

TCM DA's Transparency Act Report 2022

Sustainable testing of technology for capturing CO₂



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Executive summary

TCM is committed to protecting people, society, the environment, and company assets by closely monitoring activities and reporting emissions to the Norwegian Environment Agency. The organization prioritizes a safe working environment based on equality and diversity, with zero tolerance for discrimination or harassment. TCM strictly adheres to ethical guidelines and business conduct, reporting any concerns or violations to company management. OECD's responsible business conduct guidance is utilized for due diligence assessments, ensuring comprehensive and principled evaluations.

In summary, TCM has not identified any relationships with suppliers, customers, or partners where TCM is the cause or contributes to negative impacts on fundamental human rights or working conditions.

According to the [Transparency Act section 6](#), any person has the right to request information about the company's methods to address actual and potential impacts of its operations. Such request can be made by email to the following address: POST@TCMDA.COM

Technology Centre Mongstad (TCM)

The purpose of Technology Centre Mongstad DA (TCM) is to contribute to combating climate change, through the development of CCS- technologies in an industrial environment, and the deployment of such knowledge, to achieve sustainable and attractive business opportunities for both its Participants and for the CCS industry at large.

The company's main objective is to test, verify and demonstrate technologies suitable for deployment at large scale CO2 capture facilities, reducing cost and technical, environmental, and financial risk. The owners have highlighted these main objectives for the current operating period:

- Reduce cost and risk related to deployment of CCS.
- Facilitate wide international deployment of CCS technologies.
- Contribute to development of technology vendors and subsequent competition.
- Contribute to wide knowledge sharing where relevant for CCS.
- Support the Participants to become informed buyers and users of CO2 capture technologies.

The Company's values

Our core values are safety, collaboration, integrity, and innovation. Living these values helps us develop trusting relationships with our clients.

Safety

«Safety first» and "I am safety" are two mottos used in all TCM's operations. The high focus on safety derives from our owners, who have extensive systems and experience in risk management of industrial operations. Our Health, Safety and Environment policy is therefore based upon Equinor's model for Safety, Security and Sustainability. Govern by strong management support and established policies, all personnel working for TCM are responsible for their own health, security, and safety, and contributes and cooperate to the development of a safe, secure, and healthy working environment.

Collaboration

In order to achieve our goals for CCS technologies, collaboration is essential, both internally and with external parties. Therefore, TCM contributes with knowledge-sharing by publishing reports publicly available whenever possible.

Integrity

In TCM, we value integrity as one of the foundational characteristics of our work. Therefore, we go to great lengths to ensure that our research and testing-activities are carried out to high standards. Integrity is also indispensable as we are custodians of proprietary and sensitive business information.

Innovation

With the goal of supporting the development of new technologies, an innovative mindset is necessary. TCM personnel must be creative in their problem-solving as we operate on the frontier of CCS solutions.

Company structure and governance

TCM, with registered organisation number 819 334 552, is located at Mongstad in Alver municipality, 64 km north of Bergen. The company is structured as a general partnership with share liability (DA)¹ between the Participants²; the Norwegian state³, Equinor ASA, A/S Norske Shell and TotalEnergies EP Norge AS. The company was founded on the 22nd of July 2017, continuing the work started at the technology centre that was originally established the 17th of June 2009, and has been in operation since 2012.

TCM DA carries out the operation of the facility at Mongstad by leasing the test facility from TCM Assets AS. The participants are responsible for obligations related to demolition and removal of the facility if that is to happen in the future.

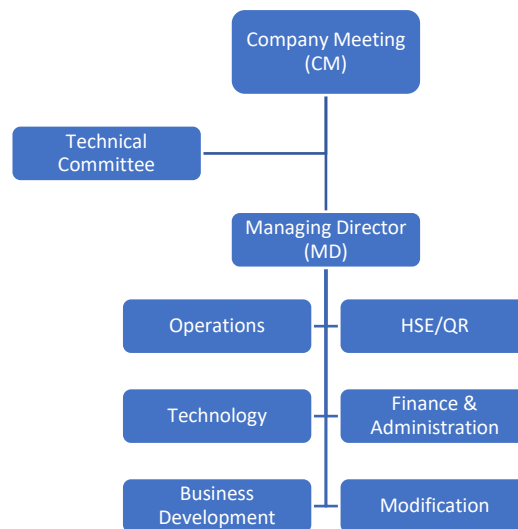


Figure 1: TCM DA's structure

¹ Norwegian: ansvarlig selskap med delt ansvar - DA.

² Often referred to as the "Owners".

³ Represented by Ministry of Petroleum and Energy / Gassnova SF

Company Meeting (CM)

The Company Meeting (CM) is the superior body of TCM and may make any decisions regarding the company and its activities. All the Participants are represented in the Company Meeting. The Company Meeting is responsible for monitoring the activities and shall ensure that guidelines and routines for the activities are developed. The Company Meeting may issue general and specific directions for the performance for the Manager Director's performance of his duties. The Member representing the State acts as chairperson of the Company Meeting.

The Company Meeting had five ordinary meetings during 2022. The Norwegian state represented by Gassnova SF, Equinor ASA, A/S Norske Shell and TotalEnergies EP Norge AS have agreed to continue the activity at the technology centre until December 2023. Evaluations regarding further operation of TCM beyond 2023 is ongoing.

As of year-end 2022, the four representatives in the Company Meeting consisted of two men and two women. The deputy representatives consisted of three men and one woman. The TCM Management team consisted of five men and one woman.

Technical Committee (TC)

The Technical Committee is as a sub-committee to the Company Meeting. The purpose of the Technical Committee is to provide advisory input to the Company Meeting in relation to technology development, inter alia regarding testing capabilities and procedures. Test Programs, implementation of technological concepts, solutions, and equipment, and upon requests evaluate technical reports and results. Each Participant have the right and obligation to appoint one member and one deputy member to the Technical Committee.

Governing documents

The hierarchy of TCM's governing documents is illustrated in the figure below.

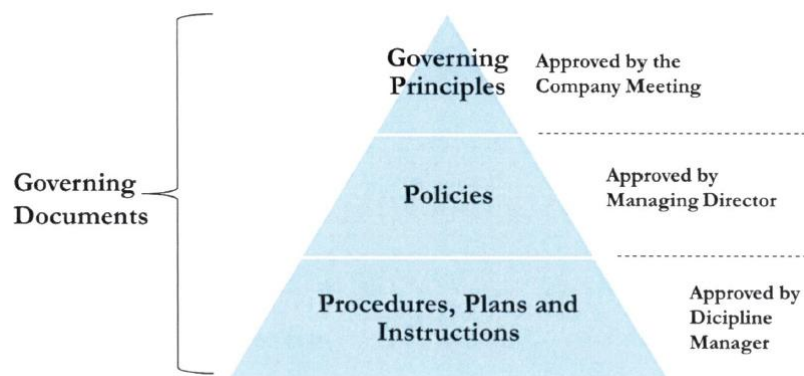


Figure 2: Hierarchy of TCM's governing documents

The activities of TCM are based on a set of specific policy areas/disciplines. Requirements in the different areas are documented in policies. All policies are approved by the Managing Director. Policies are defined for the following areas:

1. Quality and Risk Management (QRM)
2. Business Development

3. Operation incl. maintenance and modifications
4. Technology and knowledge management
5. Health, Safety and Environment (HSE)
6. Communication
7. Finance and Accounting
8. Information Technology
9. Procurement and Agreements
10. Roles and Responsibilities for the TCM DA Management
11. Secondment and Hire Personnel

These policies form the basis for more detailed procedures, and all significant routines and frequent activities are documented in such procedures. Deviations from the governing principles and policies are to be formally approved by the Managing directive within his/her authority limits.

The company's operations

Technology Centre Mongstad (TCM) offers the world's largest and most advanced test centre for developing CO₂ capture technologies and is a leading competence centre for carbon capture. We help players in various industries to adopt technologies that will enable them to achieve their goals for reducing carbon emissions. TCM is a technology-neutral partner and technology developers, vendor companies and research communities from all over the world have come to TCM to test, verify and demonstrate on an industrial scale. In broad terms, we offer two different services: Testing and Advisory Services.

TCM DA has no employees. Most of the personnel working for TCM are seconded from the participants. Equinor is the Operator of the TCM facility and is obliged to deliver necessary personnel to the Operator's organisation. When necessary for other positions in the company, personnel are hired externally on a consultancy basis.

Testing

TCM's test facilities for consist of an **amine plant** and a chilled **ammonia plant**, as well as an area for **new capture technologies**, called *Site for emerging technologies*. We have access to two industrial flue gas sources from Equinor's refinery and gas fired CHP plant at Mongstad with different CO₂ content. These different flue gas sources enable us to imitate emission gases similar to those from industries such as waste incineration, cement production and oil refining. TCM operates under an emission permit from Norwegian regulators, ensuring safe and verifiable results in every aspect of operation.

For over 10 years the amine plant has demonstrated the performance of both proprietary and non-proprietary solvents. In 2022 TCM DA conducted a test campaign in the amine plant for Research Triangle Institute (RTI), financed by the United States Department of Energy. After completing testing, the plant was prepared for the Shell Consolv campaign which started early in 2023.

At the site for emerging technologies, the US companies MTR and TDA campaigns were completed in 2022. Early in 2023, the ACCSESS-project started testing as well. Furthermore, MOF4AIR and InnoSeptra will also test at this site in 2023.

Advisory Services

With ten years of operation and more than 40,000 hours of testing, TCM has accumulated incomparable knowledge about carbon capture technology. This enables us to assist industries to successfully adopt technologies that will help them achieve their carbon emission mitigation goals. Our approach is to supported technology-buyers to become more enlightened about CCS solutions.

To maintain neutrality, TCM do not recommend technology solutions or share proprietary information about commercial testing at our facility. Instead, we enable our customers to become informed buyers of carbon capture technology. Among other things, TCM will help setting up the correct framework for the technology procurement.

In addition to commissioned consulting services, we also share knowledge and experience from our own research activities with the global CCUS community, through publication in reputable scientific journals and presentations at scientific conferences.

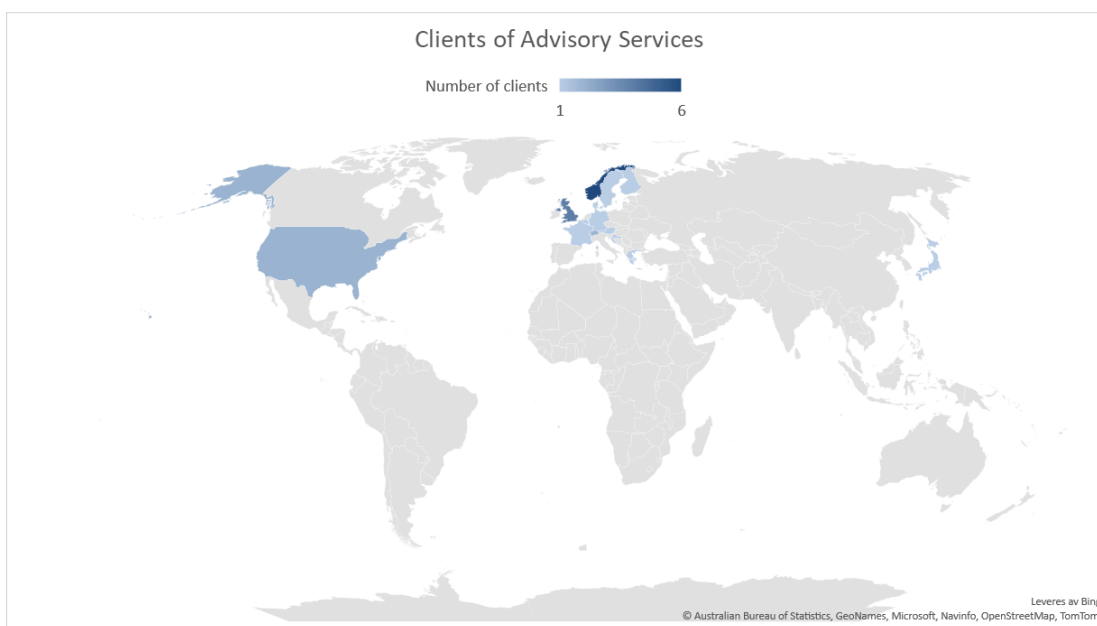


Figure 3: Clients of TCM's Advisory Services are from all around the world.

Financial information

Regarding financial resources, the company's objective is to operate the test facilities. Technology Centre Mongstad isn't a *profit-maximizing* company but aim to cover its costs by providing R&D services to the participants and to seek cost-coverage from test campaigns.

Furthermore, our financial policy states the company should not have external debt nor engage in activities that may result in a situation having to borrow funds from external parties. The cash balance should not be excessively large, and the company shall not have any petty cash box.

As of June 2023, the company's accountant is Amesto AccountHouse AS and the company's auditor is Deloitte AS. The accounts for 2022 have been approved by the auditor and the company meeting. The financial statements are prepared in accordance with The Norwegian Accounting Principles (NGAAP).

Profit and Loss (Million NOK)	2022
Sales revenue	186,4
Other Revenue	-
Operating Revenue	186,4
COGS	-
Personnel expenses	-
Other operating expenses	197,8
EBITDA	(11,4)
Depreciation	-
EBIT	(11,4)
Financial Income	0,5
Financial Expenses	(0,7)
Net financials	(0,2)
EBT	(11,6)
Tax Expense	-
Net Income	(11,6)

Figure 4: TCM DA's Profit and Loss report for 2022 (in million NOK)

Balance Sheet (Million NOK)	2022
Intangible assets	-
Fixed assets	-
Financial fixed assets	-
Total non-current assets	-
Inventories	3,3
Accounts receivables	54,2
Other short term receivables	22,7
Cash and cash equivalents	36,2
Total current assets	116,3
Total assets	116,3
Total Equity	11,5
Liabilities to financial institutions	-
Other long term debt	-
Total non-current liabilities	-
Liabilities to financial institutions	-
Accounts payable	38,3
Public duties payable	-
Suggested dividends	-
Other short term liabilities	66,5
Total current liabilities	104,8
Total equity and liabilities	116,3

Figure 5: TCM DA's Balance Sheet report for 2022 (in million NOK)

Social responsibility and our approach to due diligence assessments

TCM undertakes to conduct its business operations in an ethical acceptable, sustainable, and responsible manner, making clear requirements and close follow-up on activities to protect people, society, environment, and the company's assets. TCM contributes to national and international projects that deal with specific societal action points. The company is operated under an emission permit issued by the Norwegian Environment Agency and any emissions to air and discharge to water is reported in compliance to the emission permit and in close dialogue with the authorities.

TCM is committed to provide a safe working environment based on equality and diversity for all our co-workers. TCM does not tolerate any discrimination or harassment of co-workers or others affected by our activities.

TCM DA does not accept any form of bribery or other violations of the company's guidelines on ethics and business conduct. According to the company's guidelines of business ethics and conduct, notice of

concern, oral or written, shall be reported to the company management if violations are detected. No recordings have been made with regards to concern or violations of the regulations in 2022.

In our due diligence assessments, we utilize [OECD's guidance for responsible business conduct](#).

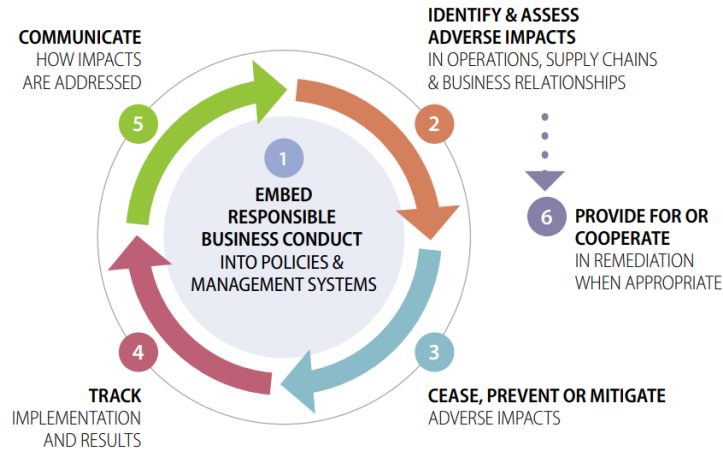


Figure 6: OECD's due diligence process & supporting measures (OECD 2018)

Furthermore, TCM's policies and procedures describes internal control regulations based on the PDCA cycle illustrated below. In summary, TCM has not identified any relationships with suppliers, customers, or partners where TCM is the cause or contributes to negative impacts on fundamental human rights or working conditions.

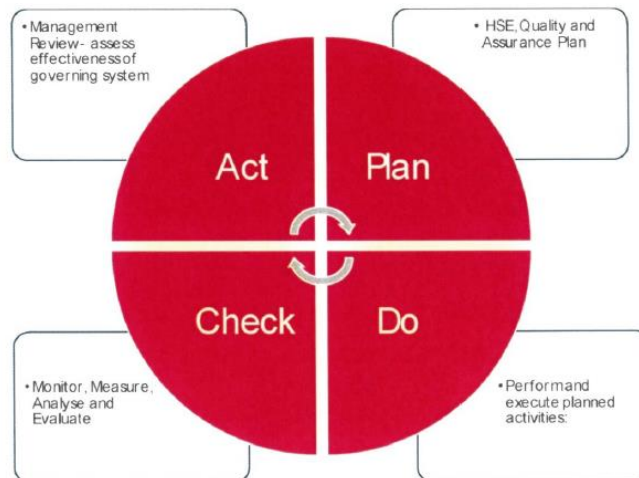


Figure 7: TCM's PDCA cycle

Risks regarding the company's own activities

As an operator of a sizable industrial plant, we evaluate HSE as one of our most significant risks. We are glad to report that no personal injuries, serious or potential serious incidents took place in 2022. In connection with the start of a test campaign in 2022, a violation of the emissions limit was discovered. This happened because the solvent had been contaminated during its production, which was unknown to TCM. The startup was stopped, additional analyses were performed, and the responsible component

was removed. This was reported to the Norwegian Environment Agency. The emission was not classified as acute pollution in accordance with the Pollution Control Act as it was not detrimental to health and environment. There have been no other violations of the emission limits in 2022.

As a company that conducts research, TCM values its co-workers as its most important resource. In order to ensure an outstanding work environment, we conduct a yearly *work environment survey* based on anonymous responses from its co-workers. The responses are analysed and reported to the management team. Areas with underperforming scores are identified and plans for further actions are created. The company has also dedicated co-workers working with HSE and an independent work environment committee. TCM DA does not hold statistics for absence due to illness, as this is handled by the companies providing the seconded and hired personnel.

Suppliers

TCM must adhere to the Norwegian Public Procurement regulations⁴, which set requirements for the protection of the environment, human rights, and other social considerations in the company's procurement practices.

TCM has two purchasing channels. Everything regarding operations of the infrastructure and its operations are purchased through Equinor's system by their professional procurement resources. All procurement activities shall nevertheless be based on the following principles⁵:

Arm's length

Purchase from one of the parties of the Participant Agreement (PA) shall be based on the arm's length principle. All prices should be commercially competitive and formal agreements shall be signed that define the delivery.

Competitive tendering

All procurement processes shall be based on competitive tendering from at least three tenders. Deviation from this principle shall be documented and approved as a deviation process. When using framework agreements, the specific agreement needs to be assessed in order to determine if competitive tendering is necessary or single source purchase is acceptable.

Equal treatment of tenders

All tenderers shall be treated equally and be given the same basis and information to present their best offer on equal terms.

Good business ethics

All suppliers and contractor that have contractual relationships with TCM DA shall perceive TCM DA as a professional actor in all aspects of the procurement process as well as the contract administration phase. TCM DA shall operate as one unit, imposing a clear ethical responsibility.

Transparency

⁴ The reason why TCM must adhere to these regulations is threefold:

- The company is established for meeting needs in the general interest.
- The company does not have an industrial or commercial character.
- The company is mostly financed by the Norwegian State.

⁵ From TCM's procurement policy

No aspects of the procurement process shall be of such nature that it cannot be informed to all tenderers. All the principles above shall be adhered to in such way that a transparent process is possible and ensured.

Documentation

The procurement process is to be documented. This includes internal preparations and documentation for the procurement process and external correspondence with possible tenderers.

Furthermore, TCM DA can only be committed to an economic obligation based on approval according to the valid Authority Matrix.

An analysis of our suppliers has yielded the following observations:

TCM purchases most of its human resources and services from its owners. This is inevitable as the personnel working for TCM is mostly seconded from the owners, and Equinor is the operator of the plant.

As three out of four of the company's owners are oil and gas companies, a large majority of TCM's purchased services are related to this sector. However, the services purchased from this sector are human resources and utilities for operating the plant, such as electricity and steam, as well as land lease of the facility area from Equinor. The owner companies are all Norwegian and they have all extensive initiatives regarding HSE, working conditions, human rights, anti-corruption, internal control, and protection of the environment.

About 97 per cent of our purchasing costs are connected to Norwegian companies. About 3 per cent are services purchased from North America. Less than 1 per cent comes from Europe. According to Transparency International's (TI) Corruption Perceptions Index (CPI) of 2022⁶, Norway is one of the least corrupt countries.

Country	CPI Score	CPI Rank	% of TCM's purchase amount
Norway	84	4	97 %
Canada	74	14	2 %
United States of America	69	24	1 %
France	72	21	Less than 1 %
Germany	79	9	Less than 1 %
Italy	56	41	Less than 1 %
United Kingdom	73	18	Less than 1 %
Sweden	83	5	Less than 1 %
Poland	55	45	Less than 1 %
Denmark	90	1	Less than 1 %

Table 1: TCM's suppliers' origin and ranking according to TI's CPI

Furthermore, Norway has strong regulations and culture for human rights, worker conditions, protection of the environment, and high standards of business ethics.

⁶ Source: [2022 Corruption Perceptions Index: Explore the... - Transparency.org](https://www.transparency.org/en/cpi/2022)

Customers

Our customers consist of three groups:

- The Participants as they are customers according to the Research Agreement between the Participants and TCM.
- Customers of testing agreements
- Customer of advisory services

Individual agreements are made with all customers of testing and advisory services. TCM demand that these agreements are governed and interpreted in accordance with Norwegian law and that the parties adhere to TCM's *Code of Ethics and Business Conduct*. Furthermore, all customers are assessed through a separate due diligence process for customer-oriented activities, ensuring that they are executed with the expected level of technical and HSE quality.

Partners

Collaboration within the Carbon Capture and Storage community is key for the mass deployment of the technology in the future. TCM collaborates with research institutes, the private sector and government entities across the globe.

[The International Test Center Network \(ITCN\)](#) was initiated by TCM in 2012 to enable knowledge sharing between CO2-technology test centres.

Other relevant information

Contact information

According to the Transparency Act section 6, any person has the right to request information about the company's methods to address actual and potential impacts of its operations. Such request can be made by email to the following address: POST@TCMDA.COM.

The participants of TCM have all committed to ensure fundamental human rights and decent working conditions. More information can be found on their respective websites:

[Gassnova](#)
[Shell](#)

[Equinor](#)
[TotalEnergies](#)

Technology Centre Mongstad DA

June 2023

