Decentralized, open master data system with intelligent curation

Consistent master data - by the energy industry partners for the energy industry partners

**CONTEXT**

For any digital transformation, data is key. The foundation for all data is Master Data. Information about materials and products, customers and vendors are at the core of the digital framework.

Even though the Oil & Gas industry traditionally had a very structured way to set up master data using Materials and Equipment Standards and Code (MESC), some of this structure was lost over time with the introduction of Enterprise Resource Planning (ERP’s), initially created for Automotive and Retail industries.

Master data is typically kept and maintained within (multiple) ERP’s, often simultaneously in other (vendor/logistics) systems. Unlike Retail, our Industry lacks having UPC/EAN codes for all their master data and “generic” use is a common practice. This results in a high use of manual or system interfaces and resources to maintain and consolidate data in house.

Whilst transitioning into the broader Energy Industry, the time has come to explore future solutions.
CALL FOR SOLUTIONS

We seek solutions that will unlock a step change towards collective use of master data across the energy industry. Ideally, such a system is open for and acknowledged by all stakeholders, both peers and suppliers.

For this call for solutions, we are looking for creative and robust approaches to support the following challenges:

◼ Upfront governance and validation rules to be automatically executed when feeding master data.
◼ Preventing duplication and errors, however, allowing family relations between master data items.
◼ Enable linking of displayable objects to a unique code e.g.: photographs of the master data item, drawings of how the master data item fits into an asset, packaging examples, etc.
◼ Interoperable with standard ERP solutions data and ideally allowing feeding into other processes and systems, e.g. Digital Twins for asset management, Digital catalogues, Bill of materials, Surplus stock, Warehouse management systems, Logistics providers, etc.
◼ A system which is intuitively to use.

WHAT ARE WE LOOKING FOR?

Solutions that can capture all required master data and can publish the data or can transfer/pull the data into the various systems that require the data, based on filters, giving all such systems one unique common master data record.

◼ Low maintenance, highly automated through robust and pre-agreed validations.
◼ Auto scalable solutions, allowing automated growth as the network grows.
◼ Self-sustaining solutions where benefits outweigh potential costs significantly.
◼ Automatically attracts participants to join.
◼ Data that is easy searchable.
◼ Easy to test through Proof of Concept.
IN SCOPE

- Preferably an open solution that enables peers and suppliers to collectively leverage master data across the industry.
- Those systems ideally should incorporate master data at the highest level, generate insights and allow to incorporate user experience.
- The list of Master Data attributes of interest, but not be limited to, are:
  - Product description
  - Unit of Measure
  - Manufacturer
  - Manufacturer Part Number
  - Weight
  - Dimensions
  - Dangerous Goods Classification
  - Expiration lead time
  - CO₂ footprint (Scope 2/3)
  - Extendable to other input parameters when valuable for the industry
- Allows incorporating of unstructured data. Examples: illustrations, pictures, drawings, clips.
- Solutions that use technologies boosting automation, uniform governance, and user experience.
- Intelligent curation algorithms.

OUT OF SCOPE

- Proposals on or related to policies & regulations.
- Use of restricted access data or data that is not in the public domain.
- Proposals that include commercial data (e.g., price)
- Information that cannot be independently verified.
- Consultancy type of projects (we are looking for a technical solution and partner that can turn the proposal into reality).
- The use of obsolete technologies or niche technologies that cannot be (self-)sustained.
HOW TO SUBMIT YOUR PROPOSAL?

Fill out the form on the GameChanger homepage. You can find it [here](#). Submissions to this Call for Solutions must be received by 4 March 2022.

**NOTES**

- Use the GameChanger process to scout and screen opportunities*.
- Any information submitted as part of the process must contain only non-confidential data and information at this stage.
- Assigned Shell experts to jointly review with GameChanger team to select opportunities (min required 3 for Q&A).
- Decision making via extended panels to screen the top proposals with support from Shell experts.
- The funding opportunity will be in the range of **USD150,000** to progress a “proof of concept” in a phased approach over a period of no more than **06 months**.
- Further development may be supported and or facilitated by Shell depending on the overall outcome of the GameChanger project.

*GameChanger criteria

1. **Novel** – Is the idea fundamentally different and unproven in this industry?
2. **Valuable** – Could the idea create substantial new value if it works?
3. **Doable** – Is there a plan to prove the concept quickly and affordably?
4. **Relevant** – Is the idea relevant to the future of energy?
5. **Scalability** – If your solution is proven, how scalable is it?