



# **GENERAL PROGRAMME INSTRUCTIONS**

VERSION 3.0

Spring 2025



References to the General Programme Instructions of EPD Denmark should be given as:

*EPD Danmark, General Programme Instructions, version 3.0, April 2025*

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REVISION LOG

Version	Publication date	Changes made
Establishment of EPD Danmark programme	2013	Publication of the first GPI within the programme EPD Danmark
From GPI v1.9 to GPI v2.0	February 2020	Revision of descriptions and adjustments to comply with EN 15804+A2:2019. Addition of option to develop automated tool solutions within the EPD programme.
From GPI v2.0 to GPI v3.0	April 1st 2025	Revision of overall structure and content. Division of GPI and Technical Rules and Guidelines

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## CONTENTS

<b>1</b>	<b>INTRODUCTION</b> .....	<b>6</b>
<b>2</b>	<b>OBJECTIVE</b> .....	<b>6</b>
2.1	SCOPE .....	6
<b>3</b>	<b>ORGANISATION</b> .....	<b>7</b>
3.1	THE PROGRAMME OPERATOR .....	8
3.2	THE ADVISORY BOARD .....	9
3.3	THE TECHNICAL COMMITTEE .....	10
3.4	VERIFIER GROUP .....	11
3.5	COST AND FEES .....	11
3.6	HARMONISATION AND MUTUAL RECOGNITION .....	11
3.7	REGISTRATION AND PUBLICATION OF EPDS .....	12
3.8	WEBSITE .....	12
3.9	EPD DATABASE .....	12
3.10	TRANSITION PERIODS .....	12
<b>4</b>	<b>PCR</b> .....	<b>12</b>
4.1	GENERAL .....	12
4.2	COMPLEMENTARY PCR DOCUMENTS PROCESS.....	13
4.3	VALIDITY AND REVISIONS.....	14
<b>5</b>	<b>EPD</b> .....	<b>15</b>
5.1	GENERAL .....	15
5.2	TECHNICAL BASIS FOR PREPARATION OF EPDS .....	15
5.3	DECLARATION TYPES .....	15
5.4	EPD SCOPES.....	17
5.5	EPD DEVELOPMENT PROCESS .....	17
5.6	VALIDITY OF A REGISTERED EPD .....	19
5.7	EXTENSION OF EPD (VALIDITY) .....	19
5.8	UPDATING OR REVISING AN EPD .....	19
5.9	OWNERSHIP AND USE.....	20
5.10	LANGUAGE .....	20
5.11	DIGITAL EPDS.....	20
5.12	EPDS FROM OTHER EPD PROGRAMMES .....	21

<b>6</b>	<b>VERIFICATION .....</b>	<b>21</b>
6.1	VERIFICATION PROCESS.....	22
6.2	EPD NOT APPROVED BY VERIFIER.....	23
6.3	APPROVED VERIFIERS .....	24
6.4	OBLIGATIONS.....	24
6.5	DATA CONFIDENTIALITY .....	25
<b>7</b>	<b>DATA MANAGEMENT AND CONFIDENTIALITY .....</b>	<b>25</b>
7.1	EXCHANGE OF CONFIDENTIAL INFORMATION.....	25
7.2	MAINTENANCE OF A PUBLICLY ACCESSIBLE LIST OF VALID EPDs.....	26
<b>8</b>	<b>SPECIFIC LCA CALCULATION RULES AND DOCUMENTATION NEEDS .....</b>	<b>26</b>
<b>9</b>	<b>FEEDBACK OR COMPLAINTS.....</b>	<b>26</b>
<b>10</b>	<b>DEFINITIONS, TERMS AND ABBREVIATIONS .....</b>	<b>27</b>
<b>11</b>	<b>NORMATIVE BASIS AND GUIDANCE DOCUMENTS .....</b>	<b>32</b>
<b>APPENDIX A</b>	<b>LIFE CYCLE ASSESSMENT (LCA) METHODOLOGY .....</b>	<b>34</b>
A.1	MODELLING APPROACH .....	34
A.2	LCA METHODOLOGY .....	34
A.3	CONTENT OF THE LCA REPORT.....	34
<b>APPENDIX B</b>	<b>ENVIRONMENTAL PRODUCT DECLARATION (EPD) METHODOLOGY .....</b>	<b>35</b>
B.1	EPD CONTENT .....	35
<b>APPENDIX C</b>	<b>VERIFIERS: APPROVAL AND TASKS.....</b>	<b>36</b>
C.1	APPROVAL OF VERIFIERS .....	36
C.2	COMPETENCES FOR THIRD-PARTY VERIFIERS.....	36
C.3	TRAINING OF THIRD-PARTY VERIFIER CANDIDATES .....	37
C.4	TASK OF VERIFIERS .....	38
<b>APPENDIX D</b>	<b>LCA AND EPD TOOLS .....</b>	<b>39</b>
D.1	GENERAL SPECIFICATIONS FOR TOOLS .....	39
D.2	LCA TOOLS.....	42
D.3	EPD TOOL.....	46



## 1 INTRODUCTION

These General Programme Instructions of the Danish EPD programme, EPD Denmark, make up the main technical document along with the Technical Rules and Guidelines. They form the basis for the overall administration of the programme and requirements for Environmental Product Declarations (EPDs – type III environmental declarations according to ISO 14025) published with EPD Denmark.

The instructions are reviewed regularly and updated, when necessary, to ensure that the document is in accordance with developments in relevant legislation, market conditions, LCA methodology, harmonisation and standardization.

Within the present document, the following terminology is adopted:

- The term “shall” is used to indicate what is obligatory.
- The term “should” is used to indicate a recommendation, rather than a requirement.
- The terms “may” or “can” is used to indicate an option that is permissible.
- The term “may not” is used to indicate that something is not allowed.

These general programme instructions for EPD Denmark shall apply until the programme operator decides to make a revision. The newest version of the programme instructions will always be available on the website of EPD Denmark: [www.epddanmark.dk](http://www.epddanmark.dk).

These general programme instructions shall apply as of April 1<sup>st</sup>, 2025.

## 2 OBJECTIVE

EPD Denmark develops and administers independently verified Type III Environmental Product Declarations (EPDs) for construction products and building-related products.

The objective of EPD Denmark is:

- to support the development and application of verifiable environmental information of construction products in the form of Type III Environmental Products Declarations.
- to support the construction industry in the documentation and declaration of the environmental sustainability of products according to legislation and standardisation applying at any time.

EPD Denmark supports the harmonisation of Environmental Products Declarations for construction products in Europe through its active membership of ECO Platform<sup>1</sup>.

### 2.1 SCOPE

The programme is open for all construction and building-related products, which comprise products, materials, components, prefabricated elements, building systems along with furniture and textiles made for construction works and for use in buildings. The programme also accepts and publishes EPDs on services<sup>2</sup>, performed as a part of the construction industry.

To ensure compliance with Construction Products Regulation (EU Construction Products Regulation 2024/3110), products will gradually be excluded from the scope of EPD Denmark as they are harmonised under the regulation

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<sup>1</sup> [www.eco-platform.org](http://www.eco-platform.org)

<sup>2</sup> A service can, for example, be soil stabilization, surface treatments of wood (e.g., burning), demolition, or construction (e.g., operation of lifts and machinery).

EPD Denmark is primarily targeted at the Danish construction industry which operates nationally as well as internationally, but it has no geographical limitations. Thus, the programme is open to any manufacturer<sup>3</sup> of a construction product, irrespective of nationality and whether the product is marketed in another country than Denmark.

The communication format for the prepared EPDs is primarily targeted at B2B communication (in accordance with EN 15942). Communication targeted B2C communication is allowed as addition and shall follow the requirements from EN 17672.

EPDs published through EPD Denmark may not contain any comparative assertions.

Declaration owners and manufacturers shall ensure that they are compliant with regulations and national laws in their territory.

### 3 ORGANISATION

The name of the organisation is EPD Denmark. EPD Denmark has no commercial aim, administrative expenses are, however, covered by EPD-holder fees.

The EPD holder fees cover costs for development, operation and maintenance of, among other things, database, website, verifier group (checklists, continuing education) and technical regulations. In addition, they cover the participation and coordination of the joint European activities and auditing of the activities, which is an important and necessary part of EPD Denmark.

Fee categories can be seen on the website [www.epddanmark.dk](http://www.epddanmark.dk). The Danish Technological Institute<sup>4</sup> is legally responsible for EPD Denmark.

EPD Denmark is organised into the following units which are described in sections 3.1 - 3.2.

1. Programme operator
2. Secretariat
3. Advisory board
4. Technical Committee

All official documents and publications within EPD Denmark will be drawn up in either Danish, English or both.

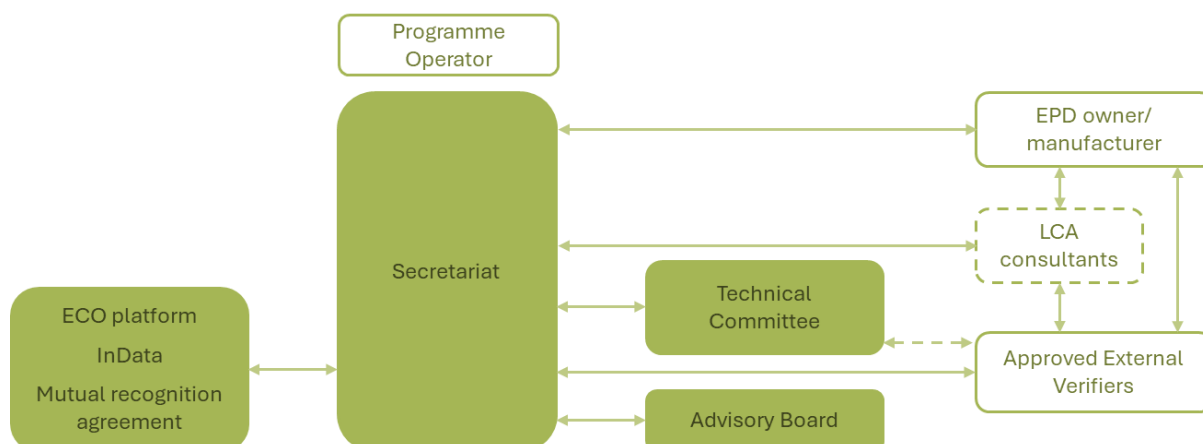


Figure 1. Organisational structure of EPD Denmark. Arrows representing contact flows.

<sup>3</sup> See definition of 'manufacturer, in the definitions table in section 10.

<sup>4</sup> [www.teknologisk.dk](http://www.teknologisk.dk)



### 3.1 THE PROGRAMME OPERATOR

The Danish Technological Institute (DTI) is the legal entity acting as programme operator (PO) of EPD Danmark with the overall responsibility and the obligations described in the international standard ISO 14025.

The Danish Technological Institute is an independent non-profit institution, which develops, applies and disseminates research and technology-based knowledge to the Danish business sector.

The Danish Technological Institute is approved by the Danish *Ministry of Higher Education and Science* as a GTS Institute (Approved Technological Service Institute)<sup>5</sup>. DTI has profound knowledge of and within the construction industry along with extensive experience in accredited testing, calculations and certification of building materials. The Danish Technological Institute also offers specialist advice on e.g. CE-marking of construction products.

#### 3.1.1 SECRETARIAT

The secretariat is staffed by the programme operator and shall carry out several mandatory assignments to run the EPD programme, according to ISO 14025. These tasks are done in cooperation with other stakeholders across the organisational structure, Figure 1, and are described in these General Programme Instructions.

Tasks of the secretariat:

- Programme maintenance
  - Develop, maintain, and communicate the programme
  - Maintain and communicate the General Programme Instructions and Technical Rules and Guidelines
  - Ensure that Type III environmental declaration requirements are followed
  - Ensure consistency of data within the programme
  - Development and maintenance of templates (EPD templates, projekt report templates, verification checklists, verification report templates)
  - Develop and manage the development and maintenance of complementary Product Category Rules (cPCRs)
  - Administer EPD owners' confidential information
  - Establish procedures to prevent misuse of programme references, templates and logos
- EPD publication and database maintenance
  - Publish verified EPDs on the website
  - Develop, maintain, and administer the EPD database and website
  - Manage the database of EPDs in a machine-readable format
- Stakeholder (internal) interactions
  - Coordinate activities with the Advisory board, Technical Committee, and verifiers
  - Manage membership in the Advisory Board and Technical Committee
  - Approval and concurrent training of verifiers
  - Maintain a list of independent verifiers and guide organizations in the selection procedure
  - Manage the verification procedure for EPDs and follow up on approved individual verifiers' activity
  - Organize the involvement of stakeholders in programme development

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<sup>5</sup> <https://en.gts-net.dk/about-gts/>

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- Stakeholder (external) involvement
    - Maintain and operate contact options, e.g. phone and mailboxes
    - Establish and maintain mutual recognition agreements with other programme operators
    - Facilitate the participation of interested parties
    - Influence and inform stakeholders about increasing the use of EPDs
    - Make explanatory materials publicly available
    - Manage complaints and appeals
  - Harmonization work
    - Participate in European harmonisation work and standardisation e.g. through ECO Platform
    - Monitor changes in the normative basis (see section 11)

## 3.2 THE ADVISORY BOARD

The purpose of the Advisory board (AB) is to provide input and recommendations on strategical focus as well as insights to the interests of relevant external stakeholders and promotion of the programme and its objectives as stated in section 2. Additionally, contribute to reliability, impartiality, consistency and transparency in the authoritative documents and procedures which form the basis of EPD Danmark.

### 3.2.1 ADVISORY BOARD MEMBERS

The Advisory board consists of organisations representing business and trade organisations, government and academic communities, appointed by the programme operator. The active members of the Advisory board can be found at the website of EPD Danmark [www.epddanmark.dk](http://www.epddanmark.dk).

The representatives appointed by the board member organisations shall have a general and broad background knowledge of the construction industry along with products and product-related environmental issues. In addition, the members shall have a thorough knowledge of EPD Danmark, including the content of these General Programme Instructions.

The Advisory board has three primary tasks:

- Market monitoring
  - Observe the adoption and acceptance of EPD Danmark
  - Collect inputs of market needs and views on EPDs and their use
- Promotion:
  - Propose initiatives and events to enhance the programme's establishment and practical use
  - Support and promote the EPD concept and use on the market
- Programme development:
  - Contribute to the preparation of the General Programme Instructions (GPI)
  - Provide input for revising and updating the programme's various components

Strategical issues concerning the preparation and application of Environmental Product Declarations for construction products, standardization, needs of the industry, etc. may be taken up in the Advisory board by the secretariat. Any decisions hereon may subsequently be entered in the authoritative documents in connection with a subsequent revision.

The General Programme Instructions are prepared and revised by the secretariat, and the Advisory board is responsible for comments on these documents prior to their publication and use.

At least once a year a meeting will be held between the members of the Advisory board and the secretariat. At this meeting the status and challenges of EPD Danmark will be discussed among other things, and there will be a dialogue on the strategical development and operation of EPD Danmark in the coming year as a minimum.

The Advisory Board can request a meeting with the Technical Committee, or members hereof, if found relevant by the board.

### 3.3 THE TECHNICAL COMMITTEE

The purpose of the Technical Committee (TC) is to ensure the quality of technical aspects regarding LCA methodology, EPD development and the development according to standardization. They are to assist the secretariat in technical and LCA-related issues, and methodological questions.

#### 3.3.1 TECHNICAL COMMITTEE MEMBERS

The Technical Committee consists of permanent individuals (LCA/EPD experts) appointed by the programme operator. A member of the Advisory board, or an approved external verifier may be invited to the Technical Committee, if they are qualified, to ensure coherency between organizational parts of the EPD Danmark programme. The active members of the Technical Committee can be found at [www.epddanmark.dk](http://www.epddanmark.dk).

The TC members appointed, shall have extensive knowledge and experience within product-related environmental issues along with a general background knowledge of the construction industry. In addition, the members shall have a knowledge of EPD Danmark, including the content of these General Programme Instructions and the Technical Rules and Guidelines.

The Technical Committee shall consist of at least five EPD/LCA experts. Their task is to provide technical advice and guidance concerning:

- LCA methodology and technical development:
  - Assess LCA-related issues
  - Suggest measures for the further development of technical and LCA-oriented aspects within the programme framework
  - Support the secretariat of EPD Danmark in technical matters
- PCR review and approval:
  - Act as the PCR review panel for evaluating and approving draft cPCRs updated after open consultations
  - Verify that PCR proposals comply with the General Programme Instructions (GPI) and other authoritative documents
- Verifier competence and Quality assurance:
  - Recommend measures for monitoring verifier competences
  - Recommendation and advice on verification procedures
- Programme Development:
  - Propose measures for the ongoing development of technical and LCA-oriented issues related to the programme and surrounding harmonization
  - Contribute to the preparation of the Technical Rules and Guidelines (TRG)

The Technical Rules and Guidelines are prepared and revised by the secretariat, and the Technical Committee is responsible for comments on these documents prior to their publication and use.

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Meetings in the Technical Committee will be held at least twice a year, where technical issues are discussed. The secretariat will invite to these meetings. If urgent matters appear, the secretariat will initiate additional meetings to discuss specific matters or seek advice for specific LCA technical questions.

The Technical Committee may occasionally seek advice from experts outside the TC.

### 3.3.2 TECHNICAL COMMITTEE CHAIRMAN

The Technical Committee shall have a chairman who is appointed by the secretariat, for a period of 2 years after which re-election shall take place. The task of the Technical Committee chairman is to give their view of surrounding development within relevant technical fields. The TC chairman may represent the TC in the Advisory Board upon request from the AB or secretariat.

### 3.4 VERIFIER GROUP

The approved external verifiers are invited to join a technical forum. The secretariat will invite this forum to verifier group meetings/discussions at least once every year, to discuss verification and LCA methodology according to directions set out by the TC, and interpretational questions when assessing EPDs and their LCA.

Participation in the verifier group meetings is obligatory for all verifiers approved by EPD Danmark and works as proof of continuous training. In case of repeated absence, the secretariat may suspend the verifier.

The tasks and requirements of the verifiers are described in more detail in Appendix C.

### 3.5 COST AND FEES

EPD owners who have registered one or more EPDs at EPD Danmark are submitted to EPD-holder fees which covers the development, operation and maintenance of EPD Danmark performed by the programme operator. The programme operator sets the price structure, which is available at [www.epddanmark.dk](http://www.epddanmark.dk).

### 3.6 HARMONISATION AND MUTUAL RECOGNITION

EPD Danmark is an active member of ECO Platform<sup>6</sup> with the aim of harmonising and obtaining general recognition of EPDs among European programme operators.

EPD Danmark strives to harmonize procedures and content of these General Programme Instructions and Technical Rules and Guidelines with other EPD programme operators in order to obtain mutual recognition (MR). Mutual recognition entails that an EPD owner can get an EPD registered with several EPD programmes, without further assessment.

A mutual recognition does not necessarily mean that EPDs from the programmes are comparable, as content/requirements to the information contained in the EPDs may still differ, according to the individual EPD programme. A mutual recognition agreement merely means that the programmes accept procedures, verifications and verifiers of each other, and thus are willing to publish an EPD which has been approved by the other programme without further assessment.

A list of current mutual recognition agreements with single programme operators is available at [www.epddanmark.dk](http://www.epddanmark.dk).

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<sup>6</sup> <https://www.eco-platform.org/home.html>

### 3.7 REGISTRATION AND PUBLICATION OF EPDS

The secretariat of EPD Danmark is responsible for publishing the approved EPDs on the website.

When commencing an EPD project, the EPD owner<sup>7</sup> shall register with EPD Danmark, submitting a registration form which is obtained through the secretariat upon request. The EPD owner shall be registered with EPD Danmark, prior to commencement of the verification process, at the latest. See more on the registration process of EPDs in section 5.5.1.

An approved and verified EPD will be published on the website throughout the validity of the EPD (5 years), or until the EPD owner asks for revision, updating or revocation.

EPD Danmark reserves the right to withdraw an EPD if any aspects described in the General Programme Instructions og Technical Rules and Guidelines are violated, or the owner fails to pay the annual fee.

### 3.8 WEBSITE

The website of EPD Danmark is found at [www.epddanmark.dk](http://www.epddanmark.dk). On this website, the valid programme instructions and Technical Rules and Guidelines will be available together with EPDs and PCRs developed and published through EPD Danmark. The secretariat is responsible for maintaining the website.

Other communication channels (e.g. newsletters and social media) are to complement communication on the website where suitable.

### 3.9 EPD DATABASE

EPD Danmark publishes EPDs on the website [www.epddanmark.dk](http://www.epddanmark.dk).

All EPDs published through EPD Danmark shall be digitized and will, as a minimum, be made available in/through the database on the EPD Danmark website and ECO Portal.

EPD Danmark will continuously work on optimising the format in which EPDs are available, working on harmonisation and digitalisation of data.

### 3.10 TRANSITION PERIODS

EPDs published by EPD Danmark shall be developed in compliance with the latest version of the General Programme Instructions (GPI, this document) and the Technical Rules and Guidelines, along with the requirements given in the relevant standards and PCRs.

All normative documents are subject to periodic revisions, which may lead to overlaps between expiry of an old version and publication of the new revision, i.e. overlaps between two published versions. This is however strived to be avoided in EPD Danmark internally. Implementation periods of changes in specific documents are stated in the documents, respectively.

Significant transition periods will be announced on the website, [www.epddanmark.dk](http://www.epddanmark.dk).

## 4 PCR

### 4.1 GENERAL

A PCR (Product Category Rules) document defines the specific technical conditions, requirements and calculation rules which are to be applied when preparing an Environmental Product Declaration for a product.

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<sup>7</sup> or LCA consultant on their behalf

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EPD Danmark refers to two types of PCR documents:

- A. Core PCR: EN 15804 - "Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products"
- B. Complementary PCR (cPCR) documents for product categories

All EPDs published through EPD Danmark shall comply with the requirements in EN 15804. In addition, the following types of cPCRs are accepted within EPD Danmark, listed in a prioritised order:

- CEN cPCR documents
- cPCRs from other EPD programmes with whom EPD Danmark has a mutual recognition (MR) agreement, as long as this is clearly stated in the EPD and as long as it does not conflict with the rules and procedures of EPD Danmark
- Other cPCRs that meet the rules and procedures of EPD Danmark, including cPCRs from other established ECO EPD programmes<sup>8</sup> successfully audited by ECO Platform

If a relevant CEN cPCR exists, it is mandatory to use this, in the development of an EPD. It is not mandatory to use a cPCR from MR partners or other cPCRs that meet the rules and procedures of EPD Danmark but is recommended to support modelling decisions<sup>9</sup>. Therefore, the verifiers may request a brief explanation of the reason why a relevant cPCR from the MR partners of EPD Danmark, has been not used.

If there is no cPCR available, EPDs for construction products are developed only according to EN 15804. An EPD shall always state according to which standards, PCR and cPCR the EPD was made.

#### 4.2 COMPLEMENTARY PCR DOCUMENTS PROCESS

The international standard ISO 14025 defines the basic procedural requirements for the development of a PCR document and the carrying out of a PCR review. Complementary PCR documents are developed by a PCR group of relevant parties from the industry and LCA specialists.

Product subcategories are defined by EPD Danmark, and basically, they will be in accordance with the harmonised technical specifications (harmonised standards and European Assessment Documents) under the Construction Products Regulation ((EU) 2024/3110).

To make sure that the process of preparing a cPCR document is quick and operational, it should be aimed to limit the total process from the start-up and until the cPCR document is available. The PCR group is registered and published by EPD Danmark, stating the expected dates for the open consultation procedure and publication, respectively. Figure 2 shows an overview of the development of a cPCR document.

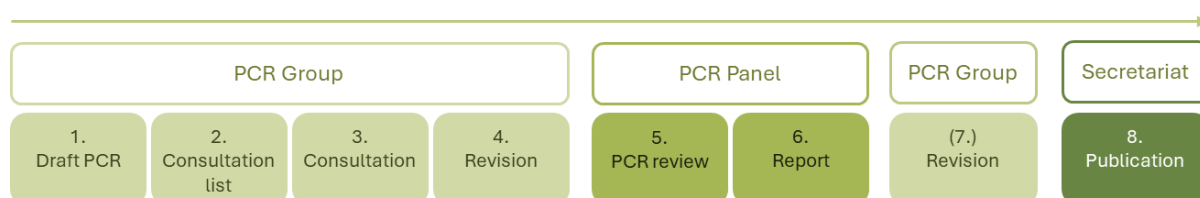


Figure 2. Process for the development of a cPCR document

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<sup>8</sup> <https://www.eco-platform.org/the-eco-epd-programs.html>

<sup>9</sup> The rules and procedures of EPD Danmark as described in the General Programme Instructions and Technical Rules and Guidelines take precedence over any conflicting rules in the cPCR of MR partners, if such is used.

The PCR Group shall prepare the first draft based on the template for complementary PCR documents which is made available by EPD Denmark. This template shall always be followed, as this will ensure that all requirements applying to all product categories, based on EN 15804, and all contents requirements have been met.

Together with the preparation of the first draft, the PCR Group shall also draw up a list of the stakeholders who will be contacted directly in connection with the open consultation procedure.

In the open consultation, the draft will be made available at [www.epddanmark.dk](http://www.epddanmark.dk) for a period of 25 working days. At the same time, the draft will be sent directly to the stakeholders stated on the consultation list. They, too, will have 25 working days to deliver comments and amendments to the draft. After expiry of the consultation period, the PCR Group may revise the draft in accordance with the consultation replies received.

The revised draft shall be reviewed and approved by an ad hoc PCR panel (consisting of TC members) before they can be published and applied. The ad hoc PCR panel consists of a chairman appointed by the TC and at least two members who have not been involved in the development of the complementary PCR document. The chairman of the PCR panel shall appoint the other panel members. The panel draws up a PCR review report which shall include the results of the PCR review and comments and recommendations made by the panel members.

By an approval of a complementary PCR document, it is confirmed that the complementary PCR document is in accordance with EN 15804, ISO 14025 and the provisions of the General Programme Instructions and Technical Rules and Guidelines.

20 working days at the latest, after their receipt of a complementary PCR document, the panel members shall return the PCR review report.

The PCR review report shall show that:

- The cPCR is developed according to EN 15804, the ISO 14040 series and ISO 14025
- The cPCR comply with these General Programme Instructions and Technical Rules and Guidelines
- The LCA based data, together with additional environmental information prescribed by the cPCR, give a description of significant product-related environmental considerations.

The final, approved, cPCR document is published at [www.epddanmark.dk](http://www.epddanmark.dk).

#### 4.3 VALIDITY AND REVISIONS

An approved complementary PCR document is valid for 3 years. Hereafter the PCR panel shall re-evaluate the document and decide on revisions, if any, of the document. After revision and approval or new approval without revision the complementary PCR document will be valid for 3 years.

It is the responsibility of the secretariat to carry out the necessary revisions of a complementary PCR document during its period of validity. Necessary revisions include updates in case of discrepancies with the ECO Platform standards, that are expected to be revised annually. The involvement of stakeholders shall follow the procedure described in section 4.2, and the revised cPCR document shall be approved by the panel prior to its publication.

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## 5 EPD

### 5.1 GENERAL

ISO 14025 describes the general procedure for development of Type III Environmental Product Declarations and the requirements as regards their contents. In addition, all Environmental Product Declarations published by EPD Danmark shall comply with the provisions of the technical basis for preparation of EPDs, and the normative reference given in section 11.

### 5.2 TECHNICAL BASIS FOR PREPARATION OF EPDS

The following documents form the technical basis for the preparation of EPDs in EPD Danmark:

- EN 15804 - "Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products"
- General Programme Instructions
- Technical Rules and Guidelines of EPD Danmark
- Complementary PCR (cPCR) documents for specific product categories.

The hierarchy of documents within EPD Danmark is presented in Figure 3.

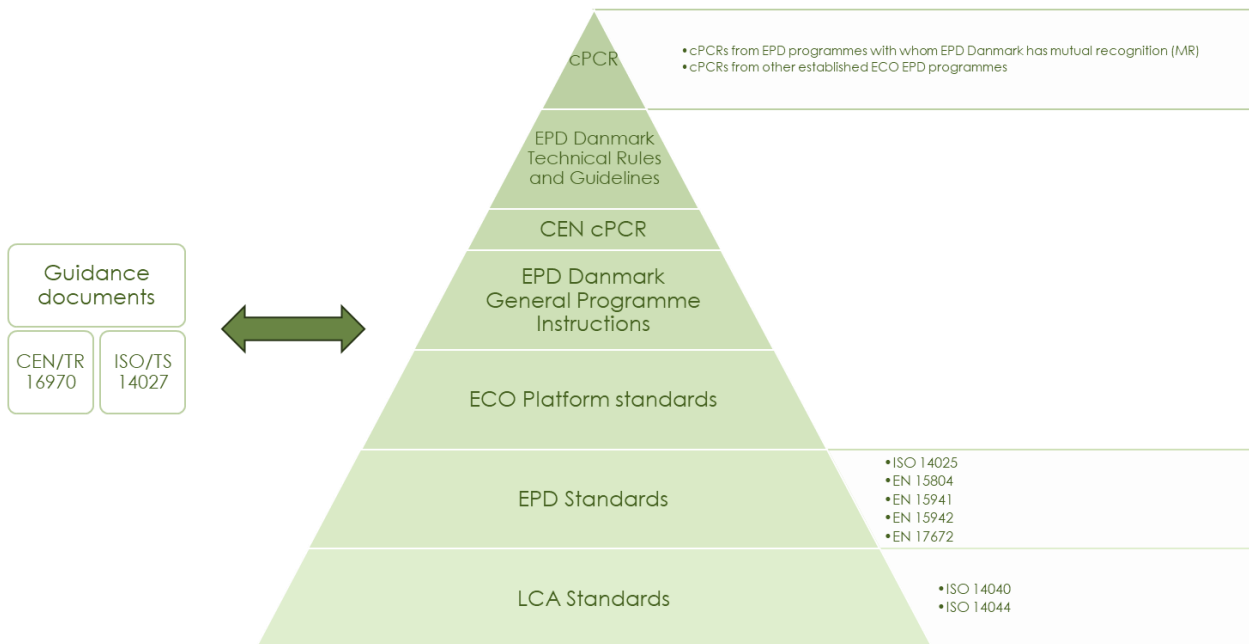


Figure 3. Hierarchy of documents within EPD Danmark, and associated guidance documents applicable.

### 5.3 DECLARATION TYPES

EPD Danmark accepts three overall types of EPDs:

- Industry EPDs
- Product specific EPDs
- Project specific EPDs

As there is a significant difference between the three types of EPDs, their data baseline and products represented, it is important that users are aware of these differences. The different definitions are explained below, and specifications on grouping and EPD scopes based on EN 15941 are described in the Technical Rules and Guidelines.



According to ISO 14025 an approved and verified EPD shall be published by a programme operator. An EPD in EPD Danmark is interpreted as published, when publicly available on the website<sup>10</sup>. The valid version of the EPD is always the one displayed on the website of EPD Danmark.

An ordinary EPD (i.e. not developed through a tool solution) will contain two signatures:

- The verifiers signature, which confirms that the verifier has conducted a third-party verification according to the procedures described in the GPI and the latest verification checklist.
- The signature of the secretariat representative, which confirms that the process of developing, verifying and publishing the EPD has been done in accordance with the procedures in this document.

EPDs developed through an EPD tool will contain additional information and signatures, see Appendix D.

If unsure whether an EPD carrying the EPD Danmark logo is valid or not, please contact the secretariat at [epd-dk@dti.dk](mailto:epd-dk@dti.dk).

### 5.3.1 INDUSTRY EPDS

An industry EPD covers multiple manufacturers, and thus averages data from representative parts of the given industry declared, declaring either an average for one product type or multiple similar products.

An industry EPD shall be registered with and published by EPD Danmark.

### 5.3.2 PRODUCT SPECIFIC EPDS

A Product specific EPD (Product EPD) covers a single manufacturer/production and can declare one or several products from one or multiple production sites, or an average of similar products. It may also declare a group of products under 'worst case' results.

A product EPD has to be registered with and published by EPD Danmark.

### 5.3.3 PROJECT SPECIFIC EPDS

A project specific EPD (project EPD) is a variation of a product specific EPD, which is developed for a specific product, from an EPD owner to a specific customer and/or project. This type of EPD is typically generated by the use of an EPD tool, but may also be developed without a tool, going through third-party verification.

A project EPD, that is developed by an LCA consultant and third party verified by a verifier affiliated to EPD Danmark, can be published with a shorter validity period, to ensure that the EPD is not available beyond its relevance. A project EPD developed this way shall be registered with and published by EPD Danmark to be valid.

If a project EPD is created by the use of an EPD tool, the project EPD is considered valid when it refers to a published product EPD and is created and monitored as described in Appendix D. Such project EPDs do not need to be published in the EPD Danmark database to be valid, and the validity follows the validity period of the published product EPD.

In project EPDs, it shall be clearly stated that the use of the EPD is limited to one project/order and what project/order it is developed for. For project EPDs published in the database, this may be deviated from upon special agreement with EPD Danmark.

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<sup>10</sup> an exception being project specific EPDs developed through an EPD tool, described in D.3.5.2

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## 5.4 EPD SCOPES

The LCA based information shall follow the requirements as put out in EN 15804 about mandatory modules to declare (see Figure 4) and potential requirement exemptions. If the mandatory modules are not declared, the omission shall be justified and the EPD shall provide information on where to find scenarios for the omitted modules.

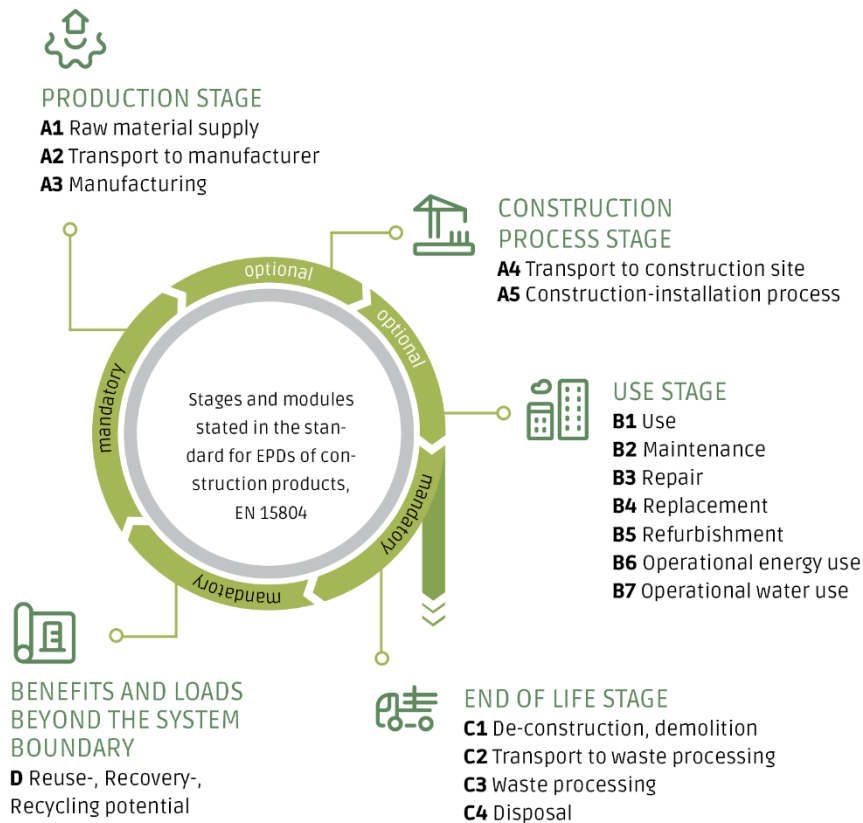


Figure 4. Life Cycle information modules, based on EN 15804:2012+A2:2019

## 5.5 EPD DEVELOPMENT PROCESS

An EPD published by EPD Danmark can be developed/prepared in three ways:

- By traditional process, LCA and EPD (all material verified by an approved third-party verifier)
- By LCA tool
- By EPD tool

Additional requirements for developing EPDs with a tool, are described in Appendix D.

### 5.5.1 REGISTRATION, VERIFICATION AND PUBLICATION PROCESSES

A registration sheet is provided in the consultancy kit, which can be acquired by contact with the secretariat. Upon registration of an EPD and development hereof, the form shall be filled out and sent to EPD Denmark.

It is recommended to send the registration sheet as early as possible, but not before the project is defined, and the number of products, EPDs, supplementary sheets, etc. is determined. The EPD owner shall be registered with EPD Danmark, prior to commencement of the verification process, at the latest.

Once the secretariat has received the registration sheet, the EPD owner and the EPDs are registered in the system. The EPD owner will receive a contract from EPD Denmark for the entire validity period of the EPD<sup>11</sup>. The contract shall be approved by the EPD owner before the EPD can be published by the secretariat.

Figure 5 shows the contact flow during the registration process.

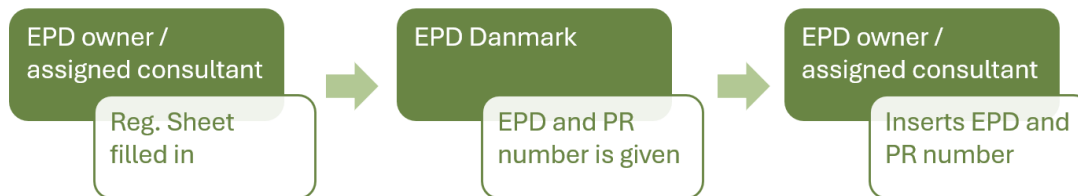


Figure 5. Contact flow for registration of EPD

### 5.5.2 DEVELOPMENT PROCESS FOR EPDS NOT USING A TOOL SOLUTION (TRADITIONAL LCA)

To have an EPD prepared, the EPD owner shall use an LCA expert<sup>12</sup>. This can be either an internal resource or, if they do not have sufficient expertise, they may find an external LCA expert/-consultant.

The EPD owner or their LCA consultant shall contact EPD Denmark and announce the commencement of the project. EPD Denmark will establish/facilitate the communication between the parties involved and will provide the templates for the EPD and project report. Requirements for the project report (including LCA methodology) and EPD can be found in Appendix A, Appendix B and the Technical Rules and Guidelines.

The project report structure is not required to follow the corresponding template provided by EPD Denmark, but the content shall document the LCA study, with relevant data and results, prepared for the product. The EPD is prepared on the basis of the LCA reported in the project report and its results, in accordance with the provisions of EN 15804 and the EPD template prepared by EPD Denmark.

When the project report and the EPD have been prepared, the EPD owner<sup>13</sup> shall send the documents (EPD, project report and supporting documentation) for verification to the secretariat of EPD Denmark. The secretariat will then initiate the verification procedure, by sending relevant documents to an appointed approved external verifier, who will conduct the verification. The appointed verifier shall draw up a standardized verification report, based on a template provided by EPD Denmark and fill out the verification checklist. The external verifier shall submit the signed verification report and with the filled-out verification checklist to EPD Denmark along with the final/approved version of the EPD for publishing, the project report and with supporting documentation, if relevant.

### 5.5.3 LCA TOOLS

To develop an LCA tool, the EPD owner shall use an LCA expert. This can be either an internal resource, or if they do not have sufficient expertise, they may find an external LCA expert/-consultant. This consultant may both develop the tool and develop EPDs through the tool, optimising the process. Requirements on LCA tools can be found in Appendix D, section D.2.

<sup>11</sup> invoicing is done on an annual basis, and the first invoice will be sent after publication of the EPD.

<sup>12</sup> An LCA expert shall have and be able to prove sufficient experience within developing EPDs and LCA in general. In this context an LCA expert is defined as a person who is either carries an education in product level LCA or has gained similar level of skill through practical LCA work. If the used LCA consultants does not have the sufficient experience, they should ensure sparring option with a senior consultant or LCA expert, to have the knowledge available in the development process.

<sup>13</sup> or LCA consultant on their behalf

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#### 5.5.4 EPD TOOLS

To have an EPD tool developed, the EPD owner shall use an LCA expert. This can be either an internal resource, or if they do not have sufficient expertise, they may find an external LCA expert/-consultant. To have an EPD prepared through an EPD tool, the EPD owner shall appoint employees who shall obtain a training certificate, enabling them to operate the tool. Requirements on EPD tools can be found in Appendix D, section D.3

#### 5.6 VALIDITY OF A REGISTERED EPD

A verified EPD is valid for 5 years from the date of publication, unless a shorter validity period is applied and approved by EPD Danmark. During this period the owner of the EPD is responsible for informing the secretariat of EPD Danmark of significant changes made to the product or the processes<sup>14</sup>. In such case, the EPD shall be updated no later than one year after these changes commence.

In cases where the EPD owner has contracted an external LCA consultant to perform the LCA study and develop the EPD, it may be necessary to involve those in the update process. The responsibility towards EPD Danmark however, lies solely on the EPD owner.

For further validity (beyond 5 years) the owner of the EPD is obliged to renew or update their EPD before expiry.

EPD Danmark reserves the right to withdraw or deregister an EPD if the General Programme Instructions, Technical Rules and Guidelines or other relevant standards are violated or the EPD owner fails to pay the annual fee. The validity of the EPD will not be extended with the time it has been withdrawn/deregistered.

#### 5.7 EXTENSION OF EPD (VALIDITY)

When extending the validity of an EPD, it shall be substantiated that there have been no deteriorations in the process that may have increased the impact more than 10% within any of the declared indicators. This can often be done by identifying which LCI data shall be collected in order to substantiate the claim in dialogue with the verifier. In many cases, however, the documentation work can be so extensive that it may be a better idea to make a completely new EPD calculation/revision or update of the EPD.

#### 5.8 UPDATING OR REVISING AN EPD

For a published EPD to remain valid it needs to be updated and re-verified at least every fifth year. Also, changes leading to an increase of more than 10% within any of the declared indicators throughout the validity period of the EPD, will require a re-assessment and coherent re-verification. The EPD owner may request an update in case of significant improvements. Only the changes affected by the update need to be verified and the re-verification shall follow the rules applied at the point of the initial publication. The revised EPD will be published with the same expiration date as the original EPD. A revised EPD can also be re-verified with the aim of extension of the validity period. In such case, the newest verification checklist shall be used, and the representativeness of the data shall be assessed.

On request from the EPD owner, editorial changes to a published EPD (new logo, spelling etc.) may be performed by the secretariat of EPD Danmark without a need for re-verification.

Revisions may be required by EPD Danmark if errors are discovered. Errors can be identified by the EPD owner, consultant, or through random samplings (unsolicited or complaint-driven) by the secretariat,

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<sup>14</sup> Processes which the product goes through during its life cycle, and which are of importance to the product's environmental impact (changes in the order of +/-10% in any of the declared indicators)

potentially mandating revision. For complaint procedures, see section 9. The EPD owner is responsible for corrections, also necessitating re-verification, and the cost associated with this.

If a manufacturer changes the production processes or the product constituents to reduce the environmental impacts of the product, the EPD can be updated immediately, disregarding the absence of average data collected for a full year's production. In such a case, the EPD owner shall describe the changes in writing including the technical documentation for the expected new data, on which the updated EPD will be based. This requires documentation, explaining the plausibility of the implemented actions and their consequences, e.g. considering the LCI data. The documentation shall be approved by a third-party verifier. Since the new EPD will be based on assumptions, the EPD owner is required to deliver the actual measured data for confirmation, if the verifier deems this confirmation necessary. This can only be done after 6 months at the earliest and shall be done after 12 months at the latest.

### 5.9 OWNERSHIP AND USE

The EPD owner will get the verified EPD<sup>15</sup> in full and retain full ownership of it, and they are responsible for its information and contents. It is not allowed to quote from or delete passages from an EPD, so that its results, conclusions etc. get another meaning than was originally the intention.

The EPD owner is responsible for the correctness and completeness of all data stated and applied when preparing the EPD.

The EPD owner retains full ownership of the project report, which is prepared based on the LCA study. The project report will be kept confidential by EPD Danmark and will not under any circumstances be published by EPD Danmark. It is not allowed to quote from or delete passages from the report, so that its results, conclusions etc. get another meaning than was originally the intention.

EPD Danmark reserves the right to register and publish the EPD in the database of EPD Danmark and make the EPD available through ECO Portal.

### 5.10 LANGUAGE

EPD Danmark accepts the use of Danish or English.

If an EPD owner wants the same EPD published in both languages, the verifier shall approve the data given in both EPDs prior to registration.

If an EPD owner wants an already published EPD translated into a third language (not English or Danish), that might be possible, but only after agreement with the secretariat. In this case a supplementary verification is needed. The EPD owner shall provide the translated EPD-text specific for the declared product.

### 5.11 DIGITAL EPDS

All EPDs published shall be available in the digital ILCD+EPD format. The procedure of digitalization is described in the Technical Rules and Guidelines of EPD Danmark. It is the responsibility of the secretariat to publish the digital datasets on a digital platform with connection to ECO Portal.

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<sup>15</sup> and project report upon request

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## 5.12 EPDS FROM OTHER EPD PROGRAMMES

Mutually recognized EPDs from other EPD programmes can be made publicly available on [www.epddanmark.dk](http://www.epddanmark.dk), if the EPD owner requests this. The EPDs will be provided with either an EPD Danmark front page or the EPD Danmark logo on the existing front page, on which it is stated that the EPD has the status as a 'mutually recognised EPD from <EPD programme>' along with the EPD Danmark registration number.

The EPD shall be in either Danish, English, Swedish or Norwegian to be published through the mutual recognition by EPD Danmark.

## 6 VERIFICATION

The verification of an EPD includes an examination of the completeness, plausibility, consistency and transparency of the calculations and information in the project report and the EPD, checking for compliance with the rules of EPD Danmark and specifications given in the PCR documents.

The verification shall ensure that the project report and EPD complies with:

- EN 15804 and relevant cPCR documents
- International standard for LCA, ISO 14040 and ISO 14044
- The General Programme Instructions and Technical Rules and Guidelines of EPD Danmark<sup>16</sup>
- The ECO Platform Standards

Additionally, the verification shall confirm that:

- EPD data and LCA report data are the same.
- That the data used are reliable, reproducible, consistent, representative and have a high coverage, accuracy and completeness.
- LCA data have a satisfactory level of accuracy, quality, probability and credibility.
- Additional environmental information has a satisfactory level of accuracy and quality.
- Basic information has a satisfactory level of accuracy and quality.
- Missing data are treated in a satisfactory level and explained how treated.

The verification of project reports and EPDs shall follow the applicable and current verification checklist, which can be acquired from the secretariat. The use period of a checklist is defined by the referenced version of the General programme instructions and Technical Rules and Guidelines.

The verification checklists existing within the EPD Danmark framework are:

- Verification checklist 1: Conventional EPD + project report
- Verification checklist 2: LCA tool, tool report + test EPDs
- Verification checklist 3: LCA tool-EPD + LT project report
- Verification checklist 4: EPD tool, tool report + test/reference EPDs
- Verification checklist 5: EPD tool EPD, Internal verification of data collection and use of EPD tool at user

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<sup>16</sup> the latest version can be found at [www.epddanmark.dk](http://www.epddanmark.dk) or acquired from the secretariat

As proof of the verification, a verification report is signed by the verifier. The verification report shall follow the template made available by EPD Denmark, and consists of a declaration from the verifier, with the following information:

- Registration number of EPD(s) and project report
- Product name(s)
- EPD Owner
- PCR and cPCR used
- Name of verifier
- Verifier signature
- Date of verification
- Verification statement including statement of verifier independence
- (if material is not approved: Statement on the issue)

The verification report is available to anybody upon request and therefore shall not contain confidential information.

### 6.1 VERIFICATION PROCESS

Depending on the EPD development method used, see section 5.5, the requirements for EPD verification differ. Figure 6 shows the contact flow during the process, from verification to publication of the EPD.

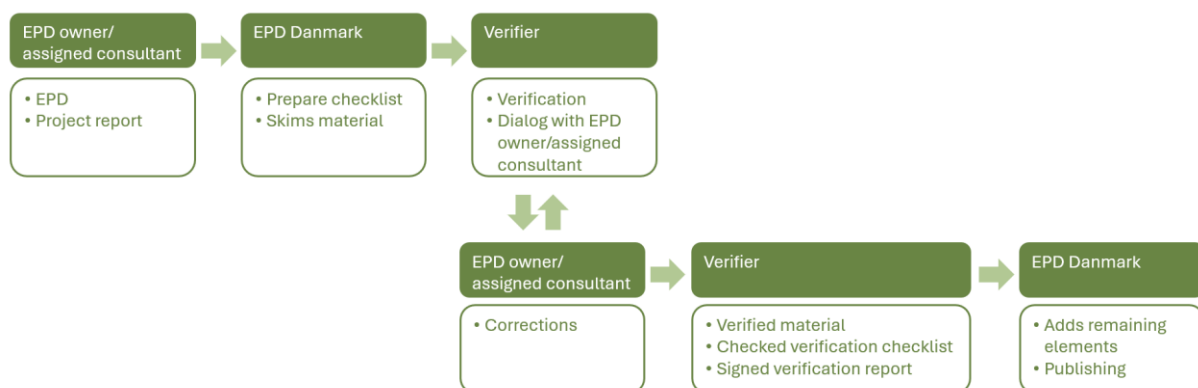


Figure 6. Contact flow for verification and release of EPD

The core material shall be sent for verification through the secretariat of EPD Denmark. As a minimum the project report and EPD, while appendices and other relevant material can be sent either through EPD Denmark or directly to the verifier, with EPD Denmark as CC<sup>17</sup>.

Only the first version of the project report and EPD etc. shall be sent to the secretariat, while the remaining dialogue takes place exclusively between the verifier and EPD owner<sup>18</sup>.

All final documents, including the verification report and filled out checklist describing the iterations between verifier and EPD owner, shall be sent to the secretariat of EPD Denmark by the verifier, for final registration.

If the EPD cannot be verified within the agreed term, this shall be announced to EPD Denmark, see more in section 6.2.

Additional requirements and review processes for verification apply for LCA- and EPD tools. These are described in Appendix D.

<sup>17</sup> If the verifier requires documents that were not included in the material received via EPD Denmark, e.g. documentation for Substances of Very High Concern (SVHC), RSL and/or documentation for GO for renewable energy etc., then the verifier shall send these together with the final files for EPD Denmark.

<sup>18</sup> Or LCA consultant on behalf of the EPD owner

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### 6.1.1 TRADITIONAL/MANUAL LCA

When the project report and the EPD have been prepared by the EPD owner (or their LCA consultant), the documents are sent to EPD Danmark, who will initiate the verification procedure.

The secretariat of EPD Danmark oversees the communication with the verifier and handles the documents which are relevant for the verification. The verifier shall verify the EPD and project report and shall fill out the relevant verification checklist and draw up a verification report, based on a template provided by EPD Danmark.

The verification procedure shall confirm that all information given in the EPD accurately reflects the information contained in the project report and supplementary documents on which the declaration is based. The verification procedure shall also confirm that the information is valid and scientifically well-founded. The verification does not include an audit performed by the verifier at the production site. The data delivered by the EPD owner is only checked for plausibility.

The verification is performed by an independent third party approved by EPD Danmark, who fulfils the competence requirements stated in Appendix C.

When the EPD is approved by the verifier, the verifier shall forward a completed and signed verification report and filled out verification checklist to the secretariat, who will then publish the approved EPD.

### 6.1.2 LCA TOOLS

An EPD developed through a verified LCA tool shall be verified by an approved third-party verifier affiliated to EPD Danmark, complying mostly the same requirements as an ordinary EPD. Further description of the process for verification of LCA tools can be found in Appendix D.

### 6.1.3 EPD TOOLS

EPDs developed through a verified EPD tool do not need an external verification by an approved third-party verifier. The EPD owner shall have a trained internal independent reviewer, who is responsible for internal verification. Further description of the process for verification of EPD tools can be found in Appendix D.

## 6.2 EPD NOT APPROVED BY VERIFIER

If the verifier concludes that the EPD and/or project report contains errors and shortcomings to such an extent that radical changes and/or new calculations are necessary, the verifier may declare in their verification report that the EPD cannot be approved in its present form.

In order for the EPD and project report to be approved, the EPD owner shall ensure that the errors and/or shortcomings are corrected accordingly. These corrections shall be proven, prior to a new/revisited verification process.

EPD Danmark furthermore reserves the right to decide<sup>19</sup>, that the supporting data for the EPD is inadequate. If this happens, the declaration/approval cannot be issued.

The financial costs involved if an EPD is not approved, shall be paid by the EPD owner. It is then the EPD owner's own responsibility to negotiate possible financial compensation with the LCA consultant, if such has been used.

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<sup>19</sup> based on the verification checklist or report, project report and/or EPD



## 6.3 APPROVED VERIFIERS

The secretariat is responsible to ensure that the approved verifiers are qualified and have the necessary competences as regards to know-how and experience within LCA and EPD for construction products (see more on these requirements in Appendix C). The secretariat is supported by the Technical Committee, cf. section 3.2.

A list of approved external verifiers is available at [www.epddanmark.dk](http://www.epddanmark.dk).

### 6.3.1 VERIFIER INDEPENDENCE

The verifier shall always be an independent third party to the EPD owner as well as to the LCA practitioner if such is used. This means that the verifier shall not be organizationally attached to the EPD owner or the LCA practitioner.

To avoid potential economic or procedural conflicts between the verifier and the EPD owner (or their LCA consultant) during the verification process, a contract shall be agreed upon before the verification process starts. The verifier will receive information on the product, EPD type and e.g. length of the EPD and project report and shall settle a price on this basis. The contract is between the EPD owner and the verifier.

The verifiers shall by principle not make any recommendations. They shall be impartial and not try to influence the EPD according to their opinion.

Verifiers shall independently obtain assignments from companies responsible for creating EPDs, without any participation from the programme operator. To guarantee impartiality, the agreement between the verifier and the company shall be designed to prevent any financial influence on the verifier to approve the EPD and shall exclude any terms that could predetermine the outcome of the verification process.

Verifiers may reject a verification if they deem that the verification cannot be performed independently, due to relations to included parties, contractual issues or if the material received is not of substantial quality for the verifier to be able to perform their tasks without significant influence on the material.

### 6.3.2 COMPETENCE REQUIREMENTS FOR VERIFIERS

Qualifications and competences are important to ensure the quality of verification and thereby the quality of the finished EPD. It is the aim of EPD Danmark to have the highest quality level that can be expected from the market at any given time, and which can be mutually recognized by other EPD programmes. See more on the requirements for verifiers in Appendix C.

The secretariat undertakes annual meetings with the verifier group, see section 3.4, to update approved verifiers with available knowledge and competences.

Inactivity of verifiers may lead to removal of an approved verifier. Repeated observations of non-compliance with the normative requirements will lead to a warning and a requirement to follow a training process as described in Appendix C, section C.3. In particularly serious or repeated cases of non-compliance, a verifier will be removed as an approved verifier affiliated to EPD Danmark.

## 6.4 OBLIGATIONS

### 6.4.1 EPD OWNER OBLIGATIONS

EPD owners with EPDs registered by EPD Danmark have ongoing obligations. They shall notify the secretariat of EPD Danmark, of any significant changes. This applies to changes in production, processes, materials, or product design. It also includes any other information submitted as background for the EPD. Significant changes are those that influence the EPD data and results by more than +/-10% within any of the declared indicators. This obligation remains throughout the entire validity period of the EPD.

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If the EPD owner does not have direct control over the production of the declared product(s) and primary data, it is the responsibility of the EPD owner to ensure this information through a legally binding agreement on information flows in the entire duration of the EPD validity. This shall be documented towards the verifier, upon verification.

An EPD owner should establish routines for an ongoing inspection and follow-up of the product, and such procedures may be connected to any existing environmental management system in the company.

The EPD owner may not publicly use an EPD which has not yet been approved, registered and published by EPD Danmark (project EPDs developed through an EPD tool being an exception, if the reference product EPD is published).

False or misleading use of the EPD and EPD Danmark's logo shall not take place, including the use of the EPD for comparative claims or mixed up with Type I environmental labels. The use of EPD Danmark's logo shall follow the logo package of EPD Danmark, which can be obtained on [www.epddanmark.dk](http://www.epddanmark.dk) or by contacting the secretariat. The misuse of an EPD or the logo will be investigated, and if such misuse—whether resulting from negligence or fraudulent intent—is confirmed, consequences may include EPD withdrawal, public announcement of the violation, and potential legal action.

In cases where EPD Danmark has repeatedly notified an EPD owner about necessary corrective measures regarding errors/non-compliance with the normative documents of EPD Danmark, and the EPD owner has not taken such measures, EPD Danmark reserves the right to withdraw the EPD and deregister it from the database. The validity of the EPD will not be extended with the time it has been deregistered.

#### 6.4.2 VERIFIER OBLIGATIONS

Just like the EPD owner, the independent verifier has an obligation to report any violations of the provisions of these General Programme Instructions and normative documents of EPD Danmark, to the secretariat of EPD Danmark.

The secretariat will subsequently give instructions as to which corrective measures should be taken.

#### 6.5 DATA CONFIDENTIALITY

See section 7, which shall also apply for verifiers registered with and approved by EPD Danmark.

### 7 DATA MANAGEMENT AND CONFIDENTIALITY

Product specific data are often confidential because of competitive requirements, information protected by intellectual property rights (IPR) and similar legal restrictions.

During the development of an EPD, it will in most cases be necessary to give external experts access to confidential data, production methods, etc. There is no requirement that such confidential data should be made public. Business data identified as confidential and provided in connection with the independent verification process shall be kept confidential in accordance with these General Programme Instructions.

ISO 14025 defines the basic rules of data confidentiality, which together with the sections below describe the procedures for handling confidential information within the EPD Danmark programme.

#### 7.1 EXCHANGE OF CONFIDENTIAL INFORMATION

In connection with the solving of specific tasks and the provision of services, the parties involved may have to exchange confidential information. Confidential information includes information of any kind and in any

form, which is not intended for free public access, including e.g. prices and rates, source codes, data, drawings, specifications, manuals, instructions, etc.

Confidential information received shall be kept, protected and handled properly with at least the same care, as the receiving party applies to their own business secrets.

The parties and their staff, sub-suppliers and consultants shall observe absolute professional secrecy as regards any confidential information received. This does not, however, apply to own internal use for the purpose. Each party shall limit the distribution of confidential information received to those staff members who actually need the information in question.

The parties are not allowed to pass on to any third party any confidential information received from the other party. This does not, however, apply to the passing on of information to the independent verifier, who is approved by the party giving the information. Approval of such verifiers cannot be refused without stating a material reason.

The parties are not allowed to use confidential information received from the other party for any other purpose than for own internal use for the original purpose, apart from any use to which the other party has granted permission.

Each party shall be responsible for any misuse or unauthorised distribution of information on the part of the party's employees, consultants or other attached persons who gain access to any confidential information received.

It is the responsibility of the EPD owner to supply sufficient access to relevant data for a verification process. Verifiers may reject a verification if they are not granted access to the necessary data to perform their duties effectively.

## 7.2 MAINTENANCE OF A PUBLICLY ACCESSIBLE LIST OF VALID EPDS

An EPD will be published on the website of EPD Danmark throughout the validity of the EPD (5 years), or until the owner asks for revocation. EPD Danmark reserves the right to withdraw an EPD if relevant standards, the General Programme Instructions or Technical Rules and Guidelines are violated, or the owner fails to pay the annual fee.

## 8 SPECIFIC LCA CALCULATION RULES AND DOCUMENTATION NEEDS

Specific calculations rules and interpretations within the EPD Danmark are described in the Technical Rules and Guidelines. The document is updated regularly, to comply with the latest harmonised interpretations by the Mutual Recognition collaborations, through ECO Platform or other relevant instances.

Documentation needs beyond the ones presented in Appendix A and Appendix B are clarified in the Technical Rules and Guidelines, which can be found at [www.epddanmark.dk](http://www.epddanmark.dk) or obtained through the secretariat.

## 9 FEEDBACK OR COMPLAINTS

Complaints or feedback about the contents of a published EPD or any other aspect of EPD Danmark's operations shall be submitted in writing to the secretariat. The complaint shall be substantiated and supported by documentation.

The complaint may not be anonymous and shall include a clear description of the scope and nature of the complaint, the EPD or claim in question, as well as a reference to the relevant rule in the GPI, Technical Rules and Guidelines, ISO 14025, EN 15804 or other applicable references.

The complaint will be handled by the secretariat, who will evaluate the relevance and severity of the complaint. The secretariat is then responsible for obtaining a common statement from the LCA practitioner and the verifier, if relevant, as well as contacting the EPD owner to inform them about the discrepancy with the authoritative or technical documents.

The secretariat should respond to any complaints as soon as possible and contact the organizations that are affected. If deemed necessary, EPD Danmark will temporarily withdraw the EPD from publication pending investigation or corrective action by the document owner. If no corrective action is taken by the EPD owner within a reasonable time period, the EPD may be de-registered by the secretariat. The validity of the EPD will not be extended with the time it has been withdrawn or deregistered.

Only breaches of rules applicable at the time of publication are considered. New guidelines are generally not implemented retroactively.

EPDs published by EPD Danmark are based on the material received from the EPD owner (and their consultants, if used), including the verifier appointed. EPD Danmark cannot be held responsible for errors and omissions made by the EPD owner or its consultants, including the verifier.

In relation to the complaint process, it's important to note that any contractual relationships between EPD owners and their consultants are separate from EPD Danmark's procedures, and the EPD owner remains ultimately responsible for the EPD in relation to EPD Danmark, regardless of any agreements with external parties.

Any conflicts or disagreements shall be tried settled out of court between the parties involved. Disputes shall be settled according to the Rules of Arbitration and Danish legislation.

## 10 DEFINITIONS, TERMS AND ABBREVIATIONS

The following definitions, terms and abbreviations apply in these General Programme Instructions and in the Technical Rules and Guidelines, project reports, EPDs and other communication under EPD Danmark:

Table 1. Definitions, terms and abbreviations within the EPD Danmark programme

ABBREVIATION	DEFINITION
<b>ALLOCATION</b>	Partitioning of flows (input and output) to and from a process or product system between the product system under study and one or more other product systems.
<b>AVERAGE DATA</b>	Data representative of a product, product group or construction service, provided by one or more suppliers.
<b>ATTRIBUTIONAL</b>	Refers to process-based modelling intended to provide a static representation of average conditions, excluding market-mediated effects.
<b>B2B</b>	Business-to-business. Communication between organisations and/or professional actors.
<b>B2C</b>	Business-to-consumer. Communication between an organisation or professional actor and a consumer.

<b>CPCR</b>	<p>Complementary Product Category Rules. Product group specific PCR, which provide additional compliant and non-contradictory requirements to EN 15804.</p> <p>In EPD Danmark the PCR basis of a specific product category consists of two parts. "Part 1" is the European standard EN 15804, which defines the basic PCR rules which are common to all construction products. "Part 2" is the complementary PCR document (cPCR), which defines the PCR rules applying to the specific product category, and which thereby <i>supplements (are complementary)</i> the provisions in EN 15804.</p>
<b>CONSTRUCTION ELEMENT</b>	Part of a construction containing a defined combination of products.
<b>CONSTRUCTION PRODUCT</b>	Item manufactured or processed for incorporation in constructions works.
<b>CONSTRUCTION SERVICE</b>	Activity that supports the construction process or subsequent maintenance.
<b>DIGITAL EPD</b>	A version of an EPD, in the ILCD+EPD format. In the digital EPD, the content of a published PDF EPD is fit to digital format, to make it useable in calculations.
<b>EN 15804</b>	European standard published by CEN, on a mandate from the European Commission. The standard forms the technical basis of the preparation of Type III Environmental Product Declarations for construction products (EPD).
<b>EPD</b>	<p>Abbreviation for a Type III Environmental Product Declaration.</p> <p>A Type III Environmental Product Declaration for a construction product in the context of EPD Danmark, is prepared on the basis of the European standard EN 15804 and ISO 14025.</p> <p>As a document, it acts as a summary of the project report.</p>
<b>EPD OWNER</b>	<p>An EPD owner is the company that is registered with EPD Danmark and has the legal responsibility for the EPD and content hereof towards EPD Danmark.</p> <p>An EPD owner may be a manufacturer (for EPDs of goods), a service provider (for EPDs of services), a trader (e.g. a retailer or a wholesaler), or a trade/industry association.</p>
<b>EPD TEMPLATE</b>	Template provided by EPD Danmark. All EPDs published by EPD Danmark shall be created according to the template.
<b>ET EPD VERIFICATION REPORT</b>	Verification report for verification of each individual EPD or group of EPDs developed by EPD tools. See 'Verification report' for details

<b>ET PROJECT REPORT</b>	<p>Short for EPD tool project report.</p> <p>Report or collection of documentation that documents the inputs to the variable parameters of an EPD tool. Is a part of the material verified, as the output of the EPD tool, using the relevant verification checklist.</p>
<b>ILCD+EPD</b>	An XML based format, in which the EPDs are presented in a machine-readable manner. Developed by the InData network.
<b>LCA</b>	<p>Life Cycle Assessment.</p> <p>The Life Cycle Assessment is the backbone of an EPD and is performed on the basis of the international standards ISO 14040 and ISO 14044. A Life Cycle Assessment compiles and evaluates all inputs and outputs and potential environmental impacts of a product throughout its life cycle.</p>
<b>LCA CONSULTANT</b>	<p>An LCA consultant in this context is defined as external to the EPD owner.</p> <p>The LCA consultant shall have the sufficient competencies to perform LCAs and develop EPDs.</p>
<b>LCA EXPERT</b>	In this context an LCA expert is defined as a person who is either carries an education in product level LCA or has gained similar level of skill through practical LCA work.
<b>LCI</b>	Life Cycle Inventory (analysis). Phase of the life cycle assessment involving the compilation and quantification of inputs and outputs of elementary flows.
<b>LIFE CYCLE</b>	Consecutive and interlinked stages of a product system, from raw material acquisition or generation from natural resources to final disposal.
<b>LOGBOOK</b>	A logbook is an overview document with the purpose of monitoring the use of an LCA or EPD tool. The content differs between LCA and EPD tools.
<b>LT EPD VERIFICATION REPORT</b>	Verification report for verification of each individual EPD or group of EPDs developed by LCA tools. See 'Verification report' for details
<b>LT PROJECT REPORT</b>	<p>Short for LCA tool project report.</p> <p>Report to be third party verified as part of the publication of EPDs created with LCA tools. It shall describe the choices made for variable data in the tool (e.g. input data quantities (foreground data), assessment of environmental data, interpretation of LCA results etc.).</p>
<b>MANAGEMENT SYSTEM (EPD TOOLS)</b>	<p>In this context, management system is defined as:</p> <p>"A company specific set of procedures and processes (e.g. a written document on who does what and how etc.) in order to assure the right quality and handling of data, leading to a proper use of the EPD tool and the internal verification of the resulting EPDs according to the requirements described in the General Programme Instructions."</p>

<b>MANUFACTURER</b>	<p>‘Manufacturer’ means any natural or legal person who manufactures a construction product or who has such a product designed or manufactured, and markets that product under their name or trademark;<sup>20</sup></p> <p>Cases in which obligations of manufacturers apply to importers and distributors: An importer or distributor, registered as an EPD owner, shall be subject to the obligations of a manufacturer, where they register a product under their name or trademark or modifies a construction product already placed on the market in such a way that conformity with the content of the EPD may be affected</p>
<b>PCR</b>	Product Category Rules. A set of specific rules, requirements and instructions for the development of an EPD for a specific product category.
<b>PCR REVIEW</b>	Process whereby a third-party panel verifies the specific Product Category Rules (PCR) prepared for a product category.
<b>PCR REVIEW REPORT</b>	Report created by the PCR review panel as documentation of their review. The report shall include the results of the PCR review and comments and recommendations made by the panel members.
<b>PRODUCT CATEGORY</b>	Group of products which can fulfil equivalent functions.
<b>PROGRAMME OPERATOR</b>	Organisation which develops and conducts a Type III Environmental Product Declaration Programme.
<b>PROJECT REPORT</b>	<p>Often called LCA- or background report. The project report (PR) is the report describing the LCA, that is the basis of the EPD, in detail.</p> <p>For EPDs developed by LCA tools, the ‘LT project report’ corresponds to the project report. For EPD tools, the ‘ET project report’ corresponds to the project report.</p>
<b>PROJECT REPORT TEMPLATE</b>	Template provided by EPD Danmark. The template gives a good indication of mandatory elements of the project report but is not mandatory itself and not exhaustive with mandatory elements for all product categories.
<b>RSL</b>	Reference Service Life – the expected service life of a product under a set of given conditions for the use of the product.
<b>SCENARIO</b>	Collection of assumptions and information concerning an expected sequence of possible future events.
<b>TEST EPDS</b>	Test EPDs are EPDs that are developed using an LCA or EPD tool, and third party verified according to the relevant verification checklist as part of the verification procedure of the tool. Test EPDs can be published, if relevant. Documentation of the test EPD can either be included as a part of the tool report or in a separate ET/LT report.

<sup>20</sup> Article 2 from REGULATION (EU) No 305/2011:

<b>THIRD PARTY</b>	Person or body that is recognised as being independent of the parties involved, as concerns the issues in question. The parties involved are usually the LCA developer and the EPD owner.
<b>TOOL AUDIT REPORT</b>	Evaluation of annual audit performed by EPD Danmark or auditor appointed by EPD Danmark at site of EPD tool users.
<b>TOOL REPORT</b>	The Tool Report is the report describing the technical details of a tool. A tool report shall also contain the descriptions of LCA modelling details, free parameters and sensitivity analysis for the tool. The tool report may also contain the documentation for verification of the test EPDs from the tool.
<b>TOOL VERIFICATION REPORT</b>	Verification report, confirming the verification of a tool, according to the relevant verification checklist develop for tool solutions. See 'Verification report' and 'Verification checklist' for details.
<b>TRAINING CERTIFICATES</b>	Training certificates are developed by the tool developer, or the entity responsible of training of the tool user, as proof of training. The certificate is personal and shall be sent to EPD Danmark.
<b>TYPE III ENVIRONMENTAL PRODUCT DECLARATION</b>	In everyday language "EPD" or "environmental product declaration". A Type III Environmental Product Declaration provides quantified environmental information on a product's life cycle to enable comparisons between products fulfilling the same function. Such declarations are based on independently verified LCA data and are developed by means of predetermined parameters. The predetermined parameters are defined in the product's PCR and are based on the ISO 14040 series of standards (ISO 14040 and ISO 14044).
<b>TYPE III ENVIRONMENTAL PRODUCT DECLARATION PROGRAMME</b>	Programme for the development and application of Type III Environmental Product Declarations, based on a set of general programme instructions.
<b>VERIFICATION</b>	Confirmation that specified requirements have been fulfilled. The verification of the project report as well as the EPD itself shall ensure the reliability of the work performed. The verification shall be performed by an independent party to the EPD owner and LCA developer.
<b>VERIFICATION CHECKLIST</b>	The verification checklist is the template by which the verification shall be performed. The checklist creates a uniform and transparent process and is sent to EPD Danmark as part of the proof of verification. The filled checklist is not publicly available but is available to EPD Danmark in case of doubt on the EPD compliance or quality of the verification.  The checklists consist of issues, that the verifier shall assess in the relevant project report.



<b>VERIFICATION REPORT</b>	<p>The proof of verification. Consists of a declaration from the verifier, confirming the verification against the relevant verification checklist(s).</p> <p>The verification report is available to anybody upon request and therefore shall not contain confidential information.</p>
<b>VERIFIER</b>	Person (or body) that carries out verification.

## 11 NORMATIVE BASIS AND GUIDANCE DOCUMENTS

Environmental Product Declarations, developed within the framework of the EPD Danmark programme, shall be in accordance with the following standards. For dated references, only the cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

**EN 15804** – Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

**ISO 14025** – Environmental labels and declarations - Type III environmental declarations - Principles and procedures

**EN 15941** – Sustainability of construction works - Environmental product declarations – Methodology for selection and use of generic data

**EN 15942** – Sustainability of construction works - Environmental product declarations – Communication format business-to-business

**EN 17672** - Sustainability of construction works – Environmental product declarations – Horizontal rules for business-to-consumer communication

**ISO 14040** – Environmental Management - Life Cycle Assessment - Principles and Framework

**ISO 14044** – Environmental Management - Life Cycle Assessment - Requirements and Guidelines

**ISO 14020** – Environmental Labels and Declarations - General Principles

### **ECO Platform standards**

Environmental product declarations and documents developed within the framework of the EPD Danmark programme should also follow the technical guidance, if relevant:

**CEN/TR 16970** – Sustainability of construction works – Guidance for the implementation of EN 15804

**ISO/TS 14027** – Environmental labels and declarations — Development of product category rules

And other relevant standards and methodology guidelines, including but not limited to:

**ISO 14067** – Greenhouse gases – Carbon footprint of products – requirements and guidelines for quantification

**ISO 14046** – Environmental management — Water footprint — Principles, requirements and guidelines

**ISO 22057** – Sustainability in buildings and civil engineering works — Data templates for the use of environmental product declarations (EPDs) for construction products in building information modelling (BIM)

**ISO 22095** – Chain of custody — General terminology and models

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European Commission – Joint Research Centre – Institute for Environmental and Sustainability:  
**International Reference Life Cycle Data System (ILCD) Handbook** – Nomenclature and other  
conventions. 2010. EUR 24384 EN. Luxembourg. Publications Office of the European Union: 2010,  
ISBN 978-92-79-15861-2

Suggestions for updating the **Product Environmental Footprint (PEF) method**, EUR 29682 EN,  
Publications Office of the European Union

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## APPENDIX A LIFE CYCLE ASSESSMENT (LCA) METHODOLOGY

Following the principles from EN 15804

### A.1 MODELLING APPROACH

Within the framework of EPD Danmark, the LCA approach of EN 15804 is interpreted as an attributional LCA modelling approach, which differs from consequential LCA. This entails the following:

- Data usage: Specific or average data shall be used. Marginal data is not permitted.
- Handling allocation problems: If a unit process cannot be divided into smaller sub-processes, allocation shall be applied. System expansion beyond the boundaries set by the PCR is not allowed. The use of 'substitution' or assigning 'credits' for avoided environmental impacts as a solution to allocation problems is not permitted.

The purpose of using this approach is to make information traceable, documented, and verifiable, as well as to support the concept of modularity.

### A.2 LCA METHODOLOGY

The LCA consultant (internal or external to an EPD owner) shall ensure to perform a study according to international standards (e.g. regarding data collection):

- **ISO 14040** – Environmental Management - Life Cycle Assessment - Principles and Framework
- **ISO 14044** – Environmental Management - Life Cycle Assessment - Requirements and Guidelines
- **EN 15804** – Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

In addition to the mentioned international standards, the following should be used (e.g. regarding LCA calculations):

- **CEN/TR 16970** – Sustainability of construction works – Guidance for the implementation of EN 15804
- European Commission – Joint Research Centre – Institute for Environmental and Sustainability: **International Reference Life Cycle Data System (ILCD) Handbook** – Nomenclature and other conventions. 2010. EUR 24384 EN. Luxembourg. Publications Office of the European Union: 2010, ISBN 978-92-79-15861-2

The requirements in the General Programme Instructions and Technical Rules and Guidelines of EPD Danmark shall be followed in addition to the standards, along with the requirements of any relevant cPCR.

The methodology shall consist of and cover the following step, which are also to be reported in the project report:

- Determination of objectives and scope
- Collection and processing of data
- Assessment of the environmental data
- Interpretation of the results

### A.3 CONTENT OF THE LCA REPORT

The project report for developing an EPD within the framework of EPD Danmark, does not have to follow a specific template. However, the secretariat offers a structured template available upon request, defined as the *project report template*. Regardless, if this template is not followed, it shall be ensured that all topics are addressed sufficiently.

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## APPENDIX B ENVIRONMENTAL PRODUCT DECLARATION (EPD) METHODOLOGY

### B.1 EPD CONTENT

The main purpose of the EPD is to showcase the environmental properties of a declared service or product in a comprehensive way. The EPD shall follow the latest EPD template developed by EPD Danmark at time of publication and can be obtained through the secretariat.

The overall content shall be:

- General information related to the EPD programme
- Information on EPD owner and verification
- Product or service information
- LCA background of the EPD
- LCA results (environmental performance)
- Additional information
- References

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## APPENDIX C VERIFIERS: APPROVAL AND TASKS

### C.1 APPROVAL OF VERIFIERS

Verifiers shall be a third party from the organization enquiring the EPD (EPD owner) which is to be verified, the developer of the EPD (LCA consultant, can either be internal or external from the EPD owner) and other parties involved in the development of the EPD (e.g. production facility, supplier, etc.).

New verifier candidates shall fulfil the training (see C.3) before final approval. The training shall be documented by an approved verifier.

Qualifications and training are essential to ensure, that the appropriate level of quality is achieved when verifying an EPD. Verifiers associated to EPD Denmark, are expected to keep updated within the field of LCA and EPD through their professional work. The secretariat of EPD Denmark will arrange at least one annual meeting in the verifier group, which enables a forum for methodological discussions. The secretariat may perform additional checks of verifications done by individual verifiers for quality assurance. This is done through random sampling.

Verifiers shall stay up to date with the development within the EPD Denmark and shall actively take on verification tasks. To uphold recognition as an individual verifier within EPD Denmark, the verifier shall annually:

- carry out at least one EPD verification within EPD Denmark,
- OR
- carry out at least one LCA study leading to an EPD within EPD Denmark

Inactive verifiers may no longer perform verifications and shall be removed from the list of approved verifiers on [www.epddanmark.dk](http://www.epddanmark.dk).

### C.2 COMPETENCES FOR THIRD-PARTY VERIFIERS

The competence requirements of approved verifiers include:

- An education at an academic level in engineering or other relevant scientific education
- LCA expertise, substantiated by at least 3 completed life cycle assessments (LCA)
- Knowledge of relevant standards for LCA (ISO 14040, ISO 14044)
- Knowledge of relevant standards for Environmental Product Declarations (ISO 14025, EN 15804, ISO 21930)
- Knowledge of product-related environmental aspects in the building industry
- At least 4 years professional experience in environmental-related work in the building industry or other related areas<sup>21</sup>
- Process and product knowledge from the lines of business covered by EPD Denmark
- Proof of knowledge within LCA software (e.g. GaBi, Umberto, SimaPro, OpenLCA, etc.)
- Completion of at least three EPDs through EPD Denmark

#### C.2.1 COMPETENCE FOR VERIFIERS VERIFYING AF TOOL SOLUTION

The group of approved verifiers affiliated with EPD Denmark will be offered to be additionally approved for tool solution verifications.

In order to be approved for tool verifications, a verifier shall be able to prove sufficient experience (in addition to the general requirements) within process verification competences.

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<sup>21</sup> This may be substantiated - for example – by having worked with development of LCA or critical review of LCA or having been involved in the international LCA/EPD standardization work in CEN and/or ISO.

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### C.2.2 COMPETENCES FOR INTERNAL VERIFICATION WHEN USING EPD TOOLS

Verification of EPDs developed through a verified EPD tool have different review processes and requirements. While external verification by an approved verifier isn't required for tool-generated EPDs, the tool owner shall demonstrate the internal verifier's independence. See more on additional requirements and review processes for EPD tools in Appendix D.

### C.3 TRAINING OF THIRD-PARTY VERIFIER CANDIDATES

Before being approved as a third-party verifier affiliated with EPD Denmark, the candidate shall undergo the following training with an established/approved verifier. After the training, the secretariat will approve the candidate based on recommendation from the observing approved verifier.

- 1-2 observations, where the candidate observes the verification process of the approved verifier. The observation includes access to documentation and dialogue between the EPD owner<sup>22</sup> and the approved verifier. The approved verifier shall provide the secretariat with documentation of the observed verification.
- 1-2 parallel verification, where the candidate takes actively part in the verification process from the approved verifier. Part of the verification procedure may be jointly performed by the candidate and the approved verifier. The approved verifier shall provide the secretariat with a report, including any major and minor shortcomings and aspects that require further improvement from the candidate.
- 1-2 verifications with check, where the candidate performs the verification, and an approved verifier makes a quality assurance of the verification. The approved verifier shall provide the secretariat with a report, including any major and minor shortcomings and aspects that require further improvement from the candidate.

The approved verifier shall have conducted at least five verifications within the last five years within EPD Denmark to be qualified in running trainings. The approved individual verifier shall be responsible that verification is carried out in accordance with the principles and procedures described in the General Programme Instruction and the Technical Rules and Guidelines, and with special attention to section 6 - Verification.

The approved verifier and the candidate can be employed in the same company. But they may also come from different companies. The training process and any expenses connected to this, is agreed between the approved verifier and the candidate. The approved verifier does not have to be the same throughout the process. This is, however, recommended.

How many observations, parallel verifications and quality assured verifications are needed, will be agreed in dialogue between the approved verifier and the secretariat of EPD Denmark.

The secretariat reserves the right to check the first EPD verified by a newly approved independent verifier to make sure that the EPD and verification process fulfil the requirements. To support this process and to avoid delays, newly approved verifiers shall inform the secretariat when a first verification is ongoing to enable planning for such a check by the secretariat.

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<sup>22</sup> Or LCA practitioner on their behalf

#### C.4 TASK OF VERIFIERS

The approved third-party verifiers affiliated to EPD Danmark are expected to carry out the task of reviewing the EPD(s) for publication, the project report, and additional documentation which supports the report according to the requirements in the General Programme Instructions, section 6.

The verification shall follow the verification checklist which is developed by EPD Danmark. It is the task of the verifier to always ensure working according to the correct verification checklist version, following the implementation periods of the Technical Rules and Guidelines. The correct version can be acquired through the secretariat.

The verifier is to report the verification to EPD Danmark through the applicable verification checklist. They shall note deviations in the project report, or EPD, to the checklist. The EPD owner<sup>23</sup> shall subsequently correct or explain any noted matters. Once the EPD can be accepted/verified, all final documents, including the verification report and verification checklist describing the iterations between verifier and EPD owner, shall be sent to the secretariat of EPD Danmark for final registration.

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<sup>23</sup> Or LCA practitioner on their behalf

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## APPENDIX D LCA AND EPD TOOLS

This appendix specifies requirements for developing automated tool solutions for the development of EPDs, including the processes, knowledge, routines and documentation required from all involved stakeholders.

Tool solutions can be used for optimization and automation of development of EPDs. Special requirements and processes for tools apply, compared to the traditional process of developing and verifying EPDs.

LCA- and EPD tools are object to different fee structures than regular third-party verified EPDs. Cost and fees are described at [www.epddanmark.dk](http://www.epddanmark.dk).

EPDs which are developed through a tool solution shall have the same quality as EPDs created through the traditional process. It is recommended to engage with EPD Danmark early in the development of tools leading to an optimised process and verification.

### D.1 GENERAL SPECIFICATIONS FOR TOOLS

An EPD or LCA tool is a solution that is intended to streamline the work with EPDs. It is therefore not the same as an LCA software, e.g. LCA for Experts, SimaPro or OpenLCA, but can in some cases be based on one of the these. There are two types of tools, accepted within the EPD Danmark EPD programme:

#### **LCA tool:**

An LCA tool is a tool that is intended to facilitate the work of the LCA consultant who creates many EPDs for the same EPD owner or for the same product type. The tool is prepared by the consultant, and the tool and central parts of the LCA shall be third-party verified prior to EPD development. When an EPD is created with an LCA tool<sup>24</sup>, the EPD itself and an LT (LCA tool) project report shall be third-party verified. The EPD can be created automatically or manually, and different levels of verification will apply, making the LT project report simpler than the ordinary project report.

#### **EPD tool:**

An EPD tool is a tool where a designated person (e.g. at a manufacturer) without an LCA background can prepare EPDs after training on LCA basics and how to use the tool. The tool is prepared by an experienced LCA consultant/expert<sup>25</sup>, and shall be third-party verified. For an EPD tool to be approved, the background model shall be locked, and the user shall only be able to enter/alter a number of fixed parameters. An EPD tool calculates the results and creates the finished EPD, which shall then be checked by another designated person internally in the company. The EPD tool can be used to generate product EPDs which shall be published on the EPD Danmark website. Based on these, an EPD owner can then publish project EPDs, which shall go through the same control procedure, but will not be published in the database on [www.epddanmark.dk](http://www.epddanmark.dk). As part of the verification of the EPD tool, the user shall complete a training/course in using the tool.

The different tool solutions require the same basic working processes, whereas the EPD tool is a further specification and more rigid than the requirements of the LCA tool. Specification of the requirements for an LCA tool are described in section D.2. Specification of the requirements for an EPD tool, are described in section D.3. It is not always necessary or practical to develop a tool for EPD development or undergo full

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<sup>24</sup> With sufficient training, employees at the tool owner (e.g. a manufacturing company) may be trained in using the tool to develop EPDs, if the LCA tool has been developed for this use case. Allowance for non-LCA experts to use the LCA tool, would require sufficient and peer training, along with continuous access to assistance/support by the tool developer and LCA expert.

<sup>25</sup> An LCA expert shall have and be able to prove sufficient experience within developing EPDs and LCA in general. If the used LCA consultants does not have the sufficient experience, they should ensure sparring option with a senior consultant or LCA expert, to have the knowledge available in the development process.

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tool verification of automated processes, and thus the ‘traditional process’ is always an option, even when fully- or semi-automated solutions are implemented.

It is not allowed to use the terms 'tool' or 'pre-verified' in EPDs published through EPD Danmark, unless the tool is officially registered as an approved tool with EPD Danmark. Misuse of these terms can be misleading for users and stakeholders, is therefore not acceptable, and may result in withdrawal of the EPD.

#### *D.1.1 STAKEHOLDERS INVOLVED IN EPD DEVELOPMENT USING AUTOMATED TOOL SOLUTIONS*

When developing automation tools for EPD generation, various stakeholders are involved. The number and type of stakeholders involved is an extension of what is usually seen, when developing EPDs through the traditional (‘manual’) process. The different stakeholders and their role in developing an EPD are listed in Table 2. Which stakeholders are involved when using respectively no tool, an LCA tool or an EPD tool to generate/develop EPDs, are listed in Table 3.

**Table 2. Stakeholder types and their role in developing EPDs**

<b>STAKEHOLDER</b>	<b>ROLE</b>
<b>TOOL OWNER</b>	Company enquiring the development of an automated tool solution (may be the same as the ‘EPD owner’, but for industry associations and similar, the tool and EPD owners/tool operators are not necessarily the same)
<b>EPD OWNER</b>	Company/manufacturer of the product or service declared, owning the EPD developed through an automated tool solution. Is the employer of the data processor and reviewer in the case of EPD tools.
<b>LCA CONSULTANT</b>	External or internal to the tool and/or EPD owner, shall be an LCA expert
<b>TOOL DEVELOPER</b>	Tool owner, LCA expert or consultant, software company/developer etc.
<b>EPD DANMARK SECRETARIAT</b>	Administratively handling the tool. Registering the tool and publishing EPDs. For EPD tools, initially included in approval of user interface and management system descriptions. Responsible of performing or outsourcing audits.
<b>VERIFIER</b>	Approved by EPD Danmark. Third party verifier, verifying the tool report LT/ET project report and the EPD
<b>DATA PROCESSOR</b>	Develops the EPDs from an EPD tool, through a locked front-end display, by gathering foreground data for the production (employed by the EPD owner)
<b>REVIEWER</b>	Independent internal reviewer with specific tasks regarding the EPD tools (employed by the EPD owner)

Table 3. Stakeholder involvement, LCA restrictions and outcome

	NO TOOL	LCA TOOL	EPD TOOL
<b>STAKEHOLDERS INVOLVED</b>	EPD owner LCA consultant EPD Danmark Verifier	Tool owner EPD owner LCA consultant EPD Danmark Verifier	Tool owner EPD owner LCA consultant EPD Danmark Verifier Data processor Reviewer
<b>LCA RESTRICTIONS</b>	None	Fixed and verified LCA model and background data and possibly a locked EPD-template	Fixed and verified LCA data and EPD-template
<b>OUTCOME</b>	EPD and project report needing individual verification	Two options: 1) EPD with pre-qualified background data and a LT project report 2) LT project report with pre-qualified background data and manual creation of EPD.  Independent verification of each EPD and LT project report	EPD generator, creating finished EPDs, with third party review of the process rather than the individual EPDs

#### D.1.2 SCOPE AND VALIDITY OF TOOLS

No tools shall be applied for EPD creation without tool verification. Declarations from tools without official registration with EPD Danmark and tool verification are not considered as a valid EPD. Tools shall not be changed after verification. Note: the verification of an individual EPD following the traditional process is always possible, independent of the means of developing the EPD and level of automation of the process.

All tool solutions registered with and approved through EPD Danmark are valid for 3 years, after which an update and re-assessment of data is required, prompting a re-verification of the tool<sup>26</sup>.

If changes/or updates are found necessary for the tool solutions *during* the validity period (e.g. change in background data/processes, update of data due to time representativeness, etc.) a supplementary verification is required. The owner of the tool shall keep track of any changes, describe them, and make them available to EPD Danmark and the verifier.

An LCA- or EPD tool may be checked annually for core LCA data validity<sup>27</sup>, which can extend the validity of the tool to a period of five years. If an update is needed during this period (change in background data/processes, update of data due to time representativeness etc.) a re-verification is required.

<sup>26</sup> It is permitted to extend the use of a tool beyond the 3 years, as long as neither foreground data nor background data are altered/need updating. The tool shall comply with most recent applicable calculation rules, meaning that if these are updated since the original development of the tool, the tool shall ensure compliance. In theory, a full verification might not be necessary, but the conditions and validity of the tool shall be confirmed and approved by a verifier.

<sup>27</sup> Documentation of the core LCA data validity shall be sent to EPD Danmark and signed by the tool developer, LCA expert and third-party verifier.

It is the tool owner’s responsibility to update the tool if conditions have changed within the period of the tool validity.

## D.2 LCA TOOLS

An LCA tool optimizes the process for developing an EPD. To have an EPD prepared through an LCA tool, the EPD owner can either use an internal LCA expert or if they do not have sufficient expertise, they may find an external LCA expert/-consultant. This consultant may both develop the tool and develop EPDs through the tool, optimising the process. Table 4 shows examples of who can be the owner and/or user of an LCA tool. The processes of developing an LCA tool and the relevant contact flows are presented in Figure 7.

An LCA tool shall be based on an LCA model which is parameterized, making the user of the tool able to modify predefined input data in order to get results for a specific and predefined product type and/or category. The model shall not be changeable by the user, when developing the EPDs.

An LCA tool can be used for standardizing the creation of the underlying LCA for an industry or company who wishes to publish several EPDs based on the same raw materials. The creation of each EPD should thus be faster and cheaper, as the background data have already been assessed and verified in the LCA tool. The output of the LCA tool can be a finished EPD, a partially finished EPD or simply a table of indicator results required for an EPD. The EPD itself is then created by the user of the tool along with a LT project report. The contact flows when publishing an EPD using a LCA tool is presented in Figure 8.

The LCA tool shall be described in a tool report for verification, describing objectives and scope, background data, data quality and representativeness etc. The tool report for the tool verification shall comply with the rules of EPD Danmark. It shall include a description of what can be varied as well as a sensitivity analysis with respect to the parameters that can be varied.

The use of an LCA tool to develop EPDs does not eliminate the need for verification of the single EPDs. The development of the EPDs shall be performed by an LCA expert<sup>28</sup>, as an LT project report shall be developed for each EPD, describing the variable data in the tool (e.g. input data quantities (foreground data), assessment of environmental data, interpretation of LCA results etc.).

The LCA tool is to be verified by an approved external tool verifier, affiliated with EPD Danmark. A verification of an LCA tool is, in general, valid for 3 years, after which the tool shall be re-assessed (and verified) to ensure data quality and representativeness.

Table 4. Examples of owner and users of an LCA tool

OWNER OF THE TOOL	USER OF THE TOOL
Associations	Association members, (manufacturers)
Software providers	Manufacturers
Manufacturers making similar products with differing bills of materials or differing physical characteristics e.g. Density, volume etc.	Retailers selling products for building projects
EPD-creator/LCA-practitioner	Manufacturers using their own tool
	EPD-Creator/ LCA-practitioners working for manufacturers

<sup>28</sup> With sufficient training, employees at the tool owner (e.g. a manufacturing company) may be trained in using the tool to develop EPDs, if the LCA tool has been developed for this use case. Allowance for non-LCA experts to use the LCA tool, would require sufficient training and peer training, along with continuous access to assistance/support by the tool developer and LCA expert.

### D.2.1 EPD DEVELOPMENT PROCESS USING AN LCA TOOL

The processes of developing an LCA tool and the relevant contact flows are presented in Figure 7. The contact flows when publishing an EPD using a LCA tool is presented in Figure 8.

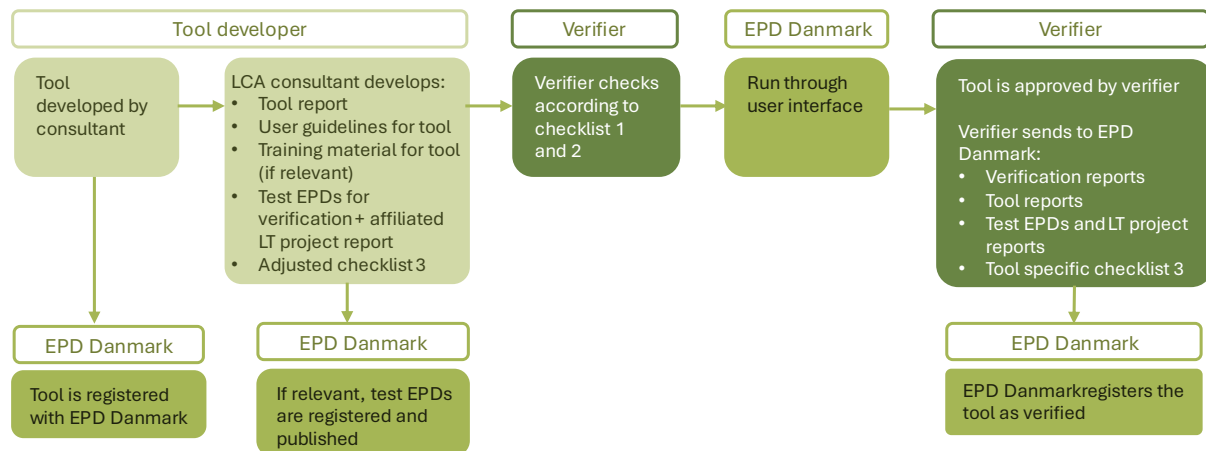


Figure 7. Contact flows for development and verification of LCA tool

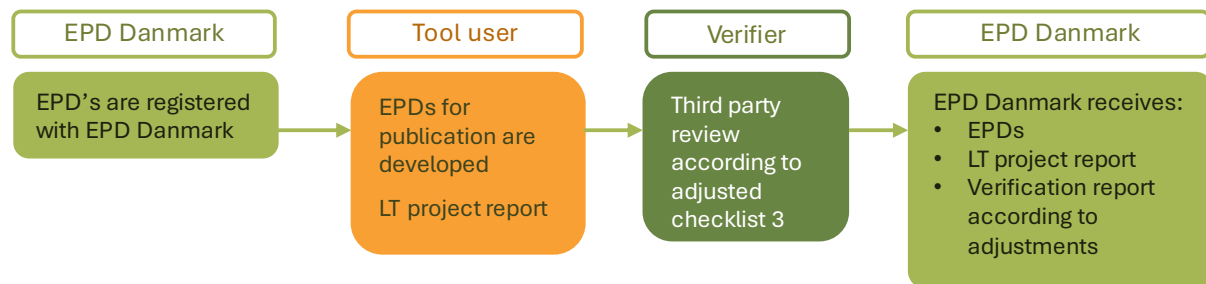


Figure 8. Contact flows for development and verification of EPDs using an LCA tool

### D.2.2 REQUIREMENTS FOR DEVELOPING AN LCA TOOL

EPD Danmark requires tool owners to ensure that the competence of the personnel developing and using the tool is adequate. LCA tools are only to be developed by experienced LCA experts, who have sufficient experience in designing automated solutions, using the relevant background data and working within the framework of EN 15804 and affiliated standards.

The LCA expert developing EPDs through an LCA tool may be the developer of the LCA tool as well.

### D.2.3 VERIFICATION OF AN LCA TOOL AND THE EPDS OBTAINED THROUGH AN LCA TOOL

LCA tools shall be verified by an external verifier, approved by EPD Danmark. Additionally, the tool has to be approved by EPD Danmark. The approval from EPD Danmark is based on a presentation of the user interface and workflows of the user to a representative from the secretariat.

The qualified tools are verified based on the tool report, tool verification report, the LT project report and the LT EPD verification report from the first EPD of each product group calculated by the tool.

The **'Tool report'** is provided by the developer of the tool, and shall document the following:

- ownership of the tool (legal entity)
- identification of the tool including the version number
- validity period of tool
- applicable PCR or range of PCR including the PCR version
- applicable version of the General Programme Instructions and Technical Rules and Guidelines
- LCA software and database used and versions
- Applied characterisation factors (version applicable)
- description of the LCA model of the tool,
- assumptions on which the model is based,
- sensitivity assessment of the variable parameters
- description of the data quality
- conditions under which the tool is to be used and
- information for the LT project report of the EPD if needed.

For verification, the tool shall be provided to the verifier together with the tool report. The tool report is confidential and only provided to the verifier and EPD Denmark.

The **Tool Verification report** shall confirm the verification of the tool according to the tool verification checklist which shall document all verification steps taken during the verification of the tool.

The **LT project report** is generated each time an EPD is calculated. This report shall provide essential information required to verify the EPDs. This includes, but is not limited to:

- The specific tool version reference.
- A link to the tool report, if requested by the verifier.
- A description and explanation of the variable input data.
- Key factors influencing the indicator results.
- Other relevant details defined by the verified scope of the tool.

Additionally, the report shall outline the quality of the variable input data used. The LT project report is provided by the tool user.

The **LT EPD Verification Report** shall confirm the verification of the EPD and LT project report according to the relevant verification checklist which shall document all verification steps taken during the EPD and LT project report verification. It shall include a reference to the tool verification report and filled out tool verification checklist. This reference shall enable clear tool identification (particularly important when verification is revised) and specify both the tool version and its associated PCR(s). The EPD itself shall also identify the tool and include its version number. The LT EPD verification report and filled out verification checklist is provided by the verifier of the tool EPD. The LT EPD verification report confirm the verification of the following at minimum:

- the variable input data used in the EPD
- identification of the inputs driving the indicator results in relation to the tool report
- verification action for any additional information e.g. non LCA indicator results.

The verification of LT project reports and EPDs shall follow the general procedures and requirements, which are described in ISO 14025 and ECO Platform, and performed in practice based on the relevant checklist(s) of EPD Denmark.

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An LCA tool, is to be verified according to checklist 2 and the EPDs and LT EPD project reports according to checklist 3, both by an approved third-party verifier, affiliated with EPD Danmark. A verification of an LCA tool is valid for 3 years, after which the tool has to be re-assessed (and verified) to ensure data quality and representativeness.

#### *D.2.4 REQUIREMENTS FOR OPERATION OF AN LCA TOOL*

When operating an LCA tool for developing EPDs, the user needs to adhere to additional requirements for documentation.

When operating a tool, a logbook shall be held. The logbook is to be sent to EPD Danmark once a year, in connection with the annual check-up. The logbook is an overview document that contains:

- A list of all EPDs created with EPD numbers, EPD Owner, product name(s)
- name on LCA consultant and date of finishing the EPD for each EPD

The user of the tool shall be able to document developed EPDs, input data collection and coherent LT project reports if requested by EPD Danmark.

EPD Danmark reserves the right to perform or initiate desktop sample checks on the EPDs developed by a company/EPD owner. These sample checks are based on the logbooks and developed LT project reports and EPDs.

EPD Danmark reserves the right to perform or initiate additional external reviews at any time and without a specified reason to obtain insight on the operation of LCA tools. Such reviews may result in comments that requires actions to be performed in order maintain the permission to use the tools . EPD Danmark reserves the right to withdraw or deregister the approved tool or EPDs developed by use of the tool, if such actions are not accommodated. Changes may incur a need for re-verification of the tool and are the responsibility of the tool owner.

##### *D.2.4.1 RESPONSIBILITIES OF THE LCA TOOL USER*

The user of the LCA tool shall keep a logbook, registering all EPDs developed with a preset content of information as stated by EPD Danmark.

##### *D.2.4.2 RESPONSIBILITIES OF THE LCA TOOL OWNERS*

The owner of the LCA tool shall be responsible for archiving any version of the tool for the entire validity period of the EPDs created with the version of the tool.

The ownership of the tool (legal entity) shall be documented in the description of the tool (tool report).

If discrepancies with the normative basis mentioned in section 0 of the General Programme Instructions, or other systematic errors are discovered in the tool, it is the responsibility of the tool owner to inform all users and EPD Danmark, and take sufficient measures to initiate correction of affected EPDs as well as updating or withdrawing the tool, including acquiring necessary competencies e.g. third party verifier and tool developer.

#### *D.2.5 INFORMATION ON EPDS DEVELOPED THROUGH LCA TOOLS*

EPDs developed through LCA tool solutions shall contain additional information to the information in the ordinary EPDs as listed in the General Programme Instructions, Appendix B.

EPDs developed through an LCA tool shall contain the following additional information:

- Tool name and version used for the EPD
- Information on and signature of the verifier of the tool and the final EPD (name and company)

Compliance shall be assured by using the latest EPD templates of EPD Danmark. These are acquired upon request to the secretariat.

### D.3 EPD TOOL

EPD tools are an extension of the LCA tool. An EPD tool can be used for standardizing the creation of larger numbers of EPDs within the same product category. The EPD tool shall be developed by an LCA expert and is to be verified by an approved third party tool verifier, affiliated to EPD Denmark.

This kind of tool is typically used by EPD owners with a large portfolio of different products or a group of manufacturers with similar product types and production processes. Table 5 shows examples of who can be the owner and/or user of an EPD tool. The process of developing an EPD tool and the contact flows included are presented in Figure 9.

The EPD tool shall be described in a report for verification, the tool report. The tool shall not be changeable by the user. The tool report for the tool verification shall comply with the rules of EPD Denmark. It shall include a description of what can be varied as well as a sensitivity analysis with respect to the parameters that can be varied.

To be able to prepare an EPD with an EPD tool, the EPD owner shall appoint employees who shall obtain a training certificate, enabling them to operate the tool. The selection in the menu of options and relevant inputs from the user leads directly to the specific EPD i.e. the output of the EPD tool is an automatically produced complete EPD, and the tool performs all calculations of the indicator results and prints these, along all other content, into the EPD template provided by EPD Denmark. The process of publishing EPD's created with an EPD tool is presented in Figure 10.

Developing EPDs through an EPD tool, enables development of *project specific* EPDs. A project specific EPD is a variation of a product specific EPD, developed for a specific product and customer/project. This type of EPD is typically generated by the use of an EPD tool, but in certain cases, traditional third-party verification can also be applied (see chapter 5.3.3 in the General Programme Instructions). A project specific EPD developed through an EPD tool doesn't require publication on the website but shall reference a published product EPD.

The EPD tool, is to be verified by an approved external tool verifier, affiliated with EPD Denmark. A verification of an EPD tool is valid for 3 years, after which the tool shall be re-assessed (and verified) to ensure data quality and representativeness.

**Table 5. Examples of owner and users of an EPD tool**

<b>OWNER OF THE TOOL</b>	<b>USER OF THE TOOL</b>
Associations	Members, (manufacturers)
Companies providing product-components for products made from components	Manufacturers using the product-components for the products they are responsible for
Companies providing building-components for building projects	Manufacturers installing building-components they are responsible for in building projects
Manufacturers making building-components they are responsible for	Manufacturers
EPD-creator/LCA-practitioner	EPD-Creator/ LCA-practitioners working for manufacturers

#### D.3.1 EPD DEVELOPMENT PROCESS USING AN EPD TOOL

The process of developing an EPD tool and the contact flows included are presented in Figure 9. The process of publishing EPD's created with an EPD tool is presented in Figure 10.

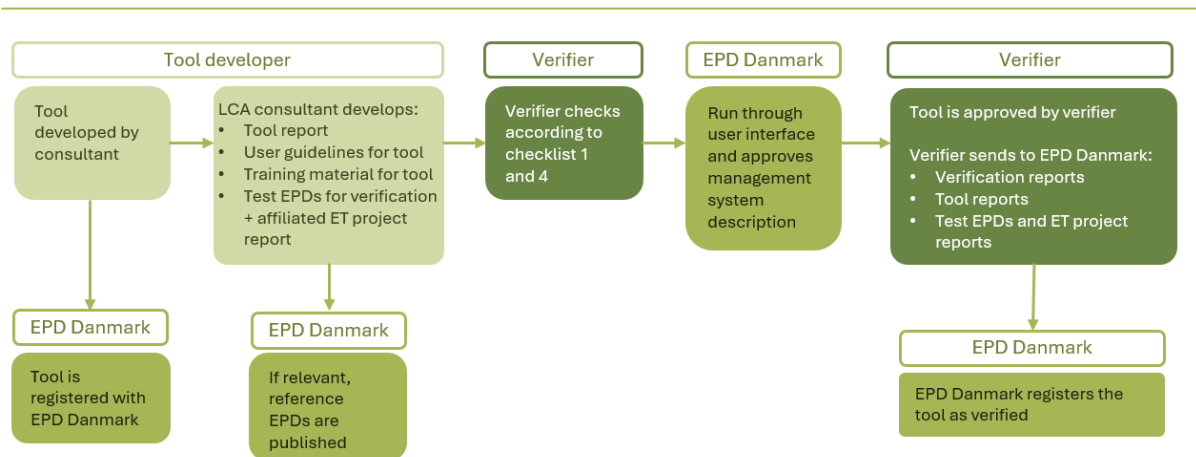


Figure 9. Contact flows for development and verification of EPD tool

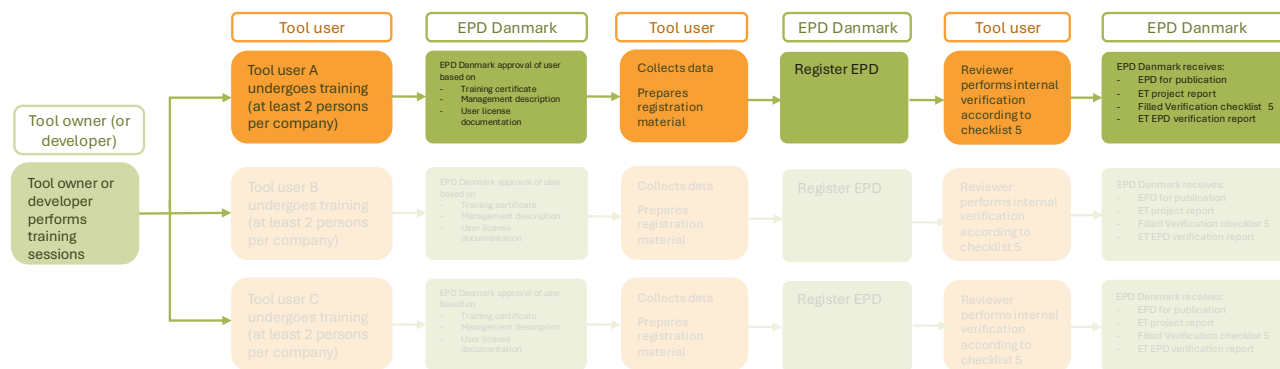


Figure 10. Processes and contact flows for developing product EPDs using an EPD tool

### D.3.2 REQUIREMENTS FOR DEVELOPING AN EPD TOOL

EPD Danmark requires tool owners to ensure that the competence of the personnel developing and using the tool is adequate. EPD tools are only to be developed by experienced LCA experts and developers, who have sufficient experience in designing automated solutions, using the relevant background data and working within the framework of EN 15804 and affiliated standards.

The tool is to be developed with a locked front-end interface, enabling non-LCA experts to develop EPDs once they are approved through introductory training. All LCA related decisions such as cut-off, allocation and definition of product groups/averages shall be locked as part of the tool or thoroughly described in the user manual of the tool.

As part of the tool development, the EPD tool owner (typically through help by the tool developer) shall create test EPDs for every product category wished to be covered by the tool. Additionally, validation tests of the tool's functionality shall be performed, to demonstrate that the tool functions appropriately within all product types and categories for which the tool is approved to calculate<sup>29</sup>.

<sup>29</sup> For example, checking that no factor of 1000 error appears, when selecting different product variations, e.g. when selecting surface treatment, paint etc.



#### *D.3.2.1 TEST EPDs*

When developing a tool solution, test EPDs shall be developed and individually verified by an approved third-party verifier, affiliated to EPD Denmark, according to verification checklist 1. Test EPDs support the verification of the tool (with an option for publishing<sup>30</sup>). If the tool can make both product and project EPDs the test EPDs should include both types.

If the tool owner wishes to facilitate the development of EPDs for additional product categories after approval of the tool, they shall enquire an LCA expert to develop the test EPDs (which is to prove that the tool can be used successfully for the 'new' product category). These additional EPDs are to be verified as ordinary EPDs, according to the verification checklist 1. If changes are needed in the background setup of the EPD tool to accommodate the new product category, a re-verification of the tool is required.

#### *D.3.2.2 PREREQUISITES FOR EPDs DEVELOPED WITH EPD TOOL*

Before the EPD owner can develop product or project EPDs using the tool, the management system, along with training certificates, shall be approved by EPD Denmark.,

Once a product category is represented in the tool solution, through verified test EPDs, the EPD owner's appointed employees are allowed to develop product EPDs with the tool for the given product category.

The first product EPD for each product category (developed with the tool) shall be sent to EPD Denmark for publication, along with a filled-in and signed verification checklist (checklist 5), a description of the management system, a filled-in registration formulae and the training certificates of the reviewer and the data processor.

Product EPDs shall be registered<sup>31</sup> with and published through EPD Denmark, before being able to develop project specific EPDs. A project EPD shall carry the registration number of the reference EPD, plus an individual ID. Both product and project EPDs developed through the EPD tool must follow the EPD templates, provided by EPD Denmark. The validity of a project EPD follows the validity of the reference product EPD.

It shall be ensured, by the tool owner, that all project EPDs are made accessible to EPD Denmark upon request. If the annual audit is done by an external auditing body, necessary involvement of LCA competence and tool knowledge shall be ensured (needs approval by EPD Denmark).

#### *D.3.3 VERIFICATION OF AN EPD TOOL AND THE EPDS OBTAINED THROUGH AN EPD TOOL*

EPD tools shall be verified by an external third-party verifier, approved by EPD Denmark. Additionally, the tool shall be approved by EPD Denmark.

The qualified tools are verified based on the tool report, tool verification report, the ET (EPD tool) project report of the test EPDs and the ET EPD verification report from the first EPD calculated by the tool. Presentation of the user interface to verifier and EPD Denmark can be done in person or online meetings.

The **Tool report** is provided by the developer of the tool, and shall document the following:

- ownership of the tool (legal entity)
- identification of the tool including the version number
- applicable PCR or range of PCR including the PCR version
- applicable version of the General Programme Instructions and Technical Rules and Guidelines
- LCA software and database used and versions

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<sup>30</sup> If the tool is developed by an industry association, these test EPDs can be developed as industry EPDs for publishing and may occur as traditional/regular third party verified EPDs. If developed by a manufacturer, the test EPDs may be used as published product EPDs.

<sup>31</sup> along with the filled-in verification checklist, registration, training certificates and description of the management system

- 
- Applied characterisation factors (version applicable)
  - description of the LCA model of the tool,
  - assumptions on which the model is based,
  - sensitivity assessment of the variable parameters
  - description of the data quality
  - conditions under which the tool is to be used and
  - information for the project report of the EPD if needed.
  - parametrization and tool setup
  - User guidelines for the tool, covering how to handle functionalities and aspects in the tool

For verification the tool shall be provided to the verifier together with the tool report. The tool project report is confidential and only provided to the verifier and EPD Danmark.

The **Tool verification report** shall confirm the verification of the tool according to the tool verification checklist which shall document all verification steps taken during the verification of the tool.

The **ET project report** is generated whenever an EPD is calculated. This report shall provide all necessary information for verifying the EPDs and for subsequent auditing. This includes, but is not limited to:

- The specific tool version reference.
- A link to the tool report, if requested by the verifier or auditor.
- A description and explanation of the variable input data.
- Key factors influencing the indicator results.
- A description of the quality of the variable input data used.

The ET project report is provided by the user of the tool.

The **ET EPD verification report** shall confirm the verification of the EPD and LT project report according to the relevant verification checklist which shall document all verification steps taken during the simplified EPD verification and include a reference to the tool verification report and filled out tool verification checklist. This reference shall enable clear tool identification (particularly important when verification is revised) and specify both the tool version and its associated PCR(s). The EPD itself shall also identify the tool and include its version number. The ET EPD verification report and filled out verification checklist is provided by the reviewer (internal company verifier) of the tool.

The ET EPD verification report confirm the verification of the following at minimum:

- verification of the variable input data used in the EPD and of the evaluation of the inputs driving the indicator results,
- verification action for any additional information e.g. non LCA indicator results and do so with the basis of the free parameters as described in the tool report.

The verification of ET project reports and EPDs shall follow the general procedures and requirements and use the relevant checklists of EPD Danmark. EPD's developed using an EPD tool shall be verified according to checklist 5.

An EPD tool is to be verified according to checklist 4 and the test EPDs also according to checklist 1 and 4, both by an approved external verifier, affiliated with EPD Danmark. A verification of an EPD tool is valid for 3 years, after which the tool has to be re-assessed (and verified) to ensure data quality and representativeness.

#### D.3.3.1 COMPETENCES FOR INTERNAL VERIFICATION

After verification of the tool, the EPDs made by the tool shall be independently verified by a reviewer internally at the EPD owner according to checklist 5. EPDs developed through a third-party verified and EPD Denmark approved EPD tool do not need an external verification by an approved verifier. The EPD owner shall have a trained internal *independent* reviewer, who is responsible for verification. It is the responsibility of the EPD tool owner to ensure and prove the independence of the internal verifier. The company using the EPD tool is solely responsible for the quality of the EPD created and shall ensure compliance with the general procedures and requirements of EPD Denmark.

#### D.3.4 REQUIREMENTS FOR OPERATION OF AN EPD TOOL

Once the tool is verified, the EPD owner shall appoint employees who undertakes the introductory course, allowing them to operate the tool. At least two people from the EPD owner should be appointed, as two roles are needed: a data processor and an internal, independent reviewer.

When operating an EPD tool, the user needs to adhere to additional requirements for documentation. As part of this, a suitable management system<sup>32</sup> shall be implemented including a stepwise description on how the tool is actually used.

The management system shall consist of:

- An organised folder/file storage system containing:
  - Logbook
  - Data collection sheets
  - Documentation of data handling (calculations for input, averages etc)
  - Documentation of direct inputs and outputs of tool for each EPD (can be screenshots, automated tool EPD reports etc.)
  - A filled in and signed checklist (internal verification, checklist 5) for each project EPD together with the version (number) of the tool used, the unique number of the project EPD created ([product EPD number] – 1, 2, 3... and the date). The signed and filled in checklist is also to be sent to EPD Denmark upon registration of product EPDs
- Description of roles of the employees
- Description of procedures to ensure independency of internal verifier

Before working with the tool, the EPD owner (often also the EPD tool owner) shall be approved by EPD Denmark. To be so, the EPD owner shall share with EPD Denmark:

- A description the management system used for EPD development at the company
- An example of the logbook as described below
- Names and training certificates of appointed employees (data processor and reviewer)
- Proof of license to use verified tool (can be signature from developer, if no official licensing is in place)
- Maintenance and support agreement (between user/owner and the developer of the tool) for the validity period of the tool

The user of the EPD tool (EPD owner) shall keep a logbook, registering all EPDs developed (both product and project specific) with a pre-set minimum content of information. The logbook is to be sent to EPD Denmark once a year, in connection with the annual audit.

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<sup>32</sup> In this context, management system is defined as: "A company specific set of procedures and processes (e.g. a written document on who does what and how etc.) in order to assure the right quality and handling of data leading to a proper use of the EPD tool and the internal verification of the resulting EPDs according to the requirements described in the General Programme instructions."

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The logbook is an overview document that contains:

- A list of all EPDs created with EPD numbers, product name and project name (if relevant)
- name on data processor and date of finishing the EPD for each EPD
- name on reviewer and date of review for each EPD
- An overview of any changes and description of them. These shall be made available to EPD Danmark and the verifier.
- specifically for project EPDs: Calculation of deviation from reference product EPD<sup>33</sup> and explanation of deviation.

#### *D.3.4.1 APPOINTMENT OF EMPLOYEES TO MANAGE AND USE THE EPD TOOL*

Training of the EPD owner/tool user's appointed employees is personal and linked to the tool. Thus, if an employee changes company, the EPD owner shall ensure training of a new replacement. An employee may use their obtained training certificate upon change of employer, if the used tool and industry/sector is the same, and their training is still valid (3 years, following the tool updates). Logbook, management system etc. stays with the EPD owner/tool user, thus a new system shall be established at the new employer, if needed.

An EPD owner/tool user (company) shall have at least 2 people who are trained in using the EPD tool, at any given time, to be able to develop EPDs. Appointed employees shall be updated on the tool content at least every third year (upon mandatory tool update), or whenever a change is performed to the tool needing re-verification.

The appointed employees, upon commencing the required training, shall be allocated to perform either the tasks of data processor or reviewer. To ensure independence of the reviewer for internal verification, these roles shall be held separate. A reviewer is considered independent when they have not been involved in data processing, collection, formatting, etc. This often precludes the same person from holding both roles. The role distribution is static, meaning one cannot alternately serve as data processor and reviewer for the same pool of units or data processing activities.

However, some special setups may allow a person to hold both roles. This may happen, when different production units (e.g., different plants within the same organization) create EPDs divided per unit. In this case, the data collector for one unit may serve as a reviewer for another unit and vice versa. However, it still applies that they shall not overlap in data processing, and that independence shall be documented/proven.

#### **Responsibilities of the data processor**

The data processor (employed by the EPD owner) develops the EPDs, through a locked front-end display, by gathering foreground data (Bill of Material – BoM) for the production and generating the EPD. The name of the data processor shall appear in the EPDs (both product EPDs and project EPDs based on published product EPDs).

The data processor shall keep the logbook, registering all EPDs developed (both product and project specific EPDs) with a pre-set content of minimum information as stated by EPD Danmark.

The working process of the data processor shall be supported by implementation and description of a management system.

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<sup>33</sup> for the core environmental impact indicator GWP-total

### **Responsibilities of the reviewer**

The reviewer performs the independent internal verification and shall review the logbook and data assessment performed by the data processor. The reviewer shall fill in and sign a verification checklist (checklist 5) for every EPD that is created. The reviewer shall sign the EPDs (project EPDs based on published product EPDs), and approve information registered, in the logbook. The reviewer shall also sign product EPDs developed through the tool in the designated space for internal verifier signature.

#### *D.3.4.2 RESPONSIBILITIES OF THE EPD TOOL OWNERS OR USERS*

The user<sup>34</sup> of the EPD tool shall be responsible for archiving a copy of a specific version of the tool for the validity period of the EPDs created with this version. The ownership of the EPD tool (legal entity) shall be documented in the description of the tool (tool report).

EPD Denmark requires tool owners to ensure that the competence of the personnel using the tool is adequate. To ensure adequate competence of the personnel using the EPD tool, the EPD tool owner shall:

- Organize and run training on how to correctly use, handle functionalities and aspects in the tool. These courses are to qualify company assigned employees to use the tool and have a basic knowledge on handling LCA data etc. The tool owner shall ensure that training sessions contain the correct level of knowledge of the tool – the LCA expert used for developing the tool should thus be included in or act as teacher when running the training.
- Maintain a list of registered users (EPD owners) and holders of training certificates.

The user guideline and competence requirements of the data processor and reviewer shall be verified by the third-party verifier. The description of the management system shall be approved by EPD Denmark.

EPD Denmark shall receive and will maintain records concerning the training of users of the tool.

### **Content of introductory tool training**

The introductory training for EPD tools shall contain the following basics:

- Introductory LCA and EPD development
  - enabling an understanding of importance of data accuracy, representativeness and quality, understanding of environmental impacts etc.
  - understanding of handling LCA data, including pre-processing of input data
- Tool operation
- Introduction to EPD Denmark and obligations hereto

The training is to be organized by the tool owner and the content shall be approved by the tool verifier, following the guidelines/approval criteria of EPD Denmark.

The training shall result in a personal training certificate and should be a prerequisite for access to the EPD tool. An EPD owner or the appointed employees will/may thus not have access to the EPD tool front-end (outside of the training context) before a training certificate is obtained for both a data processor and a reviewer.

#### *D.3.5 REGISTRATION AND PUBLICATION OF EPDS CREATED BY EPD TOOL*

Before creating the product EPD, the EPD shall be registered with EPD Denmark and assigned a registration number. When the EPD is created, it shall be sent to EPD Denmark along with a signed checklist for publication.

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<sup>34</sup> this may be the tool owner, or a company using the tool developed by e.g. their industry association

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#### D.3.5.1 *PRODUCT EPDS*

Published product EPDs shall comply with the General Programme Instructions, Technical Rules and Guidelines, and the normative references.

If a product EPD is used as a reference EPD for project EPDs, it can be defined in one of the following ways:

- A worst-case representation of the product variations, for which project EPDs can be developed
- An average for the product variations, for which project EPDs can be developed in accordance with existing rules for declaration of averages in product EPDs
- A reference product, e.g. the most commonly sold product variation

#### D.3.5.2 *PROJECT EPDS*

Project EPDs are EPDs that are specific to one project or product variation sold to a specific customer. The project EPD represents specific project productions or variations e.g. specific transport distances from 'gate' to 'production site' or a different finishing coating. Project EPDs developed through an EPD tool are not required to be made available in the EPD Danmark database but shall always refer to a published product EPD and be managed in accordance with section D.3.4. The published product EPD provides the EPD owner with a reference number for their project EPD – this reference is to ensure validity period, data validation and -quality along with transparency.

The validity of a project EPD developed through an EPD tool, follows the validity of the published reference EPD.

Project EPDs may be based on data collected for the specific production period for the project or be based on the same average data as the product EPD, but with specification such as a specified BOM.

The project EPD cannot refer to a product EPD, that contains other materials/ingredients

All project EPDs shall be assessed for variations from the reference EPD. Variations above +/-10%<sup>35</sup> shall be registered and explained in the logbook.

#### D.3.6 *INFORMATION ON EPDS DEVELOPED THROUGH EPD TOOLS*

EPDs developed through EPD tool solutions shall contain additional information to the information in the ordinary EPDs as listed in the General Programme Instructions.

Product EPDs developed through an EPD tool shall contain the following additional information:

- Tool name and version used for the EPD
- Information on the verifier of the tool (name, company and signature)
- Information on the internal reviewer and data processor (name and company), both shall be mentioned, and the reviewer shall have signed the product EPD for publishing, sent to EPD Danmark.
- State that "this EPD is created by a third party verified EPD tool, registered with EPD Danmark. Input data and results has been verified through internal independent review."

Project EPDs developed through an EPD tool shall contain the following additional information:

- Tool name and version used for the EPD
- Information on the verifier of the tool (name and company)
- Information on the internal reviewer and data collector (name and company, signature of reviewer)<sup>36</sup>.

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<sup>35</sup> For the core environmental impact indicator "GWP-tot"

<sup>36</sup> Signature of reviewer can be omitted by agreement with EPD Danmark, if it is not technically possible or practical

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- Refer to the reference product EPD number, obtained by EPD Danmark upon publication of the product EPD
- Shall not contain the signature of EPD Danmark representatives or third-party external verifier (affiliated to EPD Danmark), but refers to the signed reference product EPD
- State that “this EPD is created by a third party verified EPD tool, registered with EPD Danmark. Input data and results has been verified through internal independent review.”

Compliance shall be assured by using EPD templates of EPD Danmark. These are acquired upon request to the secretariat.

#### *D.3.7 AUDIT OF AN EPD TOOL OWNER OR USER*

At the annual audit, the following is checked:

- Logbook
- Maintenance of management system
- EPD development process (through sample checks of specific EPDs)

EPD Danmark reserves the right to perform or initiate desktop sample checks of EPDs developed by a company/EPD owner through an EPD tool. These sample checks are based on the management system, logbook and developed EPDs, why the tool developer shall ensure a solution to how all developed EPDs (including non-public project EPDs) are accessible for EPD Danmark<sup>37</sup> upon request.

EPD Danmark reserves the right to perform or initiate additional external reviews at any time and without a specified reason in order to obtain insight on the operation of EPD tools. Such reviews may result in comments that requires actions to be performed in order maintain the permission to use the tools, as described in D.3.8.

#### *D.3.8 FAILURE TO MEET AUDIT REQUIREMENTS*

If an EPD tool owner fails to meet the audit requirements, the required action is prescribed by EPD Danmark in immediate follow-up to the conducted audit. EPD Danmark reserves the right to withdraw an EPD or tool approval if the General Programme Instructions and other authoritative documents by EPD Danmark are violated, or the required actions from the audit are not responded to. This withdrawal may be temporary or permanent, and the validity period of the EPD will not be extended with the corresponding time.

The general rules and requirements described in the General Programme Instruction of EPD Danmark<sup>38</sup> applies, regardless that the EPD is developed through a tool solution. If discrepancies with the normative basis mentioned in section 11 of this document, or other systematic errors are discovered in the tool, it is the responsibility of the tool owner to inform all users and EPD Danmark, and take sufficient measures to initiate correction of affected EPDs as well as updating or withdrawing the tool, including acquiring necessary competencies e.g. third party verifier and tool developer.

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<sup>37</sup> Or an external auditing body or third-party verifier, both on behalf of EPD Danmark. If done by an external auditing body, necessary involvement of LCA competence and tool knowledge shall be ensured (needs approval by EPD Danmark).

<sup>38</sup> E.g. regarding the LCA, validity of EPDs and their content/information and responsibility of EPD holders etc.