

Appendix A.

Table 1. Coding Scheme.

Characteristic	Description	Example
<i>How to write semantic information</i>		
General definition	Definition found in an online dictionary	“An enforcer is someone employed by a company or the police to ensure safety”
Local context	The living environment of civilians in the municipality	“It needs to be translated to how it works in the municipality and to text that people on the street will understand”
Relevance towards statement	The description fits the specific statement	“It is about the instrument that this person gets equipped with, hence, for the statement, it would be relevant to know what this person’s task is”
Language use towards the target group	Clarity of information for the diverse target group by means of language use and examples	“Do not introduce new difficult terms in your explanations”
Local source	A local source focused on municipalities	The municipal websites, or officials with expertise X
Governmental source	A source focused on national governmental level	www.rijksoverheid.nl
Other sources	Other sources to consult for writing semantic descriptions	www.isditb1.nl
Other focused on semantic information	Other suggestions for semantic information	“Sometimes a simpler explanation describes the situation better than to precisely explain a concept in official terms”

How to write pragmatic information		
Accurate information	Proven information, based on numbers, no untruths	Information based on the Dutch CBS or peer reviewed science
Biased information	Information colored by framing, choice of words, emotions	Terms like climate crisis
Language use towards the target group	Clarity of information for the diverse target group by means of language use and examples	“A well-known example of a civilians’ initiative in [city] is [park].”
Describe the context	For the status quo, describe the full context behind a statement topic	“Describe all that is needed in the process surrounding a referendum.”
As concise as possible	Describe something in as little words as possible	“A referendum is a poll of the people”
As detailed as possible	Describe something as precise as possible	“A referendum is a poll of the people, for which civilians first need to gather signatures ... This can still be rejected.”
Use a picture	Use a picture to clarify something to the user	“Show a picture of a traffic circle”
Local source	A local source focused on municipalities	The municipal website, officials with expertise X
Governmental source	A source focused on national governmental level	www.rijksoverheid.nl
News source	Use an article from a news source	Brabants Dagblad, Omroep Brabant
Other sources	Other sources to consult for writing pragmatic descriptions	www.wetten.overheid.nl

Other focused on pragmatic information	Other suggestions for pragmatic information	“Also show political parties’ previous voting behavior on this issue”
<i>How to implement the parties’ stances</i>		
Per statement	Show the party stances per VAA statement	See for example <i>StemWijzer</i>
At the end	Show the party stances at the end of the VAA	See for example <i>KiesKompas</i>
Structure beforehand	Give parties rules beforehand for writing the party stances	“The stance must fit the corresponding statement”
Parties deliver their own stances	Just as now, parties deliver their own stances to the VAA developer	See for example <i>StemWijzer</i>
AI for party stances	Using AI to directly filter party stances from party programs	“Use AI as a search engine for party stances in party programs’
Party program	Parties deliver passages from their party program as source for their stance	See for example <i>KiesKompas</i>
Party may provide stance without a source for proof	A party may still provide its stance without an alternative source to back it	“[Party]’s perspective on [issue] is...”
Party may only provide a stance with alternative proof	A party may provide a stance if an alternative source is given with it	“[Party] has previously voted as follows on a motion about [topic]:...”
Communicate in VAA that the stance is not in the party program	Communicate to the user that the stance is not in the party program	“This stance is not in [party]’s program”

Other focused on party stances	Other suggestions focused on party stances	The VAA brand should check if the stances fit what parties propagate
<i>How to select and present pro and con arguments</i>		
Add this information	This information is valuable to add in a VAA	Show the arguments pro and con in the political debate with the statements
Selection of the most frequently mentioned arguments	Base the pro and con arguments on the most frequently mentioned arguments by parties	Use the most frequently mentioned arguments from the list of political parties' stances for the arguments pro and con the statement
Use everything as an argument	Everything parties provide as argument, classifies as an argument in the list	Arguments as “An X in the passport is an overboard woke ideal” may be included in the list of arguments. It is a party’s opinion.
Weigh arguments	We as researchers look critically at arguments, weigh them and select	“You as researchers may filter out qualitatively bad arguments”
Give parties rules beforehand	Before VAA development, give parties rules for writing party stances	“Provide a maximum of three arguments”
Independent experts	Base the pro and con arguments on independent experts	Scientists, journalists
Display all arguments	Display all arguments in the pro and con arguments	Show all given arguments pro and con statements when the user clicks the button ‘argumentative information’
Balance in arguments for and against	Show an equal amount of argument for and against in the pro and con arguments	Show an equal amount of argument pro and con when the user clicks the button ‘argumentative information’

Communicate the source to user	Communicate that the pro and con arguments come from political parties	“These arguments were given by political parties”
Party stances	Base arguments on the political parties’ stances	Use the party stances that parties deliver to VAA brands for the arguments pro and con the statements
Independent experts	Base arguments on the expertise of independent experts	Scientists, journalists
Local source	Base arguments on municipal sources	The municipal website, officials with expertise X
Party programs	Base arguments on programs of political parties	Use party programs of participating parties to draw out the arguments pro and con the statements
AI for arguments	Use AI to come up with arguments	Ask ChatGPT what frequently mentioned arguments are in the discussion around glyphosate
Other sources	Other sources to base pro and con arguments on	Go out into the street to ask civilians’ opinions
Other focused on pro and con arguments	Other suggestions for pro and con arguments	“It is good to present sources with the arguments. This does not necessarily help with verifying whether an argument is qualitatively sound, but rather to verify whether it has a basis.”
<i>AI for information provision in VAAs</i>		
Recognizing user input	AI recognizes the user’s intent	AI searches for [party]’s stance when a user asks: “What does [party] think?”
Generating answers	AI generates answers	The system automatically writes texts based on previously learned sentences,

		for example about how municipal elections work in the Netherlands
Correctness of info	How correct are the answers the system provides	“The system should not hallucinate”
Controllability system (black box)	To what degree it is clear on which data the system is trained	“Those models are so big that you can never precisely discover where an answer is from”
Privacy user messages	Where does the user data go/does the system train itself on user input	“User data should not get into Russia’s hands”
Transparency/traceability to sources	The system provides sources with its information	When the system derives a stance from [party program], it should also present the corresponding passages from [party program]
The amount of time/effort	The amount of time/effort it costs to develop a certain AI system	A system wherein an LLM is used means less effort for the developer; a system you develop based on a self-selected collection of sources costs more effort
AI for informing from party programs	The system is trained on party programs	By using party programs as system sources, the LLM can base its answers on that
AI based on a select set of sources	The system is trained on a set of sources	By selecting a collection of sources, you can guarantee the LLM bases its answers on those sources
Communicate AI	Communicate to the user that the system is (partly) AI	This system is partly AI, but it is trained on a self-selected collection of sources
Link to GPT when unable to answer	Give the user a link to GPT when the bot cannot answer the question	Unfortunately, I cannot answer this question. Search for your answer on www.chatgpt.com

Link to different sources	Give the user a link to for example, municipal websites, party websites etc.	Unfortunately, I cannot answer this question. Search for your answer on [party websites]
Link to contacts in the municipality	Give the user email addresses of spokespeople of local political parties	Unfortunately, I cannot answer this question. Mail to [spokesperson party] for more information
<i>CAVAA possibilities</i>		
A bot with buttons	Extra information in the VAA only available through buttons, the user cannot type questions	The chatbot presents buttons that provide information about frequently asked questions per statement
Combination model (current CAVAA)	The user can also type own questions, AI used for intent recognition, answers prewritten	Users can type their own questions in an open text-field
Combination texts	AI can make combinations out of prewritten text to formulate a fitting answer per user question	If a user asks about the role of the government in a referendum, the system can specify its answer to the relevant part of information and does not provide irrelevant information that is also present in the dataset (for example about what civilians must do themselves)
All the way AI model	No control over answers, GPT used for intent recognition and text generation	There is a direct link with an LLM such as ChatGPT that both recognizes users' input as well as formulates its own answers on this input
Other focused on AI	Other suggestions related to the use of AI	Use AI for a focus on multiple languages