		Immediate outcome	Near term outcome	GOAL
QUALITY BY DESIGN	1. To what extend does sensor design affect quality? 2. Should SC37 consider adding Best Capture Practice to existing data format standards? 3. How to provide effective feedback to users at the time of capture? 4. Given that data format standards are under revision, should it be considered to revise or add quality-related clauses (e.g. compression limits) to data format standards so that conformance to those standards ensures quality?	Comprehensive lists of sensor properties, acquisition settings, and user behavior factors that affect quality.	Perform studies to measure how each factor affects quality. Make quality "actionable" by providing feedback to user. Possibly introduce tolerance in data format standards similar to ISO/IEC 19794-5.	DRIVE FINGER, FACE AND IRIS ACQUISITION ERRORS TO ZERO.
QUALITY CALIBRATION	Quality Calibration (QC) aims at quality score interpretation and interoperability by relating quality scores to performance. QC maps the output of a quality assessment algorithm to performance of a given matcher. Therefore, QC provides: • interpretation (or context) to quality scores computed by a quality assessment algorithm, and • interoperability of quality scores computed by two or more quality assessment algorithms. Quality calibration can be performed for a specific matching algorithm so that quality scores are indicative of performance of that particular matcher, or calibration can be done for general use. 1. Could QC improve interoperability? 2. If so, should NIST leverage its data resources to establish a QC program?	Best practices for quality calibration	NIST offers open source quality calibration utility; vendors shall calibrate their quality algorithm accordingly.	INTERPRETATION AND INTEROPERABILITY OF QUALITY SCORES.
QUALITY REFERENCE DATA	1. Would sequestered or public quality annotated corpora be useful in quality interoperability or quality evaluation? 2. If these are useful and needed, how to build a quality reference data set? 3. Would a standard reference algorithm for each modality be useful?	Shall keep QSND in ISO/IEC 29794 or not?	If QSND is useful, how to build and maintain it?	PUBLICATION OF QUALITY ANNOTATED DATASETS FOR FINGER, FACE, AND IRIS.
QUALITY EVALUATION	1. What are the relevant performance metrics? 2. How should speed of operation be considered? 3. Is standardized performance testing of quality measurement algorithms needed? 4. Is certification of quality measurement algorithms needed?	A test plan for quality assessment algorithms with execution time $\leq$ 20 ms e.g. for verification applications. A test plan for quality assessment algorithms with execution time $\leq$ 200 ms e.g. for enrollment applications.	Quality evaluation of quality assessment algorithms	IMPROVE THE STATE-OF-THE-ART BY CONDUCTING BIOMETRIC QUALITY GRAND CHALLENGE (BQGC)