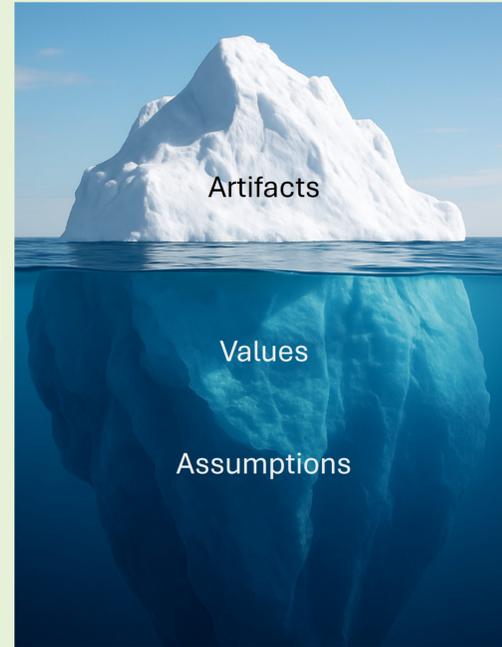




Abstract

The examination of digital forensic evidence can be influenced by organisational culture leading to potential bias, error and miscommunication. How does organisational culture, language and communication practices shape how investigators and digital forensic practitioners exchange, interpret and use digital evidence in domestic and cross-border cases? What implications might these practices have for errors and potential system-level bias? In this study digital evidence handling was examined across five European jurisdictions (Greece, Finland, Czech Republic, Portugal, UK/Scotland).



Background

Clarus moves beyond existing research that addresses bias as a feature of the individual. We approach biases, errors and misunderstandings as systemic rather than individual features.

Organisational culture (Schein, 2010, p. 18) is the pattern of basic assumptions learned by a group as it solves its problems of external adoption and internal integration, which has worked well enough to be considered valid and is therefore taught to new members as the correct way to perceive, think, and feel.

Clarus interpreted actions through an organisational culture lens: System bias occurs when the culture initiates or maintains practices that systematically result in misunderstandings, errors, and biases.

	Interviews	Focus Group Participants	Survey Responses
UK	4	17	17
FI	4	15	15
CZ	4	16	15
GR	4	14	14
PT	4	17	17
Total	20	79	78

Methods

Sample: Practitioners involved in digital evidence handling, including digital forensic practitioners, forensic science practitioners, first responders, investigators, other (e.g. intelligence officers).

Focus group interviews (n=79, 4 in each country).

Web-based survey (n=78).

Analysis:

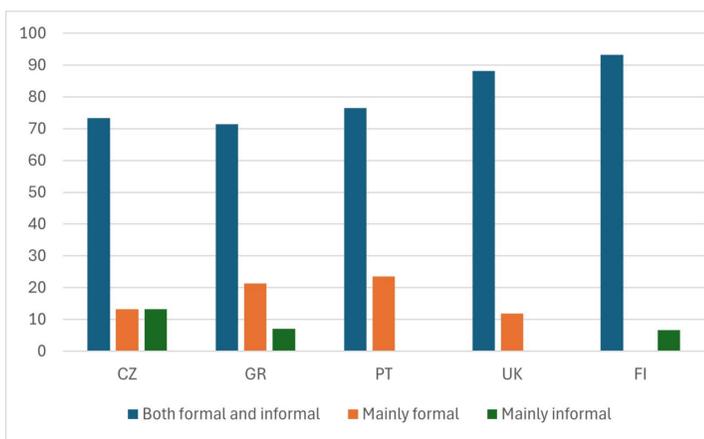
Thematic analysis of the qualitative data and descriptive analysis of the quantitative data was conducted.

Results

i) There exists variability/lack of procedural standardisation at a crime scene.

Some first responders manually search the phone on the scene; others would rely on other roles to secure and package the phone. Some first responders keep the phone on, connect to a charger, secure from network traffic and bring it to digital forensics for extraction of data; others turn the phone off, bag and tag, and bring to digital forensics for extraction of data.

ii) There is a tendency to combine formal and informal communication during a case investigation.



iii) There is a lack of feedback and reflection culture.

Practitioners across the partner countries more often experienced being misled themselves compared to experiences with misleading others. This signifies a lack of feedback and reflection culture.

iv) There was a tendency to trivialise miscommunication and bias.

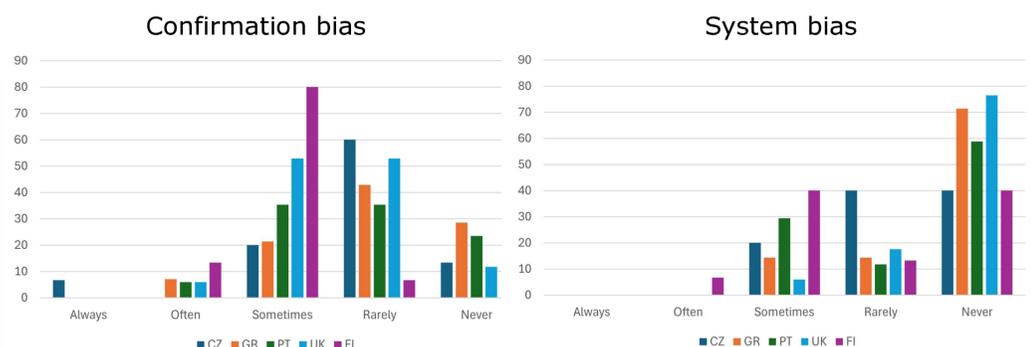
"We have so much dialogue with the investigation, you're probably not going to be in a position where there is miscommunication." (DF in UK1)

"It's just that at every level, from the first response to the examination of evidence, to the final preliminary investigation, the procedures are so strict that they leave little space for prejudice." (FR in GR4)

v) Limited cross-disciplinary knowledge

"[...] it's natural that, for example, in investigation we certainly lack, some more than others and depending on the speciality, specific technical knowledge of the various areas. But the ideal would be for us to know everything, to know all the capabilities [...]" (INV in PT1)

vi) Less experience with system bias vs. confirmation bias in daily work



Implications

- Standardising more procedures while keeping flexibility would be one step that could support a feedback and reflection culture.
- Integrate digital forensic expertise into the strategic investigative decision-making team
- Strengthen communication and documentation – Clarus is creating a lexicon of digital forensic terms, which could reduce miscommunication
- Build bias competence and a learning culture
- Institutionalise feedback and reflection

