

DMSI Environmental Scan

EXECUTIVE SUMMARY	4
INTRODUCTION	6
Goals of the Environmental Scan	7
Technology scope – digital messaging	8
Methods	8
Qualitative approach	8
Interviews/focus groups	8
Literature Review	9
Quantitative approach	9
Survey	9
RESULTS	10
Key informant demographics	10
Technology use in the sector is innovative	11
Digital messaging is widespread in settlement service delivery	15
Agencies are predominantly using digital messaging in an iterative (vs innovative) way to serve clients	17
Innovative practices in digital messaging	18
Successes and challenges for effective use of digital messaging	19
Successes	22
Challenges	24
Staff/human resources challenges	24
Resource challenges	32
Other digital technology is also being used alongside digital messaging	35
Client feedback is inconsistently incorporated into technology decisions	36
Digital messaging trends among staff	41
Funders are looking for the sector to lead them	43
Policies, protocols, guidelines	48
CONCLUSIONS	50
APPENDICES	52

Appendix 1 - DMSI Literature Review	52
Appendix 2 - DMSI Survey Data	52
Appendix 3 - DMSI Interview and Focus Groups Theme Summary	52
Appendix 4 - Digital Messaging Evaluation Framework	52
Appendix 5 - Inventory of interesting digital messaging projects	52
Appendix 6 - DMSI Survey questionnaire	52

Tables, Charts and Figures

Table #1: Distribution of respondents by province and source of funding	10
Table #2: Respondents according to the use of digital messaging and their in learning how to use it to serve clients	13
Chart #1 - Digital messaging tools using to serve clients according to Front-line and Managers	14
Chart #2: Digital messaging components using to serve clients according to Front-line and Managers	15
Chart #3: Reasons of the usefulness of using digital messaging for clients according to the respondents	16
Chart #4: Comments from front-line workers regarding how digital messaging is useful as settlement worker to serve clients.	20
Chart #5: Comments from Managers regarding how digital messaging is useful as settlement worker to serve clients.	21
Chart #6: Evaluation of the impact of using digital messaging to serve clients according to Front-line workers and Managers	23
Chart #7: Challenges using digital messaging to serve clients	24
Chart #8: front-line workers that feel they have to skills to use digital messaging	25
Chart #9: Main challenges front-line workers face using digital messaging to serve clients	26
Chart #10: additional skills and training needed to use digital messaging effectively	27
Chart #11: managers that feel they have to skills to manage staff using digital messaging	27
Chart #12: additional skills and training needed to manage staff use of digital messaging	28
Chart #12: whether agencies have consulted with staff about use of digital messaging	29
Figure #1: Digital messaging iceberg in settlement services	30
Chart #13: challenges to get resources to use digital messaging	31
Chart #14: use of work or personal resources when using digital messaging	32
Chart #15: why staff use personal devices	32
Chart #16: why staff use personal devices	33

Chart #17: Asking clients about communication preferences	35
Chart #18: when do they ask clients about communication preferences	36
Chart #19: which communication preferences do they include when asking clients	37
Chart #20: why do you not ask them their communication preference?	38
Chart #21: how widespread digital messaging is in their organization	40
Chart #21: digital messaging used by all staff - front-line worker perspective	42
Chart #22: digital messaging used by all staff - manager perspective	42
Chart #22: funder support to use digital messaging	44
Chart #23: applied for funding to use digital messaging	46
Chart #24: policies, protocols, or guidelines in place for digital messaging	47

EXECUTIVE SUMMARY

Drawing on findings from a survey of key informants, interviews and focus groups representing immigrant and refugee-serving organizations across Canada and a literature review, this scan provides a snapshot of the current use of digital messaging in direct service delivery. The findings were complemented by the practice knowledge of the author, who has been involved in delivering and researching technology use in settlement services over many years and who has built significant informal networks with practitioners and sector leaders who use a variety of technologies to deliver services to newcomers to Canada.

Throughout this scan consistent themes have emerged in the literature review, interviews/focus groups and survey:

- Digital messaging is a viable tool for direct client service delivery and is being used in that way by the Canadian immigrant and refugee-serving sector.
 - The use of digital messaging is increasing the access, effectiveness and efficiency of service delivery.
 - The literature shows that settlement agencies and funders have been encouraged to collaborate to establish a framework to guide the development, use and evaluation of technology in service delivery. However, little has happened.
 - A variety of technologies have been used in the Settlement Sector for decades. However, agencies still lack capacity to effectively integrate technology consistently across the organization. They're unsure how to implement, roll out and manage new and emerging technologies to serve clients.
 - There is a large and varied continuum of formal technology adoption in the sector, with pockets of innovation.
 - Digital messaging should be considered an effective service tool in many areas of Settlement work. There is compelling evidence that serving clients using digital messaging, such as WhatsApp, Facebook Messenger and Texting is promising and effective, both as a communication tool between Settlement professionals,

- and as a tool for providing settlement information to newcomers to Canada.
 - Use of digital messaging (also known as instant messaging, or mobile instant messaging) has grown in use by both clients and front-line workers. Client use of digital messaging is driving this trend. Clients are asking agencies to use digital messaging to communicate. Agencies are adopting digital messaging as part of their service delivery channels and methods.
 - Current focus is on the use of WhatsApp in service delivery, but immigrant and refugee-serving organizations are using a variety of digital messaging tools and apps.
 - There are gaps in the evidence base underlying use of technology in Settlement services, especially regarding digital messaging. Much of the current use of technology to serve newcomer clients has not been evaluated.
 - There is a large continuum of formal technology adoption in the sector, with pockets of innovation. There are also large pockets of informal technology adoption (i.e. not specifically funded or acknowledged by agency management or funders).
 - Awareness of Settlement services is an issue, related to the complexity of the service ecosystem and unfamiliarity with similar social/human service systems in newcomer source countries.
- Agencies lack suitable policies and guidelines for technology use to serve clients.
 - The sector lacks standards, ethical guidelines and protocols around digital service delivery.
 - Technology use is changing the nature of client relationships and offers opportunities to empower clients and enhance service integration. New technologies offer a different way for agencies to interact with clients, but also additional channels for clients to access information on their migration and integration journey.
 - The capacity of Settlement workers, agency management and funders to integrate the use of technology in the sector requires additional education, training, frameworks and support.
 - There are a lack of standards, ethical guidelines and protocols guiding the use of digital messaging to serve clients in the Settlement sector. The sector needs ethical guidelines and frameworks for existing and emerging technologies used to serve clients. Much can be learned and borrowed from other sectors that have developed guidelines, protocols and ethics for the use of technology to serve clients.
 - Privacy, security and confidentiality have emerged as significant trends in the use of technology to serve clients, but agencies and funders are unprepared at the policy and practical levels to fully integrate these trends in agency use of technology for service delivery.
 - Critical views of social media use are relevant, both for client/user information/journey mapping and the importance of establishing trust for agencies (especially if interactions shift mainly online instead of face to face). But also relevant as we look at agency and worker attitudes toward technology.
- There is a lack of knowledge sharing and transfer of promising and successful practices within the sector around digital service delivery.
 - Agencies lack effective knowledge sharing mechanisms such as promising

practices around digital service delivery, but are interested in a process to share and learn from each other.

- Funders lack capacity to evaluate, manage and monitor technology requests from the sector.
 - Technology-mediated interactions are not considered direct service by some funders.
 - Funders lack the capacity to evaluate, manage and monitor technology requests. Historically, technology is treated as a fringe issue, while it is becoming a core service competency and channel. Technology-mediated interactions are not generally considered direct service by funders.

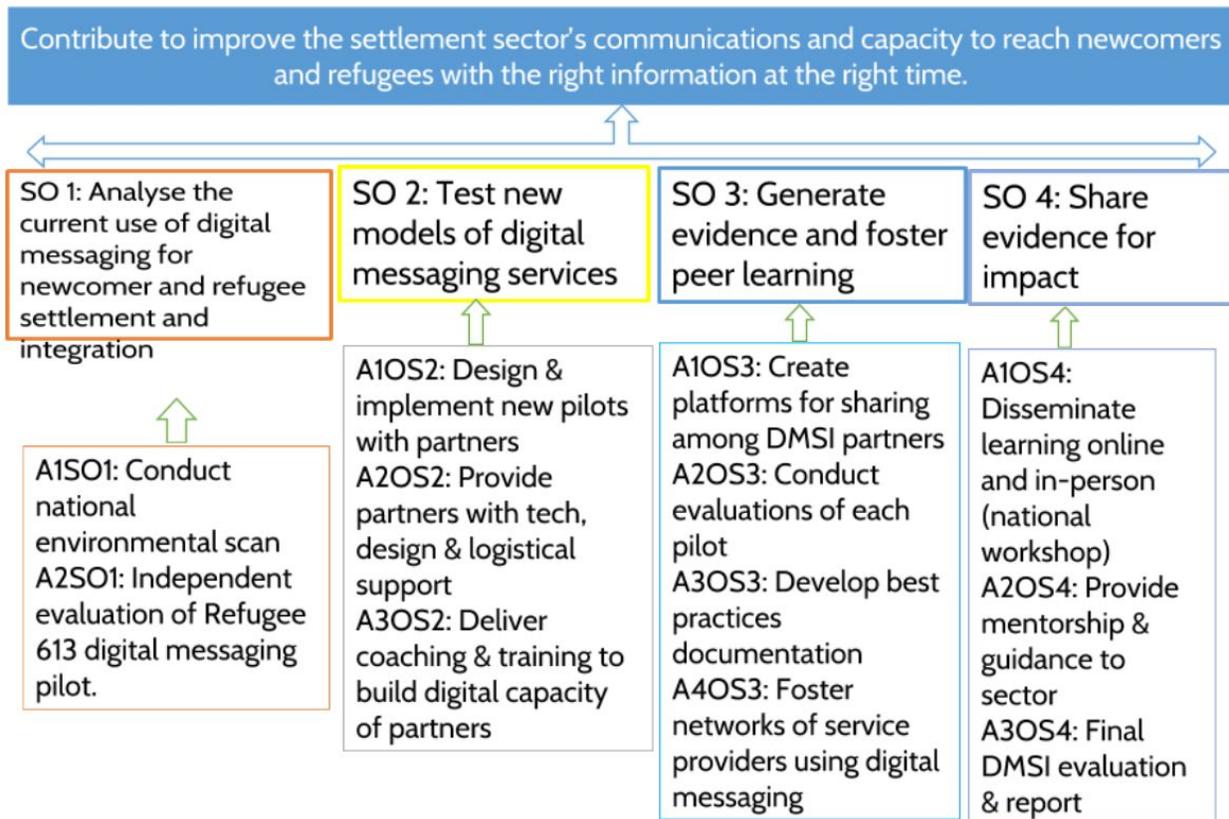
INTRODUCTION

Newcomers to Canada use a variety of technology and online tools and services in their migration and settlement journey. Digital messaging has emerged as a massive phenomenon that is transforming global communication. However, relatively little is known about its use and role in Settlement services in Canada.

Digital messaging is popular in Canada. Until recently, this has taken the form mainly of texting/SMS and Facebook Messenger (We Are Social 2018). However, as migration flows change, the digital messaging landscape in the immigrant and refugee-serving sector in particular has been changing. Popular globally, WhatsApp had limited popularity among Canadian settlement agencies until the recent arrival of large numbers of Syrian refugees. Their use of WhatsApp as a preferred and priority communication channel resulted in a scramble among agencies that serve them to equip their staff with the tools and protocols to use WhatsApp to serve clients. This scramble revealed other newcomer groups also use digital messaging such as WhatsApp, Facebook Messenger, Texting, WeChat and other tools as their preferred method of communication.

The emerging trend of client use of technology has created a need for more agencies to review their use of tools to communicate with clients.

Overall project vision and stages:



Goals of the Environmental Scan

The aim of this national environmental scan is to develop a comprehensive picture and greater understanding of the current use of digital technology for settlement information delivery in Canada, including trends, challenges, risks and promising practices. The scan is a baseline for the DMSI project. It will provide data to measure and compare in the long term frame of the project.

The environmental scan reviewed key literature in the capacity and use of digital messaging to serve newcomer clients in Canada. The literature review is complemented by interviews and focus groups to further the understanding and needs of funders and service providers regarding the use of digital messaging in newcomer Settlement service delivery. A national survey of current use of digital messaging in Settlement service delivery revealed additional opportunities, trends and challenges.

Key questions for the environmental scan are:

- Who is doing what in digital messaging, where and in what ways?
- What are some of the challenges, successes and opportunities?
- How widespread is digital messaging in settlement service delivery?
- What are some of the other forms of digital tech emerging in this context?

- How do agencies incorporate client feedback into their technology choices?
- What are some emerging best practices and success factors in organizational and geographical contexts, funding models, skill sets, etc.?
- What legal and ethical issues need to be considered?

The focus of the scan is on technology capacity and use in direct client service, such as: intake, needs assessment, regular or daily communication with clients on settlement-related topics, information, referrals and support. Technology capacity in advertising, marketing, outreach, fundraising or professional development was not considered in this scan.

Technology scope – digital messaging

Digital messaging is also known as instant messaging or mobile instant messaging. The main method of communication is sending text messages, including attachments like images, documents, etc. Digital messaging can also mean using a smartphone app. Digital messaging apps allow you to send text, images, voice/audio and video messages to an individual or group of people who have connected with you, or shared their cell phone number or account information. Most digital messaging apps also allow you to send audio and video messages, as well as having live audio / “phone” call or live video chats with one or more people.

Digital messaging is used primarily on a cell phone (usually a smartphone), although some messaging services can be accessed on a computer. Digital messaging is generally used on standalone smartphone messaging apps, such as WhatsApp, Viber, Telegram, Signal, WeChat, Line, BlackBerry Messenger (BBM) or by texting (SMS/MMS) on a cell or smartphone.

For the purposes of this scan, we consider social media use — such as Facebook, Twitter or Instagram — to be part of digital messaging only if it involves messaging with a client who has consented to an agency contacting them directly and personally.

Methods

As part of this research, we have used a mix of quantitative and qualitative approaches to collect data. In term of quantitative approach, we sent a survey to a large list of settlement agencies across Canada. In our qualitative approach we conducted interviews, facilitated focus group discussions and conducted a literature review in order to have a big picture of the sector.

Qualitative approach

Interviews/focus groups

Phone interviews were conducted with 28 people in 24 interviews (some agencies had multiple representatives in an interview). Two in-person focus groups were run in Toronto, one with 15 front-line workers, and one with 3 managers. Initial individuals and organizations interviewed were identified by project staff to represent a cross-section of agencies. Additional interviews

were conducted based on input and suggestions from interviewees themselves.

The goal of these interviews and focus groups was to collect their input on their direct experiences using instant/digital messaging to serve clients, as well as to identify existing sector research and trends in technology-mediated service delivery. This input also served to help refine questions and focus for the national survey.

Literature Review

More than 90 articles were included in the review. They range from peer-reviewed articles to funder reports and unpublished grey literature. We reviewed literature from inside the immigrant and refugee-serving sector and in other human sectors along these themes:

- Newcomer information practice
- Newcomer use of technology
- Technology use in migration
- Digital messaging in human services – general
- Digital messaging and smartphones in human services for newcomers
- Canadian immigrant and refugee-serving sector – general technology use and themes
- Standards, ethics and protocols
- Best practice principles and how-to documents

Quantitative approach

Survey

We sent our survey across Canada to settlement agencies in a number of ways, including emails to all IRCC funded agencies and SDI funded agencies (via lists provided by Immigration, Refugees and Citizenship Canada (IRCC)), Local Immigration Partnerships (LIPs), and via individual emails (including requests for organizations to send out to their email lists) and social media (Twitter, Facebook and LinkedIn).

443 respondents started the survey and were asked a number of initial questions about their use of digital messaging. After all 443 answered an initial consent question, there was a drop-off of 111 respondents who chose not to continue with the survey. It's unknown why this occurred (100% of 443 replied that they agreed to the terms of the survey). We consider 332 the actual response rate for the survey.

Our survey was constructed in such a way that there were a number of survey pathways for respondents to follow.

All 332 respondents were asked a number of questions in the initial section of the survey. After these initial questions, respondents were asked a series of questions that led them to through pathways with more specific questions based on their current use of digital messaging.

We then asked respondents to indicate if they use digital messaging with clients. 212 answered yes, 120 answered no.

Pathway 1: Those who answered no were taken to a shorter survey asking a few questions. 105 of the 120 respondents who answered no continued along this path and responded to questions.

Pathway 2: The remaining 212 that indicated they were using digital messaging were asked to identify as front-line workers or management.

208 of the 212 continued with the survey and identified themselves as:

- front-line workers - 109 (52.40%)
- management - 99 (47.60%)

After answering specific questions in each pathway, respondents were all asked the same agency demographic questions. Respondent participation numbers varied for a number of questions. As a result, when reporting percentages for specific survey responses we are also indicating the number of actual responses.

RESULTS

The bulk of this following analysis comes from 332 responses from the initial survey questions, answered by all respondents, and survey Pathway 2 front-line worker and manager respondents, which provides insights into common themes and highlights differences between front-line workers and managers. Survey responses are complemented by insights and themes that emerged from interviews/focus groups and the literature review.

Key informant demographics

Interviewees represented a variety of Settlement sector agencies, from mid-sized to large, urban and rural, front-line workers and management, from cities across the country (Fredericton, Halifax, Thunder Bay, Ottawa, Toronto, Calgary, Vancouver). Representatives also included academics (2), government representatives (2 federal, one provincial) and civic tech sector representatives (4).

96.51% (N=249) of survey respondents indicated that they are IRCC funded. Of the 258 respondents who identified the province where they provide service, this is the breakdown:

Table #1: Distribution of respondents by province and source of funding

Variables	Response	Frequency	Proportion
Province	Alberta	17	6.59%
	British Columbia	25	9.69%
	Manitoba	28	10.85%
	New Brunswick	10	3.88%
	Northwest Territories	1	0.39%
	Nova Scotia	2	0.78%
	Ontario	114	44.19%
	Prince Edward Island	5	1.94%
	Saskatchewan	56	21.71%
	Total	258	100%
Source of funding	IRCC	249	96.51%
	Non IRCC	9	3.49%
	Total	258	100%

Source: DMSI survey Database

Technology use in the sector is innovative

The literature is clear that use of technology in the immigrant and refugee-serving sector is not new. Nor are innovative uses of technology to serve clients. However, research on the impact and effectiveness of technology use in service delivery, as well as the digital capacity of

Settlement organizations to provide services to clients using technology such as digital messaging is sparse.

An important theme that is constant and consistent within the literature is a focus on standards, ethics, and protocols for using technology to serve clients.

While there is little literature in the immigrant and refugee-serving sector, there is much in other regulated, standardized service sectors, such as Social Work and International Development. We reviewed the literature from 2012 onwards of how these sectors have established protocols, guidelines, frameworks and ethical guides for use of technology by front-line and supervisory staff, and at the agency policy level. This research is very much focused on the agency side of the technology service equation and leaves the immigrant and refugee-serving sector with a number of models, frameworks, practical how-to guides and obvious next steps to integrate technology ethically, effectively, efficiently in client service delivery. The Social Work sector has also outlined the professional development and training needs and approaches needed by educators to ensure that human service workers are incorporating technology into their work with clients ethically and safely, for both clients and workers involved.

Importantly, the literature agrees that **not** using technology to serve clients is no longer an option: “Denying services to people in need simply because social workers are not comfortable with reputable digital and electronic technology is not consistent with social workers’ ethical obligation to meet the needs of vulnerable people” (Reamer 2013).

Literature on service, regulatory and ethical frameworks are more advanced in other human service sectors and it is from these that the Canadian immigrant and refugee-serving sector can borrow, replicate and customize to meet its unique needs. At the same time, Ontario and federal government work on Digital Service Standards offer opportunities for learning in the sector. In essence, much of the learning and models from other sectors can likely be replicated by the immigrant and refugee-serving sector.

The literature review also looked at best practice principles and how-to documents regarding the adoption of technology to serve clients. Creating information products and services for newcomers, especially vulnerable newcomers (not only refugees) requires a similar rigour as creating in-person services. Research suggests a fairly common set of practices and approaches any digital messaging or technology for service delivery project should follow. The reports cited (in the literature review and conclusions in this document) should be reviewed in depth as starting points for the immigrant and refugee-serving sector's digital messaging strategy.

Digital messaging is widespread in settlement service delivery

The data collected allows us to conclude that digital messaging is widespread in settlement service delivery. On a hand, many clients are asking to be contacted using digital messaging, but another hand, more and more agencies are using this method to communicate with clients. Indeed, almost 2/3 (66.27% with N=332) of agency respondents declare that clients request to use digital messaging to serve them. 63.86% (N=332) of survey respondents responded that they use digital messaging to serve clients. Of those agencies not currently using digital messaging to serve clients (Pathway 2), more than ¾ (75.24% with N=105) intend to in the near future (See Table # 2).

This is consistent with interview/focus group feedback and the literature. Two agencies interviewed are not currently using digital messaging to serve clients, but are particularly interested in joining the Refugee 613 DMSI project in order to do so. Interviewees in both cases indicated that they are getting requests from both clients and front-line staff to use digital messaging, in particular WhatsApp.

Consistent with findings in interviews, focus groups, and the literature review, clients are asking to communicate using digital messaging (according to 66.27% with N=332).

63.86% (with N=332) indicated that their agency is using digital messaging to communicate with newcomer clients. Of those agencies not currently using digital messaging to serve clients (Pathway 2), many intend to in the near future (75.24% with N=105). See Table 2.

Table #2: Respondents according to the use of digital messaging and their in learning how to use it to serve clients

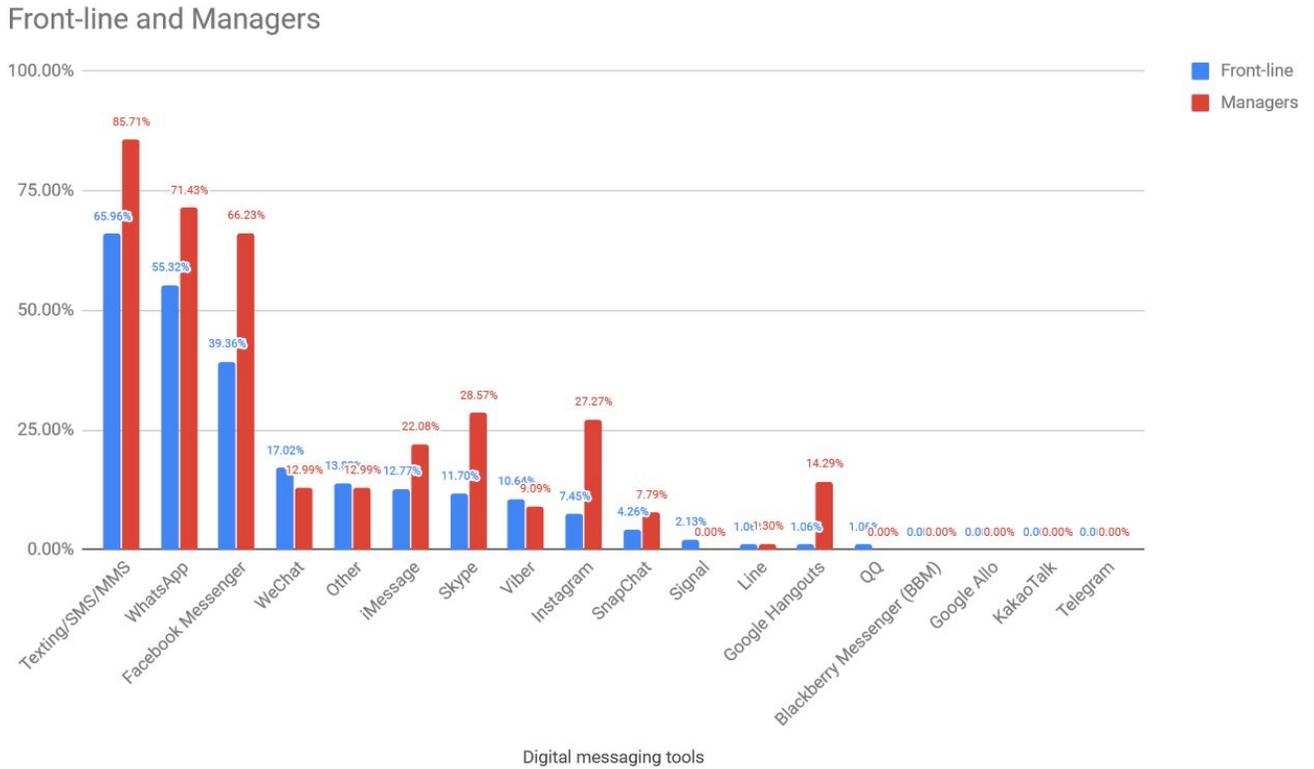
Variables	Modalities of response	Frequency	Proportion
Agencies that indicate that clients are asking them to communicate using digital messaging	Yes	220	66.27%
	No	93	28.01%
	I don't know	19	5.72%
	Total	332	100%

Using digital messaging to serve clients	Yes	212	63.86%
	No	120	36.14%
	Total	332	100%
Intend to use digital messaging to serve clients in the near future	Yes	79	75.24%
	No	26	32.91%
	Total	105	100%

Source: DMSI survey database

We were also interested to know what digital messaging tools are most commonly used by settlement agencies. Texting, WhatsApp and Facebook are the most used. This trend is the same for the front-line workers and managers. However, it is worth noting that managers suggested that Skype, Instagram and Google hangout are widely used more more compared with WeChat, iMessage and Skype by front-line workers (See Chart #1).

Chart #1 - Digital messaging tools used to serve clients according to Front-line and Managers



Source: DMSI survey database

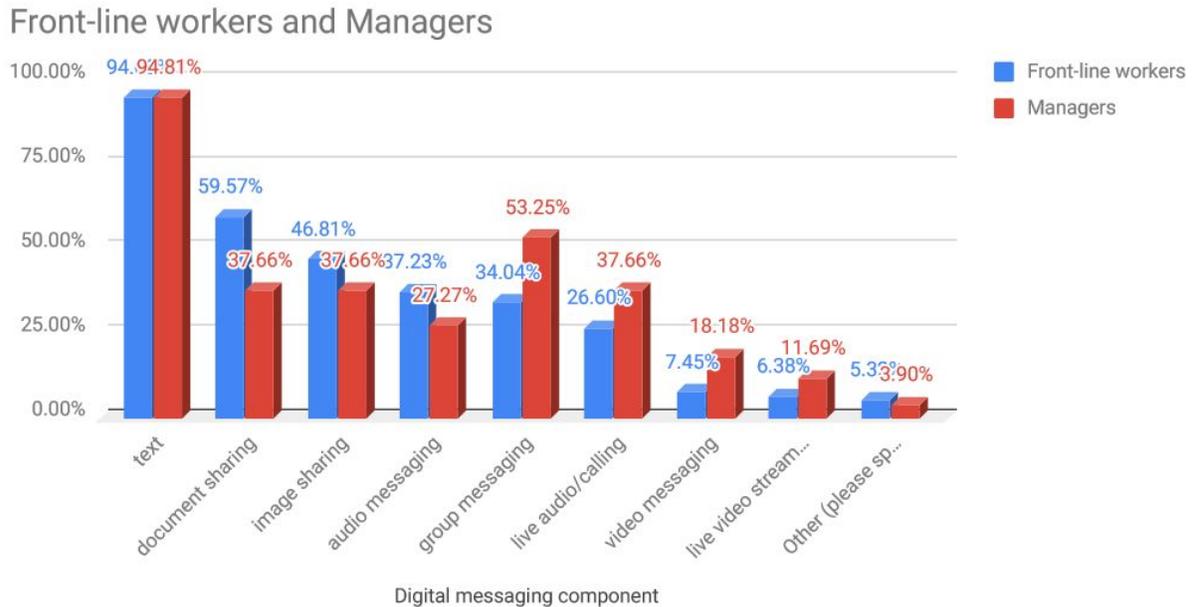
Both front-line workers and managers see the value in using digital messaging. This was confirmed in the survey, as well as in interviews and focus group discussions. They believe it has created more service access, effectiveness and efficiencies, and meets client communication preferences.

Agencies are predominantly using digital messaging in an iterative (vs innovative) way to serve clients

Digital messaging tools offer users multiple ways to communicate, using text, audio, video and group messaging. All digital messaging approaches are being utilized in the immigrant and refugee-serving sector, with text, document/image sharing, audio calling and group messaging being used the most and video messaging/streaming being the least utilized. 1-on-1 back and

forth client communication is more common than 1-on-1 broadcasting or use of group messaging in the agencies surveyed (See Chart #2). This is consistent with interview and focus group discussions. For most front-line workers, digital messaging is simply another tool they can use to provide service to their clients.

Chart #2: Digital messaging components using to serve clients according to Front-line and Managers



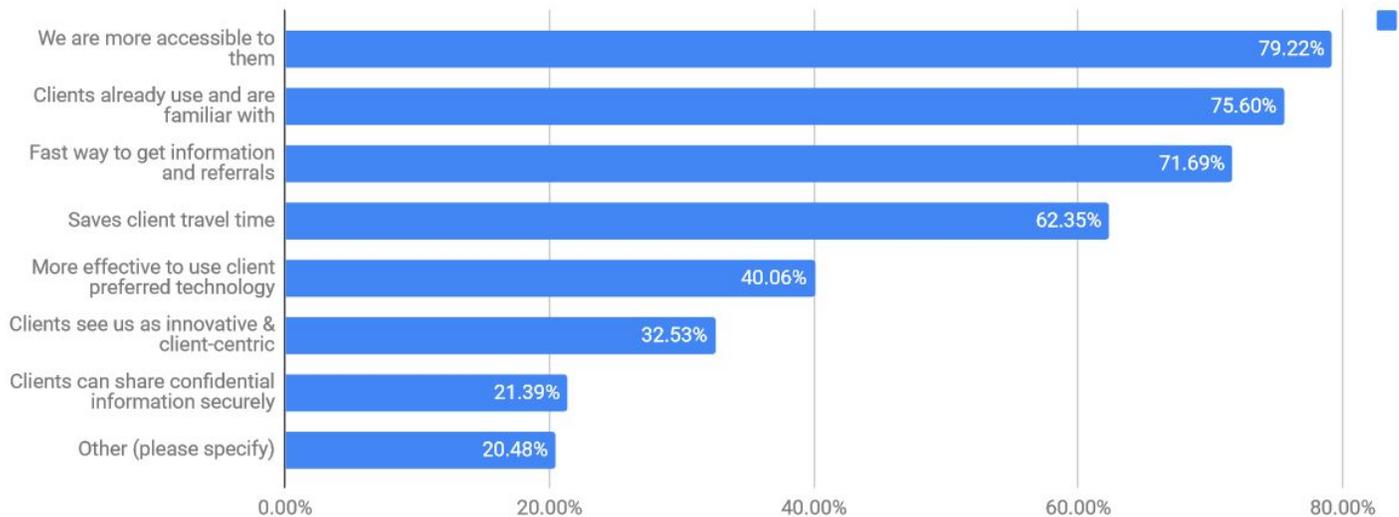
Source: DMSI survey database

In general, the agencies are aware about the usefulness of using digital messaging to serve clients. Almost $\frac{3}{4}$ (74.9% with N=332) of our respondents think so. The reasons are different from an agency to another one. However, according to survey respondents, the four main reasons are:

1. It makes us more accessible to them if they cannot come into our offices
2. It is a tool/app that clients already use and are familiar with
3. It is a fast way to get information and referrals
4. It saves travel time for them (See Chart # 3).

Chart #3: Reasons of the usefulness of using digital messaging for clients according to the

How digital messaging is useful for clients



respondents

Source: DMSI survey database

It is perhaps useful to discuss the idea of service innovation vs iteration when it comes broad technology use, but certainly with digital messaging. Where the Refugee 613 WhatsApp group can be considered an innovation (defined as developing something genuinely new), most service providers are using digital messaging in an iterative way (defined as refining what works to make it work even better, more accessible, efficient and effective).

When we look at promising practices in the sector, CultureLink's language learning WhatsApp group, ISSofBC's Newcomer.info texting service and Refugee 613's WhatsApp group are innovative uses of digital messaging. COSTI's CSS program use of WhatsApp, SWIS and Library Settlement worker use of WhatsApp/texting is iterative. Workers use digital messaging to provide services in a way they might using other technology or face-to-face. For the most part, digital messaging is being used as an additional tool and service delivery channel, complementing other service access points or channels for clients.

In most cases, digital messaging is being used as another service channel, a service iteration, with a focus on making services more effective, efficient and accessible.

Building a blended service flow, where a client may interact with one channel such as WhatsApp and move to another, such as in-person is still something agencies are grappling with.

But one manager likens online interactions to any other with clients: "You have to have staff

ready and not thinking about the service as different from face-to-face. Would you spend all day with a client? Not likely. You have to schedule appointments in the same way you would in person. If a quick interaction moves into something deeper, you have to be able to let clients know an appointment is necessary, including online, likely through video. Time management is important. You cannot be a slave to the technology and instantaneous expectations. Workers have other appointments and priorities.”

Innovative practices in digital messaging

While not exhaustive in scope or approach, our research for the environmental scan revealed some innovative approaches to digital messaging.

Thunder Bay Multicultural Agency piloted the use of a text chat box on the local municipal immigration portal. They averaged 150 conversations a week, from outside of Canada and from across the country. In-depth follow-up happened via email, but the initial personal online chat connection was crucial for newcomers to quickly ask a question and interact with a settlement worker.

A front-line worker at CultureLink personally created an after-hours English learning WhatsApp group to help clients who were unable to come into their offices during regular service hours. Starting with six clients, the group grew to 80 participants, eventually becoming part of the agency’s formal service offerings. With scheduled real-time English sessions twice a week, the group also communicated and engaged in between sessions.

COSTI’s CSS team serving GARs has moved their primary communication tool with clients entirely to smartphones and WhatsApp. Voice messaging is one of the most helpful functions. A client-centric approach has also meant adopting Google Translate as a useful tool. It’s adoption was led by clients who suggested and worked with front-line workers to make it work. Other CSS teams, along with Settlement Workers in Schools (SWIS) and Library Settlement Partnerships (LSP) workers have adopted smartphones and digital messaging as a core part of their service approach.

At ISSofBC, the agency is piloting and adopting Newcomer.info, a social enterprise between the Vancouver Community Network and ISSofBC. ISSofBC is replicating an earlier developed and tested platform called *Street Messengers*, set up for agencies and government to send one way text messages and information to homeless people. ISSofBC has modified it and introduced the ability of two way texting in different languages. They are currently piloting this tool with over 400 refugee claimants in British Columbia to provide updated information on various aspects of the refugee claim process.

Within a number of established online pre-arrival services, workers have shifted communication from email to digital messaging, at the request and preference of their clients.

In the author’s experience, once conversations with front-line workers and managers at an agency open, the use of many technology tools by front-line workers is revealed. Workers indicate they use these tools out of necessity - to serve clients. Most are used informally, without management/supervisor knowledge or approval. In one agency consulted, front-line staff

revealed they use 22 different technologies other than email, digital messaging and web surfing for clients.

Staff are innovating and experimenting to provide service to increasingly digitally savvy clients. Their innovation increasingly comes from client requests or interest in interacting in non-traditional service channels, using technology they already know and use as the primary starting point.

Successes and challenges for effective use of digital messaging

Successes

Survey respondents indicate that one-on-one worker-client interactions using digital messaging help increase access to the worker, effectiveness and efficiency of communication with clients, and supplements face-to-face interactions. From interviews, focus groups and other practice work, digital messaging is used to supplement all the services and service interactions workers provide. As one manager put it “it's another tool in the toolbox.”

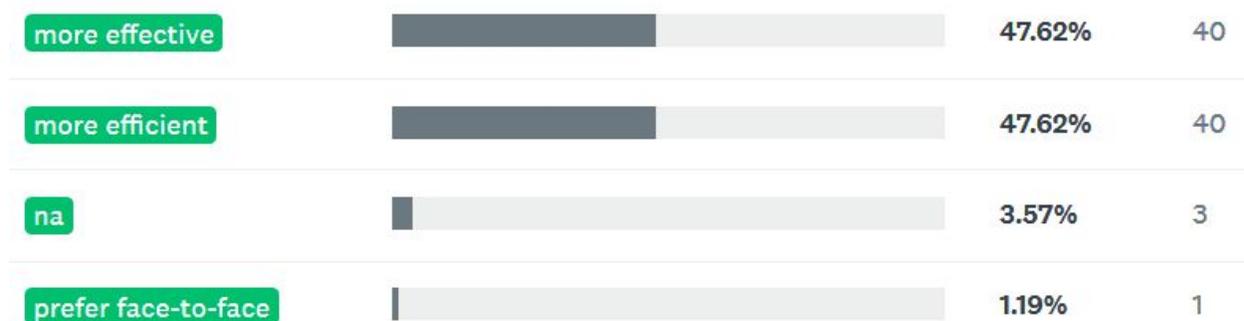
Comments made in interviews/focus groups and the survey by front-line workers about the benefits of digital messaging to serve clients make this very clear. Here are some survey comments:

- it is useful: as we can use Google translate, and then send a message to a client in their language, which we can't always do when we call them. for them to send us their pay stubs/any other pictures of mail/bills so we don't have to make a trip to them audio recordings if family is illiterate in their own language inviting to group events by copying and pasting an invite/picture of a poster and sending it to clients we truly could not do our job without this
- able to get messages to them even when they are unable to answer the phone. Also, communication with clients who are not available to communicate during the day we can text back and forth without playing "phone tag"
- It allows us to text important information so that the recipient can re-read and better understand what we are saying. We can resolve issues quicker as well.
- client chooses to communicate using this form because they are in classes or busy with life. They can also review the messages and use them to answer questions in the future.
- We receive questions more quickly than through our traditional customer service channels.
- It keeps me connected to clients at all times and gives them reassurance that they can connect with me in the way that they are most comfortable.

- It is extremely useful as it helps me reach clients who are isolated and vulnerable. Some clients are not comfortable leaving their home and participating in activities. Through digital messaging I develop trust with the clients and many of them choose to participate in settlement programs. I am also able to serve clients who are not able to communicate with email and by phone (for a variety of reasons). It also allows me to outreach to clients and tell them about upcoming programs and activities (particularly if they don't use email/phone)
- It is the primary way of connecting with clients. Without Digital messaging, I would not have the opportunity to connect with most clients.
- If the client have any sort of question, they can simply send me a text or phone call instead of driving all the way across town. We would also video call if they want to show me a specific document they might not understand and I can explain it to them. digital messaging has made everything easier and faster for me in my program.
- It allows me to create more regular and informal communication with clients, so that they feel I am approachable and reachable. It undercuts some of the language barrier for communication with clients who are still learning the language and have difficulty with voice phone calls. Text messages and voice recordings can be re-read, played back, and responded to at the client's own pace, allowing for more language processing time. I honestly find digital messaging to be incredibly useful for these reasons.

When we asked front-line workers “How is digital messaging useful for you as a settlement worker to serve your clients?”, their comments (N=84, thematically evaluated by the author) focused on the effectiveness and efficiencies digital messaging afforded them in their work (See *chart # 4*).

Chart #4: Comments from front-line workers regarding how digital messaging is useful as settlement worker to serve clients.



Source: Produced by the author using the DMSI survey database

When asked about service efficiencies and effectiveness digital messaging has created in their organization two managers called digital messaging “a game changer.” When it comes to service accessibility WhatsApp allows their staff to stay on top of services with refugee clients with complex needs (such as PTSD/mental health) who already use digital messaging as their

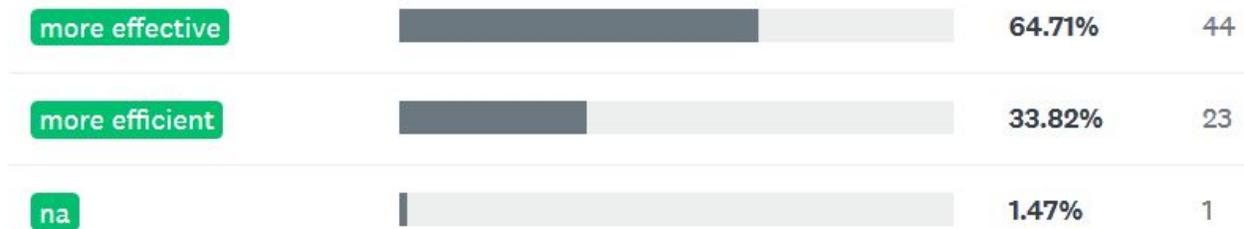
primary communication tool. With large client caseloads and clients living across a broad geography, including within the same city, they're able to be more responsive quicker. And for clients with literacy issues (including in their mother tongue), the ability to send audio and video messages on the devices and apps their clients already use has resulted in instant and ongoing access for those clients. Audio and video messages are available to be rewatched at any time, for example.

Survey comments from managers were consistent with these perspectives:

- very few clients use email. our client data increases when we use digital messaging vs phone calls or emails
- It's direct and convenient for clients. Emails can get lost in full inboxes, voicemails can get missed or ignored, but digital messaging is more direct communication to clients.
- The staff is able to communicate quickly with the clients; it makes our services more accessible to the clients and removes barriers around transportation and system navigation.
- Can ensure that factual information is shared in first language to large groups of newcomers, increase accessibility and participation of special events, job fairs, etc. Saves time for clients who can access services without travelling long distances.
- We find that they respond immediately to text messages. We send them emails first but there are usually so many excuses for not receiving or replying. But when it's text, the reply is immediate.
- Trying to reach clients can be a challenge and if the client prefers digital messaging, then it's a useful way to reach that particular client.
- Digital Messaging often times speed up communication from clients. It also helps staff become more accessible to clients who otherwise can't travel at all times.
- As I said earlier, the clients we serve in our 22 different communities would not all be able to receive services due to cost, infrastructure and geographical constraints.
- Language is an issue that makes digital messaging necessary. The clients communicate with us using their phones for translation, for document interpretation, for notification of programs in their own language. We sometimes translate the flyer into the language and send to clients so they can access some program. It makes serving the client more personalized and also the client doesn't have to be in our office for every little thing. Some of the clients don't have home phones either.
- it's another tool in the toolbox.

Management comments (N=68, thematically evaluated by the author) also focused on the effectiveness and efficiencies digital messaging afforded workers, with a stronger emphasis on how digital messaging improved staff service effectiveness (See Chart # 5).

Chart #5: Comments from Managers regarding how digital messaging is useful as settlement worker to serve clients.



Source: Produced by the author using the DMSI survey database

We asked survey respondents to rank the following benefits of using digital messaging to serve clients (1 being strongest benefit). 91 front-line workers and 74 managers responded:

Front-line workers

1. More efficient way to provide quick information & referral to clients
2. Clients can easily and quickly ask a question
3. Saves time for client travel
4. Clients indicate satisfaction communicating this way
5. Works well with clients who have literacy challenges (including in their first language)
6. Saves time for staff travel

Management

1. More efficient way to provide quick information & referral to clients
2. Clients can easily and quickly ask a question
3. Clients indicate satisfaction communicating this way
4. Works well with clients with literacy challenges (including in client's first language)
5. Saves time for client travel
6. Saves time for staff travel

More than one interviewee mentioned how using smartphones and digital messaging affords staff more flexibility and ways to communicate with clients. One team that serves Government Assisted Refugees (GARs) has moved their primary communication tool with clients entirely to smartphones and WhatsApp. Voice messaging is one of the most helpful functions. Many of their clients are not literate in their own language, but they know how to use WhatsApp and can send voice messages: "This is the way we communicate. Voice messages can also be revisited and listened to when they need it. It saves time."

Technology has facilitated access and bridges geographic barriers, without a loss of human

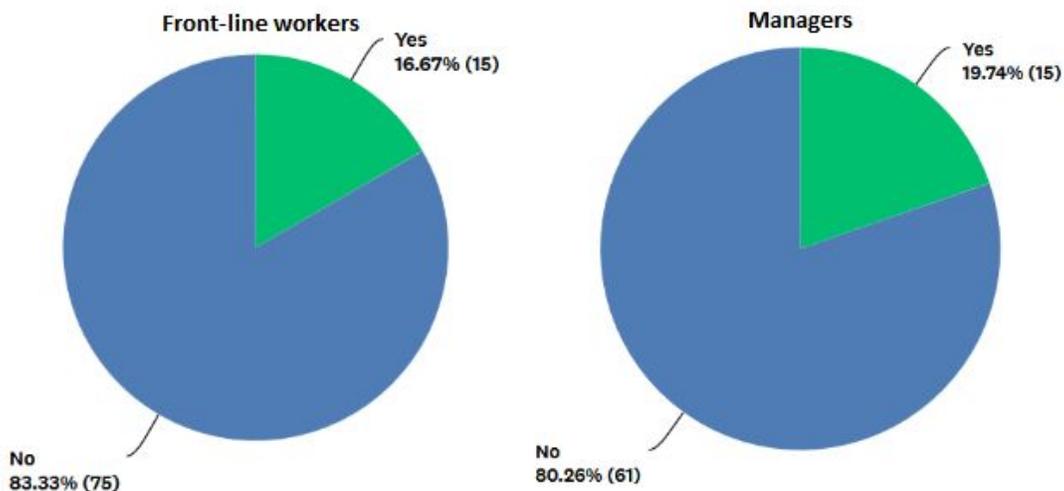
touch or interaction: “You can do the same things as you would in person. You check a person's documents and compare them to the person you're serving online. You don't need to see them face-to-face to do a needs assessment. You can accompany them without being with them physically. If we can do this with folks around the world, why not in your own town?”

Overall, the message is clear from front-line workers and managers, digital messaging is an effective, efficient, and client-centric service delivery tool. For some, it is now essential and the primary way they communicate with and serve their clients.

Challenges

As indicated in Table #2, 66.27% of agencies respondent confirm that they use digital messaging to serve clients. However, regarding the evaluation of the impact of this method to communicate with clients, only a few of agencies do so. The analysis of the data shows that only 16% of Front-line workers (N=90) and 19% (N=76) of Managers indicated that they evaluate the impact of using digital messaging to serve clients (See chart # 6).

Chart #6: Evaluation of the impact of using digital messaging to serve clients according to Front-line workers and Managers



Source: DMSI survey database

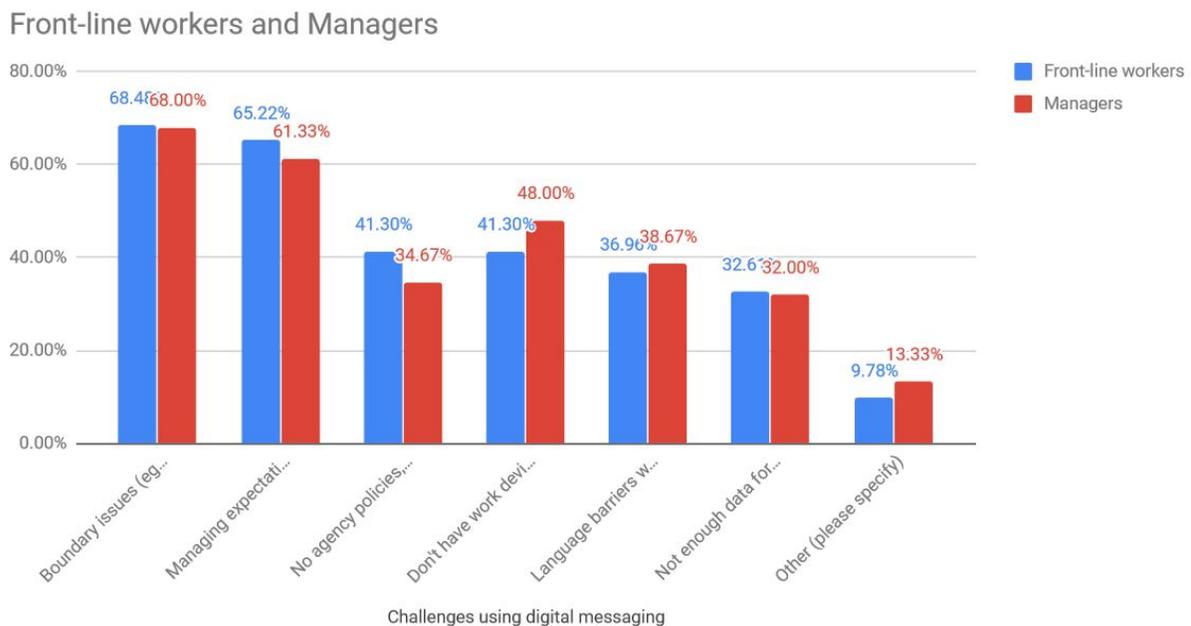
Comments from both groups suggest that this the evaluation is more informal than formal. In some cases, they indicated that their use of digital messaging is too recent to evaluate.

We asked what the main challenges using digital messaging were for both front-line workers and managers from a staff/human resource perspective as well as a resource perspective.

Staff/human resources challenges

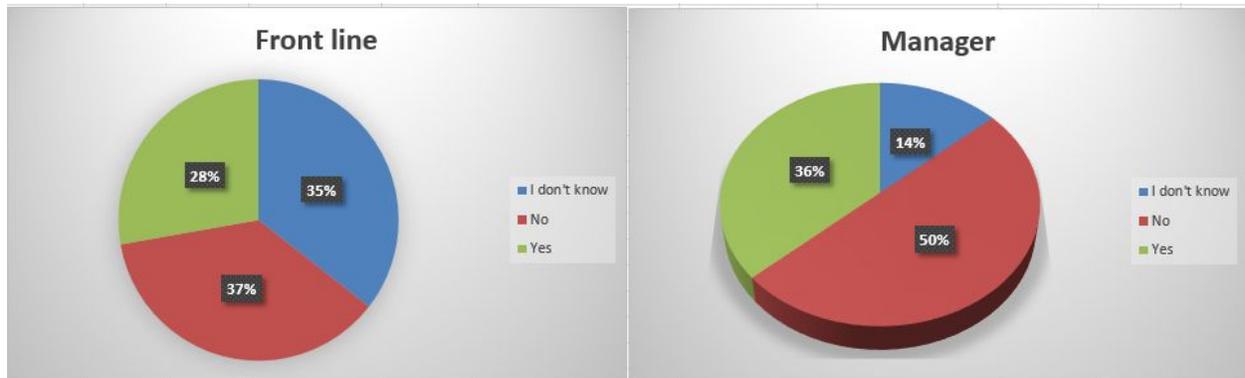
Overall, the trend in these answers points to issues related to policies and protocols around digital messaging use, in particular related to client-staff boundaries and the instantaneous nature/expectation of responses which is common to the medium. This trend is the same for front-line workers (N=92) and managers (N=75) (See chart #7).

Chart #7: Challenges using digital messaging to serve clients



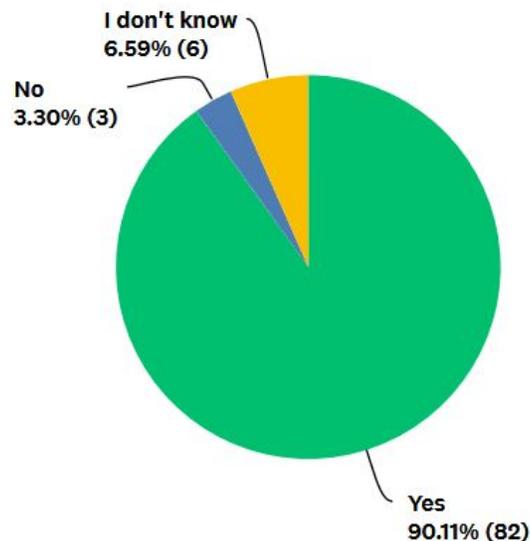
Source: DMSI survey database

It is interesting to note that a lack of agency policies, protocols or guidelines is of higher concern to management than front-line workers. As we can see in chart below, half of managers affirm that they do not have any policies, protocols or guidelines related using digital messaging against 37% for the front-lines workers.



We asked front-line workers if they feel they have the skills to use digital messaging to serve clients. 90.11% (N=91) of respondents said yes (See chart # 8).

Chart #8: front-line workers that feel they have to skills to use digital messaging



Source: DMSI survey database

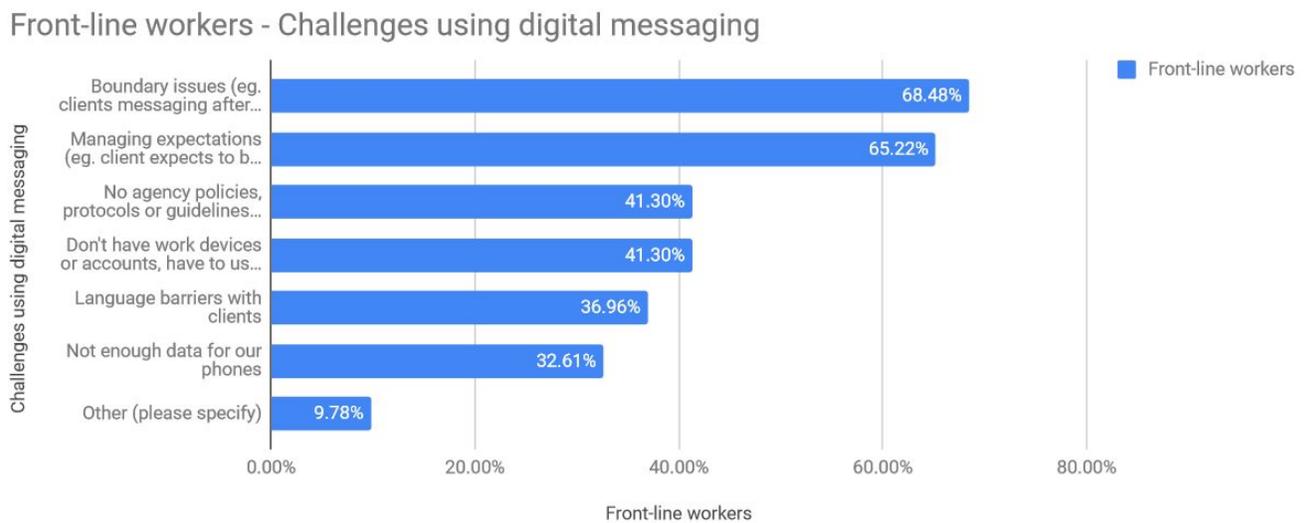
This is inconsistent with findings from interviews/focus groups and the literature. There are number of ways it could be interpreted. It is the author's opinion that workers refer to the simplicity of using digital messaging, not the additional complexities of using it in their work. One recent study found that personal use of social media doesn't translate to e-professionalism (Karpman & Drisko, 2016).

This is an important trend to explore in the sector. For some front-line workers, digital messaging has been a huge jump and change in the way they interact with clients. They have embraced newer technologies, but also find it difficult to figure out how to manage them. Grappling with boundary issues comes up frequently. As one front-line worker wrote in the

survey: "It's improved things in some ways, but in other ways, we have to help people understand that they can switch off their phones, don't have to be accessible 24/7 and that this is communicated to clients."

High on the list of front-line concerns and resources they feel they need is how to deal with client boundary issues (suggesting protocol and training concerns) and managing client expectations regarding communication turnaround times, and ensuring digital communication is secure.

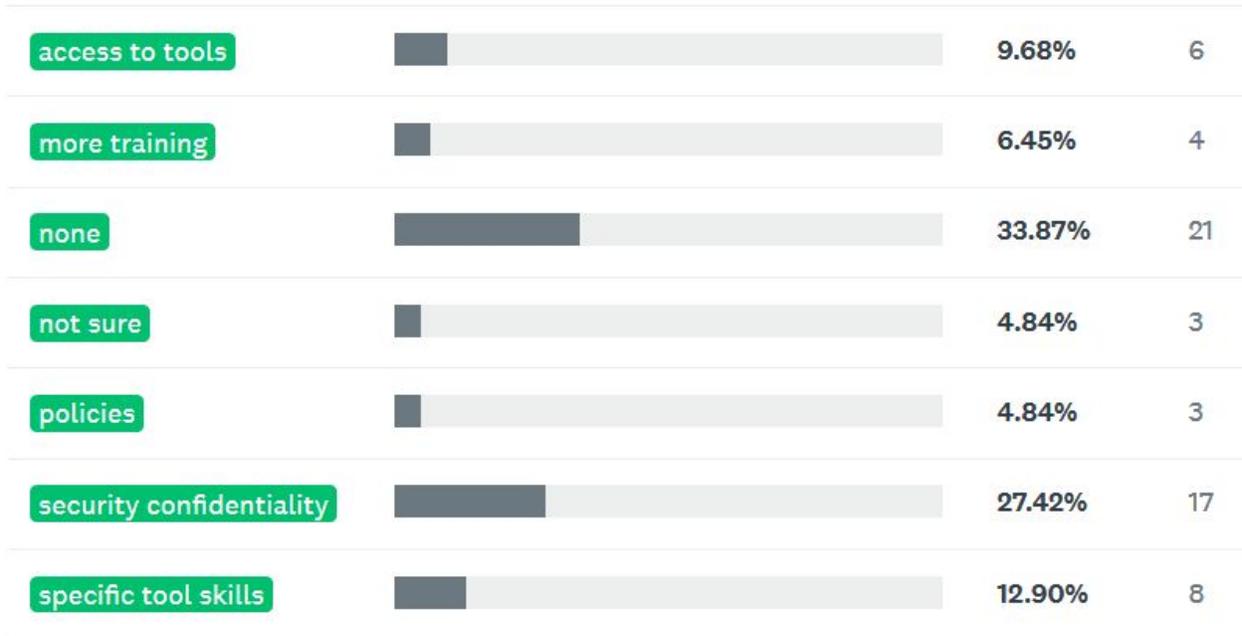
Chart #9: Main challenges front-line workers face using digital messaging to serve clients



Source: DMSI survey database

We followed up the initial survey question about skills to use digital messaging with an open ended question about additional resources or training they needed. While 33.87% of front-line workers (N=62) continued to indicate they need no additional training, 27% indicated interest in more training and skills to ensure their communication with clients is secure and confidential. 12.90% indicated an interest in additional technology-specific training.

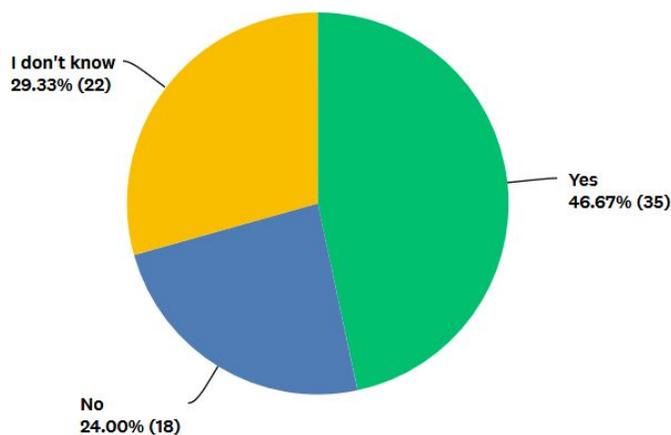
Chart #10: additional skills and training needed to use digital messaging effectively



Source: Produced by the author using the DMSI survey database

Unlike front-line workers, only 46.67% of managers (N=75) say they feel they have the skills to manage staff in this environment while 29.33% say they don't know (See chart #11).

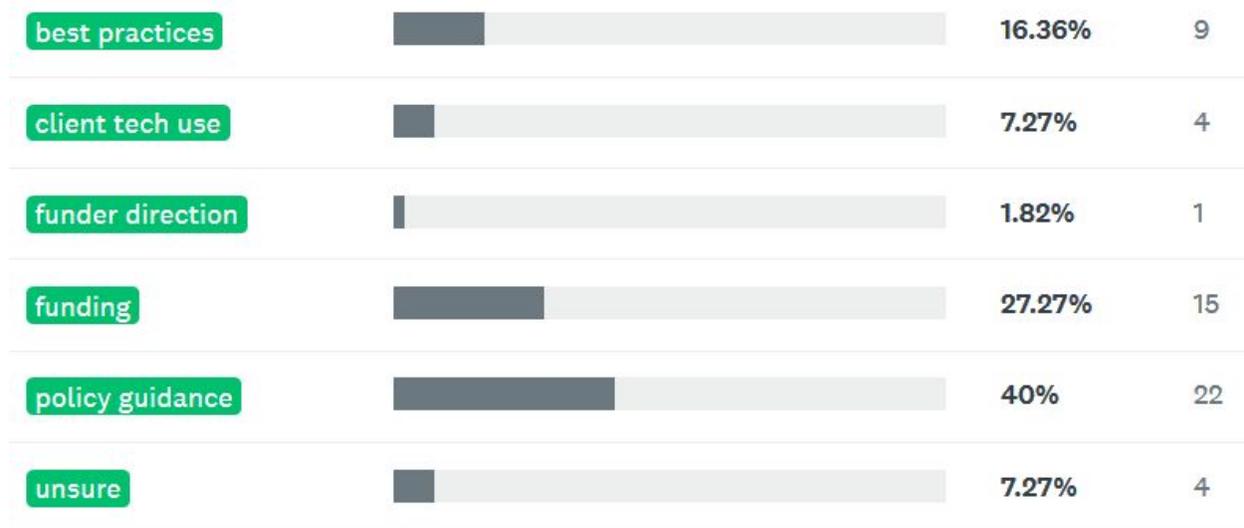
Chart #11: managers that feel they have to skills to manage staff using digital messaging



Source: DMSI survey database

In a follow-up open ended question, 40% of them would like policy guidance in their organization, 16.36% would like more best practice information/sharing.

Chart #12: additional skills and training needed to manage staff use of digital messaging



Source: Produced by the author using the DMSI survey database

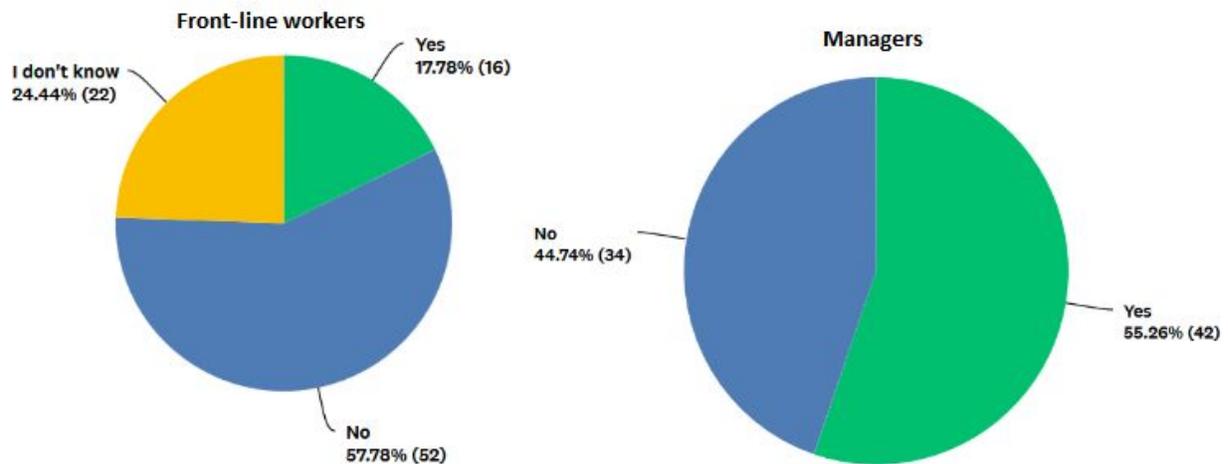
This is very consistent with the literature as well as interview/focus group feedback. Managers don't feel equipped to both make technology decisions and manage staff increasingly using technology to serve clients. As one manager put it in an interview: "When I started to hear about all these different ways to communicate, I felt like a Luddite. How much do we rely on technology? What about people who are not necessarily up to speed on tech? But if we need it for our work, if it makes things more efficient, OK, but who's going to train me? And any staff who might need it?"

Managers are also asking important questions about data privacy and access. One interviewee brought up how the free nature of apps seems to good to be true: "How is WhatsApp free? It's encrypted, but who has access to the info?" These are important questions that should be asked, but the manager also acknowledged his own lack of capacity to address them.

When you scratch below the surface with front-line staff who feel they have the skills other capacity issues that come up such as personal use of devices, lack of organizational policies, boundary issues, lack of resources, and uncertainty about agency approval and guidance for the use of digital messaging to serve clients. More consultation with the sector in this area, focusing on specific training and human resource needs would be of value.

While 55% of managers (N=76) indicate their agency has consulted with or surveyed staff about using digital messaging to serve clients, only 18% of front-line workers (N=90) indicate this (with 24% indicating they don't know).

Chart #12: whether agencies have consulted with staff about use of digital messaging



Source: DMSI survey database

The challenges and opportunities raised in the survey and interviews/focus groups are echoed in the literature. Use of technology in the immigrant and refugee-serving sector is not new. Nor are innovative uses of technology to serve clients. However, research on the impact and effectiveness of technology use in service delivery, as well as the digital capacity of Settlement organizations to provide services to clients using technology such as digital messaging is sparse.

We looked at literature on technology themes in the Canadian immigrant and refugee-serving sector from 1997 onwards. There are common themes about how some Canadian settlement agencies use technology, along with recommendations for sector action, in particular working with funders, to enhance the capacity of agencies to incorporate new and emerging technologies into client service work. Looking back at earlier sector research conducted among Ontario agencies shows that this is not a new conversation in Canada, but one that resurfaces and is studied every few years over the past two decades.

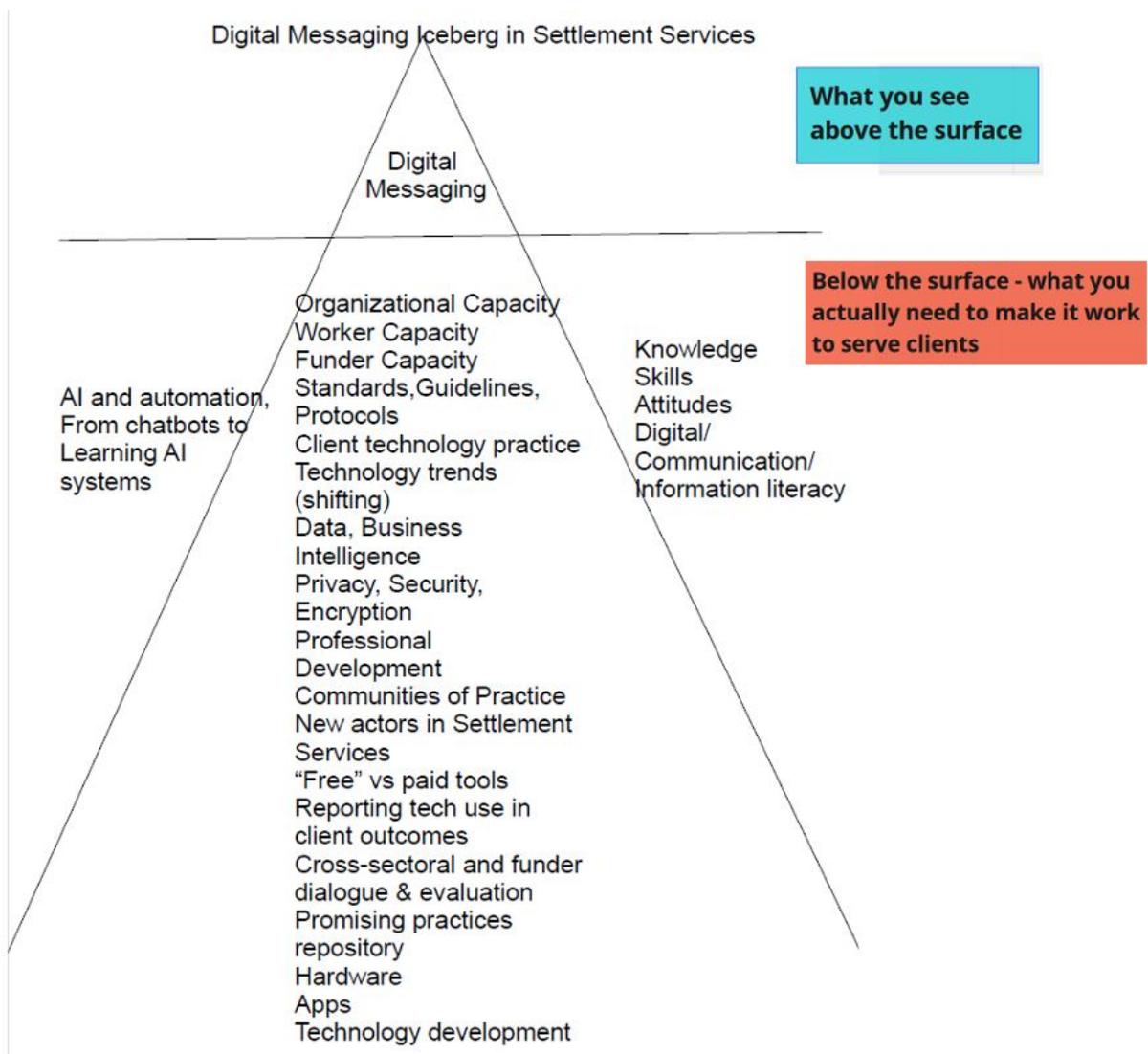
Throughout this research themes have remained fairly similar:

- Agencies lack capacity to effectively integrate technology consistently across the organization – they're unsure how to implement and manage
- Funders lack capacity to evaluate, manage and monitor technology requests
- There is a large and varied continuum of formal technology adoption in the sector, with pockets of innovation
- Technology-mediated interactions are not considered direct service by some funders
- Agencies lack suitable policies and guidelines for technology use to serve clients
- Different models exist in how agencies roll out technology to serve clients - virtual worker vs frontline worker, vs blended worker

- There is a lack of knowledge sharing and transfer of promising and successful practices within the sector around digital service delivery
- The sector lacks standards, ethical guidelines and protocols around digital service delivery

It is perhaps useful to look at digital messaging from the perspective of an iceberg (Figure #1) - what you see above the surface (i.e. using an app or technology) and what it actually takes to use it in a client service context.

Figure #1: Digital messaging iceberg in settlement services



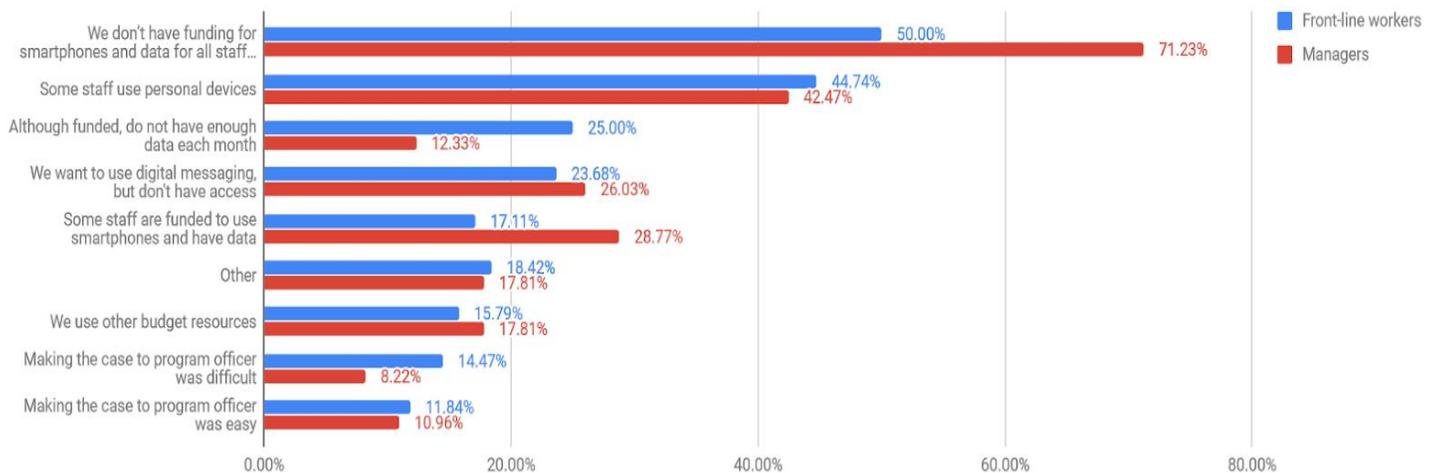
Source: Image conceptualized and created by the author

Resource challenges

Themes were fairly common between front-line workers and managers when it comes to resources. In interviews and focus groups, front-line workers are more concerned with having adequate data for their phones. Both front-line workers (N=76) and managers (N=73) indicated that it was both difficult and easy to make the case for smartphones and data at their agency with their funding officers. This suggests a potential inconsistency of funding officer recognition of smartphones and digital messaging as acceptable service tools, something that emerged anecdotally in interview and focus group feedback as well. Lack of access to smartphones was also a common theme in interview feedback. A significant number of front-line workers and managers noted that staff user personal devices and accounts to serve clients.

Chart #13: challenges to get resources to use digital messaging

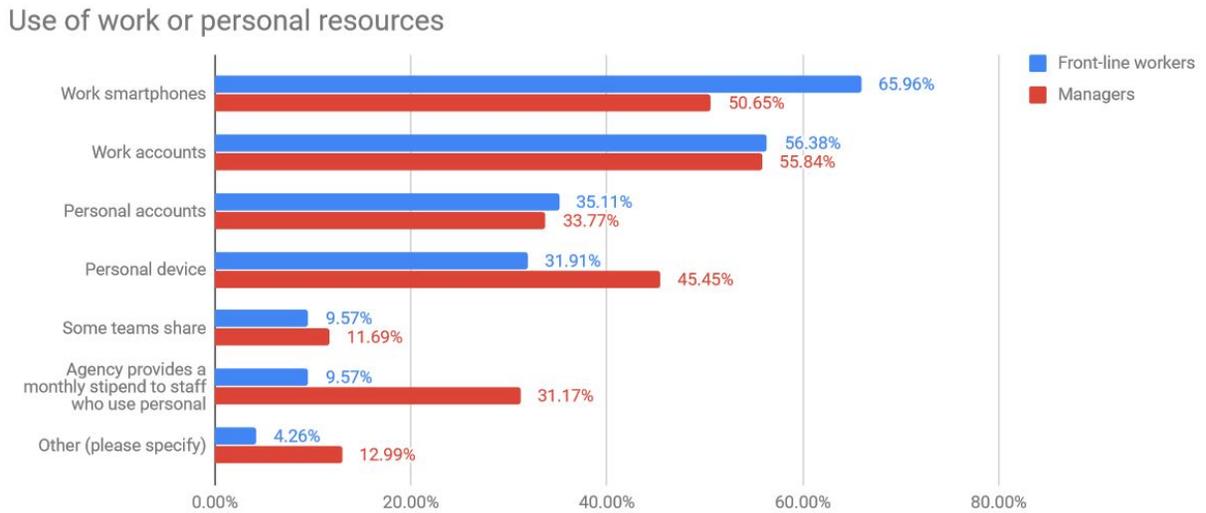
Challenges to get resources to use digital messaging



Source: DMSI survey database

65.96% of front-line workers (N=94) and 50.65% of managers (N=77) indicate that staff are using work-provided phones. 31.91% of front-line workers and 45.45% of managers indicated that staff are using personal devices to serve clients.

Chart #14: use of work or personal resources when using digital messaging

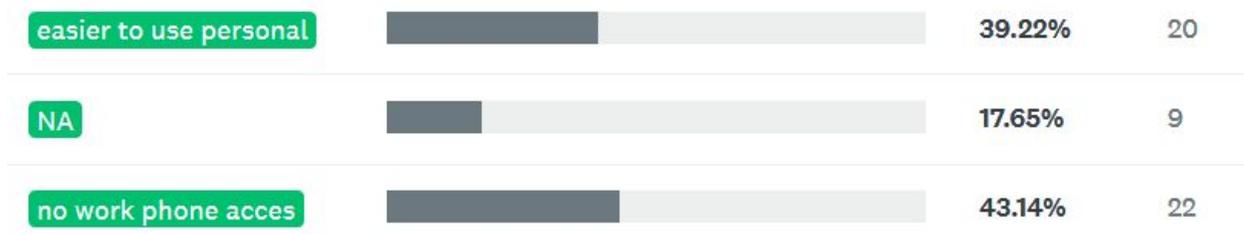


Source: DMSI survey database

When asked why personal devices are being used, 39% of front-line workers (N=51) indicated it was easier and 43% indicated they did not have access to work phones.

Front-line worker responses grouped into the following themes:

Chart #15: why staff use personal devices



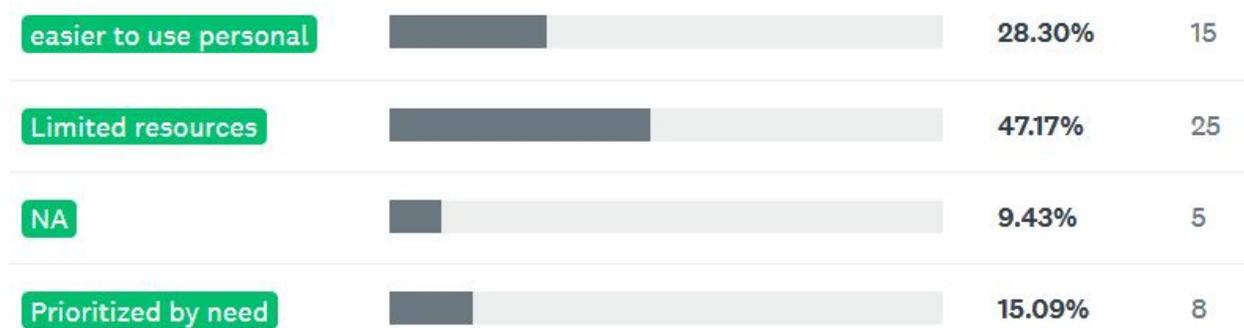
Source: Produced by the author using the DMSI survey database

Some front-line comments included:

- It is more convenient than carrying around an extra device.
- I prefer not to carry two smartphones.

Some agencies provide a stipend for staff to use their own devices. While 28% of managers (N=53) noted that it was easier for staff to use personal devices, 47% cited limited resources as the key reason why personal devices are being used by staff:

Chart #16: why staff use personal devices



Source: Produced by the author using the DMSI survey database

Comments from managers included:

- Their choice. We pay a stipend for 4 staff only, the ones using their devices to communicate with clients regularly. Staff are not expected to use their device if we don't contribute to the cost.
- personal devices are subsidized. Cheaper cost. Not ideal, as it causes boundary issues, but this was what was available to us at one time and has not changed.
- We don't have the financial resources to pay for all staff cell phones, but it is a need and a good tool, we can provide a form for taxes to expense their cell phone bills off their T4 if they chose to
- The agency does not provide a phone only a cell phone allowance. This \$40 a month helps however staff are receiving calls after work hours. They are told not to answer however struggle when they know a client needs help.
- Our staff work remotely and as a condition of employment must follow specific policies/guidelines to use their personal devices for work purposes. This helps save costs related to purchasing, distributing and supporting hardware and software.
- It occurs very rarely and messages are deleted once communicated. Agency is exploring providing work phones for those that use them.
- Some people prefer to use a personal laptop rather than a work laptop. Some people prefer to use their personal cell phone as a work phone so that they do not have to carry around two phones
- It is only occasionally that we do and not on a daily basis, it seems to be when they cannot communicate through a phone call or email.
- We currently provide monthly cell allowances but are adopting work phones for all for confidentiality and privacy issues.

- They use their own smartphone as it is easier than having an organization-owned phone.

As is evident in the comments as well as in interview/focus group feedback, increasingly personal device/account use is recognized as a concern that impacts on worker and client privacy, boundary, and confidentiality issues.

Managers, in particular, echo this concern later in the survey when asked about resources and supports they need in order to manage the use of digital messaging in their organizations.

Other digital technology is also being used alongside digital messaging

For interview and focus group participants digital messaging has become the “thin wedge” of new technology adoption. As they find success with digital messaging to serve clients, teams are becoming more and more technologically curious, finding and implementing more uses for technology in direct service delivery. They believe that if they keep growing access and capacity, and think of innovative ways of using technology they may have even more impact on their clients' outcomes. As they roll out new services, technology is now part of the consideration of how the service will be offered. The hope is that this will increase access to services.

One interviewee outlined how digital messaging has improved services to clients. According to him, newcomers are very busy and juggling a lot in their initial settlement and integration. It can be hard for them to manage the communication overload they get from school, appointments, from settlement agencies, family and more. Being able to cut through that digital noise has been a challenge. However, he has found that clients open, read and respond to instant/digital messages.

His experience is supported by literature comparing the open and read rates of instant messages vs email. Instant messaging currently commands much more consistent attention than email.

For this interviewee, digital messaging has improved communication and made it easier to keep in touch with clients. Quicker responses have meant quicker interventions. He wonders, “what more do we need to learn? What apps could be useful to help set up clients with life skill needs? Most have phones, can we help them see if they're able to use Google Maps, etc., to find their way to an appointment, or to get oriented to their new city? Is there an app we can help them set up to put appointments in phones and set reminders?”

For him and his clients, the smartphone has become an essential tool for client integration.

According to interviews and survey respondents, translation tools/apps, such as Google Translate have become an important complement to digital messaging.

The literature tells us that newcomers are digitally savvy, mobile first and avid users of smartphones and apps. Smartphones, in particular, have become essential not only to the daily lives of newcomers from Canada's immigrant source countries, but also as a migration information, data, information and navigation tool. Refugees describe their smartphones as an essential tool for survival: "As Important to Me as Water," or as their "assistant", "friend", "direction" or "right hand" or "It is my entire life." Smartphones do not become lesser tools after they've migrated, but continue to be essential for settlement and integration.

Their technology use is having an impact on how front-line workers adopt new technologies themselves.

In a front-line worker focus group, participants described how clients are teaching workers about technology that they find useful. In particular, Google Translate has become a useful complement to digital messaging. By using digital messaging, the channel of choice of their clients, and Google Translate, they said they have been able to keep communication open and more accessible. This is also reflected in comments from survey respondents.

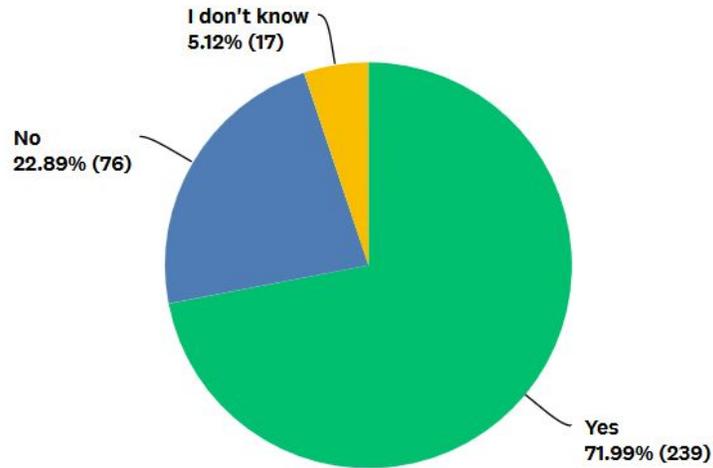
Client feedback is inconsistently incorporated into technology decisions

We asked how agencies decided to use digital messaging with clients. Digital messaging is adopted by service providers when clients ask agencies to communicate with them using digital messaging, or when agencies ask clients about their communication preference. It is client driven.

This is consistent with feedback from interviewees who said that in order for digital messaging services to be successful, agencies have learned they need to meet client needs and use technologies their clients use. Emerging research in fields such as social work also indicates that communication via new or emerging technologies has tended to be client initiated. Workers and agencies struggle and scramble to adapt.

Most agencies (71.99% N=332) ask about client communication preferences at intake.

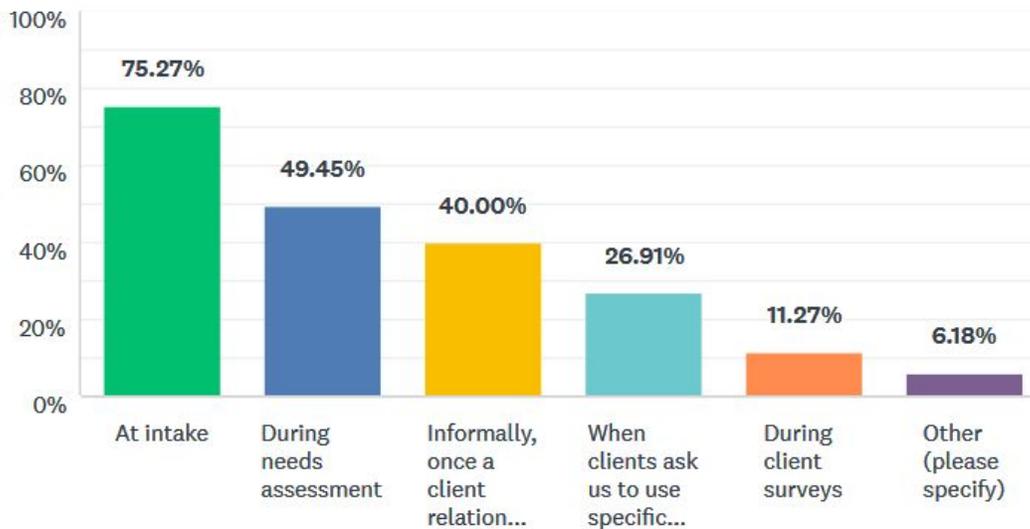
Chart #17: Asking clients about communication preferences



Source: DMSI survey database

75.27% (N=275) indicated they ask about client communication preferences at the initial intake.

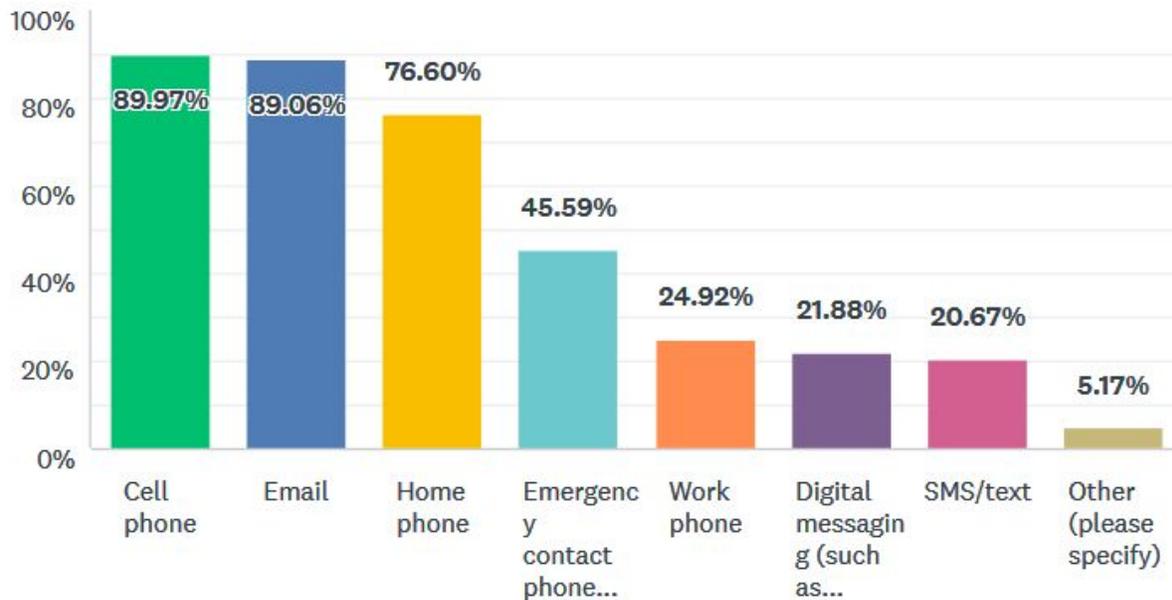
Chart #18: when do they ask clients about communication preferences



Source: DMSI survey database

However, few include digital messaging as an option when they ask (21.88% for digital messaging, 20.67% for texting, with 329 survey respondents answering).

Chart #19: which communication preferences do they include when asking clients



Source: DMSI survey database

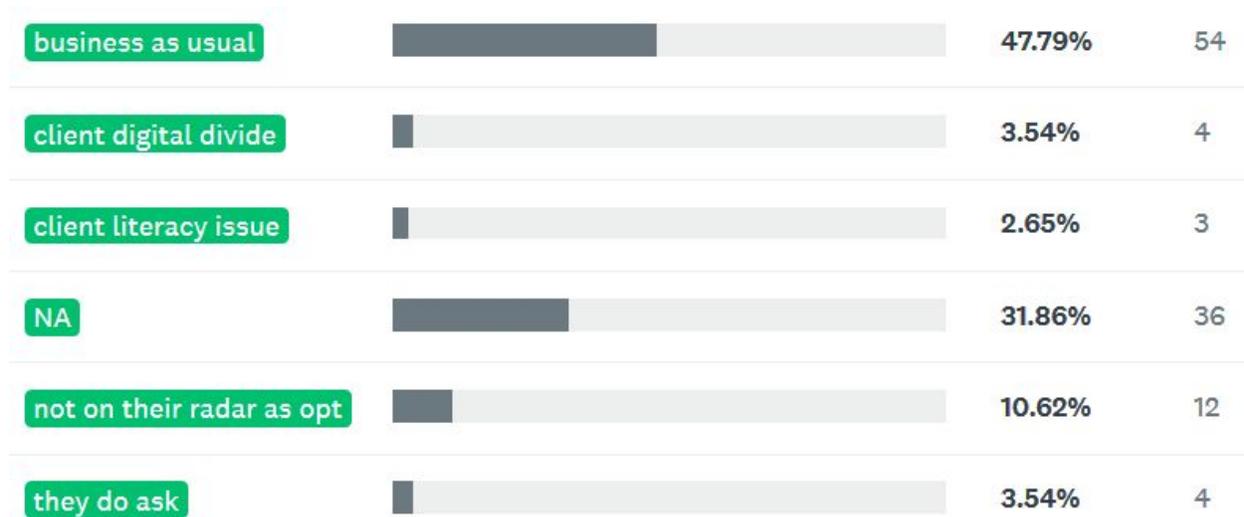
We asked those who do not ask clients this question “why do you not ask them their communication preference?” Here are some individual responses from a total of 113, as well as some themes that emerged:

- Never thought of it. I only text some of them if , months after intake, they at some point indicate texting is preferable.
- We are a very busy office that runs several different programs; we therefore do not have the time to initially communicate with our clients using different methods. We always send out an email, followed by a phone call. Once the client has responded to our initial method of contact, we continue communication with them either in person, by phone or email.
- Because have to ensure that our communication maintains the privacy of the clients but also staff (eg not all staff have work cell phones and cannot use their personal cell phones to contact clients). At this moment, the traditional methods ensures privacy
- They are told we will communicate with them via email or phone.
- All of our contact information is printed on the info card or can be found online at our website that client can choose whichever way they feel convenient and easy to contact us. Most clients know their preference and don't need to be asked specifically.
- Because our clients are english-as-a-second-language speakers it is very difficult for them to both understand us, or express themselves via phone. Therefore, we generally stick to written communication first.

- By default, we reach out to applicants by email. If they have questions, they can reach out to us by email or phone
- We have always done business that way. In person or phone visits

The 113 open ended responses were thematically grouped. Almost half of the respondents simply haven't thought about asking clients about their communication preferences.

Chart #20: why do you not ask them their communication preference?



Source: Produced by the author using the DMSI survey database

(*Business as usual* refers to responses that indicate this is just how they've always collected information. *Not on their radar* responses indicates the agency appears to have considered digital messaging but is not interested in asking clients this question (a conscious step up from *Business as usual* rejecting the idea that they ask). A large number of respondents indicated *Not Applicable*. It's unclear what they mean by this.)

Understanding client technology adoption, preference and use, along with their information practices is key to understanding how settlement work is and will shift to new and emerging technologies. More can be done to ensure that agencies are actively seeking input from clients about their information practices and technology preferences.

In the literature review, we looked at research around newcomer information practices. There is leading and exceptional research being done in Canada looking at Canadian immigrant and ethnic community information practices from 2003 onwards. This body of research provides an overview of how newcomers find, access and act on information they find. The theme continues in newer research looking at technology use by refugees and immigrants in their migration

information practice. This research grounds us in what we know about how newcomers look for and act on information, including where technology fits.

In particular, Nadia Caidi's work in has sought to examine the information needs, sources, and barriers to accessing information experienced by those who immigrate to Canada. Previously, she posited that social inclusion of newcomers is an information problem. This theme has been consistent throughout other research looking at immigrant information behaviour and practice (Caidi 2005, Caidi 2010, Sexsmith 2010, Esses & Medianu 2012). Their findings have implications for front-line workers “as well as for policymakers interested in programs, policies and funding priorities concerning information provision and access strategies that enable social inclusion of newcomers and longer established immigrants into the social fabric of Canada” (Caidi & Allard 2005).

These findings are complemented by research done for funders within the immigrant and refugee-serving sector, on the capacity and use of ICT by Settlement agencies. The research increasingly includes the context of new and emerging technologies, but also reminds readers that other, more traditional, methods of information delivery continue to be important for a heterogeneous diverse newcomer audience.

Canadian research of newcomer use of technology, along with international research, also illustrates that newcomers are increasingly digitally literate, mobile first and avid users of digital technology and the internet when looking for and acting on migration, settlement and integration information.

We narrowed our literature review to look at research on how technology is used during migration, including how important technology has become for both migration and settlement/integration. There is a large and growing body of more recent research providing evidence of client use of digital messaging and, more broadly, ICT use in migration and settlement/integration processes (Gillespie et al 2016, Gillespie et al 2018, Veronis et al 2018, Witteborn 2015, Alemasoom et al 2018 and more). Some very interesting studies have furthered Indian economist Amartya Sen's Capability Approach framework, applying it to technology and the use of technology to enhance the social inclusion of newcomers in their new host societies, including addressing the digital divide and other capacity issues. This framework, and the potential for it to be modified and applied to the immigrant and refugee-serving sector's use of technology to serve clients is outlined in a companion Appendix 4.

Recent research into the use of technology in migration over the past 3 years has focused heavily on refugee use of mobile technology and smartphone apps. Within the research are foundational lessons about how to design information services and products for all newcomers, primarily taking into account newcomer information practices and communication/technology preferences (Gillespie et al 2016, Techfugees 2017, Diaz Andrade & Doolin 2016).

Because of the influx of refugees and migrants using smartphones and apps as primary communication, navigation and service access tools there is a large and growing body of research focused on the benefits and possibilities of digital messaging technology to serve refugee clients. Current research and activities on refugees use of mobile technology focus largely on themes of connectivity, digital tools and platforms, family re-connection, education, and livelihoods and mobile money. It is, however, mainly focused on the use of digital

messaging by refugees during their migration, and less focused on how service providers can and should integrate digital messaging into their service channels or offerings.

The predominant research body here is focused on refugees over the past 4 years, and that is focused mainly on the experience in refugee camps, as well as recent migration flows into and through Europe. The lessons here are likely transferable to other groups of newcomers. There are few studies about how digital messaging can continue to play a role in the integration and settlement of newcomers once they arrive in Canada, from a service provider perspective.

Exploring digital messaging in other human service sectors (social work, health, education & learning), from the early 2010's onwards was key for the literature review to broaden out the capabilities messaging apps provide, and to explore relevant research that can impact the understanding and study of digital messaging in migration and settlement. In particular, WhatsApp groups have been explored in this context as potential information sources and community development initiatives. There is a growing body of research showing the affordances and usefulness of digital messaging use in some sectors, such as education and learning, healthcare and social work.

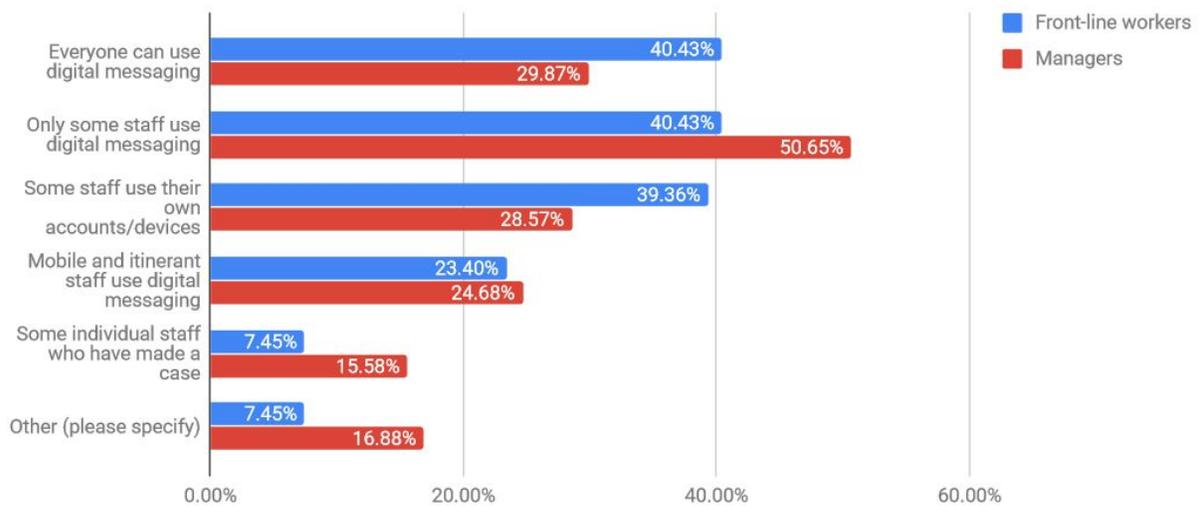
We have reviewed a small sample of research on how digital messaging is emerging as a useful service, coordination and community building tool. Our review includes two literature reviews that encompass dozens of research reports (Giordano et al 2017, Tang & Hew 2017) outlining the successes, challenges and opportunities digital messaging (in particular WhatsApp) offer in human service provision.

Digital messaging trends among staff

We asked how widespread digital messaging was in agencies and which staff use the tools. 40% of front-line workers (N=94) and 30% of managers (N=77) indicated that digital messaging is available to staff (See *Chart #21*).

Chart #21: how widespread digital messaging is in their organization

How widespread digital messaging is in their organization



Source: DMSI survey database

Other responses from front-line workers included:

- we are not given work phones, so we are told, if we do not want to give out our personal phone numbers to our clients, we can give them our office extension, meaning we can't text them or use WhatsApp with them, meaning we pretty much can't do our job, so almost all staff feel forced to give clients our personal numbers...
- staff that have work cell phones
- Digital messaging is available for all staff, but it is the nature of the service/program that suggests the best way of communication
- only staff who have work cell phones
- I use texting on request of students who have that ability.
- Usually the staff with Cell Phone facility (work phone access) would use the Digital Messaging with clients owing to privacy issues

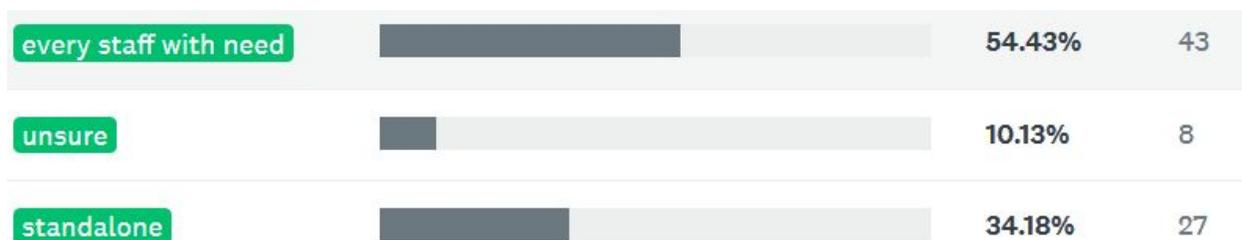
Other responses from managers included:

- mostly itinerant staff to clients who do what's ap or text
- Our instructors are not required to use digital messaging but we don't discourage its use. We provide training and support to those that want to use it with their language learning clients.
- some individual staff use texting when requested by clients
- It has not been implemented formally, some workers have just come up with the best way of communicating with clients. It is more common for the youth team.
- We don't have the funds to pay for staff cell phones, so they use their own

- Most staff use digital messaging; however, they use their own phones which is not ideal. It would be good to have enough funding to provide devices to all staff.
- We use digital messaging in all of our programs (settlement, LINC, employment) with the exception of LIPS.
- I cannot speak for the whole organization, but within the Youth initiative, the majority of groups utilize digital messaging

We also asked an open-ended question if digital messaging is integrated with all staff or role of a single staff member. 54.43% of front-line workers (N=78) and 56.67% of managers (N=60) indicated that in it is available to all staff in the organization if needed.

Chart #21: digital messaging used by all staff - front-line worker perspective



Source: Produced by the author using the DMSI survey database

Chart #22: digital messaging used by all staff - manager perspective



Source: Produced by the author using the DMSI survey database

Funders are looking for the sector to lead them

Agencies consulted feel that technology can provide new opportunities to have greater impact in their work, but they are looking for some guidance from funders. At the same time, funders are waiting for some direction from service providers.

According to funders interviewed, service providers need to explain the effectiveness and efficiencies of using digital messaging to serve clients and not take funder capacity or understanding about the potential for technology use in client service delivery for granted. As one funder said: "We're going to be driven by the SPOs and their preferences, because we're not currently driving that conversation. We don't know what part of in-person services are best suited to what kind of technology platforms. It's not government policy work to say what the technology solutions are. At the moment, we have very little in terms of evidence in terms of more effective and efficient service delivery. Without that evidence, or routinely understood by

the SPOs themselves, we are reluctant to make that leap or to demand that SPOs use technology more in their service delivery.”

Funders don't have a deep sense of the diversity to technologies being used to serve clients, beyond simple website and email use. They'd like to see evidence from the sector that emerging technologies are being used, and can be used to serve clients. They have an existing evidence base that says how standard services are delivered (including how privacy, data, client confidentiality standards are met), the cost of delivering that service, how effective the service is (for clients – how easy to access, fluid, how quickly do they move through it, etc.). However, they lack understanding and evidence of where technology fits into integration and service scenarios, whether it's an app, online learning, digital messaging, mentoring matching, etc. For funders any service enhancements have to be efficient and effective.

One interviewee noted that government itself is moving into online services, but doesn't see digital service provision as legitimate. Federally, there is promise that with the creation of Canadian Digital Services, Digital Standards and new public service Digital Academy funders will have access to additional resources to increase their technology literacy and capacity.

Funders are still internally undecided about whether technology is part of direct or indirect services. By and large it is considered indirect. When it comes to staff in itinerant programs, funders appear to understand that smartphones and digital messaging are important worker tools. According to a few interviewees, there is an awareness of the mobile nature of their program and that it's clear smartphones and digital messaging have improved service delivery. However, among service providers there is also a concern that this is a one time resource allocation, that it is not part of day to day service delivery.

The sector is clear that the use of digital messaging has increased both service effectiveness and efficiency as well as provided greater access to services for newcomers. Digital messaging is becoming integrated as a direct service tool that complements other tools already in use and will only expand as an important client service tool. The evidence is supported by interviews/focus groups and the literature about technology use in the immigrant and refugee-serving sector as well as other human service sectors.

Service providers are interested in an open discussion with funders around what they would view as acceptable forms of activity by agencies they fund and where they think there are some boundaries. This is a common theme in literature that has looked at general themes of technology use and adoption in the Canadian immigrant and refugee-serving sector.

The literature shows that use of technology in the immigrant and refugee-serving sector is not new. Nor are innovative uses of technology to serve clients new. The literature coming out of the sector indicates that agencies along with their main funder should collaborate on how this innovation can be harnessed consistently across the country:

"The immigrant and refugee-serving sector and CIC should initiate a joint project whose goal would be to establish technical parameters to guide settlement agencies and to promote coherence in ICT development and use. The goal would be to ensure that data from different agencies and locales could be easily integrated and aggregated; also, that ICT-enabled services could be freely exchanged" (Burstein & Qayyum 2014).

Internally, funders are still struggling with their own digital literacy and how to evaluate the value of technology in service delivery: “It doesn't look like traditional service delivery. This is not a front-line worker meeting with somebody who shows up in a physical office and says I have a need, and you have to do a needs assessment for me and we'll go from there. People are confused about the idea of front-line workers talking to clients on a chat app. Limitations start with internal awareness of what technology can look like and what it could do. SPOs have to do this 'at the side of their desk.'”

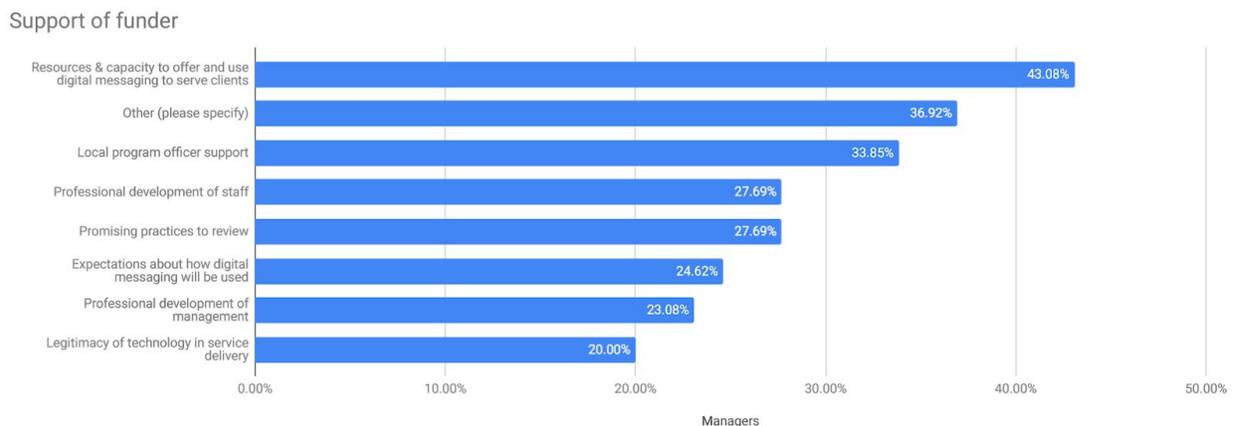
Part of the struggle centres around funding requests for non-typical resources, such as smartphones/hardware as well as technology development and maintenance. Funders want assurances that if programmers are paid larger salaries than sector workers to design a platform or app and it takes additional human resources to maintain the technology, content and maintenance that the solution created will reach far more clients far more efficiently, in terms of cost of delivery and the time and effort for each individual client.

Recent funding of technology companies in the settlement space may contribute to changing internal funder understandings of technology human resource needs (both development and maintenance), however there remains an internal knowledge gap.

All interviewees and focus group participants recognize that it is hard for organizations, but especially funders to move quickly to shift and adapt. Services are not as able to respond nimbly as new trends arise. They have to determine what they need, get programming, submit proposal, approvals, hire staff There is a big ramping up period. New services have to fit into existing programming structure, but also allow for quicker implementation.

In our survey, we asked managers (N=65) where they think they have funder support when it comes to digital messaging use.

Chart #22: funder support to use digital messaging



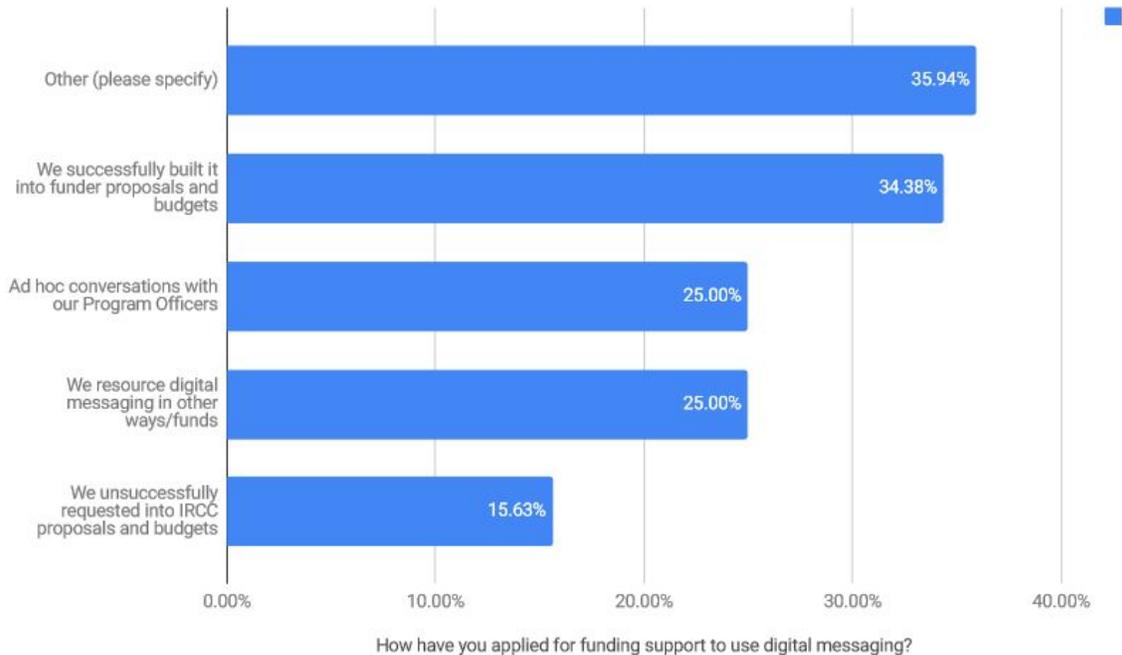
Source: DMSI survey database

Other responses included:

- we need more dialogue about all of this
- We have not had any discussion around any of these matters.
- The funder seems interested in pilots and exploration but cost is always an issue and I don't believe the funder adequately supports the cost of maintaining technology, including the agency's IT infrastructure.
- No it is not clear as to expectations around use of digital
- We currently have no support despite bringing the issue up multiple times. The quick answer we receive from IRCC is we will have to wait until the end of the fiscal year to see if there is any slippage. We went through this last fiscal year to be told there would be surplus funds only to be told a week later there were no funds available.
- All are needed, not sure if we have their support.
- Support for this has to come from core funding and that is the issue... funding doesn't cover all of the cost and many don't or can't cover core funding
- There seems to be a genuine willingness of the funder to engage in a meaningful dialogue/exercise for developing this area of practice - this is a huge ideological shift from "you can't serve everyone" to we have vulnerable people in vulnerable communities who could/should be receiving services regardless of where they live." I am truly excited by this development!
- We don't have a funder that is on board this. We never applied for funding for these resources. These are the last thing on our mind when applying for grants. We are applying for grants to cover operating budget and programs mostly.

We followed up with a question, asking managers (N=64) if their agency has applied for funding support to use digital messaging to serve clients.

Chart #23: applied for funding to use digital messaging



Source: DMSI survey database

Other responses included:

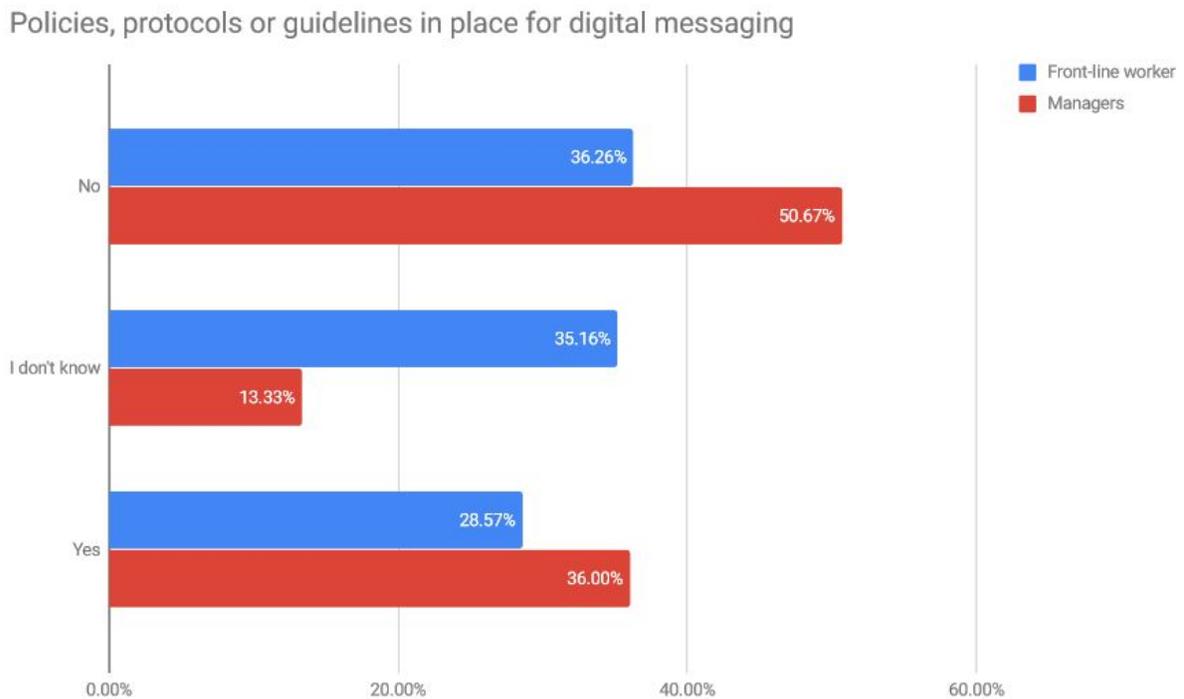
- Our only inter-play with IRCC staff was when a complaint from a rival agency complained about our staff's use of whatsapp. It was painted as a negative practice and we disagreed that whatsapp was a great way to pass on good information rather than uninformed speculation on services and settlement outcomes
- Will be proposing funding for the next budget negotiation. Currently using funds from our social Enterprise.
- we haven't applied for funding specifically for that
- We were able to obtain some start up funds - non IRCC funding
- We asked funder in other program directly, not IRCC
- haven't applied for any funding to support this, there are other needs that are greater, and being that the initiative is community based, community members are happy to continue to communicate in ways that they are already communicating with each other

Policies, protocols, guidelines

Digital messaging is being used and agencies see benefits. However, when asked “Does your organization have policies, protocols, or guidelines in place for you to specifically use digital messaging to serve your clients?” very few do. 28.57% of front-line workerse (N=91) said yes. 36% of managers (N=75) said yes. This is consistent across all interviews/focus groups, in the literature and our survey.

Equally concerning is that 35.16% of front-line workers and 13.33% of managers responded that they didn’t know if their agency have related policies, protocols, or guidelines in place.

Chart #24: policies, protocols, or guidelines in place for digital messaging



Source: DMSI survey database

Most survey respondents would like to see more policies, protocols, guidelines and funder support in place, in particular to address security, privacy and confidentiality when using digital messaging to serve clients. The literature also indicates that human service policies and protocols on the topic of digital services are in their infancy. Those that exist are not enforced consistently. However, there are also models that can be reviewed and replicated in the sector.

All interviewees and focus group participants mentioned challenges around boundaries with clients as a result of using digital messaging. The biggest staff concerns are boundaries, client expectations about staff availability and response turnaround times, and protecting their own privacy.

Organizations tend to have policies around technology use, ethics, boundaries and practices around client interactions outside of work. In many cases policies extend to online work. Thinking of it as simply another service channel, all ethics, boundaries and protocols apply. Agencies are looking at how they're using digital messaging more closely to see if they need more specific policies or additional protocols, guidelines and training. However, some managers feel their basic policies are not as comprehensive as they should be to address online/digital services. Managers also don't feel they have the skills or resources to bring in a third party to review their policies. There are also concerns about use of personal smartphones and accounts by settlement workers.

Evaluation and measurement are also concerns: "There is great potential, but I'm not sure how to implement and train staff and develop guidelines and protocols suitable to making working with clients more effective. Is our service delivery enhanced by doing this? It's happening. Seems to be effective. But there's no evaluation or measurement. We haven't developed enough understanding around the use of technology and everything is moving so quickly and changing all the time, you feel out of control."

While there is little literature focused on legal and ethical frameworks for technology use to serve clients in the immigrant and refugee-serving sector, there is much in other regulated, standardized service sectors, such as Social Work and International Development. We reviewed literature from 2012 onwards focusing on what these sectors have established and developed around protocols, guidelines, frameworks and ethical guides for use of technology by front-line, supervisory and agency leadership. This research is very much focused on the agency side of the technology service equation and leaves the immigrant and refugee-serving sector with a number of models, frameworks, practical how-to guides and obvious next steps to integrate technology ethically, effectively, efficiently in client service delivery. The Social Work sector, in particular, has also outlined the professional development and training needs and approaches needed by educators to ensure that human service workers are incorporating technology into their work with clients ethically and safely, for both clients and workers involved.

It is from these approaches that the Canadian immigrant and refugee-serving sector can borrow, replicate and introduce. At the same time, Ontario and federal government work on Digital Service Standards offer opportunities for learning as well. We also looked at best practice principles and how-to documents for technology adoption among human service non-profits and charities. Creating digital information products and services for newcomers, especially vulnerable newcomers (not only refugees) requires a similar rigour as creating in-person services. Research suggests a fairly common set of practices and approaches any digital messaging or technology for service delivery project should follow. The reports cited should be reviewed in depth as starting points for the immigrant and refugee-serving sector's digital messaging strategy.

Much of the learning and models from other sectors can be replicated by the immigrant and refugee-serving sector quite easily and effectively.

Importantly, the literature agrees that **not** using technology to serve clients is no longer an option: “Denying services to people in need simply because social workers are not comfortable with reputable digital and electronic technology is not consistent with social workers’ ethical obligation to meet the needs of vulnerable people” (Reamer 2013).

CONCLUSIONS

This environmental scan provides a snapshot of the the current use of digital messaging among immigrant and refugee-serving organizations. It is clear that digital technology, including but also beyond digital messaging, is being used by agencies in direct client service delivery. It has brought increased client access to services and information, created service efficiencies and is an effective method of service delivery.

Technology use to deliver settlement services will only increase and grow in importance and possibility. These success of current digital messaging use should be built upon by the sector and its funders, recognizing that much capacity development still needs to be done to ensure adequate, safe, client-centric and effective use of technology is consistently applied across the country.

The immigrant and refugee-serving sector in Canada is at a technology tipping point, highlighted by the current and emerging use of digital messaging to serve clients. Immigration, Refugees and Citizenship Canada (IRCC) is poised to take a leading role to work with the sector to develop policy, protocols and guidelines for the use of technology in client services.

Technology will only play a deeper role in future program delivery and direct service provision. Like other sectors, such as social work, the immigrant and refugee-serving sector and its funders must engage in collaborative, consistent and comprehensive research, analysis and evaluation of the use of technology to serve clients: “Service provider agencies generally lack the fiscal room to conduct detailed analyses of their actions, much less to compare those actions to those of other agencies across the country. The result is that excellent local initiatives suffer from ‘locked-in syndrome,’ and the sector as a whole lacks an effective strategy for sharing information efficiently and for learning from each other... there exists a shared interest by governments and by settlement organizations in strengthening the sector through investments in its capacity to analyze and innovate.” (Burstein & Esses, 2012)

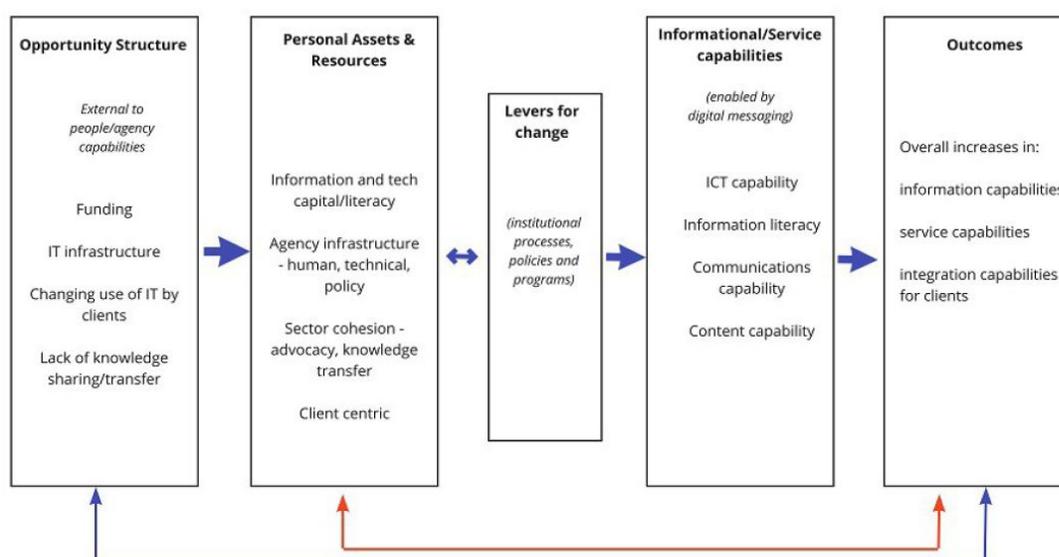
There is interest from all parties in the sector to engage in a collaborative knowledge sharing process. Much in previous research, such as the report quoted above, provides a framework to create this process. There is no need to reinvent an approach, but to look at what has already been recommended for inspiration.

All parties also agree that capacity-building, professional development and processes are necessary to move immigrant and refugee-serving agencies from a currently deficient opportunity structure to the desired operational, funding and client outcomes.

Emerging research has provided an understanding of newcomer digital competencies and emerging needs and challenges within Sen's Capability Approach. This approach argues it is not access to technology that matters; it is how people use it to enhance their capabilities and achieve valuable lives. Used initially as a tool to evaluate use of technology in international development, it has been recently used to evaluate newcomer use of smartphone technologies in migration and settlement/integration to evaluate whether smartphones can expand refugees' capabilities, choices and freedoms (Vivienne St George 2017, Abujarour et al 2017a, Diaz Andrade & Doolin 2016).

Building on previous research that is centred in a "Capability Approach" to technology adoption and use, the author has created a proposed a Digital Messaging Evaluation Framework, outlined in detail in Appendix 4.

Digital messaging evaluation framework



This framework builds on the information, experiences and expressed needs of sector actors in areas such as:

- Development of guidelines, protocols and policies regarding ethics, confidentiality, privacy & security, and evaluation of technology use in agencies
- Sector technology education and training for front-line workers as well as managers and agency leadership
- Knowledge sharing and mobilization
- Access to adequate technology at the front-line worker level

- Consistent funder capacity around technology use by funded agencies
- Systematic evaluation and research on the use of direct client service technology in immigrant and refugee-serving agencies

Creating information products and services for newcomers, especially vulnerable newcomers (not only refugees) requires a similar rigour as creating in-person services. Research suggests a fairly common set of practices and approaches any digital messaging or technology for service delivery project should follow.

The reports cited in the literature review should be reviewed in depth as starting points to inform this framework for the immigrant and refugee-serving sector's digital messaging and broader technology in client service strategy. It is recommended that these practical reports with case studies, actionable recommendations and work plans be deeply reviewed with an eye for practical models, frameworks, guidelines and protocols that can be extracted for Canadian settlement agencies to implement, in conjunction with IRCC and other funders.

APPENDICES

Appendices are provided in separate, individual documents.

- [Appendix 1 - DMSI Literature Review](#)
- [Appendix 2 - DMSI Survey Data](#)
- [Appendix 3 - DMSI Interview and Focus Groups Theme Summary](#)
- [Appendix 4 - Digital Messaging Evaluation Framework](#)
- [Appendix 5 - Inventory of interesting digital messaging projects](#)
- [Appendix 6 - DMSI Survey questionnaire](#)