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EXECUTIVE SUMMARY

TOWARDS AN INCLUSIVE COVID-19 CRISIS COMMUNICATION POLICY IN BELGIUM

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For more information on the ICC project, visit
https://www.uantwerpen.be/en/projects/towards-an-inclusive-crisis-communication-policy/

PREFACE

This executive summary documents the research conducted for the interdisciplinary project entitled "Towards an inclusive COVID-19 crisis communication policy in Belgium: the development and validation of strategies for multilingual and media accessible crisis communication", abbreviated as the ICC project.

The research was carried out between February 2021 and March 2022 by a consortium led by UAntwerpen which includes KULeuven, UCLouvain, Thomas More, Atlas Inburgering & Integratie and National Crisis Center (NCCN). The list of authors and their contribution to the project is included at the end of this summary (p. 41). In addition to the consortium, an advisory board was created to support the research activities throughout the project's lifetime. The stakeholders in the advisory board include civil society organisations, user representative organisations, governmental organisations and experts-by-experience. They were selected on the basis of their operational area, their line of work (i.e. the organisation's mission and objectives) and their target group. The advisory board was involved in a participatory approach to contribute valuable strategic knowledge from professional experience in the work field. The advisory board was involved in all stages of the project in different ways: providing documentation and best practice examples, filling in surveys, providing feedback on research activities, joining roundtable discussions, and supporting the recruitment of focus group discussions (SEE ALSO SECTION 3.3 IN PART 1 OF THIS SUMMARY). An overview of all the stakeholders in the advisory board can be consulted in the full report (PART 1, Chapter 2 of the full report)

The goal of the project was to develop a strategy for more accessible and inclusive COVID-19 crisis communication that takes into account the diversity of the Belgian population. Specifically, the project aimed to address current problems relating to the (in)accessibility of the form and channel of COVID-19 government communication and the flow of crisis information to hard-to-reach groups or groups with specific communicative needs, for example, foreign-language speakers, people with low socioeconomic status or low literacy, and people with sensory impairment. In doing so, the project activities included (1) the collection of evidence from academic sources, the practice of communication product development as well as societal stakeholders and end-users, and (2) the experimental development of new COVID-19 communication products tailored to the specific needs of specific target groups in Belgium. The final result of the project consists of a set of context-specific recommendations and a validated evidence-based guideline for more inclusive crisis communication in a pandemic context, to support stakeholders and governmental organisations in the development of strategies for accessible crisis communication in a pandemic context.

We would like to thank our advisory board members, who provided us with invaluable input throughout the research activities. We appreciate the time they took to complete our questionnaires and to share relevant reports and documents with us. Particular appreciation goes out to the advisory board members who took part in the roundtable discussions and shared their knowledge and expertise with us so freely. We are also very grateful to the participants of the focus group discussions who accepted our invitation to share their experiences and views with us. They have considerably enriched our understanding of their complex realities, and we feel honoured by the trust they put in us. We hope to be able to convey their voices accurately through this report. Lastly, we wish to thank the members in the expert panel for their active participation in the guideline development process, which was integral to the project outcomes.

PART 1

INTRODUCTION

1 CONTEXT AND RESEARCH OBJECTIVES

Access to information is not only a right (UNCRPD, 2000; EU Accessibility ACT), but also a key factor in combatting the outbreak of a crisis like the COVID-19 pandemic (WHO, 2020). Yet various signals since the start of the pandemic in Belgium indicated that the governmental COVID-19 crisis communication from 2020 onwards did not reach and was not accessible to all target groups equally. Persons and minority groups who experience **sensory, linguistic, cultural or textual barriers**, in particular, were at risk of encountering difficulties in accessing government COVID-19 information. For this reason, a **more inclusive and accessible crisis communication approach**, tailored to the needs of citizens of all abilities, is required in the fight against COVID-19 in Belgium.

Crisis communication is understood in this project as "the collection, processing, and dissemination of information required to address a crisis situation" (Coombs, 2010, p. 20). Specifically, the project focuses on crisis communication by the federal government on the topic of COVID-19 during the pandemic outbreak in Belgium. **Inclusive communication** is understood in this project as a communicative approach which allows as many people as possible to access the information captured in the mode of communication. The project's aim to contribute to a more inclusive COVID-19 government communication strategy thus pertains to the removal and overcoming of barriers which can prevent individuals' access to the information.

According to the World Health Organisation, a successful inclusive communication strategy can be achieved by prioritising the following **four communicative aspects** (Olofsson, 2007; WHO, 2020):

1. accessible ***forms*** of communication (including (re)translations and media access services[1] such as subtitling, sign language, Easy Language, and symbols),
2. accessible ***channels*** of communication (online or offline channels),
3. an efficient ***spread*** of the communication, and
4. an effective ***outreach*** to the target population.

The federal COVID-19 crisis communication strategy during the initial phases of the pandemic outbreak in Belgium did not satisfactorily address these aspects. In order to support the national and local governments at various levels to improve their COVID-19 communication strategy, policy recommendations and validated guidelines regarding inclusive and accessible crisis communication are crucial. To date, however, such research-based recommendations are scarce, especially for the specific context of Belgium.

The ICC project's objectives aim to contribute to filling this gap and to provide the government with knowledge to produce communication about risks and crises in an accessible and inclusive manner, both for the current COVID-19 pandemic and other future crises. In particular, the project's objective is (1) to develop an evidence-based guideline and context-specific policy recommendations, which offer advice on how to best communicate COVID-19-related information to people of all abilities, especially those who have proven to be hard to reach or are more vulnerable because they experience persisting sensory, linguistic, cultural, or textual barriers to access information; and (2) to put some of these recommendations into practice by developing accessible COVID-19 crisis communication products.

[1] Access services here refers to the provision of measures and adaptations to make communicative products more accessible for people with an impairment. Such services usually include, but are not limited to, subtitling (for people who are deaf and hard of hearing), audio description, sign language translation and Easy Language.

2 DELINEATION OF THE PROJECT

In the following sections, the **two prioritised foci of the project** are defined and delineated within the wider context of a pandemic outbreak: (1) the **target groups** in Belgian society which are prone to experience communicative barriers to COVID-19 crisis communication and (2) three dimensions of COVID-19 crisis communication: the **form** of government communication materials, the **channel** via which these materials are distributed and the **outreach** of government communication efforts.

2.1 COMMUNICATIVE BARRIERS AND PRIORITISED TARGET GROUPS

The main aim of the project is to define recommendations and strategies for a more inclusive crisis communication. To achieve this inclusive approach, attention is paid to specific target groups that are known to be harder to reach or that are possibly vulnerable, because they can experience persisting barriers to access information. In the project, we topicalise the following barriers explicitly:

- **Sensory barriers,** which includes barriers to access the message content due to a permanent or temporary visual or auditory impairment, such as blindness, hearing loss or deafness. For example, a hard of hearing person cannot access the press conference videos.
- **Linguistic barriers,** which refers to barriers to access the message content due to language-related dimensions of the communication. This includes literacy and proficiency. For example, a person who speaks a foreign language and does not (yet) master one of the official languages of Belgium fluently cannot understand communication which is in Dutch, French or German only. Or, for example, a person with low literacy skills cannot fully access written communication materials.
- **Cultural barriers,** which encompass barriers to access the message content due to a different linguistic or cultural background. While this is a broad category, in the context of this project, we focus specifically on non-verbal textual aspects such as the use of colours, images, symbols, and the design of a text etc. For example, certain languages use writing systems which have right-to-left, top-to-bottom script.
- **Textual barriers,** which are defined as barriers to access the message content due to the complexity and/or clarity of the text. Text complexity encompasses both linguistic aspects (such as difficult terminology and long and complex sentences) but also non-linguistic aspects. Problematic examples of the latter that have been reported include the use of abstract concepts, the density of the information, the lack of clear priorities in the text, the separation of main points and details, the lack of (terminological) consistency, textual coherence and clarity, and an ill-structured layout. Textual clarity and terminological consistency are also important for (re)translation for different target groups. If the source text is not clear and easy to understand, this also negatively affects the (re)translation.

Based on these specific barriers and the feasibility limits of the project, the needs of the following **target groups** of governmental COVID-19 communication were prioritised in the project:

- Foreign-language speakers
- People with low literacy skills
- People with sensory impairment

In defining these target groups, the project also adopts an intersectionality perspective and focuses specifically on individuals part of these target groups with **socioeconomically disadvantaged backgrounds** and **low socioeconomic status**, as (social) vulnerability in contexts of crisis typically emerges intersectionally (Kuran et al., 2020).

2.2 PRIORITISED COMMUNICATIVE DIMENSIONS OF CRISIS COMMUNICATION

The specific focus of the ICC project lies on the role of the form, channel and outreach of the message in the wider context of the crisis communication process[2]:

Form refers to the different modalities the message content takes, i.e. the textual form of the message in both its verbal and visual form. Examples of different forms include a written text, a video, an audio file, audio description[3], audio introduction[4], infographics, and subtitles.

The form of the message as an umbrella term includes not only the original text, but also its (re)translations: it includes the wide array of services that translate a source text into a target text for specific audiences. This can include traditional interlingual translation from one language and culture into another but can also include forms of intralingual translation within the same language, such as retranslation, and forms of intersemiotic translation (from one modality, e.g., written words, to another, e.g., spoken language or visuals). Examples of retranslations and intersemiotic translations include Easy Language versions, audio versions, subtitling, sign language interpreting, and visualisations through symbols or video.

Channel refers to the medium used to distribute the message and its different forms and includes both online, digital, print and other non-digital channels. Examples of different channels are printed folders, posters, television, radio, fixed phones, mobile phones, text messages (SMS), as well as internet-based resources such as email, video conferencing, (government) websites, social media and instant messaging apps (WhatsApp, Facebook, Twitter).

Outreach refers to the ways in which the message's form and channel are appropriate for the communicative needs of the target audience and how the message in its specific form is distributed, possibly through intermediaries, to the target audience. The assumption here is that appropriate and varied forms and adequate channels are a precondition to achieve wider access to the information for the intended target groups, which indirectly supports a larger outreach and exposure in the long term.

[2] It is important to emphasize at this point, that for project feasibility in a crisis context, the focus of the ICC project lies on the form, channel and outreach of COVID-19 governmental communication and does not include the content of the message (i.e. which information is included and how it is framed) and the impact of COVID-19 communication materials on behaviour change. These two elements lie beyond of the scope of the ICC project, as other COVID-19 research projects in the Belgian context (VAXCOM and TRANSVAXX) examine these issues.

[3] Audio description (also known as video description or visual description) is an additional narrative voice that provides information about relevant visual elements in a media work for people with visual impairment.

[4] Audio introductions are brief audio messages at the beginning of an audiovisual text that provide necessary information for people with visual impairment to be able to follow the video. Audio introductions can be stand-alone or can be combined with audio description during the video.

3 METHODOLOGICAL DESIGN AND PROJECT OUTLINE

As the ICC project's objectives pertain to the gathering of knowledge and the formulation of recommendations and guidelines on the most optimal form and channel(s) for more inclusive and accessible COVID-19 governmental crisis communication, a **mixed methodological design** was used in which qualitative as well as quantitative evidence was gathered from different core sources and subsequently compared and synthesised. The project's over-arching methodological approach is visualised in Figure 1.

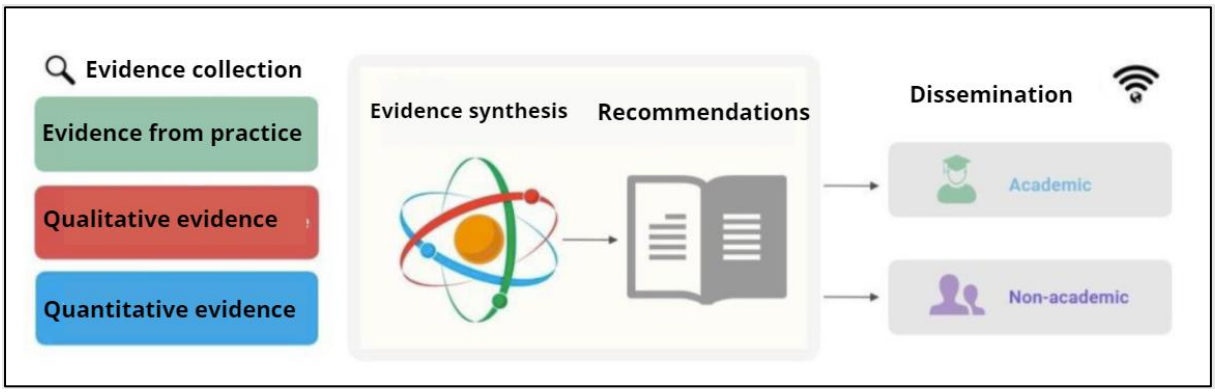

Figure 1 Methodological design of the ICC project.

3.1 QUANTITATIVE EVIDENCE

Quantitative evidence from effectiveness studies was gathered through a **rapid systematic literature review** of international studies addressing inclusive and accessible crisis communication in a pandemic context. Subsequently, these studies were translated into a context-specific guideline in a participatory process with an expert panel (following the methodology of previous guideline development procedures in the Belgian context: Bekkering et al., 2014; De Buck, Vandekerkhove & Hannes, 2018). This guideline will be submitted to the Belgian Centre for Evidence-based medicine (CEBAM). CEBAM is an accredited agency for external validation of practice and policy guidelines and facilitates the process of assessing methodological rigour of the evidence presented and transparency of the guideline development process (Brouwers, et al. 2010). The results of these research activities carried out by KULeuven are reported in PART 2 of the full report.

3.2 EVIDENCE FROM PRACTICE

Evidence from practice was collected through a process of **collaborative product development** in which inclusive communication products regarding COVID-19 in Belgium were experimentally developed. 'Practice' in this sense should thus be understood in a narrow sense as pertaining to the activities of communication product development (as undertaken by NCCN during the COVID-19 outbreak in Belgium). The aim of this set of project activities was two-fold: (1) to evaluate the provision of (re)translations and access services in the supply of COVID-19 communication provided by Atlas Integratie & Inburgering Antwerpen, on behalf of the National Crisis Center (NCCN) and (2) to develop more inclusive and accessible COVID-19 crisis communication products

in line with the (intermediary) project insights which could be put to immediate use in the fight against COVID-19 in Belgium.

This collaborative product development included the following concrete **steps**:

a) describing the current communication workflow and strategy regarding COVID-19 of the federal government;
b) providing an overview and initial analysis of the (re)translations and access services provided by the federal government;
c) developing and improving communication products within the workflow of Atlas/NCCN based on progressive insights from other project activities to support ongoing crisis communication efforts, and
d) involving advisory board members, users and experts in the development and improvement of products.

The products analysed and developed in this phase, also served as input for the roundtable discussion and focus group discussions that were organised at different stages of the project (SEE SECTION 3.3 IN THIS CHAPTER). The lessons learned from this product development phase carried out by UAntwerpen in collaboration with KULeuven, NCCN and Atlas are reported in PART 3 of the full report.

3.3 QUALITATIVE EVIDENCE: INTERMEDIARIES AND END-USERS

The collection of qualitative evidence was organised in **three stages**, planned via an **iterative process** aligned with the product development phase (SEE 3.2 IN THIS CHAPTER). The results of these research activities are reported in PART 4 and PART 5 of the full report.

In the first stage, evidence was gathered by bringing together the **already existing information and recommendations** on the accessibility of governmental COVID-19 communication in Belgium by societal intermediaries[5] in the project's advisory board, based on their expertise and professional experiences during the first months of the COVID-19 outbreak in Belgium. This included internal evaluations, best practice examples, policy recommendations and other reports. This evidence was gathered through consulting the advisory board by means of a survey, dedicated to the evaluation of the accessibility of existing governmental COVID-19 crisis communication to the target groups of the project, and by inventorying, contrasting and synthesising the already existing information that the advisory board members documented. The results of these research activities carried out by UAntwerpen for Flanders and by UCLouvain for Brussels and Wallonia are reported in PART 4, Chapters 1 and 2 of the full report, respectively.

In the second stage, the project focused on the evaluation of the current communication provided by Atlas Integratie & Inburgering, on behalf of the NCCN, during **roundtable discussions** with intermediaries, representatives and experts-by-experience recruited from the advisory board. During the roundtable discussions, participants evaluated and discussed the form and channel of existing and newly developed communication products and formulated recommendations based on their professional experiences. The results of these research activities carried out by Thomas

[5] In this report, the term 'intermediaries' is used in a generic sense. It includes user-representative organisations, experts-by-experience, civil society organisations, municipalities, governmental organisations, non-profit organisations, foundations, federations, local authorities, etc.

More for Flanders and UCLouvain for Brussels and Wallonia are reported in PART 4, Chapters 3 and 4 of the full report, respectively.

In the third stage of the project, **focus group discussions** with end-users of the different target groups were conducted. In these focus group discussions, a selection of communication products were discussed and evaluated with the participants, who were also encouraged to comment on the form and channels of governmental COVID-19 communication in Belgium. The results of these research activities carried out by Thomas More for Flanders and UCLouvain for Brussels and Wallonia are reported in PART 5, Chapters 1, 2 and 3 of the full report, respectively.

3.4 EVIDENCE SYNTHESIS

The final phase of the project was dedicated to the **synthesis of all quantitative and qualitative evidence** collected. The comparative synthesis of all the gathered information and evidence in each of the project's activities was carried out systematically by the UAntwerpen team, using a document analytical and focused thematic content analytical approach (Anderson, 2007; Bowen, 2009; Erlingsson & Brysiewicz, 2017). The outcomes of this synthesis are presented in PART 6 of the full report, specifically in the form of policy recommendations and guidelines that are aimed to support governments and stakeholders in the development of a more inclusive COVID-19 crisis communication strategy in Belgium. The evidence synthesis is also fully incorporated in the second part of this executive summary (p.12 onwards).

PART 2

SYNTHESIS OF THE THREE STREAMS OF GATHERED EVIDENCE

1 INTRODUCTION

In this part of this executive summary, the evidence and recommendations gathered from all research activities of the ICC project are summarised. In line with the ICC project's over-arching objective to provide the government with knowledge to produce communication about ongoing crises in an accessible and inclusive manner, both for the current COVID-19 pandemic and other future risks and crises, this synthesis contains information on the barriers and facilitators of inclusive COVID-19 crisis communication as well as recommendations which offer advice on how to best communicate COVID-19-related information to people of all abilities in Belgian society, especially those who have proven to be hard to reach or are more vulnerable because they experience persisting sensory, linguistic, cultural, or textual barriers to access information. In doing so, the synthesis focuses on the form, the channel and the outreach of governmental COVID-19 crisis communication and builds on the gathered evidence from all the research activities in the project. Although we believe that an inclusive communication strategy can only be inclusive when it is accessible to the entire population, the project's original focus was to investigate how to make crisis communication accessible and effective for the following target groups due to time constraints:

- Foreign-language speakers
- People with low literacy skills
- People with sensory impairment (hearing or visual impairment)

In defining these target groups, the project adopted an intersectionality perspective and focused specifically on individuals part of these target groups with socioeconomically disadvantaged backgrounds and low socioeconomic status, as (social) vulnerability in contexts of crisis typically emerges intersectionally (Kuran et al., 2020).

The features we discuss below are compartmentalised in order to create a structured overview of all the elements which play a part in the development and sustenance of an accessible COVID-19 crisis communication strategy. However, many of these features are interconnected with one another. In order to retain an overview of these links, we will frequently reference other sections in this synthesis (IN SMALL CAPS). Throughout the synthesis, we will also explicitly indicated from which research activities and which part of the full report the recommendations, information and evidence stem (by referencing the specific PART(s) and Chapter(s), of the full report). The reader is invited to consult those parts and chapters of the full report for more information and details.

2 FORM

2.1 TYPES OF FORMS

There are many types of forms which have been used by the federal government to communicate about the risks and crisis measures concerning COVID-19 since the start, as well as during the outbreak of the COVID-19 pandemic in Belgium. The project results show that some types of forms are preferred over others with regard to their general accessibility and reach.

Video messages were reported to be one of the communication products that are most commonly liked by end-users as well as representatives (PART 3 and PART 5 of the full report). Videos are

arguably useful for communicating crisis information to all target groups simultaneously, as they make it possible to present the information in a variety of modes via one singly communication product: videos can contain written text, spoken text and images simultaneously. For people with hearing impairment, videos are beneficial communication products because they offer the possibility to communicate information through images, subtitles and sign language (PART 3 and PART 4 - Chapter 3, of the full report). For people with visual impairment audio description, audio introductions or voice-overs can be added. For people with low literacy skills and foreign-language speakers, the combination of images and text (both written and spoken) can help to draw attention to the message, activating multiple senses at once (PART 3; PART 4 - Chapters 3 & 4 and PART 5 - Chapter 2 & 3, of the full report), and increasing message comprehension (PART 4 - Chapter 1, of the full report). In addition, videos can be shared through a variety of channels, for example on social media networks, via messaging apps, on TV broadcasts, in public spaces, etc. (SEE 3.2 TYPES OF CHANNELS: DIGITAL VS. NON-DIGITAL). These factors make videos ideal forms to reach a large and diverse audience (PART 4 - Chapter 3; PART 5 - Chapter 2, of the full report). In the guideline (PART 2, of the full report), video messages are also suggested as an effective communication product to distribute crisis information to the target groups. In general, the guideline suggests using short and simple (animated) videos, in which non-narrative (i.e. didactic) and narrative elements, as well as facts and concept explanations are combined (PART 2, of the full report).

Audio messages were generally found to be a bit less popular or effective than video messages. This most likely has to do with the fact that most audio messages contain no visual support and spoken text can sometimes be difficult to follow for end-users due to the complexity, length and speed of the message (PART 4 - Chapters 1-4 and PART 5 - Chapter 1, of the full report). In the focus group discussions, the audio message was rated as the least favourite product out of the three products presented to the focus group participants (PART 5 – Chapters 1 & 2, of the full report). However, audio messages do have an added value for foreign-language speakers, people with low literacy skills and people with visual impairment, since they enable end-users to listen to the information instead of having to read it, which can often be experienced as a barrier for these target groups (PART 4 – Chapter 1 & 3, of the full report). In general, it is recommended to support the audio with (an) image(s) in order to retain the listener's attention and to help them understand the information better (PART 3 and PART 5 – Chapters 1 & 2, of the full report).

Aside from audiovisual media, **posters, flyers, brochures and infographics** can also be used to communicate COVID-19 crisis information. An important asset of these specific communication products is that they can be distributed both online and offline (PART 4 – Chapters 1 & 2, of the full report), which allows for a wider possible reach (SEE 3.1 DIVERSIFICATION OF CHANNELS). Especially as communication is moving more and more towards digital platforms, people with low or no digital skills benefit from information that is shared in public spaces or that can be delivered in person and/or taken home on paper (SEE 3.2 TYPES OF CHANNELS: DIGITAL VS. NON-DIGITAL). During the focus group discussions, the brochure was chosen as second favourite out of three communication products by the participants (PART 5 – Chapters 1 & 2, of the full report). In the guideline, the use of infographics, in particular, was suggested as an effective and accessible crisis communication practice (PART 2, of the full report). In general, the accessibility of these types of products and forms is only guaranteed when attention is paid to the accessibility of the very elements these message forms are composed of (PART 2 and PART 3, of the full report).

This general observation that the whole is only as accessible as its (combined) parts allow it to be, also applies to all other types of forms that can be selected for a COVID-19 communication product:

the effectiveness of a specific form of a product in removing barriers and providing access to crucial crisis information largely depends on the specific characteristics of the form (such as the visuals, language use, subtitles, etc.) and the ways in which they are combined. In the remaining sections of this synthesis, we discuss the recommendations regarding the most important characteristics of inclusive and accessible COVID-19 crisis communication as uncovered in the ICC project's research activities.

2.2 DIVERSIFICATION OF MESSAGE FORMS

In order to reach people of all abilities in Belgian society and to ensure they all have access to crisis communication equally, the provision of a mix of communication products in various forms is crucial and can optimise the spread of information (PART 4 – Chapters 1-3 and PART 5 – Chapter 3, of the full report). Distributing crisis information through a variety of different message forms helps to make information more accessible because there is a large diversity of people with specific communication needs and preferences, not only in the population in general but also within the target groups in question. In order to meet these needs, it is necessary to make additional and tailormade communication efforts for certain groups (PART 3; PART 4 – Chapters 1 & 3, of the full report). Incorporating accessibility as a point of attention as early on in the crisis communication development process as possible is an important part of tailormade communication. However, there are some disadvantages to this strategy as well. Providing a mix of different message forms automatically implies that the circulation of a higher volume of communication material, which can make it challenging for some people to find their way to the information they need (SEE ALSO 5.3 STREAMLINING THE QUANTITY AND SCATTEREDNESS OF INFORMATION). Moreover, some target groups such as foreign-language speakers might feel targeted or stereotyped when they suspect that a communication product is adapted to their identity, which in turn can generate a counterproductive effect (PART 2 and PART 3 – Chapter 4, of the full report). For example, when a photo depicts a person of colour, people might sometimes falsely assume that the content of the message is connected to the personal characteristics of the depicted individual; such stigmatization should be avoided (PART 4 – Chapters 3 & 4, of the full report) (SEE ALSO 2.3.5 VISUAL FEATURES). In the guideline, tailoring crisis messages to the identity or appearance of the recipient in terms of the content or representation of ethnicity or ability is therefore not recommended.

In order to minimise the negative effects mentioned above, the principles of Universal Design could be applied (SEE 6.1 DESIGN FOR ALL FROM THE START).

2.3 CHARACTERISTICS OF MESSAGE FORMS

2.3.1 EASY LANGUAGE

The use of Easy Language in COVID-19 crisis communication has come forth as one of the main and strongest recommendations throughout all the evidence gathered in the ICC project (PART 3; PART 4 – Chapters 1-4 and PART 5 – Chapter 2, of the full report). Often, the actual content of crisis information is highly complex in nature, and this has proven to be particularly the case in the outbreak of a health crisis such as the COVID-19 pandemic. Consequently, if both the content of the information and the language which is used to communicate or explain the information are complex to process and understand, a double barrier can emerge to access the information. Easy

Language is thus an important and necessary characteristic of accessible COVID-19 crisis communication.

Easy Language can be adopted in all types of message forms, whether this concerns a video message, an audio message, a poster or an infographic. Moreover, not only specific target groups such as people who have a low level of literacy or people whose mother tongue is different from one of Belgium's national languages (i.e. foreign-language speakers and people with hearing impairment) can benefit from the use of Easy Language. The population at large would arguably benefit as well from this accessibility measure as it makes the information more accessible and understandable (PART 4 – Chapters 1 & 2, of the full report).

Easy Language encompasses more than just vocabulary, word and sentence structure. Visual and multimodal design also play an important role in ensuring a message is easy to read and easy to process. Based on the qualitative evidence collected throughout the project (PART 2; PART 3; PART 4 – Chapters 1-2 & 4 and PART 5 – Chapter 1, of the full report), these are the cornerstones of providing texts[6] in Easy Language:

- use short sentences of maximum ten to thirteen words;
- use every day colloquial language and simple, basic words;
- avoid jargon, abstract words or English terms;
- avoid figurative language;
- structure the text in a distinct, consistent and logical manner;
- indicate what the communication is about by using clear titles and headings;
- deliver the core message (first);
- avoid long and elaborate texts;
- provide context by adding the date and sender to the text;
- avoid background information and abstract messages;
- use a clean, airy and simple layout;
- put important words in bold;
- avoid cursive, underlined or fully capitalised text;
- choose a font that is easily readable (e.g. sans-serif);
- opt for a sufficiently large font size (i.e. using letters of at least two centimetres and preferably three centimetres high when the reading distance is one metre) and wide line spacing;
- choose contrasting colours and ensure and an even background.

Yet, there are some disadvantages to Easy Language too. In some instances, nuancing the message is necessary, and adopting Easy Language leaves less room for nuance because it simplifies the information to a high degree (PART 3 and PART 4 – Chapter 3, of the full report). Some end-users from the target groups felt that there was not enough accessible in-depth information available to them when presented with a communication product designed in Easy Language (PART 4 – Chapter 3 and PART 5 – Chapter 1, of the full report). In some cases, it might be better to leave room for detailed, nuanced information or explanations rather than oversimplifying a complex message. This need for nuance in COVID-19 crisis communication also echoed the sentiments of some end-users and intermediaries who expressed the need for such nuanced information because this comes across as more "objective" or trustworthy and enables

[6] The term 'text' is used here to refer to all types of messages, thus not only in written form, but also in visual or auditive forms.

the receiver to make their own informed decisions without being steered into a certain direction (PART 2; PART 4 – Chapters 2-4 and PART 5 – Chapter 1, of the full report). (SEE ALSO 4.2 TRUST AND ACCEPTANCE)

2.3.2 TRANSLATIONS AND MULTILINGUAL INFORMATION

Translations are a necessary and effective form of communication to increase foreign-language speakers' access to government crisis communication. Throughout the project, it was often mentioned that there is a lack of accessible multilingual information (PART 4 – Chapters 1 & 2 and PART 5 – Chapter 3, of the full report).

In the roundtable discussions and focus group discussions on the topic of foreign-language speakers' communication needs, the value of and appreciation of multilingual crisis communication was highlighted by both the intermediaries and the end-users (PART 4 – Chapters 3 & 4 and PART 5 – Chapter 2, of the full report). Especially the possibility to receive the translated message in multiple modes, i.e. both spoken in video or audio messages, and written as subtitles or printed text, was very much appreciated (PART 5 – Chapters 1 & 2, of the full report).

Aside from enabling foreign-language speakers to read or listen to COVID-19 crisis information in their mother tongue, which facilitates and heightens their comprehension of the message, providing translations also arguably reflects the gravity of the crisis situation and the importance of communicating the correct information to foreign-language speakers (PART 4 – Chapter 1, of the full report). It can invoke a strong sense of inclusion and arguably reflects an image of the (local) government as being in touch with and taking the effort to inform all its subjects (PART 4 – Chapter 1, of the full report).

In spite of the importance of translations and multilingual information, important preconditions exist which need to be taken into account when producing and disseminating translated COVID-19 crisis information:

- adopt the principles of Easy Language in translations as well (PART 4 – Chapters 1-3);
- assure that the translation is correct, for example, through testing and in collaboration with native speakers (SEE 6.3 COLLABORATION, PARTICIPATION & TRAINING) (PART 3; PART 4 – Chapter 2 and PART 5 – Chapter 1, of the full report);
- ensure easy access to multilingual information (e.g. the pathway to foreign-language material on the federal website www.info-coronavirus.be was evaluated as too complex) (PART 3 and PART 4 – Chapters 2 & 3, of the full report) (SEE ALSO 2.3.9 WEB ACCESSIBILITY);
- present the foreign-language version together with the original text in the country's national language, possibly through a QR code or hyperlink to the translation (SEE ALSO 3.2.1.5 ONLINE INFORMATION VIA QR CODES, HYPERLINKS OR DOWNLOADS) (PART 4 – Chapter 1 and PART 5 – Chapters 1 & 2, of the full report).

2.3.3 SUBTITLES

For foreign-language speakers and people with hearing impairment, providing intra- and interlingual subtitles for video or audio messages is crucial for increasing their access to crisis information (PART 4 – Chapters 1-3). Not only do subtitles help to follow the message in real time and understand it better, they also offer the possibility to print the message in written text (PART 4 – Chapter 4 and PART 5 – Chapter 2, of the full report).

In order for subtitles to reach their desired effect, the following factors are important to consider:

- the pace of the video or audio should not move too fast (SEE ALSO 2.3.4 AUDIO FEATURES),
- the font size should be sufficiently large,
- the subtitles should not be blocked by other banners, logos or text, and
- the contrast with the background should be taken into account (PART 3; PART 4 – Chapters 1 & 2 and PART 5 – Chapter 3, of the full report).

In addition, it is important to ensure that there is no delay between the subtitles and the spoken text. Synchronised subtitles are necessary so that people who can still partially hear are able to listen to and read the video message simultaneously (PART 4 – Chapter 3, of the full report).

In the focus group discussions with foreign-language speakers, video as well as audio messages with subtitles were predominantly preferred over those without (PART 5 – Chapters 1 & 2, of the full report). However, in the focus group discussion with people with low literacy skills and people with hearing impairment, there were some discrepancies among the participants' preferences, as some found the subtitles to be distracting (PART 5 – Chapters 2 & 3, of the full report). Personalised subtitles could offer a solution for this discrepancy: end-users could then choose to enable subtitles or not, and ideally also adapt the subtitles to their preferences by choosing the font size and colour, and the colour of the background (PART 3; PART 4 – Chapter 1 and PART 5 – Chapter 3, of the full report).

2.3.4 AUDIO FEATURES

When producing audiovisual communication products, it is important to take into account certain audio features that influence the reception of the message. Firstly, the speaker or voice-over should be careful not to speak too fast and leave room for enough pauses between sentences, so that the listener can follow along and read the accompanying subtitles if desired (PART 3, of the full report). This is especially important for people who have a low level of literacy or people who are not (fully) proficient in the language in which the message is delivered. The speech rate or speaking pace of audiovisual messages is also an important consideration for people with hearing impairment, as it will influence the pace of the sign language interpreting (PART 5 – Chapter 3, of the full report). When discussing possible barriers to access information, the speed of audiovisual messages was mentioned repeatedly in the gathered qualitative evidence, and in relation to all target groups (PART 3; PART 4 – Chapters 1, 3 & 4 and PART 5 – Chapters 1 & 2, of the full report). In light of a lack of insights and research on the most optimal speech rate and playback speed, more research on this is necessary. Moreover, other factors that can hinder the intelligibility of the speaker, such as background music/noise or wearing a face mask, are also important to pay attention to when producing audiovisual material (PART 4 – Chapters 1 & 4, of the full report).

Secondly, the voice of the speaker itself also plays a role in the accessibility of the message. From the roundtable discussions and focus group discussions, it became clear that end-users of all target groups mostly preferred to listen to a natural human voice, instead of a synthetic voice (PART 4 – Chapters 3 & 4 and PART 5 – Chapter 1). A synthetic voice was found to be sound too 'robotic' and 'jerky', and therefore unpleasant to listen to (PART 4 – Chapters 3 & 4, of the full report). However, the synthetic voice was deemed clearer and easier to understand than the natural voice, because the latter (in the specific audio example) spoke too fast, with too little pauses and with little intonation (PART 4 – Chapter 4 and PART 5 – Chapters 1 & 2, of the full report). It was noted that synthetic voices are acceptable for conveying crisis information in urgent situations, especially for people with visual impairment as they are already used to listening to synthetic voices (PART 4 – Chapter 3, of the full report). Another aspect of the voice that should be considered, is the tone

of voice. A tone that is too injunctive, patronising or repressive can arguably lead to less acceptance of the message (PART 4 – Chapter 2 & 3 and PART 5 – Chapter 2, of the full report) (SEE ALSO 4.2 TRUST AND ACCEPTANCE).

2.3.5 VISUAL FEATURES

Because many of the target groups in question are more visually oriented (i.e. people who have a low level of literacy, foreign-language speakers who might not understand a text in Dutch/French, and people with hearing impairment), the use of images in COVID-19 crisis communication is highly recommended. Randomly adding visuals to crisis messages, however, is not sufficient; on the contrary, wrong and excessive use can weaken the message (PART 4 – Chapter 3, of the full report), as well as create a barrier for people with visual impairment, who already struggle with accessing visual information as it is (PART 4 – Chapter 2 & 3 and PART 5 – Chapter 3, of the full report).

For these reasons, it is important to consider carefully and consciously the ways in which visuals are used and designed. One crucial requirement of accessible visuals is to ensure that the image is self-explanatory and unambiguous. In other words, the meaning behind the image should require no further explanation and should thus be evident without reading the accompanying text (PART 3; PART 4 – Chapters 1-4). Nonetheless, accompanying visuals with simple and short texts[7] and vice versa is still recommended (SEE ALSO 2.3.1 EASY LANGUAGE). In addition to avoiding misinterpretation, providing text and images together draws more attention to the message, increases message comprehension and causes the reader to remember the message better (PART 4 – Chapters 1-4). For this to succeed, it is important that the image reflects not only the content of the message, but also the current situation and context of the crisis (PART 3 and PART 4 – Chapter 1, of the full report).

In order to ensure an image is self-explanatory and unambiguous, it is recommended to use visuals which are 'universal', but which still contain enough details to be deemed realistic (PART 2 and PART 4 – Chapters 1-3). The universality of the image enables the end-user to recognise the image more easily and the details prevent the image from becoming too abstract. For this reason, photographs are sometimes preferred over pictograms (PART 4 – Chapters 1 & 3, of the full report). In general, photographs require a lower level of abstraction on behalf of the viewer, compared to pictograms. The latter often contain drawings of abstract concepts, such as a green check mark or a red cross, the meaning of which is culture-specific, and as a result require more thought, and could thus cause confusion or misinterpretation (PART 3; PART 4 – Chapters 3 & 4 and PART 5 – Chapters 2 & 3, of the full report). However, photographs also come with certain potential obstacles: people tend to interpret images very literally, so when a photograph contains some insignificant (background) details, people will sometimes attach a wrong meaning to them and misunderstand the message (PART 4 – Chapter 3, of the full report). Another disadvantage of photographs is that they are less visible when they are small in size (i.e. when viewed on a smartphone) or when they are presented or printed in black and white (PART 4 – Chapter 3, of the full report). Ultimately, photos, realistic drawings and pictograms can all be valuable tools for increasing accessibility, as long as they are designed with accessibility in mind. Involving target groups in the development process and pre-testing these products with end-users is a great way to ensure that the products are actually accessible (PART 4 – Chapters 3 & 4, of the full report) (SEE ALSO 6.3 COLLABORATION, PARTICIPATION & TRAINING).

[7] The term 'text' is used here to refer to both written and auditive messages (SEE ALSO 2.3.4 AUDIO FEATURES).

Some other recommendations to take into account when working with visuals in COVID-19 crisis communication are to:

- depict only one message in each image. More than one message in a photograph or pictogram requires a higher level of abstraction (PART 2; PART 3 and PART 4 – Chapter 3, of the full report);
- consistently use one and the same pictogram per message or topic and vice versa. Currently there are too many different pictograms in circulation for the same message, which can confuse people. Since pictograms have to be learned, using the same pictograms over a long period of time makes them more familiar to end-users and therefore more accessible. (PART 4 – Chapters 3 & 4, of the full report);
- choose pictograms or photographs that clearly depict an action, so that less interpretation is necessary (PART 4 – Chapter 3, of the full report);
- consider adding an official logo of the sender to the message (i.e. from the government), to let the end-user know who the sender of the message is and to guarantee the credibility and validity of the message (PART 4 – Chapter 3 and PART 5 – Chapters 1 & 2, of the full report);
- ensure the image is large enough (PART 4 – Chapter 3 & 4 and PART 5 – Chapter 1, of the full report). When used in printed form, images must be visible from the walking route and within people's field of view (PART 4 – Chapter 3, of the full report). When used in digital form, the pixilation of the images must be of good quality, otherwise people cannot enlarge the image (PART 4 – Chapters 3 & 4, of the full report);
- consider the position of the image in its immediate, physical environment, they should preferably be placed at eye level (PART 4 – Chapter 3, of the full report);
- always check whether an image in colour is visible and processable in black and white too. This is important for people who are colour blind as well as intermediaries who use print-out material in black and white (PART 4 – Chapters 3 & 4, of the full report);
- take into account the colour contrast, the thickness of lines and the design and shape of the icons. Do not use white lines and be aware of the choice of colours in general. (PART 4 – Chapters 1-4).

Specifically for people with hearing impairment, still images or drawings of signs form a relevant alternative to videos in sign language (PART 4 – Chapter 4, of the full report). People with visual impairment gain access to digital visuals through screen-reading software that reads out the written text and images depicted on the screen. Therefore, it is important that online information is compatible with this kind of software (SEE ALSO 2.3.9 WEB ACCESSIBILITY). With respect to visuals, this means that a detailed written explanation of the image content (i.e. an alt text) should be provided in the file or on the website (PART 4 – Chapters 1 & 2, of the full report). For people who are visually impaired but not totally blind, it is important that maximum perceptibility of the visual information is provided for (see recommendations concerning contrast, size and colour use in the list above).

Lastly, the representation of diversity in society in images for crisis communication emerged as an important concern in the project's research activities, albeit one with no clear consensus. On the one hand, it was recommended that visuals reflect the diversity of the target group, in terms of age, ethnicity and ability (PART 2; PART 3 and PART 4 – Chapters 1, 3 & 4, of the full report). On the other hand, 'neutral' visuals which everyone can identify themselves with were also recommended (PART 4- Chapter 4 and PART 5 – Chapter 2, of the full report). As said earlier, people tend to interpret images literally, so when a photo depicts a person of colour or a blind person, people will sometimes falsely assume that the content of the message is connected to the

depicted individual's personal characteristics. This can cause confusion and misunderstandings, and can lead to stigmatisation (PART 4 – Chapters 3 & 4, of the full report) which was also pointed out by the expert panel of the guideline. As discussed earlier (SEE 2.2 DIVERSIFICATION OF MESSAGE FORMS), the guideline does not recommend tailoring crisis messages to the identity or appearance of the recipient in terms of representation of ethnicity or ability, because some target groups might feel targeted or stereotyped (PART 2, of the full report). However, the expert panel did point out the importance of diversity in visuals: If a doctor is portrayed, it is nice that he is not always a stereotypical white man, but the appearance of the doctor does not have to match the appearance of the recipient (PART 2, of the full report).

2.3.6 AUDIO DESCRIPTION AND AUDIO INTRODUCTION

People with visual impairment require audiovisual messages to be put into context through a spoken description of the visual information in the message. Before the start of the audio message itself, for example, the title and subject of the message should be clear by reading it out via a speaker or voice-over (PART 4 – Chapter 3, of the full report). Additionally, the date must be accessible as well, by reading it out so that the listener knows whether this information is still up-to-date and whether differently dated and possibly outdated versions are in circulation (PART 4 – Chapter 3, of the full report).

In addition to the context of a message, there are several options to make message content more accessible for people with visual impairments. First, essential information can be mentioned in an audio introduction (AI). An audio introduction consists of a brief description of the general topic and what is shown visually in an audiovisual product. These are generally presented at the beginning of a product for the benefit of visually impaired consumers and are ideally suited for videos that have few natural pauses and contain a lot of audio.

Next to audio introductions, audio description (AD) is also a possible instrument to make audiovisual messages accessible to people with visual impairment. Audio description is a form of narration used to provide information surrounding key visual elements in an audiovisual product (such as a film or television program) for the benefit of people with visual impairment. These narrations are typically placed during natural pauses of the audio. The roundtable discussions' results suggests that people who are blind tend more towards AI for informative videos like the ones studied in this context, while people who are partially sighted tend more towards AD as they partially follow the image as well. During one roundtable discussion, it was suggested that a mix between AI and AD would be the best option to be as relevant as possible to both target groups (PART 3 and PART 4 – Chapter 4, of the full report).

For urgent COVID-19 crisis information, however, AD and AI are neither feasible nor always necessary, as long as the speaker or voice-over of the audio message already provides enough context and information to be able to follow the content without needing the images (e.g. during press conferences the name of the person speaking is announced before they start speaking) in an accessible manner (e.g. not too fast) (SEE ALSO 6.1 DESIGN FOR ALL FROM THE START). For durable, long-term information and returning topics, however, providing AD or AI does have an added value for people with visual impairment (PART 3 and PART 4 – Chapter 3, of the full report). Yet, regarding informative messages like these, detailed descriptions of images are not always needed and can sometimes even hamper end-users' understanding of the message (PART 3 and PART 4 – Chapter 3, of the full report). Therefore, it is important to clarify which visual information is inherent to the message and which images are merely used as a background (PART 4 – Chapters 3 & 4, of the full

report). All in all, the need for AD and AI depends on the way in which the video was designed from the start.

2.3.7 SIGN LANGUAGE INTERPRETING

For people with hearing impairment, providing crisis information in sign language is essential. The fact that the press conferences concerning the COVID-19 pandemic were interpreted into sign language was greatly appreciated by people with hearing impairment and their representatives (PART 4 – Chapter 1-4). However, the provision of a larger variety of communication material in sign language, such as summary videos of the press conferences or videos on additional risk information, is necessary and important (PART 4 – Chapters 1 & 3, of the full report). This way, people with hearing impairment are able to process the information at their own pace after the live event and can remember and understand it better (PART 4 – Chapter 3, of the full report). Another example of providing sign language in a different communication format is the remote interpretation service via videoconference made available by the government, which was also praised by end-users and representatives (PART 4 – Chapters 1 & 4, of the full report) (SEE ALSO 3.2.2.2 INFORMATION HOTLINES).

Some important conditions to consider in order to make crisis communication accessible to people with hearing impairment through sign language are to:

- ensure that the sign language interpreter is sufficiently visible on the screen by not covering the interpreter by the TV channel's logo or lower thirds (titles at the bottom of the screen) (PART 3; PART 4 – Chapters 1-2 & 4 and PART 5 – Chapter 3, of the full report);
- allow the interpreter to occupy one third of the screen's full size (PART 3; PART 4 – Chapters 2 & 4 and PART 5 – Chapter 3, of the full report);
- preferably choose a Deaf person to interpret into sign language (PART 4 – Chapters 2-4 and PART 5 – Chapter 3, of the full report);
- ensure that information in sign language is easy to find, e.g. by making the landing page of the federal website www.info-coronavirus.be more visually intuitive as people with hearing impairment are very visually oriented (PART 4 – Chapter 1, of the full report) (SEE ALSO 2.3.9 WEB ACCESSIBILITY);
- accompany the sign language interpretation with some simple visuals or key words and subtitles, so as to support the message further and make it accessible to people with hearing impairment and are not proficient in sign language (PART 3; PART 4 – Chapter 3 and PART 5 – Chapter 3, of the full report) (SEE ALSO 2.3.3 SUBTITLES AND 2.3.5 VISUAL FEATURES).

2.3.8 BRAILLE

Although the use of braille was only mentioned once as a possible communication form (PART 4 – Chapter 3, of the full report), adapting some tools in braille is still considered as a real added value for people who are less trained in digital skills or who do not have access to it (SEE ALSO 3.1 DIVERSIFICATION OF COMMUNICATION CHANNELS). A large part of the elderly population who is blind still uses braille.

2.3.9 WEB ACCESSIBILITY

As the majority of the day-to-day and official communication by the government happens online, it makes sense that crisis communication is also disseminated through digital channels, such as the federal website www.info-coronavirus.be. In order to ensure that everyone has access to the

information on such online channels, they have to be adapted to suit the needs of end-users who face sensory or literacy barriers that make their search for information online more difficult. This is especially the case for people with visual impairment, since they rely on screen-reading software to gain access to written text or images online. Oftentimes, websites are not yet adapted to this need (PART 4 – Chapters 1 – 4, of the full report).

The European Web Content Accessibility Guidelines (WCAG) play an essential part in this respect. In order to ensure access to online crisis communication, in particular for people with visual impairment, it was pointed out that all official government and media websites should adhere to the WCAG 2.0 AA level of compliance (PART 3 and PART 4 – Chapters 1-3). To meet WCAG 2.0 Level AA conformance, websites are required to at least:

- provide (live) captions for videos;
- provide audio description for videos that are otherwise incomprehensible;
- ensure a sufficiently large contrast ratio;
- enable users to enlarge the text without sacrificing the full content overview;
- refrain from using images of text;
- ensure the page can be found and consulted in a variety of ways (e.g. usable on a smartphone, downloadable as a Word file, etc.);
- use headings and labels that are descriptive and accurate;
- provide visible keyboard focus;
- if part of the text is written in a foreign language, indicate this in the source code;
- ensure that navigation elements are consistent and in the same relative order throughout the website;
- ensure that components with the same functionality are consistently identified throughout the website;
- use text alternatives for images that convey meaning.[8]

To reduce the risk of information exclusion, regular quality assessment based on these requirements should form an integral part of the government's crisis communication strategy (PART 4 – Chapter 1, of the full report). For the other target groups, which all arguably would benefit from visual support, governments should strive to give their websites a logical structure and make them easier to navigate by using pictograms or images as well as clear keywords and a directory to indicate which kind of information the website contains and where it can be found (PART 4 – Chapters 1 & 3, of the full report).

However, web accessibility is about more than just websites. Online documents, such as brochures or infographics, need to be available in a variety of formats in order to be accessible. With regard to people with visual impairment for example, a PDF file does not always comply with screen readers, whilst a Word or html file almost always does (PART 3 and PART 4 – Chapters 1-4). Similarly, foreign-language people and people with low literacy skills often consult information on their smartphone, or intermediaries show them information on a smartphone, so the file format and design of the message should be adapted to smartphones (PART 4 – Chapter 3, of the full report).

[8] See https://www.anysurfer.be/nl/blog/detail/anysurfer-wcag-de-europese-richtlijn-en-de-belgische-wet#:~:text=WCAG%20(Web%20Content%20Accessibility%20Guidelines,te%20maken%20voor%20alle%20gebruikers.&text=WCAG%202.0%20is%20sinds%202008,het%20W3C%20sinds%20juni%202018)

Finally, given the increased use of video and audio, the online accessibility of video should be considered as well. As mentioned above, videos should ideally contain subtitles, audio versions in different languages, including sign language. It is important that users can easily find the version that is adapted to their needs. This can be realised (1) through clear (and multilingual) navigation, (2) by choosing an accessible web player that can also be used with screen readers or (3) by choosing a universally accessible web player, such as Theo Player, which allows the integration of several access features into one single interface (see PART 3, of the full report). However, it remains important to also consider the varying levels of digital literacy of users in this respect: a simple, clear and unambiguous navigation and clear instructions in Easy Language on where to find and how to use the digital products are deemed essential (PART 3, of the full report).

3 CHANNEL

3.1 DIVERSIFICATION OF COMMUNICATION CHANNELS

Diversifying and increasing the number of the communication channels through which risk information is disseminated is an absolutely essential requirement of inclusive and accessible crisis communication (PART 4 – Chapters 1-4 and PART 5 – Chapter 1, of the full report). Earlier in this synthesis, it was pointed out that providing a mix of different forms of crisis communication is necessary to ensure that target groups with certain linguistic or sensory barriers have equal access to crisis information, because they have specific communication needs that are usually not taken into account in standard message forms (SEE 2.2 DIVERSIFICATION OF MESSAGE FORMS). The same recommendation applies to communication channels, as a larger variety of channels can also contribute to a wider reach of the crisis information and thus also possibly easier access for people who might be at a higher risk of information exclusion.

However, especially in crisis situations, it is important to know which specific types of channels reach people with linguistic or sensory impairments and which do not, so that governments can adopt an effective crisis communication strategy timely and effectively. The next section discusses the main communication channels used by people who have a low level of literacy, foreign-language speakers, people with hearing impairment and people with visual impairment, along with reasons to why some channels are arguably more or less accessible than others.

3.2 TYPES OF CHANNELS: DIGITAL VS. NON-DIGITAL

In this section, a distinction between digital and non-digital channels is foregrounded, as these two types of channels were often contrasted with each other when discussing the advantages and disadvantages of certain channels in the project's research activities.

A topic that was highlighted very frequently in this context was the **digital divide**, which is characterised by a gap between (1) some end-users' lack of digital skills and access to online information, on the one hand, and (2) the disproportionally large amount of (official) crisis communication that is distributed online instead of offline, on the other hand (PART 4 – Chapters 1-4 and PART 5 – Chapters 1-3). According to Statbel (2020), 10 percent of Belgian households has no access to the Internet at home, either due to financial barriers or low digital skills (or a lack

of interest/motivation to acquire such skills). Furthermore, 29 percent of Belgian households has reportedly a low level of digital skills and 10 percent has no digital skills (Statbel, 2019). The proportion of people with no or low digital skills is usually higher among people with a low level of education or the elderly, as for the former 42 percent report to have low digital skills and 23 percent report to have no skills (Statbel, 2019), while among the elderly this was 35 percent and 31 percent, respectively (Statbel, 2019). Since people with low literacy skills , foreign-language speakers and people with sensory impairment often fall victim to intersectional challenges like the digital divide, inequality regarding access to digital COVID-19 crisis communication was reported to be a serious barrier for these target groups (PART 4 – Chapters 1-4 and PART 5 – Chapter 3, of the full report). Because of the digital divide, many people have to rely on the help of others instead of being able to search for and receive crisis information independently (PART 4 – Chapter 4 and PART 5- Chapters 1 & 2). As the digital divide is an issue that will not disappear any time soon, it is of crucial importance that governments acknowledge it, understand it and keep committing themselves to communicating through offline channels to an equal extent as through online channels, or even better, through as many different types of channels as possible (PART 4 – Chapters 1-4). In other words, the diversification of communication channels is recommended as a crucial measure to help solve the problems related to the digital divide (SEE 3.1 DIVERSIFICATION OF COMMUNICATION CHANNELS).

3.2.1 DIGITAL CHANNELS

3.2.1.1 SOCIAL MEDIA

There are different types of social media networks that could be used to communicate COVID-19 crisis information. Social networks and messaging apps, such as WhatsApp and Messenger, in particular, can be a useful channel to distribute crisis messages, but not necessarily directly by the government. These types of channels are used more for conversations between family and friends, as well as between confidants of intermediary organisations (e.g. teachers) and end-users (PART 4 – Chapters 1 & 4, of the full report). For example, people with visual impairment reported to receive a lot of their information on COVID-19 through WhatsApp chat groups with other people with visual impairment (PART 4 – Chapter 4, of the full report). Governments therefore have little control over this channel. One of the few ways governments can influence the reach of crisis messages via this type of social media is by assuring that the available crisis communication products, such as a video and audio messages, are suited for use and dissemination via these social media apps (SEE 2.3 CHARACTERISTICS OF MESSAGE FORMS). Another more specific way in which governments can provide accessible COVID-19 crisis communication is by setting up an official chat function run by the government as an alternative to an information hotline (SEE 3.2.2.2 INFORMATION HOTLINE). This can be a very valuable addition for people with hearing impairment (PART 4 – Chapter 1, of the full report).

Media sharing networks, such as YouTube, Instagram and Facebook, can be used more directly by governments in their mission to convey crisis messages to end-users who can experience linguistic or sensory barriers. This type of social media network was mentioned among the main sources of information for people who have a low level of literacy and foreign-language speakers (PART 4 – Chapter 1 and PART 5 – Chapter 2, of the full report). People with sensory impairment also use such channels to search for or receive crisis information: similarly to messaging apps, the target groups received a lot of their information on COVID-19 through groups on Facebook (PART 4 – Chapters 1-3 and PART 5 – Chapter 2, of the full report). However, governments should not rely

too much on the spread of information via these media sharing networks (PART 4 – Chapters 1-4). As explained in earlier, a considerable amount of people are not digitally literate, and relatedly not active on social media. Moreover, among end-users that do use social media, it is not guaranteed that they will pay attention to the message or share it with others (PART 5 – Chapter 1, of the full report). Still, 'sponsored' messages by the government on social media networks like Facebook, YouTube or Instagram do have the potential to reach a variety of target groups, as these messages can pop up on their feed. Moreover, when these messages are shared on social media feeds by a 'verified sender' (i.e. senders with a check mark next to their name on social media), this generates more knowledge and search intent than other sources on social media, according to the expert panel and the guideline (PART 2, of the full report).

3.2.1.2 WEBSITES

The official federal website www.info-coronavirus.be contains a lot of relevant and useful information about COVID-19. However, most end-users from the target groups were not aware of the existence of the website (PART 4 – Chapters 1 & 2 and PART 5 – Chapters 1 & 2, of the full report). When they do know the website, it is rarely consulted (PART 4 – Chapters 1-4 and PART 5 – Chapters 2 & 3). Both the inaccessibility of the website and the digital divide were often put forward as an explanation for this lack of website visits by end-users (PART 4 – Chapters 1 & 2, of the full report). If these issues would be improved on governmental COVID-19 websites, these websites might arguably be consulted more often by end-users.

3.2.1.3 EMAIL AND TEXT MESSAGES

The use of text messages (SMS) for distributing urgent information was suggested by some intermediaries and end-users as a potential channel that would reach the entire population and that could be valuable for people with hearing impairment, people with low literacy skills or foreign-language speakers (PART 4 – Chapter 3 and PART 5 – Chapter 1, of the full report). However, at the same time there was some concern that text messages like these would be mistaken for phishing or advertisements, causing the end-users not to open the message (PART 5 – Chapter 1, of the full report). Email was also briefly mentioned as a potential channel, however, it was generally not regarded as an accessible channel to communicate crisis information to most of the target groups, as they do not (frequently) consult this channel (PART 4 – Chapter 1 and PART 5 – Chapter 1, of the full report).

In the guideline, email was also not recommended as a channel for sending crisis communication, mostly because of the digital literacy barrier and the largely textual form of emails (PART 2, of the full report). Using text messages, on the other hand, was recommended by the expert panel to reach certain target groups in times of crisis (PART 2, of the full report). Text messages are especially useful for reaching people with hearing impairment, but also people with low literacy skills or foreign-language speakers with the condition that the accessibility of the characteristics is taken into account(SEE 2.3 CHARACTERISTICS OF MESSAGE FORMS).

3.2.1.4 APPS

Aside from popular social media apps, such as WhatsApp and Facebook (SEE 3.2.1.1 SOCIAL MEDIA), two other apps were mentioned as potential channels to disseminate COVID-19 crisis communication successfully: the Coronalert app for people with visual impairment as well as for foreign-language speakers (PART 4 – Chapter 3 and PART 5 – Chapter 1, of the full report) and the

multilingual app 'Crisis Information Translated' developed by the Flemish Agency of Integration for foreign-language speakers (PART 4 – Chapter 3, of the full report).

3.2.1.5 ONLINE INFORMATION VIA QR CODES, HYPERLINKS AND DOWNLOADS

When sharing COVID-19 crisis information, either online or offline, there is a possibility to refer to more detailed or related information through a QR code, a hyperlink to a website or a download link. For some target groups, this way of communicating can pose as a barrier, because they are either unfamiliar with it (specifically, a QR code), they do not trust the link that was sent to them, or they are not motivated enough to look for further information (PART 4 – Chapters 1, 3 & 4 and PART 5 – Chapter 1, of the full report). These barriers are mostly applicable to people with a low level of (digital) literacy. People with visual impairment also find it difficult to access information in this way, because the formats of the download or hyperlinks are often not adapted to their visual impairment (PART 4 – Chapter 4, of the full report). However, such referrals do have an important advantage: additional information can be provided in this way, without overcrowding the original communication product (PART 4 – Chapter 1 and PART 5 – Chapter 1, of the full report). For example, a poster in Dutch or French which also includes a QR code that directs people to the translated version in written or audio form or a video in sign language can be very useful for (friends and family) of foreign-language speakers or people with hearing impairment (PART 4 – Chapters 1, 2 & 3, of the full report).

3.2.2 NON-DIGITAL CHANNELS

3.2.2.1 TRADITIONAL MEDIA

Traditional media includes television channels, radio channels and newspapers. Out of all channels (including digital channels), television was mentioned to be one of the most popular, widely used and accessible channels across all target groups (PART 4 – Chapters 1-4 and PART 5 – Chapters 1-3). Because of its wide reach, it is regarded as a very effective and accessible channel to crisis communicate. Governments are advised to offer enough of its crisis communication through television channels. Some specific suggestions included that crisis messages should be broadcasted during commercials (PART 4 – Chapter 1 and PART 5 – Chapter 2, of the full report), after work hours or before or after the news (PART 4 – Chapters 2 & 3 and PART 5 – Chapter 2, of the full report), and preferably both on regional and local channels (PART 4 – Chapters 1 & 2 and PART 5 – Chapter 2, of the full report) (SEE ALSO 5 MESSAGE TIMING, FREQUENCY AND QUANTITY). News broadcasts and press conferences were reported to be valuable information sources, mainly for people with sensory impairment but also for foreign-language speakers and people with low literacy skills (PART 4 – Chapters 1-3 and PART 5 – Chapters 2 & 3, of the full report). Yet, these types of broadcasts are not always accessible in terms of their characteristics, i.e. in terms of speech rate or length (SEE ALSO 2.3 CHARACTERISTICS OF MESSAGE FORMS), thus it was advised that governments also aim to broadcast accessible adaptations of crisis messages, such as summary videos in sign language or Easy Language, on television (PART 4 – Chapters 3 & 4 and PART 5 – Chapter 2, of the full report). Radio and newspapers were also mentioned as a popular channel for end-users to receive crisis information, especially for the older population (PART 4 – Chapter 3 and PART 5 – Chapters 1 & 2, of the full report).

3.2.2.2 INFORMATION HOTLINES

An official hotline dedicated for questions concerning the COVID-19 crisis at hand was deemed a valuable and accessible channels for all target groups. The COVID-19 dedicated hotline was highly appreciated, especially by people with hearing impairment since a remote interpretation service was made available (PART 4 – Chapters 2 & 4, of the full report). In order to improve the accessibility and effectiveness of this channel, it was recommended to:

- make people (more) aware of the hotlines by mentioning the telephone number on other communications (PART 3 and PART 4 – Chapter 3, of the full report);
- extend the availability of the hotline as well as the remote sign language interpretation service for people with hearing impairment (PART 4 – Chapters 1-3);
- make the hotline accessible to foreign-language speakers too by hiring multilingual operators (PART 4 – Chapter 1, of the full report).

In general, information hotlines were seen as more accessible than indirect communication channels, such as the distribution of printed media, but less accessible than face-to-face communication with intermediaries (PART 4 – Chapter 3, of the full report) (SEE 3.2.2.5 FACE-TO-FACE COMMUNICATION).

3.2.2.3 POST

Sending crisis messages in the form of letters or information brochures through the post was suggested a few times as a good alternative communication channel for sending crisis information to people who have no or little digital literacy (PART 4 – Chapters 1 & 3 and PART 5 – Chapters 1 & 2, of the full report). However, there were some concerns that sending crisis messages via mail would not reach the desired effect. First of all, people with low literacy skills and foreign-language speakers can find it difficult to distinguish between important and less important mail, such as advertisements, and thus often throw letters in the trash immediately (PART 4 – Chapter 3 and PART 5 – Chapter 1, of the full report). Another reason for throwing away unopened letters received by post is because people with a low socioeconomic status are sometimes too afraid to open envelopes sent by official institutions, as they think it will be a bill or a warning notice (PART 4 – Chapter 1, of the full report). Lastly, it was questioned whether foreign-language speakers would benefit from receiving COVID-19 crisis messages through the post, because the information would have to be written in their native language to be accessible, and sending a letter in a large variety of different languages is not feasible (PART 4 – Chapter 3, of the full report).

3.2.2.4 DISTRIBUTION OF PRINTED MEDIA

The distribution of printed crisis messages (e.g. brochures, posters, flyers, etc.) can be an effective and accessible COVID-19 crisis communication channel. However, the context of the distribution and the form of the material itself are decisive factors for its degree of accessibility and effectiveness. Regarding the context of the distribution, it is argued that delivering messages in printed form to people who have a low level of literacy and foreign-language speakers usually only works well when these prints are supported by personal communication from a confidant, such as a family member or a teacher (SEE ALSO 4 OUTREACH). Simply handing over the printed information is not enough to truly reach these target groups, but the fact that the material can be handed directly to the end-users by an intermediary who can answer their questions and can then give them the material to take it home is considered very valuable (PART 4 – Chapter 2 & 3, of the full report).

Asides from the context, the physical place where the printed information is distributed also influences the reach and accessibility of this channel. During the roundtable and focus group discussions, there was a strong emphasis on the visibility of COVID-19 crisis messages in public spaces, such as train stations, bus stops, schools, places of worship, apartment buildings, doctor's waiting room, etc. (PART 4 – Chapters 1-4 and PART 5 – Chapter 2, of the full report). Repeated exposure to printed media in public places was said to be effective, since it makes memorising the information easier (PART 4 – Chapter 1 and PART 5 – Chapters 1 & 2, of the full report). Unfortunately, the spread of information through public places also has its drawbacks: in times of a pandemic outbreak such as COVID-19 and in times of crises in general, public spaces are less frequented, so the information that is displayed in these spaces does not effectively reach everyone (PART 4 – Chapter 2, of the full report).

With regards to the form of the printed media, it was noted that printed communication material does not perform well when it contains too much text (PART 4 – Chapter 1, of the full report). Instead, these materials should effectively combine visuals with short texts in Easy Language (SEE ALSO 2.3.1 EASY LANGUAGE AND 2.3.5 VISUAL FEATURES). In addition, printed media is almost always inaccessible to people with visual impairment, thus spreading crisis information through alternative channels is highly advised (SEE 3.1 DIVERSIFICATION OF COMMUNICATION CHANNELS).

3.2.2.5 FACE-TO-FACE COMMUNICATION

As already briefly mentioned earlier, personal face-to-face communication is a very effective channel to convey COVID-19 crisis messages to end-users who are generally harder to reach because of certain linguistic or sensory barriers they can experience in accessing the communication. It was noted that personal face-to-face communication is especially effective for foreign-language speakers and people with low literacy skills , but people with sensory impairment also attach great importance to personal communication (PART 4 – Chapters 1-4). Since the start of the pandemic, many intermediary organisations have sought ways to create opportunities for vulnerable target groups (in particular isolated or elderly individuals) to meet with them in person, provide important crisis information and offer a space for them to ask questions (PART 4 – Chapters 2 & 3, of the full report). These types of initiatives were very successful, but unfortunately remained underutilised by the government (PART 4 – Chapter 2 & 4, of the full report).

One of the reasons why face-to-face communication works so well is because of the fact that organisations usually reach out to the end-users themselves, since people with low literacy skills or foreign-language speakers often do not actively seek out information on their own (PART 4 – Chapters 3 & 4, of the full report) (SEE 4 OUTREACH). Another reason for the effectiveness of personal face-to-face communication is that these target groups usually place less trust in governments and official institutions, and attach a lot of importance to who the sender of the message is (PART 4 – Chapters 1-4 and PART 5 – Chapter 2, of the full report) (SEE 4.2 TRUST AND ACCEPTANCE).

One downside to personal face-to-face communication is that it is not always practically feasible, especially not in times of a pandemic, in which it is advised not to meet in person, or when information is updated frequently (PART 4 – Chapters 3 & 4, of the full report). The latter also proves to be cumbersome for intermediaries, who are forced to bear the burden of constantly staying up to date and organising contact moments with their target audience regularly and repeatedly whenever information has changed (PART 4 – Chapter 3, of the full report).

4 OUTREACH

Even though effective outreach of COVID-19 information to vulnerable groups is essential and of paramount importance, participants in several roundtable discussions reported that it is **challenging** to reach groups at risk for communication vulnerability and exclusion (PART 4 – Chapters 3 & 4). Specifically, people with low socioeconomic status and people with restricted access to the Internet or digital technology tend to not (pro)actively seek out information, and only receive COVID-19 information **passively through informal contacts and peer exchanges**. For this reason, printable versions of flyers, which can be spread and handed out in the communities of vulnerable target groups (e.g. schools, places of worship and community spaces), were reported in roundtable discussions to be effective, since successful outreach to these groups depends to a large extent on **conversations** and personal **face-to-face communication with peers or with people in a bridging role**. In the following sections, we explain in some more detail the recommendations with regard to (1) the importance of such intermediaries, (2) the impact of the form and channel on the information recipient's trust and acceptance of the message, and (3) how the type of sender of the message can also impact the effectiveness of the outreach of COVID-19 communication by the federal government.

4.1 THE IMPORTANCE OF INTERMEDIARIES

For all the target groups topicalised in this project, the recommendations gathered in the roundtable discussions and focus group discussions underlined the paramount importance of **the intermediary approach** in reaching out to these groups effectively with COVID-19 information. COVID-19 crisis communication by the federal government was often not actively searched for and was experienced as rather complex to comprehend by vulnerable end-users. Therefore, a mediator was reported in several roundtable discussions as being crucial to introduce and re-explain the information in more accessible form and to provide more communication about the COVID-19 communication products in a personalised manner (PART 4 – Chapters 3 & 4, of the full report). Such intermediaries – including social workers, community workers, association workers or helpers, employers, doctors or pharmacists, school staff, intercultural mediators, etc. – are typically known by the target groups in **a relationship of trust**, and considered to be reliable sources for information. Furthermore, intermediaries are familiar with the communicative needs of the specific target groups and therefore best positioned to translate the information into their codes and realities.

The successful nature of the intermediary approach was also confirmed by end-users who participated in focus group discussions. During the focus group discussions with foreign-language speakers and people with a low socioeconomic status in Flanders, for example, participants confirmed that COVID-19 government communication materials often reach them only through an intermediary (PART 5 - Chapter 1, of the full report). Moreover, during the focus group discussions with people with low socioeconomic status in Wallonia, participants highlighted the importance of a personal conversation with the intermediary in which they were able to express themselves about their experiences, discuss and debate the given information, develop their own opinion, and make an informed decision (PART 5 - Chapter 2, of the full report). For this reason, it is important to **diversify the forms and channels** of communication of COVID-19 government information enough to allow for materials to be put to use and disseminated by intermediaries of various stripes.

In the guideline the use of intermediaries to reach certain target groups is also highlighted as an **important precondition** for accessible and effective crisis communication (PART 2, of the full report). However, it was pointed out that the use of intermediaries is not equally desirable for all target groups in question. For foreign-language-speaking newcomers, the deployment of in-group intermediaries (i.e. persons who belong to the social-cultural group of the recipient) can be positive, since they are able to summarise the communication appropriately (in the target group's own language), and, because of their socio-cultural affinity, they may inspire more confidence in the message and the governmental crisis policy. However, for people with a migration background who have been living in Belgium for a longer time, in-group intermediaries can be perceived as negative and stigmatising according to the expert panel; people with a migration background often do not like to be seen as a group that only wants to be approached by its own group members. For people with sensory impairment, intermediaries are generally seen as undesirable. The expert panel judged that when the use of intermediaries is necessary for people with hearing and visual impairments, the communication is not inclusive enough. People with sensory impairment should not be dependent on third parties to receive, have access to and understand COVID-19 crisis communication.

4.2 TRUST AND ACCEPTANCE

A key element in effective outreach of COVID-19 government communication on a global level is trust, which plays an important role in message acceptance by the recipient. Participants in both the roundtable discussions and focus group discussions foregrounded a relative **lack of trust in the government** as an important barrier. This degree of loss of trust in governmental authorities during the COVID-19 pandemic is in line with research and observations in other countries around the globe and highlights the international scale of this problem (see also guideline, PART 2, of the full report). According to some participants in the roundtable and focus group discussions, such mistrust runs the risk of increasing by the constantly changing information provided by the government (PART 4 – Chapter 3, of the full report), by the perception that politicians are not transparent (PART 5 - Chapter 2, of the full report), and by the lack of logic behind some measures which were experienced by some end-users as inconsistent, not credible not making sense (PART 5 – Chapters 1-3, of the full report).

Additionally, both intermediaries who participated in the roundtable discussions as well as individuals with low socioeconomic status and foreign-language speakers who participated in focus group discussions pointed towards the **tone of the message** as potentially having a negative impact on the perceived trustfulness of the message: specifically the authoritarian, pedantic, repressive, injunctive, infantilising or stigmatising tone of certain COVID-19 communication materials was criticised in this respect (PART 4 – Chapters 2 & 3 and PART 5 – Chapter 2, of the full report). (SEE 2.3.4 AUDIO FEATURES)

Next to the tone, overly simplistic and motivational information, in which **nuance** is absent, was also mentioned in numerous research activities as having a negative effect on the trust of the recipients (PART 3; PART 4 – Chapters 2-4 and PART 5 – Chapter 1, of the full report). Instead, participants of the focus group discussions mentioned that open and honest communication would be more beneficial to enhance trust, as the provision of clear, accessible and objective explanations would allow individuals to make informed and meaningful decisions for themselves. Conversely, lack of detail or oversimplifications of information were reported to run the risk to lead

to unanswered questions and an increase of mistrust (PART 4 – Chapter 3, of the full report). This was also reflected in the guideline, which does not recommend that COVID-19 crisis communication conceals exceptional situations or exceptions to the rule when communicating a safety or health measure, but instead suggests to adopt an open and proactive communication approach (PART 2, of the full report). In this respect, it is advisable to communicate the rationale of the crisis measures and the possible emergence of exceptional situations in advance, as this results in a less pronounced decline in confidence (PART 2, of the full report). However, there is also a need for clear and straightforward communication, where the most important information is highlighted. There was some concern among the expert panel about mentioning exceptional situations and other considerations, because this could cause more noise and make the message more complicated. Thus, it must be ensured that the essence of the message remains central and that minor exceptions do not receive too much attention, but instead are only mentioned at the end. (SEE ALSO 2.3.1 EASY LANGUAGE)

In spite of the considerable loss of trust in the government which currently exists, **printed communication materials combined** with **personal, spoken communication** by intermediaries, close contacts or confidants who enjoy trust was argued by roundtable discussion participants to be effective in countering the lack of trust in the government. Just handing information materials over is not enough, as information is more accepted if it is presented by someone who one knows personally and trusts. In the case of urgent communication, when face-to-face verbal transfer of information in person is not possible, roundtable discussion participants indicated that intermediaries could also resort to other channels and forms, such as text messages, WhatsApp group messages and phone calls. (SEE ALSO 3.2.2.4 DISTRIBUTION OF PRINTED MEDIA AND 3.2.2.5 FACE-TO-FACE COMMUNICATION)

The specific **form** of the communication product and the **channel** of dissemination were also reported to have an impact on the perceived trustworthiness of the message by both roundtable discussion and focus group discussion participants. The following recommendations and points of attention were mentioned in this respect:

- **The combination of audio with an image** was mentioned as a good way to retain the listener's attention and stimulate their trust;
- The use of channels such as **text messages or WhatsApp messages from anonymous government telephone numbers** that were not well-known to the general public was not recommended, as some do not trust URL links and are concerned about phishing. In general, it is sometimes difficult to distinguish between legitimate and untrustworthy messages. More work should go to make the government telephone numbers for urgent communication widely known (PART 4 – Chapter 3, of the full report);
- The use of **an official, familiar logo** of the federal Belgian government on the communication product was reported to inspire more confidence and trust in the material and the message (PART 4 – Chapter 3 and PART 5 – Chapters 1 & 2).

Starting audio or video materials with the phrase "**this is a message from the government**" was advised to be avoided, as it runs the risk of losing the attention of people who are not trustful of the government. Instead, intermediaries in the roundtable discussions suggested this information should be mentioned at the end of the audio or video (PART 4, of the full report).

The lack of trust in the government is also touched upon in the guideline, more specifically in the suggestion to use '**verified senders'** when distributing crisis messages online (SEE ALSO 3.2.1.1 SOCIAL MEDIA). Quantitative evidence points out that verified sources (i.e. senders with a check mark

next to their name on social media) generate more knowledge and search intent amongst end-users than other sources on social media (PART 2, of the full report). The expert panel agrees with this in part, but also interjects that some end-users might not understand what such a verification symbol means and that confidence in the government is currently very low.

4.3 MESSAGE SENDERS

In light of the reported lack of trust in the government and official COVID-19 communication, the following senders or mediators of senders were foregrounded as enjoying more trust by the target groups topicalised in the project:

- **Intermediary organisations in civil society** and **proximity workers** such as social workers, user-representatives and teachers (specifically for people with a low socioeconomic status, people with sensory impairment and foreign-language speakers) (PART 4 – Chapters 1 & 2 and PART 5 – Chapter 3, of the full report);
- **Experts and health professionals** such as doctors, pharmacists, and nurses (PART 2 PART 4 – Chapters 1-4 and PART 5 – Chapter 3, of the full report);
- **Friends, family and acquaintances** who form part of the existing social network or community (both physical and online) (PART 4 – Chapters 1 & 3 and PART 5 – Chapters 2 & 3, of the full report).

The guideline also suggested to use doctors to send crisis messages. This suggestion was based on a study which shows that if a doctor delivers a health crisis message via a video the knowledge of and willingness to follow crisis measures increases (PART 2, of the full report). According to the expert panel, doctors generally enjoy a position of trust and authority in the eyes of the target groups.

5 MESSAGE TIMING, FREQUENCY AND QUANTITY

Important factors to consider for the accessibility of COVID-19 government communication in Belgium relate to the timing of the message, the high frequency of new (and changing) information, and streamlining the quantity of communication materials to be disseminated.

5.1 TIMING

The time at which accessible COVID-19 information is **publicly broadcasted** can have an impact on how accessible this information is to end-users. Specifically for individuals with hearing impairment, intermediaries recommended to not only broadcast accessible information adapted to the needs of this group (such as press conferences with sign language translations on television) during the working day, but also just before or after the 19:00 news to allow working people to have access to it. (SEE ALSO 3.2.2.1 TRADITIONAL MEDIA).

5.2 FLOW FREQUENCY OF NEW AND CHANGING INFORMATION

One of the main points of criticism formulated on the COVID-19 governmental information campaign by both intermediaries and end-users in the roundtable and focus group discussions consulted pertains to the **constant flow of new and rapidly changing information** (PART 4 – Chapter 2 & 3 and PART 5 – Chapter 1-3).

Frequent updates of government measures combined with the regional differences in the applicability of measures were experienced and perceived by end-users as **contradictory**. This heightened end-users' confusion and undermined their willingness to listen, and ultimately decreased their receptiveness of the information (PART 5, of the full report).

Other impeding factors mentioned included (1) the circulation of (outdated) contradictory information, (2) the leaking of information from preparatory sources ahead of official communication on new government measures and (3) the contestation of measures in the press by experts. These factors made end-users feel **lost in the flood of information** and uncertain to distinguish between which **source of information** was to be trusted (PART 5, of the full report). The circulation of outdated and contradictory information on health-related advise and governmental measures is therefore to be avoided to the fullest extent.

Given the rapidly changing nature of government measures and rules, intermediaries recommended to date communication materials to delimit the availability and pick-up of outdated information (PART 4 – Chapters 3 & 4, of the full report).

5.3 STREAMLINING THE QUANTITY AND SCATTEREDNESS OF INFORMATION

While one of the strongest recommendations and guidelines on inclusive and accessible COVID-19 government communication in Belgium pertains to the diversification of the message forms and communication channels (SEE SECTIONS 2.2 AND 3.1), intermediaries also warned against the sheer **quantity and multiplication** of communication materials without a clear **strategy of harmonization and streamlining** (PART 2 PART 4 – Chapters 1-4 and PART 5 – Chapter 2, of the full report). Indeed, in all focus group discussions some participants mentioned the overwhelming, excessively large amount of information, both in single form and across forms and channels, and experienced this scatteredness of information as a source for anxiety, weariness and confusion (PART 5, of the full report). In particular, the multitude of federal, regional, provincial and local sources for communication materials was particularly challenging (PART 4 – Chapter 3, of the full report). In line with recommendations that the federal government function as the facilitator of COVID-19 information (SEE 6.2 FACILITATING COMMUNICATION FOR INTERMEDIARY ORGANISATIONS), such centralised facilitation should also further streamline the production and distribution of communication products and reduce the scatteredness of information.

The guideline confirms this recommendation based on qualitative evidence: it is suggested in the guideline that governments should not send too many crisis messages to the target groups, as a higher message frequency could lead to less recall of the information in the message (PART 2, of the full report). Although this was partly affirmed by the expert panel – indicating that the target group often received too much information through various channels which lead to confusion – they also stated that repetition of messages can have a positive effect too. Supporting evidence of

the latter was also uncovered in the focus group discussions, where the participants had less difficulties understanding messages which contained information that has been repeated many times since the beginning of the pandemic (PART 4 - Chapter 4 and PART 5 – Chapter 1, of the full report). However, keeping an eye on information overload is still important so that end-users do not neglect official channels. A perfect balance would be to repeat messages in different *forms* but to keep the *content* of the message consistent (PART 2, of the full report). In order to streamline the crisis communication, specific communication moments should be planned, information should be clustered and specific changes in the information should be highlighted (PART 2, of the full report).

6 COMMUNICATION STRATEGY AND PRODUCTION PROCESS

In this section, we discuss a series of issues on the level of strategy and production process which the ICC project's research activities have highlighted and which also need to be taken on board when considering the accessibility of government COVID-19 crisis communication.

6.1 DESIGN FOR ALL FROM THE START

The ICC project's results underline the importance of **integrating accessibility as early as possible in the communication development process** and highlight the expectation that the integration of necessary access provisions should be the norm in government communication. Project results report that several groups regularly encountered barriers to access official communication during the pandemic. As a result, various associations started to develop their own materials adapted to the needs of their target group, such as materials with text in Easy Language, subtitling, translation and sign language, and disseminate these materials through additional channels to achieve a wider outreach (PART 4 – Chapter 2, of the full report). Such a decentralised, uncoordinated approach was reported to have considerable downsides, such as inconsistent communication, a proliferation of information and receiving important information with a delay in the case of sign language translation (PART 4 – Chapter 3, of the full report). In addition, a pro-active approach to accessible information was suggested by intermediaries to also offer efficiency gains, as fixing communication barriers afterwards by the addition of access services is more difficult and less effective than creating a product without barriers from the start (PART 4 – Chapter 3, of the full report).

In this regard, it is important to consider a **Universal Design (UD) approach as part of an accessible communication strategy** (PART 4 – Chapter 3, of the full report). In a UD approach, a communicative product is designed in such a way that as many barriers as possible are eliminated, so that it is accessible to multiple target groups without the need for additional adaptations. For example, a video in which the voice-over consciously includes information that is visualised, is more easily accessible to a person with a visual impairment without the need to add audio description. Or, a written text that adheres to Easy Language guidelines from the start can be accessed by a wide array of audiences, without the need for a separate Easy Language version.

During the roundtable discussions in particular, a Universal Design approach was greatly supported by the intermediaries as an approach that has the potential to eliminate a series of experienced barriers:

- information can be developed and shared quicker;
- no more costly and timely adaptations need to be made;
- less proliferation of various communication products from various sources is created; and,
- the information reaches multiple target groups simultaneously.

In addition, accessibility characteristics, as discussed earlier in this synthesis, in a Universal Design approach have the potential to not only make the communicative product more accessible to specific groups, but to improve the overall accessibility of the communication for all citizens (PART 4 – Chapters 3 & 4, of the full report).

As indicated by roundtable discussion participants (PART 4 – Chapters 3 & 4, of the full report) and demonstrated in the product development phase (PART 3, of the full report), Universal Design, however, is not easy to achieve as various needs and sometimes conflicting preferences need to be taken into account and reconciled. Certain disabilities bring specific peculiarities with them that are not shared by those with other vulnerabilities. For people with hearing impairment who communicate in spoken language, for example, the combination of drawings, the text in the video, the subtitles and the audio can become overwhelming. Conversely, for hearing audiences, subtitles or a sign language interpreter on screen can be distracting. In addition, the project results have also reported that certain general messages formulated for all, were not applicable to the life realities of certain target groups, because they were not concrete enough, too abstract or not adapted to the economic, cultural, social environments and life realities of certain end-users. Some intermediaries have warned against an overtly top-down approach, which results in a lack of differentiated messages, which affect different audiences in a differentiated way. They insisted that adapting communication should be understood as more than just translating messages in different ways, but also taking into account life circumstances of citizens, as everyone has a right to information adapted to their needs and context (SEE ALSO SECTION 7 BELOW). For example, the advice to keep 1,5 meters distance is not adapted to the circumstances of a person with a visual impairment, or the advice to isolate is not feasible if the living conditions of the end-user do not allow for this. Another difficulty encountered was related to the fact that at some point during the pandemic outbreak people could only visit stores on their own and could consequently not be accompanied to enter stores. Deaf and blind people therefore found themselves carrying out activities alone that they were used to carry out with a companion. They felt very vulnerable and they sometimes had to face inappropriate reactions of other people in their presence, even if some of these reactions were actually meant to help them (PART 4 – Chapters 1, 3 & 4 and PART 5 – Chapter 2, of the full report). In such cases, the specific needs of different target groups may translate into target group-specific communication products.

In this respect, a clear understanding of the needs, and preferences of target groups is required to determine what strategy will be most appropriate (PART 4 – Chapter 3, of the full report), and collaboration with experts is encouraged to achieve this (SEE 6.3 COLLABORATION, PARTICIPATION & TRAINING).

As a consequence of the above results, the recommendation arises that an inclusive crisis communication strategy seeks a well-considered **balance between communicative products that are designed to be as accessible as possible for all from the start, as well as the addition of target group-specific adaptations when necessary.**

6.2 FACILITATING COMMUNICATION FOR INTERMEDIARY ORGANISATIONS

The importance of collaboration with intermediaries as part of an inclusive crisis communication strategy was highlighted, as the results of the ICC project's research activities point to the fact that one of the main roles of the government (besides directly disseminating communication products to end-users), is to **facilitate communication via intermediaries to citizens**. The government should provide local governments, and in particular third parties, such as civil society organisations and non-profit organisations, with accessible communication materials through a central platform, and support intermediaries and frontline workers by providing support and necessary background information. This necessary background information can, for example, concern complex health information or scientific evidence, the governments communication strategy, or the legal framework for the provision of translations in a crisis context. Governments should focus on developing materials both intended directly for end-users, as well as communicative products intended to inform intermediaries and support practitioners when reaching out to end-users in concrete situations. This way, civil society organisations can maximally fulfil their role as intermediaries, as they are close to their target groups and their intermediary role are an important tool in creating outreach (SEE ALSO 4 OUTREACH). Such a central coordination platform can help to reduce experienced barriers such as scatteredness of the information, excessive amounts of communication materials from different sources and lack of consistency of materials (PART 4 – Chapters 1, 3 & 4, of the full report).

6.3 COLLABORATION, PARTICIPATION & TRAINING

A key element in the development of a COVID-19 crisis communication strategy and production process that has been highlighted at several stages of the project (PART 4 and 5, of the full report) is the importance of **collaboration with stakeholders, intermediaries and experts**, the **participation of target groups** in the creation process of materials (co-creation as well as testing) and the **need for training** of communication team members. Such collaborations are crucial in ensuring the communicative products are adapted to the real needs of end-users of all abilities and feedback can then be continuously taken into account.

Particularly the roundtable discussions, for all target groups (PART 4 – Chapters 3 & 4, of the full report) have emphasised the need for the government to create a **network of actors** (field actors, professionals, associations, researchers, experts and the different levels of government) who are either experts in their domain or who work directly with target audiences, in order to share knowledge and expertise and be in touch with the concrete needs of different target groups, in order to develop and evaluate communication products, channels and strategies before dissemination, to facilitate feedback and ensure follow-up from relevant stakeholders to government(s).

A second key element is the **involvement of end-users in the creation process of communication materials,** at all levels of strategy and development (defining contents, forms and channels of the communication products). Such participation is relevant for products following a Universal Design approach, but particularly when developing target specific communication products that can be

operationalised in many ways. Some suggestions from the roundtable and focus group discussions by way of illustration include:

- consulting experts and experts by experience during the production process, so that they can proofread and check the communication material and make adjustments before it is published and/or distributed;
- translations produced by or at least with native speakers in order for the information and its source to be as clear, correct and trustworthy as possible for the target groups;
- testing materials with various end-users before dissemination;
- working with sign language users and/or Deaf sign language interpreters (PART 3; PART 4 – Chapters 1-4 and PART 5 – Chapter 1, of the full report);

Finally, during the roundtable discussions (PART 4 – Chapter 3, of the full report) and in the product development phase of the project (PART 3, of the full report), intermediaries and experts stressed the importance of undertaking actions in terms of training and support for the people who create communication materials. Apart from collaboration and participation, it is equally important that members of governmental communication teams who create products are aware of accessibility issues, access needs and attention points, and that they have the possibility of developing the necessary skills to develop products and know when to call upon external expertise.

7 INCLUSIVE COMMUNICATION AS PART OF AN INCLUSIVE SOCIETY

The ICC project started from the premise of the right to access to information (SEE PART 1 OF THIS SUMMARY) and focussed on ways in which this access could be guaranteed for different target groups. The project results, however, have also underlined the fact that efforts towards a more inclusive communication strategy go hand in hand with efforts for a more inclusive society and (social) environment. While this encompasses a wide range of issues that fall well beyond the scope of the current project, the following issues were raised during the project's research activities.

First, participants of roundtable discussions and focus group discussions mentioned that the content of COVID-19 communications materials and measures taken by the government were not always in line with the realities of peoples' lives and that government and society should take those needs into account more in a crisis context (SEE ALSO 6.1 DESIGN FOR ALL FROM THE START).

Second, it was mentioned that society and government could take initiatives to empower people to be able to participate more fully in society. For example, people with visual impairment would benefit from training in the use of new technology. Too often it is assumed that blind people will learn to use (new) technologies on their own (PART 4 – Chapter 3, of the full report). Another example is strengthening the level of health literacy of target groups. For some participants, this means strengthening the development of critical awareness while offering spaces for debate (PART 4 – Chapter 4, of the full report).

8 LIMITATIONS AND AVENUES FOR FURTHER RESEARCH

In this final section of the executive summary, we briefly outline the main takeaways of the project in terms of the wide research gap the project activities uncovered, the possible avenues for further research, the contribution of the project to both societal and academic fields of practice, and finally, the limitations of the project.

8.1 RESEARCH GAP & AVENUES FOR FURTHER RESEARCH

At the start of the COVID-19 pandemic in March 2020, governments had to quickly produce and disseminate crisis information to their citizens. Yet, the communication they provided was not fully always adapted to citizens who can experience sensory, linguistic, textual and cultural barriers in accessing information, which hindered the correct transfer and effective outreach of the information to these target groups. This observation formed the basis on which the ICC project was first conceived. However, an initial search for existing (international) research and evidence-based recommendations for inclusive and accessible crisis communication on COVID-19 (or related health crises) led to the conclusion that a **major research gap** exists in this respect. During the project's lifespan, the severity of this lack of research on accessible communication in crisis contexts became more and more clear. Although there is (qualitative) research and ample evidence from practice that underlines the importance of accessibility and that identifies existing barriers and how to overcome them, (quantitative) research on the effectiveness of different solutions to increase access is virtually non-existent. This was confirmed also in the systematic rapid review (see PART 2, of the full report), in which around seven thousand studies were retrieved based on a keyword search and subsequently screened for quality and relevance (i.e. about accessible crisis communication forms, channels and outreach methods for vulnerable target groups), while only twelve studies met the necessary criteria for inclusion in the end.

In addition to identifying this major research gap, the ICC project also brought to light the full complexity behind inclusive crisis communication strategies and has highlighted the need for an **interdisciplinary approach** (bringing together academic expertise from various fields and backgrounds) as well as an **transdisciplinary approach** (bringing together (academic experts) with governmental and societal stakeholders). The study of accessible COVID-19 crisis communication for all, indeed resides at the crossroads of several disciplines, including communication sciences, health studies, sociology, linguistics, translation studies, etc. What is more, the ICC project has underlined the importance of a participatory research approach when it comes to the study (and development) of accessible crisis communication which involves relevant stakeholders and end-users with first-hand knowledge and experience.

Against this background, the ICC project has identified a few key challenges as avenues for further research. Apart from the need for **replication** of the ICC project's results in contexts beyond Belgium, the project has also highlighted the need for solid **methodological frameworks** for participatory and collaborative research approaches with stakeholders and end-users, particularly when it comes to people with a sensory impairment. A second avenue for further research concerns the delineation and identification of all target groups that can experience communication vulnerability and barriers to crisis communication. While traditionally studies focus on the needs of specific target groups, the ICC project has also underlined the importance of **intersectionality**

and the fact that certain barriers apply to various target groups and that certain people experience several barriers simultaneously. This requires a further exploration of personalised communication for specific target groups as well as universalist approaches that increase the accessibility of crisis communication for all, taking into account communication and accessibility needs across various groups. Another issue that has come up in the ICC project, is the proliferation of digital communication at the expense of print and face-to-face communication which puts people with low digital literacy skills at a disadvantage. More research on how to overcome the **digital divide** is therefore warranted. Finally, a range of topics related to **multimodal communication and translation** have surfaced that require further exploration, such as the accessibility of pictograms and visuals, the form of audio description of informative videos, to name but a few.

8.2 CONTRIBUTION & LIMITATIONS

The ICC project contributed to filling the major research gap outlined above, with a unique focus on recommendations and solutions for more accessible crisis communication from an inter- and transdisciplinary approach. It hopes to contribute to more accessible crisis communication in the future and to be a catalyst for more systematic interdisciplinary research in this area.

In this respect, the following limitations of the research need to be taken into account when reading and/or applying the research results:

Belgian-specific context: As indicated above, (quantitative) research on accessible crisis communication is almost non-existent. Apart from the systematic rapid review, the project focused mostly on qualitative research activities, such as the roundtable discussions and focus group discussions. As these were performed within the local Belgian context, the results are specific to this local context only. Extrapolation to other areas and contexts should therefore be done with care.

Multilingual and multi-regional research context: Since the ICC project is a research project on a national scale, we strived for equal representation of both the Dutch-speaking region and the French-speaking region and thus synchronise the research methods and activities as much as possible. Yet, in some research phases this was not always the case due to practical reasons.

Crisis research in a crisis context: The ICC project not only focused on inclusive communication strategies a crisis context, but also had to be rolled out and completed within a crisis context and the ongoing COVID-19 outbeak in Belgium (i.e. over the period February 2021 – March 2022). This had two main implications for the project's research activities. Firstly, the project had to be realized in a shortened time-span of only one year, in order for the research results to be applied and made available as soon as possible to allow for immediate pick-up in the fight against COVID-19 in Belgium. This implied that pragmatic decisions had to be made concerning certain research activities and the overall design of the project. For example, instead of working with consecutive project phases – first focussing on gathering information and evidence and then developing more inclusive communication materials – an iterative process was used for the roundtable discussions, product development and focus group discussions. Another example was the decision to opt for a rapid systematic review instead of a full systematic review. Secondly, the project had to adapt its activities to the ever-changing situation caused by the COVID-19 pandemic. Uncertain work situations and COVID-19 quarantines and illnesses posed a constant challenge for the project's research team. Moreover, research activities were encumbered to a certain extent, because direct face-to-face contact with the project's stakeholders was not possible, which meant that all meetings of the projects research team and the round table discussions all took place online.

ABOUT THE AUTHORS

The ICC project has been jointly conducted by a consortium of twenty experts and researchers from five different institutions. Below we introduce each member of the consortium by listing their expertise, (research) interests and previous work relevant to the project, as well as their specific role within and contribution to the project.

- **Prof. dr. Mieke Vandenbroucke (UAntwerpen)** is a tenure track research professor at the Department of Linguistics of the University of Antwerp. She holds a PhD in Linguistics (Ghent University, 2016) and was a Fulbright scholar at UC Berkeley in 2016-2017. She acts as the Adjunct Secretary General of the *International Pragmatics Association* and editor of the *Handbook of Pragmatics*. She conducts and coordinates fundamental and applied research at the intersection of sociolinguistics and pragmatics, with a particular interest in the impact of globalisation and migration on multilingual urban settings in Europe, institutional discourse and language policy. She was the lead-PI for the ICC project.
- **Prof. dr. Nina Reviers (UAntwerpen)** is a tenure-track professor in Audiovisual Translation and Media Accessibility at the Department of Translators and Interpreters. She holds a PhD in Translation Studies (University of Antwerp, 2018) in the field of Audio Description, for which she was awarded the EST Young Scholar Prize in 2019. Her research addresses linguistic and multimodal aspects of audio description, computer-aided translation of audio description, integrated access for the (scenic) arts and technology for access. As manager of the OPEN Expertise Centre for Accessible Media and Culture, Nina fosters a close collaboration with stakeholders as a key factor in her research and teaching activities. She acted as co-PI for the ICC project.
- **Prof. dr. Gert Vercauteren (UAntwerpen)** is a tenure track professor in Translation Technology at the Department of Translators and Interpreters of University of Antwerp. He holds a PhD in Translation Studies and his research focuses on Media Accessibility in general and audio description in particular. His current research interests include the cognitive load imposed by audio description and computer assisted and machine translation of audio description. He is a member of the TricS research group, the OPEN Expertise Centre and the editorial board of the new book series on audiovisual translation by Frank & Timme.
- **Bonnie Geerinck (UAntwerpen)** holds a master's degree in translation studies from the University of Antwerp. She has worked as a researcher for the Department of Translators and Interpreters and the Department of Linguistics at the University of Antwerp since 2019. Her research activities for the ICC Project consisted of communicating and networking with the stakeholders in the Flemish advisory board, carrying out the data collection, analysis and synthesis of the qualitative evidence from the Flemish stakeholders' input and supporting the lead-PI in the coordination of the project.

- **Prof. dr. Anna Jankowska (UAntwerpen)** is a tenure track research professor at the Department of Translators and Interpreters of University of Antwerp and former Assistant Lecturer in the Chair for Translation Studies and Intercultural Communication at the Jagiellonian University in Krakow (Poland). She was a visiting scholar at the Universitat Autònoma de Barcelona within the Mobility Plus program of the Polish Ministry of Science and Higher Education (2016-2019). Her recent research projects include studies on audio description process, mobile accessibility and software.
- **Lien Vermeire (NCCN)** has been working as a communication officer at the National Crisis Center since 2016. On a daily basis, Lien coordinates the Risk-Info campaign, a public campaign to raise risk awareness and resilience in Belgium. She has assisted in crisis communication during several exercises and real emergency situations at the NCCN or as part of Team D5, a national team of experts in crisis communication that provides support to (local) authorities when needed. In 2020, she wrote a thesis on inclusive communication in fast-burning crises for a Postgraduate Disaster Management. During the COVID-19 crisis, she supervised the translations, interpreters and other specific inclusive communication actions.
- **Prof. dr. Anne-Mieke Vandamme (KU Leuven)** was trained as biochemist, and holds a PhD in sciences since 1986. She joined the Rega Institute at the University of Leuven in 1990, where she started a unit on virus genetic testing for clinical and epidemiological purposes (http://rega.kuleuven.be/cev/avd/). She co-founded a new division, Clinical and Epidemiological Virology; and co-started the "Institute of the future" (www.institute-for-the-future.be), a transdisciplinary research incubator. She is member of the Superior Health Council of the Belgian federal government and of the WHO ad-hoc advisory group on COVID-19. Within the project, she was part of the supervisor team that engaged in the research activities appointed to the KULeuven team.
- **Prof. dr. Karin Hannes (KU Leuven)** is associate professor at the Faculty of Social Sciences at KU Leuven and founder of the European Network Qualitative Inquiry. She specialises in meta-synthesis and innovative research methodology, including arts-based, multisensory, place-based research practice and systematic reviews. Karin prefers to work in the public sphere and from an academic activist perspective. Together with Pieter Thyssen and Daniëlle Wopereis she coordinated the systematic rapid review for the guideline development process and organised the expert panel discussions.
- **Prof. dr. Maria-Cornelia Wermuth (KU Leuven)** (PhD, Vrije Universiteit Amsterdam) is Associate Professor at the Faculty of Arts of KU Leuven (Antwerp Campus) and Head of the Research Group Translation and Technology. She teaches German grammar and Terminology and IT in the Bachelor in Applied Linguistics and medical translation in the Master in Translation. Her research areas are applied cognitive linguistics, terminology, (specialised) translation (including software tools) and (cloud-based) collaborative translation approaches. She is particularly interested in the exchange of experience and knowledge between (medical) domain specialists and translators and the development and implementation of interprofessional education in the translator training, and more specifically in the domain of specialised (medical) translation. She participated in the Rapid Review for KU Leuven.

- **Dr. Pieter Thyssen (KU Leuven)** is a postdoctoral researcher (Chargé de Recherches FNRS), working in the group of Alexandre Guay at the Institut Supérieur de Philosophie of the UCLouvain in Belgium. He has an MSc in Chemistry (KU Leuven) and completed two PhDs in Theoretical Chemistry and Philosophy of Physics. Together with Karin Hannes and

Daniëlle Wopereis he coordinated the systematic rapid review for the guideline development process and organised the expert panel discussions.

- **Daniëlle Wopereis (KU Leuven)** holds a master's degree in Sociology from the VU University Amsterdam and works as a researcher at KU Leuven. She contributed to the guideline development process, by examining literature, coordinating and reporting on the panel discussions and drafting the evidence-based guideline.
- **Heleen Van Opstal (Atlas integratie en inburgering Antwerpen)** is the coordinator of the social interpreting and translation unit at Atlas (2015-2021). At the start of the pandemic, in March 2020, Heleen set up a crisis translation team of social translators, through which information about COVID-19 was made available to the National Crisis Center and the City of Antwerp in multiple languages within 24 to 48 hours. Within the ICC project, she coordinated the communication product development in function of the roundtable discussions and focus group discussions. Furthermore, she actively contributed to the research and development of the communication products by sharing her specific expertise on Easy Language and low literacy.
- **Tristan Van Hoeck (Atlas integratie en inburgering Antwerpen)** is an employee of the social interpreting and translation unit at Atlas, where he is responsible for the daily management and follow-up of translation assignments for the unit, including specific translation assignments about COVID-19. He is also a certified social interpreter and freelance lecturer for the Social Interpreting course. For the ICC project, Tristan organised the practical implementation and development of the communication products and prepared the focus group discussions under the supervision of Thomas More.
- **Prof. dr. Isabelle Aujoulat (UCLouvain**) is a professor in public health at UCLouvain/Institute of Health & Society (RESO). She teaches health promotion, patient education, and qualitative research methods. Her main areas of interest and expertise include: patient empowerment, personalised care planning, patient and citizen involvement in research, teaching and guidelines development. For the ICC project, Isabelle supervised the processes of data collection and analysis in Brussels and Wallonia, discussed intermediary results with the UCLouvain team, and critically revised and finalised the interim reports for the activities in the second and third Work Packages.
- **Dr. Dominique Doumont (UCLouvain)** is the coordinator of a University Centre for Health Promotion at UCLouvain (UCLouvain/IRSS-RESO). She teaches research methodology, health education, e-health and socioeconomic health policies in a nursing school. Her ICC project activities included finalising the selection of materials, translating the interview guides, contributing to the collection data collection in Brussels and Wallonia, critically revising the drafts of the interim reports for second and third Work Packages, and acting as an interface between the UCLouvain team and the other partners of the ICC project.
- **Hélène Lambert (UCLouvain)** holds a master's degree in anthropology from the Université Libre de Bruxelles. She works as a research assistant at the University Centre for Health Promotion of UCLouvain (UCLouvain/IRSS-RESO). Together with Océane Le Boulengé, she conducted the data collection and analysis in Brussels and Wallonia, and both of them drafted the interim reports for second and third Work Packages.
- **Océane Le Boulengé (UCLouvain)** holds a master's degree in social and cultural psychology. She works as a research assistant at the University Centre for Health Promotion of UCLouvain (UCLouvain/IRSS-RESO). She also works as a psychologist in a family planning centre. Together with Hélène Lambert, she co-ordinated and conducted the data collection

and analysis in Brussels and Wallonia, and both of them drafted the interim reports for second and third Work Packages.

- **Dr. Marijke Lemal (Thomas More)** is manager of the unit 'research and service' at Thomas More University of Applied Sciences. She holds a PhD in social sciences and communication sciences from KULeuven. She contributed to the ICC Project as the PI for Thomas More.
- **Dr. Wessel van de Veerdonk (Thomas More)** is a Doctor in medical sciences, epidemiologist (MSc) and nurse (BSc) with a strong clinical background in (forensic) psychiatry. Wessel is currently working as a researcher and coordinator at the Thomas More University of Applied Sciences and focuses on research methodology and prevention. Wessels works on multiple projects in which several disciplines (technology, communication, healthcare) come together reaching most innovative results. Wessel's role in the project, together with Sarah Talboom, was setting up, executing and reporting on the roundtable discussions with intermediaries and the focus group discussions with the defined vulnerable populations in Flanders.
- **Sarah Talboom (Thomas More)** has a background in Communication Sciences. She is currently working as a researcher at the Thomas More University of Applied Sciences within the domain of strategic communication and a focus on inclusive and health communication. Together with Wessel, Sarah was responsible in the ICC project for setting up, executing and reporting the roundtable discussions with intermediaries and the focus group discussions with the defined vulnerable population groups in Flanders.

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