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From Silos to Solutions:
Toward Sustainable and Equitable Hybrid Service Delivery in the Immigrant & Refugee-Serving Sector in Canada

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Executive Summary

The Settlement Sector and Technology Task Group was tasked to discover, examine, and learn about the Settlement sector's needs to successfully implement digital and hybrid service delivery models[1].

COVID-19 affected the sector like the rest of the society. Suddenly, in March 2020 the sector's work was fully digital and remote. Staff moved out of their offices to work from home, still serving newcomers through digital, non-digital and creative means. The pandemic has offered the sector and its largest funder a unique experiment in digital service delivery and a pivot point to embrace innovation and collaboration more formally while working towards a hybrid service delivery model. Further dialogue among stakeholders, as well as with funders and other sectors that are exploring avenues for innovation, will benefit the settlement sector. We have re-identified the challenges. We have identified common areas of digital strengths and sector resilience. And our findings point to a renewed opportunity to craft solutions built around intention, instruments, and investment.

To build a hybrid service vision and capacity, the sector needs resources, support, different funding structures and relationships, trust, space, and time. Trust, space, and time come up again and again in this conversation, as do capacity and resources. Agencies have to be able to re- or up-skill their workforce as well as hire new types of roles and staff in order to move forward. As is evident with government departments, like IRCC's Client Experience Branch, and experiences of agencies that had already embraced digital transformation, it will mean investing more resources, not fewer, into the sector. The lack of standardized professional development/competency frameworks across the sector and at all levels in organizations (from front-line to senior leadership) is a huge issue. The sector digital divide will only get bigger if not addressed immediately.

Designing digital services should incorporate human-centred design, ensure security and privacy, have curated, authenticated, and collaborative information-gathering and provision, be accessible to clients, be sustainable, involve newcomers in design and iteration, and be aligned with organizational service goals and mission. Organizations should not rely on any one specific technology, but create multi-platform, multi-channel communications strategies rooted in the actual use of technology by clients.

It is both tempting and difficult to provide a recommendation of particular technologies. What makes the most sense is to identify baseline competencies and capabilities for SPOs in all areas such as critical literacies, capacity, skills, infrastructure, leadership, technical development, organizational models, technical choices, etc. Throughout this report we identify existing baselines, as well as promising models that the sector should explore to adopt or adapt.

Baselines require us to think about a "floor of competencies:" technologies, infrastructure, digital literacies, digital capacity, etc, that all agencies need to have, and that should be explored and supported. A key question that remains to be answered is: should a platform or a particular model be chosen and funded across the sector, or should agencies simply have a suite of choices and the capacity to implement, support, evaluate, evolve, and change those choices?

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[1] Definitions of key terms like "hybrid service delivery" can be found in the report Glossary.

People, not technology, should be at the centre of the strategy. It is essential to develop a set of guiding principles that starts with a response to the needs of clients and the technologies they are using to ensure that any service solutions meet their identified needs, preferences, technology access and literacy.

Our report provides a summary of our research, key themes, and recommendations. It is organized in the following way:

- **Executive Summary**, which includes an overview of the key themes and discussion as well as outlines our process and methodology

- **Recommendations for Action**

- **Key Themes and Discussion**, organized into three main areas:
  - Digital Inclusion
  - Institutional and Sector Resilience
  - Baseline vs Technology Recommendations

- **Conclusion**

Process and Methodology

This report presents findings and insights generated through a comprehensive exploration of hybrid service delivery over 6 months in the immigrant settlement sector in Canada.

Our work had two phases. Interviews and focus groups were carried out between October 2020 and March 2021 using Zoom and then transcribed verbatim before being thematically analyzed.

In the first phase of work (October - December 2020), we sought to gain an understanding of the sector's experiences, challenges, and promising practices related to digital service delivery. A national bilingual survey, interviews, and other submissions provided us with narratives of settlement practitioners' interactions with digital technologies and adaptation of remote/digital service delivery. For management, our findings emphasize organizational difficulties and successes in digital transformation, institutional evaluation and measurement of digital transformation, as well as needed training and support in future settlement work.

Our survey received a total of 366 responses with responses from frontline practitioners and management/leadership, in English (329) and French (37). The survey was made up predominantly of open-ended questions to provide spaces for details and comments.

Before and while our survey was open we also created an online form with 7 high-level questions to help us understand sector experiences and ideas. We received 30 submissions, many with detailed answers and information.

We interviewed 20 people. Interviewees were selected to offer a diverse range of experiences and perspectives with and about digital service delivery. Interviewees represented a variety of immigrant and refugee-serving sector agencies (settlement as well as language services), from midsize to

large, urban and rural, frontline practitioners and management, from cities across the country. Interviewees also included academics (n=3) and technology coordinating representatives (n=4). The participants included, but were not limited to, frontline practitioners, managers, etc.

We released a preliminary report[2] in which we answered a number of questions including:

- What challenges have you, your organization, your colleagues, & newcomers faced during this transition to remote/digital service delivery?
- What have the successes been?
- How is technology changing/supporting/facilitating the way organizations work together within organizations, communities and across the sector?
- What does the sector need to create a successful and equitable digital and hybrid service delivery model?

In the second phase of our work (January - March 2021), we moved from challenges to solutions. We confirmed that our report themes were comprehensive and reflected the sector's experience. We probed for information, themes, successes, and challenges we had not yet identified. Most importantly, we sought sector input on what needs to come next.

We conducted 17 1.5 hour focus groups with 166 participants representing stakeholder groups from across the country:

1. Pre-arrival service providers
2. Local Immigration Partnerships (LIPs) representatives
3. Language providers (ESL/EAL & FSL/FAL)
4. National Language Advisory Board (NLAB)
5. Organizational IT/operational support providers
6. Resettlement Assistance Program (RAP) service providers
7. Members of IRCC's Health of the Sector Working Group
8. Employment service providers
9. Immigrant Employment Council representatives
10. Private refugee sponsor and refugee claimant representatives
11. Rural service providers
12. Settlement Workers in Schools (SWIS) & Libraries service providers
13. Smaller centre service providers
14. Newcomer health service providers
15. Provincial umbrella group representatives
16. Francophone service providers
17. Peel Newcomer Strategy Group representatives

Our secondary research included an extensive survey of reports, evaluations, and publications produced by a variety of public, private, third sector initiatives, universities, and other relevant academic research.

Finally, a note of appreciation is in order. We would like to thank all the interview and focus group participants, and, in particular, our Task Group members for their time, effort, expertise, and integrity:

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[2] The preliminary report released in December 2020 can be found here.

- Amélie Duplessis-Giroux, Senior Policy Analyst in the Social Innovation Division and IRCC liaison on the Technology Task Group (Observer and IRCC liaison)
- Elena Mizrokhi, Policy Analyst, Settlement and Integration Policy (Observer)
- Jayde Roche, Rural Development Network
- Jennifer Freeman, PeaceGeeks
- Julie-Ann Vincent, Immigrant Services Association of Nova Scotia (ISANS)
- Manjeet Dhiman, ACCES Employment

Recommendations for Action

The discussion about digital and hybrid service delivery is not a new conversation in the sector. However, the sector has now had a uniquely common digital service experience for over a year. The themes outlined in this report were identified through direct consultation with the settlement sector and beyond. Exploration of those themes was built upon through secondary research including an extensive survey of reports, evaluations, and publications produced by a variety of public, private, and third sector initiatives; universities; and other relevant academic research.

Our recommendations for IRCC and the sector are ambitious. However, in order to move an entire sector together towards a hybrid service delivery model, they are also practical. What is outlined in our recommendations is not unique to the sector. Every sector, industry, and institution in every economy is going through this process at the same time. These recommendations are centred in both the sector perspective, as well as promising practices, evidence, evaluations, frameworks, and models active already in our sector and beyond.

In order to provide a sector roadmap toward hybrid service delivery, we have categorized sub-recommendations in a ***Now, Next, Later*** framework. *Now* means work should begin immediately, within the next 6 months. *Next* suggests a medium-term focus (6 months to 2 years). *Later* means longer-term (2 years up to the next IRCC CFP), intense and evidence-based work (such as that generated by upcoming IRCC Service Delivery Improvement-funded projects) is likely required, which will take more time. It is essential that the *Now* short-term steps be taken immediately. IRCC needs to show the sector that it has listened and is taking action. The sector must also centre this conversation in a future-focused, collaborative strategic process.

Recommendation 1: Develop a roadmap to support organizational digital transformation

Now:

- Acknowledge that digital transformation requires ongoing support and learning.
- Digital equity and inclusion strategies should be established and form the foundation of a sector digital transformation approach.
- The sector should review existing Digital Maturity Models, Data Maturity Models, Digital Inclusion, and Digital Literacy models from within and outside nonprofit sectors to curate and customize models for the sector.
- Explore current technologies and processes related to digital experience platforms to create a seamless settlement service experience for newcomers, from pre-arrival to citizenship.

Next:

- Funding models need to better recognize the resource and time needs of building an innovation mindset, practice, and culture.

Later:

- Create funds dedicated to improving organizations' digital strategies.
- Create funds dedicated to developing organizations' digital maturity.
- Create a seamless settlement service experience for newcomers, from pre-arrival to citizenship.

Recommendation 2: Establish a common and sector-wide vision for digital literacy

Now:

- Assessing digital literacy is different from evaluating digital consumption behaviour. Instead, it should be sustainable and comprehensive.
- The sector should develop and also be provided with data and evidence to advocate for enhancing digital literacy among clients.
- Technology should be looked at through a social justice and service lens, recognizing that there is a digital divide, and that not everyone has access to technology, or wants to access services via technology.
- There needs to be funding support in terms of building up infrastructure (such as broadband, high speed internet connections, which continue to be technology challenges in many rural and smaller communities) in agencies as well as communities. While this is outside IRCC's direct sphere of influence, it is essential that the sector and newcomer perspectives on the digital divide are included in any pan-Canadian solution, programs, and interventions, as there are specific nuances related to newcomers that must be considered in these approaches.

Next:

- There is also a need for consistent and ongoing training for staff, not only focused on how best they can use technology, but also how to train clients to use it in a service context.
- The sector and IRCC should develop guidelines on how to develop and implement digital literacy tools to assess clients' digital skills. This guidance should include the provision of training materials, tools, and recommendations for agencies to support clients' digital literacy skills.

Later:

- The sector and IRCC should develop a digital literacy competence framework conducive to the needs of the immigrant settlement sector.
- Consider a Digital Literacy Benchmark (DLB) as a complement to Canadian Language Benchmarks (CLB) to allow for Service Providing Organizations (SPOs) to quickly and

accurately assess the digital literacy levels of newcomers to guide and support them accordingly.

Recommendation 3: Establish a hybrid service delivery lead at IRCC

Now:

- Establish a sector-IRCC working group focused on hybrid service delivery to continue to research, address, evaluate, establish a roadmap, and continue the work of this Task Group and bring together other related sector efforts.
- Identify where IRCC's strategic digital strategy intersects with overall Canadian and other government digital strategies and operational approaches to align with them in sector planning and strategizing.

Next:

- IRCC should have cross-department coordination and operational leadership status to ensure efforts are incorporated into this work as well as intra- and inter-governmental learning.

Later:

- Evaluate, incorporate, and establish digital and data maturity models into Service Provider Organizations (SPO) program planning, funding, and operations, including active evaluation, learning, and knowledge mobilization of existing digital and hybrid service delivery in the sector.
- Implement evaluation, learning, and knowledge mobilization processes with organizations whose digital transformation and hybrid service delivery pre-dated COVID, such as pre-arrival, blended and remote language learning, and existing digital efforts funded by IRCC and other funders.

Recommendation 4: Establish baseline sector competencies

Now:

- Begin identifying a competencies framework for professional development, onboarding, job requirements, organizational infrastructure, and data management.
- Develop guidelines for professional practice on the use of technology in human service delivery.
- Provide a checklist of key cybersecurity considerations for the sector to use in digital service delivery.

Next:

- Establish a privacy, security, and confidentiality compliance framework related to digital service delivery and sharing it with SPOs.
- An outcomes-driven framework is built on agency capacity to collect, evaluate, analyze and act on the right data. SDI-funded initiatives are already looking into how sector agencies can

better do this work with data. Deep analysis of their work should be shared with the entire sector to learn from these approaches.

- Explore models of digital transformation, digital and data maturity, hybrid service delivery in other non-profit and the private sector to bring the best and most relevant expertise into the sector.
- Consistent and baseline professional development needs to be made available across the sector. Bring together those who provide sector-wide professional development such as umbrella groups, colleges, and universities to create a comprehensive, blended (combining online and in-person) learning model. IRCC should look to the language sector professional development model it funds, the LearnIT2teach Project, for what can be replicated in Settlement programming.
- Invest in assessing the sector's digital risks and introducing a digital security triage framework to understand the levels of risk (i.e., low risk, medium risk, high-risk) before embracing any digital security model, and fund accordingly. Employ an evidence-based approach and launch a pan-Canadian survey to understand existing and/or potential digital threats.

Recommendation 5: Establish a national sector capacity-building approach

Now:

- While it was beyond the scope of this report to include extensive case studies and promising practises, we have identified a number of digital and hybrid service delivery projects, programs, roles, efforts, etc., that exist in the sector that should be looked into in more detail to extract learnings from. There are others outside the sector that should also be looked into. All of these should be an ongoing effort, building on existing professional development efforts, but also bringing in approaches from other sectors.
- Identify and evaluate new and modified roles that have emerged during the pandemic to support digital service delivery. Continue funding existing roles through this fiscal year.

Next:

- Establish a knowledge mobilization approach to all digital funding at IRCC with a goal to quickly evaluate and share learning from funded projects at national and regional levels.
- Support broader and deeper collaboration between sector stakeholders to ensure that digital and hybrid service delivery lessons learned are shared with a goal for knowledge transfer, replication, and scaling.
- There is a need to create a knowledge mobilization strategy to share learnings and successes from within Canada, and from international case studies and examples.
- Innovation, technology and discussions of the future of settlement work are on the National Settlement and Integration Council (NSIC) agenda. That agenda and those discussions should be actively decentralized, shared, and pursued within the sector, through the emerging National Community of Practice, as well as in all related Communities of Practice, conferences, regional meetings, and other events that bring together practitioners with academics and funder representatives.

Later:

- Explore building a national knowledge mobilization strategy and structure that expands beyond IRCC-funded projects and has a scope beyond simply sharing information: one that is committed to knowledge transfer, scaling, and replication.

Recommendation 6: Ensure sector nuances are taken into account

Now:

- Smaller centres have different needs than larger urban centres. Smaller organizations without technical infrastructure have different capacity than large organizations with multi-person technical and communications teams. While we have scratched the surface on these nuances, they must continue to be explored to ensure that the sector and IRCC have baseline understandings of the diversity of organizational capacity, digital divide in agencies, regions, and clients, and that support, interventions, and investments are allocated equitably.
- IRCC should work with sector stakeholder groups through the National Settlement and Integration Council (NSIC) to confirm findings and augment them with specific nuances for different stakeholder groups (including those listed in our focus groups, and others).

Next:

- While this report scratches the surface of understanding the digital equity, divide, and literacy nuances of newcomers, more work should be done here, both by IRCC and the sector.

Key Themes and Discussion

Below you will find the key themes that emerged from our work to guide the creation of a hybrid service delivery model. Our themes are organized into three broad categories: Digital Inclusion, Institutional and Sector Resilience, and Baseline vs Technology Recommendations.

In each key theme, we provide an introduction, sector perspectives (from interviews and focus groups), a number of useful tools and practices we have found to help guide our recommendations to help the sector and IRCC develop the themes into practice, and then a list of specific recommendations that are relevant to the theme.

Digital Inclusion

Addressing digital inclusion is complex. It requires recognition of the challenge and sustained effort to address it. There is no single strategy or method that could address all populations' needs. Instead, localization and customization of different programs in Service Providing Organizations (SPOs) requires flexibility. Digital inequity is multifaceted, and intersects with culture, gender, age, class, and educational background.

The sector wants to look at technology from a social justice and service lens. The sector recognizes that there is a digital divide, not everyone has digital skills, and that not everyone has access to technology, or wants to access services via technology. Much has been written, identified and

codified in other human service sectors that can and should be easily transferred to the immigrant and refugee-serving sector. We outline these throughout the report. Resources can be borrowed, replicated, and customized for the settlement sector. Developing guidelines for professional practice on the use of technology in human service delivery is essential.

Frontline practitioners work directly and closely with their clients and comprehensively understand clients' barriers and needs. Since March 2020, settlement frontline practitioners have worked to assist clients to access virtual service and participate in virtual learning. They have become digital service trainers, digital navigators, digital equity advocates, cybersecurity consultants, digital coaches, mentors, and more. They are adult educators, who invest endless efforts to build practical and equitable digital services and online learning spaces that some of them and their clients had not previously explored.

Addressing Digital Equity and the Digital Divide

Introduction and Discussion about Digital Equity and the Digital Divide

The digital divide is a complex social challenge that requires interventions in a hybrid service delivery model. It also creates opportunities for SPOs to reflect, revisit, and refine their daily virtual interactions with vulnerable populations in order to provide more targeted services to marginalized social groups.

It is important for the sector to explore formal definitions of digital inequity and inclusion. It is an area that requires additional insight and research so it can be adequately addressed by agencies and funders. Sector discussions identified a variety of factors contributing to digital inequity, including an inability to access or having poor internet connections: 1) clients had no access to digital devices such as cell phone, laptop, or tablets; 2) clients were living in precarious situations, which limited their digital device access; and 3) clients had low digital literacy skills to use digital devices or online tools. In addition, survey respondents indicate that low digital literacy combined with language barriers (including low literacy in their own languages) produced additional challenges for online service delivery.

This is an important and unique opportunity to avoid reproducing societal inequities through technology.

Bridging the Digital Divide

The digital divide is made up of a variety of factors contributing to digital inequity and an inability to access had poor internet connections, including digital services: 1) clients had no access to digital devices such as cell phone, laptop, or tablets; 2) clients were living in precarious situations, which limited their digital device access; 3) clients; and 4) clients had low digital literacy skills to use digital devices or online tools. In addition, survey respondents indicate that low digital literacy combined with language barriers produced additional challenges for online service delivery.

In our Preliminary Report we identified the importance of both customization and localization of digital service delivery, along with pan-sectoral strategies. These include ethical considerations and sector

standardization on topics such as digital security, digital workplace collaboration and integration, and digital service competencies and policies. At the same time a spotlight has been focused on digital equity issues and the digital divide among newcomer and racialized communities, made more pressing by the pandemic shift to digital service delivery.

Digital inequity is not a new issue in Canada (in English only), but one that requires constant vigilance as "low income Canadians… are being kept (or pushed) offline by unaffordable high-speed Internet fees, low speed targets and data capping, as well as cuts to adult and community literacy programs that were once hubs of digital learning."

This recent Toronto South Local Immigration Partnership (TSLIP) report (in English only) outlines how the "lack of equitable access to technology has been a long-standing issue for vulnerable and marginalized populations including newcomers, and along with other equity issues has been exacerbated by the COVID-19 pandemic. This report outlines how the transition to online service delivery by government and community agencies has impacted newcomers, especially those in vulnerable situations, with the intent that findings be used to inform policy and drive social change."

TSLIP's report is complemented by Brookfield Institute's Mapping Toronto's Digital Divide (in English only), which analyzes Toronto's home internet and device access, quality, affordability, and usage, during pandemic closures of businesses, schools, and community organizations. Their findings "reinforce the need to continue scaling programs to close the remaining gaps in internet and device access. They also highlight notable gaps in internet quality and affordability along lines of income, age and race that urgently require greater policy and programmatic response"

Ryerson University's (in partnership with the Brookfield Institute for Innovation + Entrepreneurship, the First Nations Technology Council and SFU Public Square) Overcoming Digital Divides framing paper and workshop series (in English only) is one space where the conversation is moving from identifying the problem to moving to solutions. They ask: "How can federal, provincial, territorial, municipal and Indigenous governments advance policy solutions for full digital inclusion? What community and industry programs and policies can help to close these divides?"

These recent reports outline long held concerns by researchers and advocates who study the demography of the digital divide:

- It is estimated that 91% of Canadians have access to the internet (in English only). However, according to the Toronto Public Library (in English only) "The Canadian Radio-television and Telecommunications (CRTC) reports that only 59 percent of low income households have internet access at home. People who do not have internet access at home are at a disadvantage, and we have a role to play in helping to close the digital divide."
- ACORN Canada's research on internet use and accessibility for low-income Canadians (in English only) "reveal that the internet plays an important role in the everyday lives of low-income earners; however, the high costs of obtaining high-speed home internet connections can lead to unnecessary hardship. Respondents who struggle to afford home internet access detailed the detrimental effect this has on: job searching and job retention; school work (at the primary, secondary, and post-secondary levels) and related academic achievement benchmarks; access to information on healthcare and nutrition; access to and understanding of government forms and processes; and civic and social participation."

- [New internet performance data shows the staggering scale of Canada's urban-rural digital divide](): "The data demonstrates the massive gap in actual, measured internet speeds experienced by Canadian households in rural and urban areas. For example, in April, rural download speeds were nearly 12 times slower than those enjoyed by urban Canadians. Since the COVID-19 pandemic began, internet speeds have fallen for rural users, and increased for urban users, effectively widening Canada's digital divide."
- [Barriers to Digital Equality in Canada]() (in English only) outlines many barriers contributing to Canada's digital divide.
- [The Digital Divide Between Canadian Cities]() finds that "The shift to a highly digitalized world risks exacerbating the divergence in income and job opportunities between regions. This has been most pronounced in the U.S., where superstar cities that attract highly paid tech workers leave their smaller counterparts further and further behind… Policymakers have taken a number of steps to address regional divergence, however greater focus is required. Technology dynamics tend to form quickly and are hard to unwind once established.
- [The impact of Ontario's digital divide]() finds that "our interactions with government and public services, workplaces, financial institutions and businesses [increasingly take place] online. But differences in income, age, education and immigration status, and whether we live in an urban or rural community, mean differences in our online access. The resulting digital divide has three interrelated layers: differences in how people connect to the Internet; differences in what kind of online activities they engage in; and differences in how they benefit from their interactions with services, resources, and networks that are only available online.
- The [CRTC Communications Monitoring Report]() provides an overview of the adoption of communications technologies by Canadian households from 2013-2017, and illustrates the trends in household communications expenditure.
- The [Canadian Internet Use Survey]() outlines how the internet is used by Canadians in their personal and work lives. For example, in 2018 "30% of employed Canadian Internet users reported that their employer expected them to use the Internet to stay connected outside of their regular work hours, and almost one-quarter (23%) of employed Canadians reported that they had done some telework."
- [Digital Equity Ottawa]() (in English only), as part of the Ottawa Neighbourhood Equity Index (a tool to assess and compare unnecessary and unfair differences at a neighbourhood level on factors impacting wellbeing) provides a snapshot of the digital divide in Ottawa, including recognizing how "the non-profit sector in Ottawa is facing its own digital divide, including issues with hardware, software, helpdesk supports and a skills gap in some agencies. In order to serve our residents effectively, the non-profit sector needs to assess its own digital health and ensure it's keeping pace with evolving needs.

What is digital inclusion?

Ryerson University's [paper frames the broad challenge succinctly]() (in English only):

> "Canada's digital divide has often been narrowly defined as the gap that exists between urban and rural broadband internet availability — Canadian urban centres have significantly greater internet subscription levels at faster speeds than rural communities.1 The cost of building new internet infrastructure in less developed areas continues to impede equitable access to sufficient internet services.

However, a simple urban-rural characterization misses much of the complexities and nuances that shape Canada's digital reality. Disparities in internet adoption and speed are also significantly correlated with socio-economic inequalities and demographic factors such as income, age, education, race, Indigeneity and ability."

These nuances are clearly a reality and concern in the immigrant and refugee-serving sector. If digital inclusion is not adequately addressed, an IRPP Policy Options article suggests that we risk perpetuating existing inequalities: "Although technology benefits our societies, we must be wary of letting its effects play out unrestrained, especially given the current high levels of inequality around the world. To ensure technology delivers for all, people's well-being must be placed at the centre of public policy."

There are a number of nuanced definitions to describe digital inclusion. The immigrant serving sector needs to thoroughly evaluate these to adopt one, or create a sector-specific definition moving forward:

- The Government of Ontario defines digital inclusion as: "Deliver intuitive government services that are accessible to anyone who needs to use them. By supporting the advancement of ministry digital literacy work and inclusion initiatives, the ODS will help create a society where everyone can participate in, and benefit from, digital technologies in their lives."
- The Digital Citizenship Education Handbook (2019) (in English only) by the Council of Europe offers a conceptual model for teachers and other education service providers in teaching young people about elements of digital citizenship, such as online wellbeing, safety and digital rights.
- In the Digital Principles for the Government of British Columbia, digital inclusion is not overtly defined, but recommends that in the development of digital products and services it is important to "Apply human-centered design practices, working directly with people who will use the product or service. Communicate in plain language. Strive to meet the highest standards of accessibility, inclusion and equity. Endeavour to create a seamless experience across the government's various digital and physical channels."
- While not labelling it as digital inclusion, the Alberta (in English only) and Saskatchewan governments use co-design and user-centred design language in their digital standards/principles. The Department of Service Nova Scotia and Internal Services does not mention digital inclusion, but discusses "pivoting to putting people first" (in English only). Digital New Brunswick outlines a "people-powered" approach that includes language which references digital inclusion.
- There is room for a sector definition of digital inclusion and digital equity that should be national in scope and standardized. Given income inequality and poverty trends among newcomers, especially those from racialized groups (in English only), along with trends towards increased digital service provision across sectors, it should be a concern to us that, while newcomer clients can be among the most digitally literate and connected (in English only), they can also be among the most vulnerable and remain digitally, socially, and economically isolated.

The international humanitarian sector suggests that addressing digital equity should focus on the 5 A's of Technology Access (in English only):

- Availability – Availability is not only about availability of connectivity, it is also about availability of relevant content in local languages and the availability of adaptive and assistive technologies for people with disabilities.
- Affordability – Even if technology access is available for some people, it may not be affordable.
- Awareness – Be aware of digital governance initiatives, such as the Connecting Families program.
- Ability – Even when availability, affordability, and awareness are high, a person's ability to make effective use of a technology can be limited by a lack of digital literacy, skills, or knowledge. Do you and your clients have the skills?
- Agency – Even for those marginalized people who experience civic technologies as available and affordable, and for whom awareness and abilities are no restriction, agency (the extent to which a person's feels able to act in the world to bring about change or what a person is able to do in line with their conception of the good) may remain a formidable barrier.

It is also a public policy advocacy issue. From the Ontario Digital Inclusion Summit: "There's also a research and policy gap. It's not merely about knowing that digital divides are real, but understanding at the ground level how they affect particular groups, communities, regions and individuals so that governments and other stakeholders can adapt. In a world where people debate big and small government, it's about deciding, together, what our collective responsibility is to each other — and how digital provides both new opportunities and challenges in upholding that responsibility."

What of funding to address the digital divide?

Addressing the digital divide to ensure digital inclusion requires investments (in English only).

As the sector and all other service providers pivoted to online services over the past year, the Canadian Internet Registration Authority (CIRA) released a study detailing the funding shortfalls facing organizations that work to improve the quality of Canada's internet: "The study finds that resources are scarce for not-for-profits, charities and researchers working to connect Canadians to high-quality internet that is affordable and secure during a time when the COVID-19 pandemic has exacerbated Canada's digital divide… while ensuring all Canadians are digitally connected has never been more important, Canada's "digital philanthropy" sector is ill-defined... The research finds that funding for internet-related projects is limited, complicated, and difficult to access, which leads to competition for resources amongst groups who share the same goals."

Striving for digital inclusion of all newcomers is a key goal. However, it should not be assumed that once individuals have access to tech/internet, they will access services independently using the internet. Existing lo-fi or non-digital approaches should also be viewed as part of the hybrid service delivery continuum. There is a rich history of these in the sector.

Creating access through lo-fi and other service delivery models

While most settlement services are offered within specific offices during typical office hours, innovation in itinerant service delivery has existed for some time. Settlement Workers in Schools (SWIS), Library Settlement Partnerships (LSP), and other services aim to meet newcomers in the community.

As a recent [Standing Committee On Citizenship And Immigration (CIMM)](#) (2019) report found "the itinerant settlement services model [is] a service that goes to newcomers, overcoming the lack-of-transportation barrier. In addition, she said it does not require maintaining physical buildings, appointments are set up as needed, and the location is chosen based on its convenience for the newcomer, such as a local library. Ms. Crane maintained that this approach is flexible, needs-based and very efficient. She believes that LIPs have an important role to play in setting up itinerant settlement services, as they can put settlement service officials in touch with community organizations."

The 2020 [COVID & Canada's Settlement Sector Survey](#) (in English only) identified how sector workers and leadership are resilient, adaptable, and committed to the well-being of their clients as they suddenly shifted to remote and digital work early in the pandemic.

A [COVID-19 RAP SPO Survey (April 3 2020 update)](#) (in English only) also sought to get a better understanding of how RAP SPOs across Canada are responding to the unique challenges and issues currently being faced as a result of COVID-19 in order to continue to support vulnerable GAR clients.

Sector Perspectives on Digital Equity and the Digital Divide

Our interviews and focus group data found that SPOs have incrementally better understood the dimensions of digital inequality in the immigrant serving sector. It needs to consider different social and situational contexts intersected in clients' social class and status:

> Digital transformation needs to be considered in a broader social context, high cost and poor quality of internet services and an impediment. And particularly affecting lower income groups. And success in digital transformation can hardly be viewed independently from the issues with underlying infrastructure (technology, SPO, focus group)

Addressing digital inequality is a long-term challenge. Frontline practitioners need to be aware of the complex vulnerability in clients' lived experiences when considering digital accessibility:

> The expectation from the client to be engaged and to have access to technology sometimes is too high, we need to be very cautious about it and very mindful of their access to technology, network, and connectivity issues that happens very frequently in some areas, and also them having their own kids studying from home or somebody else trying to work from home all these challenges come with the technology. (employment, SPO, focus group)

With the purpose of solving digital inequality, participants shared with us their solution-oriented practices to support different vulnerable social groups:

> So we're finding that there is less of a need in regards to computers, but still a need for digital literacy. So not saying that they're able to use the computer, but they have one. So those are the differences. So, there is still an understanding of whether you know, they need assistance when they're at home, do they have someone that's home that can give them more assistance, or if there's nobody at home, and then we have a sense of whether that person would need more help, what they helped us with his enlisting our settlement counselors to kind of assist more with translation. So, if there was a need, and it was an area that somebody

couldn't understand or grasp, we would bring in a settlement counselor to help us with translation that spoke their language. And then we could work through the difficulties and problem solve with them. So we've had to kind of leverage each other's services in order to really meet the needs of the client. (technology, SPO, focus group)

To further tackle digital inequality issues among different vulnerable populations, collaboration has played a key role:

So, when the containment just started, we decided to conduct online friendship clubs for kids and do some activities for them. And the challenge that we had was not every family had computer devices. For example, when parents worked from home, they used the computer, so kids weren't able to attend any of these events because parents have been using that. So, we worked together with community partners, and delivered additional computers to the families. And also, the school district that we work in partnership, they provide the devices for high school students, but not all elementary school students have these devices. So, it was great to have this collaboration with other partners in the community…. Also, we noticed that not every young person has a phone number, but they all on Instagram. So, before we had the WhatsApp chat, but because they use their phone numbers from different countries, so it was not easy to communicate with them. Then we transferred them to Instagram. We're just doing more like promotional things via Instagram, where we provide some additional information about upcoming workshops, upcoming info sessions or different activities. (school and library, focus group)

Digital Equity and the Digital Divide Tools & Practice

The [NTEN Equity Guide for Nonprofit Technology](#) (in English only) provides an important overview and useful framework for the sector to approach technology through an equity and social justice lens so that technology is implemented in a way that furthers equity:

"Technology touches every aspect of a nonprofit for both staff and constituents, including collecting data and its use, how communication and training may happen, and even their access to necessary tools. Because of technology's vast influence, it can easily create or exacerbate inequities both inside and outside the organization. These guidelines define nonprofits as formally established, community-based groups and coalitions working on social impact, or grantmakers."

The guide provides a number of useful and practical guidelines to ensure equity in technology planning and implementation.

In 2017 the US Social Work sector outlined [standards for Technology in social work practice](#) (in English only). These standards provide ethical guidelines and specific standards to be met when providing services to clients in four main sections: (1) provide information to the public; (2) design and deliver services; (3) gather, manage, store,and access information about clients; and (4) educate and supervise social workers.

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- Now: Digital equity and inclusion strategies should be established and form the foundation of a sector digital transformation approach. The sector should review existing Digital Maturity Models, Data Maturity Models, Digital Inclusion, and Digital Literacy models from within and outside nonprofit sectors to curate and customize models for the sector.
- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Now: Technology should be looked at through a social justice and service lens, recognizing that there is a digital divide, and that not everyone has access to technology, or wants to access services via technology. Assessing digital literacy is different from evaluating digital consumption behaviour. Instead, it should be sustainable and comprehensive. We recommend three important components for digital literacy assessment: 1) define the concept of digital literacy in the sector recognizing the uniqueness of clients in different programs; 2) assessment should be contextualized in settlement practitioners' daily work practices and serve their programs' goals; 3) when designing the assessment, it is crucial to consider clients' intersectional identities, including race, gender, educational and professional background, sexual orientation, disability, and cultural practices. There needs to be funding support in terms of building up infrastructure (such as broadband, high speed internet connections, which continue to be technology challenges in many rural and smaller communities) in agencies as well as communities. While this is outside IRCC's direct sphere of influence, it is essential that the sector and newcomer perspectives on the digital divide are included in any pan-Canadian solution, programs, and interventions, as there are specific nuances related to newcomers that must be considered in these approaches.
- Recommendation 6: Ensure sector nuances are taken into account -- all sub-sections

A Nuanced Approach to Digital Literacy and Skills

Introduction and Discussion about Digital Literacy and Skills

Our [preliminary report](#) identified that settlement practitioners gradually acquired digital technology knowledge and integrated digital skills into service delivery. Digital literacy is a foundational skill that must be developed in a hybrid service delivery model, alongside established skill sets. This section reviews the discussions and available digital literacy frameworks to enhance support to digital inclusion in the sector.

[Digital literacy has been described by UNESCO](#) (in English only) as "the ability to define, access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy." It entails the "ability to identify and use technology confidently, creatively and critically to meet the demands and challenges of living, learning and working in a digital society."

Digital literacy skills contain the notion of digital literacy accessibility and clients' presentability, performability, and digital knowledge comprehension. Digital literacy extends beyond simple digital consumption behaviour into digital fluency. Royal Roads University's education technology expert Clint Lalonde [describes the difference between digital literacy and digital fluency](#) (in English only) as: "In learning a foreign language, a literate person can read, speak, and listen for understanding

in the new language. A fluent person can create something in the language: a story, a poem, a play, or a conversation. Similarly, digital literacy is an understanding of how to use the tools; digital fluency is the ability to create something new with those tools."

Accenture suggests (in English only) a similar approach that "digital fluency should be thought of in a manner similar to how people use languages. If someone is literate in a language, they understand the basic tools of speech, such as reading and speaking. However, if someone is fluent in a language, they are able to create something new with the tools, such as craft a poem or engage in robust conversation. Fluency unlocks newfound knowledge, creativity and innovation that literacy cannot enable on its own." They define digital fluency as measurable within "an integrated framework measured by your digital workforce's technology quotient (TQ) + digital operations + digital foundations + digital leadership and culture. When all four facets are in place, workers gain agility, and the organization leads in key performance metrics such as innovation and customer service."

We recommend three important components for digital literacy assessment: 1) define the concept of digital literacy in the sector recognizing the uniqueness of clients in different programs; 2) assessment should be contextualized in settlement practitioners' daily work practices and serve their programs' goals; 3) when designing the assessment, it is crucial to consider clients' intersectional identities, including race, gender, educational and professional background, sexual orientation, disability, and cultural practices.

We recommend that the sector not only explore and define digital literacy and skills but also digital fluency. Digital literacy assessment should recognize nuances of newcomer diversity in digital fluency. In discussions with the sector, it became clear there is much interest in establishing Digital Literacy Benchmarks (DLB) for newcomers that complement Canadian Language Benchmarks (CLB). Creating a similar set of benchmarks might allow SPOs to quickly and accurately assess the digital literacy levels of newcomers to guide and support them accordingly. A newcomer-centric DLB model does not currently exist, but there are efforts both within and outside the sector to describe, assess, and benchmark digital literacy/fluency competencies that should be explored.

Competencies for Digital Performance

The eSkills.ca project (in English only) developed a useful synthesis of current digital literacy models. It outlines their competency framework, which incorporates digital fluency:
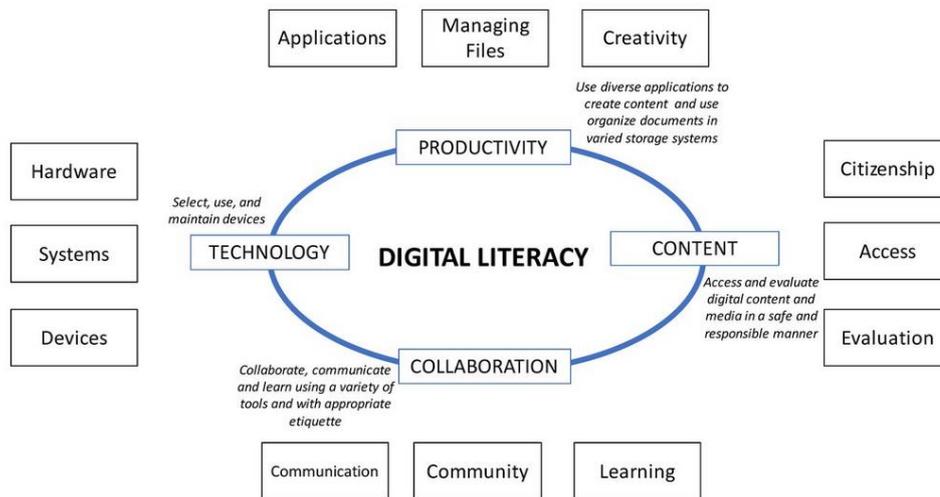
eSkills Digital Literacy competency model 1.2, 2019

The OECD Skills Research framework for the the Digital Intelligence (DQ) (in English only) offers a global framework for digital intelligence which includes a common set of definitions, language, and understanding of comprehensive digital literacy, skills, and digital readiness in eight areas, and 24 competencies composed of knowledge, skills, attitudes, and values.

Critical literacies

Several guidelines exist to build individual and organizational digital capacity to support digital transformation efforts. JISC UK (2019) outlined key digital capabilities (in English only):

1) Information, data and media literacies (critical use)
2) Digital creation, problem-solving, and innovation (creative production)
3) Digital communication, collaboration and participation
4) Digital learning and development

In their recent study (in English only) that explores the use of interactive and social media tools in the community work sector in the Greater Toronto Area (GTA), Jeremic and Bouchard (2019) highlight that critical digital pedagogy approach focuses on empowering digital users and using digital technologies through a social justice lens. The authors argue that critical digital pedagogy ensures that future practitioners will develop digital fluency skills, thereby equipping themselves to better respond and adapt to technological changes.

Sector Perspectives on Digital Literacy

Assessing clients' digital literacy skills

Measuring clients' digital literacy skills can be challenging, since this measurement is different from a language proficiency assessment. Though difficulties occurred, many SPOs have attempted to measure client literacy skills:

To assess digital levels, I had briefly reached out to different settlement practitioners from different agencies, as well as talking to our settlement practitioners. And I had one extra partner in this process. So that partner because he was a settlement worker himself, he was going directly to clients, and then doing kind of, I would say, an informal focus group. It was with, like a very small number of people…. Basically, we were trying to figure out exactly the levels that they were at, I found that within different agencies, depending on who their focus was, I found some settlement practitioners' clientele to be like they had a lot more access and a lot more digital literacy than our own clients. Like our clients had no digital access. Some of them had never seen a computer before. So with that, we had to kind of devise our different strategies. I know for age groups, our youth program, population, they were well versed in technology. So they didn't face the same kind of struggles as some of our settlement practitioners and some of our senior workers. (newcomers health, SPO, focus group)

Creating a baseline of digital literacy assessment focuses on how digital literacy skills are interrelated with digital accessibility:

We went along and talked to our clients, and these are pieces that actually came to some of our forums, and in terms of evaluating it. And in terms of getting feedback from clients, some of our forums included a section that said, where would you like us to meet you? What's the best place? What's the best platform to meet you at? And that is how we then came across and said, why does this group need this, and this group needs that? And then we trained our staff to be able to run those platforms for those groups. (schools and libraries, focus group)

Here is another example that explains a similar message:

So the things that they have done to us kind of come along with their needs of technology and access. We're finding that there's less of a need in regards to computers, but still a need for digital literacy. I'm not saying that they're able to use the computer, but they have one. So those are the differences. There's still an understanding of whether they need assistance when they're at home, do they have someone that's home that can give them more assistance, or if there's nobody at home, and then we have a sense of whether that person would need more help, what what they helped us with his enlisting our settlement counselors to kind of assist more with translation. If there was a need, and it was an area that somebody couldn't understand or grasp, we would bring in a settlement counselor to help us with translation that spoke their language. And then we could work through the difficulties and problem solve with them. So we've had to kind of leverage each other's services in order to to really meet the needs of the client. (technology, SPO, focus group)

In language service programs, instructors indicated that limitations appeared when teachers tried to create those benchmarks. It is important to not simply establish competencies, but how they will be applied in curriculum and pedagogy:

The kind of testing, idea, sort of questioning, but what are you gonna do with the test results? How is it really going to inform your teaching? And how is it really going to help you cement that relationship and trust that you need to have with the learners who come back next week and the week after and persist for something that isn't very easy to do. And [we should] try

to get them to focus on the right bit of the equation. They need to know how to use the keyboard or they need to know how to use the mouse don't really establish that relationship. (adult literacy organization, interview)

Digital literacy is also tied to literacy in general. One informant shared his experiences of working with refugees who were not literate in their own language, which this participant had never considered in his previous work practices. He underlined the importance of doing self-guided research and fully understanding client nuances:

One stat I recently read, which really just helped make things click is, if we look at the refugees recently targeted by the Government of Canada for settlement, is close to 20% don't have functional literacy in their first language. That's interesting, right? Now, if you think about, like, our response to COVID. And we just translate something into another language. Like how, how foolhardy is that, right? A fifth of your audience doesn't read the language? Why did you bother translating it? Some of the things we need to be thinking about is, if we're gonna push the message to people, well, maybe we should be using WhatsApp voice messages, because that's what's going to be effective. It doesn't presuppose literacy. And that literacy bias is so huge. We have that in so many different areas, and we don't even realize that we just default to assuming people read something. And it's like, oh, if I translate it into this language, that's it. My job is done. Realizing that's probably just as opaque to the person as the English document you had. Right. And so you just spent a lot of your time and effort doing something that's utterly fruitless. (refugees serving organization, SPO, interview)

Measuring settlement practitioners' digital literacy level

Assessing digital literacy does not stop at the client level; it is equally important to measure settlement practitioners' digital literacy levels.

In a language service program, virtual methodology and pedagogy were viewed as the crucial components when evaluating settlement practitioners' digital skills:

The most difficult part we are right now at the stage of pulling into the digital pedagogy, the methodology of online teaching how to engage make the learners an engaged learner, again, we move the learners from teaching them how to hold the mouse and click into how do you actually participate. And this is a big challenge. (language services, SPO, focus group)

When baselining or benchmarking digital literacy skills, it is also essential to evaluate how they are being used in practice:

So any perspective you have on, you know, the investments that are required in order to the way I put it is like everyone needs a floor of digital literacy and competency in order to do this work. So how do we get everybody to that level? And that includes frontline as well as leadership, right? And I actually created a leadership course, within it to teach, which I've been delivering for five years now. It is about what do you kind of walk people through to help them understand what their role is and where this is beneficial to them for the newcomers and for the staff? But what am I missing here, is to evaluate the role of evaluation. I think this is essential communication. (language services, SPO, interview)

Though many SPOs have started providing digital literacy training to their staff, challenges remained in measuring workers' digital literacy levels after training had been delivered:

> We have provided digital literacy training to our staff, as well as clients, for those individuals that were really struggling. So we put them through training almost three times over. But like you say, unfortunately, some individuals just have a level that they get stuck at the, you know, the plateau. But they're doing the basics. So I can't complain in the sense that the delivery has been impacted. It's just maybe not as advanced as technologically inclusive of some of the other levels we have, but it's there. And it's been used by the clients and the instructor themselves. We have, I would say in the majority have come a long way. Huge from where we started. (technology, SPO, focus group)

One respondent implied that evaluation of workers' digital skills is an ongoing and collaborative act:

> It certainly for most of the people here know, having the ability to work with, you know, Microsoft Office skills. There are some minimum standards that if you don't have them, you don't get past the first hiring process. And we're always evaluating. So for each position, what is the technology baseline for this position, and some, of course, require much more in terms of their abilities to be able to work in Adobe and to be able to do whatever it may be. So that's my caution and encouragement that those baselines are important, but there needs to be a mechanism that organizations revisit and re-evaluate all the time. And it shouldn't be just the government leading it, or the sector doing it. But it's got to be a national working group, like the Technology Task Group to come up with some solid suggestions for actions. (health service organization, focus group)

In order to measure digital literacy skills for both clients and settlement practitioners, participants emphasized the idea of digital recredentialing:

> How about certification, like certification requirements for staff just to make sure that we do not have holes in our staff education. People have learned how to use Zoom, but they still don't understand how the devices work on the computer. So if they had a very basic understanding of those through the certification levels. Like level one, you understand basic computer literacy; Level two, you need to type at, let's say, 25 to 30 words a minute. Level three, and so on. So just as a suggestion. And then, of course, seeing the requirements obviously, both time out of staff's days, and also funding for that. (technology, SPO, focus group)

Digital Literacy Tools & Practice

Assessing and Supporting Clients' Digital Literacy

Developing tools for assessing digital literacy is necessary but not an easy task. There are a lot of nuances and details associated with the measurement components and methods to provide a valid and reliable evaluation. We have found a variety of digital literacy competency frameworks that have been introduced by international organizations, national or subnational bodies, and private institutions.

These digital literacy conceptual models outlined below demonstrate the greatest potential for adaptability and relevance to the settlement sector's needs.

Within the sector

- [ISSofBC's Digital Literacy Curriculum Resource](#) (in English only) was designed to support English language instructors and those in the Settlement field in helping newcomer clients overcome digital literacy barriers. The resource provides an Assessor Rubric designed for teachers to identify client digital skills gaps and learning needs.
- [eSkills](#) (in English only) is an SDI-funded Red River College project which created courseware to help build English-language learners' digital literacy through self-directed online learning modules. The project also spent an extensive amount of time researching current theories of digital literacy, instructional design models to work with newcomers, and ran initial pilot evaluations with learners.
- [Norquest College's Digital Literacy course](#) (in English only) is an example of an existing approach to teaching learners digital literacy skills to help them succeed with online courses. It is one of many examples of pre-online courses designed by colleges and other institutions that can be useful to review for the settlement sector.

Canadian Resources

The [British Columbia Digital Literacy Framework](#) (in English only) elaborates on six characteristics identified by B.C. educational leaders. These characteristics are based on the National Education Technology Standards for Students (NETS-S) standards developed by the International Society for Technology in Education (ISTE) and encompass the types of knowledge and skills learners need to be successful in the 21st century.

[Mapping Digital Literacy Policy and Practice in the Canadian Education Landscape (2015)](#) synthesizes the key concepts and existing promising practices in digital literacy education contexts in Canada to provide insights for those planning to develop digital literacy frameworks.

The Use, Understand, and Create [Digital Literacy Framework for Canadian Schools](#) provides a roadmap for teaching digital literacy skills in Canadian schools. The framework draws on seven key aspects of digital literacy – ethics and empathy, privacy and security, community engagement, digital health, consumer awareness, finding and verifying and making and remixing – and provides teachers with supporting lessons and interactive resources that are linked to curriculum outcomes for every province and territory.

At the international level

Our review outlined existing conceptual frameworks for the role of service providers to help build client digital literacy:

- [The Digital Citizenship Education framework](#) (in English only) (2019) by the Council of Europe offers a conceptual model for teachers and other education service providers in teaching young people about elements of digital citizenship, such as online wellbeing, safety and digital rights.

- [Roadtrip Nation](#) (in English only), a US-based non-profit working in youth employment, has integrated [Google's Applied Digital Skills](#) (in English only), which is a free project-based program that equips clients with practical technology skills, including how to make digital presentations, do online analysis, use spreadsheets, and more.
- [Education & Skills Online](#), a joint initiative by OECD and European Commission, provides an assessment tool to measure literacy, numeracy and problem solving in technology-rich environments and it gathers information and data on how adults use their skills at home, at work and in the wider community. As a participating country, Canadian organizations that are using the tool can benchmark their results against the OECD Survey of Adult Skills results from their country and internationally.
- [Digital Literacy Global Framework (DLGF)](#) (in English only) (2018) by UNESCO Institute for Statistics developed an assessment tool for monitoring digital literacy worldwide. They identified 26 competences grouped into 7 areas of competences: identifying and using hardware/devices and software operations, information and data literacy, communication and collaboration, digital content creation, safety, problem solving, and career-related competences.
- [The European Commission DigComp 2.0 framework (2013)](#) (in English only) is one of the well-known and commonly applied digital literacy competence models which has become a reference for the development and planning of digital literacy initiatives both at European and member state level. DigComp identifies 5 digital competence areas with their respective dimensions and self-assessment grid. [Areas include](#) (in English only) information and data literacy, communication and collaboration, digital content creation, safety, and problem solving. DigComp also provides indicators for development of digital competence, reflecting three proficiency levels (foundation, intermediate, and advanced) within each competence area.
- [The UNESCO Media and Information Literacy (MIL) framework](#) (in English only) (2013) provides assessment tools to evaluate the necessary MIL competencies for using information in the new, digital, media environment.
- [Chinien and Boutin's 2011 report](#) (in English only) presents comprehensive analysis on the concept of digital skills and how to develop and validate a digital skills framework for generic users of digital technology in the Canadian workplace.
- [Digital Literacy Framework for Adult Learners](#) (in English only) (Maryland, US) identifies the characteristics of digitally literate adult learners as investigative, productive, technical, civic, communicative, collaborative, and computational thinkers. In the framework, each characteristic involves its own guiding question, competence descriptions, and situation examples.
- The Welsh Government's [Digital Competence Framework Guidance](#) (in English only) (2015), in partnership with Digital Pioneer Schools, incorporates 4 strategic strands that could help practitioners identify areas that need to be supported.

Self-assessing

- The Public Library Association's [Tech Skills Checklist](#) (in English only) is a self-assessment tool that helps clients identify which skills they have mastered and the skills they need to improve. Library databases and software, social media, emailing, the Internet, and web surfing are among the topics covered. Each skill set in the checklist is connected to online learning opportunities so that clients get further support.

- [Northstar Digital Literacy](#) (in English only) identifies and evaluates the fundamental skills required to complete assignments on computers and the internet. People can receive a Northstar Digital Literacy Certificate after passing different tests. This certificate can serve a credential for employment. Completing the modules is free of charge.
- When it comes to the development and use of self-assessing tools, there are a few design issues to consider. [Using gamification](#) (in English only) to reward people for correct answers and achievements could motivate clients and make the test more interesting.

- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- all sub-recommendations
- Recommendation 4: Establish baseline sector competencies -- Now: Develop guidelines for professional practice on the use of technology in human service delivery.Recommendation 5: Establish a national sector capacity-building approach -- Next: Establish a knowledge mobilization approach to all digital funding at IRCC with a goal to quickly evaluate and share learning from funded projects at national and regional levels.

Institutional and Sector Resilience

In the first phase of our work, we [captured a number of promising practices](#) that SPOs had implemented to adapt to the changing environment regarding the format of service delivery and organizational operation. The pandemic crisis has opened up some new opportunities as digital strategies have expanded to reach more audiences. We see the progress that has been made by SPOs, which strengthen the capacity of program resilience.

In this process, individual settlement practitioners and SPOs have demonstrated creativity, flexibility, agility, and elasticity to create success, strategies, and implications to conquer challenges, difficulties, and toughness in pandemic times. Digital transformation and adopting the hybrid service delivery model can be unique driving forces to encourage and continue institutional resilience in the immigrant and refugee-serving sector.

Enabling Digital Change in the Organization

Introduction and Discussion about Change Management

In the Digital Maturity Model approach, change management is crucial. People, processes, leadership, and organizational readiness require attention and development.

As we have learned particularly over the past year with services moving to digital and remote delivery models, becoming digital requires a number of overlapping capabilities, literacies, and organizational capacities. These exist within particular contexts. The most important perhaps is the client context (their literacies, preferences, capabilities, etc.). SPOs also work within the constraints of a funding context, and societal information and communications contexts which impact their work, how and what they communicate within our sector, with newcomers, and beyond.

Some agencies have returned to in-person or partial in-person services. Most will return to in-person services in the coming year. Additional planning and remodelling will need to occur to ensure office safety for both staff and clients. This will push organizations to reconsider how workplaces and shared spaces will be transformed and reorganized, and how to make the most effective use of what is available, and where technology support fits in. OCASI recently called for proposals to develop a Working From Home Post-COVID Plan (in English only). While focused on building an OCASI-specific plan we believe the report's key recommendations will be useful sector-wide, and hopefully will be shared.

It is important to acknowledge that different agencies are at different stages of digital maturity, capability, and adoption. Similar to the Digital Maturity Model, researchers have created a model of three phases of adoption of technology (in English only) (in their case social media) in government, which can be extrapolated to broader innovation practice: experimentation (informal adoption, decentralized among workers), constructive chaos (workers begin to recognize both benefits and risks of the technology use, organizations attempt to standardize technology use through practice or policy standards), and institutionalization (organizations establish standards, processes, and enforcement measures to control the use of the technology).

Most settlement agencies are in the experimentation phase (or digitally developing), some have moved into constructive chaos, and a few have begun institutionalization. Like any organizational or institutional change process, this progression takes time, leadership (in order to move between stages), resources, capacity development (front-line, leadership, funder), flexibility (within the organization as well as negotiated with funders), continuous learning and room to learn.

Sector Perspectives on Change Management

Change management is a key factor, including senior management support, and is critical to the success of a data strategy:

> "You need to have both high senior level support. Any type of change management project in an organization is always going to take senior officials to say this is important to us. And so that has been definitely a crucial success factor you have to buy in basically, in organizational buy in. But oddly, like, sometimes just the structure and culture of these organizations plays a huge role as well. So a good example of this is, is the employment counselor and the job developer the same person? Or do they split those roles? We're doing both an intervention for clients, but then ultimately trying to get an employer in the system as well. There's some opportunities for us to pull some resources together to be able to build baseline knowledge that the staff has. Can we come together and have an agreement on what those baselines are? We should have a system that can provide that sort of on demand training, that maybe is certificate driven, versus things that they might happen to catch in a webinar or ad hoc learning." (employment, interview)

One participant stressed that change management in information and data administration required a new approach for daily work-related activities. This shift in their standard operating procedures requires a considerable amount of resources and human investment:

Whenever we are introducing a new system, we are not just introducing a system, we are introducing a new way of work. And then we put those ideas in a written process format, we call it a standard operating procedure or processes. So if I'm not here today, if my job is to do intake, if I'm not here, somebody else comes in, looks at the documents and they can easily do it. They need to be from the point of education and so on, but they can follow the procedures and do the same thing. What it does is it creates a standard of work, regardless of who is doing the work. It would be easy for us to measure, easy for us to monitor, easy for us to create analytics at the end of the day, and easy for us to sort of create outcomes out of it. The downside to it requires a lot of resources….Change management requires shuffling staff and moving staff from here to there restructuring and all those stuff. And their instruction also could include actually moving a business unit from here to another business unit. So one of the things we have done the past two, three years where we combined settlement, business unit, immigration settlement business unit, with employment together. So now the employment is with settlement. And we do have small programs like language and so on, they all combined in one business unit, they sort of create synergy and better service delivery for newcomers. (technology, interview)

A manager described how system integrations helped manage client virtual participation, but still required operational management, consistency, and staff to follow procedures:

We recently integrated Zoom with our client management database that we use on the Salesforce system. So this has some benefits from an administrative perspective and cuts down sort of manual tracking of attendance and whatnot. And it's immediately added to client records. So you can see any workshops that a client attended, which are all great things, but in order for that integration to work properly, meetings have to be set up in a certain way. And there are specific fields that are very important in order for that to work effectively. So we are training staff on how to do that. And even though you've done the training, and maybe you've produced a guide to manage the data. (technology, focus group)

Similarly, a frontline practitioner outlined their pre-COVID client tracking database ecosystem, which helped them seamlessly serve program needs in transitioning to hybrid service delivery:

We use the Google ecosystem. It's essentially a database [for us]. But basically, it's a whole system of interconnected Google sheets that has been developed to simulate a typical database that you would use. So all the data points that we enter, either gathered through surveys and forums and things like that will populate into different spreadsheets that we can repurpose, and move around to make use of the data. So things that we did before the pandemic, for example, was our system was already linked to our intake forms. And so those would pre-populate so that the caseworker and whoever else was involved in the intake situation could have that available to them online, and they would be able to fill that out just the missing pieces that were needed. (resettlement program SPO, focus group)

Change Management Tools & Practice

Change management within a digital context has certain unique qualities that should be taken into account as organizations embark on their digital transformation. These four tools provide useful reference points for organizations:

- OrgWise (in English only), OCASI's voluntary organizational standards for the Settlement sector in Ontario has an online self-assessment tool SPOs can use to assess their strengths and areas for growth. The focus is on governance and management standards, as well as broad approaches to service delivery and community building.
- AAISA's recently created Intersectional Organizational Assessment (based upon a diversity, inclusion, and psychological safety competency assessment framework) (in English only) is meant to be used by management teams to assess services, develop a plan, and then later reassess services after work has been conducted to address intersectional issues. A second assessment can be conducted later to show the progress made or further improvements areas that can be addressed. The assessment is centred around six key management areas: governance, programs and services, human resources, communications, community relations, and physical facility and environmental design.
- Jisc's Digital Discovery Tool (in English only) can be used to raise awareness of the range and importance of digital capabilities, and to encourage personal development. After answering questions, users are made aware of digital practices they already have and new ones they might try. Once their answers have been submitted they receive a visual profile of their digital capabilities. This is followed up with advice on the 'next steps' they might take to further develop their practice.
- The European Framework for Educators' Digital Competence (DigCompEdu) (in English only) (2017) defines what it means to be digitally competent as an educator. DigCompEdu categorizes 22 competencies into six areas. The framework's purpose is to demonstrate how digital technology can be used to develop and innovate education and training. The six areas include Professional Engagement, Digital Resources, Teaching and Learning, Assessment, Empowering Learners, and Facilitating Learners' Digital Competence.

Addressing Digital Equity and the Digital Divide - Relevant Recommendations

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- all sub-recommendations
- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- Later: Evaluate, incorporate, and establish digital and data maturity models into Service Provider Organizations (SPO) program planning, funding, and operations, including active evaluation, learning, and knowledge mobilization of existing digital and hybrid service delivery in the sector.
- Recommendation 5: Establish a national sector capacity-building approach -- all sub-recommendations

The Hybrid Service Delivery Model

Introduction and Discussion about Hybrid Service Delivery Models

A [recent report on digital transformation in the public sector](#) (in English only) suggests that digital transformation "means new ways of working with stakeholders, building new frameworks of service delivery and creating new forms of relationships." In this report, we focus on the emergence of a hybrid settlement service delivery model as a new and emerging framework.

Simply described, a hybrid service delivery model suggests a combination of in-person and online/remote (digital and non-digital) services for newcomers to Canada. It occurs when services are offered in-person as well as at a distance. It is both a tool and strategy that guides Settlement practitioners to determine how technology can be used effectively in service delivery, while ensuring support and room for in-person support. In the immigrant and refugee-serving sector a hybrid service delivery model should incorporate newcomer choice (where all services are offered via all channels, online and off, with clients free to decide and move between them) and be integrated in the entire service delivery process, guiding newcomers through service options and implications (where clients are informed what the best channel is for them when accessing a given service).

In our analysis, we borrow heavily from the education and language services sectors. They have engaged in blended learning for many years. There are many frameworks, technologies, and approaches being used that are useful for our analysis. Later in this document we review and reflect on eHealth and Virtual Care. We had much to learn from Virtual Care as the health sector is well ahead of the settlement sector when it comes to use of technology in a regulatory and privacy framework. We continue to be able to learn and borrow from them in our analysis, models, frameworks, emerging roles, use of technology, ensuring client-centricity, and sector human resource development. At the same time, health exists within a strong regulatory framework that the settlement sector lacks. We believe that as the immigrant and refugee-serving sector moves toward hybrid service delivery, it should aspire to the high levels of regulatory standards that exist within the Health sector (for example, privacy, security, and confidentiality by design).

As previously mentioned, there are also sector priorities that must be foundational in a hybrid service delivery model, such as digital equity and inclusion. Those are explored in depth below.

Below are a number of current definitions and models of blended and hybrid service delivery that should continue to be reviewed to determine the final, agreed-upon definition of an immigrant and refugee-serving sector hybrid service delivery model.

Definitions Hybrid Services

The language side of the settlement sector has a useful and simple definition of blended learning which fits as a starting definition for hybrid service delivery in the sector. From [New Language Solutions](#) (in English only):

> Blended learning describes a teaching and learning environment in which face-to-face (f2f) classroom instruction and learning are combined or 'blended' with online and other computer-mediated activities.

Existing research (in English only) has already acknowledged that blended learning should not be seen as simply adding some forms of technology to practice of learning. It requires thoughtful planning, new approaches to instructional design, and a number of pedagogical shifts and skills. Commonwealth of Learning's Guide to Blended Learning (in English only) (2018) reviewed some of the key steps that organizations begin to think through before designing, delivering, and supporting blended learning programs:

1. Technology access: A critical first step is to know which resources are available to your students. Is there limited bandwidth, unreliable Internet connectivity, or lack of devices such as laptops or smartphones? Once you are clear about access, you can choose learning activities with the technology in ways that allow all to participate.
2. Design: Creating the appropriate in-person and online activities means designing courses with the pedagogic principles of both and integrating technology in a way that supports meaningful learning.
3. Safety and security: Create awareness of cyber-malice and ensure security interventions against unethical learning practices, academic dishonesty, identity theft and bullying are in place.
4. Skill development, support and training: Both students and instructors must have technological literacy and competence with technology applications.
5. Motivation: Students need adequate motivation when engaging in a wide range of often shifting learning modalities, some of which may require significant skill development.

AlphaPlus, which supports Ontario adult literacy education professionals to incorporate digital technology in their work outlines blended learning as:

> a combination of face-to-face in classroom and technology-mediated learning using devices such as computers, smartphones, tablets and other mobile devices with an internet connection. These devices may be provided by programs, or learners may be free to bring their own device. Our position is that blended learning in adult education is not only about the use of tools and resources. Instead, it is a way to think about program and curriculum development, including learning design and delivery.

And the Irish Further Education Support Service provides additional useful context (in English only):

> QQI (2018) refers to Garrison and Kanuka's (2004) definition of blended learning as "the integration of classroom face-to-face learning experiences with online learning experiences" (2018, p.3). Driscoll and Carliner (2005) identified four typologies of pedagogy which could be blended learning, namely:
>
> a. a mix of web-based technologies
> b. a mix of various pedagogical approaches (for example, constructivism, behaviourism, cognitivism)
> c. a combination of any form of instructional technology with face-to-face instructor-led conditions
> d. a combination of instructional technology with actual job tasks to form an effective mix of learning and working

More broadly, the European Commission Mutual Learning Programme for Public Employment Services [provides a useful distinction between four different multi-channel strategies](#) (in English only):

1. Parallel positioning: Services are offered via all channels with citizens free to decide which channel to choose.
2. Replacement positioning: Channels replace one another based on the assumption that one channel is more effective and efficient than another for a particular task/client group.
3. Supplemental positioning: Each channel has its own characteristics that make it suitable for certain services/client groups.
4. Integrated positioning: In this model all channels are integrated in the entire service delivery process. This means that all services are offered via all channels but that the strengths and weaknesses of channels are considered in their design. Users are steered to the best channel and channels integrate seamlessly.

Additional definitions outside the sector

To explore the integration of blended approaches on a more permanent basis, we should be clear about what we are referring to, and how the term is applied across the sector. We continued to probe these definitions with sector stakeholders while diving into the literature.

Blended learning [can be defined](#) (in English only) as "the thoughtful fusion of face-to-face and online environments to conduct teaching and learning." The concept is [often used interchangeably](#) (in English only) with terms such as hybrid, mixed-mode or flexible learning.

The application of a blended learning model is usually based on specific needs, capacities, modalities and pedagogies of a particular institution or sector. There are varying definitions based on the context and circumstances in the field of education.

For example, the Online Learning Consortium, a professional organization devoted to advancing the quality of online learning worldwide, defines blended learning as a course where 30% - 70% of the instruction is delivered online. On the other hand, at the University of Ottawa, a course is considered to be "blended" when at least 20% or no more than 80% of in-class hours are replaced by interactive online learning activities as an integral part of the course.

Similarly, the Sloan Consortium report, [Blending In: The Extent and Promise of Blended Learning in the United States](#) (in English only), describes four different course models, only one of which, the third, is truly blended or hybrid learning:

1. 0% online learning describes a traditional face-to-face model. Content is delivered in writing or orally.
2. 1-29% online describes a "web-facilitated" course that "uses web-based technology to facilitate what is essentially a face-to-face course." Syllabus and assignments will be posted, for example, using a course management system (CMS) or web pages.
3. 30-79% describes a truly blended (hybrid) model, a course that blends online and face to-face delivery. A large majority of the course's material is delivered online, and it usually includes conversations online as well as certain face-to-face sessions.

4. 80+% online is an online or distance learning course where most or all of the content is delivered online. Typically in a purely online or distance learning course there are no face to-face meetings.

Going Forward: Digital Strategy as a Key Priority

Moving toward a hybrid service delivery model requires an overall digital transformation approach. As sector leaders and IRCC reimagine current service models and implement new ways of engaging people, technology, and processes, a digital strategy is required.

IRCC and the sector can borrow from current evidence and approaches to digital transformation when building a hybrid service delivery model for the sector. Government of Canada Digital Design Standards are applicable:

- Design with users
- Iterate and improve frequently
- Work in the open by default
- Use open standards and solutions
- Address security and privacy risksBuild in accessibility from the start
- Empower staff to deliver better services
- Be good data stewards
- Design ethical services
- Collaborate widely

These standards also align with IRCC's current funding vision under the CORE Principles.

Canada's Digital Government priorities are laid out on the Government of Canada website. These should be mirrored within IRCC as well. These priorities outline current modern and emerging technologies on the government radar:

- Artificial intelligence
- Enabling interoperability
- Open Source Software
- Cloud services
- Information management

While there are some concerns (in English only) that the Canadian government has made less progress on digital services during the pandemic, there are lessons to be learned from their experiences that contribute to building a hybrid service delivery model. From a technology infrastructure perspective, there is common ground to build on here, from within government, while learning from sector leadership in this area already. For example, pre-arrival service providers were fully digital before the pandemic. Blended language learning has existed for many years.

Hybrid service delivery is seen as simply how things are done now:

> Before COVID-19, blended or hybrid meant partly face to face and partly online, very clear cut, everyone was happy. And everyone was thought of as innovative if they did that. Now, to me, it's morphed into synchronous versus asynchronous, because synchronous could be online or face to face. It's the dichotomy between the face to face and online is thrown out the window. You could still have a face to face, or maybe you are doing face to face as much as you can. Otherwise, it's not going to happen…. So the big difference between hybrid and blended service is that technology, a kind of a linear hardcopy based solution is no longer linear. It is exponentially changing. And by the time you think of something, it's gone out the door. (school district, interview)

Discussions highlighted the importance of different options for service delivery and the exploration of diverse possibilities:

> I just want to highlight that the hybrid could be two different ways. Like it doesn't have to be both at the same time, in class, and in person. It could be like, for example, for our workshops, what we have been doing is that we have in class, a number of people just to maintain social distancing, and we'll have another group joining in line. (employment, focus group)

Settlement practitioners underscored different options and possibilities that assisted their program to be more accessible for clients:

> And I'm glad that people use the word hybrid, not just totally online, because we have some programs planned to move forward in the new normal, which are for the vulnerable populations. So, they have a lot of challenges, of course. So, then technology, it's not just technology or lack of devices, but even their own language. Can you imagine how to explain technology to them? So with those clients, we still see one on one with safety distance, of course. And when we reach out to them, we go to their houses, but outside in the driveway, and then pass on what are the things we need to pass on. And we help them that way. So yeah, and I'm glad this hybrid knowledge is not totally online, because they are clients who need face to face services. (S, school and library, focus group)

When we define the hybrid service delivery model, it is important to reflect what the concept of hybrid looks like in the immigrant serving sector. To some programs, hybrid means no geographic restriction for service delivery. This phenomenon was referred to by our participants as "service without borders" (W, school and library, focus group), which carves out opportunities to reach rural areas and communities across Canada:

> Before the pandemic, we can't serve clients outside of our service area. But now with online, we have people from different cities, they asked about our services. Our settlement practitioners speak their own languages, which some agencies don't have. So a lot of times it's very natural for clients, immigrant clients to reach out to us and say, Oh, can you help me? And we used to say, No, we can't get to that area because it was in person. But now

because services are online, we can provide the services for them. (school and library, focus group)

"Services without borders" means blurring lines between pre-arrival and in-Canada services. SPOs promote their work online, which means it is shared with individuals who are outside of Canada, regardless of whether a SPO is a pre-arrival service provider. Some underlined the importance of guidelines from IRCC to offer directions for the new normal:

Because we promote our service on Facebook and Twitter, we receive requests not just from Canada, not even just from our province. In the beginning, when we started advertising, for some sessions, we actually had people who wanted to sign in from the Philippines and Sri Lanka, because it's out there and they are interested….I think this will answer about what direction and again something that IRCC needs to look at. but I think once we have adapted to the new normal, and we're actually now or when we're on our way to actually create some level of standard hybrid services or whatnot. (school and library, focus group)

It is important to continue to understand the dynamics of digital transformation in the immigrant and refugee-serving sector and address the nuance of intersectional identities of populations programs are serving as well as different roles in SPOs would have experienced differently in digital transformation:

The more we delve into this, the more we realize that there's a lot of nuance to what works for which population and some of it is actually not entirely intuitive. It's worth putting in the time to do the research, because some of the findings are not what I certainly would have anticipated....It's also worth paying some attention to the needs of indirect service providers like ourselves, because I think that our experience and our transition has been different. (settlement program, SPO, focus group)

Hybrid Service Delivery Tools & Practice

We can and should continue to build on sector evidence and practice. A new study on blended learning in LINC (in English only) (2020) provides key approaches and practices for blended learning to thrive:
- Stable wi-fi and consistent and sufficient technology support
- Sufficient portable devices on campus
- A Bring Your Own Device (BYOD) policy and practice
- Experienced and knowledgeable LINC teachers enthusiastic about and professionally developed in using technology and EduLINC
- Leadership by administration to provide the technologies, childcare, other resources, and support for teachers
- Transition to blended learning classes for students
- Ongoing professional development and training for teachers
- Consistent teacher-student engagement and interaction with students (teacher presence) – online as well as in the classroom
- Integration of Portfolio-Based Language Assessment (PBLA) activities into the blended learning program/curriculum and PBLA activities in the online activities

We should also look outside the sector. We have cast a wide net to find useful resources for the sector to use in the process of evaluating and adapting existing models. They are summarized below and need to be evaluated for the sector adaptation.

- Quality Assurance Rubric for Blended Learning (2020) (in English only) is a formative and summative quality assurance tool that bases evaluation on 7 areas: content, instructional design, course structure, learner support technology/media, assessment, quality assurance and evaluation.
- Further Education and Support Services published Strategies for Blended Learning (in English only) (2020) for organizations delivering blended courses that provide simple strategies to help make blended models smooth and effective. Their model called ADDIE, which stands for Analysis, Design, Development, Implementation, and Evaluation, provides five iterative steps of a development process. The report also provides tips and strategies for content design, online engagement that could be useful for the sector organizations to model.
- In the adult education context, AlphaPlus's position paper defines blended learning as "an approach where educators leverage technology and digital access for learners to create, communicate, collaborate and apply critical thinking skills to construct knowledge in a connected world."
- Education Elements (2020) (in English only) developed the five domains of blended learning teaching practices that can be used as a rubric: developing a classroom culture that values learners' opportunity to learn and problem-solve independently; Blended Learning Management creates systems and routines that maintain an effective blended learning environment; integrate digital curricula and flexible learning environments to support student-centered instruction independently; assessments and analysis, which entails measuring and analyzing students' academic success using a variety of online and offline data sources; and using technologies to enhance the effectiveness of a blended learning environment.
- Blended Learning Course Quality Rubric was created by Teaching and Learning Support Service (TLSS) at the University of Ottawa, Canada and covers subjects such as course architecture, learner assistance and infrastructure, technology use, course organization, and curriculum presentation.
- Blended Course Learnability Evaluation Checklist (in English only) can be used to evaluate the course's content. It can be used by practitioners who are creating a blended course as a learning tool.
- Flipped Learning Network (in English only) defines flipped learning as "a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter".
- The SOFLA model (in English only), Synchronous Online Flipped Learning Approach, was developed by Marshall (2017) (in English only) and Marshall and Rodriguez Buitrago (2017) (in English only) in order to align flipped learning principles with online instruction. SOFLA is analogous to flipped learning in that work done outside of class is now transferred to an asynchronous space, and work completed in class is completed in synchronous training sessions with the instructor and learners' peers.

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- all sub-recommendations
- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Now: Technology should be looked at through a social justice and service lens, recognizing that there is a digital divide, and that not everyone has access to technology, or wants to access services via technology. -- Next: There is also a need for consistent and ongoing training for staff, not only focused on how best they can use technology, but also how to train clients to use it in a service context. The sector and IRCC should develop guidelines on how to develop and implement digital literacy tools to assess clients' digital skills. This guidance should include the provision of training materials, tools, and recommendations for agencies to support clients' digital literacy skills
- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- all sub-recommendations
- Recommendation 4: Establish baseline sector competencies -- all sub-recommendations
- Recommendation 5: Establish a national sector capacity-building approach -- Now: Identify and evaluate new and modified roles that have emerged during the pandemic to support digital service delivery. Continue funding existing roles through this fiscal year. -- Next: Establish a knowledge mobilization approach to all digital funding at IRCC with a goal to quickly evaluate and share learning from funded projects at national and regional levels.
- Recommendation 6: Ensure sector nuances are taken into account -- Next: While this report scratches the surface of understanding the digital equity, divide, and literacy nuances of newcomers, more work should be done here, both by IRCC and the sector.

Investing in Hybrid Service Delivery

Introduction and Discussion about Investing in Hybrid Service Delivery

Technology access, literacy & infrastructure require investments in training and appropriate hardware as it evolves, and as client use of it changes. The sector uses technology and indeed has a rich history of being innovative with technology; however, there continue to be many challenges to technology implementation in agencies, particularly around service delivery and data, information, and feedback management. To achieve innovation and technology outcomes that will propel the sector forward, investments are needed to build the capacity of sector agencies and their staff.

To most immigrant and refugee-serving programs in Canada, funding is the driving force determining program development and sustainability. In hybrid service delivery, funding is also considered to be one of the most crucial components.

In this section, we revisit participants' perceptions on funding baseline and implications and analyze some needed endeavour that could be further addressed in the hybrid service delivery model in the context of digital transformation.

Recent suggestions from the sector about government investment in technology are modest, and practical:

IRCC should create a national technology capital replacement budget or mechanism to ensure current service providers have the capacity to continue and expand a hybrid service delivery approach post-COVID-19. We also recommend that IRCC work with the sector to address remote service privacy and confidentiality issues, staff training needs, and other requirements of a hybrid service delivery model.

These suggestions are also ambitious, based on emerging technology, what we have learned and are learning about newcomer use of and preference for self-directed services, and should be considered:

With advancements in technology and the challenges of digital literacy among some newcomer populations settling both in urban and smaller centres, the Government of Canada, settlement sector, and telecommunication companies should explore ways to ensure that newcomers have the capacity to access multilingual information and support online or by phone (e.g., cell phones issued at a low cost to resettled refugees). Imagine the possibilities inherent in a multilingual settlement telephone helpline for an entire province, staffed by trained settlement workers from various providers, who offer over the phone information and orientation and service linking for primarily, but not exclusively, low digital literate newcomers, regardless of their legal status. Imagine recently arrived newcomers being able to call one telephone number to receive the support they need or to link them to their local immigrant and refugee-serving agency.

Governments are at [various stages of their innovation capacity](#) (in English only). They tend to also be at different stages in their capacity to fund innovation.

There is a [growing recognition that funding of digital innovation is inconsistent, uninformed, and not well defined](#):

"while ensuring all Canadians are digitally connected has never been more important, Canada's "digital philanthropy" sector is ill-defined when compared to other well-developed philanthropic sectors such as the environment, poverty and public health. The research finds that funding for internet-related projects is limited, complicated, and difficult to access, which leads to competition for resources amongst groups who share the same goals. Study participants also fear that the COVID-19 pandemic will place new pressures on the small number of funders in this area, stretching already thin funding across other needs and priorities."

[AAISA's Provincial Settlement and Integration Sector Survey 2020](#) (in English only) focused on "gaining a better understanding of what technological capacity support agencies in the sector would benefit from. 62% of agencies indicated that training or support to increase their internal technological capacity. This was followed by an interactive service delivery or learning platform (60% of agencies)." Agencies are interested in investments to build their capacity.

Hybrid service delivery contains the notion of options, possibilities, and integration. Funding is crucial to providing different alternatives and potentials to different programs' needs. Given this context, one respondent highlighted that hybrid service delivery funding implications and endeavour should be ongoing to pinpoint needs and establish trust:

> Digital transformation is an ongoing funding for training and support. If we're going to continue with the online delivery, it's not a one time shot deal, and it's finished. But it needs to be a consistent acknowledgement that there's going to be an online ongoing need for trust, troubleshooting new programming new software. It just needs to be an ongoing funded process. (technology, SPO, focus group)

Considering the changing nature of technology

Funders should recognize that the nature of technology keeps transforming as it is closely related to the cost of digital devices and equipment:

> We set a baseline for standards for laptops. And we did this about a year and a half ago. And it was, you know, four Gigs of RAM and it had to have USB three and it had to have a minimum 15.6 inch screen, those kinds of things. Well, guess what, when I went to redo this when we got some more money to buy more mobile equipment, four gigs, Ram is not enough. So if we're going to set baselines, then we also have to set a process and stick to it whereby those baselines are reviewed on a regular basis because technology is galloping madly off in all directions. (health service, focus group)

It is essential to have governments join the conversation regarding funding implication baseline because of the changing nature of technology and digital divide challenges:

> The fact that, especially in technology, IT changes every six months, there's something new, that has to be sort of built into the equation. But nonetheless, it means that you've got a bit of a floating baseline. The challenge I see is one of the critical baselines is uniformity of access to things like infrastructure, internet. Now, that's not determined by only one government. There are other departments responding to that. So at some point, those departments have to be part of this conversation, to ensure that minimum baseline, I've said it before, you can go 11 kilometers outside of our main area, and you have no internet. So unless that's fixed, we're always going to struggle with where that common baseline is. (health service, focus group)

Participants indicated the usefulness of considering licence purchasing. Though there are free versions of some essential digital platforms such as Zoom, Survey Monkey, and Eventbrite, there is a solid need to purchase their premium license to help explore engaging approaches with those clients who prefer to be served online:

> Funders need to recognize that even with the indirect services, it's going to require a different kind of investment. So I think that for a long time, we've treated technology as sort of nice to have. And, you know, often many of us have been using free flat platforms. The free version

of Eventbrite and the free version of Zoom, and the low cost version of SurveyMonkey, I don't think that's going to play anymore, I think if we're going to be doing a lot of this, that they need to recognize that we professional platforms, we're gonna have to pay for those licenses. And sometimes it's like multiple licenses, because some of our partners can't use them, right, because they're government agencies that can't use Zoom on their professional license." (settlement program, SPO, focus group)

Strengthening a hybrid service delivery model

In order to enhance the hybrid service delivery model in digital transformation, some areas can possibly be taken into account. For example, compared to settlement frontline practitioners in some urban cities, SPOs in rural areas are still facing multi-dimensional challenges. Moreover, affordability was considered to be one of the most demanding factors. This concept intersects with clients' low literacy and working in precarious conditions that complicate finding one single solution to solve this digital marginalization:

> The point I would put there that that that affordability should also be looked into as one of the reasons especially given that I work with temporary foreign workers who of course, most of them are low skilled, you know, and then now being able to afford all these because of internet and all that, for them to be provided a service. Whereby before they would just walk into an office without having to incur an extra cost through their phone or through their, the internet that they are using. So, for our organization, affordability is key. (smaller center, focus group)

Investing in Hybrid Service Delivery Tools & Practice

Investing in Hybrid Service Delivery will require leadership and coordination. NDIA recently released a report that outlines the creation of a government Digital Equity Office (in English only) needed to "lead cross-sector, cross-departmental, multi-faceted digital inclusion activities that impact the entire state." Along these lines, a Hybrid Service Delivery lead at IRCC could:

- lead the coordination of Hybrid Service Delivery activities,
- assist with the development of Hybrid Service Delivery policy,
- coordinate funding,
- strengthen regional Hybrid Service Delivery ecosystems,
- educate policymakers, local governments, and stakeholders on Hybrid Service Delivery,
- guide Hybrid Service Delivery focused research and data use, and piloting scalable Hybrid Service Delivery models.

The federal government is investing in technology infrastructure. CRTC's Broadband Fund provides up to $750 million over 5 years to support projects to build or upgrade access and transport infrastructure to provide fixed and mobile wireless broadband Internet access services in eligible underserved areas of Canada. The Connect to Innovate program is investing $585 million by 2023 and will bring high-speed Internet to 975 rural and remote communities in Canada, including 190 Indigenous communities. There are also provincial government investments in this space. There may be other funds and supports worth exploring as well.

SPOs may be able to participate in funding applications, but it may also be well beyond the scope and capacity of most organizations. There is perhaps an aggregating role IRCC or other sector actors could play here.

Interesting examples of funding dedicated to developing SPOs digital maturity include:

- The Digital Strategy Fund from Canada Council for the Arts for strategic initiatives helps Canadian artists, groups, and arts organizations understand the digital world, engage with it, and respond to the cultural and social changes it produces. Here are two examples of the type of project they fund: Toronto Consort (in English only) (sample RFP) and National Access Arts Centre (NaAC) (in English only).
- The Digital Confidence Fund from the UK's Heritage Fund provides grants and mentoring to support organizations in achieving their own goals by building digital skills and confidence.
- According to a 2021 report by the Canadian Internet Registration Authority (CIRA), for the nonprofit, civil society and community services sector, funding is most needed for digital literacy, infrastructure and community leadership. CIRA's community investment program grants also provide funds for nonprofit organizations in these areas.
- The U.S. model of Digital Equity Stimulus Funding (in English only) may also be of interest to explore.

The role that emerging social finance models can play and how they can be expanded to fund innovation in the sector should continue to be explored. The 2016 Social Finance for the Settlement and Integration Sector in Canada Market Assessment Report (in English only) looked at this question and concluded that the government will continue to have an important role to play in supporting the settlement and integration sector. A social finance approach in the settlement & integration context can leverage new funding sources, improve the sustainability and impact of service provider organizations, and encourage partnerships with the private sector.

Investing in Hybrid Service Delivery - Relevant Recommendations

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- Next: Funding models need to better recognize the resource and time needs of building an innovation mindset, practice, and culture. Technology access, literacy & infrastructure require investments in training and appropriate hardware as it evolves, and as client use of it changes. The sector uses technology and indeed has a rich history of being innovative with technology; however, there continues to be many challenges to technology implementation in agencies, particularly around service delivery and data, information, and feedback management. To achieve innovation and technology outcomes that will propel the sector forward, investments are needed to build the capacity of sector agencies and their staff. -- Later: Create funds dedicated to improving organizations' digital strategies. Create funds dedicated to developing organizations' digital maturity. Create a seamless settlement service experience for newcomers, from pre-arrival to citizenship.
- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Now: There needs to be funding support in terms of building up infrastructure (such as broadband, high speed internet connections, which continue to be technology challenges in many rural and smaller communities) in agencies as well as communities. While this is outside IRCC's direct sphere of influence, it is essential that the sector and newcomer perspectives on the digital divide are included in any pan-Canadian solution, programs, and interventions, as

there are specific nuances related to newcomers that must be considered in these approaches.

- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- Now: Establish a sector-IRCC working group focused on hybrid service delivery to continue to research, address, evaluate, establish a roadmap, and continue the work of this Task Group and bring together other related sector efforts. Identify where IRCC's strategic digital strategy intersects with overall Canadian and other government digital strategies and operational approaches to align with them in sector planning and strategizing. -- Next: IRCC should have cross-department coordination and operational leadership status to ensure efforts are incorporated into this work as well as intra- and inter-governmental learning. -- Later: Evaluate, incorporate, and establish digital and data maturity models into Service Provider Organizations (SPO) program planning, funding, and operations, including active evaluation, learning, and knowledge mobilization of existing digital and hybrid service delivery in the sector. Implement evaluation, learning, and knowledge mobilization processes with organizations whose digital transformation and hybrid service delivery pre-dated COVID, such as pre-arrival, blended and remote language learning, and existing digital efforts funded by IRCC and other funders.
- Recommendation 4: Establish baseline sector competencies -- Next: Invest in assessing the sector's digital risks and introducing a digital security triage framework to understand the levels of risk (i.e., low risk, medium risk, high-risk) before embracing any digital security model, and fund accordingly. Employ an evidence-based approach and launch a pan-Canadian survey to understand existing and/or potential digital threats.
- Recommendation 5: Establish a national sector capacity-building approach -- all sub-recommendations

New & Emerging Professional Roles in Settlement Service Delivery

Introduction and Discussion about New & Emerging Professional Roles

This section explores new skill sets and roles that are emerging and will be important in a hybrid service delivery model. In many cases, these will not be entirely new roles in organizations. They will become part of someone's role. It is important to explore these emerging roles not only to identify them, but to also explore the skills required and how hybrid professional roles (such as Frontline Practitioner/Digital Navigator) will emerge, be developed, and workers trained. Professional development training in the areas of digital technology, online service delivery and engagement are inevitable to increase digital transformation in the immigrant serving sector.

It is crucial to understand that digital professional talents and digital skills learning are interwoven. We have identified a number of new positions and job titles that are emerging in SPOs. These roles include Digital Navigator, Director of Innovation, Data Scientist, Instructional Designer, Content/Subject Matter Expert, Web/tech/app developer, Digital Pedagogy Specialist, Organizational Culture Designer, Cybersecurity Consultants, and others. Below we explore a few of the more common roles we have discovered or are emerging.

The Digital Navigator

Since the pandemic started, many organizations have pivoted possibilities and options to create digital specialist roles. These new positions were filled by admin staff or settlement practitioners whose roles changed to incorporate digital support and orientation for both clients and colleagues. As noted in our preliminary report, Digital Navigators are emerging as an essential role now, during the pandemic, and in the future of a hybrid service delivery model.

The National Digital Inclusion Alliance (in English only) defines Digital Navigators as "individuals who address the whole digital inclusion process — home connectivity, devices, and digital skills — with community members through repeated interaction". Their site provides practical tools and documents that SPOs can use to collect information about technology needs of the community and clients, assess community members' digital skills, conduct follow-up surveys.

The Digital Literacy Alliance describes digital navigators (in English only) as an adaptation of traditional digital inclusion roles that will specifically provide remote one-to-one dedicated support to the community. Digital Navigators help citizens identify their internet, device, and training needs, walk them through their options, support them in filling out required paperwork or online forms if necessary, and provide "warm handoffs" (a handoff that is conducted in person (virtual, f2f, or via phone), between two practitioners (within the same organization, or between organizations) with the client directly involved) for additional training or technical support as needed.

In the context of supporting digital skills for the adult workforce, DigitalUS (in English only) (2020) described digital navigators (in English only) as "trained staff or volunteers who help learner-workers secure internet access and/or devices and start to use them to help them meet their goals. Those goals can include using an online learning program to reskill, access services, apply for a job, support their children in school, and more. The navigators coach participants in- person at drop-in locations or virtually (through phone hotlines or online chats/meetings) using techniques intentionally designed to develop the confidence and abilities needed to become agile, lifelong learners of new technologies, an essential component for digital resilience". Their Digital Navigator Resource Hub (in English only) & Digital Navigator Toolkit (in English only) provide useful and practical tips and steps about the digital navigator model.

In the healthcare context (in English only), digital navigators are regarded as "new team members" in clinical teams in the digital care setting, where they provide app assessment and recommendation, application setup and troubleshooting, and app data preview and analysis for clinicians to support clinical care.

Researchers created a "10-hour curriculum designed to train digital navigators across 5 domains: (1) core smartphone skills, (2) basic technology trouble-shooting, (3) app evaluation, (4) clinical terminology and data, and (5) engagement techniques."

The report Digital Navigators: Lynchpin in Equitable Reskilling & Recovery Efforts (in English only) highlights the need for a long-term approach that makes digital navigation services central in any learning and working environment: "For the new learn and work ecosystem to be more equitable, we must figure out the long-term solution so that digital navigation services become a core, funded

delivery model and that the systems are in place to ensure that they are effective and affordable at scale."

Instructional Designer

Instructional design is defined (in English only) as "the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction. It is the entire process of analysis of learning needs and goals and the development of a delivery system to meet those needs. It includes development of instructional materials and activities; and tryout and evaluation of all instruction and learner activities."

Instructional designers (in English only) work with businesses, K-12 schools, higher education institutions, government agencies, and third sector organizations to develop and distribute instructional materials. Instructional designers are often engaged to develop e-learning for online or blended learning programs. In higher education, for example, instructional designers assist in incorporating technology into pedagogy to achieve course goals and promote student progress through learning environments and modalities.

By ensuring that online education standards are applied to classes, instructional designers have come to help the online course creation process. These principles (in English only) include reimagining the instructor role while teaching online, leveraging the benefits of the online modality, planning for appropriate pacing through the course, using strong asynchronous pedagogies, managing online communications, revising assessments for online use, accessing tools to provide better feedback, advocating for fair student-instructor ratios, and supporting online learning communities.

One study, which explores the role of instructional designers in emergency remote teaching during COVID-19 (in English only), highlights instructional designers' critical position on accessibility and assessment of instructional material. Similarly, instructional designers are found to support organizations to create more inclusive learning and teaching environments (in English only) while creating digital content at rapid speed and scale during the pandemic. The same is true for the non-profit sector. For example, a Calgary-based nonprofit quickly hired an experienced instructional designer in online learning (in English only) to ensure their approach was effective.

Instructional designers are increasingly well positioned to contribute to SPOs' work through their experience in multilingual multimedia and their knowledge about user needs and training learning outcomes.

Cybersecurity, Digital and Data Protection Advisors

Essential in Digital and Data Maturity Models is risk management. We see and will continue to see roles emerge that focus on cybersecurity, digital, and data protection. Given that jobs like these are increasingly in demand (in English only), the sector will need to define these roles, along with attraction and retention approaches sooner rather than later: "The ICTC estimates that in 2020, 218,000 information and communications technology (ICT) positions will need to be filled in Canada. According to ICTC's projection, about half of these will be new ICT positions while the other half will

be replacements for workers leaving the industry. Only 29,000 ICT graduates are expected to join the workforce every year, which is not enough to fill these positions through local supply."

An example of an emerging role is the Digital Protection Advisor. This is an information/IT expert who can provide guidance on how to handle threats involved with the delivery of digital services. Their responsibilities may differ according to their roles and contexts in human service organizations. Our review suggests that a Digital Protection Advisor's responsibilities become even more pressing in organizations working with vulnerable, high-risk communities, such as displaced individuals.

In the International Rescue Committee's (in English only) recent call, DPA roles included identifying risks that social media programming creates for clients, creating ways to support online protection for them that enables them to effectively react and respond when a risk related to mis/disinformation online is identified. Digital Protection Advisors also play an active role in coordinating and advising collective efforts of key humanitarian agencies also engaging in this space to create a convening space and support global regulatory policies.

Digital Pedagogy Specialist

Brian Croxall defines digital pedagogy (in English only) very broadly as "the use of electronic elements to enhance or to change the experience of education". These "electronic elements" can, he explains, vary from a PowerPoint display to full-fledged MOOCs (Massive Open Online Courses), to flipped classrooms. It is an attempt to use technologies thoughtfully to improve teaching and learning in a number of ways.

In the context of vocational education and adult training, digital pedagogy specialists' role is significant in supplementing conventional teaching methods with new technology that allow greater access to educational material and promote interactive learning and teaching in both physical and virtual settings. This is evidenced by the European Commission's Working Group on Vocational Education and Training (VET) report (in English only): "A digital pedagogy specialist is a professional that collaborates with faculty, staff, and students to employ technological solutions in the realisation of teaching and learning aims."

On the language side of the sector, the issue of digital pedagogy was raised multiple times. Teachers, trainers, and facilitators are (in English only) all "exploring what online teaching reality means for them. What is the new pedagogy of online teaching at scale really like? What does engaged learning look like in this new environment? How can online learning produce outstanding learning experiences?" Contact North | Contact Nord's Pockets of Innovations Series (in English only) has 220 promising practices (which, compiled between 2011 & 2019, predate COVID-19) in all aspects of online teaching, learning and organizational planning:

1. Educational Design, Courses and Resources
2. Diversity in Blended Learning
3. Student Access, Engagement and Flexibility
4. Supporting Student Success Online
5. OER and MOOCs
6. Options for Online Assessment
7. Faculty Development and Support
8. Models of Collaboration

9. Organizational Planning for Online Learning

The pandemic has provided opportunities to reflect on individual upskilling capacity and uncovered the potential. Respondents suggested there needs to be a tiered approach to providing digital training opportunities to upgrade settlement practitioners' digital knowledge and professional skills:

> Our initial priority was to identify what direction we were going in, and then set up the training. The training was done, actually from management, and then went down the levels. So we felt it was important that management had the knowledge so that it could support the frontline staff, and not the other way around. So we actually started with and it was done within literally two weeks. So it was a very quick process. But we did identify somebody in-house that had the expertise. And then that person was then kind of deployed that we actually set up training sessions for the entire division. So basically, he went through the management, we found some champions that we trained as well, the champions became helpful to their frontline staff as well as the management did. And then we went into frontline staff training as well. So it was a tiered approach that we did with the training so that all levels had knowledge and all levels were able to access and do things that were online. We did, initially, opt to use Zoom. And so that was integral in making sure that people were really on topic, knowing how to access Zoom, some of the challenges, troubleshooting. We needed them to have that knowledge, even before we rolled it out to our clients. I think even prior to that we had to establish what platform we were using. What was going to be more user friendly? Not just for clients, but for our own internal staff. What was user friendly? What was easy to learn? What was the quickest to learn? And where could we adapt the skills the most? Challenges for us were not necessarily the platform; but, it was more on understanding that our staff themselves didn't have basic Word skills. That was a real eye opener for us. (technology, SPO, focus group)

In addition to a top-down training plan with varied training formats, one respondent suggested that training should be built in a regular work routine and basis:

> I think that training, ongoing training actually needs to be built into regular workflows. Because we will never be 100% proficient. I mean, there is always room for learning. So no matter what stage of the learning you are, and I think our instructors are at very different stages. So again, I don't think we can just come up with one standardized training and expect everybody to take that because we have instructors that honestly are teaching others how to teach online and then we do also have instructors who need some basics as well. So I think all this needs to be ongoing, built into regular workloads and expectation, that a certain amount of work time is devoted to professional development and basically just an expectation of the program that this is done, really an assumption needs to be delivered as an ongoing thing. (language services, SPO, focus group)

As most SPOs' settlement practitioners had indicated diverse professional development training on hybrid service delivery, to those settlement frontline practitioners in rural areas, training was much less accessible. Though they could attend some of the available online workshops, little was contextualized to their specific geographic restrictions and social urgency:

I think that potentially there needs to be a separate training or approach that really takes into consideration some of those real world challenges and puts that small centre lens on to the training. One thing we hear a lot about, from our community partners is this professional development, I mean, pre-COVID it was taking place. Calgary and Edmonton and you're driving or spending all this time and money to get access PD (professional development training). Now with the online resources and its challenges, the training so far isn't relevant in that rural context. So it's just, it doesn't provide as much value as if it were to have that small center lens applied and you're talking about issues like the rural connectivity lo-fi options for clients. (small centre, SPO, focus group)

Digital professional role

One settlement worker in an umbrella SPO that provided credential-based training for frontline settlement practitioners underlined digital specialists' functions should focus on interacting and engaging with clients in virtual spaces:

So it turned out she (digital mentor) understood a lot of the technology of Zoom, which I didn't see the team using before. And so she did breakout rooms where they did teamwork, she did bring in videos. And so by the end of the class, people were still really engaged after three hours, because it wasn't just to talk, it wasn't a talking head or two Talking Heads, doing it. So it'll be important, kind of show us how they're using this technology and how you get all these different features because many of us went into the technology, and just did what we had to do. Right. It'd be nice to have some people mentor us with, with some techniques to keep people engaged. Because I've seen where people are just drifting off and they're sleeping. We're not keeping them engaged. (umbrella group, interview)

As SPOs develop internal capacity, external digital consultants have been utilized to identify needs amongst staff and clients. One SPO brought in a digital consultant who developed ways to support staff to be more engaged in virtual spaces:

We hired a local consultant. She's been fantastic. She basically went around and did a little mini needs assessment with each team. She went beyond our working group, and really went to each team and said, What do you need? What if we're gonna do some training or capacity building? What does it look like? And she identified three buckets of areas that she could focus on. And then it was great that she did that, because she identified some stuff we hadn't or that I hadn't heard. One was that there's our digital divide, even amongst our staff. So the staff were comfortable or ready for using the whiteboard on zoom. But there's a whole bunch of people who just haven't done it, because they are really intimidated, they are nervous, they are resistant, they thought it was in a different place. And we need to kind of offer some coaching and one on one, no stigma. So we started to offer that we haven't a lot of uptake but we're offering how to go from one on one to zoom, and try to replicate what we used to do in person on screen. So for next week, she is going to teach us about how to activate people's motivation, using the reactions and getting people to poll regularly and that kind of thing, which is really great. (community health centre, interview)

The intersection of digital administration with pedagogy has also emerged:

It's been interesting to watch how a lot of programs and some of them are very small, she's the person who wears the coordinator hat is the teacher as well, that you show them how they can use a Google Doc to manage their staff timesheets, or their volunteer timesheets or something like that. And then they think, Oh, my learner, my learner might be interested in doing something similar. Or when my learner goes to college, they may have something similar at the college, they may have a cloud storage that they're using for submitting things. So it often trickles from someone thinking about something from an administrative side to seeing an application on a learner side, which is sort of interesting. (adult literacy education organization, interview)

In addition, bringing lived experience to the role of a digital navigator can be crucial:

I'm a newcomer. I'm also an immigrant. And that puts me in another perspective, because I'm, I have been living in Canada for 14 years. And I came from an underdeveloped country, and having all these new things on me, made me realize that there's more for me to know and learn. And now I put on their shoes, I mean, I know I separate the needs and, and need for knowing more and integrate into the culture and know about the needs of people to try to integrate the culture and Canadian culture as well. So I guess that gives me a different perspective, maybe that some other people experience or knowledge." (community centre, interview)

Aside from explicit and implicit functionalities that digital specialists, many participants mentioned hiring digital specialists would not be enough. It is important that settlement practitioners learn to be knowledgeable in using digital devices and platforms and prepare for digital transformation readiness. One respondent illustrated the idea of becoming a digital adult educator to provide digital knowledge and skills in the realm of hybrid service delivery:

It's a whole extra skill set, when you have to now become an adult educator, to teach clients how to, you know, like a whole new skill and and some, not all providers have that adult education skill set. And so we almost went down the road of expecting everyone to suddenly be the Renaissance man, and be able to still do what your profession is, but then also all of these other things. (newcomer health, focus group)

Some SPOs have either employed digital specialists or shifted staff roles to become the in-house digital specialist. One respondent who worked as a digital communication assistant in a newcomer health program explained her role in assisting frontline practitioners in exploring digital inequality:

It would be great for me to individually give lesson plans on technology on how to use Zoom, how to troubleshoot zoom, I'm only one staff member. And there's also the issue that I only speak English, and a lot of the clients that we serve their first languages are not English. So right now, I'm trying to work on working with different settlement practitioners one on one to kind of figure out what issues that they're having trouble with their clients the most in relation to technology. And then I think another strategy that we're trying to do is, we understand that certain clients don't have access to the internet. There's that barrier of like, how can we get them to learn about technology when they don't have technology itself. A lot of our clients do have phones. What I'm trying to build is I'm trying to build a worksheet that's very visual based, and then I would be able to get on the phone or the settlement worker would be able to get on the phone. And they would go through this worksheet one by step to kind of

circumvent that issue if they can't log on to zoom if they don't have the internet bandwidth to do so. (newcomer health, SPO, focus group)

One participant in a language service program outlined that frontline practitioners' digital usage and preferences also need to be taken into account:

So it's really then also looking at what your skill sets are, where people are at in terms of staffing, and in terms of their skill sets and capacities, and really redesigning some of your service activities, to meet them there as well. Because we also don't want to make our staff feel constantly pressured, that they have to know Instagram. We have a lot of staff who don't want to be on Instagram. And that's fine. But then there's other platforms that they're more comfortable with. And that's how we have to tailor our work with our staff. So that they're not also feeling the pressure of constantly being this tech geek or something." (school and library, focus group)

New & Emerging Professional Roles Tools & Practice

Technology leaders have long been key actors in supporting organizations navigate through tech-driven change. However, this has been accelerated with the pandemic disrupting the way we work. As [IDC's white paper outlined](): "By 2023, 30% of organizations will define a new technology leadership role combining CIO, CTO, chief digital officer, chief data officer, and chief innovation officer functions that will orchestrate the digital road map based on a "use case journey" for their respective organizations." Positions like these will not be foreign to the sector for much longer.

New & Emerging Professional Roles - Relevant Recommendations

- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Next: There is also a need for consistent and ongoing training for staff, not only focused on how best they can use technology, but also how to train clients to use it in a service context.
- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- Later: Implement evaluation, learning, and knowledge mobilization processes with organizations whose digital transformation and hybrid service delivery pre-dated COVID, such as pre-arrival, blended and remote language learning, and existing digital efforts funded by IRCC and other funders.
- Recommendation 4: Establish baseline sector competencies -- all sub-recommendations
- Recommendation 5: Establish a national sector capacity-building approach -- all sub-recommendations
- Recommendation 6: Ensure sector nuances are taken into account -- Smaller centres have different needs than larger urban centres. Smaller organizations without technical infrastructure have different capacity than large organizations with multi-person technical and communications teams. While we have scratched the surface on these nuances, they must continue to be explored to ensure that the sector and IRCC have baseline understandings of the diversity of organizational capacity, digital divide in agencies, regions, and clients, and that support, interventions, and investments are allocated equitably.

Data, Outcomes Measurement, and Evaluation

Introduction and Discussion about Data, Outcomes Measurement, and Evaluation

The above narratives and analysis capture vital training capacity and upskilling in hybrid service delivery as well as what professional positions had been created to meet existing programs' needs. The hybrid service delivery model contains human resources and development, service distribution, digital literacy assessment, and digital professional training and career establishment. One of the essences of hybrid service delivery is how to measure and evaluate service performance and effectiveness.

SPOs have worked digitally/remotely since March 2020. Questions remain about how these organizations evaluate the quality and outcomes of digital services. This section will outline useful concepts and practices to measure and evaluate digital services in an effort toward better understanding which strategies are most useful and effective in achieving missions.

Outcomes measurement is not a new term for the immigrant and refugee-serving sector. Traditionally, many SPOs have created an evaluation model that is still focused on "how the service was delivered instead of what service was delivered." (technology and security, community service organization, interview) SPOs have used a variety of evaluation tools, such as client feedback forms, focus groups with both clients and staff themselves, and staff informal meetings and sharings. This range of research practices provided an analytical lens to immigrant and refugee-serving programs regarding their intake number, hybrid activities participation, and client integration completion number. While this quantitative data could help compare service quality to before the pandemic time, more can be done.

Counting, or quantitative measures are easy with technology. The digital service landscape is vast and-data-rich. Analytics are built into all digital systems. Organizations are increasingly investing in data to measure program outcomes, improve services to clients, analyze their past performance, and adjust their strategy. Data can help ensure that agencies meet the needs of the communities they serve and remain accountable to diverse stakeholders.

Sectors and organizations are increasingly being asked to create their own data ethics standards, practices, and procedures. Organizations require the skills to gain meaningful insights from data in order to unleash the strength of data. Measuring service delivery outcomes in a hybrid service model practice requires a different lens than simply the quantitative one.

Alberta Association of Immigrant Serving Agencies (AAISA) is currently conducting research that looks at various Data Information and Management Systems and solutions that are being used by the sector. As they connect with both the platform providers for a technical understanding of the platforms and with agencies for anecdotal feedback, the framework they create in the near future will be useful to help guide those agencies who are looking at adding, changing, and creating solutions.

A digital coordinator in an employment program identified a job matching system that allowed them to better focus and match clients' professional and educational backgrounds with potential employers in digital job fairs, resulting in efficiencies as well as more effective hiring experiences:

> We had to create something called a job matching system. So no government had anything like that where we looked at the clients and those that are job ready. We use the NOC (National Occupational Classification) codes to match them with the employer job openings, and we match them that way. That helps getting people's job faster. But it also helps with job fairs. We have a lot of mini job fairs across the different regions. And we only invite the people that we think are relevant to the employers that we're bringing in. And that works really well. And technology allows us to do that, right? Before it was tedious to try to do that matching. Now a bit labour intensive to get all the NOC codes. But once that is done, the rest is a lot easier. (employment, SPO, focus group)

One participant stressed the comprehensiveness of digital data transition required to examine staff working preferences:

> Looking at change management, just with a database, where we're switching from having paper files and notes and things like that, and then transitioning to something that's digital. That's really important. And that was really important during this pandemic, because one of the first things that we needed was to make sure we have access to client files, and that we're able to pace manage, and track the activities that we're doing, and to be able to do that online without the paper files, and to be doing it remotely as well. But it was a long process. Some staff that prefer writing, taking their notes and typing them in later and so on. And I think again, the pandemic really pushed us forward to say that's kind of like, there's none of that you don't have your files, you got to do everything online. (leaders, SPO, focus group)

In addition to database administration, informants underlined that intake and referral systems needed to be internally linked. Clients should not have to refill applications that contain repetitive content when receiving services within a province:

> What is the basic information that could be attached to a client's file when it comes to settlement and integration services that they don't have to exhaust newcomers every single time they go to one agency to the other to be able to, and some regions do it better. I know that Saskatoon, for example, all the agencies are interlinked really well, they do this much better in terms of flowing. But when it comes to Ontario, every single time you appear at a settlement agency or even any kind of settlement service it's like you're starting from scratch and like you never existed from the first place. It's that part that you also need to enhance, so that you make the newcomer feeling a little bit more supportive. (employment, focus group)

Several frontline practitioners illustrated that intake questions needed to be further refined. These questions should avoid collecting unnecessary information from clients to accelerate the intake process. Each intake question through the virtual intake system should have its own purpose based on program serving objectives:.

I think for the hybrid service model, in our intake process, we need to change the way we are doing our intake to make sure that we are capturing this information about the clients, their digital literacy or their interest in attending either online or in person, because this will help us organize our thoughts and organize our programs. Otherwise, it's going to be like, are you interested and then they may not be interested or they may not be available. So checking on their family status, we do that, all of us but make it more consistent. The baseline data. We never captured, like are you interested in doing the work online or in person, we have to start capturing this information. (technology, focus group)

One SPO adopted a research-based evaluation and management system to measure their service delivery outcomes in a hybrid service model:

In terms of measuring, some of the core measures stay the same. It's participation, numbers, completion numbers. But I also do find that, you know, in some ways, having using digital services makes metrics and feedback actually much easier. So it's not just again, conversation, it's things that are getting documented, they can be tracked, they can be, you know, data can be compiled and looked at. (leader, SPO, focus group)

This leader also emphasized that the quantitative and qualitative data collected through an evaluation model could support her organization to capture the reasons for the program drop-off rate:

We also know where there have been drop offs in the number of clients who can participate. And we're asking those questions very directly through the phone and through the intake process. And trying to get a sense of how many people can't participate because of some of the same reasons because of childcare, that they have children at home, they're finding it difficult, or maybe they don't have the technology and so on. So we're really looking at ways of gathering both quantitative as well as qualitative data. So that's really an important piece. (leader, SPO, focus group)

In one refugee service organization, settlement practitioners designed three sets of surveys, including intake survey, onboarding survey, and exit survey. These three types of surveys did not aim to quantify the service output but examine the impact of measurement on their service delivery to refugee clients:.

In another SPO, one participant mentioned a phone call approach to collect service feedback.

Data management has a direct result on service efficiencies and newcomer outcomes. Settlement practitioners in an employment program shared with us their service outcomes when they are able to collect and analyze data:

We decided to go to occupation-specific virtual job fairs. And this was really successful because we ended up with say, we wanted people in the early childhood education we invited for five employers and 25 to 30 clients. It was very good because they ended up going into specific rooms, and they ended up like, you know, talking each person introduced themselves, and hiring happened after that. So it's like, you know, we need to think strategically about, like maybe making it less crowded, less people, but, and more put more emphasis on specific occupations or specific labor market demand, I think that's the best way

> to do it. The virtual job fairs, big ones, are not gonna work like. (employment, SPO, focus group)

It is also important to note that many SPOs already use outcome measurement approaches and tools:

> So we have got measuring approaches we've been using for years for virtual meetings, so it wasn't new to us to sit like this with a group of people. We have our performance management, [which] is a web-based performance management system that we've been using for how many years for eight years. And so people were already being all the way down to our home visitor level. We're accustomed to entering their performance data on a weekly basis online and for us to get feedback. (multicultural community, interview).

Apart from understanding staff's digital capacity as well as establishing an outcomes management system, it is interesting to note that one refugee serving organization did not limit themselves to measuring service outcomes by a specific measurement approach but expanded the notion of how share outcomes:

> One thing we've really had to think about is how do we kind of balance this sort of survey approach to impact measurement with genuine storytelling. It's really important to protect the identities of the newcomers in our program. So where we've landed this year is we've started a podcast series. In the podcast series, most of the newcomers who are telling the stories of their experience connecting with volunteers, and what that experience has been like, and the impact, they're doing it anonymously. And so in this way, we don't have to share the newcomers' image in a newspaper article or quote them by name, but we're still really capturing that kind of qualitative data about how the program is landing. (refugee service organization, focus group)

Data, Outcome Measurement, and Evaluation Tools & Practice

Besides existing outcome measurement approaches, it is essential to note that many SPOs have created customized outcomes measurement methods to reflect their service quality and adjust their hybrid service delivery practices. More should be done to baseline data management in the sector.

Data Maturity Models and Assessments

The Data Management Maturity Model helps organizations evaluate data practices and data maturity against documented promising practices, identify gaps, and improve data management. There are a [number of different, competing models](#) (in English only). All offer a framework of data management practices in key categories to help organizations benchmark data management capabilities. While we see the clear benefit of applying a Data Management Maturity Model in the immigrant serving sector, due to time and resource constraints we are unable to conduct an in depth review and provide recommendations.

Evaluating digital and hybrid service delivery

These resources could help the settlement sector develop the skills and assets required to tap into the different types of digital tools and processes that are available today to improve the way staff operates, while also supporting the mission of delivering quality services.

- The Data Maturity Framework by DataKind and Data Orchard (in English only) is a self assessment tool to help charities better understand and alleviate the challenges of incorporating data into their efforts. The framework presents the five stages of progress in data maturity for organizations: Unaware, Emerging, Learning, Developing, and Mastering together across each of the seven key themes: Data, Tools, Leadership, Skills, Culture, Uses and Analysis.
- Microsoft's Nonprofit Digital Assessment Worksheet (in English only) is designed to assess an organization's use of technology and approach to important topics like privacy and security.
- Vitus Research and Evaluation (in English only) (2021) created a tool for SPOs to use in order to better understand the effect of COVID-19 on their clients' lives. Another report by Vitus - Measuring Your Impact During COVID-19: Seven Practical Considerations for Virtual & Hybrid Programs - presents strategies and practical considerations for implementing a blended mobile, virtual, and/or hybrid program. The guide is meant to spark action and reflection around designing and developing digital services, including planning and potential pitfalls that are inevitable when operating programs at scale and complexity.
- Homewood Research Institute (in English only) (2020) proposes a guideline by which efficacy of mobile apps in youth mental health services can be evaluated. 30 criteria are identified to test effectiveness. The report highlights the importance of human centred design approach, working with youth from the outset to understand if the design objectives and interaction design are appropriate. Ongoing developmental evaluation is also needed to make sure added features and modifications are appropriately evaluated.
- The Ontario Centre of Excellence for Child and Youth Mental Health (the Centre) and Children's Mental Health Ontario (CMHO) published a guidance report for evaluating and improving e-mental health services. The guide is categorized into 4 areas to consider for service evaluations: client level, service provider level, organizational level, larger environmental level. The guide also provides a checklist for evaluating e-mental health services. This checklist summarizes suggested areas, such as assessing and improving overall service outcomes, client engagement and satisfaction, staff skills in delivering virtual services.
- Digital Mental Health Tools: Resources to Support Mental Health Clinical Practice (2020) by Centre for Addiction and Mental Health (CAMH) also provides key questions and areas of concerns we should think about when delivering mental health support through digital tools. Areas include computerized interventions, wearable computing and monitoring devices, telemedicine/telehealth. The report also presents useful resources from countries Canada, UK, US, Australia, and Hungary about app rating metrics , app assessment guidelines/frameworks, implementation resources, resources to improve communication, resources for clients.
- The Mental Health Commission of Canada's Toolkit for e-Mental Health Implementation for Canada (2018) includes a collection of strategies for effectively planning and implementing e-mental health advancement in clinical practice. Five modules are presented as: exploring the e-health, roadmap for launching e-health programmes, building digital skills, engaging

clients in e-mental health, leadership for e-mental health innovation. These five modules reflect a complex and iterative mechanism rather than a linear one. Groundwork information, planning and feedback models, self-assessments, mini-case scenarios, and links to other tools are all provided in each module.

- Centre for Addiction and Mental Health (CAMH)'s brief on virtual and remote mental health care for older adults (in English only) explores the effects of different virtual and remote technologies, offers some considerations for decision-making around enablers and barriers to use technologies, and intervention adaptations for older adults, such as adjusting online, smartphone/app or video game technologies, and video or teleconferencing according to the needs of older adults.
- Finding Digital Mental Health Tools during the Pandemic (in English only) (2020) by CAMH provides insights to think about while assessing e-health tools. Key questions to ask: Does the tool work? Where did it come from/where is it going? Are risks managed and addressed? What and who is it for? How do you get it? Webinar also highlights the ways of optimizing the effectiveness of the digital service through collaborative and iterative testing cycles. It has been emphasized that clients need assistance in recognizing and choosing digital interventions that better address their needs, as well as deciding when and how to use them. Therefore, service providers must be better equipped and well-informed about digital tools and service delivery models.
- The IFRC Data Playbook (in English only) is a recipe book or exercise book with examples, promising practices, how to's, session plans, training materials, matrices, scenarios, and resources. The data playbook provides resources for National Red Cross/Red Crescent Societies to develop their literacy around data, including responsible data use and data protection. The content aims to be visual, remixable, collaborative, useful, and informative. There are nine modules. Each has a recipe that puts our raw materials in suggested steps to reach a learning objective.

The Ontario Centre of Excellence for Child and Youth Mental Health and Children's Mental Health Ontario (CMHO) have also compiled some useful resources, including Evaluating and improving e-mental health services. They have also run useful information webinars:

- Evaluation of virtual care in response to COVID-19 (in English only) This webinar outlined a province-wide evaluation of virtual care conducted between April and September 2020. Throughout the webinar panelists discussed what was working well, what wasn't and how agencies and services providers can improve virtual services going forward.
- Three approaches to ongoing monitoring and evaluation (in English only) This webinar features panelists sharing three different approaches to the ongoing monitoring and evaluation of virtual care in child and youth mental health. This includes a developmental evaluation and two mixed-method evaluations looking at client and caregiver perceptions, in one case, and client and staff surveys in the other.

Assessing and Communicating Data: Literacy, Fluency, and Mindfulness

Underlying any Data Management Maturity Model or approach is data literacy and competencies. Statistics Canada has created a Data Literacy Competency Framework which provides "an overview of the definitions and competency frameworks of data literacy, as well as the assessment tools used to measure it. These are based on the existing literature and current practices around the world. Data literacy, or the ability to derive meaningful information from data, is a relatively new concept.

However, it is gaining increasing recognition as a vital skill set in the information age. Existing approaches to measuring data literacy—from self-assessment tools to objective measures, and from individual to organizational assessments—are discussed in this report to inform the development of an assessment tool for data literacy."

[The Data Strategy Roadmap for the Federal Public Service in Canada](#) (2019) was released by the Government of Canada which provides recommendations for public services around four themes: stronger governance, improved data literacy and skills, enabling infrastructure and legislation, and more focused treatment of data as a valuable asset.

Additionally, the Canada School of Public Service Digital Academy offers [further resources](#) to develop data related skills in support of a data-literate workforce.

Data mindfulness can be defined as an active awareness about data. The concept was put forward by Ümit Mustafa Kiziltan, Chief Data Officer at IRCC at the [2021 Data Conference](#) (in English only). According to Kiziltan, data mindfulness has 3 dimensions: awareness about the potentials of data; awareness of the impact that service providers could create on data; awareness of data limits. The first dimension concerns the appreciation of data as the key driver in enhancing work processes, while the second dimension regards the potential harm that could be done with data. And the last principle is about developing an awareness about data limits, which requires a critical lens on exploratory power of data. Rather one should "come to data with a sense of what constitutes public value".

We acknowledge that a value-driven approach to data is critical and should be further explored by the sector. This approach should also entail exploring potential data sharing frameworks across the sector and government that allow organizations to enhance their service evaluation.

In their [2019 report](#) (in English only), Powered by Data, a coalition of civil society organizations that developed a Canadian policy agenda on administrative data for social impact, highlights four areas of potential use cases of administrative data in the social sector: outcomes evaluation, research and advocacy, data-informed program planning, and integrated service delivery. Their report highlights the importance of effective data sharing across traditional boundaries within nonprofits and also between nonprofits and government for effective use of data for the objectives mentioned above. As the report illustrated in one of the use cases, an organization providing health services to refugees and immigrants can access OHIP data, aggregated by catchment areas. Knowing how many refugees, new immigrants, and returning Ontario residents in a given catchment area have applied for OHIP or are on the 3-month waiting list could help anticipate how many people they will need to serve.

In a similar effort, the Alberta Nonprofit Data Strategy, a sector-wide collaborative initiative to build a knowledge-driven nonprofit sector, [shared a vision for data use](#) (in English only) in the social sector. Their mission also includes a focused Newcomer Task Team, which scanned for current data initiatives in the Immigrant and Refugee sector, and the nonprofit sector more broadly in Alberta to document learning and assess gaps. The report shows that service providers recognize organizational data capacity as the ability and expertise to collect, use, and share data strategically and appropriately. The following indicators are identified as data capacity components by the organizations: knowledge of available data; access to appropriate technology and infrastructure individual, organizational and sector buy-in; and having dedicated staff, time, and funding to work

with data intentionally. Recommendations by the organizations around successful data-sharing practice echo general concerns and suggestions present in our literature review: creating a data-sharing culture that is meaningful and impactful, rather than bureaucratic; enhance staff's data and technological literacy; decrease confusion about what data can be shared; work collectively and more closely with funders to set the what, why's, and how's of reporting and data collection; and make sure trust is embedded in data sharing activities.

While managing, using, and sharing data is crucial, equally important is ethical and secure use of it. [Responsible Innovation in Canada and Beyond: Understanding and Improving the Social Impacts of Technology](#) (2021) provides a comprehensive guide to help the general public and the private and public sectors in their decision making pertaining to ethical and safe use of technology. It incorporates shared considerations, challenges, frameworks, and promising practices for improving the social impact of technology from a wide variety of perspectives.

Open Data Institute (2019) published the [Data Ethics Canvas](#) (in English only). It provides a high-level framework for identifying and assessing the ethical implications of any data activity within organizations handling personal information of their clients.

The World Economic Forum's latest [Ethics by Design: An organizational approach to responsible use of technology](#) (in English only) (2020) report shares key insights to assist in the shaping of organizational decisions to encourage stronger and more routine ethical behaviour. Instead of focusing entirely on staff's personal character, the report promotes an approach that focuses on the environments that can lead ordinary people to engage in more ethical behaviours, such as organizational culture. The study discusses operational design measures and guidelines that have been seen to be more successful than traditional methods including compliance training and financial incentives.

While general understanding around ethical and safe use of data is valuable, our review advises that sectors and organizations are increasingly being asked to create their own data ethics standards, practices, and procedures.

The OECD's [Good Practice Principles for Data Ethics in the Public Sector](#) (in English only) (2021) highlights the importance of data ethics in the public sector as well as its practical implications. It lays out ten promising practices for public officials to follow when implementing data ethics in digital government programs and services.

[Databilities](#) (in English only) is an evidence-based data literacy competency framework. It has been used to understand organizations' data literacy.

Researchers from Dalhousie University [defined data literacy](#) (in English only) as "the ability to collect, manage, evaluate, and apply data, in a critical manner." [Another organization recognizes it](#) (in English only) as a skill that empowers all levels of workers to ask the right questions of data and machines, build knowledge, make decisions, and communicate meaning to others."

How to assess and measure data literacy skills in organizations has been a key topic. The [Global Data Literacy Benchmark](#) (in English only) (2020) has been used to understand data literacy in public service organizations in Australia, Canada, India, UK and US. The framework is labelled as [the most comprehensive assessment tool of individual data literacy in the world by Statistics Canada](#). The

framework outlines three areas: reading, writing, and comprehension. For each competency level within the framework, there are up to 6 levels of proficiency. Based on the level of proficiency, the framework identifies 3 cohorts of employees: the Curious, the Confident, and the Coaches (from low to advanced data literacy skills). The study found that organizations should identify opportunities to amplify the skills of the Coaches so they can reach more of the Curious and become an active part of the organizations' data literacy campaign. The Confident should be supported and encouraged to stretch with the view to becoming future Coaches, while the Curious should be encouraged to engage with data literacy concepts and creating opportunities for them to learn and seek guidance from their fellows.

While conversant in the "people, process and technology" capabilities of organizational change, most executives and professionals do not "speak data" fluently (in English only) as the new critical capability of digital society.

Data, Outcomes Measurement, and Evaluation - Relevant Recommendations

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- Now: The sector should review existing Digital Maturity Models, Data Maturity Models, Digital Inclusion, and Digital Literacy models from within and outside nonprofit sectors to curate and customize models for the sector.
- Recommendation 4: Establish baseline sector competencies -- Next: Explore models of digital transformation, digital and data maturity, hybrid service delivery in other non-profit and the private sector to bring the best and most relevant expertise into the sector.
- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- Later: Evaluate, incorporate, and establish digital and data maturity models into SPO program planning, funding, and operations, including active evaluation, learning, and knowledge mobilization of existing digital and hybrid service delivery in the sector. In particular, evaluation, learning, and knowledge mobilization attention should be paid to organizations in areas where digital and hybrid service delivery pre-dated COVID, such as pre-arrival, blended and remote language learning, and existing digital efforts funded by IRCC and other funders.

Promising Practices and Models in Other Sectors

Introduction and Discussion about Promising Practices and Models in Other Sectors

Interviewees and the literature are clear that the sector needs to both surface innovative and emerging promising practices within the sector, but also learn from ideas, projects and approaches in other sectors. A common question is not only how to identify promising practices, but the processes through which they might become the new standard for service delivery. Within IRCC, the SDI funding stream is a pocket of change and innovation. IRCC can more actively solicit and analyze evidence coming from its innovative SDI funding in order to build the evidence base necessary to move the innovation discussion internally. IRCC should also apply this approach to all funded projects in order to extract learning and to mobilize knowledge both within IRCC and across the sector.

This section explores promising practices and models outside of the immigrant serving sector with a specific focus on innovation, solutions, and implications that other sectors have been implementing

to enhance services in their organizations. In particular, we are interested in the evolution of Virtual Care practices in health care.

One community health centre located in Eastern Canada has introduced video interpretation methods in counseling. This solution was invented to better translate clients' meaning to the counselors if there was an interpreter involved. Through phone counseling, interpreters could not see clients' faces if clients expressed meaning with body language and gestures. In this context, video counseling could be crucial to enhance language accuracy for the conversation between clients and counselors:

> We had to shift services to all virtual, we did have the capacity originally to be able to do phone service. But we had to introduce the video as well. Because of the language barriers, often when clients are describing something, the interpreters will be able to describe it, if we can get that close to actually showing the person, such as I have a huge gash on my head right now, what do I do? So we had to figure out a way to incorporate video interpretation into our sessions… And we partnered with another agency in Toronto, another community health center to be able to provide that support. We are in the process of now trying to think of how to do this on our own internally, but the capacity is built in. So that support is coming in from a partner that's in Toronto. (community health centre, interview)

Additionally, this community health centre also utilized a virtual programming model as a tool kit. This virtual programming guide was created by a Canadian company and was customized by the centre for their daily work and practices:

> We also came across recently, a company developed a whole virtual programming guide like a toolkit. And we are so happy to find that. So actually part of the sort of culmination of one of our projects and we will be creating something very similar. We will use this tool kit as our basis and then just customize it for our practice. So that at the end of all, this will have it kind of all in one place and have a sort of tool. But I think like they were ahead of the game on that one. And I was really glad that whoever sent it to me that that connection was made, because it shows you what we've all been kind of trying to do within little pieces. And they got there and they created something kind of cool. (community health centre, interview)

This participant also addresses how this programming guide was introduced to solve digital inequality issues in different communities:

> When I started talking to other groups I heard this term digital equity, which is a bit more of an advocacy term. And so we decided internally, strategically, we're going to use that word, because it really is a new barrier to social determinants of health, and our whole model of care is based on that. So this is just one more we need to start plugging the human right. In this kind of world, you can't see your doctor, you can't get your groceries and you can't order groceries as a senior if you don't have online capability. You're facing an inequitable barrier that needs to end. At a service individual level, we're going to keep doing it. But it's ridiculous that we're shopping for tablets and trying to shop for internet plans for people that's like that, that shouldn't be the case.(community health centre, interview)

Virtual Care

The virtual care model is an emerging system that focuses on finding the best solution for both clients' needs as well as practitioners.

Virtual care can be defined as "any interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care" (Shaw et al., 2018 (in English only)). This breakthrough offers significant opportunities to not only modernize care delivery through interactive services, but also to increase access for those living in rural and remote areas where physicians are not always accessible. A recent report by The Virtual Care Task Force (VCTF) notes that Canada was an early leader in the advancement of virtual care with the works of Dr. Maxwell House of Memorial University of Newfoundland who used telephone technology to offer virtual consultations to remote locations throughout the province in the 1970s (Affleck et al., 2020).

This interest has also been well-represented among Canadians. According to recent polls undertaken by Canada Health Infoway (CHI), 80% of Canadians want access to their medical records as well as other digital health options including e-booking and e-visits. Furthermore, 96% of Canadians believe that using digital health technologies and capabilities is important for the health-care system (Canada Health Infoway). Several questions raised by the settlement sector about digital service delivery seem to be shared by virtual care stakeholders, according to our analysis. Furthermore, as already noted, Canadians' interest in virtual care has validated our need to investigate this field for specific procedures.

One digital health advisor suggests (in English only) that hybrid service delivery, now somewhat in its infancy, might provide the best of both service worlds, but it must be strategically approached:

> Telehealth is not a technology, not a stand-alone service, but rather a clinical tool. It's a tool available to clinicians to deliver care, just like prescribing medications or referring patients to physical therapy are clinical tools to facilitate the speedy and sustained recovery of patients.

> At times telehealth may be a good, appropriate tool and other times it may not. It's neither a panacea nor is it a modern technology to be shunned. Sticking one's head in the sand is not going to make telehealth blow over. What is needed is a strategy that guides the effective use of telehealth when appropriate while leaving room and support for the traditional in-person care delivery.

The Empowered Kids Ontario's Virtual Care Resource Guide (in English only) is a resource to support organizations in assessing Virtual Care options and implementing Virtual Care services. It includes specific information, templates and resources organized into relevant topics:

● Preparing for Virtual Care
● Acquiring a Solution
● Implementing Virtual Care

- Specific implementation checklists (such as Virtual Care Enterprise Risk Management Framework, Selecting Your Virtual Care Application, Virtual Care Regulatory Requirements, Virtual Care Privacy and Security Policy Framework, Privacy and Security Checklist, Evaluation Template, and more)

Heart and Stroke Foundation of Canada (2020) published a [Virtual Healthcare Implementation Toolkit](#) which involves a comprehensive roadmap and detailed checklists for effective and efficient virtual healthcare sessions for both clinicians and service recipients.

It is important to recognize that integrating digital into care processes is an all-in mentality. The [Ontario Ministry of Health's "Digital Health by Design" philosoph](#)y, an approach to health policy and program design that integrates digital thinking into policymakers' and planners' everyday work, may be one manifestation of this thinking. It necessitates that healthcare professionals ask themselves, "How can we do it with digital?" across care processes and procedures, and consider how to accomplish their objectives through the use of new technologies.

In a [comprehensive brief about virtual care in Canada](#) (in English only), the authors put forward 10 practical steps which include suggestions such as making digital health practices (i.e., electronic renewals of prescriptions, and on-line scheduling) a part of the accountability agreements for primary-care practices.

Promising Practices and Models in Other Sectors - Relevant Recommendations
- Recommendation 1: Develop a roadmap to support organizational digital transformation -- Now: The sector should review existing Digital Maturity Models, Data Maturity Models, Digital Inclusion, and Digital Literacy models from within and outside nonprofit sectors to curate and customize models for the sector.
- Recommendation 5: Establish a national sector capacity-building approach -- all sub-recommendations

Baseline vs Technology Recommendations

There are many examples of organizations that are using portal-style technologies to provide digital service. In particular, pre-arrival service providers and language service providers are using a combination of technologies and online portals to provide service. In many more cases, agencies are providing services using a combination of technologies. A mix of asynchronous (not real-time) tools such as email, digital messaging, texting, chatbots, online surveys, online courses, screencasts, video recordings, document sharing, and online courses are combined with synchronous (real-time) service delivery tools such as phones, Zoom, Microsoft Teams or other video platforms for one-on-one or group interactions, webinars, live-streams, real-time whiteboard or other collaborative technologies.

Agencies may use the technologies that they are already using or that they prefer, or have already invested in. For larger organizations or those whose work on technology predates COVID-19, this is an easier choice. They already have the capacity. They have made the investments. Still, our findings suggest that no one agency has achieved optimized digital maturity in service delivery. There is much still to learn. It is also important for the sector and IRCC to determine how they can collaborate

on interoperable systems. Guidance on system and technology choices is necessary to ensure the investments move the sector towards collaboration and technical standards, not standalone systems.

Some SPOs have started to put in place protocols and guidelines with regards to social media, digital instant messaging and other technologies being used in service delivery. Most are not formally shared or captured in the sector, or by IRCC. They should be collected, along with useful documents from other sectors to be shared sector-wide and a baseline set of standards created for sector agencies to adhere to.

Learning from agencies further along the digital maturity continuum is important. IRCC and the sector need to evaluate and share their baseline capacity and what it took to get them to that point. The goal of this evaluation should be to establish baseline capabilities for all funded settlement organizations. Smaller organizations, or organizations for whom the shift to digital during the pandemic was newer, and who may still be struggling in many ways, will benefit the most. But the entire sector, as well as newcomers, will also benefit. The sooner these baselines are established, the better for those organizations that have sunk costs into development, and those that cannot.

It is essential to evaluate the decisions more digitally mature organizations have made, how to measure the outcomes of their technology choices and how to measure the choices they've made. The sector can benefit from having some baseline guidance to determine how to move forward with systems choices, training for their staff, with support for their plans, etc. When we look at a hybrid service delivery model, there's a continuum of possibilities and choices that agencies could make. There are also potentially economies of scale in sector procurement. For example, if a tool such as Zoom is determined to be the baseline technology choice for video conferencing, a centralized body like IRCC, provincial umbrella groups, or other organizations could negotiate bulk purchases. This would bring the cost per unit down for these agencies, and allow for standardization of use, knowledge mobilization of promising practices, communities of practice around online facilitation, as well as create either hiring expectations or common technology onboarding strategies. The question to focus on is how can agencies be supported to not only make technology choices that make sense for them, but that they are also able to support and build on over time.

In a hybrid service delivery model with baseline capabilities and competencies, each Frontline Practitioner, Manager, Director, Executive Director/CEO, and newcomer should have the same understanding of what a baseline hybrid service delivery model can offer. Consistency is key. SPOs can exceed this baseline, developing solutions beyond and above the baseline. They may have internal resources, or be connected to external resources (possibly shared among other agencies) to ensure that they have the capacity to provide an expected level of hybrid service delivery.

In a model with baseline expectations and support, SPOs would have the same capacity as other agencies. While they can be expected to offer hybrid service delivery options in a variety of different ways, each agency would have a similar set of competencies, skills, technology infrastructure, and service delivery expectations.

The technologies around hybrid service delivery models or platforms will continue to evolve. In the hybrid service delivery section (in English only) we discussed this continuum and what that range looks like from ad hoc technology choices, to platform-based models, to seamless digital user experiences, from pre-arrival to Citizenship.

There is much in the sector that can and should be learned from. At the same time, emerging external frameworks offer useful starting points for many agencies to assess, map and begin moving towards innovation and a more strategic use of technology.

Baseline Competencies and Infrastructure in Digital Transformation

Introduction and Discussion about Creating Baseline Competencies and Infrastructure

This section addresses the baseline infrastructure required for a hybrid service delivery model in the immigrant and refugee-serving sector. SPOs have been using a suite of technologies over the past year, and earlier. What is lacking is a significant sector evaluation of those technologies to determine which are optimal in hybrid service delivery.

Instead of presenting a specific technical roadmap outlining what the right hybrid model system is, what we have discovered in conversations with the sector is that those who are more digitally mature want to be supported in the choices they have made, while those that are digitally developing are still trying to figure out how to do all of this type of work digitally. They want to be assured that there are baseline competencies they can aspire to and be supported in achieving. In this model, every agency would have the same funded, baseline infrastructure, competencies, and standards.

With ever-increasing threats to the security of systems, data, and applications, there is growing recognition by nonprofits that the move to hybrid service delivery cannot happen without the establishment of baseline cybersecurity standards. Services must be private and secure by design (in English only).

Ensuring quality digital service delivery is more important than ever (in English only): "Standards set out requirements, specifications, guidelines or characteristics that can be consistently applied to ensure that products, materials, processes and services perform as intended — qualitatively, safely and efficiently."

Developing technology standards is crucial to maintain service consistency and make sure that clients are kept fully informed about the services on offer. They also empower teams to ensure that duplications and miscommunications won't occur and that new applications will be strategically aligned with the current applications.

Our findings have confirmed the importance of technology standards as an integral part of an organization's overall digital strategy. Clients who use more than one blended or web service benefit from program-wide standards so they are less confused.

Creating information products and services for newcomers, especially vulnerable newcomers (not only refugees) requires the same rigour as creating in-person services. When it comes to technology-mediated service delivery, research suggests a fairly common set of practices and approaches an agency should follow. There are a number of resources that provide useful starting points to develop technology and innovation capacity in the immigrant and refugee-serving sector. They will be explored below.

Digital Maturity Models provide a framework to evaluate how digitally mature an organization is today, and to help build a roadmap for the future. These models provide digital assessment, guidance, and road maps across broad capacity areas and should be evaluated for adoption and replication in the sector. They are explored below.

Consistent and baseline professional development needs to be made available across the sector. There is value in bringing together those who provide sector-wide professional development such as umbrella organizations, colleges, and universities to create a comprehensive, blended (combining online and in-person) learning model. IRCC should look to the language sector professional development model it funds, the Avenue/LearnIT2teach Project, for what can be replicated in Settlement programming. At the same time, it is essential to move the professional development conversation beyond up-/re-skilling to hiring. We are already seeing the [emergence of workers with different credentials or in entirely new roles/structures](#) in the sector .

Baselining cybersecurity is essential but can be complicated in a client-centric design and service model. For example, it makes sense to discover and use the digital technologies that clients are comfortable using. However, this raises security concerns since not all digital platforms are secure or encrypted or have integrated digital privacy frameworks, guidelines and policies. Frontline settlement practitioners have to negotiate this shifting technology landscape and client technology preferences carefully. While they must ensure ease of use in technology, they also are responsible to ensure that client interactions that include personally identifiable information are conducted on secure platforms. They must also communicate, educate, and support clients on the reasons for secure and confidential use of digital channels.

Implementing cybersecurity includes a number of digital ethics considerations that exist below the surface. It is a collaborative endeavor that requires the entire sector to ensure that privacy and confidentiality are securely maintained at the highest levels possible. It also involves a process of reciprocal reflection that constantly revisits related practices to ensure digital safeguarding is a sustainable act.

Though some SPOs have implemented organizational practices to increase cybersecurity, many organizations are still seeking guidance in this area. Cybersecurity needs to be built into some organizational baselines. It should be viewed as fundamental infrastructure in digital service delivery. It also involves a process of constantly revisiting organizational operations to ensure sector cyber resilience. This is a necessity with nation-wide strategic implications. [Canada's National Cyber Security Strategy (2018)](#) recognizes cybersecurity as "the companion to innovation and the protector of prosperity" and it is an essential component of any functioning sector.

There are a variety of schools of thought about whose responsibility it is to ensure baseline competencies. Some expressed that it could be the frontline practitioners' ability to identify the ethics and risks since they work directly and closely with clients in this hybrid service delivery transition. Others argued that it is the programs/organizations' responsibility to provide guidelines and directions so that no one will be left behind. Others are simply looking for privacy and security guidelines from IRCC that they must comply with. In reality, it is a combination of all of these.

Several settlement frontline practitioners illustrated that intake questions needed to be further refined to not only reduce unnecessary questions, but also add more relevant ones related to digital literacy and capacity:

> I think for the hybrid service model, in our intake process, we need to change the way we are doing our intake to make sure that we are capturing this information about the clients, their digital literacy or their interest in attending either online or in person, because this will help us organize our thoughts and organize our programs. We never captured "are you interested in doing the work online or in person," we have to start capturing this information. (technology, focus group)

Cybersecurity is recognized as an essential infrastructure in practicing the hybrid service model:

> There's a conflict between the security requirements of the service providers and the platforms that they want to use, and what newcomers are able to upload on their devices. So if they have older devices, some of the apps just don't work. We've even been finding that with the schools, the schools are lending out devices to families, but they're locked so that the child can only access school using those devices. So what that means is the parent can't then use that device. The security specifications are so tight that they are undermining a whole lot of other other things. (LIP, SPO, focus group)

Many settlement frontline practitioners have taken initiatives to educate their clients regarding digital privacy and virtual confidentiality. Some organizations have designed cybersecurity guidelines. Some programs have also trained clients:

> So we started with digital security training focusing on professional usernames, secure passwords, protecting our online identity. We are working on navigating the web now. This will be our sort of the next step to build the real fundamentals of digital privacy (language services, SPO, interview)

Cybersecurity is widely discussed in other sectors. We can learn from them to create an organizational regulatory framework to protect client privacy and security in the digital database:

> In the health sector and healthcare, they have very high standards around regulatory frameworks on privacy, security and confidentiality. The pattern for compliance, which we don't have in our sector, but we are suggesting we should aspire to why not hit the highest standards, because we do deal with people's personal information. (adult literacy organization, interview)

Assessing Digital Maturity

There are a number of interesting Digital Maturity Models that would be useful to review and assess for potential application in the sector. If we expand the idea that SPOs are either "Digitally Developing" or "Digitally Mature" we can use Digital Maturity Models to assess them and develop capacity and competency baselines across the sector.

The 2021 Volunteer Management Progress Report (in English only) explores digital maturity of volunteer organizations in 22 countries (including Canada) along a rating scale: Lagging - Little or no use of technology to meet goals, Adapting - Moderate use of technology to meet goals, Maturing - Extensive use of technology to meet goals. Only one in four (24.0%) rated their agency overall as Mature in terms of technology use and volunteers. Accenture's 2020 Global Digital Fluency Study (in English only) "shows that just 14% of companies are digitally mature. Business leaders—and workers, too—are struggling to navigate this new technology-enabled world of work. Many companies weren't prepared for the abrupt transition."

We have discovered a number of existing, mature, and effective Digital Maturity Models that have been created or assessed for nonprofit use, or have been accepted in business/consultancies. It is outside the scope and resources of this project to fully screen them. As part of our first recommendation *Develop a roadmap to support organizational digital transformation*, we have suggested that the sector review existing Digital Maturity Models from within and outside nonprofit sectors to curate and customize models for the sector.

Nonprofit Digital Maturity Models

- NetHope's Digital Nonprofit (in English only) project outlines a Digital Skills Framework as well as a Digital Nonprofit Ability™ (DNA) Assessment for nonprofits to assess their readiness and identify areas for up-/re-skilling and organizational capacity. Their Digital Nonprofit framework (in English only) provides a digital maturity model example for the nonprofit sector. It is made up of six key elements: People, Process, Readiness, Data, Investment, and Technology.
- TechSoup Global's Digital Transformation Initiative (in English only) provides digital assessment, guidance, and road maps across six capacity areas: Productivity, Security, Back-office process automation, Reach and engagement, Data and impact measurement, and Innovation.
- The UK-based National Council for Voluntary organizations (NCVO) developed the digital maturity matrix (in English only), a self-assessment tool for organizations to measure their digital maturity in 8 areas: leadership and strategy, expertise and capacity, technology, service design, content, communications and campaign, data and insight, and security and data protection. UK-based Breast Cancer Care developed a digital maturity benchmark analysis (in English only).
- Think Social Tech, a research consultancy for the UK's civil society, reviewed 50 existing digital maturity models (in English only), 33 of which specifically target the charitable sector. They provide conceptual, strategic and practical recommendations (in English only) for

organizations that plan to develop digital maturity assessment and diagnostic tools. Among the models they reviewed:

- ○ Scottish Council for Voluntary organizations (SCVO)'s Digital Check-up (in English only) is a simple diagnostic survey to assess digital maturity, specifically designed for small charities.
- ○ Better Digital Services (in English only) lists 9 key design principles that help charities build better digital services: user needs, understand what is out there first, build the right team, take small steps and learn as you go, build digital services not websites, be inclusive, think about privacy and security, build for sustainability, collaborate and build partnerships, be open.
- Digital leadership's Digital Maturity Framework (in English only) assesses 15 competencies between 1 and 5 to produce a digital maturity score.
- Digital Culture Compass created The Tracker (in English only), a digital maturity index element, for arts and heritage organisations.
- Microsoft has created a guide to their solutions & technologies for nonprofits (in English only), including cloud solutions. Their digital self-assessment worksheet (in English only) helps nonprofit organizations measure their level of digital maturity. The assessment covers areas such as engagement with donors and volunteers, empowerment of the employees, optimization of work processes, and innovation.

Business/Consultancy Digital Maturity Models

- Google and Boston Consulting Group (BCG) have created a Digital Maturity Model (DMM) (in English only) with four stages: Nascent, Emerging, Connected, and Multi-Moment.
- Forrester, a global market research company, created The Digital Maturity Model 4.0 (in English only). They provide a self-assessment for companies around culture, technology, insight, and organization.
- The Capability Maturity Model Integration (CMMI) (in English only) offers a framework for digital maturity of an organization with five maturity levels: Initial, Managed, Defined, Quantitatively Managed, Optimizing.
- Deloitte's Digital Maturity Model (in English only) evaluates digital capability across 5 clearly defined business dimensions to create a holistic view of digital maturity across the organization: Customer, Strategy, Technology, Operations, Organization and Culture.

Baseline Risk Management

Looked at simply, the Scottish Council for Voluntary organizations (SCVO) recommends nonprofits take three key actions (in English only):

1. Have a cyber security policy
2. Instigate an organizational culture of working safely
3. Train your staff on online safety and privacy

It is important for the sector to embrace the principles of privacy and security by design in a hybrid service delivery model. One strategic approach to baseline cybersecurity in the human service organizations is to embrace Enterprise Risk Management (ERM).

ERM addresses the full spectrum of an organization's significant risks and then measures the degree to which the organization is successful in controlling these risks. In the ERM model, both risks and strategies to mitigate those risks are outlined. The following are the elements of a simplified ERM framework:

- Risk Category/Description – What can go wrong?
- Likelihood – How likely is the risk?
- Impact/Consequence – How bad is the risk?
- Risk Rating – Low, medium, high?
- Mitigation Strategy – Can the risk be prevented/reduced?
- Residual Risk Rating - Post-mitigation low, medium, high?

Risk assessment processes enable organizations to be aware of potential risk areas, identify mitigation measures and weigh factors to determine whether and/or how to adopt digital services. This model has been also recommended for organizations delivering virtual care services, as documented by [Empowered Kids Ontario's Virtual Care Resource Guide](#) (in English only).

KPMG's [Enterprise Risk Management (ERM) Toolkit for Charities and Institutions of a Public Character (IPCs)](#) (in English only) provides a risk landscape, answers why ERM frameworks matter to the nonprofit sector, and suggests plans for establishing a baseline of security, and actionable advice. The toolkit also includes sample risk assessments for non-compliance acts with regard to digital technologies and data.

[A recent report](#) (in English only) from NetGain Partnership (a collaboration between six of the United States' leading foundations to address issues of the digital age) on digital security in the civil society sector outlines how to assess the existence and potency of digital threats and enhance digital security in the organizations. The report suggests seven questions that funders can ask about organizations' digital security systems and procedures, as well as their plans to improve security and respond to crisis. The report recommends that funders take a systematic, rather than piecemeal, approach to digital security, and that they encourage grantees to make iterative capacity improvements. It urges funders to support grantees to develop short- and long-term security plans, and to collaborate with other funders who are similarly interested in advancing digital security at the grantee and field levels.

Baseline Competencies and Infrastructure in Digital Transformation Relevant Recommendations

- Recommendation 1: Develop a roadmap to support organizational digital transformation -- all sub-recommendations
- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Next: The sector and IRCC should develop guidelines on how to develop and implement digital literacy tools to assess clients' digital skills. This guidance should include the provision of training materials, tools, and recommendations for agencies to support clients' digital literacy skills.
- Recommendation 2: Establish a common and sector-wide vision for digital literacy -- Later: The sector and IRCC should develop a digital literacy competence framework conducive to the needs of the immigrant settlement sector.

- Recommendation 3: Establish a hybrid service delivery lead at IRCC -- Later: Evaluate, incorporate, and establish digital and data maturity models into Service Provider Organizations (SPO) program planning, funding, and operations, including active evaluation, learning, and knowledge mobilization of existing digital and hybrid service delivery in the sector.
- Recommendation 4: Establish baseline sector competencies -- all sub-recommendations
- Recommendation 6: Ensure sector nuances are taken into account -- Now: Smaller centres have different needs than larger urban centres. Smaller organizations without technical infrastructure have different capacity than large organizations with multi-person technical and communications teams. While we have scratched the surface on these nuances, they must continue to be explored to ensure that the sector and IRCC have baseline understandings of the diversity of organizational capacity, digital divide in agencies, regions, and clients, and that support, interventions, and investments are allocated equitably. IRCC should work with sector stakeholder groups through the National Settlement and Integration Council (NSIC) to confirm findings and augment them with specific nuances for different stakeholder groups (including those listed in our focus groups, and others).

Conclusion

This report has highlighted the findings of the Settlement Sector & Technology Task Group. Hybrid service delivery is an inevitable and positive future model for the immigrant and refugee-serving sector. During the current pandemic-inspired digital/remote service delivery experiment, the sector and IRCC have learned that digital transformation is possible. People, not technology, should be at the centre of a future hybrid service delivery strategy. It is essential to develop a set of guiding principles and take immediate steps toward a strategy that starts with SPOs and clients at the centre to ensure that hybrid service solutions meet their identified needs, preferences, technology access and literacy.

Glossary of Key Terms

In our recommendations and throughout this document we use specific terminology, explained below.

Baseline: Baselines require us to think about a "floor of competencies," technologies, infrastructure, digital literacies, digital capacity, etc., that all agencies need to have.

Digital Transformation: The process of integrating digital technologies into the organization with a view to streamlining and improving work processes and achieving organizational objectives. Digital transformation has been described as a journey, rather than a destination.

Hybrid Service Delivery: Simply described, a hybrid service delivery model suggests a combination of in-person and online/remote (digital and non-digital) services for newcomers to Canada. It occurs when services are offered in-person as well as at a distance. It is both a tool and strategy that guides settlement practitioners to determine how technology can be used effectively in service delivery, while ensuring support and room for in-person support.

Digital Literacy: "the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship" (UNESCO, 2018). It includes competences that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy. It entails the "ability to identify and use technology confidently, creatively and critically to meet the demands and challenges of living, learning and working in a digital society".

Digital Fluency: can be defined as "the ability to reformulate knowledge and produce information to express oneself creatively and appropriately in a digital environment" (Wang et al, 2013). While digital literacy is an understanding of how to use the tools, digital fluency refers to the capabilities to create something new with those tools.

Digital Divide: a variety of factors contributing to digital inequity and an inability to access had poor internet connections, including digital services. In our sector, this includes: 1) clients had no access to digital devices such as cell phones, computers, or tablets; 2) clients living in precarious situations, which limited their digital device access; 3) clients with low digital literacy skills to use digital devices or online tools. In addition, survey respondents indicate that low digital literacy combined with language barriers produced additional challenges for online service delivery. Ryerson University's Overcoming Digital Divides further outlines interrelated factors impact access, including: availability and speed of internet infrastructure; affordability of home internet service; demand for internet connection within a household; access to and affordability of the devices and software needed to connect to the internet service; digital literacy to enable meaningful use of the devices, software and services; and online safety and security required to use the services with confidence.

Digital Equity: a condition in which all individuals and communities have the information technology capacity needed for full participation in our society, democracy and economy. Digital Equity is necessary for civic and cultural participation, employment, lifelong learning, and access to essential services.

Digital Inclusion: refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of technology. Digital Inclusion requires intentional strategies and investments to reduce and eliminate historical, institutional and structural barriers to access and use technology.

Digital Maturity Models: provide digital assessment, guidance, and road maps across broad capacity areas and should be evaluated for adoption and replication in the sector. Change management is a crucial component. In particular, a focus on people, processes, leadership, and organizational readiness are crucial components that require attention and development.

Data Management Maturity Models: help organizations evaluate data practices and maturity against documented promising practices, identify gaps, and improve data management. There are a number of different, competing models. All offer a framework of data management practices in key categories to help organizations benchmark data management capabilities.