

Fingerprint Determinations Downunder Accuracy and Uncertainty

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NSW Police Force



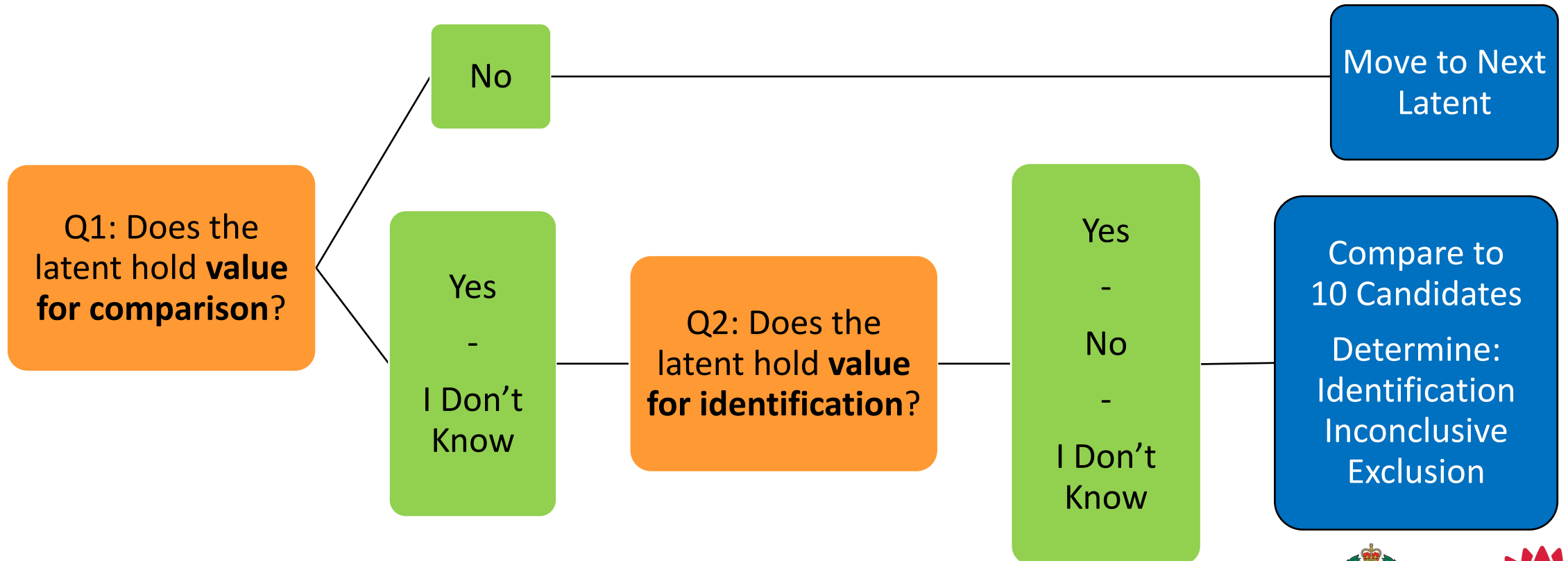
NSW
GOVERNMENT

Study Design

- 40 trials – 1 latent v 10 single finger candidates
- Latent prints reflective of case work
- 11 non-matching trials
 - 10 close non-matches (in ranked order)
- 29 matching trials
 - 9 close non-matches (in ranked order)
 - 1 true match (in random placement)
- Participants used regular comparison software
- Reported results anonymously via online survey



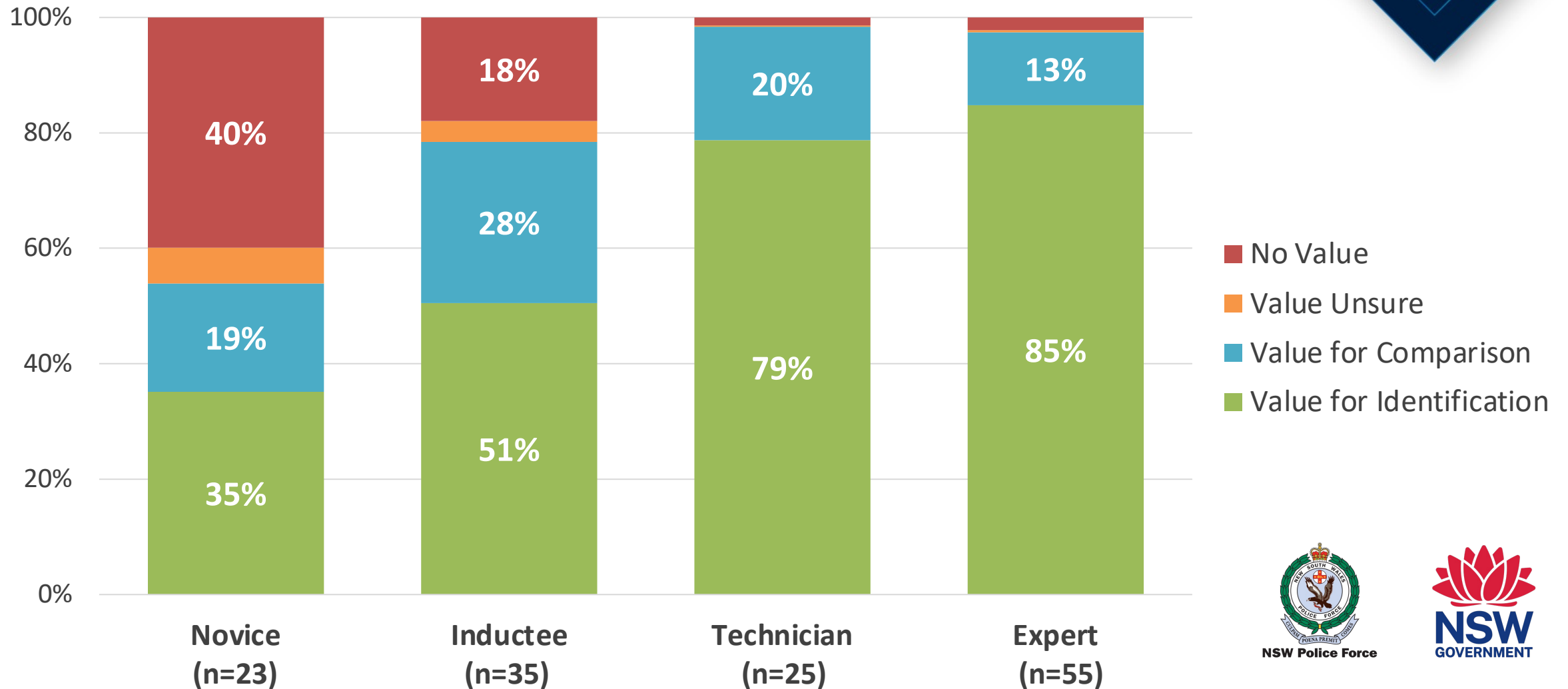
Study Design



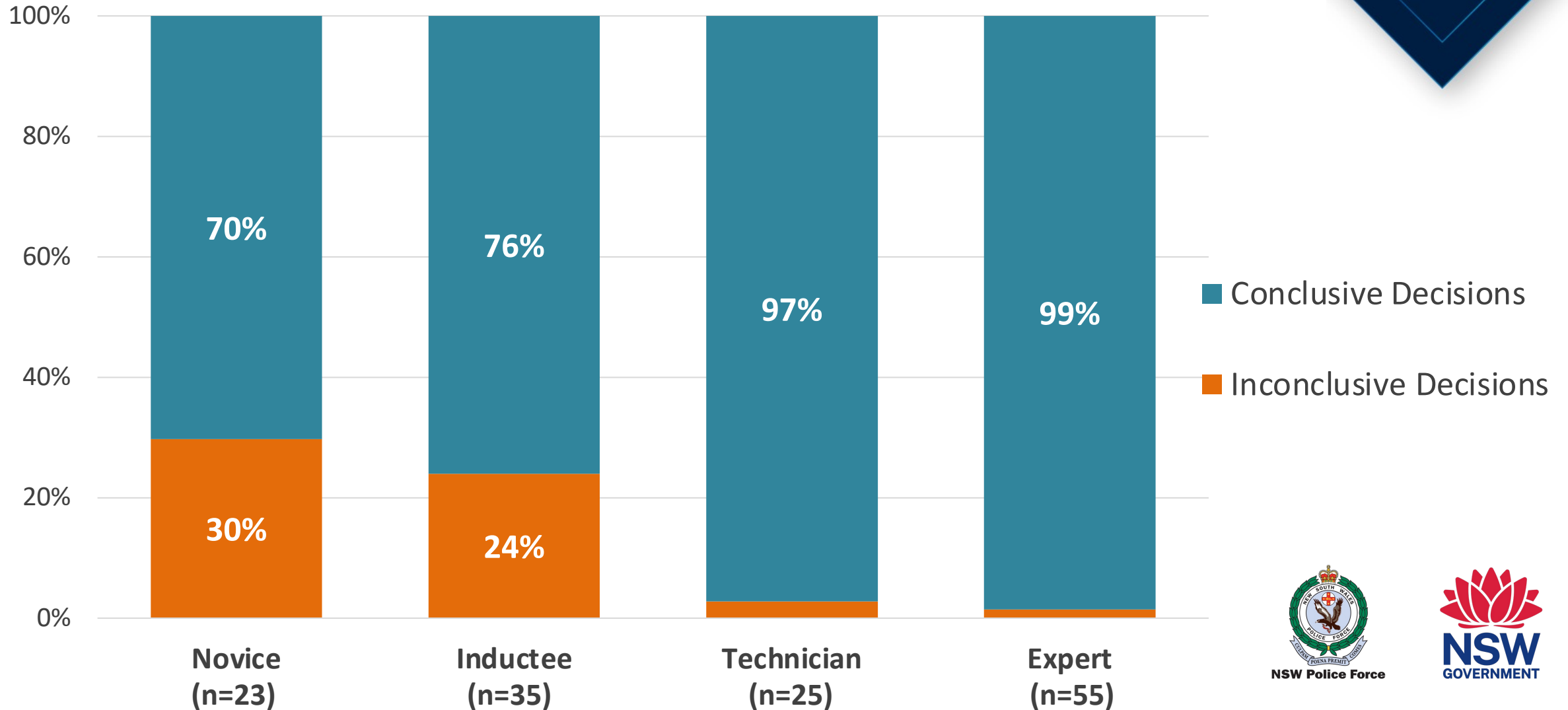
NSW Police Force



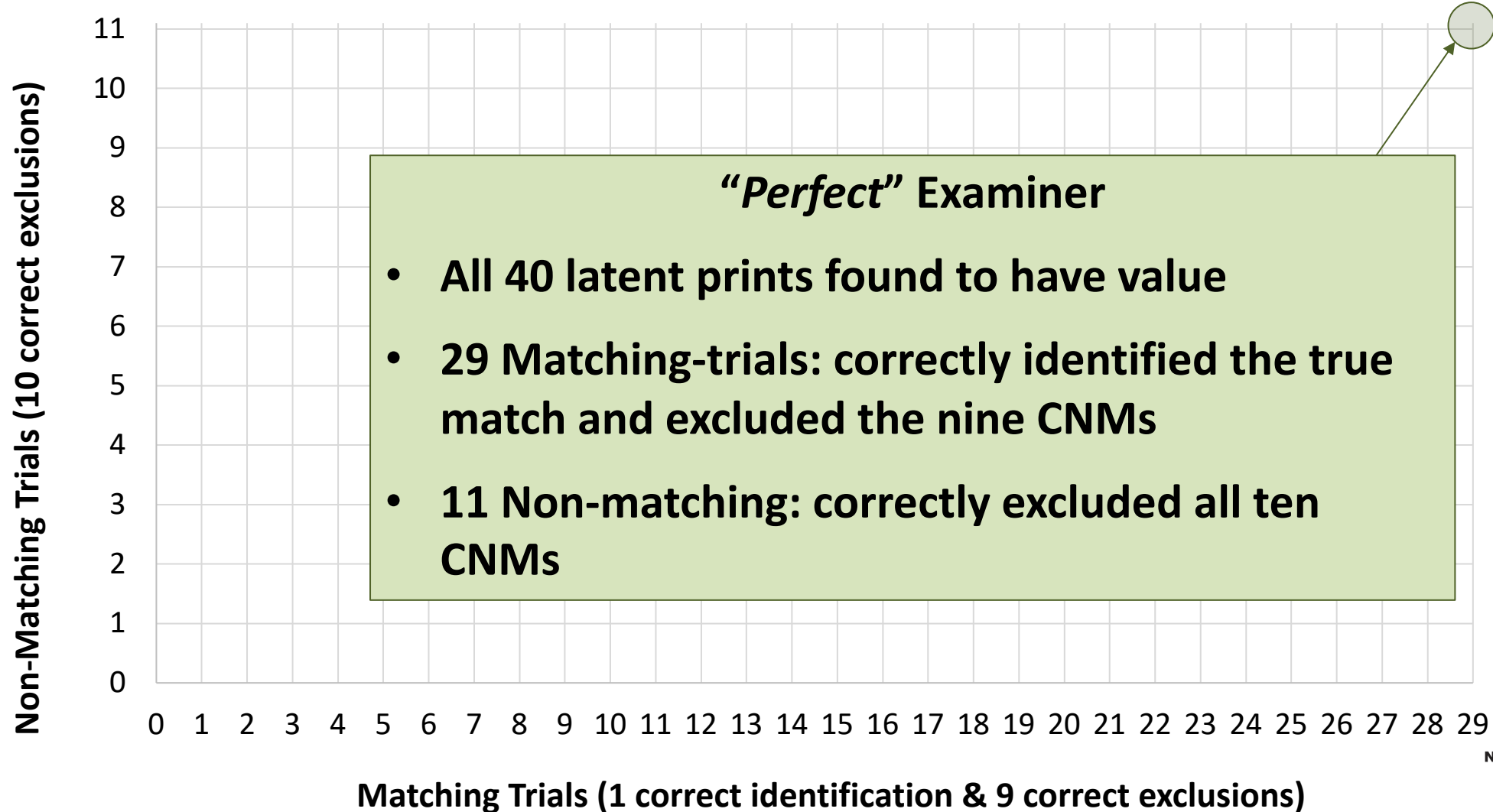
Latent Print Value



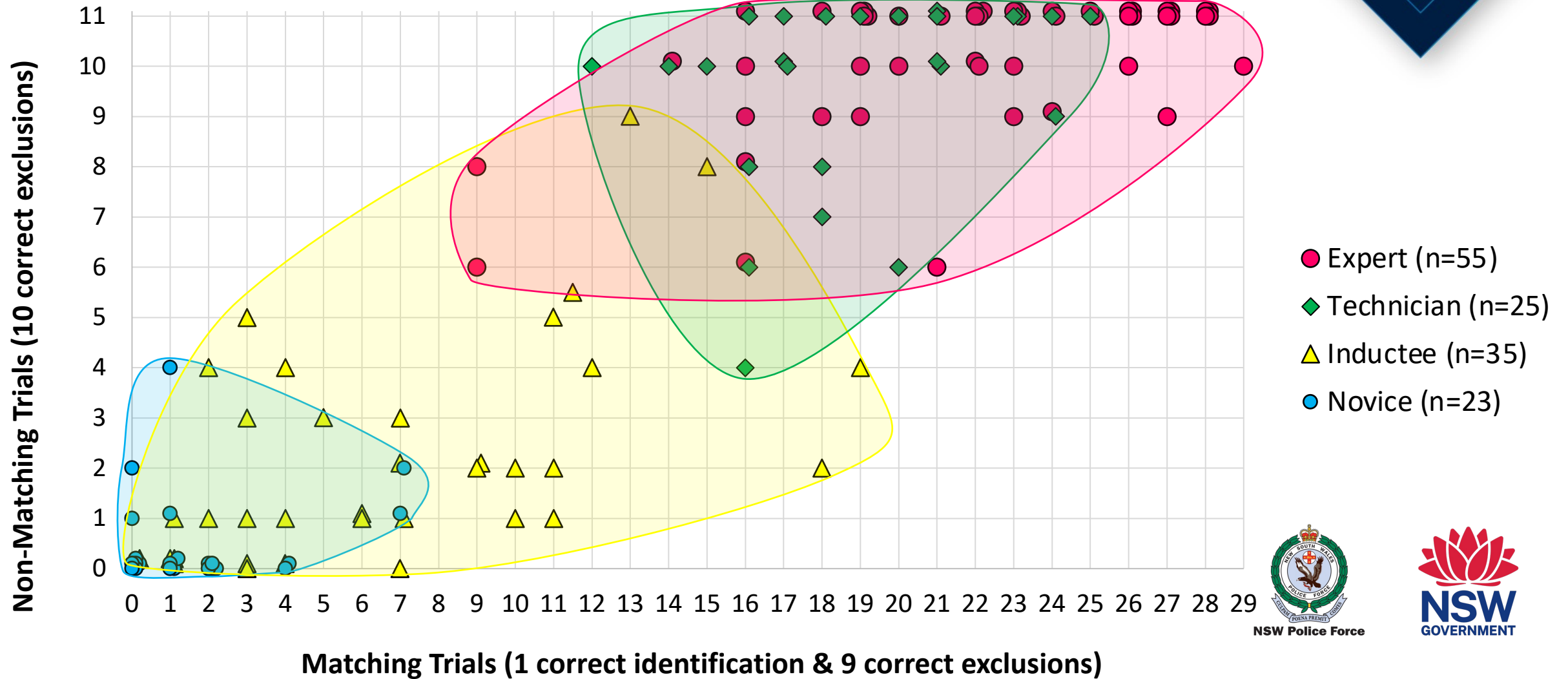
Decision Decisiveness



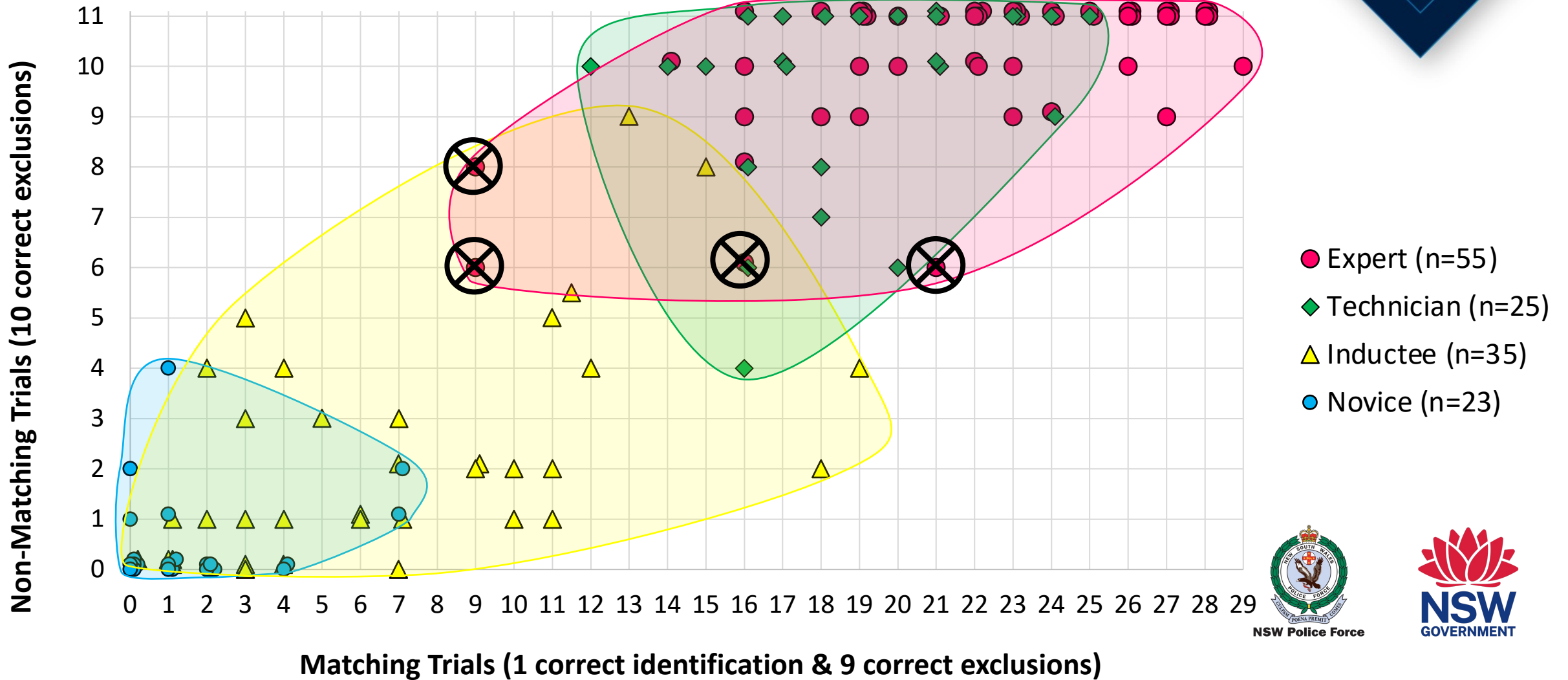
Performance



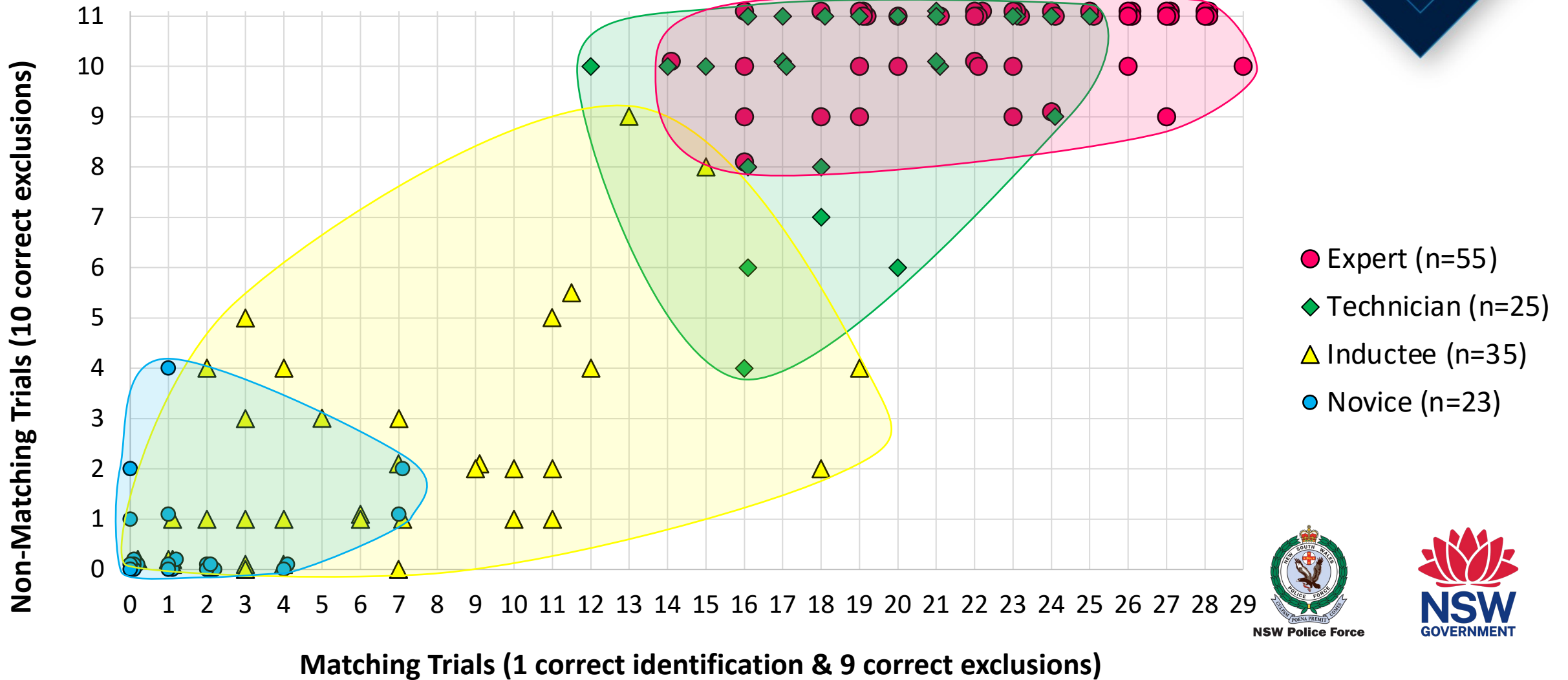
Performance



Performance

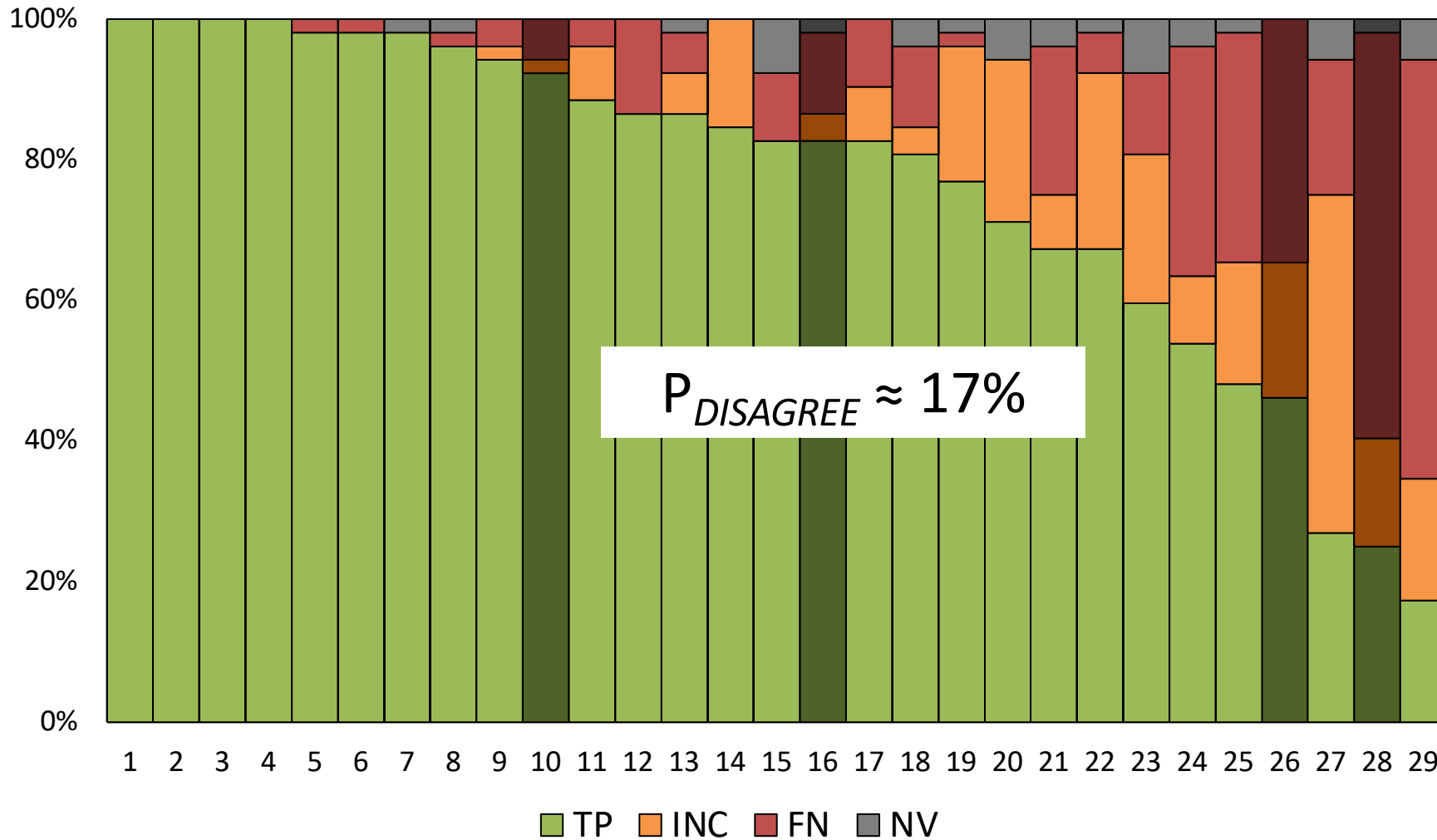


Performance

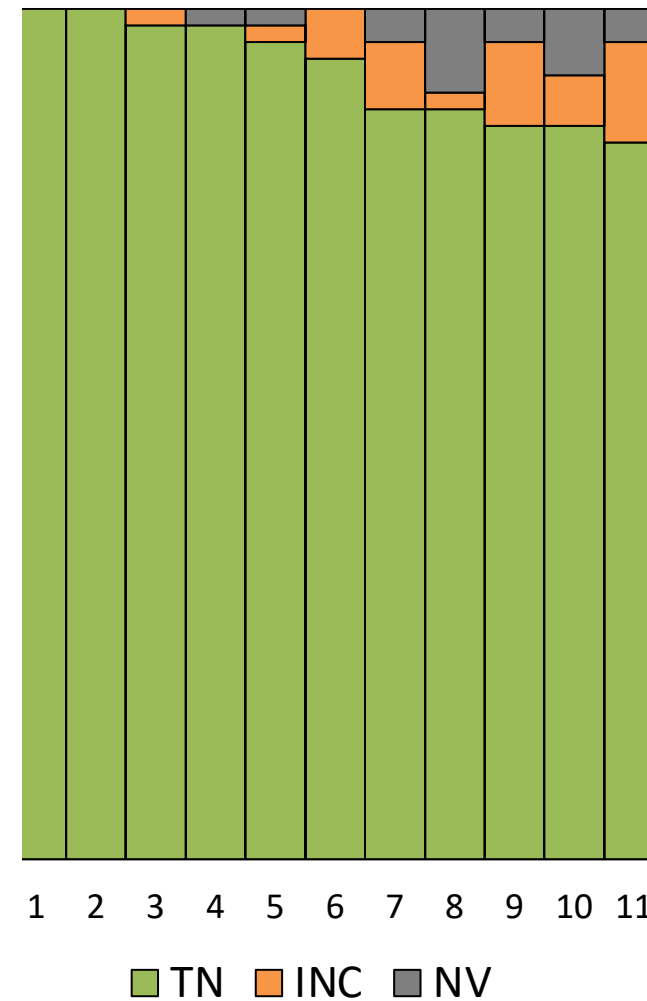


Expert Decision Uncertainty

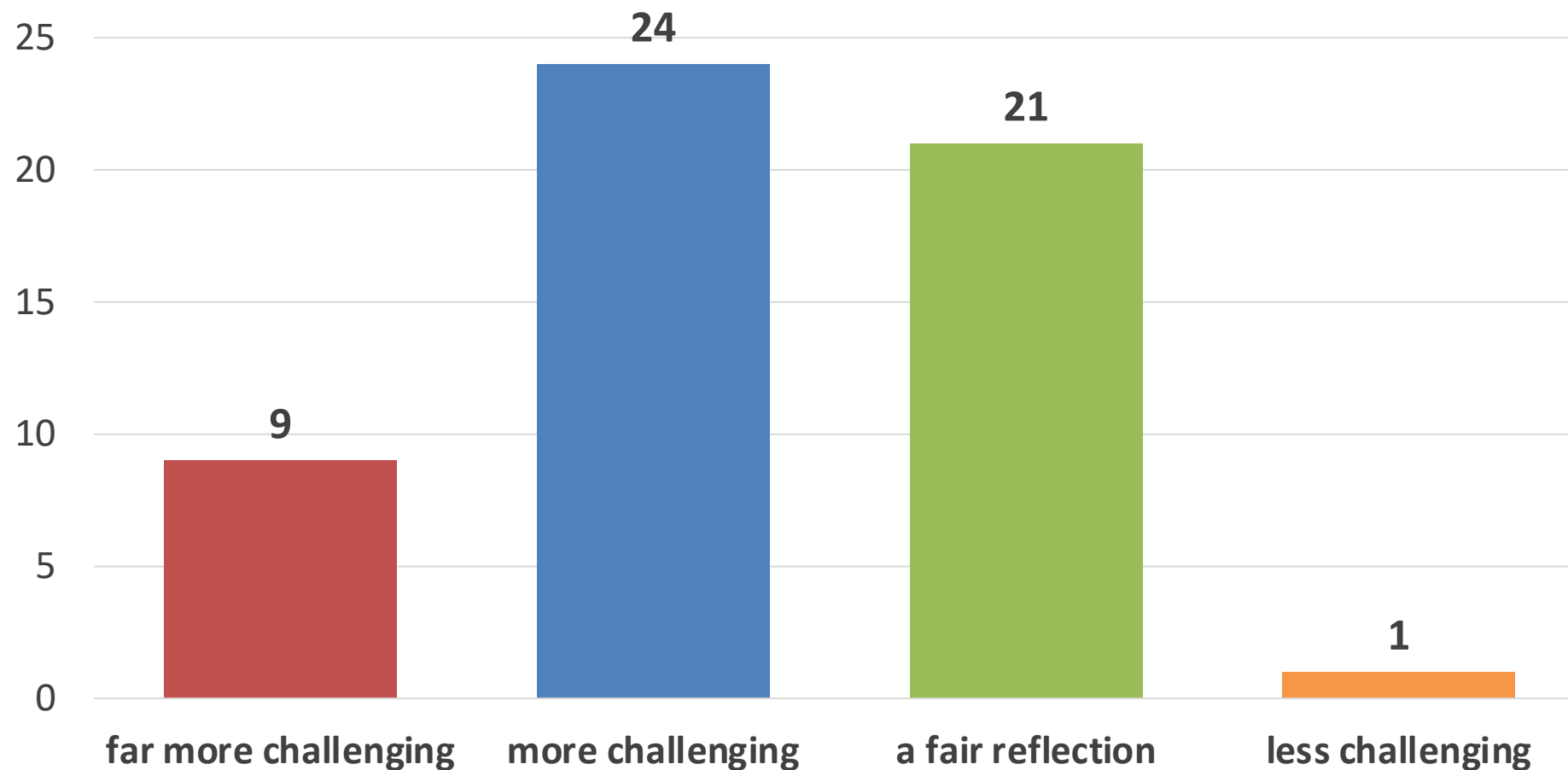
29 Matching Trials



11 Non-Matching Trials

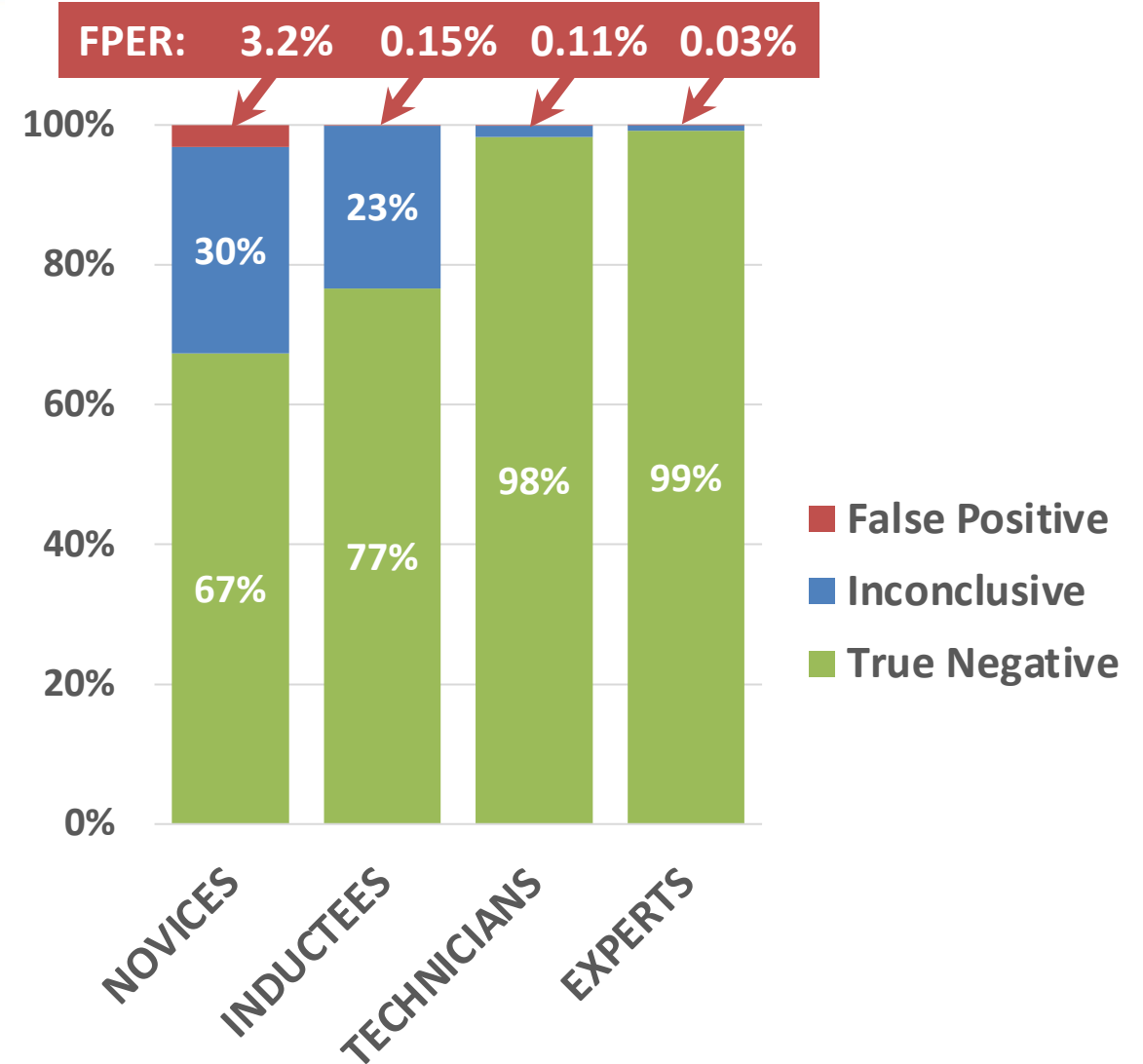
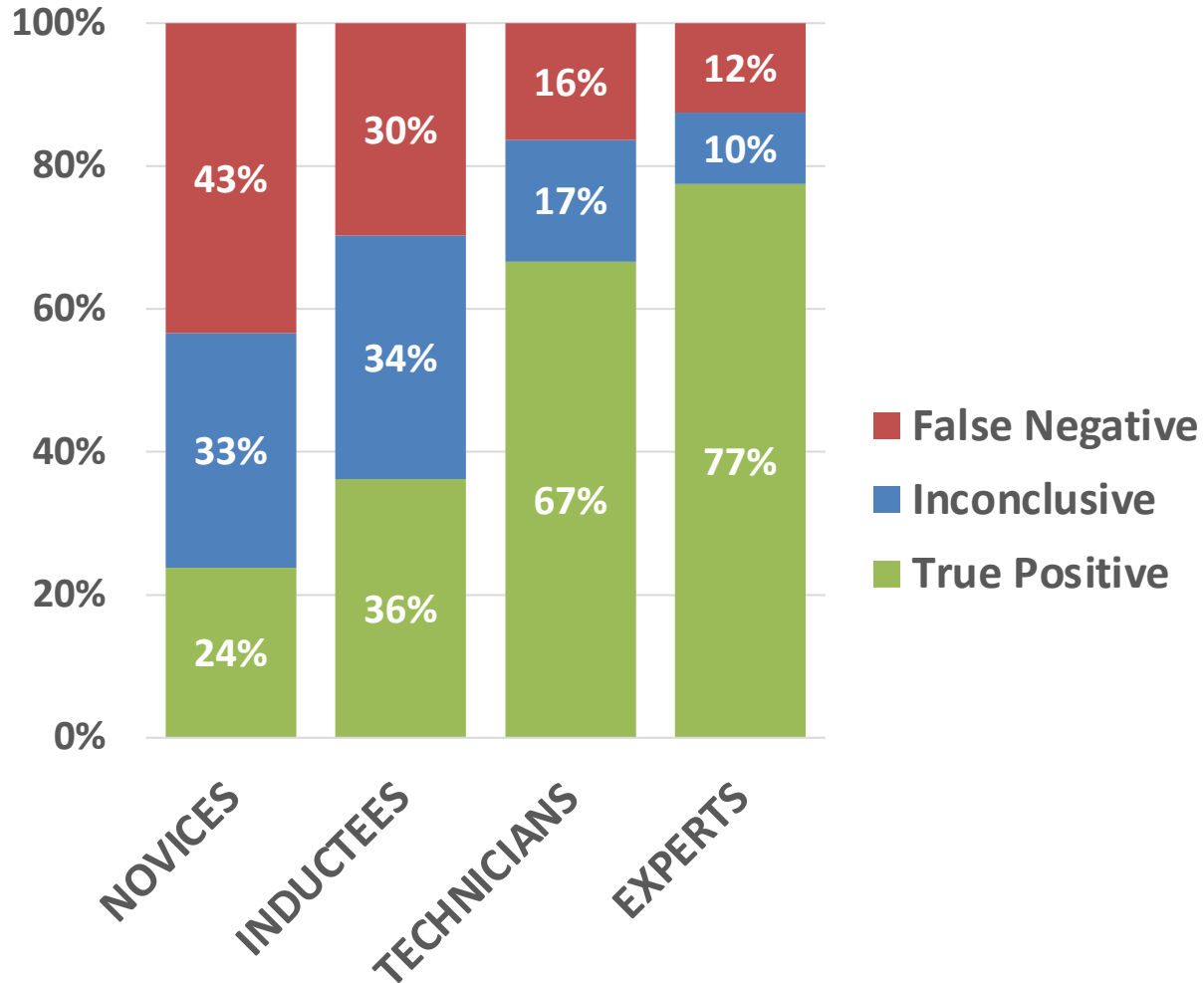


Comparison to Casework - Experts

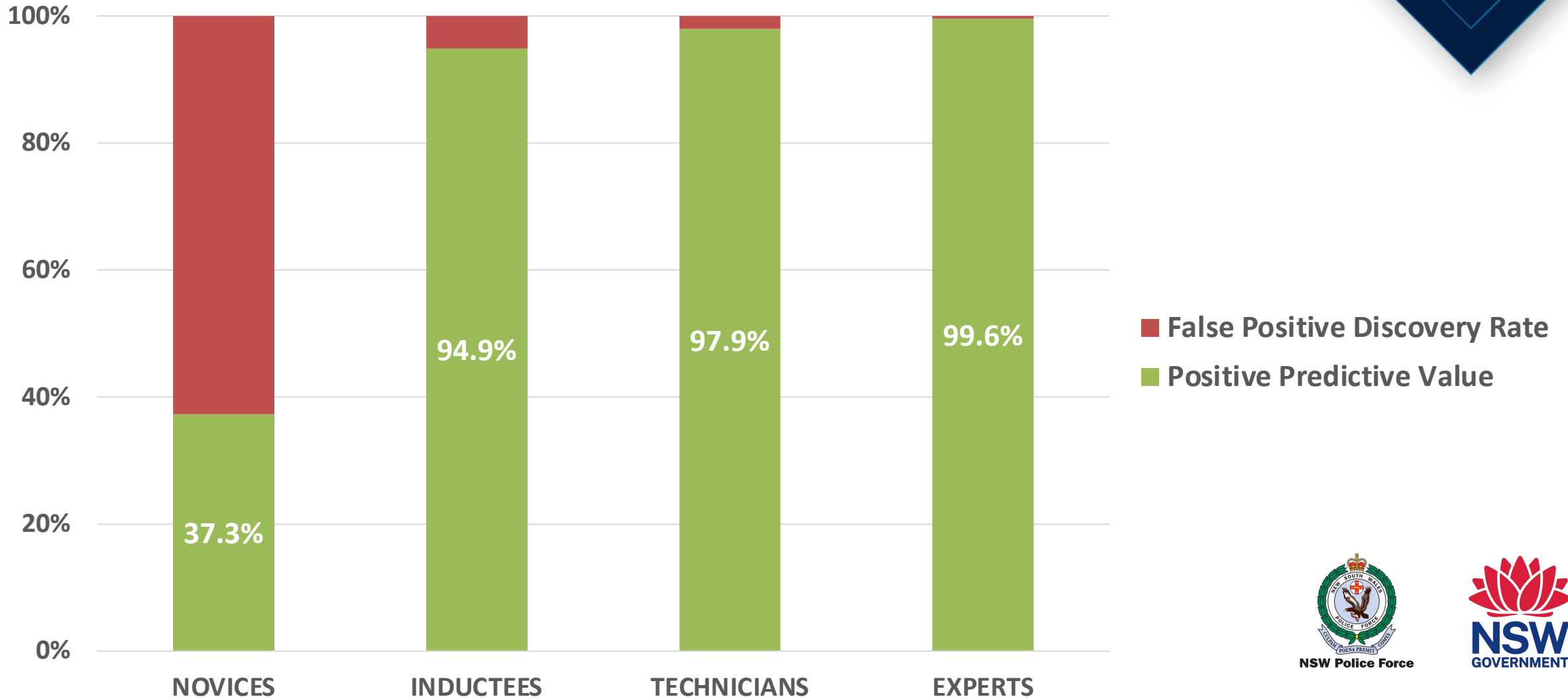


Examiner Accuracy

Matching Trials



PPV: Identification Accuracy



Why do experts make erroneous identifications?

F I G J A A M

Fingerprint

Identification

Gratification

Justifies

All

Absurd

Minutiae