QUALITY MANAGEMENT IN AIM

A quick introduction

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skeyes nice to guide you

PART 1

WHAT IS QUALITY?

Can you say what you think quality is?

What is quality?

- How to describe quality:

  - A good smartphone …

  - An enjoyable hotel room …

  - Quality of your work…

  - Quality of a service…

  - Quality of an AIP or NOTAM or a Data Set…

- Not so easy to define…

🤔

What is quality?

On the internet...

- Quality =

  - 'Fit for the purpose'

  - 'Conformance to requirements'

  - 'An experience'

  - 'A distinctive attribute or characteristic possessed by someone or something'

  - 'Confidence that something will perform as expected'

Definition of quality in ICAO Annex 15 & PANS-AIM:

Quality is a degree to which a set of inherent characteristics fulfils requirements

Before digging further into definitions…

… who is depending on the quality of your work?

An AIS shall ensure that aeronautical data and aeronautical information necessary for the safety, regularity and efficiency of air navigation are made available in a form suitable fc **in a form suitable for the operational requirements** of *the air traffic management (ATM) community*, including:

a) those involved in flight operations, including flight crews, flight planning and flight simulators; and

b) the ATS unit responsible for flight information service and the services responsible for pre-flight information.

Which brings us to another ICAO definition…

What is quality in AIM?

Definition of data quality in ICAO Annex 15 & PANS-AIM:

Data quality is a degree or level of **confidence** that the data provided meet the requirements **of the data user** in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness and format

Why do we need 'quality' in AIM?

But first … Why do we need quality in AIM?

What can happen if erroneous data get published? 😨

Kathmandu – 04 MAR 2015

ACFT touched with 1 wheel in the grass (in low visibility).

Wrong THR coordinates in the FMS!

AIP SUP published for works with wrong THR coordinates. A NOTAM was published revoking the info in the SUP. The chart provider did not process the NOTAM!

A number of coincidences:
- low visibility
- pilots ignoring MDA
- wrong coordinates in the data chain
- ...

Again...

Data quality is a degree or level of **confidence** that the data provided

meet the requirements **of the data user** in terms of accuracy, resolution,

integrity (or equivalent assurance level), traceability, timeliness,

completeness and format

The word 'confidence' is used 19 times in Annex 15 and PANS-AIM!

😮

Confidence...

... that data are accurately generated, published with the minimum resolution that makes them fit for their purpose and that the integrity of the data has been preserved while processing

- **Data accuracy**: a degree of conformance between the estimated or measured value and the true value

- **Data resolution**: a number of units or digits to which a measured or calculated value is expressed and used

- **Data integrity** (assurance level): a degree of assurance that an aeronautical data and its value has not been lost or altered since the origination or authorized amendment

Confidence...

... that data are traceable back to their origine and that every interaction where data could have been changed is retrievable

- **Data traceability**: the degree that a system or a data product can provide a record of the changes made to that product and thereby enable an audit trail to be followed from the end-user to the originator

Confidence...

… in the timeliness of the provided data

- **Data timeliness**: the degree of confidence that the data is applicable to the period of its intended use

Confidence...

... that the provided data are complete

- **Data completeness**: the degree of confidence that all of the data needed to support the intended use is provided

And finally confidence...

... that the data are provided in the agreed format to the data user

- **Data format**: a structure of data elements, records and files arranged to meet standards, specifications or data quality requirements

How can you earn this trust?

- By delivering systematically the data as required, all the time over and over again without making mistakes

- The best way to achieve this is by installing a quality management system

Your questions please!