Lineage:

- Initial version – Radim and Rashid, Aug 2016
- Substantial Edits – Bruce, Jan 2017

User Story

6.1.2 Generate WMO Standard Data Product

Version: 0.1

==== User Story ====

Related components: 4.4, 5.1, 8.1, 8.3.2, 7.1.5

Related User Stories:

- CDMS Config – New Data Product Approval
- 5.1 Ingest and Extract

A Climate Data Manager requires functionality to dynamically generate **WMO Standard Data Products** to allow the NMHS to conform with WMO requirements for data delivery, and for data download and exchange with other organisations:

- Generate selected WMO standard messages when needed, for a selection of stations and dates. The required formats are:
  - Legacy formats such as Traditional Alphanumeric Codes (TAC) codes:
    - SYNOP, CLIMAT, METAR, TEMP, SHIP, CREX, Volume A and World Weather Records;
    - climatological normal, Climate Change Indices and aeronautical climatology.
  - The Table Driven Code (TDC) variants of the same messages;
  - Emerging open spatial standards based formal data standards such as:
    - WaterML 2;
    - METCE;
    - IWXXM; and
    - WIGOS and Climate Observations.
  - Priority should be directed to develop TDC capability initially.
- Generate climate change indices for a selection of stations and time period and ingest them in the database or export them in suitable format.
- The Climate Data manager has the possibility to create new climate indices and specify their calculation method and schedule their calculation after the raw data is available in the database.
- create new climate indices along with the method of calculations;
- Add new WMO standards products as requested.

This component needs to ensure:

Bruce Bannerman 20/1/2017 10:17
Comment [1]:

This is not really a user story.

We may need to move this user story under 5.1.2 Ingest and Extract

To be confirmed. It will depend on the level of analytical capability required to generate the WMO data products.

Bruce Bannerman 20/1/2017 08:59
Comment [2]:

Is there a formal data definition for these ?

- Per station
- Per grid

Bruce Bannerman 20/1/2017 09:47
Comment [3]:

Perhaps the Climate Change Indice component functionality should be defined in a separate user story ?

- that the integrity of the Climate Database and climate data is protected;
- Climate Change Indices calculation rules:

    1. Monthly indices are calculated if no more than 3 days are missing in a month, while annual values are calculated if no more than 15 days are missing in a year.
    2. No annual value will be calculated if any one month's data are missing.
    3. For threshold indices, a threshold is calculated if at least cover of 70% of data

Architectural Comments:

- It is expected that the '6.1.2 Generate WMO Standard Data Product' analytical component will be typically called by the '5.1.2 Data Extract' component to facilitate delivery via either '8.1 Open Spatial Standards' services, or via '7.1.5 Data Download' (dependent on message type).
- There will also be a requirement for a capability to read historical data in such data formats for ingest into the '4.2.1 Climate Database'.
- There may also be a required for a push capability to deliver data via WMO's GTS.

===== end ====

Reference: WMO 1131

Bruce Bannerman 20/1/2017 09:41
Comment [4]:

Where are these formally defined ?

What rules are used by other WMO Standard Products ?

Bruce Bannerman 20/1/2017 10:05
Comment [5]:

To be confirmed