

QUANTUM Data Holders' Maturity Framework

A framework to assess readiness for health data reuse at organisational or workflow level, across 10 key dimensions, each assessed through 5 progressive maturity levels.



1. Data collection process

Processes relating to the capture of data from multiple sources for secondary purposes.



2. Data management – governance

Level of maturity of data management processes.



3. Data management – infrastructure

Level of implementation and development of data holder's data management infrastructure.



4. Data provenance

Clear description of dataset lineage providing transparent and comprehensive documentation of the data pipeline to get the dataset.



5. Data access

Definition and implementation of legal, ethical, and technical data access processes.



6. Data analytics environment

Availability of analytical services, tools, and access to secure data environments.



7. Data enhancement – augmentation

Application of techniques to improve data usability for specific purposes.



8. Data enhancement – enrichment

Addition of derived information such as annotations, labels, or NLP-derived data labels.



9. Data model

Availability of clear and documented data models to structure and standardise data.



10. Data dictionary

Availability of documented data dictionary, terminologies..



MATURITY LEVELS

LEVEL 1 INITIAL

No documentation/processes

LEVEL 2 EMERGING

Basic, partial or ad hoc processes

LEVEL 3 DEFINED

Standardised (interoperable) processes

LEVEL 4 MANAGED

Partially automated, proactively managed processes

LEVEL 5 OPTIMISED

Automated processes, and continuous improvement