



DELIVERABLE 1.6:
Data Management Plan



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101136225.

Document information		
Deliverable name: D1.6 Data Management Plan		
Deliverable nr: D1.6	Classification: PU - Public	Project acronym: NextFuel
Project nr: 101 136 225	Project name: Industrialising eREACT™ for supply of bio-methanol as the next shipping fuel	
Distribution date: 27 March 2024	Document version: 1.0	Status: Final

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Version history			
Version	Date	Contributor(s)	Summary of modifications
0.1	16/02/2024	Athanasia Maria Moustaka	Initial version
0.2	05/03/2024	Athanasia Maria Moustaka Attila Akac Vassilios Kappatos	Minor revision
0.3	11/03/2024	Tor-Einar Sandvik Bjørn Austbø Sabine Bengtsen	Internal review
1.0	27/03/2024	Athanasia Maria Moustaka	Final version

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Executive Summary

This document outlines the data management plan (DMP) for the project “NextFuel”. It details how data will be collected or generated, stored and shared during and after the project. It specifies which data will be publicly accessible and which will remain confidential within the consortium. The DMP is divided into 7 subsections, each representing a detailed plan for each of the 7 Work Packages of NextFuel. The DMP was created following the Argos OpenAIRE structure and its format adheres to the Horizon Europe guidelines. The DMP is submitted in Month 4 and changes may occur during the lifecycle of NextFuel. Updated versions will be available upon request.



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Abbreviations and Acronyms

Abbreviation / Acronym	Definition
<i>eREACTTM</i>	Topsoe proprietary Electrictrified Steam Methane Reforming technology
<i>DMP</i>	Data Management Plan
<i>WP</i>	Work Package
<i>T&Cs</i>	Terms and Conditions

1 Introduction

1.1 NextFuel Project Overview

The project aims to pilot a novel approach to producing bio-methanol using an electrified stream methane reformer technology (*eREACTTM*), which promises higher energy efficiency and no directly associated CO₂ emissions compared to conventional reforming methods. The innovative technology has already been successfully demonstrated at lab scale by our consortium partner Topsoe, and the project seeks to upscale it for commercial viability.

The successful implementation of *eREACTTM*-based bio-methanol production holds the potential to transform the maritime industry by providing a zero-emission fuel alternative. NextFuel aims to enhance environmental sustainability and facilitate the widespread adoption of bio-methanol as a clean energy source.

1.2 Deliverable Purpose and Scope

The scope of this DMP is to outline the framework followed for the management of the data in NextFuel. It provides details about the creation, storage, maintenance, archiving and long-time preservation of all the project related data. The project includes various types of data, ranging from technical specifications and design documents to financial models, environmental impact assessments, safety protocols and more. This DMP describes actions to protect sensitive or proprietary information and addresses procedures for secure storage, backup, and access control. Also, it ensures that data will be FAIR (findable, accessible, interoperable and reusable) as per Horizon Europe guidelines. The DMP was created in accordance with the Argos OpenAIRE format.

2 NextFuel Data Management Plan

A separate data management plan has been developed for each WP of the project.

2.1 NextFuel WP1 “Project Management & Coordination” Dataset

WP1 is responsible for project management and coordination, overseeing financial, technical, and administrative aspects of the project's implementation.

2.1.1 WP1 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Other (Administrative / Organizational data)
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Other (Administrative, Logistical, Legal and Regulatory Data)
<i>What is its format?</i>	Numerical, text, spreadsheets
<i>What is its expected size?</i>	Unknown The size can vary from KBs for smaller documents to MBs for larger reports.
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To help administrate • To combine with other data
<i>What is its origin/provenance?</i>	Internal inputs (e.g. meetings, documents), External inputs
<i>To whom might it be useful ('data utility')?</i>	Decision makers EU and the consortium may use the data to evaluate the project's progress and monitor resource allocation.

2.1.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.1.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.1.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	No

2.1.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	None
<i>Will you provide metadata for the described dataset / output?</i>	No

2.1.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Locally and online (Microsoft SharePoint) stored data, not available to the public
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	No
<i>Does the repository support versioning?</i>	Yes

2.1.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP1 Management and Coordination Data
<i>How is the dataset / output shared?</i>	Shared Data will not be openly available outside the consortium. The data should be handled with sensitivity and confidentiality. Terms and conditions (T&Cs) for dissemination as per clause 8.4 of Consortium agreement applies.
<i>What is the reason of limiting access to the dataset / output?</i>	The dataset may include sensitive information such as personal and financial data that cannot be publicly shared.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	Access to the data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.1.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.1.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	No

2.1.10 Increasing data and other outputs reuse

Question	Answer
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	No
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.1.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP1 leader

2.1.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission
<i>How will you preserve the described dataset / output in the long term?</i>	Data will be securely stored both on local servers or dedicated storage systems and online private repositories.

2.1.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Yes The financial and personal data are confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Yes
<i>Does the described dataset / output contain personal data?</i>	Yes
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Anonymizing data where necessary • Privacy policies • Access control

2.2 NextFuel WP2 “Framework conditions & incentives” Dataset

WP2 aims to identify stakeholder interests, map regulations, and develop environmental and cost analysis of the potential bio-methanol sites. WP2 may include stakeholder, environmental, economic and regulatory data.

2.2.1 WP2 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Research Data
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Simulation
<i>What is its format?</i>	Numerical, texts, images, spreadsheets, geospatial data
<i>What is its expected size?</i>	Unknown The size can vary from KBs for smaller documents to MBs for larger spreadsheets etc.
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To combine with other data
<i>What is its origin/provenance?</i>	External inputs (e.g. engaged stakeholders), software generated data
<i>To whom might it be useful ('data utility')?</i>	Researchers, Decision makers, Industry. The data derived from the analysis can be utilized by researchers and industry stakeholders to assess the potential of the proposed approach to produce bio-methanol.

2.2.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.2.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.2.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	Yes

2.2.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	<ul style="list-style-type: none"> • Data identifiers (DOI) • Uniform Resource Name (URN) • Researchers' identifiers (ORCID) • Organization identifiers (Other) • Project identifiers (CORDIS)
<i>Will you provide metadata for the described dataset / output?</i>	No

2.2.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Zenodo https://zenodo.org Zenodo is an open-data repository funded by OpenAIRE and CERN. A DOI is registered for each submission, facilitating easy citation. Also, data will be locally and online (Microsoft SharePoint) stored.
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	Yes
<i>Does the repository support versioning?</i>	Yes

2.2.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP2 Framework Conditions & Incentives Data
<i>How is the dataset / output shared?</i>	Open Environmental, LCA and LCC output will be openly accessible. However, some stakeholder-related data may be confidential and will only be shared within the consortium. For access to eREACT™ documentation Non - Disclosure Agreements directly with Topsoe is required. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>Are there any methods or tools required to access the dataset / output?</i>	Unknown Software may be necessary to access output files from LCA and LCC analysis.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	The data will be publicly available and discoverable on Zenodo.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.2.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Under which license will metadata be provided?</i>	Creative Commons Zero (CC0)
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.2.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	Yes

2.2.10 Increasing data and other outputs reuse

Question	Answer
<i>What internationally recognised license will you use for your dataset / output?</i>	Creative Commons Zero (CC0)
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement
<i>Will you provide the described dataset / output in the public domain?</i>	Yes
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	Yes Data in the repository will be openly accessible to third parties.
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.2.11 Allocation of Resources

Question	Answer
Identify the people who will be responsible for the management of the described output	Project coordinator and WP2 leader

2.2.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords • Hash functions <p>Zenodo repository uses strong protection measures to safeguard access to data. Also, it utilizes advanced cryptographic hashing algorithms to encrypt user passwords.</p>
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing
<i>How will you preserve the described dataset / output in the long term?</i>	At present, Zenodo repository guarantees the preservation of data for a minimum of 20 years.

2.2.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Unknown Part of the data may be confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Unknown
<i>Does the described dataset / output contain personal data?</i>	Unknown
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Anonymizing data where necessary • Privacy policies

2.3 NextFuel WP3 “Process Simulation & Optimization” Dataset

WP3’s objective is to simulate and optimize bio-methanol production processes, integrate hydrogen production and carbon dioxide utilization and study the potential for heat and work integration.

2.3.1 WP3 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Research Data, Mathematical, Statistical and Simulation Models
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Simulation
<i>What is its format?</i>	Numerical, texts, spreadsheets, models, scripts
<i>What is its expected size?</i>	Unknown
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To develop a product • To improve a product • To combine with other data
<i>What is its origin/provenance?</i>	Literature sources, Secondary data retrieved from open-source repositories, Data in private data repositories, Software / simulation generated data
<i>To whom might it be useful ('data utility')?</i>	Researchers, Decision makers, Industry

2.3.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.3.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.3.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	Yes

2.3.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	<ul style="list-style-type: none"> • Data identifiers (DOI) • Uniform Resource Name (URN) • Researchers' identifiers (ORCID) • Organization identifiers (Other) • Project identifiers (CORDIS)
<i>Will you provide metadata for the described dataset / output?</i>	No

2.3.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	<p>Zenodo https://zenodo.org</p> <p>Zenodo is an open-data repository funded by OpenAIRE and CERN. A DOI is registered for each submission, facilitating easy citation.</p> <p>Also, data will be locally and online (Microsoft SharePoint) stored.</p>
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	Yes
<i>Does the repository support versioning?</i>	Yes

2.3.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP3 Process Simulation & Optimization Data
<i>How is the dataset / output shared?</i>	Open Data will be openly accessible in Zenodo. However, any eREACT™ documentation may be confidential and will only be shared among specific partners where Non - Disclosure Agreements have been signed directly with Topsoe. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	The data will be publicly available and discoverable on Zenodo. Access to confidential the data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.3.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.3.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	Yes

2.3.10 Increasing data and other outputs reuse

Question	Answer
<i>What internationally recognised license will you use for your dataset / output?</i>	Creative Commons Zero (CC0)
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement • Analysis
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	Yes Data in the repository will be openly accessible to third parties.
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.3.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP3 leader

2.3.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords • Hash functions <p>Zenodo repository uses strong protection measures to safeguard access to data. Also, it utilizes advanced cryptographic hashing algorithms to encrypt user passwords.</p>
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission
<i>How will you preserve the described dataset / output in the long term?</i>	At present, Zenodo repository guarantees the preservation of data for a minimum of 20 years.

2.3.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Unknown Part of the data may be confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Unknown
<i>Does the described dataset / output contain personal data?</i>	No
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Privacy policies • Access control for specific data

2.4 NextFuel WP4 “Plant Design, Optimization and Module Fabrication” Dataset

WP4 aims to further develop and optimise the plant design. This includes modelling capital and operative costs and environmental impacts, delivering the process design package, all the details for the actual plant construction and the fabrication of the process plant.

2.4.1 WP4 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Research Data, Models
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Simulation, Derived or compiled
<i>What is its format?</i>	Numerical, texts, spreadsheets, models, scripts, 3D models, drawings
<i>What is its expected size?</i>	Unknown
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To improve a product • To combine with other data
<i>What is its origin/provenance?</i>	Research and analysis data, software / simulation generated data and documents
<i>To whom might it be useful ('data utility')?</i>	Researchers, Decision makers, Industry

2.4.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.4.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.4.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	Yes

2.4.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	None
<i>Will you provide metadata for the described dataset / output?</i>	No

2.4.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Locally and online (Microsoft SharePoint) stored data, not available to the public
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	No
<i>Does the repository support versioning?</i>	Yes

2.4.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP4 Plant Design, Optimization and Module Fabrication Data
<i>How is the dataset / output shared?</i>	Shared Data will be shared exclusively within the consortium or among specific partners where Non - Disclosure Agreements have been signed directly with Topsoe. The data should be handled with confidentiality. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>What is the reason of limiting access to the dataset / output?</i>	The data from WP4 are highly confidential information (e.g. financial models, plant design data) and could be used by competitors.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	Access to the data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.4.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.4.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	No

2.4.10 Increasing data and other outputs reuse

Question	Answer
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement • Analysis
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	No The data are property of our consortium and cannot be (re)used by third parties.
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.4.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP4 leader

2.4.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission
<i>How will you preserve the described dataset / output in the long term?</i>	Data will be securely stored both on local servers or dedicated storage systems and online private repositories.

2.4.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Yes Data are considered confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Yes
<i>Does the described dataset / output contain personal data?</i>	No
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Privacy policies • Access control

2.5 NextFuel WP5 “Industry-scale demonstration” Dataset

WP5 focuses on conducting the first large-scale demonstration of the eREACT™ technology. WP5 includes the plant preparation, the integration of the process module into the demonstration plant and finally the plant operation and the performance analysis.

2.5.1 WP5 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Research Data, Protocols
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Observational, Derived or compiled
<i>What is its format?</i>	Numerical, texts, images, spreadsheets, 3D models, geospatial data
<i>What is its expected size?</i>	Unknown
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To improve a product • To combine with other data
<i>What is its origin/provenance?</i>	External inputs (e.g. contractors, suppliers), sensors data, quality control measures, operational logs, software generated data
<i>To whom might it be useful ('data utility')?</i>	Researchers, Decision makers, Industry

2.5.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.5.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.5.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	Yes

2.5.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	None
<i>Will you provide metadata for the described dataset / output?</i>	No

2.5.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Locally and online (Microsoft SharePoint) stored data, not available to the public
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	No
<i>Does the repository support versioning?</i>	Yes

2.5.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP5 Industry - scale demonstration Data
<i>How is the dataset / output shared?</i>	Shared Data will be shared exclusively within the consortium or among specific partners where Non - Disclosure Agreements have been signed directly with Topsoe. The data should be handled with confidentiality. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>What is the reason of limiting access to the dataset / output?</i>	WP5 contains confidential information, including contracts, personal details, financial data and critical eREACT™ technology information.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	Access to the data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.5.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.5.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	No

2.5.10 Increasing data and other outputs reuse

Question	Answer
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement • Analysis
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	No The data are property of our consortium and cannot be (re)used by third parties.
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.5.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP5 leader

2.5.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission
<i>How will you preserve the described dataset / output in the long term?</i>	Data will be securely stored both on local servers or dedicated storage systems and online private repositories.

2.5.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Yes Data are highly confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Yes
<i>Does the described dataset / output contain personal data?</i>	Yes
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Anonymizing data where necessary • Privacy policies • Access control

2.6 NextFuel WP6 “Scaling & Impact” Dataset

WP6 aims to enhance the feasibility of adopting eREACT™ technology. It focuses on analysing the potential for using the eREACT™ concept at other biogas sites, studying scenarios for large-scale use as maritime fuel, and compiling a final feasibility report based on project results.

2.6.1 WP6 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Research Data
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Simulation, Derived or compiled
<i>What is its format?</i>	Numerical, texts, spreadsheets, scripts
<i>What is its expected size?</i>	Unknown
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To develop a product • To improve a product • To combine with other data
<i>What is its origin/provenance?</i>	Data is generated through simulations, studies, and assessments.
<i>To whom might it be useful ('data utility')?</i>	Researchers, Decision makers, Industry

2.6.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.6.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.6.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	Yes

2.6.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	<ul style="list-style-type: none"> • Data identifiers (DOI) • Uniform Resource Name (URN) • Researchers' identifiers (ORCID) • Organization identifiers (Other) • Project identifiers (CORDIS)
<i>Will you provide metadata for the described dataset / output?</i>	No

2.6.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Locally and online (Microsoft SharePoint) stored data, not available to the public
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	No
<i>Does the repository support versioning?</i>	Yes

2.6.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP6 Scaling & Impact Data
<i>How is the dataset / output shared?</i>	Shared Data will be shared exclusively within the consortium. For access of eREACT™ documentation Non - Disclosure Agreement directly with Topsoe is required. The data should be handled with confidentiality. However, any specific data that could be open access, will be published on Zenodo. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>What is the reason of limiting access to the dataset / output?</i>	WP6 contains confidential data that competitors could exploit.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	Access to the data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.6.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.6.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	No

2.6.10 Increasing data and other outputs reuse

Question	Answer
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement • Analysis
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	No The data are property of our consortium and cannot be (re)used by third parties.
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.6.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP6 leader

2.6.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission
<i>How will you preserve the described dataset / output in the long term?</i>	Data will be securely stored both on local servers or dedicated storage systems and online private repositories.

2.6.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	Yes Data are considered confidential and should not be shared.
<i>Does the described dataset / output contain sensitive information?</i>	Yes
<i>Does the described dataset / output contain personal data?</i>	No
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Anonymizing data where necessary • Privacy policies • Access control

2.7 NextFuel WP7 “Communication, Dissemination and Exploitation” Dataset

WP7 aims to ensure that project outcomes are effectively communicated to relevant stakeholders through activities, comprehensive planning, and dissemination channels.

2.7.1 WP7 Dataset Description

Question	Answer
<i>What kind of research output are you describing?</i>	Other (e.g. stakeholder engagement, performance metrics and analytics)
<i>Is it physical or digital?</i>	Digital
<i>Are you generating or re-using it?</i>	New
<i>What is the type of the described dataset?</i>	Derived or compiled
<i>What is its format?</i>	Numerical, texts, images, videos, spreadsheets
<i>What is its expected size?</i>	Unknown
<i>Why are you collecting/generating or re-using it?</i>	<ul style="list-style-type: none"> • To obtain information • To share information • To keep on record • To make informed decisions • To develop a product
<i>What is its origin/provenance?</i>	Dissemination and engagement activities, project’s social media and website metric data, performance analysis
<i>To whom might it be useful ('data utility')?</i>	Researchers, Education, Industry

2.7.2 Publications

Question	Answer
<i>Does the described output support any scientific publication?</i>	No
<i>Is there a data availability statement provided along with the publication?</i>	No

2.7.3 Datasets

Question	Answer
<i>Does the described output use or support any published dataset?</i>	No

2.7.4 Software

Question	Answer
<i>Does the described output use or support any software?</i>	No

2.7.5 Making data findable, including provisions for metadata

Question	Answer
<i>What type(s) of persistent identifier(s) are used for the described dataset / output?</i>	<ul style="list-style-type: none"> • Data identifiers (DOI) • Uniform Resource Name (URN) • Researchers' identifiers (ORCID) • Organization identifiers (Other) • Project identifiers (CORDIS)
<i>Will you provide metadata for the described dataset / output?</i>	No

2.7.6 Repository

Question	Answer
<i>In which repository will the dataset / output be deposited?</i>	Zenodo https://zenodo.org Zenodo is an open-data repository funded by OpenAIRE and CERN. A DOI is registered for each submission, facilitating easy citation. Also, data will be locally and online (Microsoft SharePoint) stored
<i>Is the selected repository a trusted source?</i>	Yes
<i>Does the repository(ies) assign datasets / outputs with persistent identifiers?</i>	Yes
<i>Does the repository support versioning?</i>	Yes

2.7.7 Data

Question	Answer
<i>What is the described dataset / output title?</i>	NextFuel WP7 Communication, Dissemination and Exploitation Data
<i>How is the dataset / output shared?</i>	Open access publications and non-confidential data will be openly available on Zenodo or ResearchGate. However, confidential data will remain closed. For access of eREACT™ documentation Non - Disclosure Agreement directly with Topsoe is required. T&Cs for dissemination as per clause 8.4 of Consortium agreement applies.
<i>What is the reason of limiting access to the dataset / output?</i>	The dataset includes sensitive information such as personal data that cannot be publicly shared.
<i>Are there any methods or tools required to access the dataset / output?</i>	Yes Data access control is implemented.
<i>Is the described dataset / output supported by a data access committee?</i>	No
<i>Please specify how the dataset / output will be accessed during and after the project ends</i>	Part of the data will be publicly available and discoverable on Zenodo or ResearchGate. Access to the confidential data will be limited to authorized users only.
<i>Please specify how long after the project has ended the dataset / output will be made accessible for</i>	For a minimum of 2 years.

2.7.8 Metadata

Question	Answer
<i>Will you provide metadata even if the described dataset / output cannot be openly shared?</i>	No
<i>Do metadata provide information about how to access the described dataset / output?</i>	No
<i>Will metadata remain available after the dataset / output is no longer available?</i>	No

2.7.9 Making data and other outputs interoperable

Question	Answer
<i>Does your (meta)data use a controlled vocabulary?</i>	No
<i>Have you applied a standard schema for your (meta)data?</i>	No
<i>Will you provide a mapping to more commonly used ontologies?</i>	No
<i>Does the described dataset / output provide qualified references with other outputs?</i>	No

2.7.10 Increasing data and other outputs reuse

Question	Answer
<i>What internationally recognised license will you use for your dataset / output?</i>	Creative Commons Zero (CC0)
<i>What reusability and / or reproducibility methods are followed?</i>	<ul style="list-style-type: none"> • Readme files • Variable definitions • Units of measurement • Analysis
<i>Will you provide the described dataset / output in the public domain?</i>	No
<i>Do you intend to ensure (re)use by third parties after your project finishes?</i>	No
<i>Is provenance well documented?</i>	Yes
<i>What documented procedures for quality assurance do you have in place?</i>	<ul style="list-style-type: none"> • Set up scientific and technical committee according to governance structure (Deliverable D1.1) • Data conforms to format specification

2.7.11 Allocation of Resources

Question	Answer
<i>Identify the people who will be responsible for the management of the described output</i>	Project coordinator and WP7 leader

2.7.12 Data Security

Question	Answer
<i>What security measures are followed?</i>	<ul style="list-style-type: none"> • Encryption • Firewall • Passwords • Hash functions <p>Zenodo repository uses strong protection measures to safeguard access to data. Also, it utilizes advanced cryptographic hashing algorithms to encrypt user passwords.</p>
<i>What conditions do the security measures meet?</i>	<ul style="list-style-type: none"> • Data access • Data storage • Data sharing • Data transmission • Data recovery
<i>How will you preserve the described dataset / output in the long term?</i>	<p>At present, Zenodo repository guarantees the preservation of data for a minimum of 20 years.</p>

2.7.13 Ethical aspects

Question	Answer
<i>Are there any ethical or legal issues that can have an impact on sharing the described dataset / output?</i>	<p>Yes Data contains personal information.</p>
<i>Does the described dataset / output contain sensitive information?</i>	<p>Yes</p>
<i>Does the described dataset / output contain personal data?</i>	<p>Yes</p>
<i>What are the methods used for processing and accessing sensitive / personal information?</i>	<ul style="list-style-type: none"> • Anonymizing data where necessary • National laws • Data accompanied by informed consent statements • Privacy policies • Access control

3 Conclusion

This DMP serves as a framework for the effective management of data throughout the lifecycle of NextFuel. It ensures that project data is handled in a structured and secure manner. Part of NextFuel's data is considered confidential or sensitive, therefore only required users will have access to it. Any data used in publications or NextFuel's dissemination events should adhere to FAIR principles (data should be findable, accessible, interoperable and reusable) in accordance with Horizon Europe guidelines. Changes to the DMP may occur as the project progresses and updated versions will be available upon request.