



Smart data and document delivery

Designed by the industry,
for the industry



Digitalisation provides further opportunities to reduce exploration costs, mitigate risks and enhance work-process efficiency.

Introduction

Digitalisation represents the new milestone which the Norwegian oil and gas industry is heading for. It provides a wide range of opportunities for reducing exploration costs, mitigating risks, and enhancing work-process efficiency and documentation management during all stages of energy production.

Changing the approach to information and data transfer will help to achieve the strategy of simplifying and streamlining the costly and time-consuming delivery of equipment information across the entire oil and gas industry on the Norwegian continental shelf (NCS).

EqHub is the door opener for improved competitiveness and value creation, and establishes a new level of cooperation across the NCS.

Why make the change?

The key players on the NCS have stated publicly that document management needs to be supported by better processes, standards, and solutions.

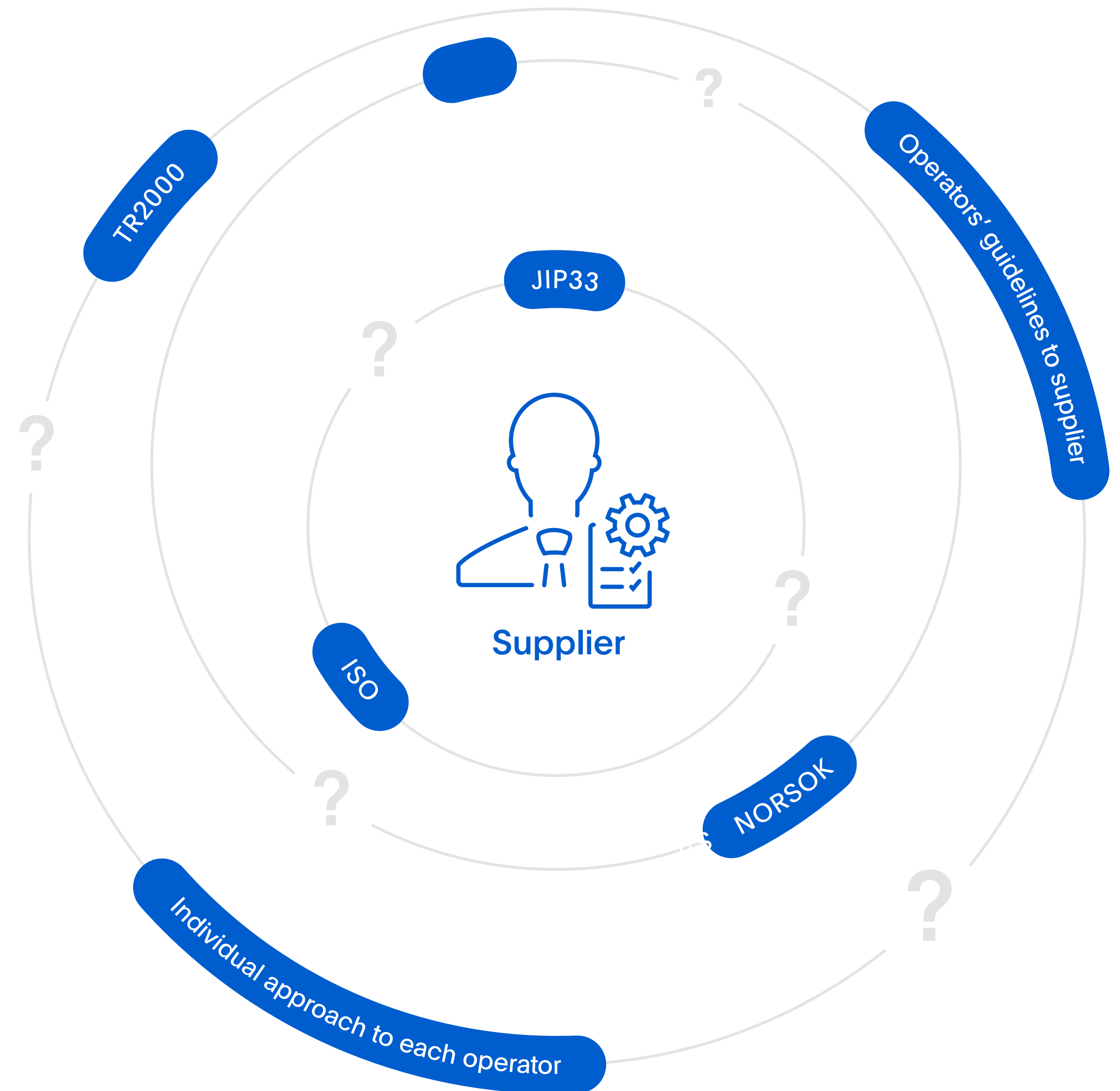
Costs in this area could be halved if the energy sector invests in innovative improvements.



Why make the change?

When entering the market, suppliers need to address the following challenges:

- an ever-growing number of requirements and standards
- a strong regulatory environment
- switching between multiple tools when collaborating across the NCS.



Data-driven supply chain challenges

Identifying the primary data-quality challenges facing the oil and gas industry today, and taking further action on them, correlates directly with the way EqHub can improve performance in the supply chain ecosystem.

Data quality



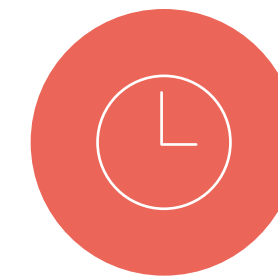
Lack of visibility affects agility and decision-making

Incomplete, outdated and fragmented data across dozens or even hundreds of systems



Poor data quality costs millions

Ineffective operations and logistics, missing procurement information.



Manual processes result in slow time to market

Redundant workloads and significantly slowed time to market (the operator)



Failure to comply with regulatory demands

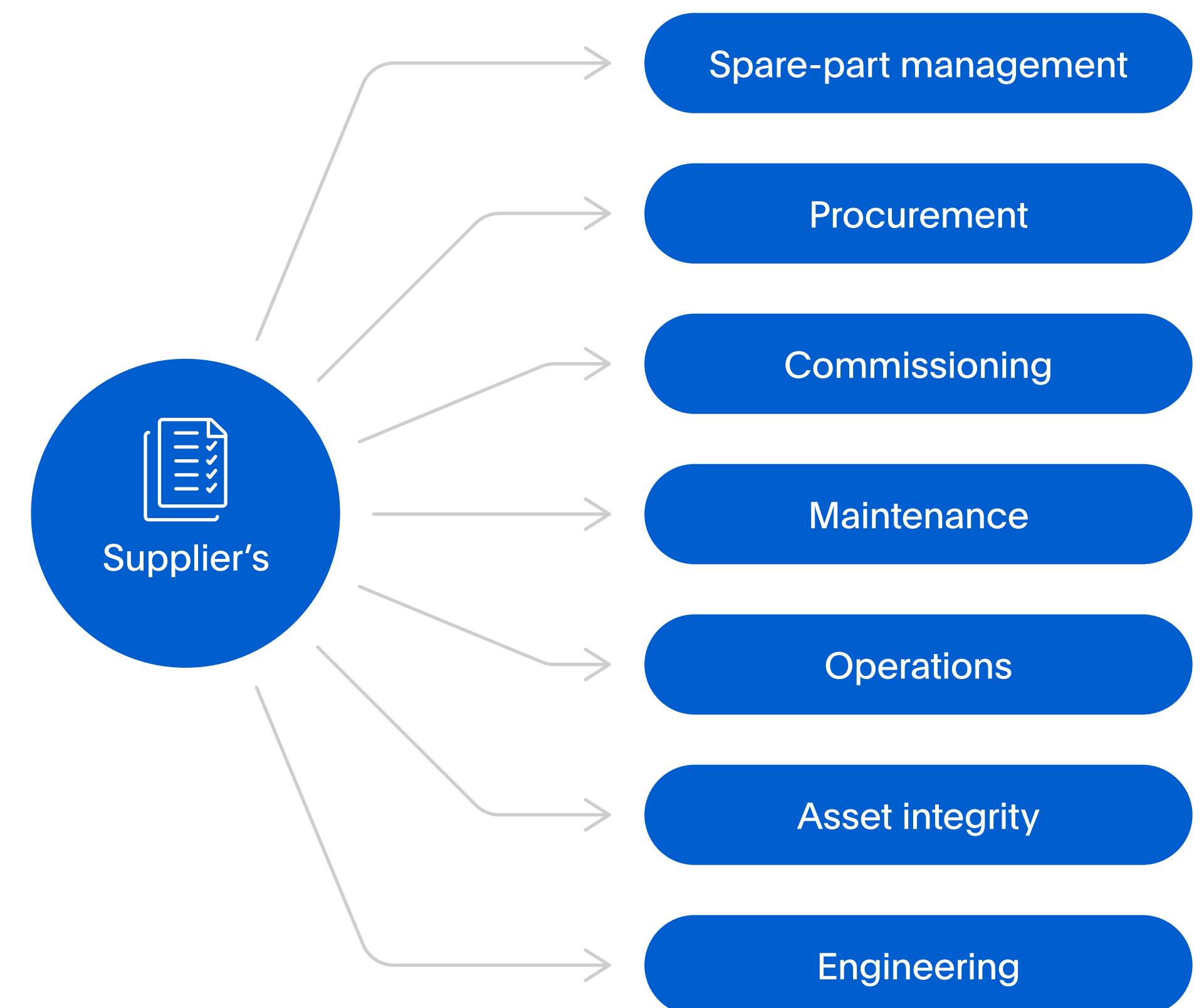
Non-compliance with the established regulations

Supplier data

Supplier data are crucial for supporting multiple business functions at owner-operators, contractors and suppliers. However, each department specifies different requirements for document setups, which are challenging to follow and may result in the creation of multiple data silos.

What if the data are incomplete?

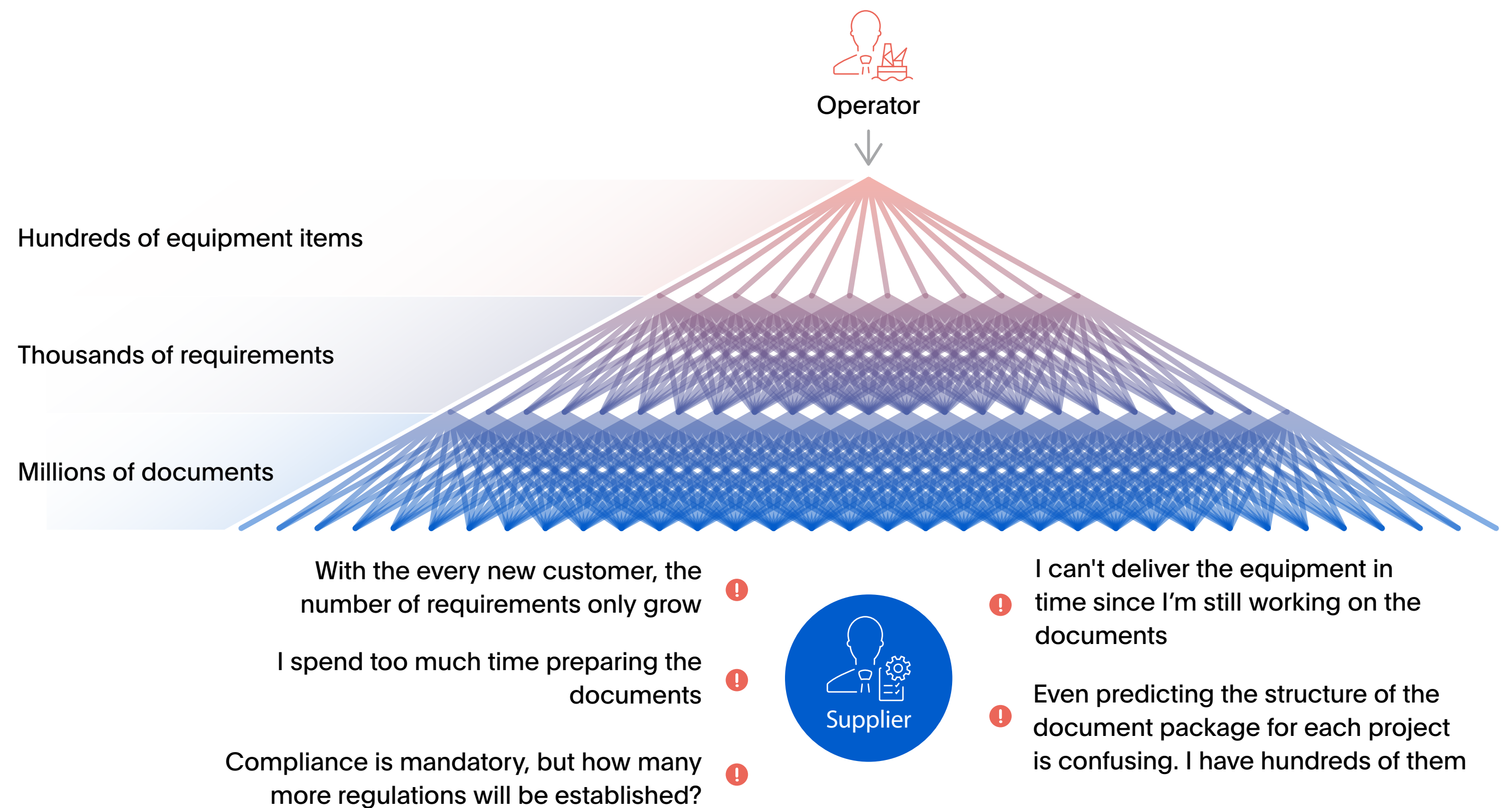
The oil and gas industry is on its way to finding the right approach to documentation management. Where equipment suppliers are concerned, every mistake in document delivery and data processing may cost double that of deliveries to other industries.



Current supplier's lifecycle

Suppliers deliver the same equipment to different operators, which may be installed several times in each project. For each delivery, the supplier creates a standard document package in accordance with the specific requirements set by the operator.

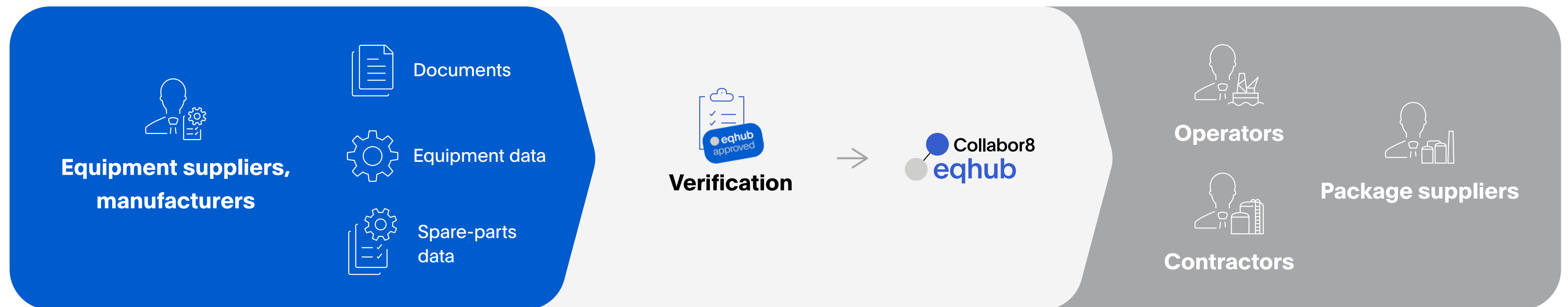
This document management approach only complicates selection and delivery processes, resulting in many rounds of document reviews before final approval of the information delivered.



Sustainable future for document sharing

The basic principle of EqHub is to enter the equipment information in the system only ONCE, and then REUSE it as many times as needed. EqHub assigns a unique EqHub ID* to each item entered into the system. Furthermore, this EqHub ID is linked to the correct TAG number, which identifies what equipment was delivered to the operator company and how it can be substituted.

EqHub serves as a single and controlled source of vendor documentation for all the parties involved.



The data entry stage is based on the requirements previously specified by operators

Verification stage, compliance check.
Making data available to all the parties involved

Usage and delivery stage: correct equipment information is connected to the PO/TAG

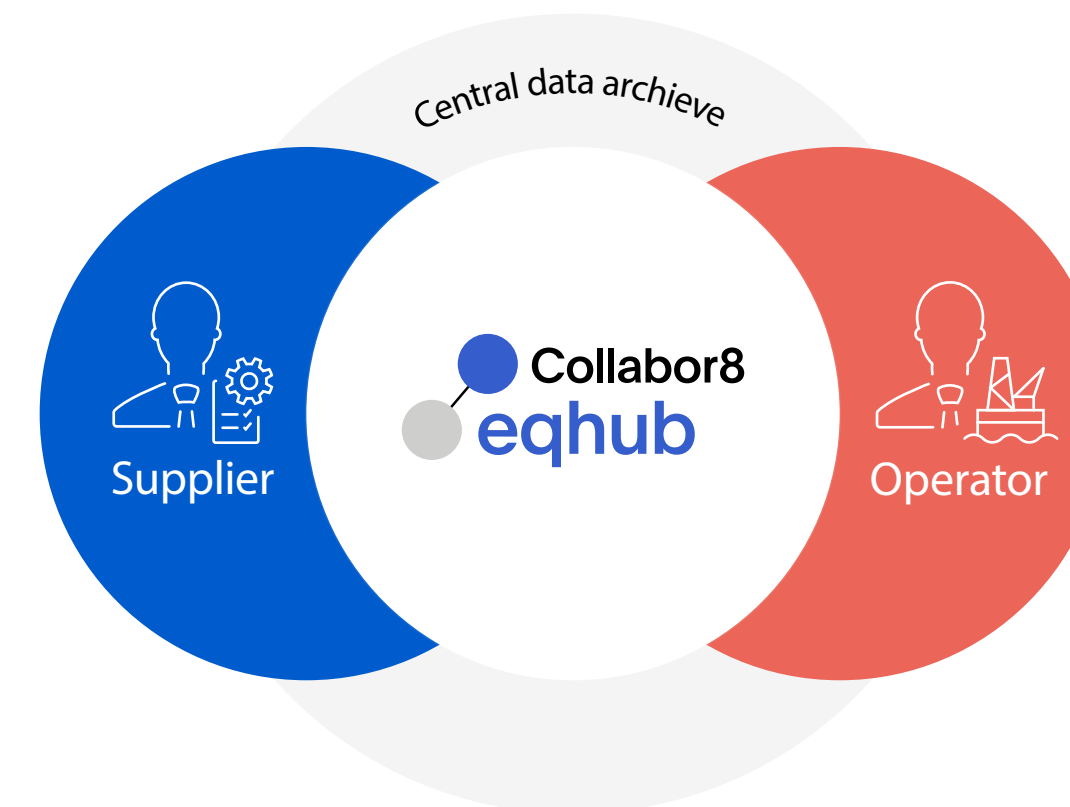
* EqHub ID previously known as a TEK number

Data exchange in EqHub

With EqHub, suppliers provide information **ONLY ONCE**. This significantly reduces their delivery work per project and gives them a competitive edge owing to lower documentation costs. Contractors will eliminate work on information expediting, compilation and timely delivery.

Communication and collaboration will be simplified since only one central data archive will be available and accessible at any time.

- ✓ Personal catalogue with stored documents and drawings. At any time, data can be extracted and changes traced with the EqHub ID
- ✓ Requirements are clearly specified for each equipment item
- ✓ Information is verified and data are complete
- ✓ Increased number of completed orders and shorter delivery time
- ✓ Compliance with the latest standards/regulations
- ✓ The operator can consider you a trusted supplier

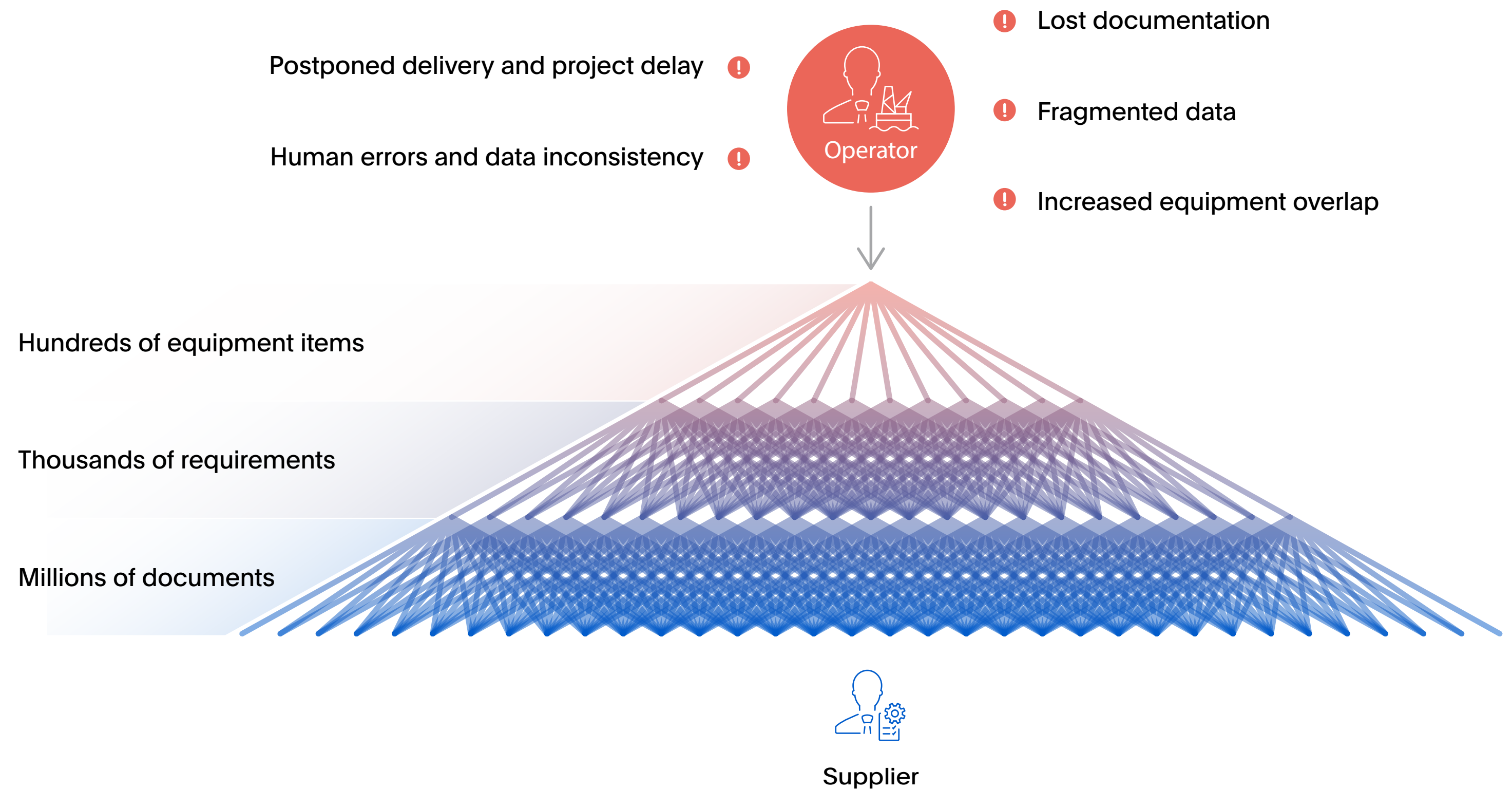


- ✓ Planning material requirements
- ✓ Purchasing
- ✓ Inventory control
- ✓ Quality control
- ✓ Material supply management

Operator challenges

Collaboration between the players offers a great potential for improving information visibility. In addition to providing technology-based improvements, organisations must ensure that end-to-end inventory management is integrated through a consistent process framework.

Utilising and implementing EqHub as a single-source solution for data delivery will support the digitalisation of the oil and gas industry through data sharing and reusing documents and data in a collaborative environment.



Define the stage

EqHub ensures the implementation of common requirements and standards related to equipment and data deliveries during the following project development stages.



Building a new platform from scratch requires data document gathering and alignment of the delivery process. The data are consolidated in EqHub and visible to every party involved. All processes correctly established during this stage will simplify the following stages significantly.

Material codification, warehousing and logistics processes are supported through data deliveries. An accurate inventory register means the number of items in stock is displayed.

The project data are complete and comprehensive, with an instant understanding of what is installed and what can be reused.

× Pre-award

× Exploration

✓ Development

✓ Operations

✓ Decomissioning

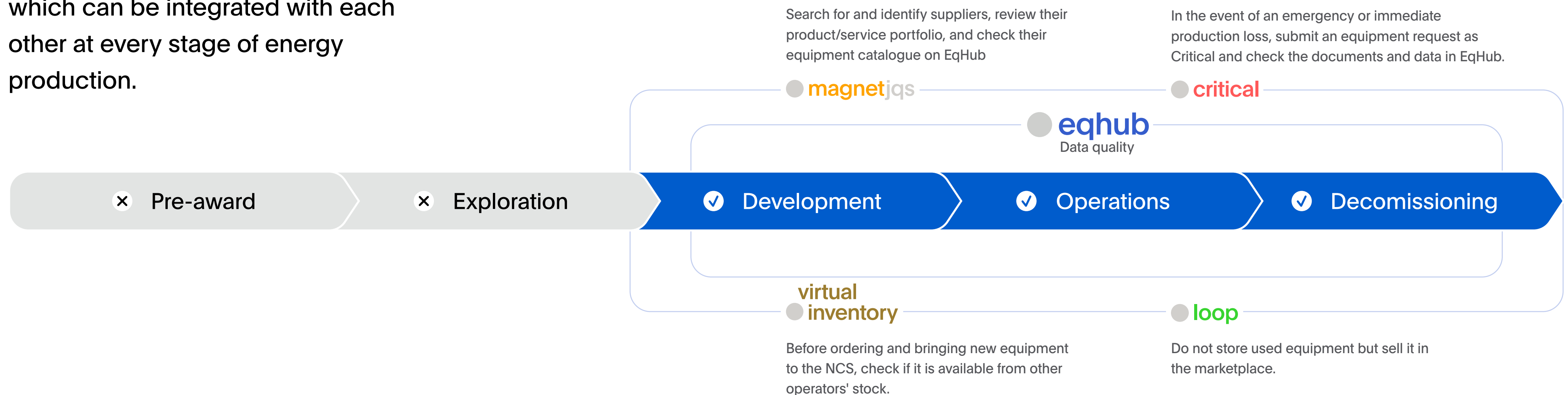
Companies entering documentation are responsible for the data quality and have the intellectual property rights to the information. The supplier is also responsible for keeping the information correct and current.

Simplified standard documentation deliveries have shown that, above all, maintainable tags can be documented through simplified processes using EqHub. Replacing or reordering processes are facilitated through the opportunity to access data quickly and trace the changes applicable to a particular EqHub ID.

EqHub permits combining or linking products, and establishing spare-part lists or separate units with several standard components. It also provides opportunities to document more extensive components, such as subsea units and other package items.

Innovative Norwegian Oil and Gas material management approach

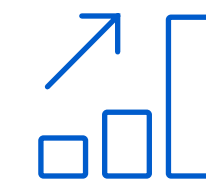
Zero-waste production and data utilisation. Norwegian Oil and Gas has established all-encompassing material management solutions which can be integrated with each other at every stage of energy production.





Reaching milestones with EqHub

Digitalisation and formulation of the single documentation and data source will result in:



improved
work
efficiency



optimised
inventories



shortened
data delivery
schedules



reduced
documentation
volumes



achieved
regulatory
compliance



mitigated
risks



saved
time and
resources

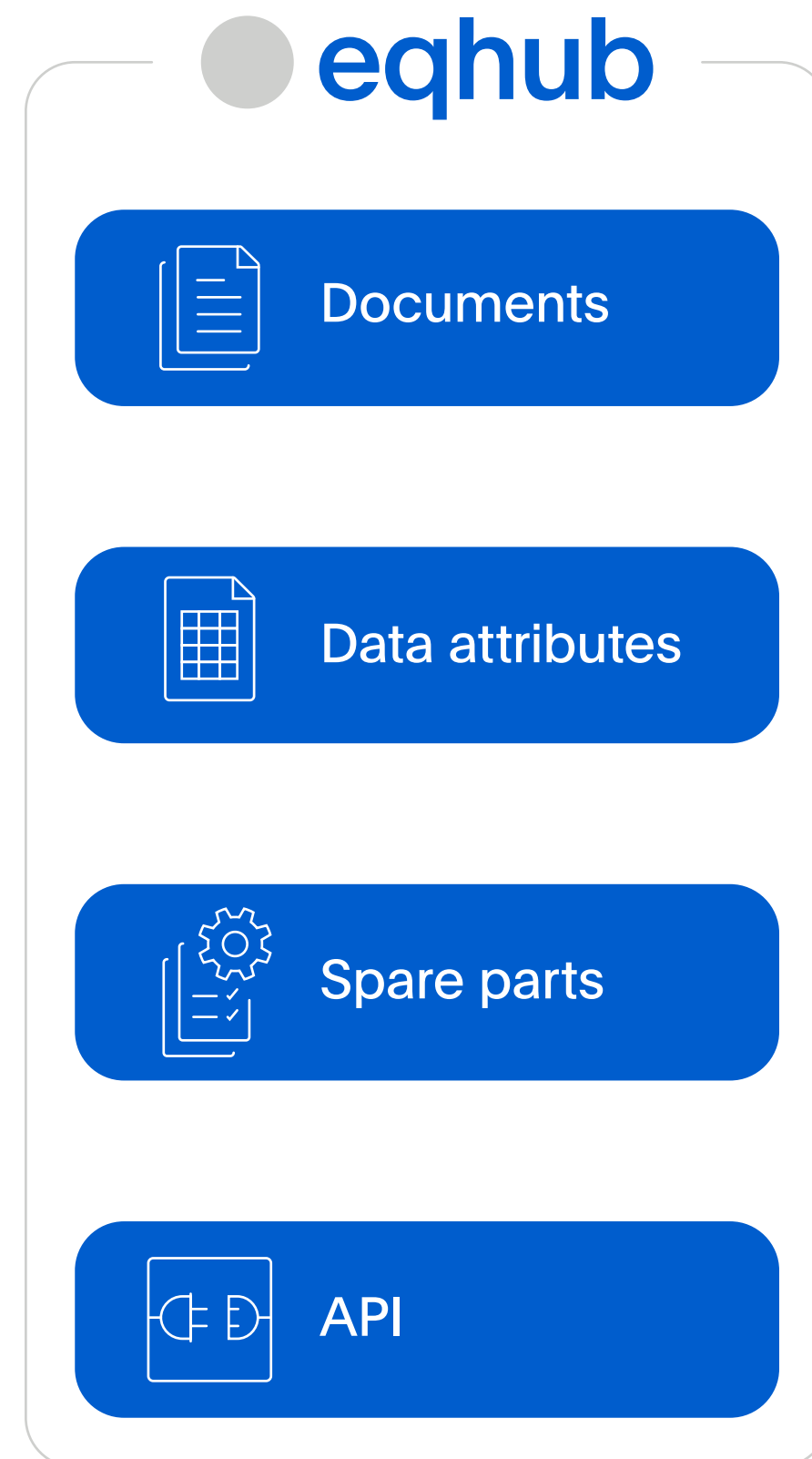


avoided
non-produced
assets

The text "Product overview" is displayed in a large, bold, black sans-serif font. To the left of the word "Product" is a light blue circle. Below the text is a large blue rounded rectangle, and to its right is a grey circle.

Product overview

What is EqHub



Standardised, reusable documents based on industry standards

Data attributes based on industry standards

Data attributes based on industry standards

Integration and data-sharing platform

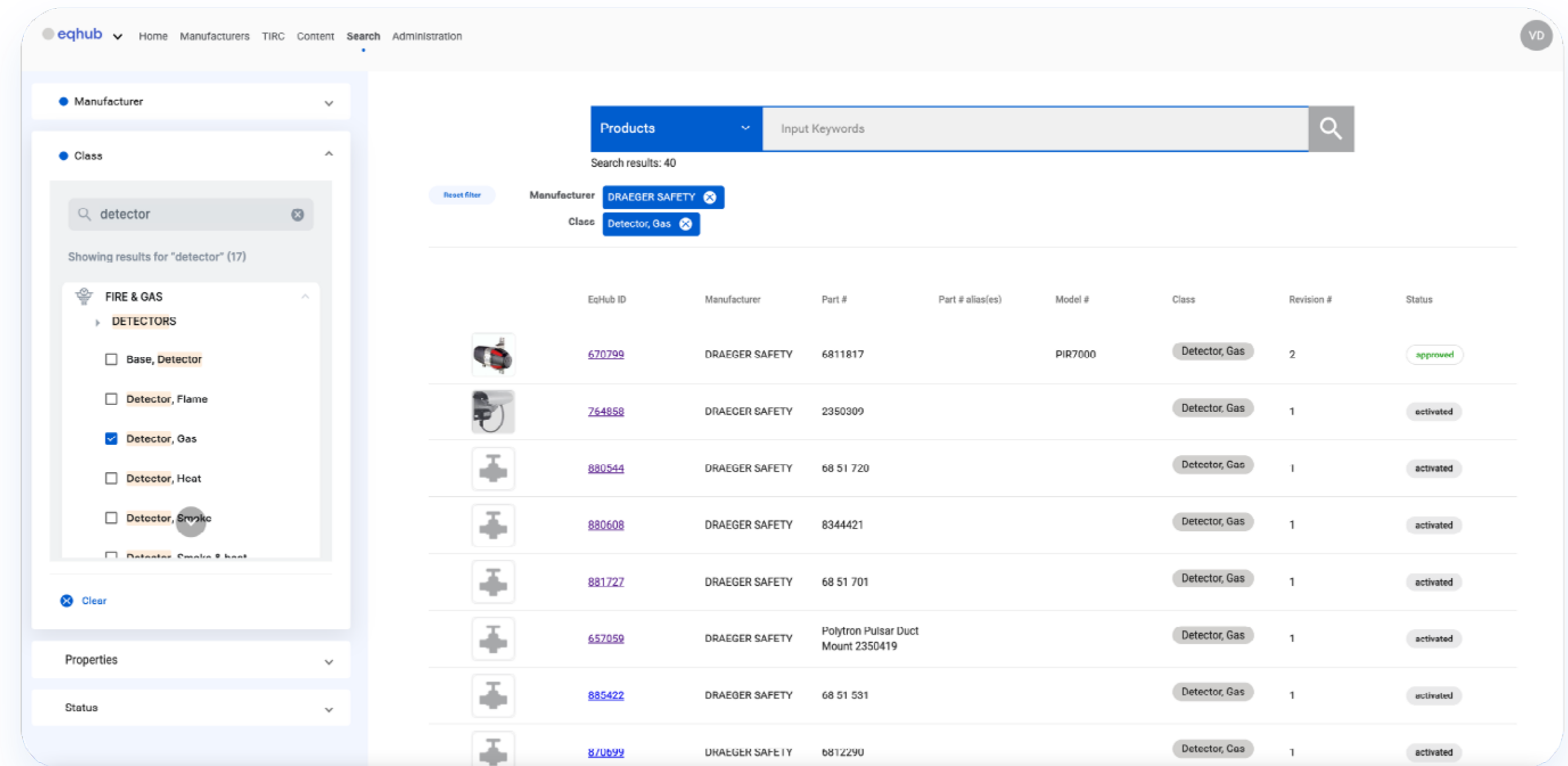
EqHub is a cloud-based solution for managing standard data and documentation across all operators on the Norwegian Continental Shelf. The solution gives access to quality-assured information when needed, and provides a technical information library for products in accordance with ISO 15926.

The critical components of EqHub are:









- a repository solution for standard documents and data related to documents, in addition to document
- a data standard with product structures, classes and attributes aligned with relevant and required industry standard
- functionalities for structuring and linking products, parts and spares.

EqHub search

The solution allows suppliers to provide general information about their products, lets users understand the source of all input, and to which extent this input has been verified or not. In addition, EqHub has advances search functionality supported through Elasticsearch which also allows users to navigate and explore with ease, on both high and low detail levels.



The screenshot displays the EqHub search interface. On the left, a sidebar shows filters for 'Manufacturer' and 'Class'. The 'Class' filter is expanded, showing a search for 'detector' with 17 results. The 'FIRE & GAS' category is selected, and 'Detector, Gas' is checked. The main area shows a search bar with 'Input Keywords' and a search button. Below the search bar, the results are filtered by 'Manufacturer: DRAEGER SAFETY' and 'Class: Detector, Gas'. The results table lists 8 items, each with an icon, EqHub ID, Manufacturer, Part #, Part # alias(es), Model #, Class, Revision #, and Status.

	EqHub ID	Manufacturer	Part #	Part # alias(es)	Model #	Class	Revision #	Status
	670799	DRAEGER SAFETY	6811817		PIR7000	Detector, Gas	2	approved
	764858	DRAEGER SAFETY	2350309			Detector, Gas	1	activated
	880544	DRAEGER SAFETY	68 51 720			Detector, Gas	1	activated
	880608	DRAEGER SAFETY	8344421			Detector, Gas	1	activated
	881727	DRAEGER SAFETY	68 51 701			Detector, Gas	1	activated
	657059	DRAEGER SAFETY	Polytron Pulsar Duct Mount 2350419			Detector, Gas	1	activated
	885422	DRAEGER SAFETY	68 51 531			Detector, Gas	1	activated
	870899	DRAEGER SAFETY	6812290			Detector, Gas	1	activated

EqHub document management

The document management feature allows suppliers to upload their documents with relevant metadata. Suppliers can also manage corresponding document categories with ease. Supplier can also easily define and manage document access as needed, per document.

eqhub

HomeManufacturersTIRCContentSearchAdministration

+

CA

Content

ProductsDocuments

OF DOCUMENT REVISIONS

5

OF DOCUMENTS

5

Search

Search by ID, manufacturer, title, document #, description

+ Document

Document Id	Manufacturers	Document #	Document Title	Categories	Revision #	Revision Status	Revision date	Updated	Author	Company	Access #
100000001	ATV	44141-FLECK-2015-MANUAL.PDF	NULLA POSUERE SOLlicitUDIN AI IQUAM ULTRICES ...	General Arrangment drawing	1	Published	2.05.2023	3.05.2023	Company super user, Content viewer ATV S.P.A.	ATV S.P.A.	
100000002	ATV	4005118-FLECK-2015-SELL-SHEET.PDF	NISL PURUS IN MOLLIS NUNC SED ID SEMPER	Installation, operation and main... Other Documents	1	Published	1.05.2023	3.05.2023	Company super user, Content viewer ATV S.P.A.	ATV S.P.A.	
100000004	ATV	...	TFII IUS IN METUS VULPUTATE EU	Product description and orderin... Other Documents	1	Published	1.05.2023	3.05.2023	Company super user, Content viewer ATV S.P.A.	ATV S.P.A.	
100000005	ATV	_DRAI"GER PIR 7000 FIXED GAS DETECTOR (4)	1	Installation, operation and main... Spare part list + 2	1	Published	1.05.2023	4.05.2023	Company super user, Content viewer ATV S.P.A.	ATV S.P.A.	0

EqHub data management

It is possible to add information on the class, attributes and value level for users with the access to make such additions. Any such amendment is fully transparent within the solution.

The screenshot displays the 'Register Product' interface in the EqHub application. The top navigation bar includes links for Home, Manufacturers, TIRC, Content, Search, and Administration. The user is logged in as 'CA'. The main heading is 'Register Product', with a 'Draft' status, 'Revision: 1', and 'Eqhub Id: 100000004'. A 'Save Draft' button is visible. Below the heading is a progress bar with six steps: General, Additional, Properties (active), Documents, Preview & Publish, and Verification. The 'Class' is set to 'Turbine, Steam'. A progress indicator shows '5 of 7 properties' completed. The 'Electrical' section contains three properties: 'Lower limit output power' (value: 100, UOM: kW), 'Normal output power' (value: 1, UOM: kW), and 'Rated power output' (value: Rated power output, UOM: kW). The 'Process Condition and Function' section contains one property: 'Lower limit rotational speed' (value: 2000, UOM: RPM). A description box on the right titled 'Normal output power' states: 'The power which is the power at normal operating rotational speed.'

Spares part handling & product linking

EqHub enables users to combine or link products and thereby create spare-part lists or units consisting of several standard components. This approach can be relevant for delivery purposes.

The solution also permits documenting more extensive components, such as subsea units and other package units.

It is possible to add information at a class, attribute and value level for users with the access to make such additions. Other users can read the information in the solution.

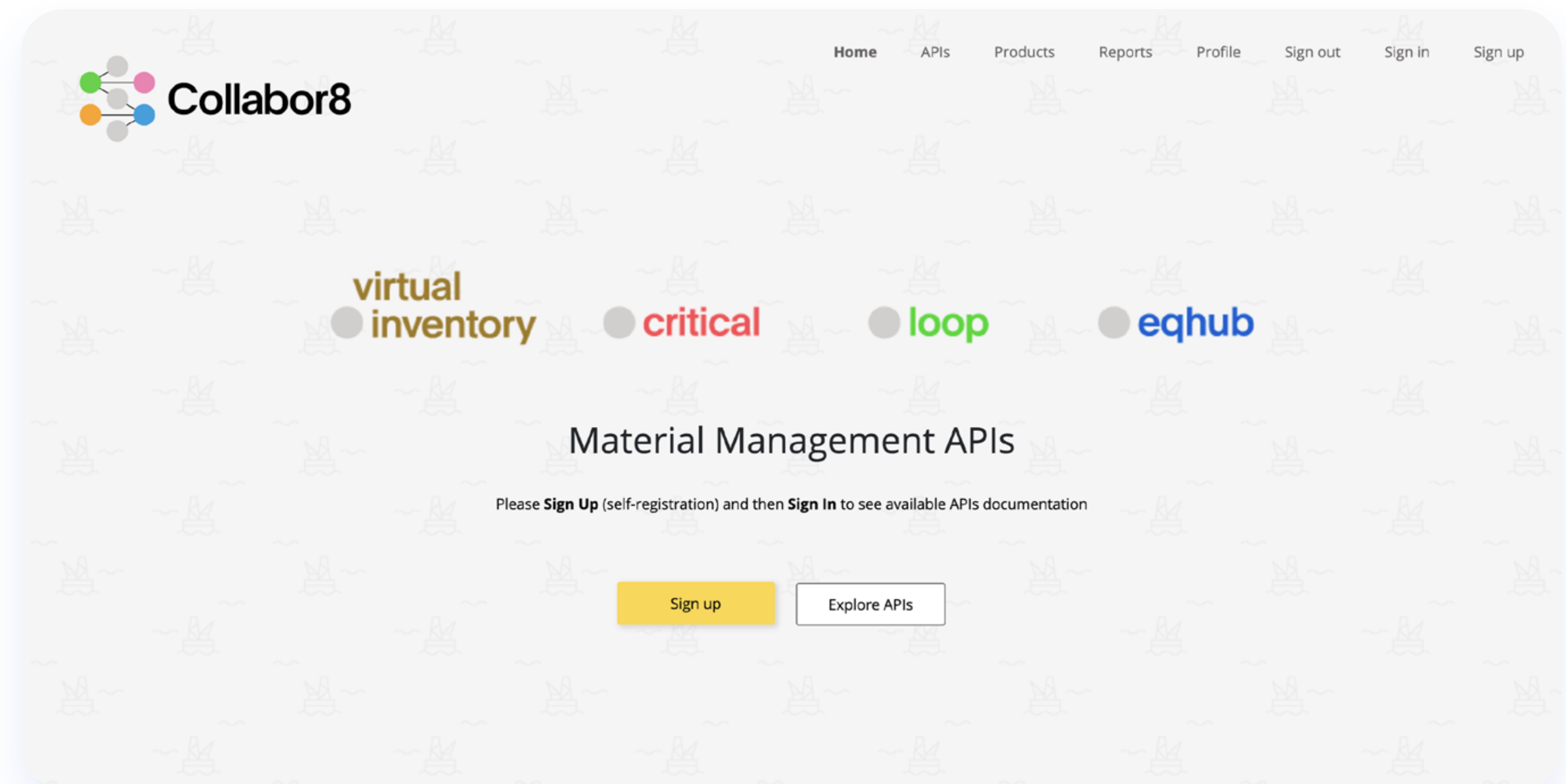
The screenshot displays the EqHub interface with a 'Spare Part List' modal window open. The modal window shows a table of spare parts for a specific product (EqHub ID: 129030). The table columns are: EqHub ID, Name, Manufacturer, Part #, Class, Unit, Material, and Qty. The table lists several spare parts, including valves and regulators, with their respective EqHub IDs, names, manufacturers, part numbers, classes, units, materials, and quantities.

EqHub ID	Name	Manufacturer	Part #	Class	Unit	Material	Qty
00779253	XSC089-06-4-74AT4-24D-68-V-10X3	Bifold	XSC089-06-4-74AT4-24D-68-V-10X3	-	ea	316SS	1
00779254	Filter Regulator	Bifold	SCM2-20-FR-SR-MD-10-V-X3	-	ea	316SS	1
00779255	Check Valve	Bifold	PCV-04-04-13-023-V	-	ea	316SS	1
00779256	PSD Solenoid Valve (Pilot), 3/2,NC, EExme, 3,6W	Bifold	FP06P-S1-M1-32-NC-V-74AT4-24D-68	-	ea	316SS	1
00779257	Ball Valve, 1/4" Npt fm	Bifold	BV0104F0211.5TT2KLK	-	ea	316SS	1
00779258	Single Block and Bleed Ball Valve, 1/2" Npt fm	Bifold	BV0408F04F0210ERV6KLK	-	ea	316SS	1
00779259	Block & Bleed Needle Valve, 1/4" Npt fm	Bifold	NV0404F02M5V6K	-	ea	316SS	1
00779261	Ball Valve, 1/4" NPT fm, 2K	Bifold	BV0104F0211.5TT2KLK	-	ea	316SS	1

EgHub API

EgHub's API allows users to explore and retrieve information for the users' specific needs.

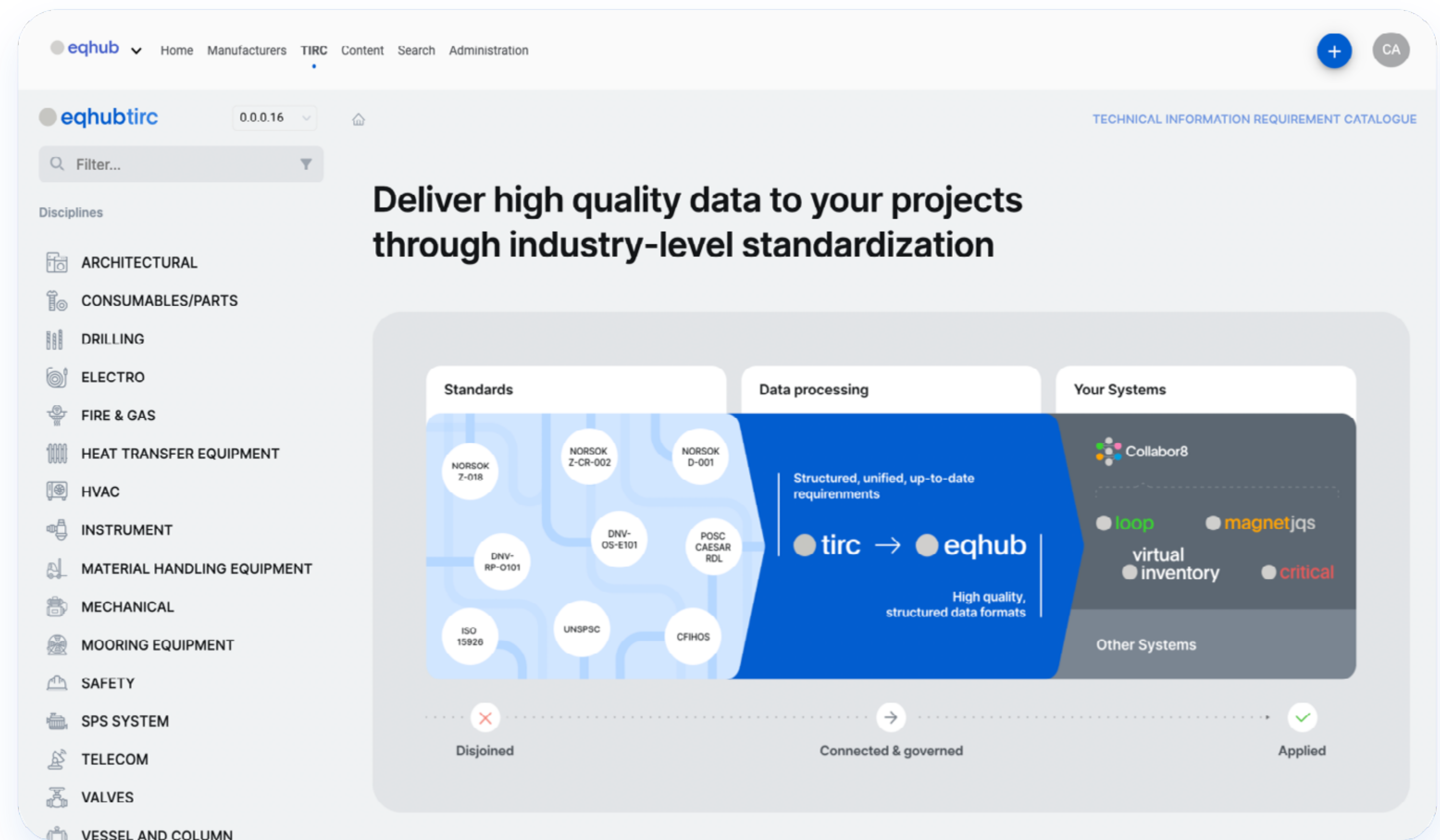
The API enable digital experiences, simplify application integrations, and make data reusable and universally accessible. EgHub enables REST API connectivity.



Requirements

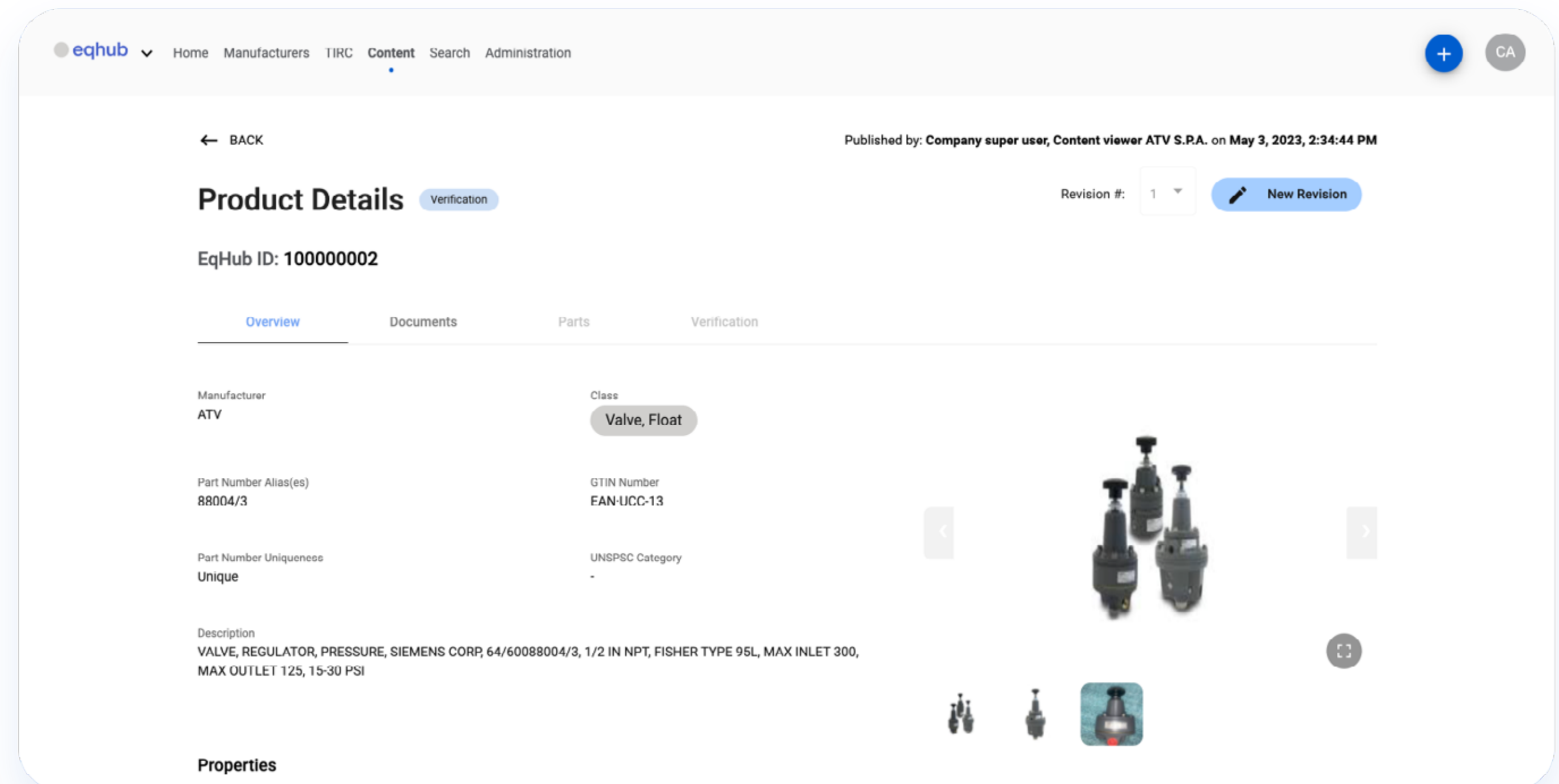
In EqHub, users will at any given time have access to up-to-date industry requirements (properties and documents) for any product category.

Users will also be made aware when or if any changes in those requirements have occurred.

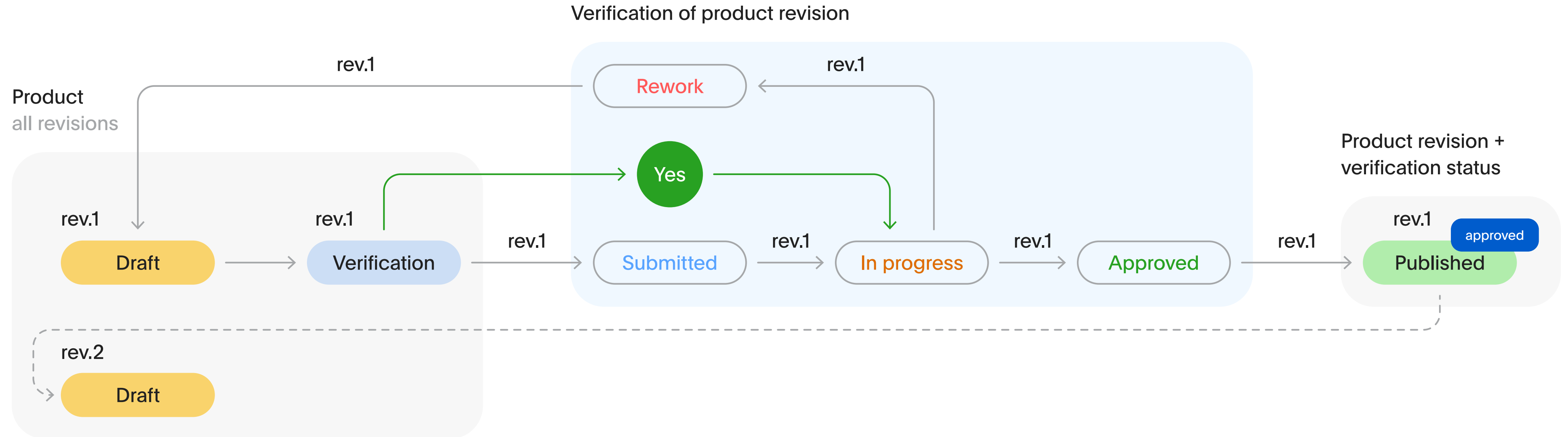


EqHub IDs

EqHub ID is a unique identifier of a manufacturer's registered product, which can be reused for all relevant and subsequent deliveries. All product revision can be submitted and subject to verifications in which the accuracy of the registered information is assessed.



Register and verify information in EqHub





 **EqHub:**
be data-smart

Contact us

