1 MAPPING OF PARTICIPANTS AND STATEMENTS IN OUR RESULTS SECTION

Our results section avoids naming participants for *each* statement that compose our themes and sub-themes. We, instead, give a sense of the prominence of each statement by using terms such as *a few, many, mostly, generally, unanimously*. We also mention *who* said *what* when a statement is based on comments made by *one* to *three* participants. We decided to do so to improve the readability of our manuscript. Table 1 offers a detailed mapping of the participants whose responses led to the statements in our results section. Additionally, we release our codebook, where we include the specific quotes that compose each statement.

Statements	Participants
T1.1. Strategizing Information Requests	
Case (1), hypothesized that they had violated the regulation	P1, P3, P4, P5, P8, P10, P11, P12, P13, P15, P16, P17, P18, P19, P20, P21
Case (2), hypothesized that they represented a false positive	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21
Case (2a), hypothesized that they had rented their property out with a license	P3, P6, P8, P19, P10, P13, P15, P18
Case (2b), hypothesized that they had not rented their property out but the system indicated that they did	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P14, P15, P16, P17, P19, P20, P21
Unanimous priority to knowing *why*	P1, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21
Difference between feature-based explanation and decision justification	P1, P4, P6, P7, P8, P9, P10, P12, P15, P16, P17, P19, P20, P21
Municipality should be clear about the reasons behind the decision	P13, P15, P18, P19, P21
Lack of actionable data features	P1, P3, P7, P8, P9, P10, P12, P15, P18
Want to understand the decision basis (policy)	P3, P15, P18
Request for information to know where they stand with respect to law	P1, P5, P15
Want to double-check that the algorithmic decision basis is backed up by relevant policy	P1, P4, P8, P13, P15
Admit that they might not have been aware of the regulation and would accept the first warning if duly motivated	P1, P10, P12, P13, P16
Ask for legal advice	P1, P2, P4, P7, P14, P18, P19
Case (2b), difficult to show proof of innocence	P11
Low AI literacy - uninterested in knowing how the algorithmic system worked	P3, P9, P13, P18, P19
Medium and *High AI literacy* - data-related information regarded as actionable	P1, P2, P4, P5, P6, P7, P8, P10, P11, P15, P16, P20, P21
Medium AI literacy and *High AI literacy* with no *AI fairness experience*- generally curious to know more about the system	P1, P2, P5, P8, P10, P11, P12, P20, P21
Medium AI literacy and *High AI literacy* with no *AI fairness experience*- generally curious to know more about the system	P1, P2, P5, P8, P10, P11, P12, P20, P21
Medium AI literacy and *High AI literacy* with *no AI fairness experience* - do not know how information about the *how* is useful for contestability	P1, P2, P5, P6, P7, P8, P10, P11, P20, P21
High AI literacy and *experience with AI fairness* - additionally requested information about the model and the development of the system	P4, P15
T1.2. Facilitating Dialogue with Controllers	
Need to turn relevant information into meaningful explanations	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P15, P16, P17, P18, P19
Need to clarify technical jargon	P2, P3, P6, P7, P8, P10, P15, P16
Communication channels should be designed to minimize friction	P1, P2, P3, P4, P5, P6, P8, P9, P10, P12, P13, P14, P15, P17, P18, P20, P21
Effort to understand the information has to be minimal	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12, P13, P15, P16, P17, P18, P19
Need for information to be relevant for their case, concise, simple and clear	P2, P4, P5, P7, P8, P9, P10, P12, P15, P16, P18
Need to customize information, e.g., to decision subjects' AI literacy	P4, P5, P6, P8, P11, P15, P18, P19, P21
Progressive discovery of information based on relevance	P8, P9, P10, P18
Need for communicative effort through visual explanations or explanatory videos	P8, P16, P19, P21
Interactive explanations	P1, P17, P21
T2.1. Seeking Organizational Support	
Preference towards human reviewer	P2, P5, P6, P12, P13, P16, P17, P19, P21
AI seen as unable to change the output while humans could deal with ill-defined situations	P5, P6, P12, P13, P16, P19

Statements	Participants
Need for human reviewer to be cooperative, empathetic and proactive	P2, P5, P6, P8, P11, P12, P15, P18, P19, P20, P21
Need for human reviewers to be active listeners	P7, P20
Need for decision subjects to feel understood and heard	P21
Defined the contestation process as a fight	P6, P8, P10
Need for human reviewers to be experts in AI	P2, P3, P4, P6, P7, P8, P11, P12, P15, P16, P20
Power differentials between reviewers and decision subjects	P10, P15, P17
Power differentials accentuated when there is a lack of knowledge on the decision subject's side	P17, P18
Requests for a third party to mediate	P1, P2, P3, P7, P8, P10, P11, P12, P14, P15, P18, P21
Third party could ask questions on the decision subjects' behalf	P15
Third party could have information about similar cases	P8, P15
Third party should be independent from the municipality, but as informed as developers	P11, P15, P18
Third party should have legal knowledge	P1, P15, P18
Third party should have technical knowledge and help decision subjects move forward	P2, P7, P8, P14, P15
Level of support needed from the third party would depend on the decision subjects' AI literacy	P10, P12, P15, P21
Level of support needed from the third party would depend on the decision subjects' level of satisfaction with the explanation received from the controller	P12
Level of support needed from the third party would depend on the decision subjects' legal knowledge	P10
T2.2. Seeking Peer Support	
General priority to clarify their own individual cases	P3, P5, P6, P7, P8, P9, P10, P11, P14, P15
Case (2b), contesting aspect of the algorithmic system more feasible if done collectively	P11, P15, P18
Similar cases where the algorithmic system made an error - basis for collective contestation	P4, P16, P17
Collective - a place organized by citizens, by people that have gone through this	P18
High AI literacy individuals, or experts could be technical guides	P4, P11, P15
Attracting the attention of the media required	P6, P15
Turning the issues into a political matter required	P6, P15, P18
A collective to help citizens affected by the system to make sense of their situation and act on it	P2, P16
A collective to provide decision subjects insights into similar cases	P4, P7, P14, P16, P17
Collective to enable spotting error patterns across false positives	P3, P4, P7, P11, P13, P16, P17
Collective especially important for people with *low AI literacy* and no immediate social support structures	P2, P18
T3.1. Ensuring Algorithmic Accountability	
Appreciated the right to contest but dealing with errors made by the algorithmic system perceived to be unfair	P9, P10, P15, P20, P21
Burden of showing proof of innocence	P2, P5, P8, P17, P18, P20, P21
Effort needed to make sense of the information that would enable showing proof of innocence	P18
Consensus that correcting AI's mistakes is not the decision subject's responsibility	P4, P7, P13, P15, P18, P21
Requests for *compensations* for the time wasted and effort devoted to contesting	P5, P11
Contesting responsibility of the human controller	P15, P21
Workflow suggested for human controller to contest decisions	P21
Complexity of attributing responsibility if the system is not developed in house	P13
Certification as a solution to unburden decision subjects and ensure fair responsibility attribution	P9, P13
T3.2. Fostering Social Transparency	
Requests for transparency about AI development practices within the organizational context of the public administration (*social transparency*)	P4, P15
Requests for participatory development approaches	P1, P11
Importance of probationary periods that do not impact ongoing activities	P1
Nature of public administration makes the choices made during the system development to be the correct ones	P2, P5, P7, P9, P13, P20, P21
Because the public administration is behind the system, assumption that there will be more accountability and diligence	P2, P5, P10, P20, P21
In the public sphere algorithmic decision-making is believed to be more contestable	P2, P21

Table 1: Mapping of statements that compose our results section and participants whose remarks led to developing such statements.