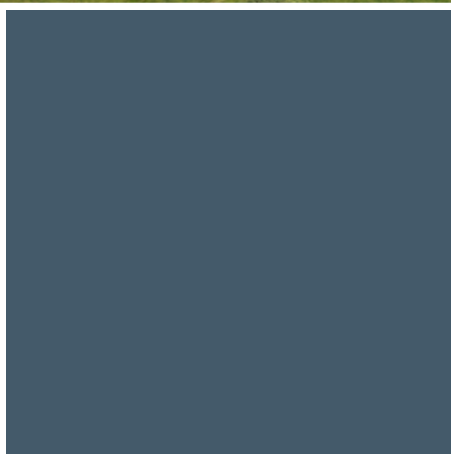
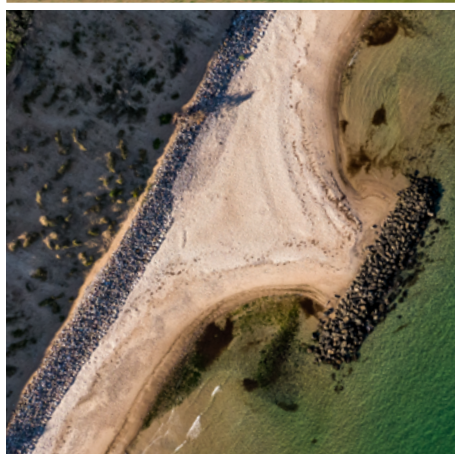


# ANNUAL REPORT | 2022

CBR NO. 50 49 78 28



The annual report was presented and approved at the COWIfonden board meeting on 22 May 2023.

Chairman

ANTON PETERSEN

**COWIfonden**

Parallelvej 2, 2800 Kongens Lyngby



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# STATEMENTS

## STATEMENT BY THE BOARD OF DIRECTORS

Today, the Board of Directors considered and approved the annual report for the financial year 1 January–31 December 2022 of COWIfonden.

The annual report has been prepared in accordance with the Danish Financial Statements Act. In our opinion, the accounting policies applied are appropriate and the accounting estimates made are adequate.

In our opinion, the annual report gives a true and fair view of COWIfonden's assets, liabilities and financial position as of 31 December 2022 and the results of COWIfonden's operations and cash flows for the financial year 1 January–31 December 2022 in accordance with the applied accounting policies.

In our opinion, the management's review gives a fair and true view.

Kongens Lyngby, 22 May 2023

### BOARD OF DIRECTORS:

ANTON PETERSEN  
Chairman

PETER HOSTRUP RASMUSSEN  
Vice Chairman

SUZANNE C.  
BECKMANN

LISBETH M.  
OTTOSEN

TINA VEJRUM

DAVID  
MACKENZIE

HEIDI LUND  
HANSEN

MARIUS SEKSE

ANNA KATHRINE  
BISGAARD SØRENSEN

## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors of COWIfonden and the foundation authority.

### OPINION

In our opinion, the Financial Statements give a true and fair view of the financial position of COWIfonden at 31 December 2022, and of the results of COWIfonden's operations and cash flows for the financial year 1 January – 31 December 2022 in accordance with the Danish Financial Statements Act.

We have audited the Financial Statements of COWIfonden for the financial year 1 January–31 December 2022, which comprise a summary of significant accounting policies, profit and loss statement, balance sheet, statement of changes in equity, cash flow statement and notes ("financial statements").

### BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing (ISAs) and the additional requirements applicable in Denmark. Our responsibilities under those standards and requirements are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of COWIfonden in accordance with the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (IESBA Code) and the additional ethical requirements applicable in Denmark, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### STATEMENT ON THE MANAGEMENT'S REVIEW

Management is responsible for Management's Review.

Our opinion on the financial statements does not cover Management's Review, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read Management's Review and, in doing so, consider whether Management's Review is materially inconsistent with the financial statements or our knowledge obtained during the audit, or otherwise appears to be materially misstated.

Moreover, it is our responsibility to consider whether Management's Review provides the information required under the Danish Financial Statements Act.

Based on the work we have performed, in our view, Management's Review is in accordance with the Financial Statements and has been prepared in accordance with the requirements of the Danish Financial Statements Act. We did not identify any material misstatement in Management's Review.

### MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENT

Management is responsible for the preparation of Financial Statements that give a true and fair view in accordance with the Danish Financial Statements Act, and for such internal control as Management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting in preparing the financial statements unless Management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

### AUDITOR'S RESPONSIBILITY

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit

conducted in accordance with ISAs and the additional requirements applicable in Denmark will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit conducted in accordance with ISAs and the additional requirements applicable in Denmark, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management.
- Conclude on the appropriateness of Management's use of the going concern basis of accounting in preparing the financial statements and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and contents of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that gives a true and fair view.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Hellerup, 22 May 2023

**PricewaterhouseCoopers**

Statsautoriseret Revisionspartnerselskab

CBR no. 33 77 12 31

JESPER MØLLER LANGVAD

State Authorised Public Accountant

mne21328

SØREN ALEXANDER

State Authorised Public Accountant

mne42824



# MANAGEMENT'S REVIEW

## INFORMATION ABOUT COWIFONDEN

NAME AND ADDRESS:  
COWIfonden, Parallelvej 2,  
2800 Kongens Lyngby  
Denmark

## BOARD OF DIRECTORS AND ADMINISTRATION

COWIfonden is headed by a board of directors with nine board members, of which six are appointed, two are elected by the employees in the Danish part of the

COWI Group, pursuant to the Danish Companies Act, and one member is elected by the employees in the Swedish or Norwegian part of the COWI Group. Four of the six appointed members must hold or have held executive positions in the COWI Group. The two remaining members are appointed among recognized, independent persons outside the COWI Group.

The board of directors holds four ordinary meetings a year.

In accordance with recommendations 2.3.4 and 2.4.1 under "Report on foundation governance", the following can be said about the board members:



### ANTON PETERSEN CHAIRMAN

- He is former Regional Vice President of COWI's major business line, Bridge, Tunnel and Marine Structures (BTM), born in 1950.
- **CURRENT TERM:**  
**Joined:** January 2015 (Chairman)  
**End of term:** May 2023  
Member of the board of COWIfonden for two terms – from 1998 to 2001 and from 2009 to 2012.
- **Special competencies:** In-depth knowledge of COWI, both technical from the field of bridges, tunnels and marine structures, and managerial from line management, based on 39 years of continued employment until the end of 2014. For 15 years, head of Bridge, Tunnel and Marine Structures in COWI, thereby acquiring solid international business and management experience. Broad experience with board duties from his positions as chairman of BTM subsidiaries and board member for several terms for multiple Danish companies (Dansk Konstruktions- og Betoninstitut, Danish Steel Institute (DSI), IABSE Danmark, and Dansk Selskab for Bygningsstatik).
- **Share owner:** Yes.
- Not independent.

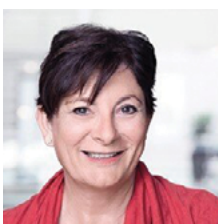




## PETER HOSTRUP RASMUSSEN

### VICE CHAIRMAN

- He is Senior Market Director, born in 1965.
- **CURRENT TERM:**  
**Joined:** May 2021  
**End of term:** May 2025  
Member of the board of COWIfonden from 2007 to 2010.
- **Special competencies:** Extensive line management and management of international business (Roads, Railways, Metros, Lightrails and Airports) as well as thorough knowledge of COWI achieved throughout the years since the employment in 1989.
- **Other directorships:** Member of the Management board of COWI Polska. Member of DI-Transport, a branch of the Confederation of Danish Industry.
- **Share owner:** Yes.
- Not independent.



## SUZANNE C. BECKMANN

### MEMBER

- She is MSc in Social Sciences, Director/partner in own consultancy company, 30 years as researcher and teacher at the Aarhus School of Business and Social Sciences, the University of Southern Denmark, and as professor at the Copenhagen Business School for 20 years until 2016, born in 1959.
- **CURRENT TERM:**  
**Joined:** May 2018  
**End of term:** May 2026
- **Special competencies:** International board experience, strategy and management, ESG investments, corporate social responsibility and SDGs, marketing management and communication, research donations in public and private contexts.
- **Other directorships:** Member of a portfolio of Danish and international committees, steering groups and boards, and examiner with business economics programmes since 1991.
- **Share owner:** Yes.
- Independent.



## LISBETH M. OTTOESEN

### MEMBER

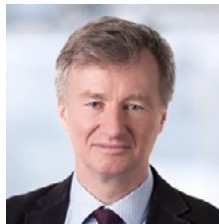
- She is Professor, born in 1967.
- **CURRENT TERM:**  
**Joined:** May 2022  
**End of term:** May 2026
- **Special competencies:** Circular economy in the construction sector, reuse and recycling of construction materials, use of secondary resources in new construction materials and recovery of critical elements from ash.
- **Other directorships:** Head of section for Materials and Durability at DTU Sustain, member of the Academic Council at Technical University of Denmark (DTU), convener of the standardization in CEN/TC350/SC1/WG1 "Circular economy in the construction sector – Terminology, principles and framework for implementation".
- **Share owner:** No.
- Independent.



## TINA VEJRUM

### MEMBER

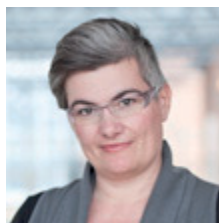
- She is Senior Technical Director in Transportation International, born in 1968.
- **CURRENT TERM:**  
**Joined:** May 2019  
**End of term:** May 2024
- **Special competencies:** Extensive experience in line management and project management. In-depth knowledge of COWI's international infrastructure business. Vast international network. Focus on knowledge sharing and professional development.
- **Other directorships:** Member of the board of COWI Korea. President of IABSE (International Association for Bridge and Structural Engineering). Board member of the Danish group of IABSE. Affiliated professor at the Danish Technical University, DTU-Construct.
- **Share owner:** Yes.
- Not independent.



## DAVID MACKENZIE

### MEMBER

- He is Senior Technical Director, Bridges COWI UK, born in 1962.
- **CURRENT TERM:**  
**Joined:** March 2022  
**End of term:** May 2026
- **Special competencies:** Extensive experience in civil engineering projects worldwide with a particular emphasis on complex structures. Twenty five years at senior director level on line and business management.
- **Other directorships:** Member of "Structural Safety" Board in the UK responsible for setting safety advice on structures. Chief Examiner for setting competency for the Institution of Structural Engineers.
- **Share owner:** Yes.
- Not independent.



## HEIDI LUND HANSEN

### EMPLOYEE-ELECTED

- She is Senior Project Manager, Project Management Consultancy, born in 1970.
- **CURRENT TERM:**  
**Joined:** December 2016  
**End of term:** May 2024
- **Special competencies:** Knowledge of client consultancy, competition consultancy and process consultancy. Industrial PhD holder. Special knowledge of COWI's business, especially in the area of buildings for educational and cultural purposes. Knowledge of employee relations.
- **Other directorships:** Member of the board of COWIfonden from 2012 to 2014, elected as alternate in 2014.
- **Share owner:** No.
- Not independent.



## ANNA KATHRINE BISGAARD SØRENSEN

### EMPLOYEE-ELECTED

- She is Creative Leader, Associate, Arkitema Architects (wholly owned subsidiary of COWI Holding), born in 1969.
- **CURRENT TERM:**  
**Joined:** May 2020  
**End of term:** May 2024
- **Special competencies:** Holistic architecture developed via interdisciplinary collaborations. Sustainable architectural solutions for a wide range of sectors and projects, primarily knowledge, culture and transformation. Extensive network achieved through numerous assignments within knowledge environments.
- **Other relevant positions:** Member of the board of representatives "De 19", the SDG Network and appointed professional juror at Danish Association of Architects. External examiner in the Corps of External Examiners for the Engineering Programmes AAU/DTU Civil – Design and Architecture. Member of The Society of Artists Architect Section at The Royal Danish Academy of Fine Arts. Member of the board of Ejendomsfonden Knudepunktet Mols.
- **Share owner:** No.
- Not independent.



## MARIUS SEKSE

### EMPLOYEE-ELECTED

- He is Digital Transformation Director, COWI AS, Norway, born in 1981.
- **CURRENT TERM:**  
**Joined:** May 2020  
**End of term:** May 2024
- **Special competencies:** Digital management and development of interdisciplinary projects, project management, and security consultancy. Writer of articles and speaker at conferences focusing on digital development and standardisation within the infrastructure sector.
- **Other relevant positions:** Served as employee-elected member on the board of COWI Holding from 2017 to 2020.
- **Share owner:** Yes
- Not independent.

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The administrative processing of applications for donations is handled by the technical and administrative secretary, who also acquires expert testimonies, when needed. Qualified applications are assessed by an evaluation committee set up by the board of COWIfonden. Applications are presented for the approval or rejection of the joint board of directors.



**JOAN MAJ NIELSEN**  
TECHNICAL AND ADMINISTRATIVE SECRETARY

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Board members are eligible for re-election, but are to resign at the first board meeting of COWIfonden following the Annual General Meeting of COWI Holding A/S after the end of the financial year when they turn 70.

However, the Danish Business Agency may grant an exemption to deviate from the age limit, as is the case for the chairman, whose membership has been approved until he turns 72.

Also see COWIfonden's website, [www.cowifonden.dk](http://www.cowifonden.dk), for further information about COWIfonden's activities.



## COWIFONDEN'S PURPOSE

The purpose of COWIfonden can be stated as follows:

- The foundation is to support and expand the COWI Group.
- The foundation is to work to strengthen the reputation of Danish engineering.
- The foundation may use the means available to increase the share capital in COWI Holding A/S.
- The foundation may support the further education and research of engineers.
- The foundation may support the further education and research of other academics, especially in technical, economic or social disciplines, or, in special cases, other scientific or artistic purposes, relating to the activities of the COWI Group.

## COMPETENCIES AND DIVERSITY ON THE BOARD OF COWIFONDEN

Prior to appointing new board members, the board of COWIfonden prepares a profile of the competencies needed on the board. In addition, COWIfonden has prepared a diversity policy, which sets out targets on gender and geography in terms of board makeup. As a result, at least two out of six appointed board members are to be of the same gender, and at least one of the internally appointed (not external) members is to come from a non-Danish subsidiary. At the end of 2022, COWIfonden meets these targets.

## INVESTMENT POLICY

COWIfonden has adopted an investment policy covering COWIfonden's investments in securities in order to ensure that it invests in companies that have a business oriented mindset, that exercise a high professional and ethical standard in all regards, and that meet the values of COWIfonden. The investment policy is evaluated/ updated once a year for final approval by the board of the COWIfonden. In 2020, the board of COWIfonden decided to increase COWIfonden's share of "green" holdings (ESG investments). This policy will continue also in 2023. COWIfonden has engaged a professional investment advisor to support the investment and audit committee.

## DONATIONS

COWIfonden wants to support projects with a high technical level and long-term perspective. To promote this objective, COWIfonden has adopted a donation policy, which entails, among other things, that projects are granted a suitable overhead to cover expenses beyond

direct salary expenses. The size of the overhead granted is published on COWIfonden's website. In 2022, we granted an overhead of DKK 175 per hour for salary costs, and for other project-related costs, we accepted an overhead contribution of up to 20 per cent. The award of donations complies with COWIfonden's donation policy, which is stated below.

## DONATION POLICY

Referring to sections 2 and 4 of the charter, the board of COWIfonden has adopted the below guidelines, which form the basis for COWIfonden's processing of applications and potential design of innovative research projects. The guidelines can be summed up as follows:

- When awarding donations, priority is given to recipients from countries where the COWI Group is established. Priority is also given to development of projects regarding the professional activities of the COWI Group.
- Universities, research institutions, well-established organisations or individuals are eligible for donations. The activities receiving support are normally to be anchored in a professional environment.
- Large-scale donations can be awarded to innovative research projects or programmes that stretch over several years, preferably with several parties contributing financially and participating actively in the project. A business unit of the COWI Group can participate in such multidisciplinary projects. Smaller donations can be awarded to narrow purposes and individuals, although with a long-term perspective.
- Projects worthy of support are characterised by high technical competencies, long-term value to society and social responsibility.
- The results of projects or activities supported by COWIfonden are to be publicly accessible and, preferably, contribute to COWI's good reputation.

## FINANCIAL RESULT DEVELOPMENT IN 2022

The result of the year before taxes amounted to DKK -1.836.144 which is lower than expected because of the negative development in the financial markets throughout the year. In consideration of this negative development, the Board of Directors finds the result for the year acceptable.

As of 31 December 2022, COWIfonden owns 86.7 per cent of the shares in COWI Holding A/S, corresponding to a booked cost price of DKK 86,403,625. Stated according to the net asset value method, the share portfolio would amount to TDKK 1,312,005. In 2022, COWIfonden received dividend from COWI Holding A/S of DKK 58,586,658, which is recognized with COWIfonden.

The donations pledged in that period make up DKK 18,677,376, consisting of DKK 19,703,501 of donations awarded and DKK 1,026,125 of donations reversed.

The result of the year after donations and regulation of the frame of donations amounts to DKK -21,895,788, which is proposed to be carried over to the revenue reserves. The total net capital (net asset value) then makes up DKK 404,063,792, of which the base capital makes up DKK 20,000,000.

COWIfonden states COWI Holding A/S shares at cost price. If the shares of COWIfonden were stated at the percentage of COWI Holding A/S's net capital (net asset value), the net capital of COWIfonden would amount to TDKK 1,629,665.

#### CASH FLOW

Cash flow from operating activities amounted to DKK 5.6 million. The adjustment for price of securities amounts DKK -62.7 million, down from DKK 13.8 million in 2021.

Cash flow from investing activities to a net negative amount at DKK 36.7 million in 2022 and related primarily to investments in marketable securities. Free cash flow amounted to DKK 25.9 million in 2022. It is the intention of COWIfonden continuously to invest the free cash flow in securities according to the investing policy.

## EVENTS AFTER THE BALANCE SHEET DAY

No conditions have occurred after the balance sheet date which have significant influence on the assessment of the annual report.

## EXPECTED DEVELOPMENT

Given the war in Ukraine, high inflation and a potential risk for recession in some markets, the financial markets are expected to be uncertain for most of 2023. Income in 2023 from COWIfonden's investments in securities is therefore rather uncertain. However, COWIfonden expects an increased income not least from its investments in COWI Holding A/S. The result for 2023 therefore is expected to be considerably higher than the result for 2022, with a profit in the range of 50 million DKK for 2023.

## STATEMENT ON FOUNDATION GOVERNANCE

COWIfonden complies with all recommendations for foundation governance, except for recommendation 3.1.2, cf. the table below.

## REPORT ON FOUNDATION GOVERNANCE PURSUANT TO THE DANISH FINANCIAL STATEMENTS ACT, § 77A.

RECOMMENDATION		COMPLIANCE
1	Transparency and communication	
1.1	It is recommended that the board of directors adopt principles for external communication that address the need for transparency and stakeholders' needs and possibilities to obtain relevant up-to-date information about the circumstances of the foundation.	COWIfonden complies with the recommendation. COWIfonden has a website, which communicates, e.g., news and matters relating to donations. In its rules of procedure, COWIfonden states that only the chairman is to make public statements.
2	Tasks and responsibilities of the board of directors	
2.1	Overall tasks and responsibilities	
2.1.1	It is recommended that, in order to secure the activities of the commercial foundation in accordance with the purposes and interests of the foundation, the board of directors should, at least once a year, take a position on the overall strategy and distribution policy of the foundation on the basis of the article of association.	COWIfonden complies with the recommendation. COWIfonden has adopted a strategy "Purpose, values, vision and donation policy", which was approved by the board of directors in 2017. Once a year, a status report is prepared on implementation of the overall strategy, subject to the processing and approval of the board of COWIfonden. The donation policy is included in the overall strategy, and once a year the frame for donations is determined as part of the budgeting.
2.1.2	It is recommended that the board of directors regularly address whether the foundation's asset management is in line with the purpose of the foundation and its long- and short-term needs.	COWIfonden complies with the recommendation. Annual budgets are prepared, and budget follow-up is carried out as part of four annual board meetings, during which the board also takes a position on fulfilment of COWIfonden's investment policy.
2.2	Chairman and vice-chairman of the board of directors	
2.2.1	It is recommended that the chairman of the board of directors organise, convene and chair meetings of the board of directors in order to ensure effective board work and to establish the best conditions for the work of the board members individually and collectively.	COWIfonden complies with the recommendation. The job description for the chairman is part of the rules of procedure for COWIfonden. It clearly defines that the chairman organizes, convenes and chairs board meetings.
2.2.2	It is recommended that if the board of directors, in exceptional cases, asks the chairman of the board of directors to perform special activities for the commercial foundation which extend beyond the duties of chairman, a board resolution to that effect be passed to ensure that the board of directors maintains its independent, general management and control function. Appropriate allocation of responsibilities should be ensured between the chairman, the vice-chairman, the other members of the board of directors and the executive board, if any.	COWIfonden complies with the recommendation. A job description is prepared for both the chairman and the vice chairman to ensure well-defined and sound allocation of responsibilities. The chairman of the board is not permitted to take on special operational tasks for the board of COWIfonden without prior approval by the board of directors. Furthermore, the following committees exist: <ul style="list-style-type: none"> <li>• Assessment committee (donations)</li> <li>• Nomination committee</li> <li>• Investment and audit committee.</li> </ul>
2.3	Composition and organisation of the board of directors	
2.3.1	It is recommended that the board of directors regularly, and at least every second year, assess and stipulate the competences that the board of directors needs to possess in order to best perform the tasks incumbent upon the board of directors.	COWIfonden complies with the recommendation. COWIfonden has prepared a competency profile for the board of COWIfonden, which is discussed and approved once a year by the board of COWIfonden.



RECOMMENDATION	COMPLIANCE
<p>2.3.2 It is recommended that with due respect of any right in the articles of association to make appointments, the board of directors approves a structured, thorough and transparent process for selection and nomination of candidates for the board of directors.</p>	<p>COWIfonden complies with the recommendation. The board of COWIfonden has prepared terms of reference and set up a nomination committee, which is tasked with identifying and recommending candidates for the boards of COWIfonden and COWI Holding. The process for selecting candidates is described in the terms of reference. Then, based on the recommendations of the nomination committee, the board of COWIfonden appoints new members to the board of COWIfonden and nominates candidates for election at the annual general meeting of COWI Holding.</p>
<p>2.3.3 It is recommended that members of the board of directors are appointed on the basis of their personal qualities and competences, taking into account the collective competences of the board and that when composing and nominating new members of the board the need for introducing new talent is weighed against the need for continuity and the need for diversity is in relation to, inter alia, commercial and grants experience, age and gender.</p>	<p>COWIfonden complies with the recommendation. COWIfonden has prepared a competency profile for the board of COWIfonden as well as targets for diversity on the boards of COWIfonden and COWI Holding A/S as the basis for appointment of new board members. Also see 2.3.2.</p>
<p>2.3.4 It is recommended that in the management commentary in the annual report and on the Commercial foundation's website, if any, there is an account of the composition of the board of directors, including its diversity, and that the following information is provided on each board member:</p> <ul style="list-style-type: none"> <li>• the name and position of the member,</li> <li>• the age and gender of the member,</li> <li>• date of original appointment to the board whether the member has been re-elected, and expiry of the current election period,</li> <li>• any special competences possessed by the member,</li> <li>• other managerial positions held by the member, including positions on executive boards, boards of directors and supervisory boards and board committees in Danish and foreign foundations, enterprises and institutions, as well as other demanding organisation tasks,</li> <li>• whether the member owns shares, options, warrants and similar in the foundation's subsidiaries and/or associates,</li> <li>• whether the member has been appointed by authorities/providers of grants etc., and</li> <li>• whether the member is considered independent.</li> </ul>	<p>COWIfonden complies with the recommendation. The required information about all of the members of the board of COWIfonden is available at COWIfonden's website, <a href="http://www.cowifonden.com">www.cowifonden.com</a>, and in the annual report.</p>
<p>2.3.5 It is recommended that the majority of the members of the board of directors of the commercial foundation are not also members of the board of directors or executive board of the foundation's subsidiary(ies), unless it is a fully owned actual holding company.</p>	<p>COWIfonden complies with the recommendation. None of the board members of COWIfonden are members of the executive boards or board of directors of any COWIfonden subsidiary.</p>

RECOMMENDATION	COMPLIANCE
2.4 Independence	
<p>2.4.1 It is recommended that an appropriate proportion of the board of directors be independent. If the board of directors (excluding employee representatives) is composed of</p> <ul style="list-style-type: none"> <li>• up to four members, at least one member should be independent,</li> <li>• between five and eight members, at least two members should be independent, or</li> <li>• nine to eleven members, at least three members should be independent, and so on.</li> </ul> <p>To be considered independent, this person may not, for example:</p> <ul style="list-style-type: none"> <li>• be or within the past three years have been member of the executive board or a senior employee in the foundation or an essential subsidiary or associated company to the foundation,</li> <li>• within the past five years have received larger emoluments, including distributions or other benefits from the foundation/group or a subsidiary or associated company to the foundation in other capacity than as member of the board of directors or executive board of the foundation,</li> <li>• within the past year have had a significant business relationship (e.g. personal or indirectly as partner or employee, shareholder, customer, supplier or member of the executive management of companies with corresponding connection) with the foundation/group or a subsidiary or associate of the foundation,</li> <li>• be or within the past three years have been employed or partner at the external auditor,</li> <li>• have been a member of the board of directors or executive board of the foundation for more than 12 years,</li> <li>• be a close relative or in another way be very close to persons who are not considered as independent,</li> <li>• be the founder or a significant donor if the purpose of the foundation is to grant support to this person's family or others who are especially close to this person, or</li> <li>• be a member of the management of an organisation, another foundation or similar, which receives or repeatedly within the past five years have received significant donations from the foundation.</li> </ul>	<p>COWIfonden's board consists of nine members. Three of the board members are elected by employees and six are appointed. One independent members of the board of directors owns shares in COWI Holding A/S. Due to the relative immateriality of the investment both in terms of the remuneration of the board members and of the total number of shares, COWIfonden still considers the board member independent.</p>

RECOMMENDATION	COMPLIANCE
2.5 Appointment period	
2.5.1 It is recommended that members of the board of directors be appointed for a minimum period of two years and a maximum period of four years.	COWIfonden complies with the recommendation. According to COWIfonden's rules of procedure, board members are appointed for a period of four years. They may be re-elected.
2.5.2 It is recommended that an age limit for members of the board of directors be set, which is published in the management commentary or on the foundation's website.	COWIfonden complies with the recommendation. The age limit for the chairman and board members are stated in the rules of procedure and published as part of the management's review in the annual report.
2.6 Evaluation of the performance of the board of directors and the executive board	
2.6.1 It is recommended that the board of directors establish an evaluation procedure in which the board of directors, the chairman and the contributions and performance of individual members are evaluated annually and the result is discussed by the board of directors.	COWIfonden complies with the recommendation. According to COWIfonden's rules of procedure, an annual evaluation of the board's performance is carried out, following a thorough procedure defined by the board of directors. Among other things, the evaluation covers the topics described in the recommendation.
2.6.2 It is recommended that once a year the board of directors evaluate the work and performance of the executive board and/or the administrator (where relevant) in accordance with predefined clear criteria.	COWIfonden complies with the recommendation. COWIfonden has no executive board and no administrator, but is purchasing administrative services from COWI A/S. The administrative services related to COWIfonden carried out by COWI A/S is part of the overall evaluation of the work of the board, cf. 2.6.1.
3 Remuneration of management	
3.1.1 It is recommended that the members of the board of directors of commercial foundations be remunerated with a fixed remuneration and that members of a possible executive board be remunerated with a fixed remuneration, possibly combined with a bonus which should not be dependent upon accounting results. The remuneration should reflect the work and responsibilities consequential to the position.	COWIfonden complies with the recommendation. COWIfonden has no executive board. Remuneration of chairman, vice chairman and board members is stated in the note in the annual report.
3.1.2 It is recommended that the financial statements provide information about the full remuneration received by each member of the board of directors and any executive board from the commercial foundation and from the foundation's subsidiaries and associated companies.  Furthermore there should be information on any other remuneration which members of the board of directors and an executive board, if any, have received for performing other work or tasks for the foundation, the foundation's subsidiaries or associated companies, except for the remuneration of employee representatives as employees.	COWIfonden does not comply with the recommendation. COWIfonden does not believe that publishing remuneration received by each board member will add additional relevant information to COWIfonden's stakeholders. For your information, board members that are employed by COWI Holding A/S subsidiaries earn a normal wage and bonus, if relevant. The note in the annual report states the total salary including bonus of board members employed with COWI Holding A/S subsidiaries.

## KEY FIGURES AND FINANCIAL RATIOS FOR COWIFONDEN

	2022	2021	2020	2019	2018
KEY FIGURES	DKK (‘000)	DKK (‘000)	DKK (‘000)	DKK (‘000)	DKK (‘000)
<b>PROFIT AND LOSS ACCOUNT</b>					
Dividend from shares in subsidiaries	58,587	56,333	48,465	48,309	43,709
Profit before financial items	54,249	52,257	44,621	45,003	40,386
Financial income and expenses	-56,085	22,534	49,294	52,423	-6,210
Profit for the year	-2,192	70,647	93,679	92,735	34,176
<b>BALANCE</b>					
Assets	444,380	459,000	398,417	317,514	232,673
Equity	404,064	424,933	365,977	282,432	203,117
Equity (the inner book value) <sup>1</sup>	1,629,665	1,600,157	1,575,754	1,314,108	1,214,868
<b>FINANCIAL RATIOS</b>					
Donation percentage	n/n	16.6	10.8	14.5	48.2
Return on equity	-0.5	17.9	28.9	38.2	17.6

### DEFINITION OF FINANCIAL RATIOS

Donation percentage:  $(\text{Donations} \times 100) / \text{Profit for the year}$   
 Return on equity:  $(\text{Profit for the year} \times 100) / \text{Average equity}$

<sup>1</sup> Equity, book value – i.e. if shares in subsidiaries were calculated at the inner book value and not at historic cost.

## STATEMENT ON DONATION POLICY

The board of COWIfonden has set a frame for donations of DKK 22 million for 2023. The intention is to aim for a total award of some DKK 17 million in 2023, but the larger frame will provide the board with the required elbow room, should special projects eligible for support emerge.

			2022
TYPE OF APPLICATION	Applications	Donations awarded	Success rate %
Innovative research projects (based on prequalification)	1	1	100
Industrial PhD	5	5	100
R&D projects	24	8	33
Visiting professor	3	1	33
Publications, TV, other media	1	0	0
Conferences etc. (execution of)	4	1	25
Ph.d. incl. research abroad	2	0	0
Equipment	2	2	100
Other	1	1	100
<b>TOTAL</b>	<b>43</b>	<b>19</b>	<b>44</b>

In present annual report, COWIfonden chooses to focus on three ongoing research and development projects and one ongoing industrial PhD project that COWIfonden supported in 2022.

As mentioned elsewhere in present annual report (and on COWIfonden's website), COWIfonden is to serve two purposes, according to its charter. As a commercial foundation, COWIfonden is to support and expand the COWI Group. The commercial element is unfolded in the role as an active and competent owner with a profound interest in the COWI Group's business and development. Furthermore, COWIfonden is to act as a donating foundation, supporting relevant purposes beneficial to society, primarily within the COWI Group's fields of activity and in particular within post-graduate studies and research. COWIfonden attaches great importance to high professional skills and activities carried out within the framework of what is today called open science,

preferably in collaboration between several actors within and outside COWI. To that end, COWIfonden grants substantial donations to research and development projects at universities or research institutes that have a long-term effect and perspective within the COWI Group's fields of activity.

Among other things, that means that, for a number of years, COWIfonden has made donations to industrial PhD projects carried out with COWI and partner universities in several countries. We greatly value this function since it combines several of the COWIfonden's objectives: high professional level, relevant to COWI's long-term development, employee development and talent management. At the same time, the professional foundation is developed with COWI's partners at universities, benefitting the common public, while COWI's reputation is strengthened through the publications resulting from the industrial PhD projects.



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Barony A-Frame at Barony Colliery, Scotland. Photo courtesy of Dr Neil Burnside, University of Strathclyde

## MINING FOR HEAT

### Research activities and other projects / Industrial PhD project

Warm water extracted from abandoned, flooded coal mines can be used for heating and help decarbonise the fossil fuel dependent energy mix of the United Kingdom. This PHD tries to encapsulate the needs of all stakeholders from a local to national scale, creating research outputs that are useful and applicable to real-life scenarios.

The implications are indeed global once a framework emerges. In the UK alone, the energy required for space heating (and increasingly, space cooling) contributes to 40% of the energy demand each year, 90 per cent of which comes from the burning of natural gas. Using naturally derived heat stored within the shallow subsurface for heating, cooling, and thermal storage has the potential to form part of the solution to decarbonise the fossil fuel-dependent UK energy mix and reach net zero by 2050.

Mine water thermal (MWT) extracts warm water (10-20°C) from networks of abandoned, flooded coalmines that lie below an estimated 25% of homes in the UK through ground source heat pump (GSHP) technologies. Currently, only one MWT scheme is permitted per mine water block (a network of mines identified to be relatively well connected to one another) due to a lack of understanding of how mine water temperature responds to multiple users tapping into the same resource.

## A COLLABORATIVE INNOVATION ECOSYSTEM

Project members from COWI UK, the University of Strathclyde, and the Technical University of Denmark are working alongside a suite of other academic, entrepreneur, and government players in an innovation ecosystem with the combined goal of accelerating the uptake of mine water thermal in the UK and globally. An interdisciplinary approach with a range of stakeholders is key to ensuring that the progress made during the lifetime of the project (and beyond) is communicated effectively, widely purposeful, and just.

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Mine water thermal has so far been underutilised in the UK as a low-carbon energy solution due to the knowledge gaps and uncertainties associated with how heat flows within mines. To not only accelerate, but maintain its growth, a cross-sector collaborative approach is vital to securing mine water thermal's significant role in the green transition toward net zero,”

says Civil & Environmental  
PhD student Sally Jack.

## ABOUT THE PROJECT

- **PROJECT NAME:**  
Heat flow in complex mine water geothermal systems: towards a digital tool for options appraisal to maximise mine water resources
- **PARTICIPANTS:**  
COWI UK, University of Strathclyde (Civil & Environmental Engineering Department), and Technical University of Denmark (DTU)
- **TIMELINE:**  
October 2021 – June 2025
- **COWIFONDEN CONTRIBUTION:**  
GBP 219,468 (≈249,000 EUR)

## DATA, DATA, AND MORE DATA

This project has highlighted the importance of equitable data sharing in research as many of the challenges faced so far have been related to the necessary collection of relevant subsurface data. There is currently no single, publicly available dataset that records existing UK mine water temperatures. Data that is available requires a license to be viewed, something that takes time and occasionally funding to obtain. These barriers hinder the development of MWT by extending project timescales and restricting the scope of industry and research projects such as this one. We hope that our research outcomes will aid in removing some of these data barriers.

## MODELLING THE SUBSURFACE

The focus of this research is to de-risk future scenarios where more than one user will be tapping into the same mine, or mine water block and provide a screening tool from which prospective developers can assess the suitability of a site for MWT scheme implementation.

So far, three main methods have been explored during this research: (1) artificial intelligence/machine learning algorithms on subsurface temperature data, (2) semi-structured interviews with mine engineers, and (3) numerical modelling of water and heat flow in mines. Machine learning approaches combined with qualitative technical interviews will inform on parameters for use in numerical modelling of heat behaviour in mines. Models will be based on two interconnected mines in Scotland where multiple users are planning to extract and reinject heat and, as such, the findings will have real-world data for calibration and validation.

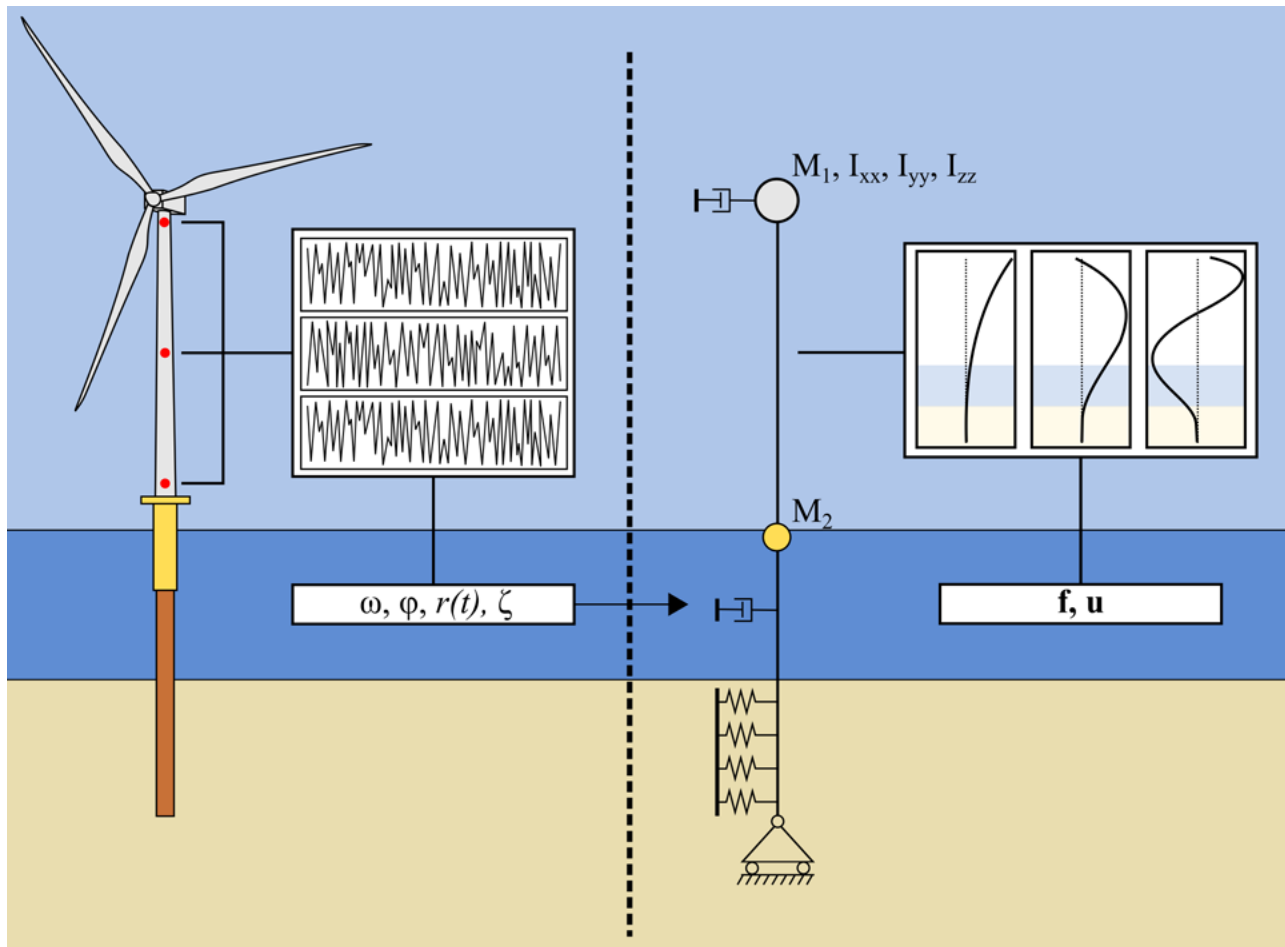
### A NEW PERSPECTIVE

We have imported around 150,000 subsurface temperature data points into machine learning algorithms and formed initial temperature-depth profiles for UK ground and mine water. Running parallel to this, qualitative data obtained via the miner interviews have complimented existing mine data for our chosen Scottish case studies. One key takeaway has been the importance of miner testimonies – first-hand knowledge of these mine workings provides unparalleled information when compared to guesses about the mine structure and layout and are an invaluable part of this research.

We have presented this research at The Geological Society's regional group, have authored and co-authored conference abstracts, and will be presenting at two international conferences in 2023.

The project was granted GBP 219,468 commencing in October 2021. The final offering will be ready in Q1/2 of 2025 when the ecosystem's development tasks are all carried out and the PhD thesis is submitted.





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Through a simple vibration monitoring system, the modal parameters of an OWT are identified and used for updating an FE model.

## HOW TO PREDICT THE LIFETIME OF OFFSHORE WIND TURBINES

### Industrial PhD project

Bringing down the cost of green energy production is pivotal for a successful green transition. Over the last decades, this has motivated great technological progress in the field of offshore wind energy, leading to a significant increase in the number and size of operating Offshore Wind Turbines (OWTs). But wind turbines are highly flexible and dynamic structures and are therefore prone to damage caused by cyclic loading or fatigue. Given the above, we are seeing an increasing demand to optimize operation and maintenance (O&M) activities, with the overall goal to reduce lifecycle costs and extend the lifetime of such structures.

#### SENSOR DATA FOR POTENTIAL LIFE EXTENSION

In this PhD project, we intend to improve the prediction of remaining life for new and existing OWTs by utilizing data from sensors installed on the individual turbines. Combining the data with a calibrated numerical model representation of the turbines, a so-called Digital Twin, will allow us to estimate the consumed fatigue life at any location in a turbine at any time based on its actual behaviour.

## ABOUT THE PROJECT

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- **PROJECT NAME:**  
Data-driven Identification of Structural Degradation of Offshore Wind Turbines
- **PARTICIPANTS:**  
COWI Bridges International and Technical University of Denmark (DTU)
- **TIMELINE:**  
March 2022 – February 2025
- **COWIFONDEN CONTRIBUTION:**  
650,000 DKK (≈87,200 EUR)

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We look forward to developing data-driven methodologies to extend the service life of offshore structures building on the in-house experience gained while developing parallel methodologies on other structures, such as bridges. By doing so, we will contribute to accelerate the green transition,”

says Isaac Ferreras Alcover, Principal Specialist at COWI and main industrial supervisor.

## BROAD COLLABORATION IS KEY TO A CONCLUSIVE PROJECT

During the first year, time was spent simulating structural responses and assessing these to develop a proof-of-concept of the methodology to be developed. This initiated a good collaboration between the project (COWI and DTU Construct) and DTU Wind and the agreement of an external research stay at the Acoustics and Vibration research group at Vrije Universiteit Amsterdam, which is one of the leading research institutions in this field.

## VIRTUAL SENSING

This research investigates the use of Virtual Sensing based on Modal Decomposition and Expansion (MDE) to estimate stress ranges at critical details, which govern the lifetime of such structures.

This allows for estimating strain time histories for all fatigue-vulnerable locations in the structure based on the actual dynamic response. By measuring the actual behaviour of the structures, we reduce uncertainties and assumptions regarding the loading on the structure present in the design phase, and by calibrating our numerical model we are reducing uncertainties regarding the assumptions on the structural parameters. This allows us to update remaining lifetime estimates on a near real-time basis with high accuracy.

## WHAT IS NEXT

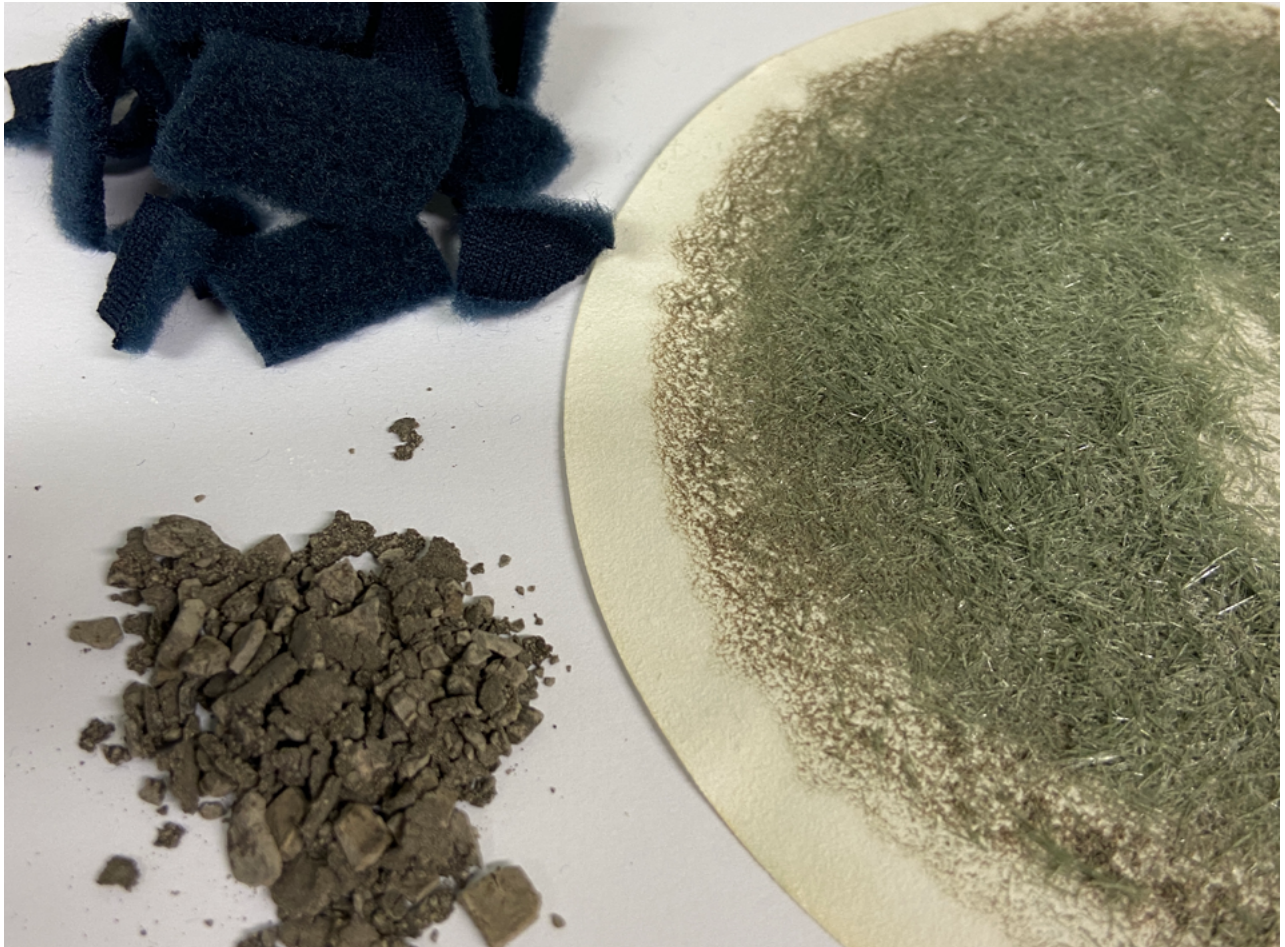
The Virtual Sensing methodology considered in the present project includes several steps and thus part of the research aims at identifying the areas with the greatest potential for improving current methodologies. The different steps of the methodologies under development are:

- Identification of modal parameters
- Numerical model updating and calibration
- Quantification of fatigue life consumption
- Probabilistic prognosis for remaining fatigue life

It is expected that the first publication will be in 2023. The project will be concluded in 2025 and will pave the way toward life extension methodologies for Offshore Wind Turbine supporting structures.

In the near future, it is anticipated to work with monitoring data from a COWI-designed OWT supporting structure to validate the developed methodologies as a first step towards future professional applications.

Mads Greve Pedersen was granted DKK 650,000 for the PhD project which started back in 2022. The conclusions will be ready at the end of 2025 when the PhD thesis will be published.



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The chemical products from recycling of a blue synthetic textile: BHET monomers from polyester (green) and nylon polymers (brown).

# CHEMICAL RECYCLING OF SYNTHETIC TEXTILES

## Research activities and other projects

### ABOUT THE PROJECT

- **PROJECT NAME:**  
RE:MIX III – Chemical recycling of blended synthetic textiles
- **PARTICIPANTS:**  
COWI AB Industry Division and RISE Research Institutes of Sweden
- **TIMELINE:**  
December 2021 – April 2023
- **COWIFONDEN CONTRIBUTION:**  
1.5 MILLION SEK  
(≈135,300 EUR)

Each year the average Swedish citizen throws 7.5 kg of textile in the trash, textiles which are then incinerated. This adds up to 80,000 tons of textile value lost each year. By developing new techniques for recycling and new circular value chains, this waste can become a resource instead. This project focuses on the development of a new innovative solution for recycling synthetic textiles.

This project will contribute to the development of a green and sustainable process for future textile waste refinery, and, at a global perspective, this research will contribute to future circular handling of synthetic textiles by replacing combustion and landfill of these textiles with a chemical recycling process.

Our current recycling scheme cannot handle blended textile streams. The mechanical recycling methods in place today can only successfully handle uncoloured plastics and textiles — composed by a single polymer — such as clear PET bottles or white cotton sheets. Therefore, new recycling concepts need to be developed for complex material streams such as plastics and textiles composed of more than one polymer type.

COWI AB Industry Division and RISE Research Institutes of Sweden are investigating an innovative chemical recycling process for synthetic textile (underwear, swimwear, active wear, pantyhose) composed of the polymers polyester (PET), nylon (polyamide) and elastane (stretch). This will generate recycled streams of chemical building blocks of PET and nylon which can be used for production of recycled platform chemicals, plastics, and textiles, and therefore replace fossil-based virgin polymers and contribute to a future circular society.

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The cross-disciplinary project team and collaboration is key for the development of the chemical recycling process of synthetic textiles. Knowledge transfer between RISE's competence within the textile development, polymer chemistry, and chemical recycling and COWI's competences in the upscaling and construction of chemical processes to industrial level, leads to the development of a waste refinery concept for synthetic textiles,”

says Stefan Mattsson, Market Developer  
at COWI AB Industry Division.

## ACCELERATE THE DEVELOPMENT OF A GREEN AND SUSTAINABLE PROCESS

### Technical highlights

A conceptual method to separate and recycle synthetic textile blends has been developed based on a twostep process scheme:

- **Step 1:** separation of polymeric nylon from the textile by dissolution chemistry (165°C, ethylene glycol).
- **Step 2:** depolymerisation of polyester (PET) and elastane (230 °C, catalyst, ethylene glycol) to PET monomeric building blocks (BHET) and elastane degradation products.

### A STEP TOWARD CIRCULAR VALUE-CHAINS FOR TEXTILES

This innovative project has delivered a new concept for handling synthetic textiles through the development of a chemical recycling concept.

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By developing new chemical recycling methods, the “fossil carbon atoms” in textiles can be turned into useful “recycled carbon atoms” which can be used to produce recycled plastics and textiles and diminish our dependency on fossil oil resources,”

explains Cecilia Mattsson, Senior Scientist  
at RISE Research Institutes of Sweden.

This basic research project will also be the foundation for new spin-off projects. For example, it will enhance our knowledge of elastane degradation chemistry and support the possibility to separate polymeric nylon from synthetic textiles.

The results have been communicated at workshops, conferences, and other industry events and a final scientific publication will be published during spring 2023.



#### ABOUT THE PROJECT

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- **PROJECT NAME:**  
Independent research carried out by Aquateam COWI as a research institute
- **PARTICIPANTS:**  
Aquateam COWI AS
- **TIMELINE:**  
September 2021 – August 2024
- **COWIFONDEN CONTRIBUTION:**  
4.5 MILLION NOK  
(≈414,000 EUR)

## INDEPENDENT RESEARCH PERFORMED BY AQUATEAM COWI AS A RESEARCH INSTITUTE

### Research activities and other projects

Aquateam COWI AS is an independent, non-profit, research and development (R&D) company owned by COWI. The donations from COWIfonden are used to develop new methods, gain new competences, and create value for the COWI organization and society at large.

## AQUATEAM COWI'S ROLE



The support from COWIfonden gives Aquateam COWI a unique opportunity to perform cutting edge applied research, allowing us, as a research institute, to develop new methods and advance our scientific understanding of subjects of particular importance within the water and environmental sectors,”

says Hanne Bonge-Hansen,  
manager of Aquateam COWI.

## ALLOCATION OF COWIFONDEN DONATION

Aquateam COWI uses the funds from COWIfonden to write scientific project applications both nationally and internationally; to disseminate project results and research; and to build new knowledge and expertise, developing and improving research methods.

Three examples of ongoing projects for which the support from COWIfonden has been highly important are RenCarBio, TreatRW, and DigestPlast. In all of these projects, Aquateam COWI is the project leader and collaborators include universities and industry leaders from Norway, Poland and Denmark.

### **Biochar as a quality recycling-product from organic waste fractions – RenCarBio**

The RenCarBio project focuses on typical Norwegian organic waste streams and how to maximize their value. This circular economy project aims to apply anaerobic digestion and pyrolysis as a combined, sustainable, and safer handling solution for municipal sewage sludge and animal manure, in the aim of reducing the volume of waste to manage, improving the recirculation of nutrient value, and minimizing the input of harmful contaminants to the soil. The project will analyse the content of heavy metals and selected contaminants of emerging concern (CEC) in the biochars obtained, including PFAs and pharmaceuticals, to help assess their impact on the environment and humans.

Preliminary project results from batch-scale pyrolysis trials on municipal sewage sludge (chemical and biological) performed at 400 and 600 °C showed a higher carbon content in raw sludge's biochar than in anaerobically digested sludge. Pyrolyzing the samples reduced the nitrogen content for all samples, with digested bio-sludge samples showing a lower content than raw bio-sludge ones. The higher the temperature, the more alkaline the biochar produced, correlating with the reduced nitrogen content. Overall, the results appear very promising.

### **Treatment of road water from tunnel washing and run-off – TreatRW**

Norway has ~1150 road tunnels with a total length of ~800 km. Challenging landscape with fjords and mountains have increased the use of road tunnels. To maintain traffic safety and increase lifespans of the tunnels, Norwegian tunnels are up to 12 times per year. Approximately 60-100 L water mixed with 0.5-1 % detergent is used on each meter of each tunnel. This results in a significant amount of polluted wash water.

The aim of this project is to improve knowledge about the water quality of tunnel wash water (TWW) and road surface water (RRW) and the need for treatment to meet local effluent requirements. Improving knowledge about microplastics in TWW and RRW is also a priority in the project.

Bamble tunnel was selected as a case for this study. Raw TWW was heavily polluted with particles, heavy metals, and organic micropollutants. Laboratory investigations for the removal of particles, heavy metals, and organic pollutants from TWW have been conducted. Chemical coagulation with iron-based coagulants and sulphur-based precipitants showed good performances for the TWW from the Bamble tunnel. The coagulation process removed over 95% of particles and more than 90% of heavy metals.

**Digest Plast Methane fermentation of biomass containing biodegradable polymeric material – Digest-Plast**

Bioplastics are relatively new products which are increasingly used in various areas of life while the knowledge about their decomposition during biological processes of municipal waste treatment (e.g. when bioplastics ends up in organic fraction of municipal waste) is very limited.

The Digest-Plast project is devoted to testing the possibility of decomposition of bioplastics by methane digestion bacteria. In the tests the most widely used types of bioplastics were investigated: polylactic acid (PLA), polyhydroxyalkanoates (PHA), polyhydroxybutyrate (PHB), Bioplastic 120, and bran (used to manufacture edible plates). The conducted research showed that the commonly used PLA (known as biodegradable) does not decompose at all under anaerobic conditions. The highest value of methane production was achieved for PHB, cellulose, and bran.

**Method development**

The funds are also used in smaller, internal projects that aim to develop new methods and gain new competencies which cannot be covered by customers or public funding.

**KNOWLEDGE SHARING**

Aquateam COWI frequently disseminates research results and achievements nationally and internationally. Aquateam COWI's scientists regularly participate in scientific conferences, giving oral presentations, acting as session chairpersons, and presenting posters. Recent conferences include the Nordic Biogas Conference 2022 in Linköping, Sweden; the 11<sup>th</sup> IWA International Symposium on Waste Management Problems in Agro-Industry in Gdansk Poland; and the IWA World Water Congress & Exhibition 2022 in Copenhagen, Denmark. At the latter, Aquateam COWI gave five podium presentations and three pitch presentations; had one session chairperson; and presented three posters. Aquateam COWI's knowledge and research results are also regularly shared with other companies in the COWI Group in the form of webinars.

# ACCOUNTING POLICIES

## BASIS OF ACCOUNTING

The Annual Report of COWIfonden for 2022 has been prepared in accordance with the provisions of the Danish Financial Statements Act applying to medium-sized enterprises of reporting class C.

In pursuance of number 5 of section 111(3), COWIfonden has not prepared consolidated financial statements. COWI Holding A/S' consolidated financial statements can be requisitioned at COWI Holding A/S, Parallelvej 2, 2800 Kongens Lyngby.

COWIfonden has derogated from the provisions of the Danish Financial Statements Act in terms of the format of the profit and loss statement to accommodate for the specific circumstances of COWIfonden's operations.

The annual accounts have been prepared according to the same accounting policies as last year.

The annual accounts are stated in DKK thousands.

## RECOGNITION AND MEASUREMENT

The accounts have been prepared using the historical cost principle.

Income is recognised in the profit and loss account as earned. Value adjustments of financial assets and liabilities which are measured at fair value or at amortised cost are also recognised in the profit and loss account. The same applies to all expenses paid to achieve earnings of the year.

Assets are recognised in the balance sheet when it is probable that future economic benefits will flow to the company, and the value of the asset can be reliably measured.

Liabilities are recognised in the balance sheet when it is probable that future economic benefits will flow out of the company and the value of the liability can be reliably measured.

On initial recognition, assets and liabilities are measured at cost. Subsequently, assets and liabilities are measured as described for each individual item below.

Recognition and measurement take into consideration anticipated losses and risks that arise before the time of

presentation of the annual report and that confirm or invalidate affairs and conditions existing at the balance sheet date.

The functional currency is Danish kroner (DKK). All other currencies are considered foreign currency.

## PROFIT AND LOSS ACCOUNT

### DIVIDEND FROM SHARES IN SUBSIDIARIES

Dividend from subsidiaries is calculated in the profit and loss account upon receipt of the dividend.

### STAFF AND ADMINISTRATION COST

In addition to remuneration to the Board of Directors, staff and administration costs include remuneration to the administrator of COWIfonden, COWI A/S, and other salary cost.

### OTHER EXTERNAL COST

Other external cost include administration and rent cost, travel cost, bank charges, etc.

### FINANCIAL ITEMS

Financial income and expenditure include dividend, interest and value adjustments on marketable securities.

### FOREIGN EXCHANGE ADJUSTMENT

Foreign exchange transactions are translated at the rates ruling at the transaction date.

Monetary items in foreign currencies are translated at the exchange rates ruling at the balance sheet date. Unrealised exchange gains or losses arising from differences between the exchange rates ruling at the balance sheet date and the rates prevailing at the time when the receivable or payable arises, are recognised in the profit and loss account.

### TAX ON PROFIT FOR THE YEAR AND DEFERRED TAX

The taxable income of COWIfonden is measured according to the tax rules on foundations.



Tax rules allow tax deductions for deferred tax intended for later distribution. This provides the foundation with the option to reduce a possible taxable income to zero when computing the taxable income by recognizing deferred tax intended for later distribution. Accounting recognition of deferred tax for later distribution is disallowed.

Deferred tax of unrealised capital gain on shares as well as loss carry forward is allocated.

## DONATIONS

### *Donations paid out*

Donations that have been pledged, in accordance with COWIfonden's purpose, and paid out on the balance sheet day are deducted via the appropriation statement.

### *Donations due*

Donations that, in accordance with COWIfonden's purpose, have been adopted on the balance sheet day and announced to the recipients, but not paid out on the balance sheet day, are deducted via the appropriation statement and included as a liability.

### *Reserve for future donations*

At the board meeting during which the annual result is approved, the board determines an amount that is expected to be donated. This amount is transferred from the revenue reserves to the frame of donations. As donations are announced to recipients, the amounts are paid out, or they are transferred to debt or, exceptionally, to provisions regarding donations.

### *Provisions regarding donations*

Provisions for donations are recognised when COWIfonden grants a donation and therefore has a legal or actual obligation and when it is likely that economic benefits have to be ceded in order to fulfil that obligation. Among other things, this is the case when announced donations are conditional upon one or more future events, or if the specific recipient is unknown.

## BALANCE SHEET

### INVESTMENTS IN SUBSIDIARIES

Investments in subsidiaries are measured at cost. If the cost exceeds the recoverable amount, it is written down to the lower recoverable amount.

### RECEIVABLES

Receivables are measured in the balance sheet at amortised cost, which essentially corresponds to the nominal value. Write-downs are made to meet potential losses.

### MARKETABLE SECURITIES

Marketable securities are recognised in total current assets and include listed bonds and shares measured at fair value at the balance sheet date.

## CURRENT TAX LIABILITIES AND CURRENT TAX RECEIVABLES

Current tax liabilities and current tax receivables are recognised net in the balance sheet as tax computed on taxable income for the year adjusted for tax on taxable income for previous years. Tax liabilities and tax receivables are set off provided there is legal right of set-off, and the items are forecasted net.

## DEFERRED TAX ASSETS AND LIABILITIES

Deferred tax is accounted for in respect of all temporary differences between accounting and tax values of assets and liabilities. Deferred tax is measured based on the tax rules and tax rates effective at the balance sheet date when the deferred tax is expected to crystallise as current tax. In cases where the tax base can be determined according to alternative tax rules, deferred tax is recognised on the basis of the planned use of the asset or settlement of the liability, respectively. Deferred tax as-sets, including the tax base of tax loss carryforwards, are recognised at the value at which they are expected to be utilised, either by elimination in tax on future earnings or by set-off against deferred tax liabilities.

## CASH FLOW STATEMENT

The cash flow statement shows the foundation's cash flows for the year broken down by operating, investing and financing activities, changes for the year in cash and cash equivalents as well as the foundation's cash and cash equivalents at the beginning and end of the year.

### CASH FLOWS FROM OPERATING ACTIVITIES

Cash flows from operating activities are calculated as the net profit/loss for the year adjusted for changes in working capital and non-cash operating items such as depreciation, amortisation and impairment losses, and provisions. Working capital comprises current assets less short-term debt excluding items included in cash and cash equivalents.

### CASH FLOWS FROM INVESTING ACTIVITIES

Cash flows from investing activities comprise cash flows from acquisitions and disposals of intangible assets, property as well as fixed asset investments.

### CASH FLOWS FROM FINANCING ACTIVITIES

Cash flows from financing activities comprise cash flows from paid donations.

### CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise "Cash at bank and in hand".

The cash flow statement cannot be immediately derived from the published financial records.

# FINANCIAL STATEMENT

## PROFIT AND LOSS STATEMENT FOR 1 JANUARY TO 31 DECEMBER

	Note	2022 DKK	2021 DKK
<i>Primary activities</i>			
Dividend from shares in subsidiaries		58,586,658	56,333,325
Financial income	2	17,746,857	51,266,254
Financial expenses	3	-73,831,743	-28,732,749
<b>Operating profit</b>		<b>2,501,773</b>	<b>78,866,830</b>
<i>Administration expenses</i>			
Employee expenses/administration expenses	1	-3,191,600	-3,134,882
Other external expenses	1, 11	-1,146,317	-941,364
<b>Profit before tax</b>		<b>-1,836,144</b>	<b>74,790,584</b>
Foundation tax	4	-356,143	-4,143,199
<b>Profit for the year</b>		<b>-2,192,287</b>	<b>70,647,385</b>
PROPOSED DISTRIBUTION OF THE PROFIT FOR THE YEAR			
Donations	5	19,703,501	12,212,331
Adjustment of reserve for future donations		0	0
Transferred profit		-21,895,788	58,435,054
		<b>-2,192,287</b>	<b>70,647,385</b>

## BALANCE SHEET AT 31 DECEMBER

ASSETS	Note	2022 DKK	2021 DKK
Investments in subsidiaries		86,403,625	86,403,625
<b>Financial fixed asset investments</b>	6	<b>86,403,625</b>	<b>86,403,625</b>
<b>Fixed assets</b>		<b>86,403,625</b>	<b>86,403,625</b>
Other receivables		1,489,556	1,333,992
Tax receivables		1,176,726	1,118,731
Paid on account tax		240,633	1,338,000
Rent deposit		21,158	20,768
<b>Receivables</b>		<b>2,928,073</b>	<b>3,811,491</b>
<b>Securities</b>	7	<b>329,120,374</b>	<b>357,983,970</b>
<b>Cash</b>		<b>25,927,545</b>	<b>10,800,549</b>
<b>Current assets</b>		<b>357,975,992</b>	<b>372,596,010</b>
<b>Total assets</b>		<b>444,379,617</b>	<b>458,999,635</b>

## BALANCE SHEET AT 31 DECEMBER

LIABILITIES	Note	2022 DKK	2021 DKK
Base capital		20,000,000	20,000,000
Reserve for future donations		22,000,000	22,000,000
Retained earnings		362,063,792	382,933,455
<b>Equity</b>		<b>404,063,792</b>	<b>424,933,455</b>
Accounts payable, suppliers		591,777	625,349
Donations payable		39,724,048	33,440,831
<b>Short-term debt</b>		<b>40,315,825</b>	<b>34,066,180</b>
<b>Total debt</b>		<b>40,315,825</b>	<b>34,066,180</b>
<b>Total liabilities</b>		<b>444,379,617</b>	<b>458,999,635</b>
Related parties and ownership	10		
Contingent assets, liabilities and other financial obligations	12		



## STATEMENT OF CHANGES IN EQUITY

	Base capital DKK	Reserve for future donations DKK	Retained earnings DKK	Total DKK
Equity at 1 January 2022	20,000,000	22,000,000	382,933,455	424,933,455
Reversed donations of the year	0		1,026,125	1,026,125
Donations in 2022	0	-19,703,501	0	-19,703,501
Profit distributed to equity	0	19,703,501	-21,895,788	-2,192,287
<b>Equity at 31 December 2022</b>	<b>20,000,000</b>	<b>22,000,000</b>	<b>362,063,792</b>	<b>404,063,792</b>

## CASH FLOW STATEMENT

	Note	2022 DKK	2021 DKK
Net profit/loss for the year		-2,192,286	70,647,385
Adjustments	8	-555,853	-75,100,394
Change in working capital	9	6,093,691	4,424,975
<b>Cash flows from operating activities before financial income and expenses</b>		<b>3,345,552</b>	<b>-28,034</b>
Financial income		3,464,575	6,419,313
Financial expenses		-3,213,357	-326,621
<b>Cash flows from ordinary activities</b>		<b>3,596,770</b>	<b>6,160,356</b>
Foundation tax paid		2,028,712	-4,524,000
<b>Cash flows from operating activities</b>		<b>5,625,482</b>	<b>1,636,356</b>
Purchase of financial assets			-
Purchase of securities		-77,889,720	-74,700,666
Sale of securities		41,198,962	36,948,740
Dividends received from subsidiaries		58,586,658	56,333,325
<b>Cash flows from investing activities</b>		<b>21,895,900</b>	<b>18,581,399</b>
Paid donations		-12,394,386	-10,248,000
<b>Cash flows from financing activities</b>		<b>-12,394,386</b>	<b>-10,248,000</b>
<b>Change in cash and cash equivalents</b>		<b>15,126,996</b>	<b>9,969,755</b>
Cash and cash equivalents at 1 January		10,800,549	830,794
<b>Cash and cash equivalents at 31 December</b>		<b>25,927,545</b>	<b>10,800,549</b>
Cash and cash equivalents are specified as follows:			
Cash at bank and in hand		25,927,545	10,800,549
<b>Cash and cash equivalents at 31 December</b>		<b>25,927,545</b>	<b>10,800,549</b>







# NOTES TO THE ANNUAL REPORT

	2022 DKK	2021 DKK
1 EXPENSES FOR BOARD AND ADMINISTRATION		
Remuneration for board	1,797,167	1,797,000
Other remuneration	206,050	185,750
Remuneration to the board administration	1,188,383	1,152,132
Other external cost	1,146,317	941,363
	<b>4,337,917</b>	<b>4,076,245</b>

Of the total expenses, about DKK 1,571,000 is spent on administration of the donations, in connection with evaluation and selection. COWIfonden has no employees.

## REMUNERATION FOR THE BOARD IS AS BELOW

<b>Basic fee</b>		
Chairman	375,000	360,000
Vice Chairman	210,000	200,000
Seven members	1,033,333	1,050,000
<b>Fee for committee members</b>		
Chairman	28,000	28,000
Vice Chairman	32,000	32,000
Six members	118,833	127,000
	<b>1,797,167</b>	<b>1,797,000</b>
In accordance with recommendations on foundation governance, it is informed that the board members receive from other group companies:	7,602,252	6,616,337
Thereof remuneration for the board for seats on executive boards and boards of directors in other group companies in total:	0	0

2 FINANCIAL INCOME		
Dividend, shares	6,511,728	5,628,220
Interest, bonds	3,070,433	2,394,890
Value adjustment, bonds	368,544	1,851,630
Value adjustment, shares	7,796,152	41,391,514
	<b>17,746,857</b>	<b>51,266,254</b>

3 FINANCIAL EXPENSES		
Interest, Danske Bank	-92,885	-145,750
Value adjustment, bonds	-11,302,440	-808,335
Value adjustment, shares	-62,436,417	-27,778,664
	<b>-73,831,743</b>	<b>-28,732,749</b>

4 FOUNDATION TAX		
Dividend taxes	356,143	83,199
Foundation tax	0	4,060,000
<b>Tax for the year</b>	<b>356,143</b>	<b>4,143,199</b>

# NOTES TO THE ANNUAL REPORT

5 DONATIONS	2022 DKK
<b>Innovative research projects</b>	
Preparation of applications	100,000
Floating Offshore Solar Research Facility. COWI A/S, Wind Energy and Renewables Management. Carlos García Suárez	5,088,925
<b>Total</b>	<b>5,188,925</b>
<b>Industrial Ph.D.</b>	
Substitution of natural aggregates in concrete applications. COWI A/S, Bridges International. Anders Hedegaard Jensen	700,000
Concrete without cement – Investigations of material properties with a focus on real structural applications. COWI A/S, Tunnels and Underground Infrastructure. Marvin Glissner	700,000
An Evaluation Framework for Social Sustainability in Urban Housing Areas. COWI A/S, Urban Planning and Transport. Jesper Bredgaard	500,000
Upgrading of the load carrying capacity of concrete structures. COWI A/S, Transport Infrastructure. Kenneth Dahl Schiøttz Damsgaard	650,000
Combined in-plane and out-of-plane shear in concrete shell structures – to avoid replacements of existing concrete bridges without shear reinforcement. COWI A/S, Transport Infrastructure. Søren Gustenhoff Hansen	700,000
<b>Total</b>	<b>3,250,000</b>
<b>Research and development</b>	
Wellbeing, Health and Performance Promoted by Visual and Thermal Stimuli: Fenestration Design to Support People's Indoor Environment Needs. Technical University of Denmark, Dept. of Environmental and Ressource Engineering. Jørn Toftum and Natalia Giraldo Vasquez	177,000
COWI as partner in research project "HECTAPUS". COWI AS, Management Buildings. Erik Rigstad. NOK 360,000	263,844
Simplified method for the assessment of the cyclic degradation of coarse-grained material. COWI A/S. Majid Goodarzi	1,079,705
Practical guidelines to resilient urban planning against heat stress. COWI SE; Gothenburg university; COWI DK. Marie Haeger-Eugensson	2,000,000
Efficient numerical modelling methods for design and analysis of ultra-large floating wind turbines II – EMULF II. COWI - Energy International. Volkert Oosterlaak	2,080,000
Remediation of PFAS in groundwater. COWI A/S, Dept. 1203, Environment and People. Kirsten Rügge	1,495,162
On CO2 efficiency and trade-offs between safety and sustainability in the built environment – Phase II. Aalborg University, Department of the Built Environment. Michael Havbro Faber	620,000
Efficient Added Mass Calculations for Large and Complex Floating Offshore Structures. Technical University of Denmark, Department of Applied Mathematics and Computer Science (DTU Compute). Allan Peter Engsig-Karup	339,861
<b>Total</b>	<b>8,055,572</b>
<b>Visiting professorship</b>	
Application for support for research stay at Harvard University, Boston, USA. Technical University of Denmark, DTU Management. Anders Fjendbo Jensen	31,000
<b>Total</b>	<b>31,000</b>
<b>Conferences</b>	
BuildSim Nordic Conference - keynote speakers. Technical University of Denmark, Dept. of Civil and Mechanical Engineering. Christian A. Hviid	30,700
<b>Total</b>	<b>30,700</b>

# NOTES TO THE ANNUAL REPORT

5 DONATIONS	2022 DKK
<b>Equipment</b>	
Purchase of a Combined DSC and TGA Equipment. Aarhus University, Dept. Civil and Architectural Engineering. Min Wu	431,432
Aerosol measuring equipment for teaching and research at DTU Sustain. Technical University of Denmark, DTU Sustain. Teis Nørgaard Mikkelsen	215,872
<b>Total</b>	<b>647,304</b>
<b>Other</b>	
Support for Doctors Without Borders' efforts in Ukraine. Doctors Without Borders. Anne-Mette Krøyer	2,500,000
<b>Total</b>	<b>2,500,000</b>
<b>Donations in total</b>	<b>19,703,501</b>
<b>Reversed donations of the year</b>	<b>1,026,125</b>
<b>Donations, net</b>	<b>18,677,376</b>

## NOTES TO THE ANNUAL REPORT

6 FINANCIAL ASSETS	2022 DKK	
Shares in COWI Holding A/S value at year end amount to nominally DKK 200,000,000 A-shares and DKK 25,333,300 B-shares	A-shares	B-shares
Acquisition price 1 January 2022	2,000,000	84,403,625
<b>Acquisition price 31 December 2022</b>	<b>2,000,000</b>	<b>84,403,625</b>

If the shares of COWI Holding A/S were booked at the internal value method, they would represent a value of TDKK 1,312,005 per 31 December 2022 and the equity in COWIfonden per 31 December 2022 would be TDKK 1,629,665.

ENTITIES IN THE COWI GROUP	Domicile	Ownership	Equity DKK	Net profit/loss for the year DKK
COWI Holding A/S	Denmark	86%	1,299,879,242	-53,643,700
COWI Invest A/S	Denmark	86%	612,626	9,422
COWI A/S	Denmark	86%	294,336,255	78,926,250
Comar Engineers A/S	Denmark	86%	671,395	-1,443
COWI & Partners LLC	Oman	86%	9,455,549	813,886
COWI Belgium SPRL	Belgium	86%	7,472,919	350,206
COWI Consulting (Beijing) Ltd. Co.	China	86%	2,890,871	240,290
COWI India Private Limited	India	86%	45,802,353	22,752,784
COWI Korea CO., Ltd.	Korea	86%	2,212,143	-3,945,308
COWI Lietuva UAB	Lithuania	86%	4,716,209	3 279,312
COWI Polska Sp. z o.o.	Poland	86%	2,388,408	729,478
COWI Tanzania Ltd.	Tanzania	86%	-5,371,263	-445,926
Flux AD A/S	Denmark	86%	-1,294,587	-943,075
Studstrup & Østergaard A/S Rådgivende Ingeniørfirma	Denmark	86%	1,097,139	-1,081
COWI International AB	Sweden	86%	402,231	-82,716
COWI AS	Norway	86%	199,181,618	88,672,578
Aquateam COWI AS	Norway	86%	809,584	417,979
COWI Holding AB	Sweden	86%	219,634,420	-11,058,711
COWI AB	Sweden	86%	81,975,637	-286,770
• AEC Advanced Engineering Computation Aktiebolag	Sweden	86%	5,255,939	4,634
• COWI Projektbyrå AB	Sweden	86%	12,898,231	5,844
• PB-Teknik Aktiebolag	Sweden	86%	4,130,806	-10,680
COWI International A/S	Denmark	86%	161,523,261	-14,246,121
Flint & Neill Limited	United Kingdom	86%	35,512,999	1,138,353
COWI Gulf A/S	Denmark	86%	25,968,845	-1,296,778
COWI Hong Kong Limited	Hong Kong	86%	-8,737,292	65,198

COWI North America Holding Inc.	USA – Delaware	86%	126,678,440	-5,519,831
• COWI Consulting Inc.	USA – New York	86%	43,368,519	4,443,598
• COWI North America, Inc.	USA – Delaware	86%	78,976,879	12,720,678
• COWI North America Ltd.	Canada	86%	53,083,133	4,041,255
• Finley Engineering Group, Inc	USA – Florida	86%	17,654,949	3,846,033
• COWI Czech Republic, s.r.o.	Czech Republic	86%	276,049	-527,252
COWI Singapore Pte. Ltd.	Singapore	86%	2,816,271	-2,399,544
COWI UK Limited	United Kingdom	86%	127,144,882	68,640,582
COWI Architecture A/S	Denmark	86%	10,249,008	-16,191,869
Anpartsselskabet 03.03.03.	Denmark	86%	257,285	3,230
Arkitema K/S	Denmark	86%	63,053,704	1,384,594
• Arkitema AB	Sweden	86%	11,903,074	-7,158,112
• KUB Arkitekter AB	Sweden	86%	6,290,970	10,137,294
• Arkitema Architects AS	Norway	86%	16,545,536	5,064,896

7	Fair value hierarchy level	2022 DKK	2021 DKK
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**Marketable securities**

Marketable securities are valued at the share price on 31 December and can be specified as below:

Shares	1	223,284,442	272,385,826
Bonds	1	105,835,932	85,598,144
		<b>329,120,374</b>	<b>357,983,970</b>
Value adjustment of marketable securities is transferred to the profit and loss account.		-62,779,498	13,805,640

Level 1 – Fair value can be measured using quoted market prices in an active market for identical assets and liabilities.

8	CASH FLOW STATEMENT – ADJUSTMENTS	2022 DKK	2021 DKK
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Financial income	-17,746,857	-51,266,254
Financial expenses	73,831,743	28,732,749
Income from subsidiaries	-58,586,658	-56,333,325
Tax on profit/loss for the year	356,143	4,143,199
Other adjustments	1,589,777	-376,763
	<b>-555,853</b>	<b>-75,100,394</b>

9	CASH FLOW STATEMENT – CHANGE IN WORKING CAPITAL	2022 DKK	2021 DKK
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Change in receivables	-155,954	2,798,640
Change in trade payables, etc.	6,249,645	1,626,335
	6,093,691	4,424,975

## 10 RELATED PARTIES AND OWNERSHIP

COWIfonden owns all A-shares in COWI Holding A/S and has therefore determining influence in COWI Holding A/S, as COWIfonden has more than 98% of the votes.

The COWI Holding group has a share programme for past and current employees, and COWI Invest A/S (subsidiary of COWI Holding A/S) is subject to an obligation to buy back employee shares at book value. Employees own for a total of nominally DKK 34,537,600 at 31 December 2022. Under certain conditions and at certain terms, COWIfonden has issued a letter of indemnity for COWI Invest A/S, allowing the company to honour its buyback obligation.

COWIfonden does not run independent business.

In 2022 COWIfonden incurred expenses of TDKK 1.261 from COWI A/S for assistance and consultancy within the fields of communication, accountancy, secretary and administrative services and consultancy fees. At the balance sheet date TDK 82 is outstanding to COWI A/S and is due in 2023.

Other than that, and apart from normal remuneration for board, remuneration to the board administrator and dividend, COWIfonden did not carry out any transactions, neither of significant scope nor on unusual conditions, with related parties. In accordance with the Danish Financial Statements Act, §69, subs. 3, it hereby stated that all transactions with the related parties during the year have been on market conditions.

	<b>2022</b>	<b>2021</b>
	<b>DKK</b>	<b>DKK</b>
11 AUDITOR'S FEE		
Audit fee to PricewaterhouseCoopers	167,419	117,500
Other services from PricewaterhouseCoopers	137,500	65,220
Total fee to PricewaterhouseCoopers	304,919	182,720

## 12 CONTINGENT ASSETS, LIABILITIES AND OTHER FINANCIAL OBLIGATIONS

The foundation has no contingent liabilities as of 31 December 2022



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