## Technical Validation of Datasets for the ÖKOBAUDAT Database

## Validation Tool

A standalone, cross-platform validation tool with a graphical user interface (GUI) has been developed that offers facilities for technical validation of datasets.

It is available for download in both source and binary form at

https://bitbucket.org/okusche/ilcdvalidationtool/

The tool is designed to be intuitive enough that it is not necessary to have a written manual.

## General Use

The user interface is divided into three parts: one named "File Selection" where the files and/or archives to be validated can be added, the "Validation Aspects" part where the aspects to be validated can be selected, and the "Validation Messages" part where a detailed message will be displayed for each validation event.

• • •		ILCD	Validation Tool 1.1.0			
File Selection					Validation Aspects	
Filename	Path			Validation Progress	Default	Profile
• - 5		Drop files or folders h			Archive Structur Categories Links Orphaned Items Reference Flowr XML Schemas XSLT Stylesheet	1
Validation Messages Aspect Name	Filename	UUID	Dataset Type	Message		
				-		

Figure 1: ILCD Validation Tool

ZIP archives, folders or single XML files can all be added via drag-and-drop to the "File Selection" component. Alternatively, there are buttons labelled "+" and "-" that can be used to choose files or folders from the filesystem or remove items from the list, respectively. Another button is available to clear the entire list (see Figure 1). In order to validate against the specific format extensions and categories of the ÖKOBAUDAT, a corresponding profile will have to be installed. It can be downloaded from the ÖKOBAUDAT website along with this document.

To install the profile, first uncheck the "Default" validation aspect as shown in Figure 2 in order to enable the Profiles selector. Then, in the Profile selector, choose "Add Profile..." to show the Preferences dialog (Figure 2 and Figure 3).

Figure 3: Add a new profile

Click on the icon with the three dots as shown in Figure 4. A "File Open" dialog appears that will let you select the profile file where you downloaded it and confirm (Figure 5).

		Preferences		
Profiles	Profiles			
	Name:			
	Path:			
	Version:			~
	Add Edi	t Remove Clear		
	Name	Path		Version
			Cancel	ОК

Figure 4: Preferences Dialog

		Pref	erences			
	Profiles	Profiles				'alidati
	<>===	<b>profiles</b>		٥	Q Suc	hen
Name		Änderungsdatum 🗸	Größe	Art	Hinzugefügt am	
	EPD_1.1_profile_1.0.1.jar	04.11.2015, 15:53	132 KB	JavaR-Datei	Heute, 10:56	
_						
		*.jar	•			
Ne	euer Ordner Optioner	n			Abbrechen	Öffnen 📐
				Cano	cel OK	

Figure 5: Select profile on the file system

The name and version number of the profile are now shown in the respective fields of the Preferences dialog as shown Figure 6. Click on "Add" in order to install the profile (Figure 7). Close the Preferences dialog by selecting the OK button.

Profiles Name: Path: Version: Add Ec Name	EPD 1.1 /Users/oli/Downloa 1.0.1 dit Remove Cle Path		tValidationToc	ol 2/profiles/E Version
Path: Version: Add	/Users/oli/Downloa 1.0.1 Jit Remove Cle		tValidationToc	
Path: Version: Add	/Users/oli/Downloa 1.0.1 Jit Remove Cle		tValidationTod	
Version:	1.0.1 dit Remove Cle			
		ar		Version
				Version
			Cancel	ОК



		Preferences	
Profiles	Profiles		
	Name:	EPD 1.1	
	Path:	/Users/oli/Downloads/ILCDFormatValidationTool 2	/profiles/E
	Version:	1.0.1	
	Add	dit Remove Clear	
	Name	Path	Version
		Cancel	ОК
			(S)

Figure 7: Profile installed

This installation process only has to be performed once, all installed profiles will be stored locally by the application and be available for subsequent uses.

The newly installed profile can now be selected in the Profile selector of the Validation Aspects view. Select the EPD profile and check the "Categories" and "XML Schemas" aspects to be validated (Figure 8 and Figure 9).

Valid	ation Aspects	
	Default	Profile
	Archive Structure	✓ Default ILCD EPD 1.1 (V1.0.1)
	Categories	Add Profile
	Links	
	Orphaned Items	
	Reference Flows	
	XML Schemas	
	XSLT Stylesheet	

Figure 8: Select new profile

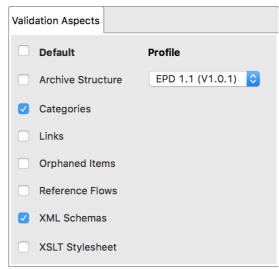


Figure 9: Validation settings

Once files and/or folders to validate have been added, the validation can be initiated by selecting ">" button (Figure 10).

		ILCD Valio	lation Tool 1.1.0			
File Selection					Validation Aspects	
Filename Oad48afe-38dB-4		Drop files or folders here		Validation Progress	Default Archive Structure Categories Links Orphaned Items Reference Flows XML Schemas XSLT Stylesheet	Profile EPD 1.1 (V1.0.1)
Validation Messages						
Aspect Name	Filename	UUD	Dataset Type	Message		

Figure 10: Start validation

During the validation process, a progress indicator will be shown for each item on the list. Once the validation is finished, next to each item a little icon is displayed indicating whether or not the validation was successful (Figure 11).

		ILCD Validation 1	Tool 1.1.0					
File Selection					Valio	dation Aspects		
Filename ✓ 0ad48afe-38d8-47d1-8c74	1	les or folders here		Aalidation Progress		Default Archive Struct Categories Links Orphaned Item Reference Flov XML Schemas XSLT Styleshe	ns ws	Profile EPD 1.1 (V1.0.1) 😒
Validation Messages				~				
Aspect Name Fil	ename	טווט	Dataset Type	Message				
Validation successful.								

Figure 11: Validation successful

In case any issues were detected, these are listed in the "Validation Messages" view below (Figure 12). These indicate the aspect, filename, UUID and type of the dataset, and an explanation. To read the explanation in full, hover over the message with the mouse pointer to display a tooltip with the entire message (Figure 13).

••	•		ILCI	D Validation Tool 1.1.0			
File Selec	ection					Validation Aspects	
Validation	n Messages	/Users/oli/Downloads/	UUID Qad48afe-38d8-47d1-8c74-705b6f296t	Detaset Type	Validation Progress	Default     Archive Structure     Categories     Links     Orphaned Items     Reference Flows     XML Schemas     XSLT Stylesheet	Profile EPD 1.1 (V1.0.1) 3

Figure 12: Successful and unsuccessful validation with messages

Vali	dation Messages	
	Aspect Name	Filename UUID Dataset Type Message Validation error for classification "oekobau.dat": category "Nutzung von Wärmeerzeugern" under path "/Gebäudetechnik Nutzung" unknown (using file edu/kit/jai/jca/epd/categories/OEKOBAU.DAT_Gategorie
Th	ere were errors.	

Figure 13: Validation message

If the item to validate is a single XML file or folder, the "Validation Messages" view allows for right-clicking on an item and selecting the option "Show in file system" in order to locate the incriminating item on the file system (Figure 14). Obviously, this does not work for ZIP archives, which would have to be extracted first on the file system.

Validation Messages			
Aspect Name	Filename	UUID	Dataset Type Message
Categories	0ad48ate-38d8-47d1-8c74-705b6f	Oad48afe-38d8-47d1-8c74-705b8f296b94	process d show in file system ssification "oekobau.dat": category "Nutzung von Warmeerzeugern
There were errors.			

Figure 14: Show in file system