



# data-driven construction.io

mining | visualization | analytics | automation

data-driven  
construction.io

# DATA > SOFTWARE

The future of construction is **data-centric**



# data-driven construction.io

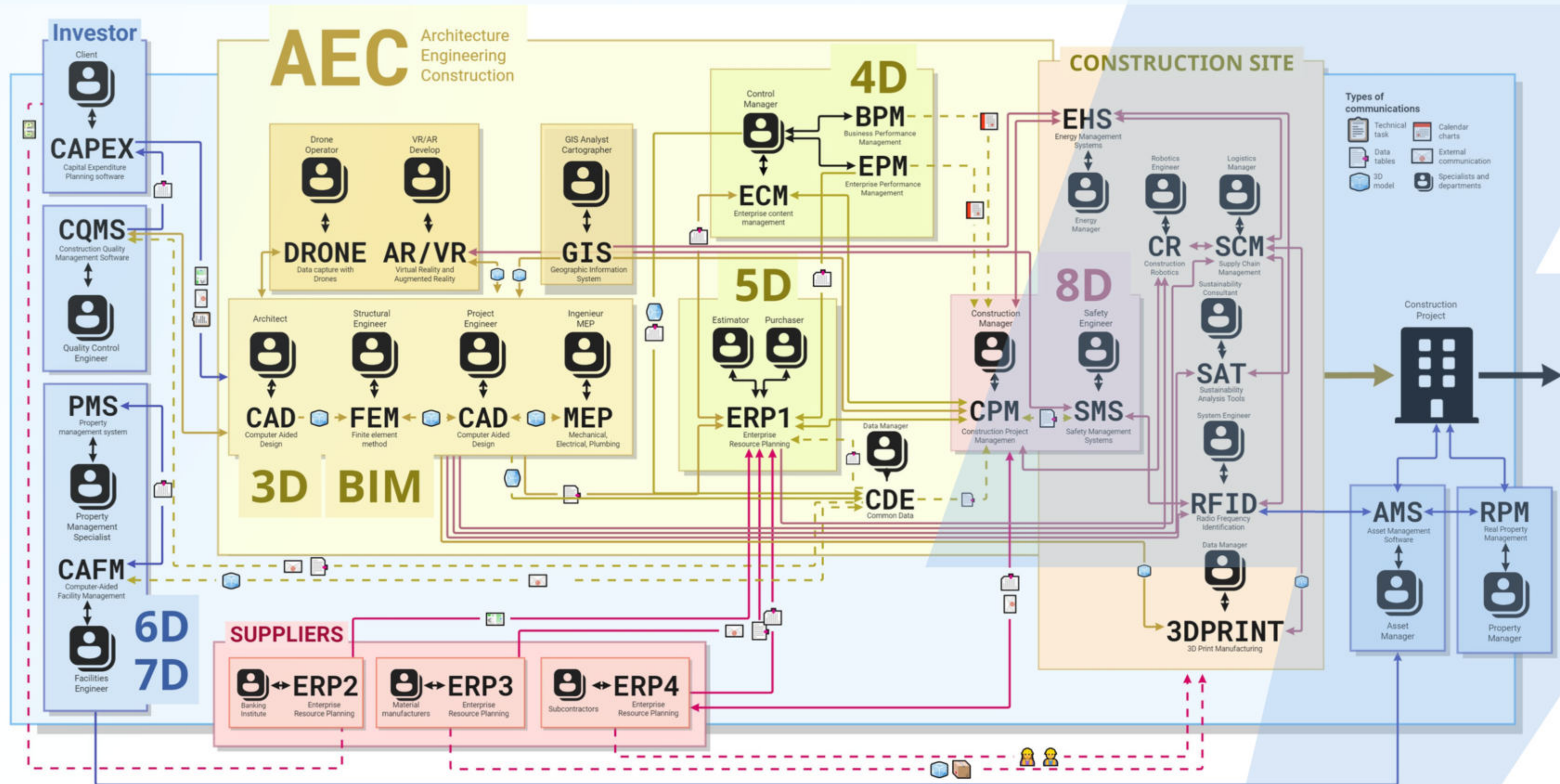
DataDrivenConstruction Toolkit is a powerful tool for exploring construction data without the need for an online connection or the installation of CAD (BIM) software. It supports the offline reading of BIM data and allows for the export of data to various formats such as DAE, USD, OBJ, CSV, Excel, JSON, XML, etc.

The central logo for the DataDrivenConstruction Toolkit features the letters 'DDC' in a bold, dark blue font, with a stylized blue lightning bolt striking through the 'C'. Below this, the word 'TOOLKIT' is written in a smaller, dark blue, sans-serif font. Surrounding this central logo are several white square icons with rounded corners, each containing a different logo: the R programming language logo, a colorful geometric knot-like logo, the Python logo, a green and white building icon, the Microsoft Excel logo, a blue logo with a white Greek letter mu, a blue and yellow '.dwg' file icon, and the OpenAI GPT logo. The entire central composition is set against a light blue background with a subtle purple-to-blue gradient. Scattered around the central area are several 3D isometric cubes, each featuring different logos and icons, including the R logo, the Python logo, the Excel logo, and the GPT logo, adding a dynamic, multi-dimensional feel to the design.

**DDC**  
**TOOLKIT**

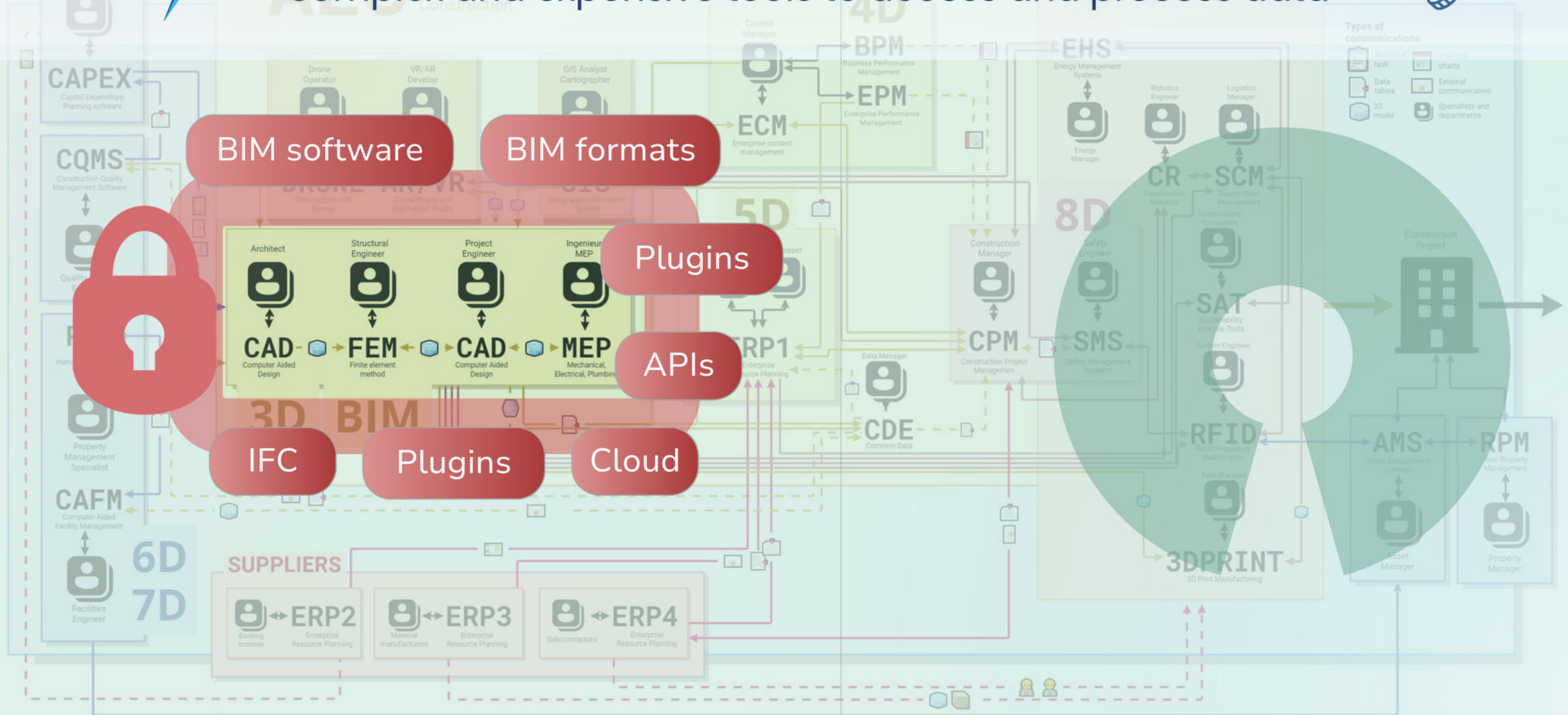


The construction business is filled with a lot of systems and data that need to be connected to each other





Closed and complex CAD (BIM) formats force users to use complex and expensive tools to access and process data



## CLOSED DATA



converter

SDK

1996-2018

BIM software

BIM formats

IFC

Plugins

Cloud

Internet

APIs

## OPEN DATA



no BIM software

no BIM formats

no IFC

no Plugins

no Cloud






no Internet

no APIs

Most major construction and design companies, as well as CAD (BIM) vendors, get open data from CAD (BIM) formats using SDKs, reverse engineering

**OPEN DATA**

- no BIM formats
- no Cloud
- no APIs
- no BIM software
- no Plugins



Easy life

IFC

openBIM™

APIs

Plugins

BIM formats

BIM software

Cloud

subscriptions

closedBIM

Hard life

**BIM**




converter

**SDK**

1996-2018

Hard decisions

**CLOSED DATA**

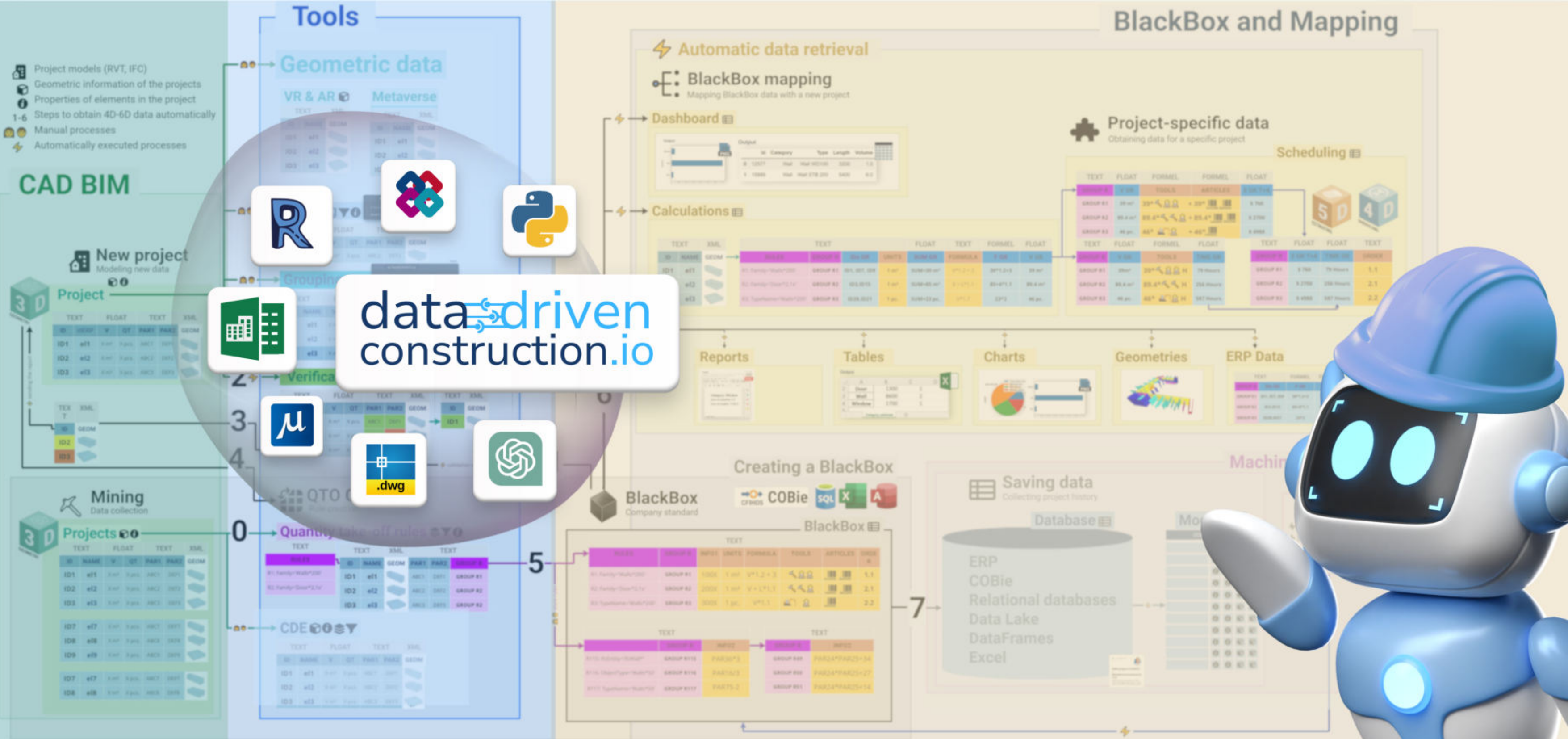


Easy decisions

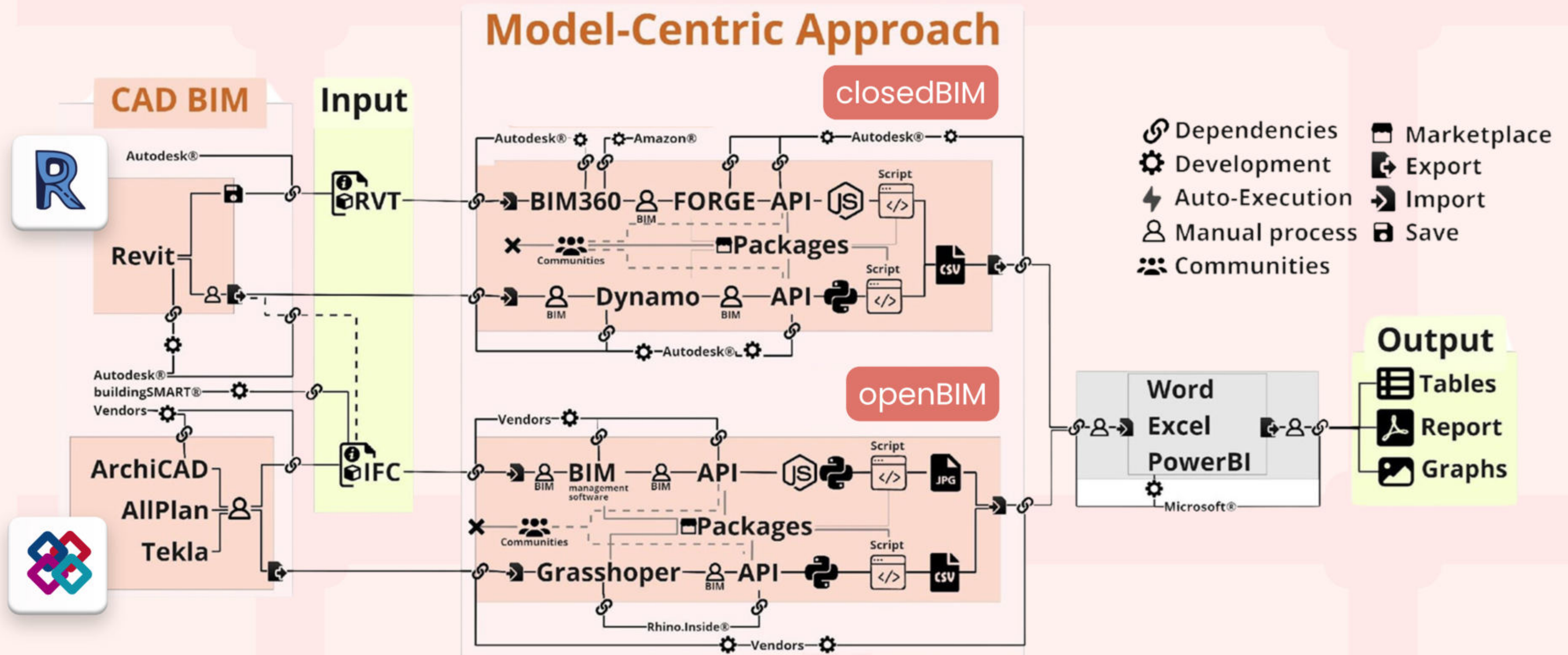
A single CAD (BIM) project

Quality of data

10000000000+ data use cases



THE **LARGE NUMBER OF DEPENDENCIES** WITH CLOSED DATA  
MAKES IT **DIFFICULT TO CREATE A SEAMLESS PROCESS**

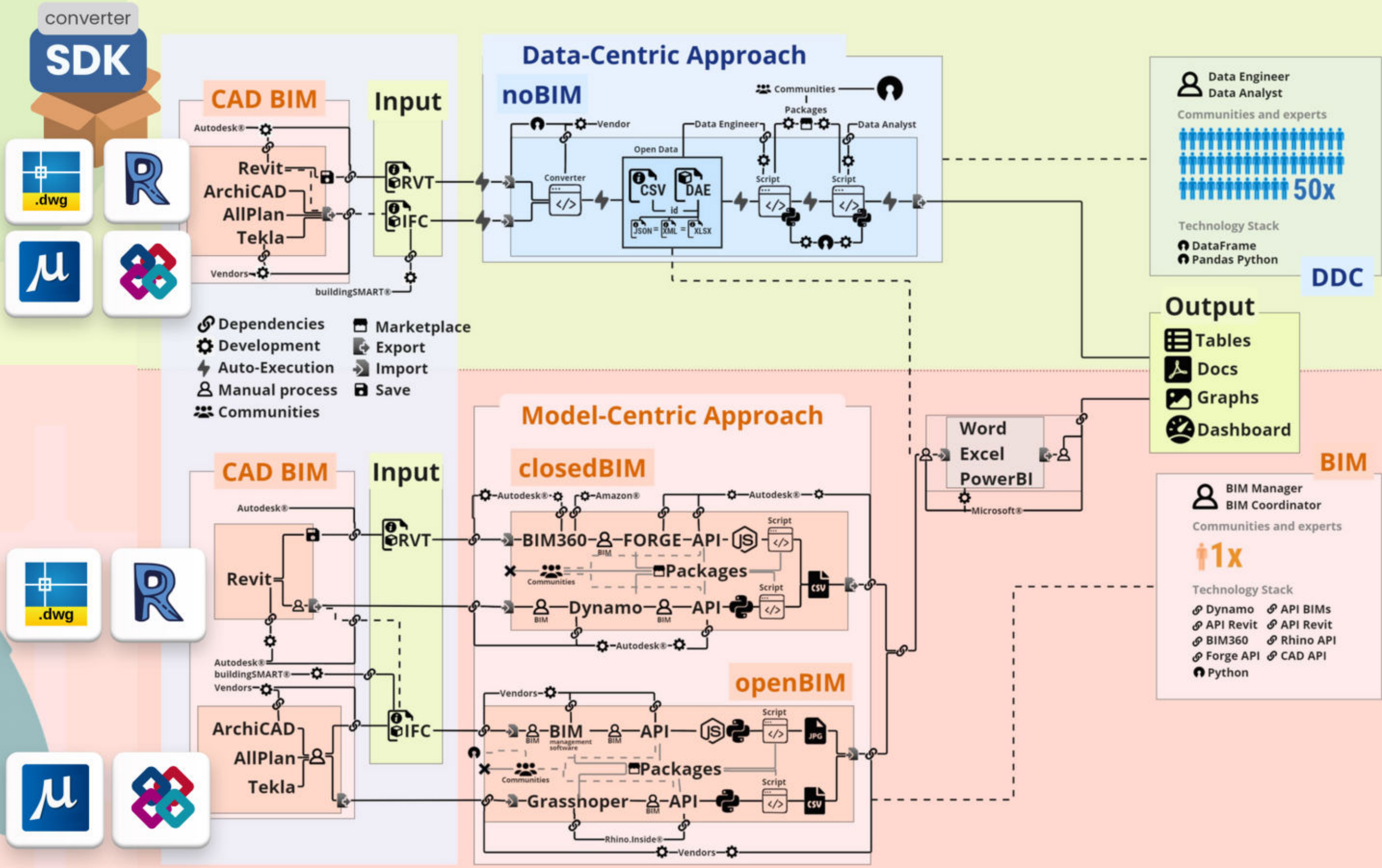


# Data-Centric Approach vs Model-Centric Approach in Construction Data

Number of dependencies when working in closedBIM , openBIM and Data-Centric Approach

Structured data  
Granular data  
Open data

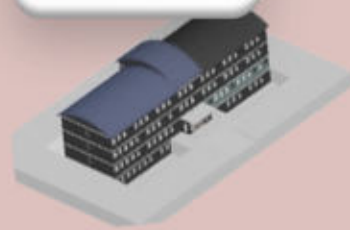
closed data  
closedBIM  
openBIM



Revit 2015  
Revit 2016  
Revit 2017  
Revit 2018  
Revit 2019  
Revit 2020  
Revit 2021  
Revit 2022  
Revit 2023



IFC2X3  
IFC4  
IFC4X1  
IFC4X2



**Various documents  
to be filled out**



**Different formats**

**Various versions**

**Restricted access**



**Quality?**

**EIR**



**BEP**



**BAP**



**Information  
Requirements?**

**EIR**

**BEP**

**BAP**

**Other industries check  
quality more easily**



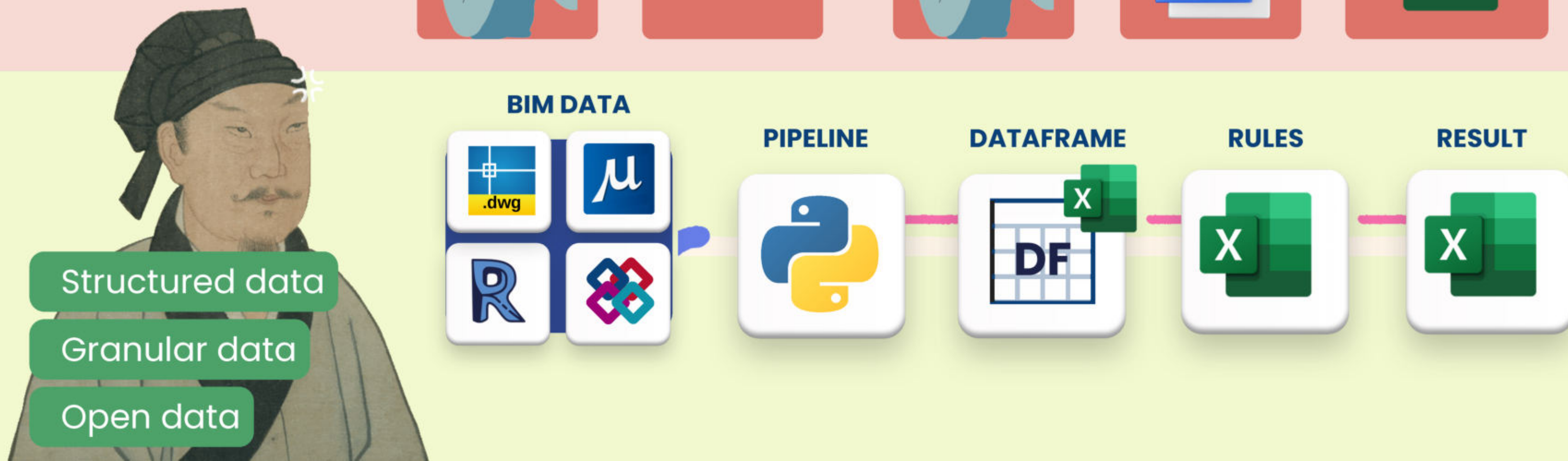
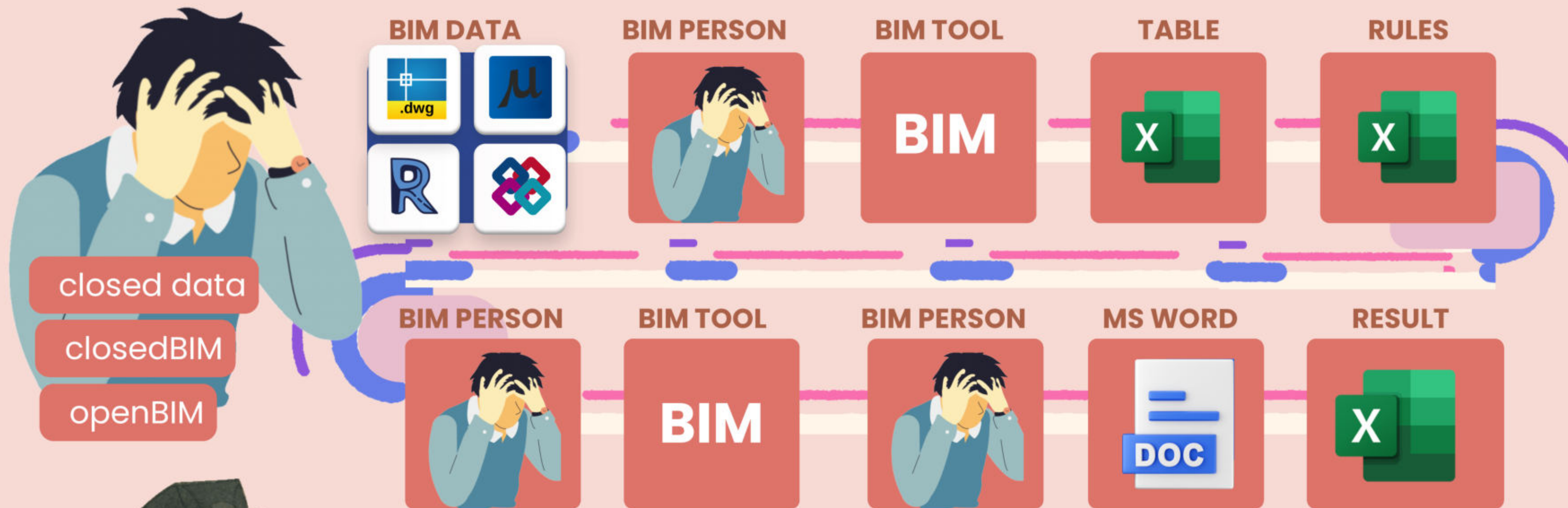
Revit 2015  
Revit 2016  
Revit 2017  
Revit 2018  
Revit 2019  
Revit 2020  
Revit 2021  
Revit 2022  
Revit 2023



IFC2X3  
IFC4  
IFC4X1  
IFC4X2



**granular  
structured  
data**



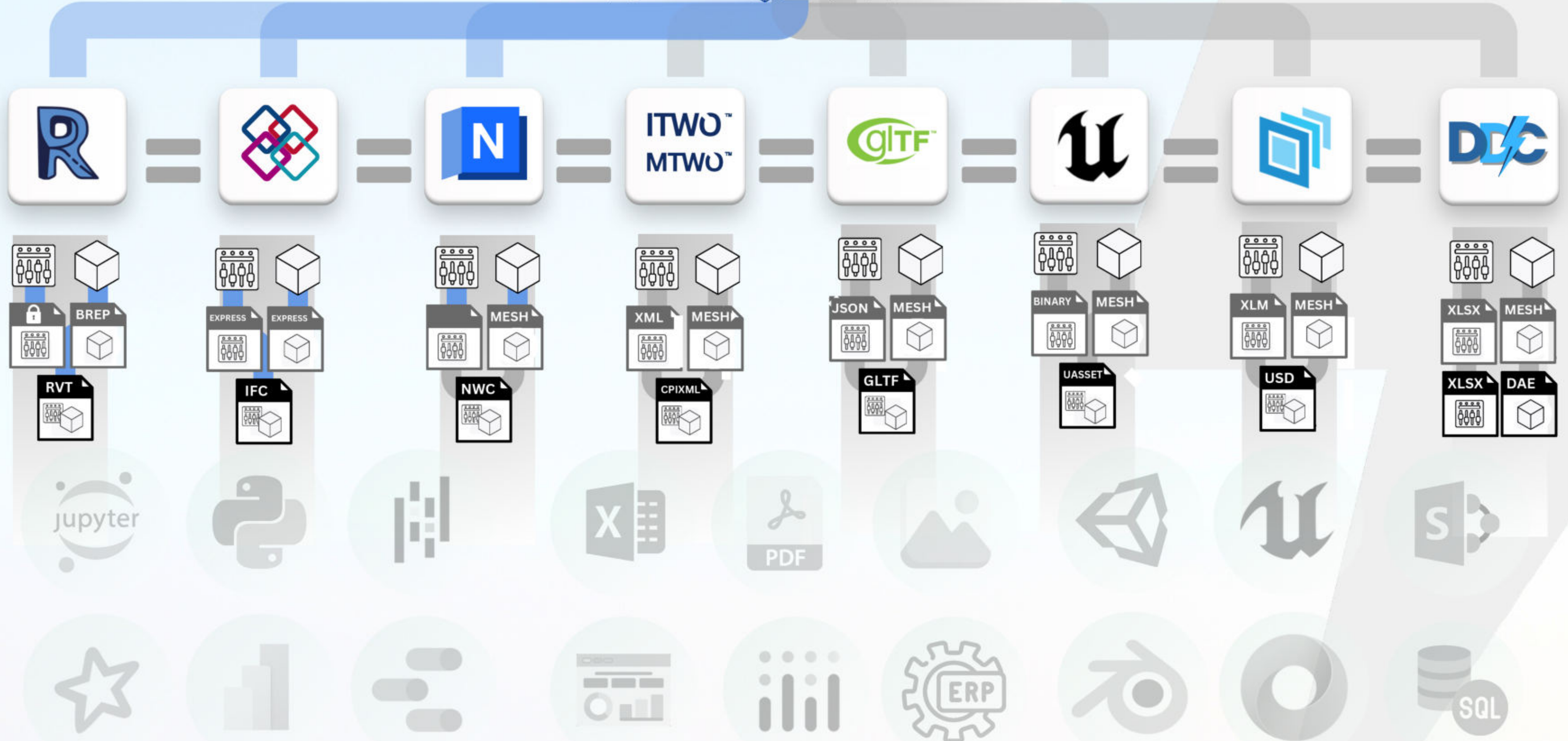
Thanks to SDKs and converters, different formats including complex closed formats, parametric formats and simplified flat formats **now contain identical information** about the same construction project

## CAD (BIM) DATA

Geometric properties  
of project entities

Attribute properties  
of project entities

In construction projects, data manipulation begins with the collection of attribute and geometry requirements for project entities. Using parametrized CAD systems, the project is populated with data on the geometric parameters of the entities, which allows to confirm volumes and prepare data to be transferred to systems for handling the attribute parameters of the project entities.



## Geometric properties of project entities

### Attribute properties of project entities

*In construction projects, data manipulation begins with the collection of attribute and geometry requirements for project entities. Using parametrized CAD systems, the project is populated with data on the geometric parameters of the entities, which allows to confirm volumes and prepare data to be transferred to systems for handling the attribute parameters of the project entities.*

## COMPARATIVE ANALYSIS OF FILE FORMATS FOR CONSTRUCTION PROJECTS

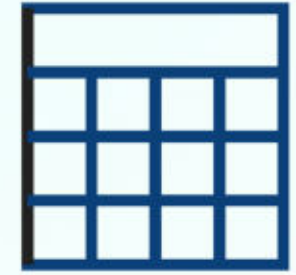
COMPARATIVE ANALYSIS OF FILE FORMATS FOR CONSTRUCTION PROJECTS

[https://datadrivenconstruction.io/?sdm\\_process\\_download=1&download\\_id=3231](https://datadrivenconstruction.io/?sdm_process_download=1&download_id=3231)



AS

STRUCTURED  
DATA



Column names

Columns axis = 1

Index label

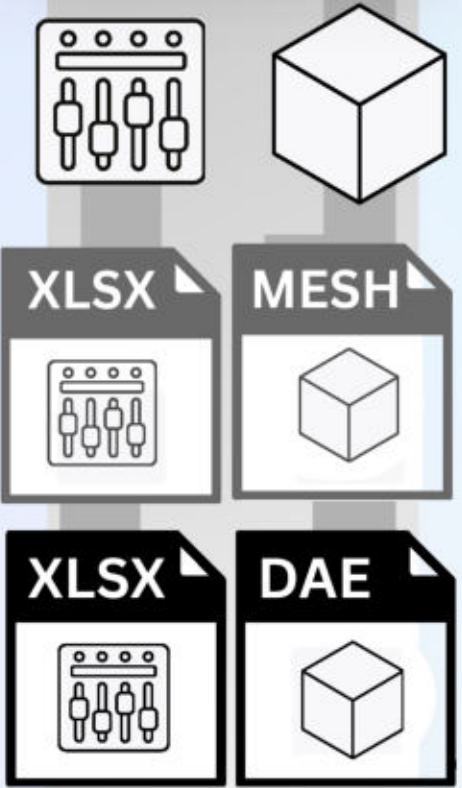
Index axis = 0

Missing value

Data

ID	Name	Category	Family Name	Height	BoundingBoxMin_X	BoundingBoxMin_Y	BoundingBoxMin_Z	Level
431144	Single-Flush	OST_Doors	Single-Flush	6.88976378	20.1503	-10.438	9.84252	Level 1
431198	Single-Flush	OST_Doors		6.88976378	13.2281	-1.1207	9.84252	Level 2
457479	Single Window	OST_Windows	Single Window	8.858267717	-11.434	-11.985	9.80971	Level 2
485432	Single Window	OST_Windows	Single Window	8.858267717	-11.434	4.25986	9.80971	Level 2
490150	Single-Flush	OST_Doors	Single-Flush	6.88976378	-1.5748	-2.9565	-1E-16	Level 1
493697	Basic Wall	OST_Walls	Basic Wall		-38.15	20.1656	-4.9213	Level 1
497540	Basic Wall	OST_Walls	Basic Wall		-4.5212	-0.0708	9.84252	Level 1

A project, is a set of elements where **each element has a set of properties** and parameters and where geometry is an optional attribute



XLSX

DAE


ID	Name	Category	Volume	IfcGUID
176804	Floor	OST_Floors	561.0052641	0WFFycJ9rEj9FbADAA0q3o
198694	Basic Wall	OST_Walls	159.4707199	3ILx0gNe59vvExhby0Bfew
198749	Basic Wall	OST_Walls	42.87248164	3ILx0gNe59vvExhby0Bff1
211850	Sink-Offset-Kohler-Vaul	OST_PlumbingFixtures	0.140436811	28i3i5WDD8Ju0YHnzXOTs7
213811	Faucet-8inch_Reach-Kc	OST_PlumbingFixtures	0.011825773	28i3i5WDD8Ju0YHnzXOm_
234869	Basic Wall	OST_Walls	153.1897499	28i3i5WDD8Ju0YHnzXOzdu
243274	Basic Roof	OST_Roofs	1235.098039	2cgXCjpDT0Zx8vXMSr3pfm
414482	M_Concrete-Round-Co	OST_StructuralColumn	144.8376535	3llj7B0LnBjf0mvxk2zuuc
418079	Basic Wall	OST_Walls	61.63398154	1oPutv5ADAxgWEbAZbN6Wv
418183	Floor	OST_Floors	1064.663482	3OLNF2_DL6hfPgh8Bw7fi7
418977	M_Wind Power Genera	OST_Site	8.431030183	3OLNF2_DL6hfPgh8Bw7f6X
418985	M_Wind Power Genera	OST_Site	8.431030183	3OLNF2_DL6hfPgh8Bw7f6f
420270	Bathtub-TOTO-Nexus-F	OST_PlumbingFixtures	9.049002553	21MLmufC9A8ftVM8JLuL62
422243	Basic Wall	OST_Walls	42.6965127	1PDnLIM013wvkZO9Lb4\$wc
422466	Single-Flush	OST_Doors	3.84110567	1PDnLIM013wvkZO9Lb4\$7
423100	System Panel	OST_CurtainWallPanels	3.82334098	1PDnLIM013wvkZO9Lb4\$7v
423107	Entrance door	OST_Doors	3.591789773	1PDnLIM013wvkZO9Lb4\$6
423134	Rectangular Mullion	OST_CurtainWallMullio	0.20341248	1PDnLIM013wvkZO9Lb4\$IR
423136	Rectangular Mullion	OST_CurtainWallMullio	0.20341248	1PDnLIM013wvkZO9Lb4\$ib
423138	Rectangular Mullion	OST_CurtainWallMullio	0.423776001	1PDnLIM013wvkZO9Lb4\$Id







3D ODB Model Viewer

How to control the display of geometry:

Rotate: Right mouse button | Pan: Shift + Right mouse button | Zoom: Middle mouse button | Zoom target: Ctrl + Shift + Right Mouse Butt

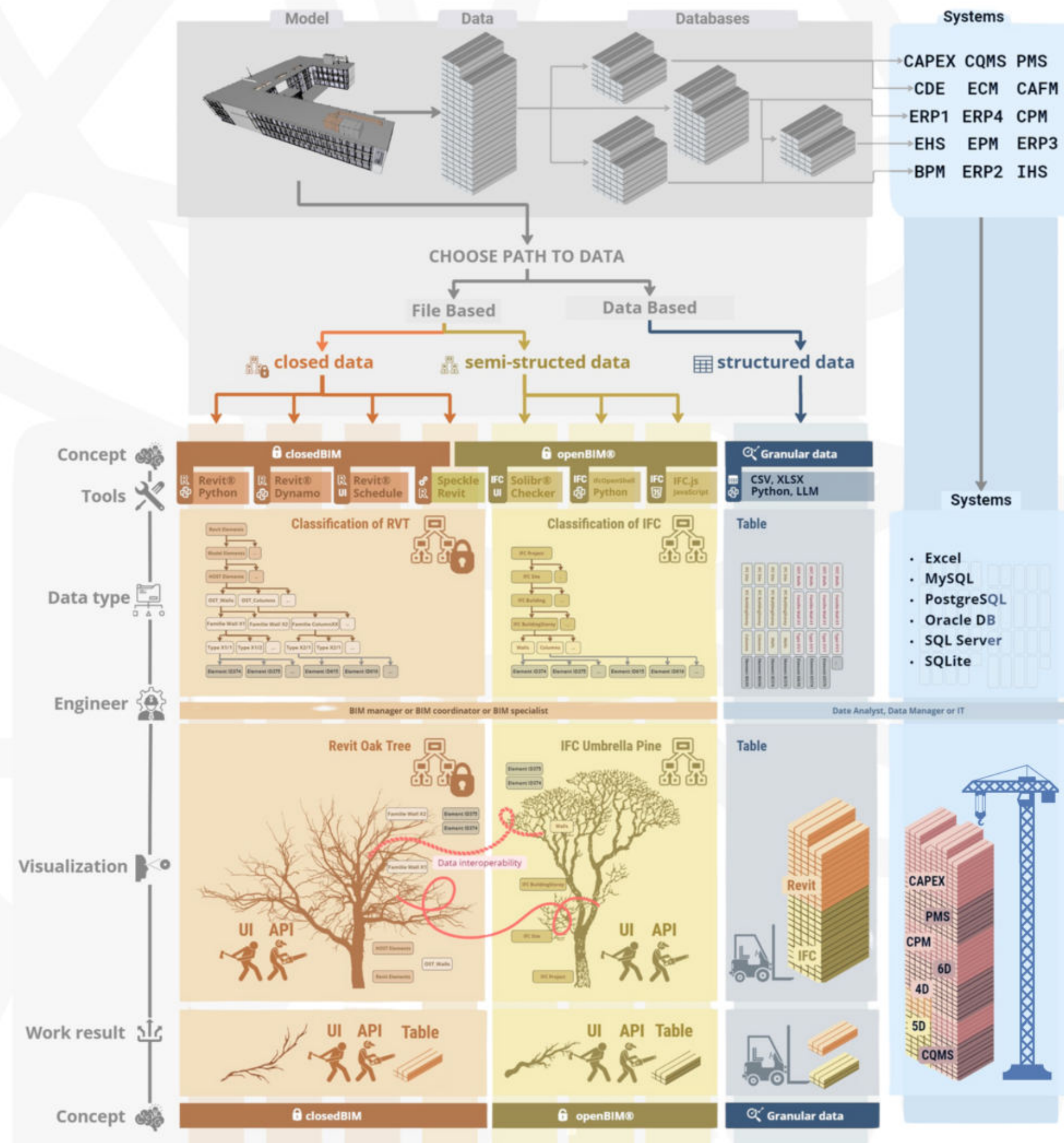
View: F, R, U, B, L, D | Camera rotation: A, S, W, Z | Keyboard Up and Down to rotate | Field of view: Alt + Mouse right key dragging

Projects 

TEXT		FLOAT		TEXT		XML	
ID	NAME	V	QT	PAR1	PAR2	GEOM	ID
ID1	el1	X m <sup>3</sup>	X pcs.	ABC1	DEF1		ID1
ID2	el2	X m <sup>3</sup>	X pcs.	ABC2	DEF2		ID2
ID3	el3	X m <sup>3</sup>	X pcs.	ABC3	DEF3		ID3
ID7	el7	X m <sup>3</sup>	X pcs.	ABC7	DEF7		ID7
ID8	el8	X m <sup>3</sup>	X pcs.	ABC8	DEF8		ID8
ID9	el9	X m <sup>3</sup>	X pcs.	ABC9	DEF9		ID9

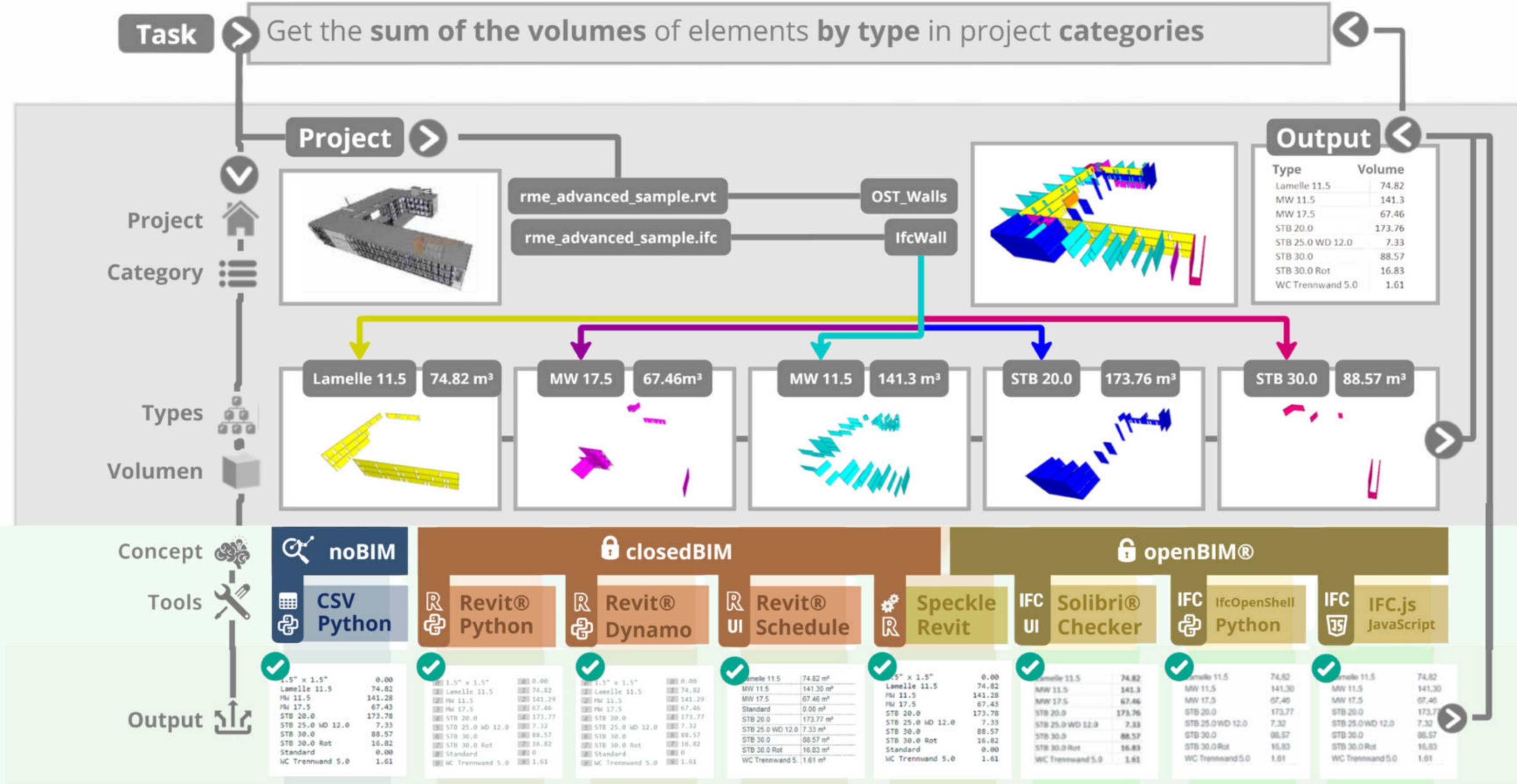


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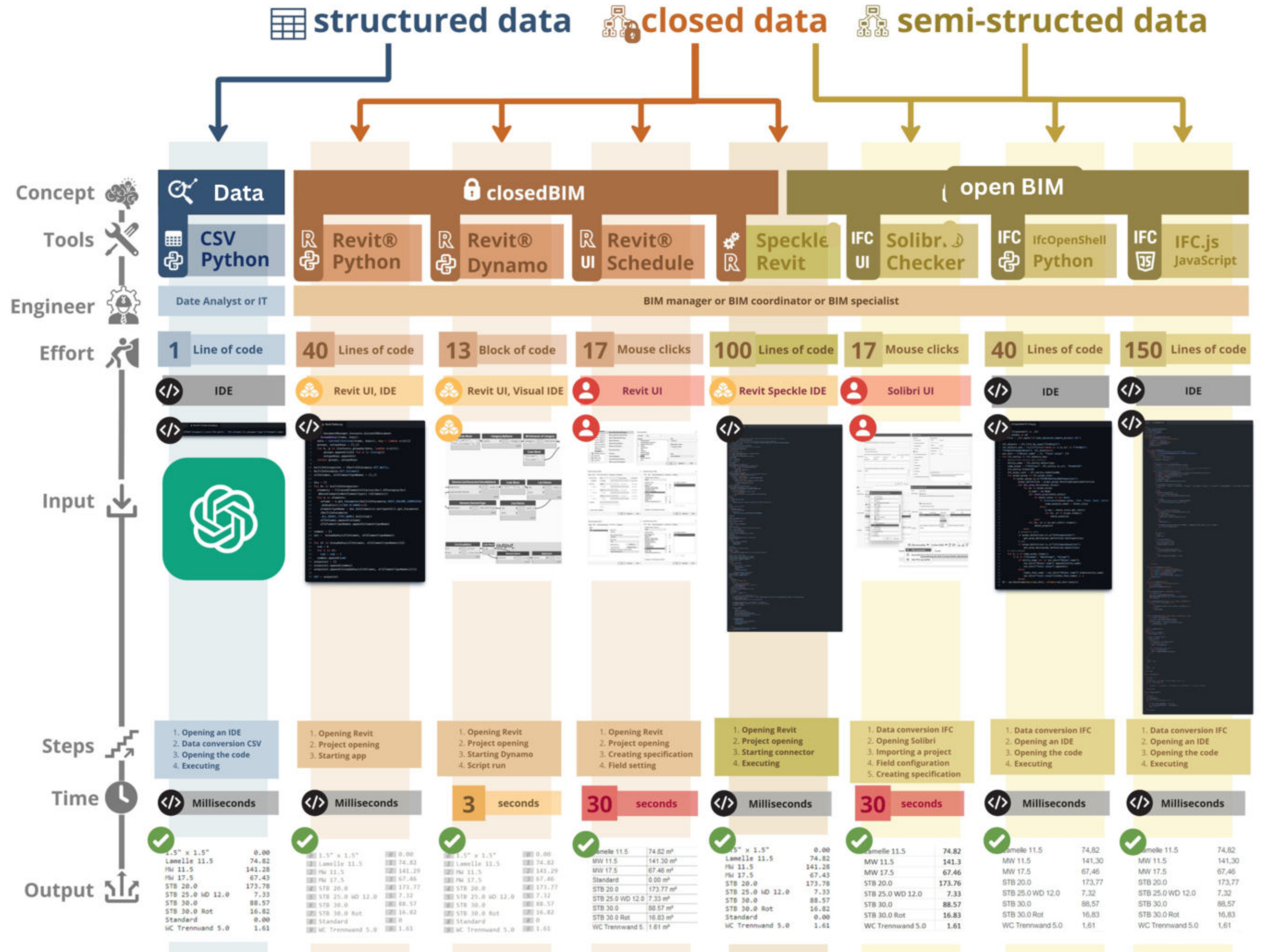
# GET DATA FROM A MODEL

The popular case study "Quantitative Takeoff

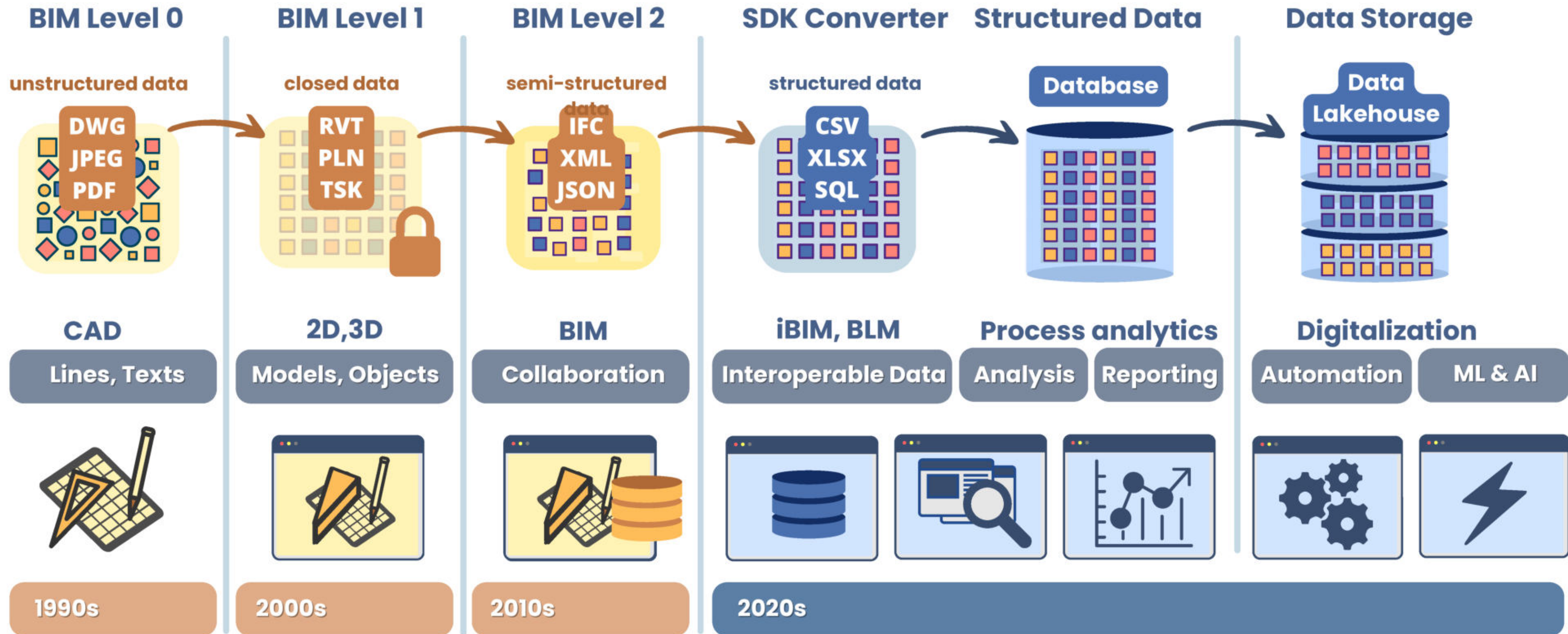


**Structured data** leads the way: simpler, faster, more efficient

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construction.io



# CAD (BIM) Maturity Levels: From Stage 0 to Structured Data





excel

plugin



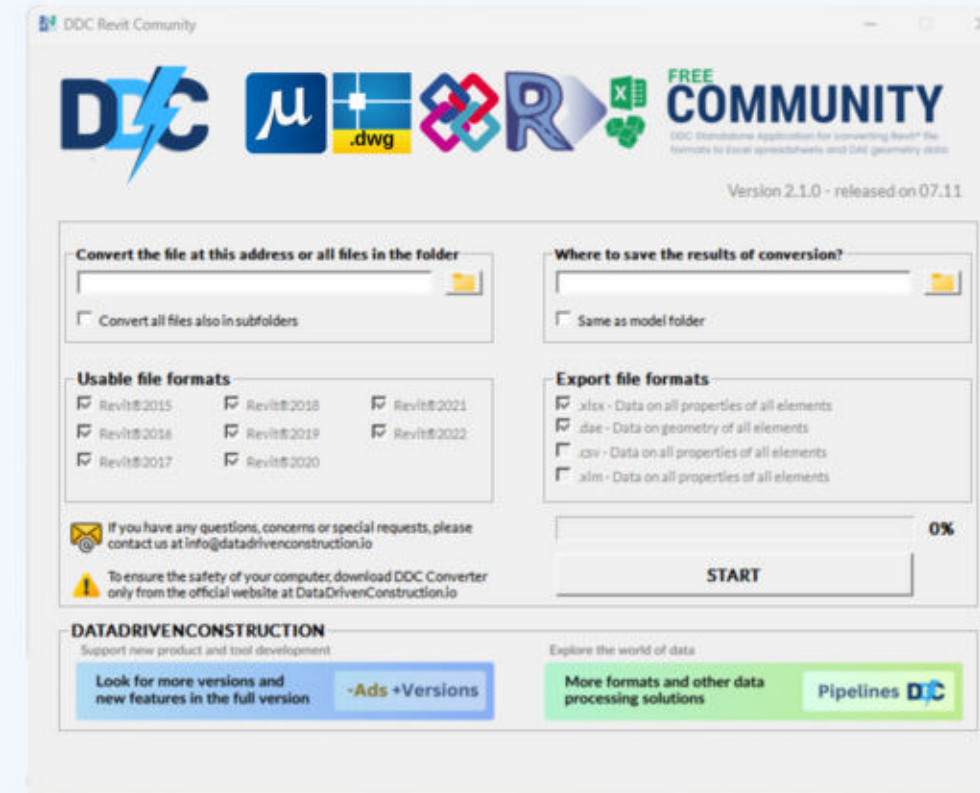
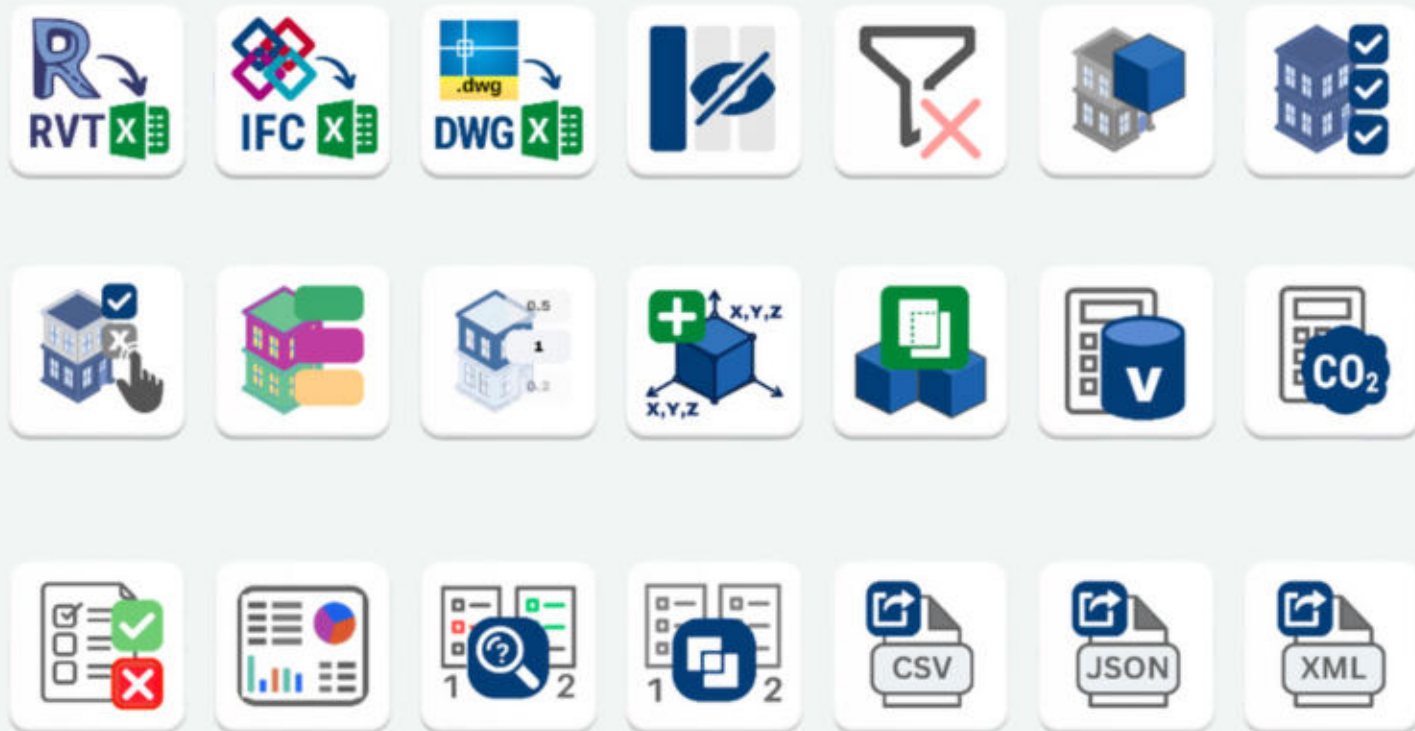
data driven  
construction.io



converters

converter with UI

terminal version



Input

```
1 # The bar plot can be created as follows
2
3 dfp = df.groupby('Category')['Volume'].sum()
4 dfp.plot(kind='barh')
```

Output

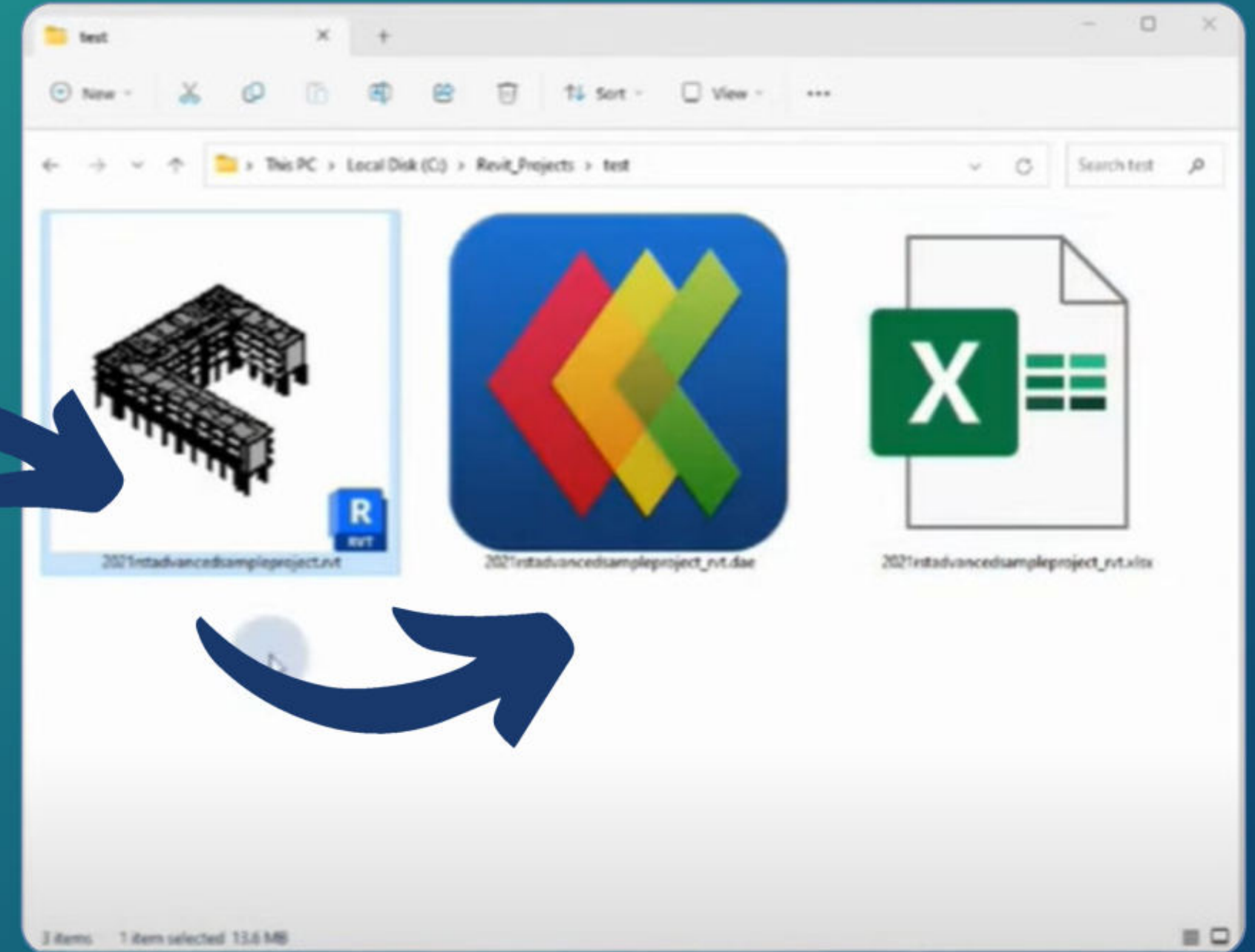
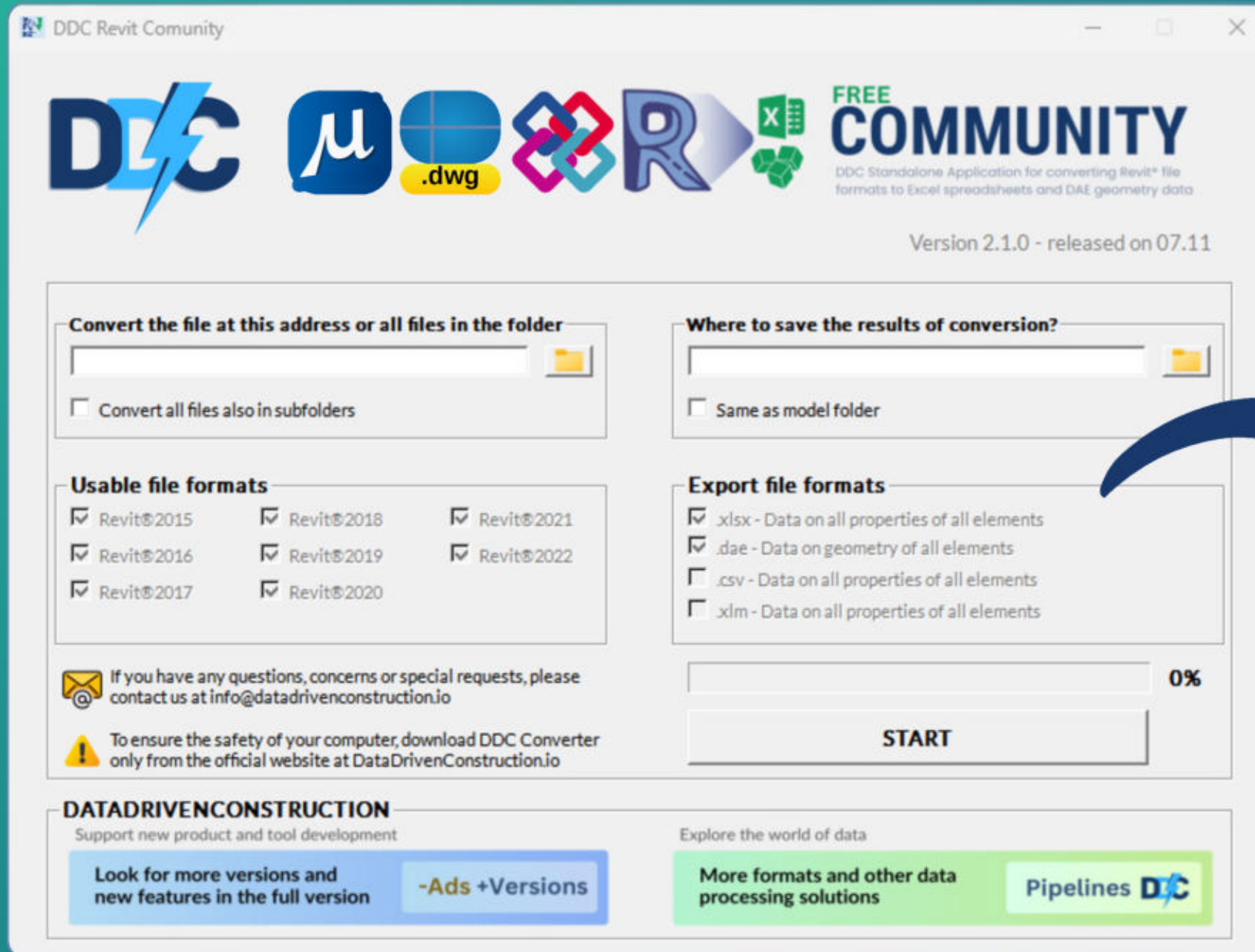
	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0
3	74456	Window	Window 1700w	1700	0.5

Input

```
1 # Whether each element contains the values
2
3 df[df['Category'].isin(['Wall', 'Window'])]
```

# Converter with UI

Conversion from CAD (BIM) formats in two clicks



# Converter

terminal version

Hundreds of applications allow you to embed the conversion process into your use cases



**Command Prompt**

```
Command Prompt
C:\DDC\DDC_Converter> RvtExporter.exe D:\sample_basic.exe
```



**PowerShell**

```
Windows PowerShell
PS C:\DDC\DDC_Converter> RvtExporter.exe D:\sample_basic.rvt
```



VS Code



kaggle

Google

colab



eclipse



Azure Notebooks



# From multi-format CAD (BIM) data into a structured format 🤗

## DATA CONVERSION TO OPEN FORMATS



```
RVT | IFC | DWG conversion.py

1 import os, subprocess
2
3 # Folder where the DDC converter is located
4 path_conv = r'C:\DDC_Revit_Community\datadrivenlibs\'
5 # Path address RVT | IFC | DWG project are located
6 file_path = r'C:\DDC\rstadvanced_sample.rvt'
7
8 # Conversion of one RVT project
9 process = subprocess.Popen([os.path.join(path_conv,
10 'RvtExporter.exe'), file_path], cwd=path_conv)
11
12 print("DDC Conversion process finished")
```

conversion in just 4  
lines of code

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RVT | IFC | DWG as DataFrame.py

```
1 # RVT | IFC | DWG project file name in XLSX format
2 output_file = file_path[:-4] + "_rvt.xlsx"
3 # Read the converted Excel file
4 df = pd.read_excel(output_file)
5 # Update column names to remove storage type in parameter
6 df.columns = [col.split(' : ')[0] for col in df.columns]
```

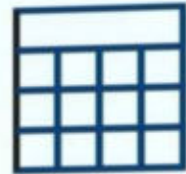
🚀 Structured format is ideal  
for analytics, visualization  
and automation

two-dimensional  
project data



AS

STRUCTURED  
DATA



Column names

ID	Name	Category	Family Name	Height	BoundingBoxMin_X	BoundingBoxMin_Y	BoundingBoxMin_Z	Level
431144	Single-Flush	OST_Doors	Single-Flush	6.88976378	20.1503	-10.438	9.84252	Level 1
431198	Single-Flush	OST_Doors		6.88976378	13.2281	-1.1207	9.84252	Level 2
457479	Single Window	OST_Windows	Single Window	8.858267717	-11.434	-11.985	9.80971	Level 2
485432	Single Window	OST_Windows	Single Window	8.858267717	-11.434	4.25986	9.80971	Level 2
490150	Single-Flush	OST_Doors	Single-Flush	6.88976378	-1.5748	-2.9565	-1E-16	Level 1
493697	Basic Wall	OST_Walls	Basic Wall		-38.15	20.1656	-4.9213	Level 1
497540	Basic Wall	OST_Walls	Basic Wall		-4.5212	-0.0708	9.84252	Level 1

Columns axis = 1

Index label

Index axis = 0

Missing value

Data

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# converters



FULL ACCESS  
TO YOUR DATA



download  
without  
registration

## PRO version



RVT 2023-2024



IFC 4x1 - 4x3

ad-free



Buy Add-Free  
Excel Plugin

## community edition



RVT 2015-2022



DGN V7-V8



IFC 2x3



DWG 1983-2023

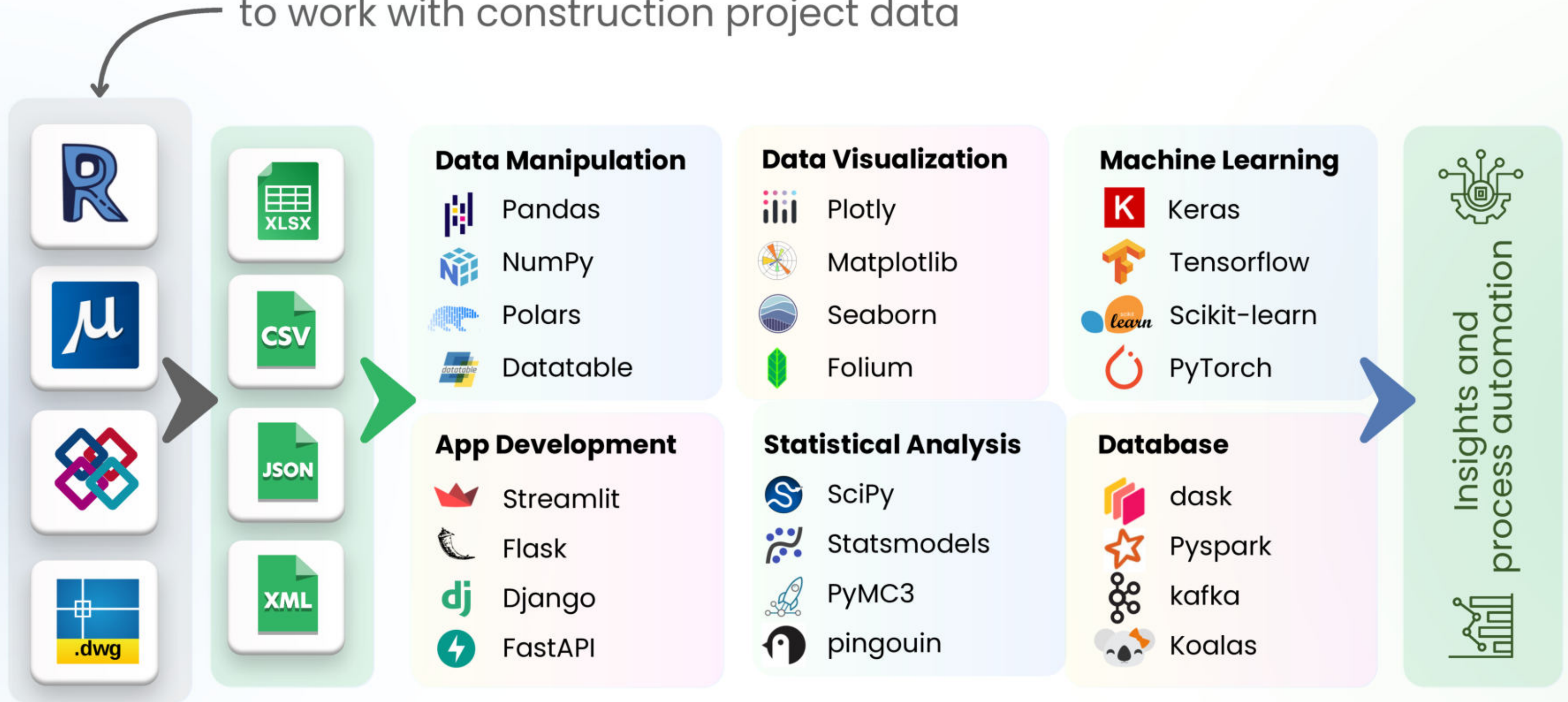
+ ads



# Life Is Short, Use Python

data<sup>driven</sup>  
construction.io

to work with construction project data



easy to learn, easy to develop

STRUCTURED  
DATA



Pandas: The leading library for data manipulation  
and a key tool for building pipelines



**pandas**



8811040

Number of [downloads](#) of the Pandas  
Pipeline library each day



70%

Data engineers [using](#) Pandas Pipeline as  
their primary tool



200k

Questions on Stack Overflow [tagged](#) with  
Pandas Pipeline



## LOAD

Input

```
Importing Revit and IFC data.py

1 # Importing data for processing
2
3 import pandas as pd
4 df = pd.read_csv('C:\Revit_Sample.csv')
```

Output

	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0
2	76554	Door	Glazed Back Door	1300	0.3
3	74456	Window	Window 1700w	1700	0.5

## FILTER

Input

```
Filtering data in Revit and IFC projects.py

1 # Whether each element contains the values
2
3 df[df['Category'].isin(['Wall', 'Window'])]
```

Output

	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0
3	74456	Window	Window 1700w	1700	0.5

## GROUP

Input

```
GroupBy Revit IFC.py

1 # Grouping a Revit or IFC project by parameters
2
3 df.groupby('Category')['Volume', 'Length'].sum()
```

Output

	Volume	Length
Category		
Door	0.3	1300
Wall	7.0	8600
Window	0.5	1700

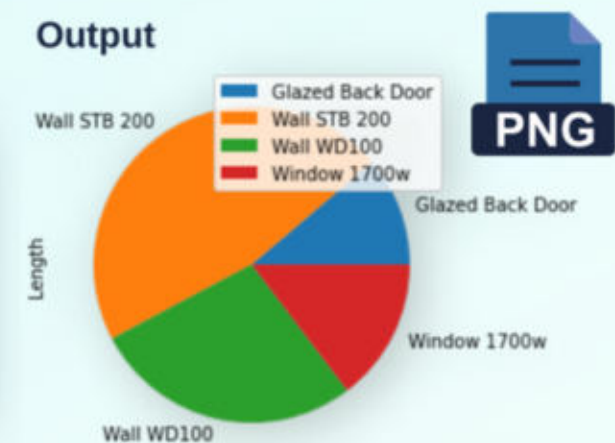


## PIE chart

Input

```
1 # Create a basic pie chart
2
3 df.groupby(['Type']).sum().plot.pie(y='Length')
```

Output

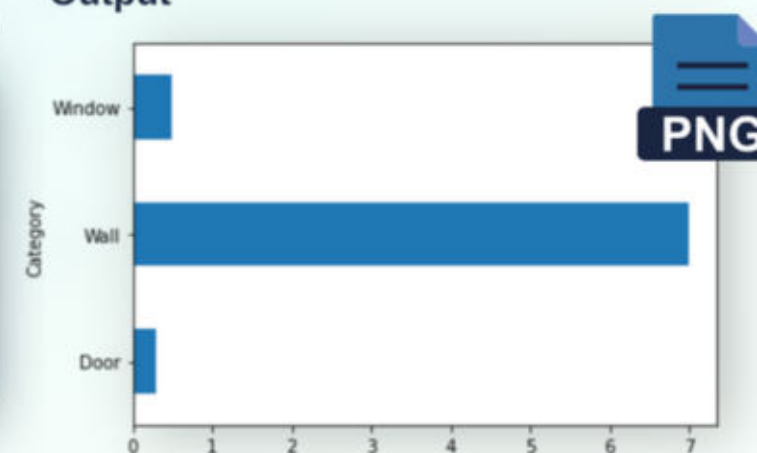


## BAR chart

Input

```
1 # The bar plot can be created as follows
2
3 dfp = df.groupby('Category')['Volume'].sum()
4 dfp.plot(kind='barh')
```

Output



## Regular Expression

Input

```
1 #Regular expression in Revit and IFC
2
3 df[df['Category'].str.match('Wal*')]
```

Output

	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0



## QTO TakeOff

Input

```
QTO by RegEx.py

1 #QTO - Finding volumetric quantities for the group
2
3 dfq = df[df['Category'].str.match('Wal*')]
4 dfq = dfq.groupby('Category')['Volume', 'Length'].sum()
```

snappy.py

Output

	Volume	Length
Category		
Wall	7.0	8600

## EXCEL Data Export

Input

```
Export to Excel.py

1 # Creating a grouping and saving as Excel
2
3 dfe = df.groupby(['Category'])['Length'].agg(['sum', 'count'])
4 dfe.to_excel("output.xlsx", sheet_name='Category_estimate')
```

snappy.py

Output

	A	B	C	D
2	Door	1300	1	
3	Wall	8600	2	
4	Window	1700	1	
5				

Category\_estimate

## PDF Document

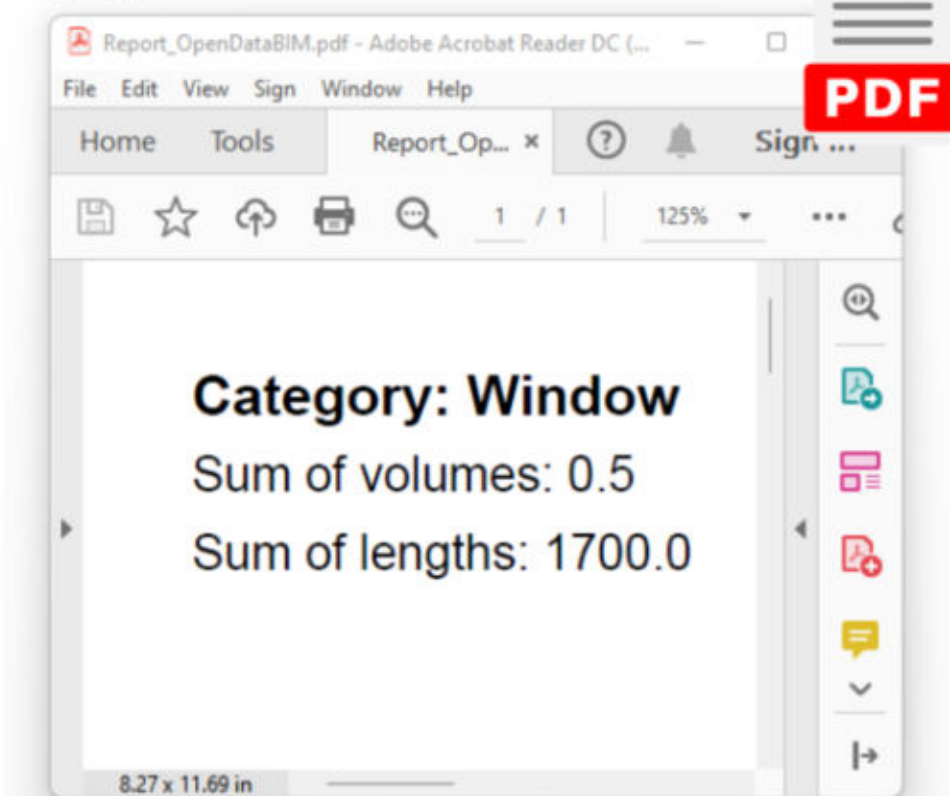
Input

```
Creating a PDF document.py

1 from fpdf import FPDF
2
3 # Determining the volumetric characteristics of the group
4 s_cat = 'Window'
5 dfq = df[df['Category'].str.match(s_cat)]
6 dfq = dfq.groupby('Category')['Volume', 'Length'].sum()
7 cat_len = str(dfq.iloc[0]['Length'])
8 cat_vol = str(dfq.iloc[0]['Volume'])
9
10 # Creating a PDF document based on the parameters found
11 pdf = FPDF()
12 pdf.add_page()
13 pdf.set_font('Arial', 'B', 16)
14 pdf.cell(190, 8, 'Category: ' + s_cat, 2, 1, 'L')
15 pdf.set_font('Arial', '', 14)
16 pdf.cell(190, 8, 'Sum of volumes: ' + cat_vol, 2, 1, 'L')
17 pdf.cell(190, 8, 'Sum of lengths: ' + cat_len, 2, 1, 'L')
18
19 # Saving a document in PDF format
20 pdf.output('c:\Report_DataDrivenConstruction.pdf', 'F')
```

snappy.py

Output





## FILTER



Input

```
Filtering data in Revit and IFC projects.py

1 # Whether each element contains the values
2
3 df[df['Category'].isin(['Wall', 'Window'])]
```

Output

	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0
3	74456	Window	Window 1700w	1700	0.5

Filter the data in the project to keep the wall category items in the project

## GROUP



Input

```
groupBy Revit IFC.py

1 # Grouping a Revit or IFC project by parameters
2
3 df.groupby('Category')['Volume', 'Length'].sum()
```

Output

Category	Volume	Length
Door	0.3	1300
Wall	7.0	8600
Window	0.5	1700

Group the project by the "Type Name" parameter and show the volume of each group

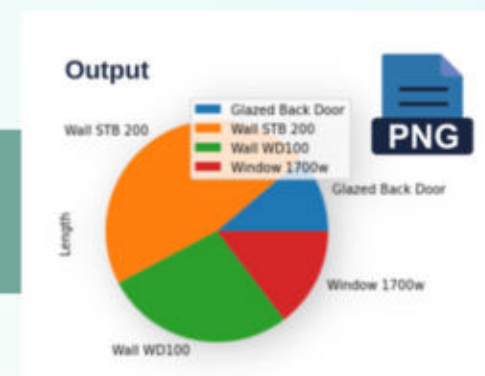
## PDF



Input

```
Creating a PDF document.py

1 from fpdf import FPDF
2
3 # Determining the volumetric characteristics of the group
4 s_cat = 'Window'
5 dfq= df[df['Category'].str.match(s_cat)]
6 dfq = dfq.groupby('Category')['Volume', 'Length'].sum()
7 cat_len = str(dfq.iloc[0]['Length'])
8 cat_vol = str(dfq.iloc[0]['Volume'])
9
10 # Creating a PDF document based on the parameters found
11 pdf = FPDF()
12 pdf.add_page()
13 pdf.set_font('Arial', 'B', 16)
14 pdf.cell(190, 8, 'Category: ' + s_cat, 2, 1, 'L')
15 pdf.set_font('Arial', '', 14)
16 pdf.cell(190, 8, 'Sum of volumes: ' + cat_vol, 2, 1, 'L')
17 pdf.cell(190, 8, 'Sum of lengths: ' + cat_len, 2, 1, 'L')
18
19 # Saving a document in PDF format
20 pdf.output('c:\Report_DataDrivenConstruction.pdf', 'F')
```



Choose the first 20 types by volume and show the result as a Pie chart



Create a PDF report with a table and a graph



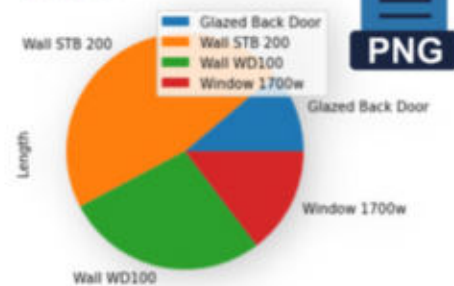
Output

	Id	Category	Type	Length	Volume
0	12577	Wall	Wall WD100	3200	1.0
1	15889	Wall	Wall STB 200	5400	6.0
3	74456	Window	Window 1700w	1700	0.5

Output

	Volume	Length
Category		
Door	0.3	1300
Wall	7.0	8600
Window	0.5	1700

Output



PDF

Show the differences between the new version of the project and the latest version

Filter the data in the project to keep the wall category items in the project

Group the project by the "Type Name" parameter and show the volume of each group

Choose the first 20 types by volume and show the result as a Pie chart

Create a PDF report with a table and a graph

# PANDAS

1 Line of code



IDE

QTO.py

```
df[df['Category'].isin(['OST_Walls',  
'OST_Columns'])].groupby('Type')['Volume'].sum()
```



Milliseconds



1.5" x 1.5"	0.00
Lamelle 11.5	74.82
MW 11.5	141.28
MW 17.5	67.43
STB 20.0	173.78
STB 25.0 WD 12.0	7.33
STB 30.0	88.57
STB 30.0 Rot	16.82
Standard	0.00
WC Trennwand 5.0	1.61

Effort



Input



Time




Output



1 Sentence



LLM Chat

Sum the 'Volume' column, grouped by 'Type', but only for rows where 'Category' is either 'OST\_Walls' or 'OST\_Columns' 



Seconds



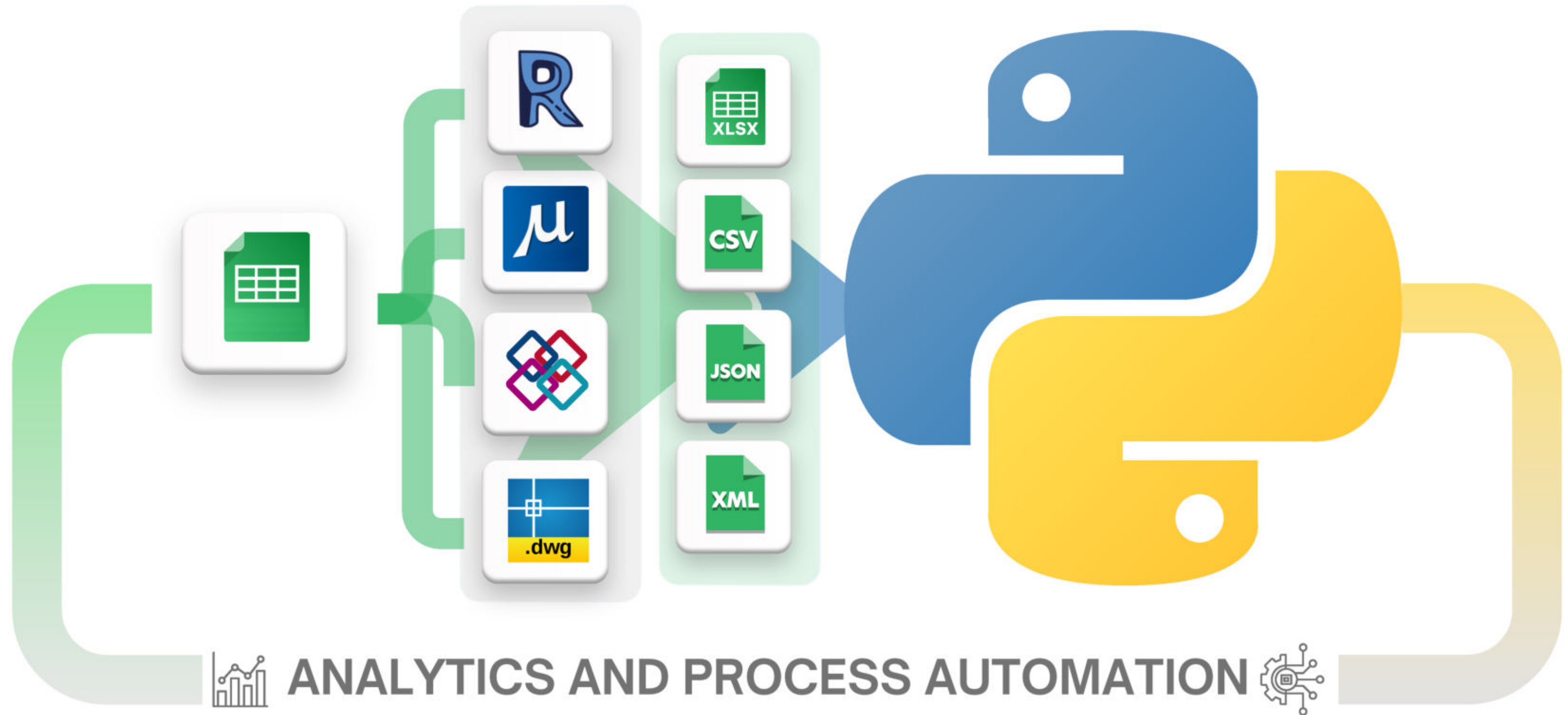
1.5" x 1.5"	0.00
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MW 17.5	67.43
STB 20.0	173.78
STB 25.0 WD 12.0	7.33
STB 30.0	88.57
STB 30.0 Rot	16.82
Standard	0.00
WC Trennwand 5.0	1.61



CHATGPT

# Life Is Short, Use Python

to work with data in construction



Processing

Automated  
Workflow

without data processing

post-processed data

EXTRACT

TRANSFORM

LOAD

Selected Project

Company Projects That Are on Servers

Company Projects That Are on Servers

The Data Handling Process

Automated Workflow script

9:00

1  
Running a  
CAD program

CAD

2

Attribute check

Running the plugin

Setting up the output

17:00

3

Revision Check

Start Revision App

Filling in the settings

4  
Storing data  
in folders

5  
Sending messages  
about created files

Report Creation  
Messages

Getting ready for  
the next project

Generated Data and Reports for Project 1

Datamanager

Project Manager

Designer

Working with  
Data in Apps

Script Running  
on Schedule

Mo., Tu.,  
We., Th., Fr.  
19:00

1

File  
Collection

2

Checking  
Changes

3

Geometric  
Collisions

4

5

Converting to  
Other Formats

6

Revision  
Check

7

Checking the  
Correctness of  
the Attributes

8

Report Creation  
Messages

Automatically Generated Data and Reports for Project 1-X

Datamanager

Project Manager

Designer

CAD (BIM) DATA

STANDALONE DDC EXCEL  
PLUGIN OR DDC CONVERTER

OPEN DATA  
FORMATS

DATA  
APPS



no Revit to run   no API needed   no Forge  
no internet connection needed   no subscription



XLSX  
CSV





## IMAGES

**JPEG**

PNG



## VIDEO

**MPEG**

AVI



## AUDIO

**MP3**

WAV



## CAD (BIM)

**XLSX  
& DAE**

CSV & GLTF





**Processing and  
visualization**

Excel >>



**Automation  
and Pipelines**

Python and JN >>



**UNREAL  
ENGINE**



**Visualize  
geometry**

UE and Unity >>

OMNIVERSE



**Training and  
simulation**

USD and Omniverse >>

And 10+ more popular data platforms



**Nicolas Merot**

Ingénieur BIM | Caeli Ingénierie



DataDrivenConstruction products revolutionize data management in construction! Their IFC and RVT to Excel converters enable smooth data analysis and extraction, optimizing...

[Read more](#)



**Daniel Glober**

BIM-Manager | SCHOLZE-THOST GmbH



Revit and IFC reports that used to take me almost weeks to create are now updated in just a few minutes. I was able to quickly understand what the DataDrivenConstruction did and thu...

[Read more](#)



**Dmitri Garbuzenko**

BIM and AIM Coordinator | RB Rail AS



With the help of Python and especially the pandas library, as the DataDrivenConstruction team does, we are now able to perform delivery checks four times faster....

[Read more](#)



**Prof. Dr.-Ing. Michael Bühler**

Co-Owner GemeinWerk Ventures



Be part of the movement with DataDrivenConstruction! Let's make true freedom in data formats a reality and catalyze a new era of productivity and innovation in construction....

[Read more](#)



**Abdelrahim (Mohamed) Deghidry**

BIM Manager | Consolidated Contractors Company



DDC converter and Plugin is a fantastic and helpful tool for visualisation and quantification the meta data from Revit. Thanks for sharing such helpful tools!



**Jānis Dzenis**

BIM Coordinator | Merks, SIA



This is a fantastic tool, haven't seen one like this in a long time. In this era, we have countless tools and methods for creating models, drawings, tables, and other forms of data....

[Read more](#)



**Valerio Spini**

Settore RVCS



Great experience: Until now, I used to open IFC files in Blocknote to check the parameters and their structure. Thanks to the DataDrivenConstruction converter I can check the parameter...

[Read more](#)



**Irina Fischer**

BIM Coordinator | OBERMEYER Group



The decision to use Jupyter Notebook for results verification turned out to be highly beneficial. Our experience with solutions from Data Driven Construction and Jupyter Notebook...

[Read more](#)



# Excel Add-in

free basic  
functions for  
working with  
data

FUNCTIONAL APPLICATIONS AVAILABLE IN THE DATADRIVENCONSTRUCTION PLUGIN FOR EXCEL



RVT to Excel



IFC to Excel



DWG to Excel



Hide Columns



Remove Filters



Project Geometry



Visible Rows



Selected  
Elements



Change  
Colors



Change  
Transparency



Add BBox  
Data



Check  
Duplicate



QTO  
Table



CO2  
Emissions



Check  
Parameters



Create  
Dashboard



Comparing  
Versions



Merging  
Projects



Export  
to CSV



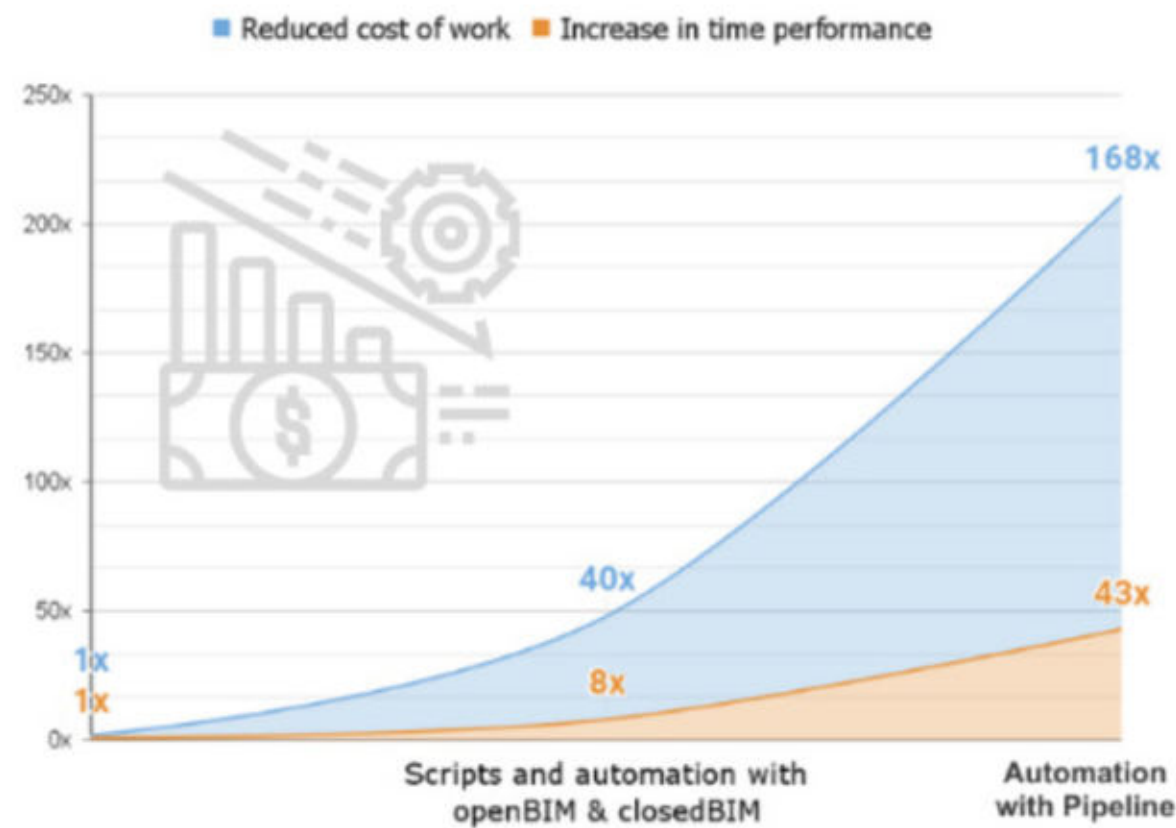
Export  
to JSON



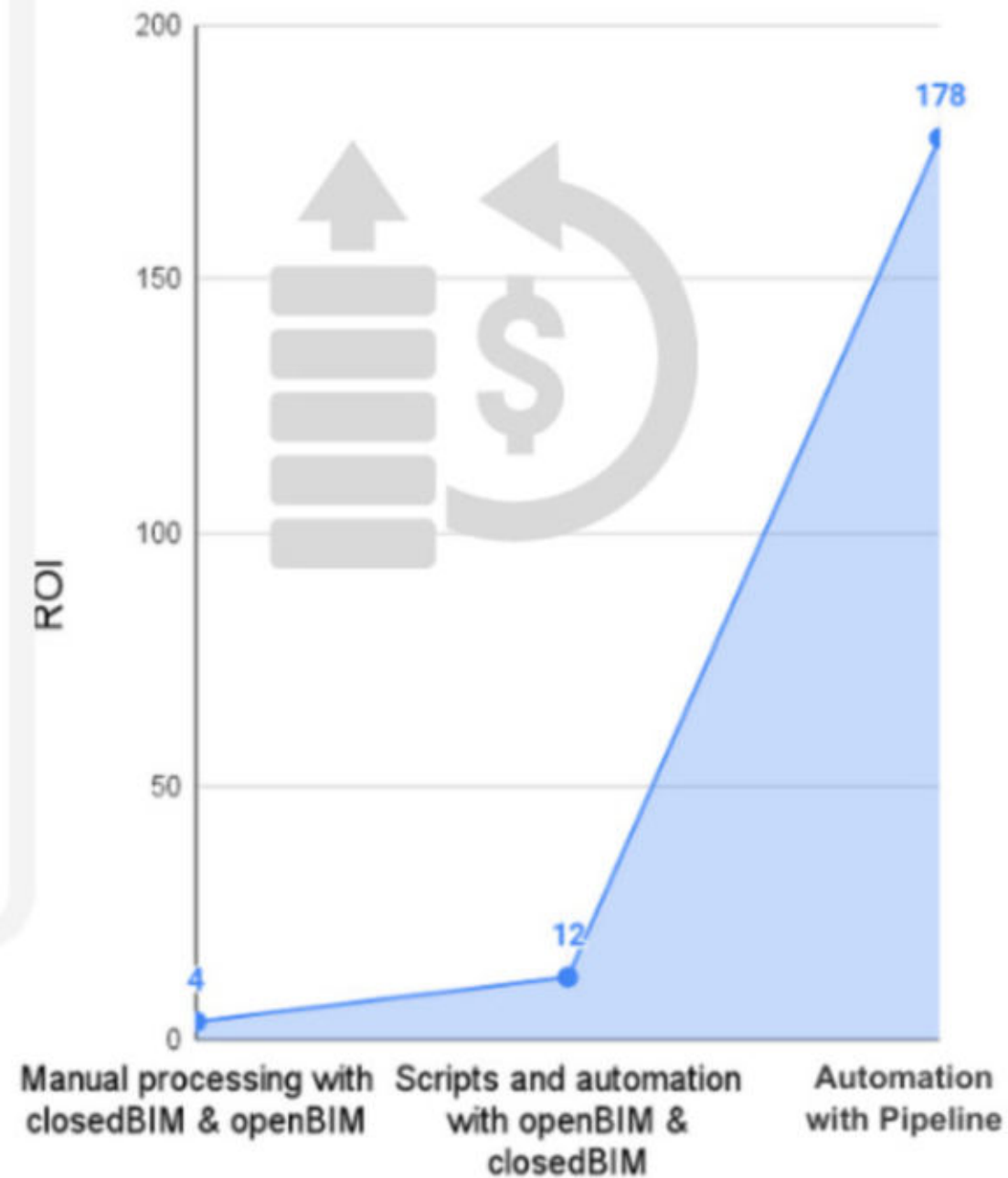
Export  
to XML

# Utilizing Pipeline provides an exponential increase in productivity

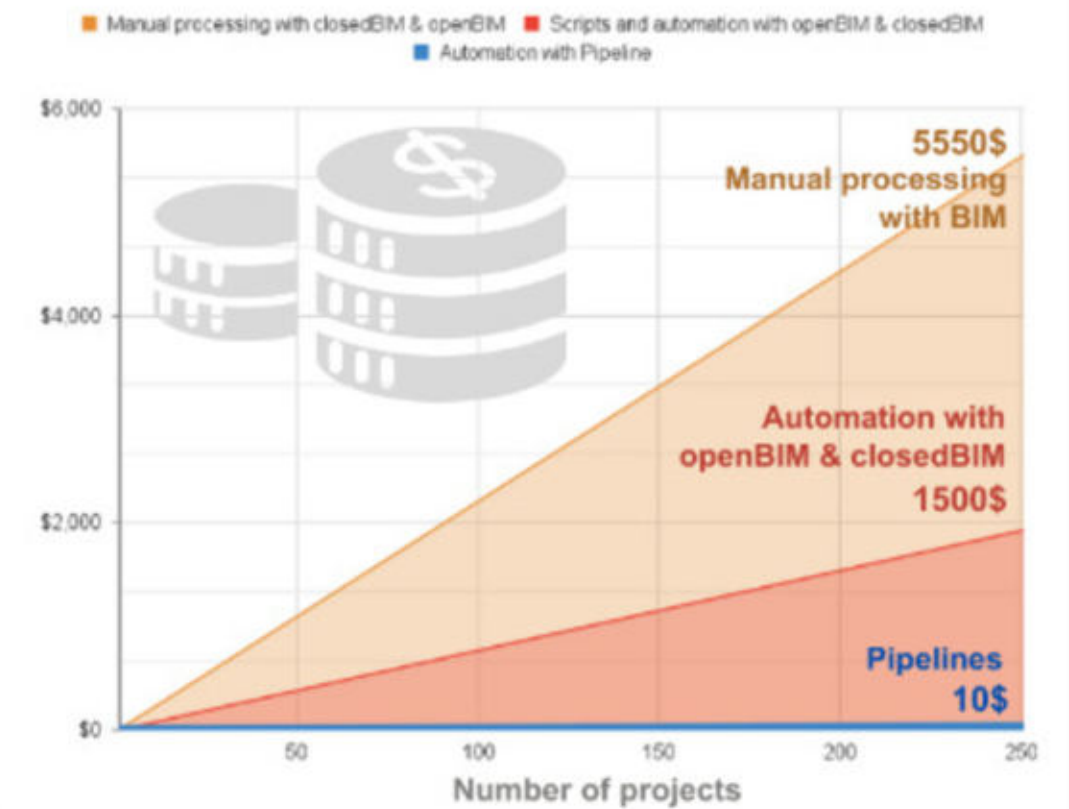
Reducing the cost of work and increasing productivity over time



Comparison of ROI of different automation concepts



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





Tools for working and processing  
project data in Revit™ and IFC formats



DDC

Revit

IFC

BIM 360 & ACC



Open Format



Quality of Data



Don't Need CAD to Get Data



Don't Need the Internet



Data Structure

Structured Data

Closed Data

Semi-Structured Data

Closed Data



Data Form

Table

Graph as a classifier

Graph as a classifier

Graph as a classifier



Batch Processing



Automate Data Mining

1 line of code

100+ lines of code

100+ lines of code

100+ lines of code



No API Restrictions



Community



Ready-made solutions



Easy to Work



No BIM skills required



Basic Work Tool

Excel

Revit

OpenBIM Tools

Forge



Compatible with ERP Systems



# data-driven construction.io

no Revit to run

no plugins

offline

no BIM software

standalone application

no BIM formats

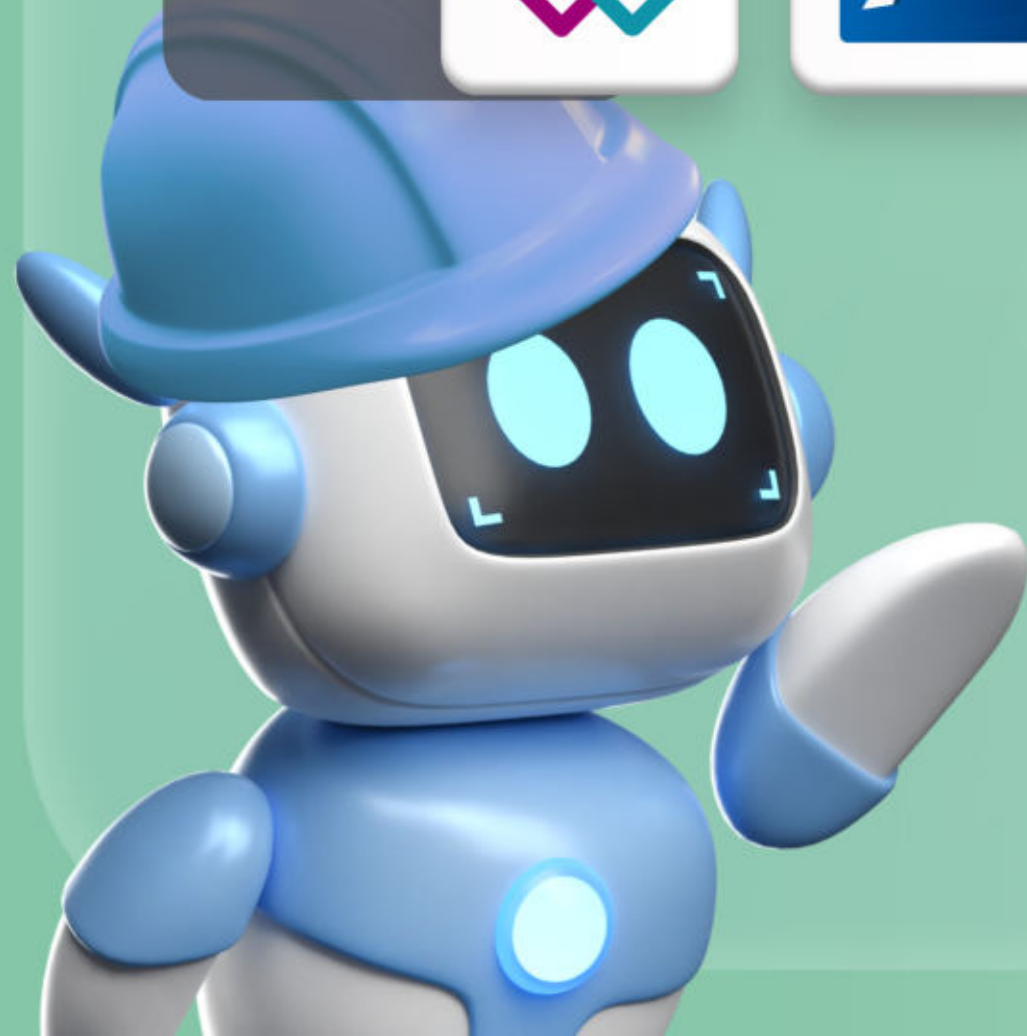
no APIs



Democratizing  
access to data from  
CAD software



WORK WITH DATA FROM CAD  
(BIM) DIRECTLY INTO CHATGPT



Code for converting ⚡ data  
stream into required formats  
and documents

# How Secure is My Data?

Your information  
remains strictly yours



closed data



open data



no Revit to run

no plugins

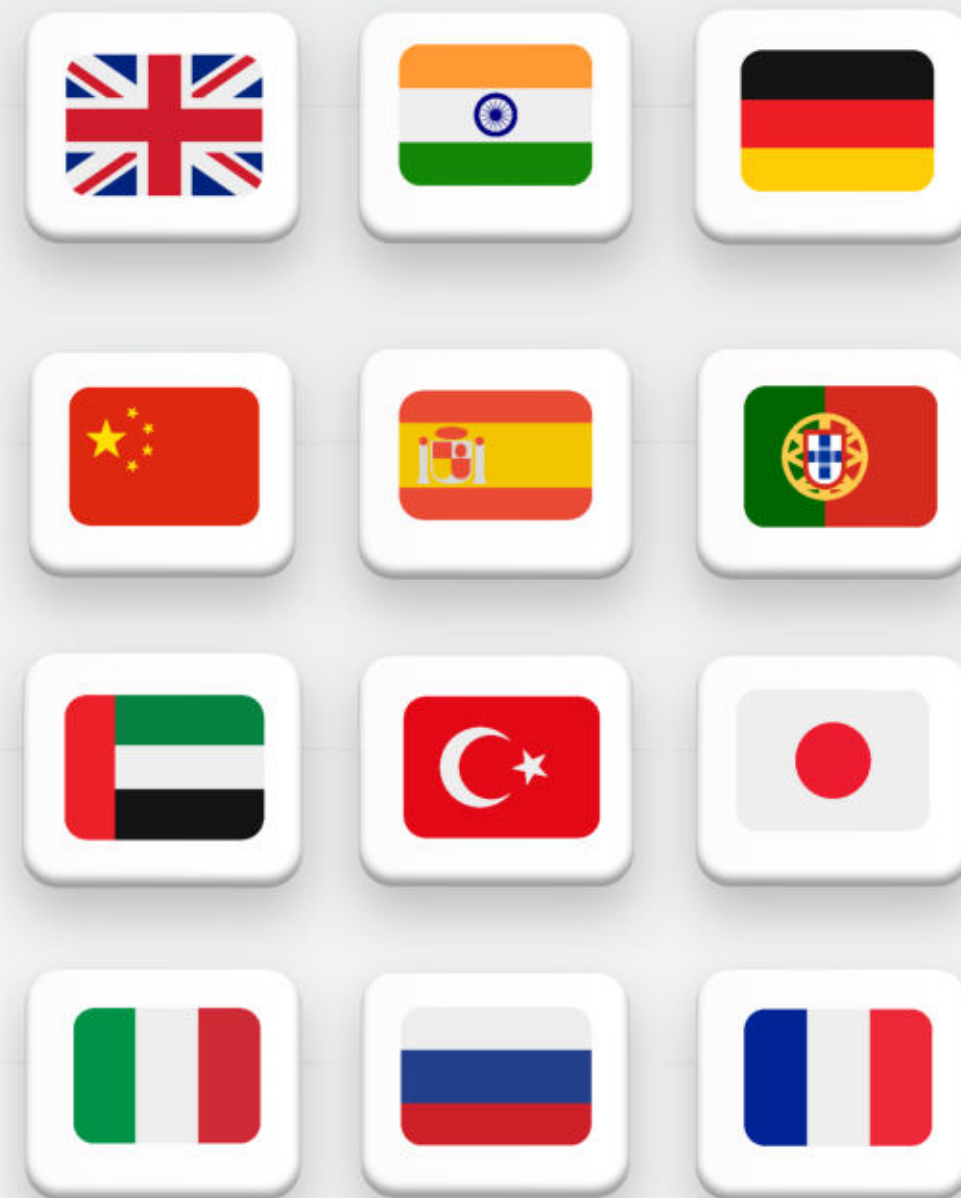
offline

no BIM software

standalone application

no BIM formats

no extra costs



**"DATA-DRIVEN CONSTRUCTION: Navigating the Data Age in the Construction Industry"** opens the door to the world of digital innovation in construction for a wide audience, offering insights into the latest technological advancements shaping the industry.

# ~80 MOST IMPORTANT TOPICS ON DATA MANAGEMENT IN CONSTRUCTION



# 210

## UNIQUE

### ILLUSTRATIONS



# Support & Training

Dedicated Post-Implementation Support  
Training Modules to Get You Started

## What We Offer



### Customized Data Strategies

Tailored solutions for data collection, management, and analysis that fit your specific project requirements



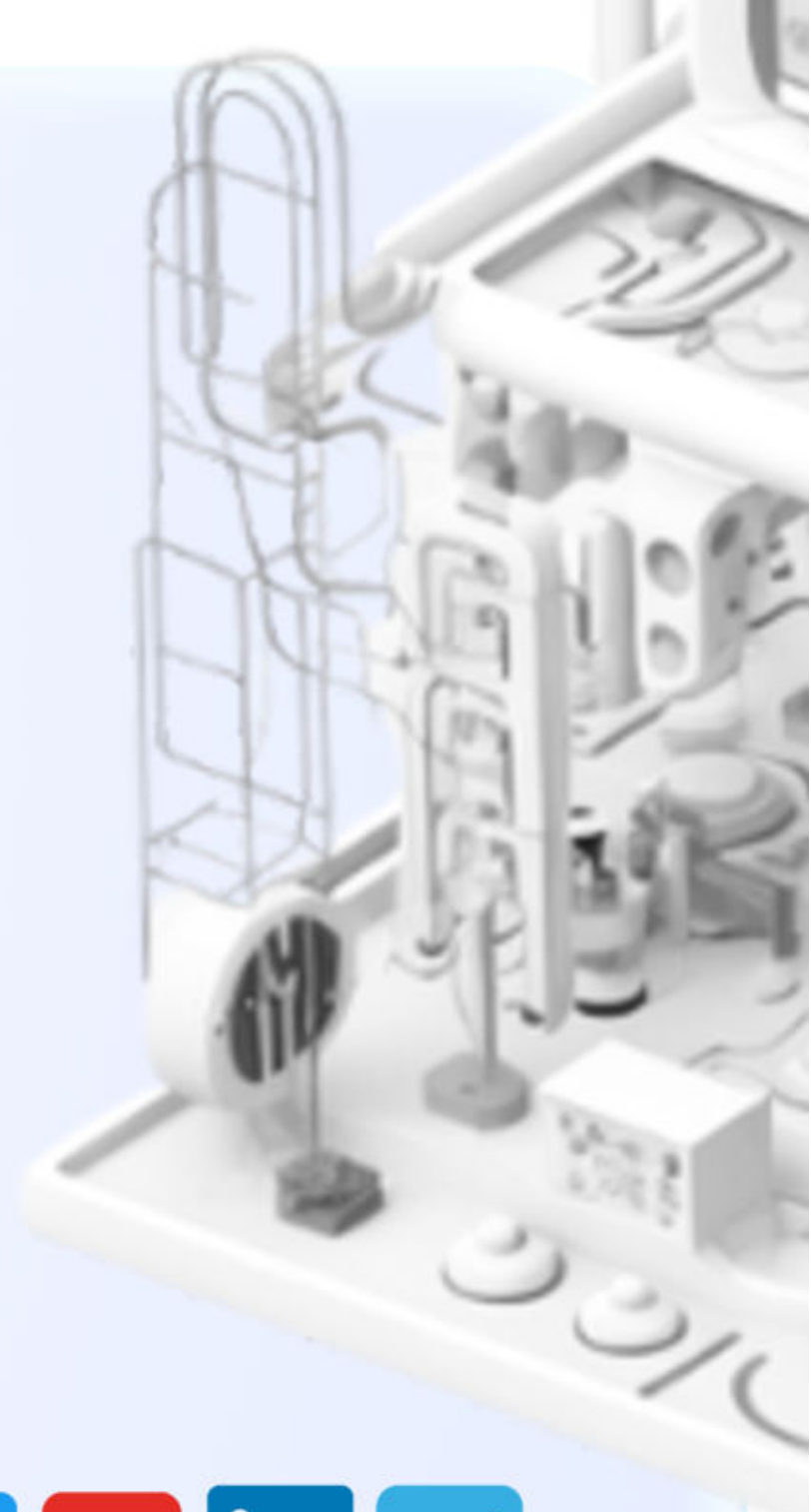
### CAD Conversion and Integration

Streamline your project documentation with our advanced CAD conversion tools, making data easily accessible and usable



### Training and Support

Empower your team with the knowledge to leverage BIM data, enhancing productivity and innovation



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# data-driven construction.io

mining | visualization | analytics | automation



[datadrivenconstruction.io](https://datadrivenconstruction.io)

[info@datadrivenconstruction.io](mailto:info@datadrivenconstruction.io)



Together, Let's Build the  
**Future of Construction**