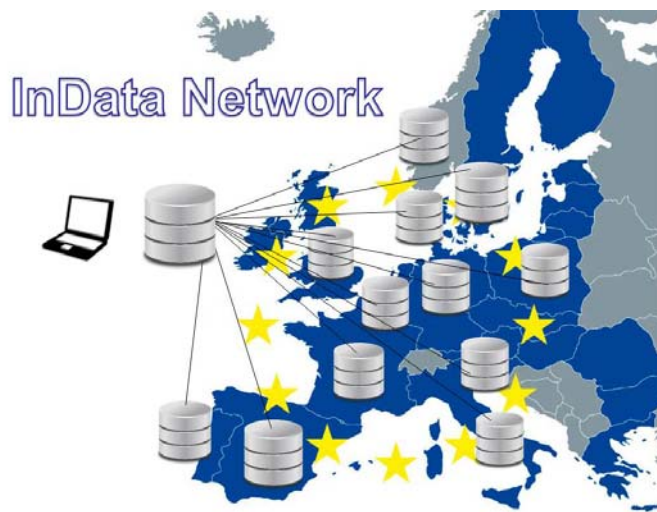


## International Open Data Network for Sustainable Building (WG InData)

### Background

During the World Sustainable Building Conference 2014 in Barcelona a growing interest in structuring and using information from Environmental Product Declarations (EPD) for sustainable building was recognized. There was a need for exchanging experience and harmonization of ongoing activities. In March 2015, a first meeting was initiated in Berlin<sup>1</sup> with interested international stakeholders. It was the starting point of the working group InData, where the participants decided to launch this initiative on a voluntary basis. The basic objectives were stipulated in the 'Decalogue'<sup>2</sup>.

### Motivation and Objective



Sustainability considerations in the construction sector are of growing interest and even recommended by the European construction product regulation (CPR). LCA at building level is a central instrument for the evaluation of environmentally relevant sustainability aspects. The required material data is given in environmental product declarations (EPD) based on calculation methods according to European or International Standards (e.g. EN 15804, ISO 21930). Meanwhile, there is an increasing demand of data in digital format.

The main objective of InData is to establish an online based international LCA **data network structure** for LCA/EPD data using a **common data format and open source software**. Within

this network, data for specific purposes shall be identified by filters and easily implemented in applications, e. g. LCA calculation tools, BIM.

### Data format

The InData initiative is based on already existing instruments, and standards. It thus uses the so called **ILCD+EPD data format**. The ILCD data format, developed by the European Commission's DG JRC<sup>3</sup>, is widely used in the LCA context. Extensions had to be added to integrate EPD specific information (e.g. scenarios, modules, type of data). The chosen format offers a high flexibility, which allows for the adaption of related specific national requirements or changes in the underlying standards (e. g. amendments M350 of EN 15804) in future.

The use and development of the data format as such is to be seen independent. InData decided to define a compliance level for the data: a common core of information, data quality requirements, and rules are - and partly still have to be - defined. The objective is a high quality of data within the network.

InData compliance implies the following requirements:

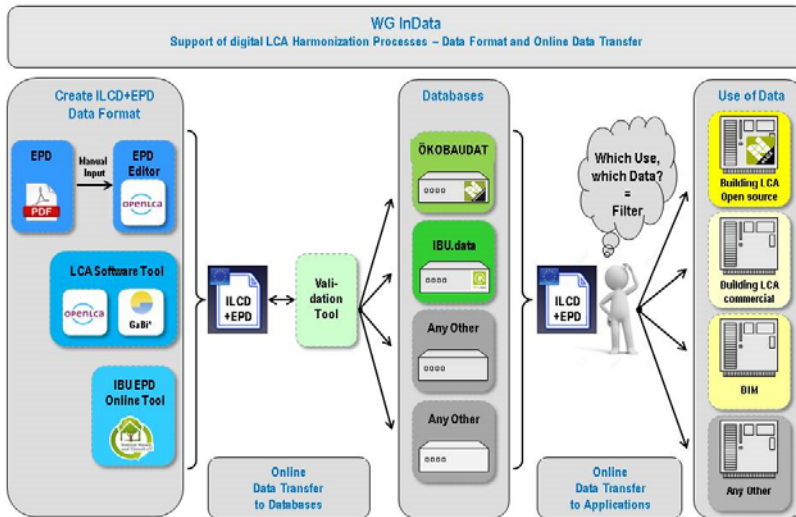
- ✓ Conformity with EN 15804, including independent 3<sup>rd</sup> party verification
- ✓ Core information in English language (additional languages are possible)
- ✓ Declaration of used background database (e. g. GaBi, ecoinvent)
- ✓ Information about data subtype (e.g. specific, average, representative, template, generic dataset)
- ✓ Using ILCD+EPD data format
- ✓ Conformity with InData definitions and requirements

<sup>1</sup> BBSR Federal Institute for Research on Building, Urban Affairs and Spatial Development

<sup>2</sup> Decalogue [http://www.oekobaudat.de/fileadmin/downloads/2017-07-14\\_Decalogue\\_v6.pdf](http://www.oekobaudat.de/fileadmin/downloads/2017-07-14_Decalogue_v6.pdf)

<sup>3</sup> EU COM Joint Research Centre and International Reference Life Cycle Data System [http://eplca.jrc.ec.europa.eu/?page\\_id=86e](http://eplca.jrc.ec.europa.eu/?page_id=86e)

## Network Structure and Work in progress

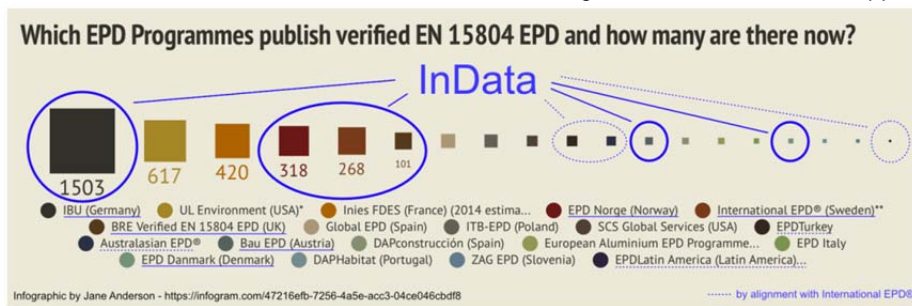


Using a common data format in an open network structure allows open access to data, while maintaining individual ownership and allowing for flexible application of data. The figure shows the already established online and open source LCA infrastructure. The EPD Editor<sup>4</sup> allows transferring EPD from pdf format into the ILCD+EPD format. These data are transferred to online databases, like OKOBAUDAT<sup>5</sup> and IBU.data<sup>6</sup>, or OpenDAP<sup>7</sup> in future. The user is able to filter data from the entire database network for his specific purpose. This means, data is provided and

organized by each data supplier, while at the same time being available to users across the data network.

### Added value

InData underlines its mission to establish best practices for providing EPDs in a machine readable form as a quality source of verified LCA/EPD data for BIM, as for building LCA and other relevant applications. It points out that



through its current participants<sup>8</sup> it represents important EPD programs, and covers more than two thirds of the publicly available 3<sup>rd</sup> party verified EN 15804 compliant EPDs, as illustrated by using Jane Anderson's infographic<sup>9</sup>.

Furthermore, InData sees added value by its initiative to multiple LCA activities.

- ✓ Offering online and open source tools to create and use EPDs in machine readable ILCD+EPD format
- ✓ Support in conformity with existing initiatives (e. g. ECO-Platform) and ongoing standardization processes
- ✓ Support the task to use EPD for BIM (BIM-Workshops; ISO/TC 59/SC 17/WG 3 EPD4BIM)
- ✓ Database infrastructure and data format are flexible for adaptations
- ✓ Improve harmonization of LCA processes
- ✓ Data quality improvement, e. g. by definition of data quality/compliance levels
- ✓ Independent, and voluntary initiative
- ✓ Transparency of information
- ✓ Easy and broad data transfer
- ✓ Support of the entire supply chain

InData started its work within the scope of the construction sector and building products, but the technical infrastructure is open to other standards, sectors, and products.

<sup>4</sup> provided by BBSR [www.bauteileditor.de](http://www.bauteileditor.de)

<sup>5</sup> [www.oekobaudat.de](http://www.oekobaudat.de)

<sup>6</sup> <http://ibu-epd.com/ibu-data-start/>

<sup>7</sup> <http://www.opendap.es>

<sup>8</sup> List of members/support, see <http://www.oekobaudat.de/en/info/working-group-indata.html>

<sup>9</sup> <http://bit.ly/2017EPD>