

Top tips for quality assurance of master data



The oil and gas industry is asset intensive. Operators and oilfield service companies are heavily reliant on asset performance and reliability, which directly affects revenue.

Equipment failure can result in serious safety critical and environmental breaches, leading to operational downtime. It is therefore essential that the master data, which represents these assets, is of the highest quality to ensure effective maintenance operations and to maximise production uptime.

Whether managing CAPEX projects or performing remedial work, it is critical that maintenance master data is accurate and kept up-to-date across all assets.

Ask yourself:

- Can you be sure that all your safety critical equipment is defined in your technical system?
- Can you be sure that all work to maintain the ideal operating condition of these assets are accurately defined and up-to-date?
- Is poor quality of master data a contributory factor in equipment malfunction for your assets?
- How do you avoid the risk of 'fix on failure'?
- Can you facilitate proactive maintenance through data trending and forecasting?

In order to sustain effective asset maintenance, we must understand all aspects of data quality to ensure that master data is continually governed, from data collection and updates, to support trending and forecast analysis.

What can effective quality master data do for your organisation?

Oil and gas companies estimate that improving the quality of master data can reduce operational costs by 2.5% through:

- Improved asset reliability
- Asset life extension
- Streamlined maintenance planning
- Improved data forecasting for proactive maintenance
- Eliminating duplicate and unnecessary maintenance
- Improved effectiveness of your maintenance strategy
- Reduced maintenance and operational costs

Data quality can be affected by the way information is built, deployed and sustained. Recognising this, Absoft can perform a thorough health check on your asset data following 20 years' of data management expertise in upstream oil and gas.



Top tips for quality assurance of master data

Maintenance is effected by the following challenges of managing master data:

- Data Completeness
- Data Validity
- Comprehension
- Standardisation and Synchronisation
- Managing Master Data Updates
- Compliance with Industry Standards



Data completeness

Is your master data complete?

Incomplete data affects the quality and accuracy of reporting, which can impact upon asset integrity, HSEQ and operations.

Absoft recommend that the completeness of master data should be managed during creation of new data, transfer, storage and retrieval, to ensure it is both complete and consistent across the organisation.

Data governance must be enforced to preserve data, so whatever the process, the data will still remain in the state it was intended for and fit-for-purpose.



Data validity

Is your master data accurate and up-to-date?

Master data stored in maintenance systems can often comprise of an assortment of old and new information. It is important to regularly check that master data is up-to-date to identify master data which is obsolete, along with any associated dependencies. This will reduce the likelihood of planning and scheduling maintenance for redundant equipment and plant.

Absoft's health check for asset data includes running a set of queries to assess data validity. The assessment provides an overall score for quality, displayed as a percentage, but also provides an outline of data validity for set criteria (completeness, accuracy) in a detailed report.



Comprehension

Is the data understood by all users?

As well as assuring the data is accurate and complete, it is important to make sure the data is understood. Data which is heavy on technical jargon may suffice if the users are highly technical, but it is worth considering cases where simplification of technical descriptions can be achieved or training can be delivered.



Standardisation and synchronisation

Is the data consistent?

It is not uncommon to find master data stored across multiple systems relating to similar assets. Master data relating to these assets may also be structured differently across subsidiaries. This makes cross-organisational reporting difficult as there is no commonality, or 'like for like' of data, to draw comparisons.

Absoft recommend a uniform approach towards the management of maintenance master data, which allows for synchronisation between assets stored on multiple systems. Standardisation of master data improves cross-organisational reporting and the sharing of essential spares for critical equipment across the organisation.



Managing master data updates

How are data updates managed?

Many companies fail to properly govern changes to master data, despite the importance of keeping maintenance master data accurate and standardised with existing data in the system.

With no practical way to manage the process of requesting, evaluating, and implementing changes to data, the accuracy of maintenance master data in CMMS solutions deteriorates and operations suffer as a result. Inaccuracy of data can have a major impact in terms of cost and the reputation of the company, particularly if HSE related information is out of date.

The management of master data requires a layer of governance. Absoft can develop a master data management strategy to provide ongoing quality checks which ensure that any changes conform to organisational rules and industry standards.



Industry standards

Is the data compliant?

Absoft has extensive experience of implementing CMMS and managing master data in compliance with ISO14224 and NORSOK Z008 standards.

Data which has not been updated can provide an inaccurate account of the condition of equipment and plant leading to a criteria of non-conformance (CONC) during industry audits. It is therefore vital that master data is checked at regular intervals to correct non-compliant data and continuously monitored and governed for long term compliance.

Training is an essential component for managing master data throughout the life of an asset. Recognising this, Absoft offer quality assurance training as part of their asset data health check to up-skill and prepare personnel for effective long term management of master data.

Absoft's asset data quality health check

The effectiveness of maintenance management systems is wholly dependent on whether master data is accurate, up-to-date and governed.

Failure to manage master data can directly impact on the effectiveness of essential maintenance for proactive and remedial work. Ultimately, this leaves oil and gas companies exposed to major HSE, financial and operational repercussions, including reduced asset performance and lifespan, loss of containment, or even loss of life.

Absoft's expertise in the field of data quality spans over 20 years' of operation in upstream oil and gas. Our asset data health check equips maintenance supervisors with an in-depth understanding into the quality of their master data through data audits, governance strategies, synchronisation across assets and training.

These methodologies are proven to improve quality data assurance, effective maintenance management systems and streamline proactive and remedial work throughout the life of the asset.

We provide:

- An analysis of all maintenance master data
- An overall quality score for your master data based on set descriptors
- A full report of maintenance master data that fails quality checks and a recommended improvement plan
- A comprehensive strategy for governance of master data management
- Techniques to ensure data creation and updates are governed for quality control
- Master data quality assurance training

About Absoft

Absoft is an SAP® dedicated specialist, established in 1991. Our SAP expertise, pre-configured templates, solutions and accelerators mean we deliver the best business and technical solutions for your individual needs to the highest standards of quality, quickly.

We are the only SAP partner to specialise in upstream oil and gas. We are working with leading players in the industry and have been for over 20 years, uniquely combining business processes, oil and gas and SAP expertise to deliver best practice solutions globally.

If you are working with SAP then Absoft can save your business time and money, leading to increased revenue and bottom line impact.

We enable:

- Highly tailored, best in quality SAP technical and functional support
- The best SAP solutions for your oil and gas business, implemented on time and on budget
- More cost efficient and profitable upstream operations
- More value from your growth and acquisition activity
- Safe and compliant oil and gas operations
- Dedicated oil and gas SAP experts working as part of your team for maximum performance

Absoft's track record for delivering value for upstream oil and gas companies and our support clients is unrivalled. Our customers praise our flexibility and ability to integrate with their internal teams.

It's the reason why our first customer remains a customer over 20 years' later.

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