# DDC Revit
All-in-One Converter

Database Full Dump Geometry

Schedules Drawings

DDC RVT converter allows you to access your Revit® projects and translate this data into popular and open format XLSX. Using the converter, without running Autodesk® tools and without using the Internet (without third-party libraries and plugins), we extract project data from RVT files and present the Revit database as a structured Excel table, where each row represents a specific project element (with its own identifier), and columns represent related properties and parameters.

After the conversion, data can be utilized in thousands of tools that are ready to work with databases and triangular geometry:

DATABASES

ANALYTICS

AI & LLM

SIMULATION
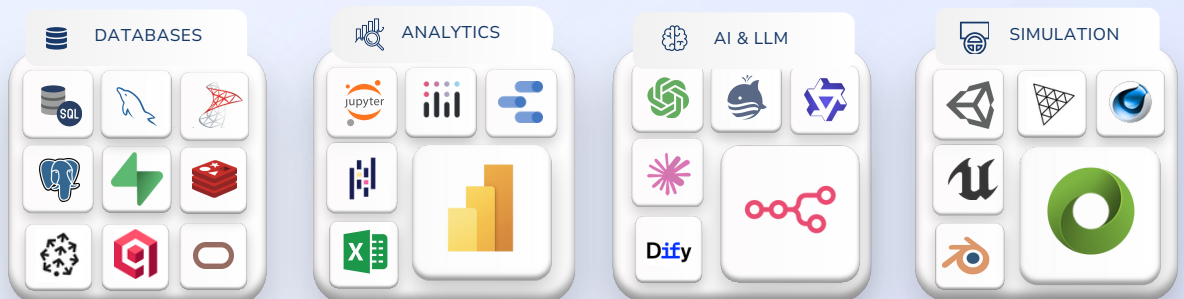
Requirements:

- Windows 7, Windows 8, Windows 8.1, Windows 10, Windows 11, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019

- Internet Connection: Not required
- Independence: No reliance on Forge or other CAD (BIM) Tools

If you encounter any issues, have feedback, or ideas for improvement, feel free to send an email to info@datadrivenconstruction.io

1 STANDALONE APPLICATION

DDC UI Converter
(Graphical Interface)

Process: Select a folder with CAD (BIM) files in the graphical interface, choose whether to include subfolders, and start the conversion with a single click. The tool automatically creates Excel output files in the chosen directory.

- **Best suited for**: Non-technical users, quick one-off conversions.
- **Key advantage**: Intuitive interface with no setup required — immediate access to structured Excel data.

2 TERMINAL APPLICATION

DDC Terminal-based Converter
(Command-line Utility)

Process: Open Command Prompt or PowerShell, run the converter by pointing to the executable and the target CAD (BIM) file.

- **Best suited for**: Advanced users, developers, and technical teams.
- **Key advantage**: Flexible, scriptable, and easily integrated into batch processes or automation scripts.

```
1.  # CMD or PowerShell
2.  > C:\DDC\IfcExporter.exe  C:\Example.ifc
```

3 BATCH CONVERSION
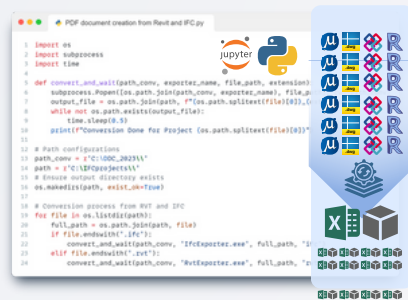
DDC Bulk Conversion
(High-volume Data Processing)

Process: Run preconfigured scripts from the DDC_Pipelines folder to process multiple CAD (BIM) files simultaneously. The converter handles large datasets in parallel and produces consolidated Excel outputs.

- **Best suited for**: Enterprises and organizations handling large datasets.
- **Key advantage:** Scalable processing of hundreds of CAD (BIM) files with ready-to-use pipelines for workflow integration.

Examples and ready-made Python scripts for stream processing can be found in the "DDC_Python_pipelines" folder
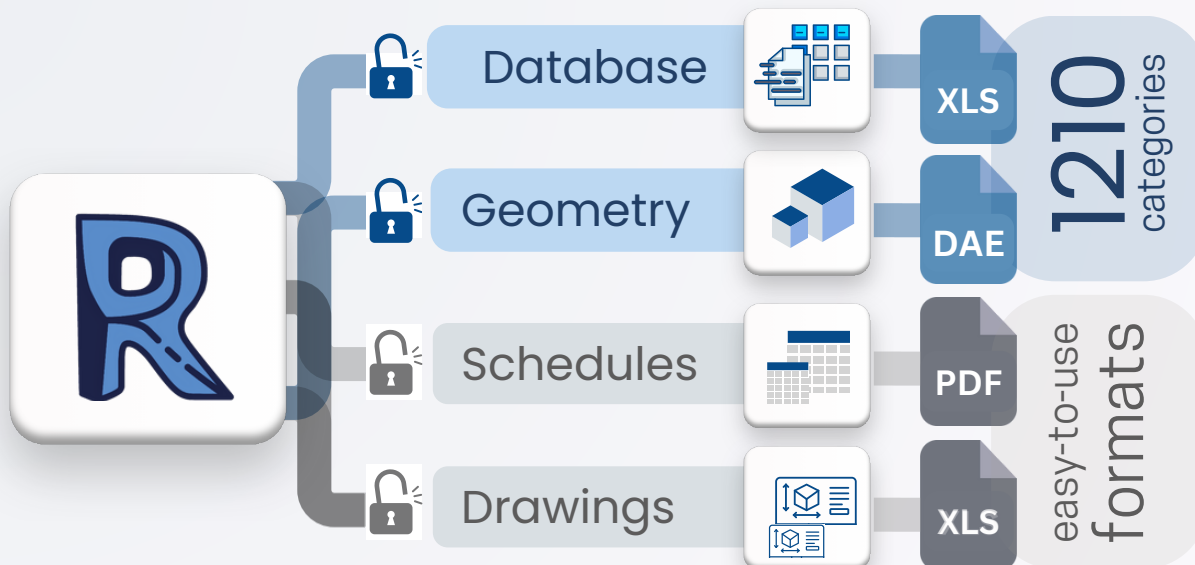
4 BATCH CONVERSION
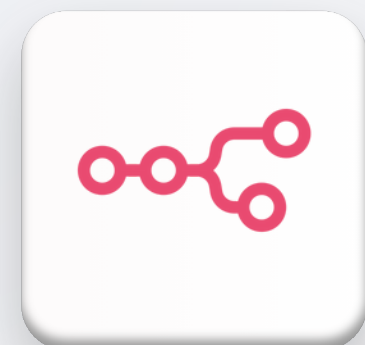
DDC Conversion via n8n
(Workflow Automation)

Process: Use n8n workflows to call the terminal-based converter inside a Windows environment. Once data is extracted, subsequent n8n nodes automatically process, filter, and load results into databases, dashboards, or third-party systems.

- **Best suited for**: Companies seeking full automation and system integration.
- **Key advantage**: End-to-end automated workflows — CAD (BIM) conversion becomes part of a seamless data pipeline.

Examples and ready-made n8n Workflow for stream processing can be found in the "DDC_n8n_workflows" folder

Flexible, Full-Depth Data Extraction from Revit

Database → XLS

Geometry → DAE

Schedules → PDF

Drawings → XLS

1210 categories

easy-to-use formats

You can receive drawings and specification tables and also configure the depth of export from your Revit project both through the application interface and through the command line:

To view all available options, run the following command in your terminal:

C:\DDC_Converter_Revit> **RvtExporter.exe**

This will display the usage information with all supported parameters:

```
Usage:
RvtExporter <input file> [<output file>] [<output file>] [<export mode>] [<category file>]
[bbox] [schedule] [sheets2pdf] [-no-xlsx] [-no-collada]


<input file>          - Input .rvt file (required)
[<output file>]       - Output path for the .dae file (enabled by default, can be disabled with -no-collada) (optional)
[<output file>]       - Output path for the .xlsx file (enabled by default, can be disabled with -no-xlsx) (optional)
[<export mode>]       - Export mode: basic | standard | complete | custom (optional)
[<category file>]     - .txt file with category names (only required in custom mode) (optional)
bbox                  - Include BoundingBox geometry for each element in the XLSX (optional)
schedule              - Export all schedules (optional)
sheets2pdf            - Export all sheets to PDF (optional)
-no-xlsx              - Disable export to XLSX format (optional)
-no-collada           - Disable export to DAE format (optional)
```

You can find an even more convenient conversion configuration process using various options in the folder with the free workflow set for n8n

Description of **Standard**, **Basic**, **Full**, and **Custom Categories** in DDC Revit Converter

Export Mode
- ○ Basic (Fast)
- ◉ Standard (Moderate)
- ○ Complete (Slow)
- ○ Custom

In this categorization system for Revit, we distinguish between Standard, Basic, Complete, and Custom categories to provide users with accurate and flexible data conversion options, allowing data extraction from Revit at varying speeds and levels of detail.

309 Categories

Basic Categories: This subset consists only of items without the `##` prefix, automatically excluding any prefixed with `##`. This selection allows for more streamlined and faster data processing by focusing solely on core elements.

724 Categories

Standard Categories**:** These include all listed items, both with and without the `##` prefix. This comprehensive approach ensures no categories are omitted, offering maximum detail and flexibility during data conversion.

1209 Categories

Complete Categories: This category encompasses all available data points, providing the broadest data extraction for projects that require a high level of detail and completeness.

Custom Categories: Users can define this set through a customizable list. In the folder with the converter, there is a file in `datadrivenlibs` folder named `DDC_Custom_Categories_to_Convert.txt`, where categories can be specified line-by-line, such as:

`OST_Rooms`
`OST_Walls`

A list of all the built-in categories in Revit:
https://www.revitapidocs.com/2024/ba1c5b30-242f-5fdc-8ea9-ec3b61e6e722.htm

In the UI and Excel interface, radio buttons are available for category selection. To use custom categories through the console, you need to specify the custom argument:

```
.\RvtExporter.exe sample.rvt custom
```

You can also specify a different .txt file by providing its path:

```
.\RvtExporter.exe sample.rvt custom /path/to/categories.txt
```

If no file is specified, the system will default to using

`DDC_Custom_Categories_to_Convert.txt`

This flexible system ensures that users can tailor their data extraction process to their specific project needs, balancing speed, precision, and detail.

# Use data from CAD (BIM) projects in an unlimited number of tools

Open data and formats will inevitably become the standard in the construction industry — it's just a matter of time. This transition will accelerate if the professional community actively spreads information about open formats, database access tools, and SDKs for reverse engineering.

Comparative Analysis
Structured Data vs BIM

Feature	Structured Data (XLSX, CSV, DF)	closedBIM and openBIM Tools
Reporting & Visualization	High	Moderate
Customization	High	Moderate
Data Analysis	Robust	Limited
Industry Acceptance	Broad	AEC
Learning Curve	Moderate	Steep
Automation & Scripting	Yes (VBA & Macros)	Limited
External Data Integration	High	Moderate
Cost Efficiency	High	Moderate to Low
Add-ons & Extensions	Wide Range	Varied Range
Collaboration & Sharing	High (M365)	Structured Environments
Accessibility	Widely Accessible	Specialized Access

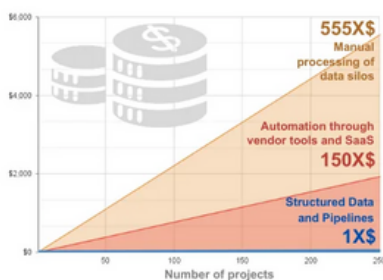## Advantages of switching from CAD (BIM) to ▦ in data processing

- Wide Accessibility
- Quick Reporting and Visualization
- Data Analysis Capabilities
- Broad Acceptance
- Flexibility and Customization
- Ease of Training and Adoption
- Automation and Scripting
- External Data Integration
- Cost Efficiency
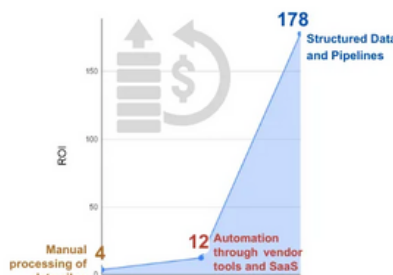- Wide Range of Add-ons
- Collaboration and Sharing
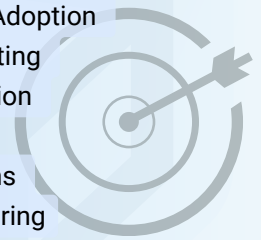
The world of workflow automation and artificial intelligence is changing the industry: More and more specialists — from engineers to estimators — will use these digital tools. Instead of spending hours manually reviewing and mapping data, teams will work with automated systems, focusing on decision making and value creation rather than routine processing.

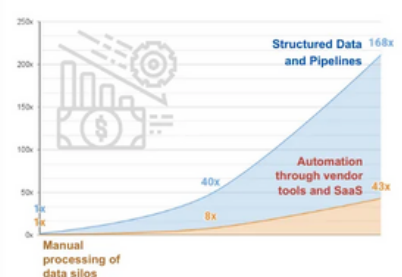## ROI, and Productivity Comparison of Data Automation Approaches

Comparison of the cost of automating the tasks of extracting data from construction projects

555X$ Manual processing of data silos
150X$ Automation through vendor tools and SaaS
1X$ Structured Data and Pipelines

Comparison of ROI of different automation concepts

178 Structured Data and Pipelines
4 Manual processing of data silos
12 Automation through vendor tools and SaaS

Reducing the cost of work and increasing productivity over time

168x Structured Data and Pipelines
43x Automation through vendor tools and SaaS
40x
8x
1x Manual processing of data silos

Workflows driven by automation and AI are not just tools. They are becoming an integral part of everyday activities, requiring new skills and opening up new opportunities for efficiency and innovation across the industry.