can be a way of demonstrating the relevance

of a research endeavour. Several federal grant opportunities require scholars to have a community partner, such as the Social Science and Humanities Council of Canada's (SSHRC) Partnership Engage, Partnership Development, and Partnership grants. Developing community partnerships may thereby be a way for researchers to both increase available funding opportunities for their projects and strengthen their grant applications.

Governance. The governance structures of public libraries and universities/colleges may differ from organization to organization. However, both institutions are shaped by the principles of bureaucracy, such as rationalization, efficiency, hierarchical power, and predictability.[17-18] Public libraries in Canada typically have a central branch that houses executive members and centralized library services, and several community branches that offer essential library services to neighbourhoods. Public libraries in Canada are overseen by local library boards, apart from public libraries in Quebec which are managed by municipalities.[19] As public library workers and leadership manage the day-to-day operations of the library, including decisions about which research partnerships to pursue, they remain accountable to their library board. Public libraries rely on funding from both provincial and municipal governments.[19]

In contrast, universities and colleges are primarily funded by the federal government and their provincial government. While being shaped by bureaucracy, some have described the governance structures of universities/colleges as "organized anarchies" and "loosely coupled systems."[18]These institutions are comprised of several faculties (also referred to as schools) that consist of distinct departments tied together by a division of knowledge, and offices that can each contain their own vision, values, and mandate. Due to this complexity, public libraries may find it difficult to navigate and find research partners within universities or colleges. As a step toward remedying this issue and supporting CUPs, many universities have an office dedicated to engaging with community organizations, groups, and external partners or offer knowledge broker services.

In addition to having distinct governance structures, public libraries and universities also operate on different timelines. The library runs by the calendar year, where a new programming schedule comes out each season and events correspond with cultural holidays and the municipality's priorities. The university or college, however, runs by a semester system, where the year is divided into three sections: January to April, May to August, and September to December. Likewise, their research is also governed by federal grant competitions, which have varying deadlines. A challenge for public library-campus partnerships may be reconciling differing timelines.

Key Takeaways:

- Partnering can lead to research that is relevant and potentially more fundable than research done strictly internally.
- Both public libraries and universities can benefit by publicly connecting themselves with the 'brand' of the other.
- While universities offer public libraries research expertise and resources, public libraries offer universities an avenue to connect with the public in a way that is equitable, inclusive, and respectful.
- A campus's community-engagement office or knowledge broker services offer a starting point for public libraries that have a particular research need but do not yet have a research partner.

1C. Continuum of Research Engagement

Each public library-campus partnership will be unique and may change over time alongside changes in an organization's staffing, challenges, goals, interests, and resources. When seeking to develop a partnership, it is thereby important to recognize that there is not necessarily a 'one-size-fits-all' approach to partnering with a university on a research project. While this toolkit outlines suggested practices and considerations, these may not always be applicable. Below is a list of five approaches to research partnerships on a continuum of low to high levels of engagement on the part of the library.

Advertiser. This approach to research partnerships requires a low level of engagement on the part of the library. With this approach, the library supports members in accessing or participating in research at a university or college. For example, HPL has a research webpage where the library posts advertisements developed by scholars who are looking to recruit community members for a research study or advertise a research event. HPL also has a bulletin board at library branches, where they post posters or notices, developed by scholars. Being a social space for scholars to connect with their broader communities is in alignment with a public library's mandate to create public access to learning and information. It requires little effort on the part of library workers while helping to sustain a relationship with another organization. The library however is unlikely to benefit from the research being conducted and has no input in the research process.

Facilitator. This approach to research partnerships will likely require moderate levels of engagement on the part of the library. The library actively shares resources and spaces to help facilitate research, rather than just being a site for scholars to advertise their projects. For example, HPL and McMaster have partnered in a study that explores mobility in later life. The project requires older adults to wear a mobility tracker, such as a smartwatch, where they can self-monitor and report on their mobility and health. HPL's role in this project is hosting 'pop-ups' within library branches, where potential participants can learn about the project and mobility in later life, meet with a McMaster researcher to ask questions about the project, and if they choose to, sign up and retrieve their fitness tracker. Many libraries may also enact this approach to partnerships when they host speaker events or informational sessions where a researcher shares their findings at a public library. This approach can support the library in creating opportunities for members to gain access to learning and information and can strengthen the library's relationship with the campus. It also draws on a library's strength in community development and community programming. However, library workers will likely play a small role in developing and carrying out the research. As the library is not guiding the research process, the research may not be directly useful when it comes to decision-making or demonstrating the value of library services.

A Site for Experiential Learning. This approach to research partnerships will likely require moderate to high levels of engagement in the research process on the part of the library. Experiential learning is a teaching method, often used in universities and colleges, where students are given opportunities to practice skills and apply knowledge in a setting outside of the classroom. Its underlying philosophy is that students learn by doing and reflecting on their experiences.[1] For example, McMaster's Academic Programs for Sustainability Office has collaborated with HPL to offer students experiential learning opportunities, where students bring a fresh perspective and research skills to help address HPL's research questions or challenges.

As the library plays a central role in identifying the research questions, findings are likely to directly benefit the library. A drawback of experiential learning projects is that they are typically short-term, unfunded, and conducted by novice researchers. Projects are thereby likely to yield findings and research outputs that are ungeneralizable and limited when it comes to demonstrating the value of a library service.

Community-Engaged Research Partner. This approach to research partnerships will likely require moderate to high engagement in the research process on the part of the library. Here, the library plays an active role in guiding the research process. In these partnerships, library workers and researchers each contribute their knowledge and expertise to develop a project that directly benefits both organizations.[2] For example, HPL and McMaster partnered on a study that examined how public library workers experience emotional labour and how this impacts their health and wellbeing. Emotional labour is when an individual needs to display a particular emotion in their workplace even if it is not how they truly feel. HPL's role in this project included recruiting other library systems to participate in a survey, assisting in developing a random sample of library staff, and helping to design survey questions that would be ethical and relevant to public library workers. HPL will likewise use findings to refine health and wellness resources for their staff. The benefits of being a community-engaged research partner are that the library can help produce research that addresses their organizational needs or the needs of library members. The key drawbacks are that a community-engaged research project can put demands on staff capacity and space.

Community-Based Participatory [Action] Research Partner. This type of partnership requires a high level of engagement on the part of the library. Community-based participatory research (CBPR) is a formal research methodology where the library and a campus researcher collaborate in each stage of the research process, from the conception of the question to the dissemination of the research findings. Each organization shares leadership over the research.[3] CBPR is research designed to bring positive social change via the research process.[4] In this form of partnership, public library workers take on a 'researcher role' in data collection and analysis. The benefits of this type of partnership are that the library can shape the research process to directly address their organizational needs or the needs of library members. The knowledge and expertise of public library workers are likewise viewed as essential in this research methodology. However, CBPR places a strong demand on staff capacity and library resources.

Citizen Science Facilitator. This type of partnership will likely require a high level of engagement on the part of the library. Citizen science is research that is conducted by community members who may not have formal research training. In contrast to the other types of partnership, in citizen science research, a campus partner will play a minor consulting role in the research process. The library members are the central players in data collection and analysis.[5-6] In a citizen science project, the public library is a site for the research to take place and can be conceptualized as a library program. Librarians help facilitate the research process via programming.[5] Libraries may support citizen science projects by circulating 'science kits' that contain instructions and equipment to gather scientific observational data and by hosting informational events and programs in partnership with a campus or research institute.[6] Likewise, projects may take the form of grassroots initiatives, led by library members, to address a community issue. By providing the infrastructure for citizen science, the library plays a role in

supporting community development and empowerment, as well as increasing access to knowledge and opportunities for learning.

1D. A Platform Approach to Research

A research platform is a formalized relational network, where a campus and one or more community organizations can share infrastructure and knowledge for shared research purposes. Sharing infrastructure entails lending physical meeting spaces, technology, and most importantly staff expertise and knowledge. The purpose of a research platform is to reduce work redundancy and promote the sustainability of a partnership. Public library-campus partnerships, where both partners play an active role in developing the research plan, data collection, analysis, and/or dissemination, can take time and effort to build. Intentionally fostering the sustainability of a project can be a way of maximizing this time and effort. As noted in Section 1A, practices that can help foster sustainability include cultivating strong project management, drafting realistic timelines for all stakeholders, ensuring organizational and institutional support for the project, and developing agreed-upon methods for dealing with conflict and staff turnover. By offering a formalized channel of communication and an established foundation for engaging in collaborative research, a research platform can ease the demands of these practices. With this approach, public library workers and scholars can build off the work of past research endeavours.

As it eases the time, effort, and potentially the financial demands needed to seek out and/or build a partnership, this research approach can help community organizations strengthen their ability to partake in and use research meaningfully to inform or advance decision-making and address societal challenges. This approach breaks down barriers related to organizational capacity that can prevent organizations from benefiting from research. It may likewise have the potential to expand the dominant conception of research as an activity reserved for an academic institution to a tool for addressing community needs and interests. An essential element of a research platform is that it creates a shared infrastructure that extends beyond one-off relationships among scholars and community practitioners. This element ensures that a partnership does not disintegrate when a project is completed, or a member leaves an organization.

In 2020, HPL and McMaster, along with the Canadian Mental Health Association of Hamilton (CMHA), Centre 3 for Artistic and Social Practice (C3), the YWCA of Hamilton, and the John Howard Society of Ontario (JHSO) established a Community Research Platform (CRP). The CRP receives ongoing and stable funding from McMaster. This funding covers costs associated with maintaining the platform, namely the hiring of the CRP manager and maintaining the website. This research platform provides a direct way for the scholars, students, and community practitioners within these organizations to access each other's infrastructure, resources, and expertise for collaborative research. Grounded in the shared goals of supporting social justice, community wellbeing, and resilience, research projects seek to identify, understand, and determine appropriate responses to community challenges and/or aspirations. As each organization serves different target populations, the platform also creates opportunities for making research findings accessible to a wide audience. Although the CRP is a relatively new initiative, it has provided opportunities that would not have been possible if each organization remained siloed. It has likewise led to several learning points. Key learning points include:

- Hiring a staff member, such as a research coordinator or 'researcher-in-residence' in the public library to help facilitate communication between the library and various organizations (see Appendix A for sample job description).
- Develop a common website and an online presence for the research platform, where community members can learn about research being done in their community. Public libraries may likewise create a research webpage that provides lay summaries of the CRP projects.
- Establish a steering committee comprised of executive members of each organization that meets regularly.
- Maintain an archive of common documents and templates needed to apply for funding, institutional ethics approval, or bolster a partnership (MoU and data-sharing agreement), such as those provided in section 3.

1E. Suggested Resources – Considering Partnerships

A Project Development Checklist for Community-Based Research. 2019. Center for Poverty and Social Citizenship. Retrieved from https://carleton.ca/cspsc/research-toolkit/

This toolkit aids community-based organizations (CBOs) in understanding the process of engaging with a campus to conduct a project, identifying their research needs, and determining whether a research partnership is an appropriate next step given their organization's capacity and mandate. To help guide CBOs in determining whether to pursue a partnership with a campus, the toolkit offers a list of questions that prompt CBOs to methodically examine each step in the research process while considering their organization's resources, strengths, needs, and goals. It divides the research development process into five categories: Research with Indigenous Communities, Partnerships, Project Planning, Research Design, and Post-Research. Each question in the toolkit corresponds with relevant free online resources, templates, and information. While not specific to public libraries, the Center for Poverty and Social Citizenship at Carleton University provides an extensive collection of 'tools' that are intuitively organized for easy access. Their toolkit is informed by a seven-year research study on the impacts of community engagement within the university context.

Practical Toolkits. 2021. Community-Based Research Canada. Retrieved from https://www.communityresearchcanada.ca/practical-toolkits

Community-Based Research Canada is a non-profit organization supporting community-based research by connecting individuals and organizations across Canada and globally via online discussions and a bi-annual conference, sharing resources, developing training, disseminating community-based research findings, and advocacy. They have produced several toolkits intended to help guide community and academic researchers in collaboratively producing research that promotes social equity. These toolkits include a "Community Resource Handbook' and a "Participatory Action Research Toolkit', which concisely expound these research methodologies for community practitioners. Likewise, other toolkits are designed to aid community and academic researchers in having conversations about decolonizing research, conducting youth-led research, adapting research plans to align with pandemic-related public health policies and restrictions, evaluating research conducted with refugees, and conducting research on topics related to mental health and substance abuse. These toolkits are a useful resource for both gaining an understanding of the practices, principles, and research

methodologies enacted within community-university partnerships and conducting ethical and equitable research with a variety of social groups.

Community Toolbox. 2021. Center for Community Health and Development, University of Kansas. Retrieved from https://ctb.ku.edu/en

This website is a free online collection of toolkits that are comprised of checklists, frameworks, and educational modules designed to help guide organizations in community practices that foster positive social change. The website offers sixteen toolkits that range from "Analyzing Problems and Goals" to "Evaluating an Initiative." Notably, the website includes a toolkit dedicated to creating and maintaining partnerships. Organizations interested in partnership can together move through this toolkit's step-by-step list of actions and questions to help guide their efforts to establish a partnership that targets a common goal.

Healthy City. Community Research Toolbox. Advancement Project. Retrieved from https://www.healthycity.org/cbpar-toolbox/

The Community Research Toolbox is designed to support community organizations in engaging in research. Its "Short Guide to Community-Based Participatory Action Research" (CBPAR) clearly and concisely provides a definition, the guiding principles, and benefits of CBPAR. The authors outline key ethical and project planning considerations that a community organization and campus partner need to work through. It furthermore breaks down the research process into five stages including sub-tasks and questions to answer before proceeding to the next stage. The "Community Research Toolkit" also offers a step-by-step guide on how to develop research questions, design a feasible research plan, collect and analyze data, and present findings.

Hall PV, MacPherson I. Community-university research partnerships: Reflections on the Canadian social economy experience. University of Victoria; 2011. https://dspace.library.uvic.ca:8443/handle/1828/3878

This open-access e-book chronicles the lessons learned from several research partnerships between Canadian university scholars and community organizations that took part in a Canadian Social Economy Research Partnership (CSERP) between 2006 and 2012. CSERP is a federal initiative developed by the Social Science Research Council of Canada (SSHRC) that was intended to strengthen Canada's social economy via collaborative research. This book offers recommendations and key insights on how to evaluate the partnership process, sustain a partnership and maintain respectful relationships, overcome institutional constraints, and choose appropriate project coordinators. Chapter 1 offers a framework that can be used to reflect on 'what constitutes community engagement', covering topics such as a project's governance model, networks, the domain of the research, the content of the project, research methodologies and processes, evaluation methods, knowledge mobilization, and capacity building. Appendix C: Fostering Positive Community Research in this book likewise offers a comprehensive list of questions to prompt reflection on whether a research partnership will benefit the CBO.

1F. Organizational Reflexivity Checklist

The checklist below summarizes considerations that have been brought forward in this section of the toolkit. It is intended to aid public libraries in identifying factors that may shape future research partnerships.

1. **Interest and goals in a research partnership.**
   -What are my goals as they relate to my public library's values, mandate, and current priorities?
   -What knowledge do I need that could help my public library accomplish these goals?
   -Is formal research (systematic inquiry) necessary to obtain this knowledge?
   -To what extent does my organization want to be involved in guiding the research process?
   -Besides gaining new knowledge, why might or might not my public library be interested in partnering with a university or college?

2. **Resources**
   -To what extent is my public library able to contribute staff time, space, and financial resources to conduct research?
   -To what extent is my public library able to contribute staff time, space, and financial resources to participate in a research partnership?
   -What resources (time, expertise, funding, and technology) would my public library want a campus partner to bring to a partnership?

3. **Communication**
   -What constitutes 'good communication' in my workplace?
   -What are my expectations of research partners when it comes to communicating (how, with what frequency, and with whom)?
   -What deadlines, schedules, or 'busy times' in my workplace should a research partner be aware of?

4. **Culture**
   -How might my public library's culture be described?
   -How does my public library deal with conflict in partnerships?
   -What are my expectations and assumptions about the culture of a campus research partner?

Section 2: Project Planning

While public libraries may use section 1 to consider whether to pursue a research partnership, this second section aims to assist public libraries in moving forward with a partnership. As universities and colleges can often be difficult to navigate, the section begins with a description and directory of knowledge broker services at Canadian universities. These services are designed to help community organizations connect with researchers who have relevant expertise and knowledge. Moving forward, this section contains information and recommendations for ensuring ethical research, supporting grant development, and evaluating a partnership. To summarize, this section ends with a list of questions to ask a potential research partner to help ensure the partnership will be mutually-beneficial, ethical, and sustainable.

2A. Finding a Campus Partner

For community organizations and public libraries that have established a research need or question and are now seeking a campus partner, navigating a campus's complex bureaucracy can be a challenge. Recognizing this challenge, many universities and colleges have established partnership broker services or have designated a particular office that connects researchers with the research needs of community organizations and industries. Partnership brokers facilitate, mediate, and can help manage relationships between one or more organizations. Table 1 below contains information about knowledge broker services across Canada. The principal author generated this list via an environmental scan of community engagement services and practices at publicly-funded Canadian universities. While not representative of all services at Canadian universities, the principal author selected services based on their location in Canada and that are university-wide (not located within a particular faculty).

Table 1: Selected Directory of Partnership Broker Services.

Location	Campus	Address	Website
Western	University of Victoria	Research & Innovation Michael Williams Building 3800 Finnerty Road Victoria BC, V8P 5C2 Canada	https://www.uvic.ca/research/partner/
Western	University of British Columbia	Community Engagement 6251 Cecil Green Park Road Vancouver, BC Canada V6T 1Z1	https://communityengagement.ubc.ca/engage-with-ubc/help-desk/
Western	Simon Fraser University	Office of Community Engagement 250-13450 102 Ave, Surrey, B.C. V3T 0A3	https://www.sfu.ca/communityengagement.html

Western	University of Saskatchewan	Community University Institute for Social Research University of Saskatchewan R.J.D. Williams Building 432 - 221 Cumberland Avenue Saskatoon, SK S7N 1M3	https://cuisr.usask.ca/index.php
Western	University of Regina	Research Office Research & Innovation Centre Room 109 3737 Wascana Parkway Regina, SK S4S 0A2	https://www.uregina.ca/research/partner-with-us/index.html
Central	Brock University	Community Engagement 1812 Sir Isaac Brock Way St. Catharines, ON L2S 3A1 Canada	https://brocku.ca/community-engagement/
Central	Guelph University	Community Engaged Scholarship Institute 17 University Avenue East Guelph, ON N1G 2W1 Canada	https://www.cesinstitute.ca/
Central	Humber College	research@humber.ca	https://www.humber.ca/research/partners
Central	McMaster University	Office of Community Engagement McMaster University Hamilton Hall 103B 1280 Main Street West Hamilton, Ontario, Canada L8S 4S4	https://community.mcmaster.ca/
Central	Concordia University	Office of Community Engagement Bâtiment 7 1900 Le Ber Montréal, QC H3K 2A4	https://www.concordia.ca/about/community.html
Atlantic	Saint Mary's University	Atrium Building Suite 209 Halifax, NS, B3H 3C3	https://www.smu.ca/oice/index.html
Atlantic	Change Lab Action Research Initiative (CLARI	n/a	https://actionresearch.ca/

2B. Ensuring Ethical Research

All research that involves humans or animals must be approved by a Research Ethics Board (REB). REBs are committees located within institutions and their affiliated hospitals and research institutes that conduct research. The role of an REB is to ensure that all research undertaken within its jurisdiction is conducted ethically, as outlined in the most recent Government of Canada's Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS) document. Although REBs are embedded within an institution's infrastructure, they independently make decisions about a research study, whether to approve, request modification, reject, or terminate a research project.

The TCPS 2018 consists of thirteen chapters that outline three core ethical principles and how they can be applied in various research contexts and methodologies. These principles include (1) respect for persons, (2) concern for welfare, and (3) justice. Ethical research respects and protects a person's autonomy, their ability to make informed decisions and their holistic health and wellbeing, while ensuring that the benefits and risks of participating in research are experienced by all members of the population equally.

When partnering with a campus, the university or college researcher will take the lead in completing an ethics application as they will be the primary member of the REB's affiliated institution. However, public libraries in a public library-campus partnership still play an important role in securing ethics approval. As a partner in research, a member of a public library may be listed as a co-researcher. In community-engaged research ethics applications, REBs may at times require a data-sharing agreement or a letter of support that is signed by a public library representative. Public libraries can also support the ethics process by considering whether a project meets the TCPS core principles. By the nature of working within the community and being familiar with the needs, challenges, circumstances, cultures, and strengths of library members and staff, public libraries can help campus partners identify "blind spots" or areas where research may be unethical. They can furthermore draw on their community knowledge to offer alternative ethical methodologies or approaches to recruiting participants, acquiring informed consent, collecting, storing, analyzing data, and disseminating the findings. The questions below in Table 3 can be useful in considering the ethical dimensions of research.

Table 2: Questions for Ethical Research

Theme	Question
Respect for Persons	- How are participants recruited? How can the research team ensure that participants do not feel 'pressured' to participate? - How can the research team best communicate to participants the risks and the rewards of partaking in the research? How can the research best communicate participants' right to ask questions, stop participating, take breaks, skips parts of the research process, or withdraw from the study? - If this is indigenous research, is an indigenous community involved in guiding and shaping the research?

Concern for Welfare	• What are the physical, social, and psychological risks of participating in this research? Can these risks be removed? How can these risks be mitigated? • How can the research team ensure the confidentiality and privacy of research participants throughout the recruitment, data collection, analysis, and reporting of the research findings? • How should the data be safely stored and managed? Who should have access to this data?	
Justice	• What are the inclusion and exclusion criteria for participating in this study? Is there anyone who is excluded that could benefit from participating? Are the inclusion and exclusion criteria justifiable or necessary to achieve the research purpose? • What are the benefits of participating in this study? Who benefits and does not benefit? How can the benefits of the research be dispersed widely and equitably?	

The following TCPS tutorial provides training and an overview of the ethical dimensions and considerations of research: http://tcps2core.ca

2C. Supporting Grant Development

Securing funding for research partnerships via grant development is an important step in enabling partnership and facilitating sustainability. While there are a variety of grant sources, such as foundations and corporations, Canada's federal government serves as the key source of research funding for Canadian university and college researchers. Canada has three federal funding agencies, referred to as Canada's Tri-Agency or Tri-Council: The Canadian Institute for Health Research (CIHR), which funds health research, National Science and Engineering Research Council of Canada (NSERC), which funds non-health-related research in the fields of science, technology, engineering, and mathematics, and the Social Science and Humanities Research Council of Canada (SSHRC), which funds non-health-related social science, information and library science, business, and humanities research. With an interest in ensuring that public funding for research benefits the public, federal funding often encourages community-campus partnerships, where the research goals, questions, and methods are shaped by a non-academic community.[1] Partnering with a community organization, such as a public library, can thereby open up funding opportunities for researchers or can make their application more competitive than if they were conducting a research project strictly with other academic partners. Table 4 highlights annual grant competitions that specifically fund partnered research.

Table 3: Descriptions of Federal Research Grant Competitions that Specifically Fund Research Partnerships.

Agency	Competition	Description	Value	Length of Award

Mitacs	Accelerate	Mitacs is a national non-profit organization, largely funded by the federal and provincial governments, that supports innovation and research by providing funding for projects that connect post-secondary institutions with industry, non-profit, and public sectors. They provide funding to support organizations or businesses in hiring a student researcher (undergraduate through to postdoctoral fellow) in completing a research project. Accelerate Program – To fund a 4-month project, the library provides $7400, which is matched by Mitacs. The student intern conducts a research project at the library. *HPL and McMaster leveraged a Mitacs Accelerate award to hire a 'Researcher-in-Residence' at HPL for one year.	$7400/4-months	Min 4 months.
CIHR	Project Grants[2]	Researchers conduct projects that promise to advance health-related knowledge, health care, population health outcomes, and health systems. These projects may or may not involve non-profit, private-sector, or public sector partners. However, a goal of the grant competition is to "promote relevant collaborations across disciplines, professions, and sectors."	$50 000 to $750 000	1-5 years
NSERC	Alliance Grants[3]	University researchers partner with non-profit, private-sector, or public-sector organizations.	$20 000 to %1 million	1-5 years
SSHRC	Partnership Engage Grant[4]	University researchers partner with non-profit, private-sector, or public-sector organizations in research activities that inform decision-making. There is only one non-academic partner and the project is short-term.	$7000 to $25000	1 year

	Partnership Development Grant[5]	University researchers lead projects that form formal disciplinary, interdisciplinary, interinstitutional, international and/or cross-sector partnership arrangements that develop or advance research initiatives in the social sciences and humanities.	$75,000 to $200,000	1-3 years
	Partnership Grant[6]	University researchers partner with non-profit, private-sector, or public-sector organizations in research activities that advance research, research training, and knowledge mobilization. This grant occurs in two stages. In the first stage, the partners establish and refine their governance structures, agreements, and research methodologies. In the second stage (invite only), the research team conducts a collaborative research project.	Stage 1 - $20000 Stage2- $500000 to $2,500,000	4-7 years

The federal grants listed above require applicants to provide evidence of their partnership. Evidence typically takes the form of a letter of support, listing the community organization's in-kind and/or financial contributions, and/or a formal agreement (see 3A-C). A letter of support will describe the mission of the public library, the relevance and benefits of the project's expected outcomes to the public library, how the public library will be involved throughout the research process, and financial and in-kind contributions.[7-8] SSHRC (2021) defines in-kind contributions as "eligible nonmonetary resources that partners, sponsoring organizations and/or the grantee's institution provide to support the project."[9] Table 5 below is intended to support brainstorming about in-kind and financial contributions.

Table 4: Financial and In-Kind Contributions

Resource	What is required?	How much does it cost?	Total
Staff time (salary replacement).			
Professional/technical services.			
Travel for the project.			
Access to library equipment and/or software.			

Library space (room rentals).			

2D. Evaluating Partnership Progress

Evaluating the impacts of a public library-campus research partnership on stakeholders can offer insight into whether the goals of the partnership and the interests of each partner are being addressed.[1] Evaluation can take place throughout the research partnership to keep the project on track, to determine whether resources are being used efficiently, to ensure the partnership is being conducted in a manner that will lead to trustworthy and impactful results, and to determine whether the target results have been achieved.[2] Partners together should discuss if and how they will evaluate their work early in the establishment of the partnership.[3] Evaluations often entail standard methods of data collection and analysis, such as a thematic analysis of stakeholder interviews or a quantitative analysis of a community questionnaire or survey. Likewise, evaluations can take the form of monitoring indicators, signs that partners can look for and measure to determine whether they are achieving the desired outcomes and conducting the partnership according to their principles, and benchmarks, the pre-established standards that they aim to achieve.[4] Below are descriptions of three dominant approaches to evaluation.

1. Outcome/Impact Evaluations – Grant agencies and funders often require a research team to provide the results of an outcome evaluation. This form of evaluation can show funders their financial 'return-on-investment,' as well as the cultural, social, and educational impacts of a project.[5] Outcome-based evaluation often entails constructing logic models that provide a graphic approach to mapping out the relationship between goals, resources, activities, timelines, desired outcomes for stakeholders, and broader community impacts.[6] An outcome-based evaluation thereby often requires more effort than just monitoring counts, which have an assumed relationship to the desired outcome, such as monitoring citation statistics of research publications or keeping track of attendance at webinars and programs as a way of understanding if the results of the research are being meaningfully implemented. Rather, the research team seeks to measure to what extent they have achieved their goals and the impact of their research findings. Examples of outcomes that can be measured in community-engaged research include changes in a community's capacities, the achievement of goals, and perceived value or overall satisfaction with the partnership.[7] For example, a research team may monitor citation statistics and keep attendance records of initiatives that have resulted from a partnership while also analyzing survey or interview results relating to stakeholders' experiences or perspectives. If the partner organizations have the capacity, they may wish to measure the long-term impacts of a partnership.[7]

Suggested Resource:

Irwin B, Silk K, editors. Creating a culture of evaluation: Taking your library from talk to action. OLA Press; 2017.

Irwin and Silk (2017) explain why evaluating the outcomes of library programs and services is valuable, and at times essential for public libraries. This book provides a guide to methods for evaluating the outcomes of library services. The methods outlined here may apply

to evaluating the outcomes of a public library-research partnership, especially in situations where the partnership provides opportunities for library members to participate in the research process or to learn about research findings.

2. Principle-Based Evaluation- This evaluation method is rooted in the idea that principles shape how and what projects are conducted and thereby "can and should be evaluated."[8(p.6)] Within the context of a research partnership, principles are the basic rules, ideas, and guidelines that are rooted in shared values and beliefs. These principles may include equity, diversity, and inclusion, as well as trust, reciprocity, and sustainability. Principles are often what drive the development of community services and social innovation yet are not encompassed in logic models or evaluation plans. This method evaluates whether the guiding principles of a project or partnership are "clear, meaningful, and actionable", how and to what extent these principles are enacted, and to what end.[8] Explicitly acknowledging and evaluating principles can help partners determine how they shape the research and partnership processes and outcomes, and whether the principles and how they are practiced need to be refined. For example, a public library-campus partnership might be premised on the principle that partners should engage in transparent communication. Partners should then work together to clarify the meaning of this principle, why it is important to the partnership, how they will practice it, how and when they will monitor their practices, and the impact of their commitment to this principle.

Suggested Resource:

Patton MQ, ProQuest. Principles-focused evaluation: the guide. New York: Guilford Press; 2017.

Patton (2017) makes a case for evaluating principles. Patton (2017) reasons that acknowledging the role of principles in an initiative can provide a more nuanced understanding of what is working and not working within a particular community service or social innovation. This book details the types and characteristics of effective principles and outlines techniques for practicing principle-focused evaluation, which are exemplified in case studies.

3. Process/Implementation Evaluation- This evaluation method emphasizes the importance of the process of conducting research and developing a partnership.[9] Process evaluations help partners identify which elements of a partnership are helping to achieve the desired outcomes. This form of evaluation is useful when it comes to considering what is working well in a research partnership and what can be refined to ensure the most efficient use of resources and the greatest community benefit. Partners examine the actions taken and the practices used to establish and maintain a partnership.[10] This approach consists of examining the project and partnership goals alongside how the research team is working to achieve these goals and the external factors that are hindering or supporting their efforts.[11]

Suggested Resource:

Steckler AB, Linnan L, Israel B. Process evaluation for public health interventions and research. San Francisco, CA: Jossey-Bass; 2002

This book describes the value of using process evaluation, its strengths and limitations within various contexts, and its history. Using case studies, Steckler, Linnan, and Israel (2002) illustrate how and why researchers and practitioners use this evaluation method. They methodically outline each step in a process evaluation.

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While the three approaches are distinct, they are not mutually exclusive. They can be used in conjunction to generate a more holistic understanding of the value and lessons learned from a particular research initiative or partnership. For example, Community-Based Research Canada developed the Community-Based Research Excellence Tool (CBRET) to help the community and academic research partners evaluate community-based research proposals and completed projects regarding the process, rigour, and project outcomes.[12] It consists of a checklist of indicators related to each of the three domains and three qualitative questions. After completing the checklist, research partners can tabulate a score and place themselves on a continuum of poor to exceptional. The three qualitative questions guide partners in contextualizing and developing a deeper understanding of areas where their research process, rigour, and outcomes can be improved. Likewise, in some cases, public library workers may consider using their familiar evaluation methods, such as the Public Library Association's Project Outcome.[13] For example, a public library-campus partnership may lead to publicly-accessible programming that can be evaluated by disseminating and evaluating Project Outcome's standardized library member surveys.

Table 6 is intended for brainstorming about what should be evaluated and how it might be evaluated.

Table 5: Evaluation Brainstorming

Subject of Evaluation	Question	Indicators and Benchmarks	Data collection approach	Data analysis Approach
Research Process	Is the research being conducted in a manner that will lead to ethical and trustworthy findings? Is the partnership being conducted in a manner that is sustainable, honours shared goals and complementary interests, and promotes trust and reciprocity between partners?			
Research and Partnership Outcomes	Were the target research and partnership outcomes achieved and to what effect?			
Principles	Were the project's guiding principles "clear, meaningful, and			

	actionable", how and to what extent were these principles enacted, and to what end?[8]			

2E. Questions to Ask a Potential Campus Partner

To help create a strong foundation for a partnership, the following checklist contains questions that a public library worker may want to consider or ask a potential campus partner. Table 2 contains two sets of questions: (1) questions to ask when the public library is seeking out a campus research partner to support their research needs, and (2) questions to ask when the public library is being approached by a campus partner with a research partnership request. These questions are based on the notion that when an organization is seeking out a partner they will come to an initial partnership meeting with a research need and a flexible plan on how to meet this need. While questions related to data management, ownership, sharing, and transferring are important to discuss in the early stages of a research partnership, they are complex (see 3B). When they are pertinent to a particular project, these questions may be more fruitfully discussed when the collaborative research project is clearly defined. Likewise, it may be best to discuss these questions with a research contracts advisor (See Section 3).

Table 6: Questions to Ask a Campus Partner

Topic	Seeking a campus partner.	Being sought after for partnership.
Interest in Partnering	Would this research topic/question interest you? Do you have the capacity to partner with us? Why do you want to partner with a public library?	What do you hope to do with this project's results? How do you see the library contributing to the success of this project?
Methodology	What is your suggestion on how to collect and analyze data? Who will collect and analyze the data?	How do you expect the library to be involved in data collection and analysis?
Benefits to the library	n/a	How do you see the library benefiting from the project?
Ethics	What do you see the risks and benefits of this project being for library members, staff, or the organization as a whole? What do we need to know or how can we contribute to ensure that the project is conducted ethically?	

Equity, Diversity, and Inclusion	Have you considered how to remove barriers to ensure that people from diverse groups are included meaningfully and can benefit from the research? Will public library members of the research team be considered equal partners in the research process? How will our input be valued?	
Funding	What is the financial cost of this project for the library? If the research team is pursuing funding, how can we contribute to securing funding? How can we contribute in-kind? How will funding be used to support the library's contribution to the project?	
Timeline	Can you work within our timeline? Are there any firm deadlines throughout the project?	What is the timeline for this project? How flexible is this timeline? Are there any firm deadlines throughout the project?
Data Management, Ownership, Sharing, and Transferring. (if applicable)	What data will this study produce? What data will be shared or transferred? Who will own (manage and control) the data? Where and how will the data be stored securely? (See Section 3B for more information and questions related to data sharing and ownership).	

Section 3: Drafting Agreements

This section details contracts and agreements which may help cultivate partnership sustainability and may be necessary depending on the nature of the research project and partnership. Formal agreements and contracts may be especially important for projects that involve the sharing of sensitive information or data, a substantial amount of staff time and finances, or where findings may have an impact on a partner's reputation or finances. While this section includes examples of phrasing within formal agreements and contracts, it's important to emphasize that these examples are only intended to exemplify common elements and considerations of formal agreements between partners. Each public library-campus partnered research initiative will be unique and will thereby require its own tailored formal agreements where applicable. Many universities and colleges have industry liaison offices that assist in the process of developing formal agreements. The table below provides websites of industry liaison offices throughout Canada. Please see Appendix 6 for a summary, written by McMaster's Industry Liason's Office, that describes their role in helping to establish research partnerships.

Table 7: Contact Information for Selected Industry Liaison Offices in Canada

	University/College	Industry Liaison Office Website.
Western	University of British Columbia	https://uilo.ubc.ca/
Western	University of Saskatchewan	https://research.usask.ca/rei/about-us/industry-liaison-.php
Central	McMaster University	https://research.mcmaster.ca/mcmaster-industry-liaison-office-milo/
Central	University of Waterloo	https://uwaterloo.ca/research/non-profitpublic-sector-research-partnerships
Central	McGill University	https://www.mcgill.ca/research/innovation
Atlantic	Dalhousie University	https://www.dal.ca/dept/research-services/about/industry-liaison-and-innovation.html
Atlantic	University of New Brunswick	https://www.unb.ca/research/partner/index.html

This section of the toolkit contains information on drafting a Memorandum of Understanding, a data-sharing agreement, as well as a list of questions to consider if a project will generate intellectual property. While MoUs and data-sharing agreements are common documents used to establish partnerships, other types of formal agreements may be more appropriate depending on the research questions, data collection and analysis plans, project goals and knowledge mobilization plan, funding requirements, and the nature of the relationship

between partner organizations. The following are two examples of other common documents that can be used to establish a partnership.

> *Confidentiality/Non-Disclosure Agreement* – This document is a legally-binding agreement that confirms both parties are on the same page when it comes to how they will use and not-use information that they share. What distinguishes a data-sharing agreement from a non-disclosure agreement is that a non-disclosure agreement addresses information-sharing more broadly, such as that shared in conversations and email exchanges, whereas a data-sharing agreement refers to a specific set of information that will be analyzed.

> *Facility Use Agreement* – This document is a legally-binding agreement that confirms both parties are on the same page when it comes to how they will use shared facilities.

An industry liaison officer can support partners in determining which agreements will best support the establishment of the partnership and project success.

3A. Memorandum of Understanding

After partners collaboratively develop a research plan, they may choose to formalize their partnership by developing and signing a Memorandum of Understanding (MoU), a document that is also commonly referred to as a Memorandum of Agreement or a Memorandum of Partnership Engagement. An MoU is a tool for both formalizing partnerships and ensuring that both partners agree on the partnership goals, desired research outcomes, activities and methods, and governance structures and protocols. Likewise, an MoU confirms that both partners are committed to transparent communication and are willing to share in the risks and rewards of the partnership. It is however not legally binding. Developing an MoU is fundamentally a practice of communication that requires both partners to together identify and navigate differences and similarities thoughtfully and reflexively. While the process of developing an MoU takes effort, it can create a strong foundation for a partnership.

The template provided below was adapted from a template generously provided by McMaster University's Industry Liaison Office (MILO). McMaster scholars and HPL leadership used this template to formalize a platform research partnership (see 1E). To begin the process of developing an MoU, a partnership broker from McMaster's Office of Community Engagement facilitated a meeting with all project stakeholders to first identify what each partner hoped to get and give from the project, as well as their thoughts on how the project should be governed.[1] The knowledge broker led a follow-up meeting with a smaller group of representatives from each organization to discuss, reflect on, and reach a consensus on the goals, outcomes, and governance structure of the platform partnership. In this follow-up meeting, the group of representatives identified the next steps and developed a timeline for moving the partnership forward. The project manager for the platform then drafted, circulated among key stakeholders, and revised an MoU using MILO's template.

Research partnerships run the risk of being unsustainable and impractical when they are built on misunderstandings about each other's research needs, goals, resources, and strengths. When a partnership requires substantial time, effort, and resources, an MoU can help protect against this risk. The HPL-McMaster platform MoU has been particularly useful in providing evidence of this formalized relationship when applying for grants, helping to foster partnership sustainability. The process of developing this MoU likewise assisted partners in avoiding

miscommunication, ironing out mismatched expectations, and ultimately ensuring that the partnership would be impactful for all stakeholders.

Memorandum of Understanding Template.

Project Title:

Date:

Purpose of MoU:

- Confirm mutual interest to enter a formal partnership with a defined research goal or project.
- Confirm agreement on elements of the project and commitment to transparent communication.

A Note on Legality:

- Suggested wording from MILO: "This document is not intended to be legally binding and does not create any binding obligations or commitments between the partners."

Principles of Respect and Open Dialogue

- Suggested wording from MILO: "All partners shall be respected for the inputs and outputs they offer to the Project. Commitment to this principle was the basis for crafting the Project collaboratively and is the premise upon which our work will proceed. Partners acknowledge that each bring skills that are beneficial to the project and complementary to the skills offered by other partners."

Governance and involvement in decision-making

- Suggested wording from MILO: "The partners agree with the proposed plan for governance, and the means by which partners will contribute to the decision-making process affecting the research, outcomes, and related activities. Partners recognize there is a management structure in place where final determinations will be made by Project leadership after consideration has been duly given to partner views."

Knowledge Outputs and Mobilization

- Suggested wording from MILO: "All partners with the project share the desire to produce high quality outputs. Further, each partner and participant will share, promote, engage, and disseminate outcomes to the widest possible audiences that include, but are not limited to, academic organizations, private for-profit and not-for-profit entities, and any other interested stakeholder, following the agreed-upon plan established by the project's management. Ultimately, our collective

goal is that the knowledge created is accessible for the benefit of all those who wish to access it.

Accessibility of the outcomes, therefore, is of vital importance and agreed to by all partners. The partners remain open to new mechanisms for knowledge mobilization (e.g. new technologies, social networking mediums, etc.) as they are likely to evolve over the course of the Project.

While the partnership proposal reflects the team as a whole, each partner acknowledges their respective roles and responsibilities in conducting various components of the project's work, either solely or in collaboration with other partners and participants. The partners are committed to conducting the work involved in this project for which they have taken responsibility. The partners also agree to notify the Project leadership of challenges or delays as soon as they become aware of them."

Endorsement of the Proposal
Confirm agreement regarding:

- Knowledge Mobilization Plan
- Governance
- Goal and Project Description
- Description of Formal Partnership
- Intended Outcomes of Proposed Activity

Partner Signatures:

<div align="center">***</div>

The template provided here showcases key elements of an MoU. By explicitly outlining the purpose, defining principles, and expected outcomes of the partnership, and by requiring consensus, an MoU offers an opportunity for partners to formalize their relationship.

3B. Intellectual Property

Intellectual property is the inventions, products, publications, and ideas expressed within that belong to the individual, group, or organization that developed them.[1,2] The Canadian Intellectual Property Office (CIPO) provides services and resources to help Canadians understand intellectual property laws and protect their intellectual assets.[3] CIPO is a special operating agency of the Government of Canada's Innovation, Science and Economic Development Canada department.[3] It defines intellectual property as "what you create, invent or develop as a result of your intellectual activity".[1] The rights and laws that protect ownership of intellectual property ensure that an individual, group, or organization receives due credit and compensation when their inventions, products, or publications are used by others. These rights and laws take the form of copyright, patent, trademark, and trademark secrets laws:[1,2]

1. Copyright – laws that protect written and artistic products and ideas. Copyright laws give the owner the right to 'copy' their work and prohibit others from doing so without the

owner's permission. Unlike the laws discussed below, copyright laws automatically apply to a work as soon as it is created. There is no need to apply or navigate Canada's legal system to establish these rights.

2. Patent – laws that protect inventions and engineered items that are "novel or new (the same invention cannot already be in existence), have utility (i.e. it must be functional and operative), and be non-obvious to a person skilled in the field of the invention."[3(10)] When an invention or item is patented, the patent can be sold or licensed, so those who want to use the item must pay a fee. In Canada, a research team must disclose their invention and item within one year of its creation, either publicly or confidentially, and there should be written or visual evidence of the disclosure.

3. Trademark – laws that protect distinctive logos, symbols, names, and other indicators belonging to an individual or organization. These distinctive visuals can be an important part of an organization's reputation and identity.

4. Trademark secrets – laws that protect formulas, recipes, processes, designs, and instruments that are generally not known by the public or their competitors and are profitable for an individual or organization.

Copyright, patent, trademark, and trademark secret rights are assets that can be bought and sold, in the case of patents, licensed to create revenue, or can bolster an individual/organization's reputation and economic pursuits.[1,4,5] In Canada, a research team can apply for a patent, trademark, or trademark secret through CIPO (see suggested resources below).[1]

Within a research context, how intellectual property is managed and who owns it is shaped by the policies of the researcher's university, funding regulations, intellectual property laws, and the nature of the research team and their approach to collaboration.[4]

1. University and Funding Regulations – Universities have policies on how intellectual property is managed. While most universities allow the rights to and ownership of the intellectual property to reside with the individual or group that developed it, some universities require that they have ownership or co-ownership of the property developed by their members and receive the benefits therein. University research partners should be familiar with their university's policy on intellectual property. Research funders, such as those discussed in 2D, likewise may regulate intellectual property ownership. An Industry Liaison Office can help clarify university and funding organization policies and regulations on intellectual property.

2. Intellectual Property Laws – The copyright, patent, trademark, and trademark secret laws in Canada discussed above.

3. The Research Team – Research is often done collaboratively, both internally among academics and students in a university context(s) and academics and industry, non-profit, and public sector partners. When co-authoring or co-inventing, partners need to discuss how they will manage intellectual property. If each partner works separately on a segment of the research product, they may wish to copyright individually these sections. However, in most cases, they will need to navigate joint ownership. In a conversation on joint ownership, partners may determine how they will attribute authorship in publications (i.e. how will names be ordered on the publication?) or who will be listed as an 'inventor' on a patent.

A conversation with a research partner early in the research process about intellectual property (when applicable) can help ensure that a library worker involved in a partnered research project and their library receive their due benefits for their intellectual activity. Whether protecting intellectual property is necessary will depend on the partners' levels of engagement in the research process (see 1C).[6] In cases where the library is not involved in shaping the intellectual direction of the project (advertiser, facilitator, [potentially] a site for experiential learning and citizen science), it is not necessary to discuss the intellectual property. However, when the project involves substantial staff time, knowledge, and library resources, and where the library is meaningfully involved in shaping the intellectual direction of the project (community-engaged and community-based participatory research), discussing joint ownership may help ensure equitable and sustainable partnerships characterized by trust and reciprocity (See 1A).

Suggested Resources

Canadian Association of Graduate Studies (CAGS). A Guide to Intellectual Property for Graduate Students and Postdoctoral Scholars. 2005 [cited 2021 Nov 15]. Available from https://cags.ca/cags-publications/

While written for graduate and postdoctoral students, this discussion paper clearly and concisely outlines the purpose of intellectual property rights and laws within the university research context. It is particularly helpful in considering the various factors that may shape how intellectual property is managed within the context of a collaborative research project (university policies, funding regulations, and the nature of the research team).

Canadian Intellectual Property Office. Intellectual property and copyright [Internet]. Ottawa, ON: Government of Canada; 2021 [cited 2021 Nov 15]. Available from https://www.canada.ca/en/services/business/ip.html

The Government of Canada's Intellectual Property and Copyright webpage provides a comprehensive overview of the steps that need to be taken and the resources that are available to Canadians interested in protecting and managing their intellectual property. From this webpage, readers can navigate to guides and briefing notes on the Canadian policies and laws that govern copyrighted material, patents, trademarks, and trade secrets. These guides delineate the associated fees associated with patenting and trademarking intellectual property. For those interested in patenting an invention or trademarking a visual or logo, readers can also navigate to databases of trademarks and patents. Within these databases, the research team can verify that their invention, visual, or logo is not already patented or trademarked. Lastly, this webpage also contains CIPO's contact information.

World Intellectual Property Organization (WIPO). Successful Technology Licensing [Internet]. Geneva, Switzerland: WIPO; 2015 [cited 2021 Nov 15]. Available from https://www.wipo.int/edocs/pubdocs/en/licensing/903/wipo_pub_903.pdf

This book is a helpful resource for those interested in collaborating on a project that will lead to intellectual property. The book begins with a concise overview of what constitutes intellectual property and how, why, and where it can be licensed to ensure that its owners are properly acknowledged and financially compensated for their work. What follows is instruction on how to prepare for a negotiation between various partners involved in the creation of intellectual property

and how to negotiate ownership. Furthermore, the authors guide readers in considering the legal factors that shape the process of licensing intellectual property.

3C. Sharing and Managing Data

A public library-campus research partnership may entail sharing, transferring, and managing data, potentially necessitating a data-sharing agreement and a data management plan. Data can broadly be understood as small units of information, such as basic facts and statistics. It is the factual material that is analyzed to generate new insights or to validate research findings.[1] A data-sharing agreement is a legally-binding document that spells out the data provider and data receiver's agreed-upon plans and expectations for how data will be shared and used ethically and fairly. A data management plan (DMP) is a living document that details the research team's plans for handling data throughout its lifecycle, from collection to long-term storage or its destruction. Data sharing and data management go hand in hand, where the management plan helps to guide the agreement and vice versa.[2]

Research ethics boards often require researchers to provide these two documents to ensure data is being handled ethically.[3] Partner organizations should consider developing a data-sharing agreement when they have an ethical or legal obligation to protect the data, such as that created by their organization's privacy policy. They may likewise consider developing a data-sharing agreement when the data contains personal or confidential information, such as demographic information, information related to an organization's internal operations, or information related to the perspectives and experiences of individuals.[3] Researchers should develop a DMP whenever they are collecting or handling data from human participants.[3]

Data Management Plan (DMP)- A data management plan (DMP) accompanies a data-sharing agreement. Unlike a data-sharing agreement, a DMP is not legally binding and can change if necessary throughout the research process. It outlines the activities, timelines, strategies, and tools that a research team will use to collect, share, protect, store, travel with, reuse, and destroy data. A DMP helps the research team to think strategically through and document how they will use data to support ethical and trustworthy research. This document is thereby also useful when it comes to applying for grants and ethics approval.

Data Sharing Agreement – Within the context of a research partnership, data sharing entails one organization making an internally-collected data set (a body of data) available to another.[4-5] Depending on what the partners want to emphasize within the agreement about how the data is being shared and used, this formal agreement can also be referred to as a 'data transfer' or 'data use' agreement. For example, if the data is simply being shown or presented to another organization, it may be referred to as a data-sharing agreement, however, if it is being 'handed over' to another via physical in-person or electronic means, the document may also be referred to as a data transfer agreement. An example of data sharing/transferring is a public library collecting data on a particular program, such as attendance numbers and feedback from library users, and sharing this with a university research partner, who then takes on the task of analyzing it. A data-sharing agreement spells out the requirements of each party regarding what data will be shared and how it will be shared, stored, protected, analyzed, used, and disseminated. This agreement ensures that partner organizations will use data in a manner that complies with both the organization's policies and national privacy laws.

Below are common elements of a data-sharing agreement. This list of common elements includes questions for partners to consider together when developing a data-sharing agreement.

1. The *5 W Questions.* The agreement will outline pragmatic details about the data transfer. It should answer the 5-W questions, namely Who, What, Where, Why, When, and How (see table 8 below):

Table 7: 5Ws of Data-Sharing

Who	- Who is the disclosing party (data provider)? - Who is the receiving party? - Who will be responsible for transferring the data? - Who (names or general descriptions) may access the data? Who may not have access?
What	- What data will be shared (see element 2)? - What is the nature of the data that is needed? *This question can help clarify whether the data contains confidential, sensitive, or identifying information that necessitates strict data storage protocols and safeguards (see element 4). It can help clarify if the data can be aggregated or de-identified before transferring to minimize confidentiality and privacy risks (see element 5). Lastly, this question will clarify if there is an associated cost with sharing the data that needs to be negotiated (see element 8).*
Where	- Where did the data originally come from? *This question is particularly important because it helps the research team to clarify if they need additional approval or consent to transfer the data to another party. For example, if the researchers would like to use data collected for a different purpose, they will need to determine if the original participants gave their consent for secondary use of the data they provided.* - Where will the data be transferred and stored?
Why	Why will it be transferred (i.e., for research and publication, student research projects, or another purpose)? *Answering this question may also involve naming a particular research study.*
When	When will it be transferred?
How	- How will it be transferred? - How long will the data be available?

2. Data Definition. The agreement will specify what is meant by the term 'data'.

> Example from MILO: "Data" means all personal information (including without limitation medical data and other personal health information) that has been collected for the purpose of the Study at Disclosing Party and is provided to the Receiving Party for the purpose of carrying out the Study."

Data can refer to various forms of information.[1] The nature of the data that is being shared will dictate how it will be shared, used, and protected. For example, a data set that contains data with information that could be used to identify individuals needs to be treated with more

precaution than one with anonymous data. Similarly, when referring to data, some may want to share or receive aggregated data, as opposed to 'raw data', the individual pieces of information yet to be analyzed. Anonymized aggregated data does not need to be treated with the same precautions as raw data.

3. Institutional Laws and Guidelines. The agreement will specify the laws and guidelines that shape the agreement.

> Example from MILO: "This Agreement is made in compliance with the provisions of The Freedom of Information and Protection of Privacy Act C.C.S.M. c. F175 ("FIPPA") and of The Personal Health Information Act C.C.S.M. c. P33.5 ("PHIA"), and all other applicable privacy legislation, including equivalent privacy legislation in other jurisdictions ("Applicable Privacy Laws")."

> Example from MILO: "Provider will prepare and furnish to Recipient the Data in accordance with Ontario's Personal Health Information Protection Act (PHIPA), and specifically warrants that transfer of the Data by Provider will be in compliance with REB approved subject informed consent forms ("ICFs") provided by the individuals from whom the Data was collected, or terms of an REB Waiver of Consent, as applicable. Data will not be transferred until each party's REB provides written approval for the Study."

When sharing data, partner organizations must ensure that they are legally allowed to share the data, especially if the data contains personal information provided by community members. FIPPA and PHIA are two relevant privacy laws that govern how data is shared.[6,7] Likewise, Research Ethics Boards (REBs) give guidance on how to share and protect data ethically and in ways that ensure the original data provider's privacy and confidentiality.[3]

4. Safeguards for Confidential, Sensitive, or Private Information. The data receiver can likewise protect confidential, sensitive, or private information by storing data securely. An important purpose of a data-sharing agreement is to ensure that the data will be used and stored responsibly, or in a manner that does not jeopardize the reputation or resources of the data provider or those who originally generated the data. REBs require researchers to provide a data management plan, where they delineate the safeguards they will put in place to protect and store the data securely. Data safeguards may include encrypting the data, storing the data in a password-protected and secure file on a trusted online storage platform or hard drive, and if in a hardcopy form, storing data in a locked cabinet, and deidentifying data and using a file that links participants with a code. A common strategy is to create a linking code for each individual and their data, where the participant and code information is stored separately from their data. A data-sharing agreement will likely obligate the data receiver to notify their REB and the data provider if the data is leaked to a third party.

> Example from MILO: "The Receiving Party shall use appropriate safeguards (including without limitation with respect to encrypting identifying numbers, linking files, storing and retrieving files from secured locations) to prevent any unauthorized use or disclosure of the Data and shall promptly report to Disclosing Party any breach, unauthorized use or disclosure of which Receiving Party becomes aware."

5. Instructions on How and When the Data Should be Aggregated, Anonymized, or De-identified. As alluded to in the second element, Data Definition, aggregated, anonymized, or

de-identified data poses less risk to the original data providers than data that contains identifying personal information from individuals. In many cases, the data provider can promote confidentiality and privacy by sharing data that is anonymized. An anonymous data set does not contain information that could be used or combined with other information to identify a particular individual.[1] In other words, an individual has gone through a process to de-identify the data. There are tools and standards to guide the de-identification of data, such as the US Safe Harbor Standards and the Expert Determination Method.[8] The US Safe Harbor Standard guides organizations in removing eighteen types of identifiers, such as postal codes and phone numbers, from a data set to ensure that there is no residual information that the data receiver could use to identify an individual.[8] The Expert Determination Method relies on an expert (someone with training in statistics and data analysis) to conduct a series of statistical procedures to ensure a minimal risk of sharing a data set that includes personally identifiable information.[8] When developing the research protocol, partner organizations should consider what data needs to be shared and whether the data can be de-identified.

If the data being transferred contains identifying information, the data receiver will be responsible for aggregating and de-identifying the data before publishing research results.

3. ***Permitted Uses.*** The agreement will specify expectations about how the data will be used and not used. A data-sharing agreement will help to ensure that the data is serving the shared goals of the research partnership.[2] The research study's methodology and the research ethics protocol will dictate the use of the data and how long the data will be kept by the receiver. Importantly, the agreement will specify expectations about non-disclosure and/or the ability of the receiver to share the data with a third party. Many academic journals require that researchers archive their raw data in an open-access data repository so that readers can reproduce or verify findings.[9] Partners should discuss and reach a consensus on whether and (if applicable) how the receiving party can share the data open-access. To ensure that the data does not serve additional purposes beyond the scope of the study and the research relationship, the agreement may outline when and how the data receiver will destroy the data, and who they will notify when this takes place.[2] If the data contains personal information, the agreement will require the data receiver to refrain from identifying or contacting any of the individuals who provided their information.[2]

> Example from MILO: "The Receiving Party shall limit access to the Data only to its internal personnel and/or agents who need access for the purposes herein and who are bound by the same confidentiality obligations herein ("Study Staff"). Without limiting the obligation set out in s. 2, the Receiving Party agrees that it/he/she shall, and shall require its/his/her Study Staff, to:
>
> a) maintain Data in confidence, and not disclose Data except as permitted by this Agreement;
>
> b) use Data solely for the purposes of the Study or other expressly consented purposes, in compliance with:
>
> (i) the Study protocol as approved by the Disclosing Party's REB and as amended from time to time, provided that amendments are approved by the Disclosing Party's REB (the "Protocol");
>
> (ii) any written conditions imposed by the Disclosing Party's or Receiving Party's REB;

(iii) the Study subject's consent consistent with the informed consent form approved by the Disclosing Party's REB (the "Consent") or, if the requirement to obtain consent has been waived, or otherwise determined to be unnecessary, by the Disclosing Party's REB, the waiver of consent given by the Disclosing Party's REB (the "Waiver");

(iv) any other conditions or restrictions imposed by Disclosing Party relating to the use, security, disclosure, return or disposal of the Data as set out in this Agreement.

c) not use the Data to identify any individuals.

d) not transfer the Data to any third parties without the prior written consent of the Disclosing Party and without obligating such third parties to comply with the terms and conditions hereof. Notwithstanding the forgoing, the Receiving Party may transfer the Data:

(i) to regulatory authorities, provided that the Receiving Party gives prior written notice of such intended disclosure to the Disclosing Party;

(ii) as otherwise permitted by the Consent or Waiver; or

(iii) in order to comply with Applicable Law or judicial process, or with a court or regulatory order, provided that the Receiving Party gives prior written notice of such intended disclosure to the Disclosing Party and takes all lawful actions that are reasonable in the circumstances to minimize the extent of such disclosure and obtain confidential treatment for such disclosure.

e) securely destroy the Data as required by the Protocol or instructed by the Disclosing Party and provide a written confirmation of the manner of destruction in a form acceptable to Disclosing Party."

6. *Intellectual Property, Publication, and Other Financial Matters.* As noted in the previous sub-section on intellectual property, a key purpose of formal agreements is to fairly establish and manage intellectual property. The data receiver will be using the data to generate new understandings, and formulate ideas, innovations, interventions, or inventions. These creations and publications are intellectual property that can have an associated economic, cultural, or social value. Partner organizations, therefore, need to discuss who will own the intellectual property, receive the benefits therein, and how all involved in gathering, sharing, and analyzing the data can be appropriately and fairly acknowledged. The research team may wish to discuss and agree on a process for reviewing publications that result from the shared data.

Example from MILO: "Except as expressly provided herein, no right, title or interest in and to the Data is granted to the Receiving Party or implied hereunder. The Receiving Party shall own the analyzed data that has been stripped of personally-identifying information and incorporated into its Study database.

The Receiving Party shall have the right to use a) the analyzed, de-identified data derived from the use of the Data; and b) information and results arising out of analysis of the Data, as part of a publication or presentation of the results of the Study and shall own all such analyzed Data and results. The Receiving Party shall not include any personally identifying information in any publication or presentation. Disclosing Party's investigator's contribution

to the Study shall be acknowledged appropriately in any such publication or presentation in accordance with academic standards."

In addition to fairly considering and accounting for the potential financial revenues that arise from the project, the partners should also consider the costs that may accrue from data-sharing activities. Data may have a proprietary value, such as data within a database that is costly to replicate or that is in a unique copyrighted format. In these situations, the partners will need to discuss how these costs will be managed.

<p style="text-align:center">***</p>

While this tool provides example wording and phrasing for the various components of a data-sharing agreement, these agreements will be unique to each collaborative project. The key components of a data-sharing agreement require partners to collaboratively set parameters around what data will be shared, along with how it will be shared, stored, protected, used (and not used), and how each organization will benefit from the data-sharing activities. Data-sharing agreements offer an opportunity for open communication that can enhance a relationship between organizations. These agreements likewise can provide an opportunity for both the providing and receiving parties to discuss how they will respectfully and ethically protect the confidentiality of the original data providers, if applicable.

Suggested Resources

Portage Network. Training Resources [Internet]. Portage Network; 2021 [cited 2021 Nov 10]. Available from: https://portagenetwork.ca/tools-and-resources/training-resources/

Portage is a Canadian network of experts and institutions, launched by the Canadian Association of Research Libraries, that support strong data management infrastructure. This webpage provides links to several training resources related to creating data management plans. These resources include bilingual training aids (guidelines, templates) and online modules (videos, webinars). The online modules provide DMP primers, standard definitions of terminology, and guidance on navigating complex or unique data-management situations, such as creating a DMP within the context of COVID-19 and with sensitive and confidential information. The webpage furthermore provides resources to help researchers navigate whether and how to share data in repositories and best practices for using metadata, which is data that provides information about the data set.

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Appendix A: Sample Researcher-in-Residence Job Description

The Researcher-in-Residence will help to facilitate and manage research partnerships and the library's internal research endeavours. Below is a list of potential duties, skills, and experiences a public library may wish a 'researcher-in-residence' to take on.

Duties:

- Develop grants that advance library services, programs, and research.
- Maintain the research webpage by posting research opportunities for library members and sharing research updates.
- Filter and manage research partnership requests to ensure that all research partnerships are relevant to the library's priorities.
- Negotiate how the library will contribute and what they will receive from the partnership.
- Participate in writing formal agreements to secure a partnership.
- Attend research meetings with partners to speak on behalf of the library.
- Identify research opportunities and research needs internal to the library (e.g. potential research partners, where routinely-collected data is being underutilized, and where data might be collected).
- Acquainted with and identifies partnerships that address the library's current challenges, opportunities, and goals.
- Writes briefing notes on trends and current research that can help inform resource allocation, planning, and advocacy.

Skills and Experience.

- Master's degree in social science, business, or library and information sciences.
- Project management.
- Grant writing
- Knowledge of funding agencies and annual funding cycles.
- Basic quantitative, qualitative, and mixed-methods research skills.
- Experience liaising with university researchers, staff, and faculty members from various disciplines and public library workers.
- Knowledge mobilization and knowledge translation skills.

Potential Work Breakdown

- Approx. 10 hours – administrative (filtering and managing partnerships, identifying research opportunities, liaising etc.)
- Approx. 10-15 hours - Grant writing and internal research/data analysis.
- Approx. 10-15 hours - Knowledge mobilization and translation (ensuring partnered research is useable for library workers; library programming).

Appendix B: Description of McMaster Industry Liaison Office's (MILO) Services from MILO's Faculty Handbook

MCMASTER INDUSTRY LIAISON OFFICE - MILO

(formerly the Office of Research Contracts & Intellectual Property - ORCIP)

WHAT WE DO

The McMaster Industry Liaison Office (**MILO**) supports the research activities of McMaster University and its affiliated hospitals, Hamilton Health Sciences and St. Joseph's Healthcare, by facilitating collaborative research with industry partners and disseminating these results through commercialization. The staff in the Research Contracts group and Intellectual Property group at MILO help faculty by:

➢ **Advancing collaborative research**

   o Reviewing and negotiating industry-sponsored research agreements and all research contracts performed at the University, whether from government, industry or other sources.

   o Working with researchers and industry to ensure that appropriate legal agreements are in place to enable the exchange of cells, or other biological and chemical materials (MTAs) and confidential information (NDAs).

➢ **Helping researchers obtain funding**

   o Assisting in applying for industry matching grant programs, such as NSERC's Strategic grants, Collaborative R&D grants, Industrial Chairs, and those offered by the Ontario Centres of Excellence (OCE).

   o Assisting in applying for commercialization funding, such as CIHR's Proof of Principle Initiative, NSERC's Idea to Innovation Program, OCE's Market Readiness Program, C4 Proof-of-Principle fund, which can be used to develop prototypes.

➢ **Evaluating and protecting intellectual property**

   o Reviewing and evaluating inventions, discoveries and copyright materials to assess their practical feasibility and commercial potential.

   o Securing intellectual property protection through patents, copyright, trade-mark and other means to protect and enhance research discoveries.

➢ **Marketing and licensing technologies**

   o Connecting researchers with industry for licensing of technologies, collaborative research and joint development.

   o Assisting in creating spin-off company opportunities and connecting researchers with industry support networks, venture capitalists, angel investors and other management and financial specialists.

➢ **Educating the research community**

   o Offering educational seminars and events on intellectual property and research contract issues for faculty, staff, or students, which can be tailored to specific research areas or current issues in this field.