CONTENTS

7.2 REQUIREMENTS ON (PARTIALLY) AUTOMATED SOFTWARE SYSTEMS FOR GENERATING AND APPROVING EPDS (SO-CALLED EPD TOOLS)

7.2.1 Definition of "EPD tools"

EPD tools are software systems for automated or partially automated generation of EPDs. EPDs are generated using a specified calculation and evaluation method which cannot be altered by the user.

7.2.2 Approval of EPD tools

The basis for verification of EPD documents from EPD tools is so-called approval of the EPD tool by a verifier appointed by the SVR. A distinction is made between two types of approval:

1. Approval for type B EPD verification (see 7.2.6): permits abbreviated verification of the EPDs

2. Approval for type C EPD verification (see 7.2.6): permits verifications based on a QS system at the tool operator's and regular ex-post publication, i.e. followed by random sample verification of the EPDs

The operator/owner of an EPD tool is responsible for implementing the requirements on EPD tools. The owner of the EPD tool and the owner of the declaration as well as the author of the EPD can vary (e.g. in the case of association solutions).

7.2.3 General requirements on "EPD tools"

1. The EPD tool comprises a specified calculation and evaluation method which cannot be altered by the user.
2. Running an EPD tools requires approval in accordance with currently applicable EPD tool approval criteria. Examination for approval comprises at least the following elements:
   - Accompanying documentation (background report)
   - Description of the system (for users and verifiers)
   - System function and conformity of the results (e.g. EPD document)
   - Documentation and implementation of quality assurance processes
3. The same requirements apply for documentation of the EPD tool (background report) as for an EPD background report. Furthermore, all elements addressed for software tools in the approval report must be covered in the latest version ("Review criteria for approval of tools").
4. The operator of the EPD tools is responsible for the specified quality assurance processes and must define rules in the event of incorrect EPDs being withdrawn. This includes an obligation to provide information and verification within an appropriate period (two weeks).
5. Each change to an EPD tool gives rise to a new version of the EPD tool. All versions must be saved and archived for 10 years by the operator of the EPD tool, and remain available for examinations (e.g. concerning traceability) at all times.
6. Each EPD generated from an EPD tool contains the version number of the EPD tool in the section on References.

7. Changes to Parts A and B of the PCR which require adaptation of the calculation or evaluation method must be implemented in the EPD tools within an appropriate transition period. Exceptions must be justified and approved by the SVR.

8. Any change in the calculation or evaluation method requires renewed approval of the EPD tool.
   For type B: Without changes, renewed approval is necessary after 5 years at the latest.
   For type C: Without changes, renewed approval is necessary after 2 years at the latest.
9. The background data on an EPD tool must be updated at the latest 5 years following approval. If the existing background data is merely updated, a comment in the background report (date of update, data base version used, file name and location of backup copy of the "old" EPD tool version) shall suffice, as well as forwarding the changes to the verifier and IBU. Extensions to the data are classified as a change in the calculation and evaluation method, and require renewal of the approval. On initial approval, the verifier must check whether the requirements concerning the age of background data are complied with.
10. Changes to Part B of the PCR which necessitate mere textual adaptation must be implemented within an appropriate period (this concerns EPDs from type C verifications, in particular). For type B verification, implementation is necessary after 2 years at the latest (see 5).
11. An optional connection to IBU.data or ÖKOBAUDAT according to the programming instructions is to be clarified with each manufacturer before the approval of the tool.

The schematic layout of EPD tools by type B and C verification is depicted in Fig. 1 and Fig. 2.
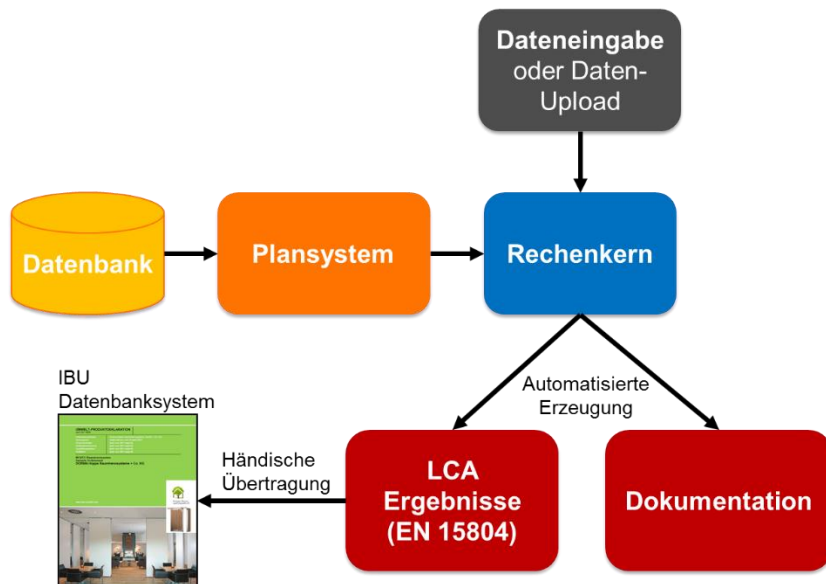

Fig. 1: Elements of an EPD tool in accordance with type B verification

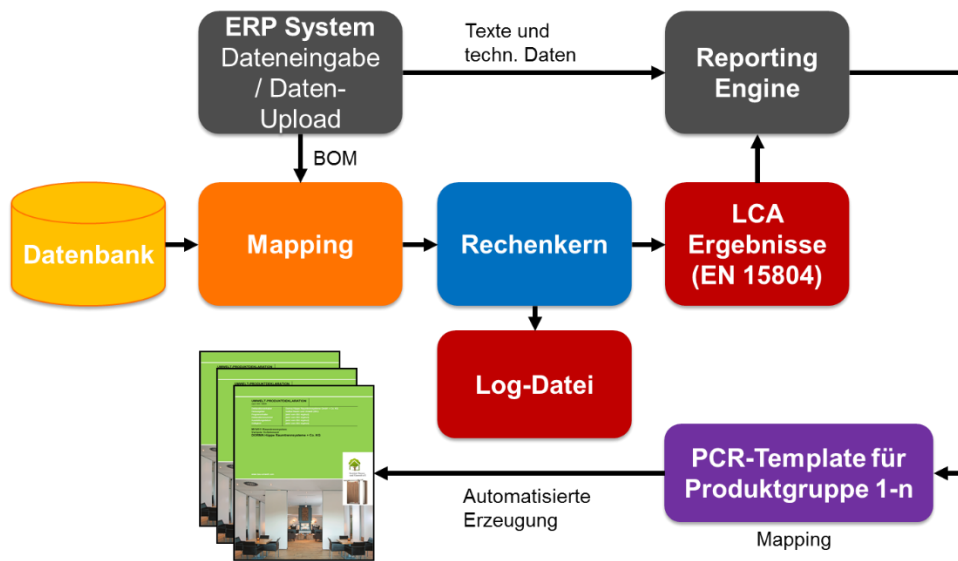|	Data entry or data upload
	Data base
	Planning system
	Calculation core
	IBU data base system
	Manual transfer
	LCA results (EN 15804)
	Automated generation
	Documentation

Fig. 2: Elements of an EPD tool in accordance with type C verification

	ERP system Data entry / Data upload
	Text and technical data
	Reporting engine
	BOM
	Data base
	Mapping
	Calculation core
	LCA results (EN 15804)
	Log file
	Automated generation
	PCR template for product group 1-n
	Mapping

7.2.4 EPD tool approval process

The EPD tool approval process is outlined in Fig. 3.

Responsible	Work steps	(Governing) documents	Input/Output
	Start		
Manufacturer (D) and SVR (I)	Presentation of project to SVR	SVR requirements as per list in this chapter	Charts for the SVR
Manufacturer (D)	Generation of EPD tool and documents	General programme instructions (esp. 7.2)	
Manufacturer (D) and IBU (D)	Contractual issues, link to IBU.data and allocation of verifiers	Articles of Association, Membership Fee Regulations etc.	Application for membership
Verifier (D), Manufacturer (M)	Approval and EPD verification → OK?	- Approval report [review criteria for approval of tools (type C or B)] - General programme instructions (esp. 7.2) - EPD pilot verification report template	Approval report and EPD verification report (incl. traceable files)
Verifier (D), IBU (I), Manufacturer (I)	EPD publication and information to SVR		Verified approval: background report to IBU
IBU (D), Manufacturer (I),	End of approval process		Pilot EPD by e-mail to SVR

Fig. 3: EPD tool approval process[1]

The following content must be presented to the SVR *prior* to commencement of EPD tool approval:

- Operator of the EPD tool and proposed verification type (type B or type C)
- Objective and scope (companies, products, LCA modules etc.)
- EPD tool users
- Potential volume of EPDs from the tool per year

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[1] *(D): Implementation, (M): Collaboration, (I): Recipient of information*

- Planned function (schematic incl. changeable/non-changeable parameters)
- Quality assurance concept (detailed method and process descriptions indicating responsibility, (governing) documents and input/output per work step, internal QA)
- Details on verifiability/manipulability of the EPD tool
- Details on planned sampling of the EPDs from EPD tool type C
- Details on planned revisions of the EPD tool

7.2.5 Requirements on initial approval of an EPD tool

1. The respective valid version of the "Review criteria for approval of tools" (link) document applies as a basis for approval of an EPD tool. Furthermore, the same requirements apply as for classic EPD verification.
2. If an EPD tool comprises more than one product group (or PCR Part B), verification must include all product groups. *(Note: handled as n-Tools)*
3. Initial approval requires generation of an initial EPD (so-called pilot EPD) from the EPD tool for each product group. This pilot EPD must declare the maximum scope of the EPD tool (e.g. if the EPD tool comprises A1-C4+D incl. scenarios, the pilot EPD must depict all of these cases).
4. The verified pilot EPD(s) and the verification report from the initial approval are e-mailed to the SVR for information purposes.
5. For EPD tools with approval for type C verification: the test cycles for sampling of the EPD documents as well as examination of the documentation and implementation of the QA processes outlined must be specified in co-ordination with the SVR for initial approval and noted by the verifier in the approval documentation. In the case of product-/object-specific computers, EPDs should be created of representative products in the IBU online tool (not a data set for each EPD). An optional link to IBU.data in line with the programming instructions should be discussed with each manufacturer prior to approval of the tool.

7.2.6 EPD Verifications from EPD tools

The various types of EPD verification from EPD tools, their elements and distinctions for individual verification of EPDs (type A) are listed in Table 1.

Table 1: Elements of EPD verification from EPD tools compared to individual EPD verification

	Type A verification	Type B verification (System 1)	Type C verification (System 2)
Description of verification	Standard (ex-ante publication)	Abbreviated (ex-ante publication)	After approval of the system via sampling (ex-post publication)
LCA model	x	x	x
Background report	x	x	x
Verified EPD valid for 5 years	x Individually	x Individually	x Random samples
System approval		x	x
System approval of the model		x	x
QS system for the system approval		(x)	x
Random sample verifications			x

7.2.6.1 Requirements on type B EPD verification

1. A prerequisite for type B EPD verification is valid approval of the respective EPD tool for this type of verification. The manufacturer confirms for each EPD drawn up that the system version most recently approved has not been modified.
2. Each EPD goes through type B verification (so-called abbreviated verification) prior to publication. This comprises at least:
   - the EPD document,
   - the input values, data sets used and EPD tool version number for calculating the LCA results (contained in the abbreviated documentation).

Note: In individual cases, it may be necessary to supply additional data. This is specified when the system is approved for the first time.

3. After successful type B verification, all EPDs generated are published via the IBU data base system.

7.2.6.2 Requirements on type C EPD verification

1. A prerequisite for type C EPD verification is valid approval of the respective EPD tool for this type of verification. EPDs from approved EPD tools for type C verification are subject to regular random sampling.
2. Random sampling is carried out in accordance with a regular cycle specified by the SVR on initial approval and comprises:
   - at least one EPD document
   - the respective log file
   - reproducibility of the results
   - examination of textual changes based on changes in parts A and B of the PCR
   - list of EPDs generated using the EPD tool

7.2.7. Requirements on extending the approval of "EPD tools"

An extension of approvals of EPD tools is specified at the latest every 5 years (type B) or every 2 years (type C).

At least the following aspects are examined on extension:

   - Compliance of the EPD tool with the requirements of the respective valid version of the "General programme instructions" (= available document)
   - Documentation and implementation of quality assurance processes in accordance with the background report
   - Conformity of the LCA results with the respective valid version of EN 15804 and PCR Part A
   - Compliance of EPD documents generated with the respective valid version of PCR Part B

A new verifier is assigned for an extension or new approval of an EPD tool.