

# BEHAVIOURAL SCIENCE OF TEMPERATURE SURVEY

Temperature's cyber security culture survey for all employees consists of 24 questions that cover the four cultural factors and twelve subfactors; all 24 questions are used for a baseline survey, and a randomised set of 4 questions (one question per factor) can be distributed for ongoing pulse surveys. The survey questions have been developed, refined, and tested through multiple methods:



**Comprehensive pool of questions:** It is best practice in survey development to draft a much larger pool of questions than the final set to comprehensively capture the content of the target factors. As part of our work with the UK government, our team collated 28 measurement frameworks and questionnaires, and looked for evidence for predictive validity (i.e., does it correlate with real change or impact). 298 questions had predictive power, and these questions were used as a starting point to develop the initial pool of questions.



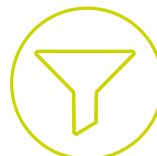
**Adapting and developing the questions:** Subsequently, as the definitions for the cultural factors were refined, our behavioural scientists developed new questions and adapted questions in the existing pool to better match the target cultural factors.



**Mapping against definitions:** To ensure that the survey questions indeed reflect the cultural factors they are designed to measure, five behavioural scientists (none of whom were involved in developing the questions) read a pool of 96 questions; for each question, they independently judged which of the four factors it fits best. Only questions that were categorised as the target factor by all five behavioural scientists were retained for subsequent refinement: 78 questions matched this criterion.



**Focus groups and external review:** The lead behavioural scientist selected 49 questions from the pool of 78 questions based on clarity and to avoid redundancy between questions. Feedback on the 49 questions were gathered from 10 cyber security team members and 6 employees across functions (such as learning and development) within a consumer goods company via online focus groups. Moreover, two external cyber security practitioners independently provided their expert feedback on the questions.



**Refinement and selection:** Based on the feedback, the lead behavioural scientist edited the pool of 49 questions and selected 24 questions, ensuring clarity and comprehensiveness.



**Future developments:** We will conduct comprehensive quantitative analyses of the survey questions in collaboration with our current partners; this would involve collecting real responses from employees and testing the questions' reliability and validity. We also plan to expand our library of questions to reduce repetitiveness across surveys, and in turn to enhance employee engagement with the surveys.