🚀 Move to **BIM level 3** where only data and processes remain and where 🔓 your **data is yours**

data driven construction.io

CAD (BIM) data quality

Excel Add-in

Data filling in CAD (BIM)

Date analytics in construction

LLM for CAD (BIM)

Users Across the Globe are Transforming Insights with Open Data for Smarter, Faster, and More Efficient Decisions

CAD (BIM) data quality

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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.

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. By turning IFC data into a pandas DataFrame and comparing it with quantification tables or classification databases, we have made our expertise fast and reliable.

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 thus extend and modify it to fit projects.

The DataDrivenConstruction team showed me examples of blocks and scripts that can automatically generate PDF, XLSX, and DOCX files that mark errors/defects in the model. Additionally, we also now do automatic checks for IFC structure, file naming, etc.

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 parameters and see their structure directly in MS Excel in an orderly and SMART way, amazing!

Nils Strumberger
BIM- Coordinator | Fact GmbH

★★★★★

The DDC (Data Driven Construction) Excel Plugin is a game-changer, transforming proprietary CAD models into open source data frames for seamless integration and AI interaction.

It significantly improves workflows and offers exceptional value for money by saving time and boosting productivity. Highly recommended for anyone looking to enhance their projects with data-driven insights.

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.

The DDC Excel plugin provides me with the capability to manage information in alternative ways.

Vinod Kumar
BIM Manager | Esttareal solutions

★★★★★

DataDrivenConstruction approach is truly revolutionary and has the potential to transform the construction industry. It's amazing to see how you are empowering users to work with structured data in a user-friendly way, leveraging the power of Excel and open-source tools.

I'm sure that your Excel plugin and data management solutions will be a game-changer for construction projects. Keep up the fantastic work!

Abdelrahim (Mohamed) D...
BIM Manager | Consolidated Contractors C

★★★★★

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!

Mohamed Touati
Principal Data Scientist at Pixemantic

★★★★★

As a data scientist, I use data every day in every topic and field and think that data can appear in one format to make it easier to use and explore.

After I tried the DDC converter, it became the only solution for me to manage and convert all BIM documents. Thanks to DataDrivenConstruction, I can now work with all IFC and Revit files automatically without having to upload files to the server.

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 has been extremely positive.

Overall, the integration of solutions from Data Driven Construction and Jupyter Notebook has greatly improved our workflows. Their combined capabilities and performance have not only optimized data processing, but also produced meaningful results, making them highly recommended tools.

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.

The real and necessary journey from closed to "open" formats has not even started: True freedom in data formats —free from proprietary ties and accessible to all—is what we need to unlock innovation and collaboration across the construction industry, particularly benefiting the 99% of construction, i.e. SMEs and unchaining the sector for accelerated growth

Marie Annette Kittus
BIM Manager | Esttareal solutions

★★★★★

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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 project management and documentation.

A powerful, user-friendly solution for construction professionals

automate the verification process

CAD (BIM) data quality

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🚀 Move to BIM level 3
🔓 Your data is Yours

Challenges	Objectives	Solution
Poor quality data Errors in models and parameters can lead to significant financial losses.	**Ensure high quality** of data coming from CAD and BIM systems	**Data conversion** Provides easy access an processing of data
Integration complexity Integrating data from different sources and formats requires significant resources.	**Reduce errors** and inconsistencies in models	**Open Data Formats** Use granular, structured data for simplified data integration
Closed data formats The use of proprietary formats makes it difficult to access and process data.	**Improve the process** of data integration and processing for later use	**Process Automation** Use Python and LLM to validate, analyze data

5 STEPS FOR ENSURING QUALITY OF CAD (BIM) DATA

01 Parameterization of the task

02 Creating validation rules

03 Fully automatic quality control

04 Fill the model with the right data

05 Presentation of verification data

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info@datadrivenconstruction.io

no API needed | no file based | no hidden fees
no internet needed | no limitations | no quality loss
no plugins | no subscription | no CAD-BIM needed

BIM level 3 | granular data | open data | unified
DataFrame | LLM | analytic | open source tools
data-driven decision | structured data | pipelines

streaming check within seconds

Checking the quality

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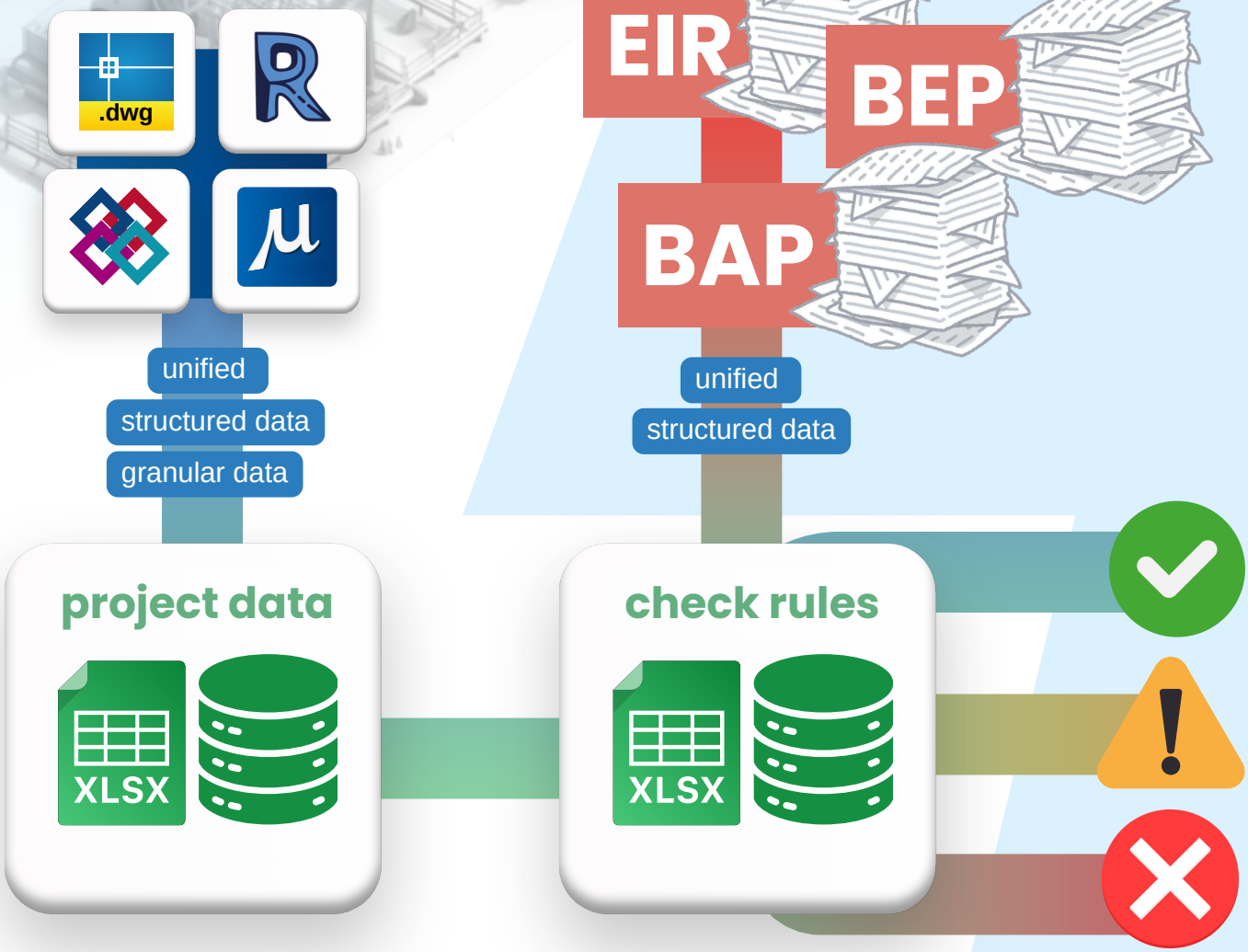
Move to BIM level 3

Your data is Yours



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Excel Add-in

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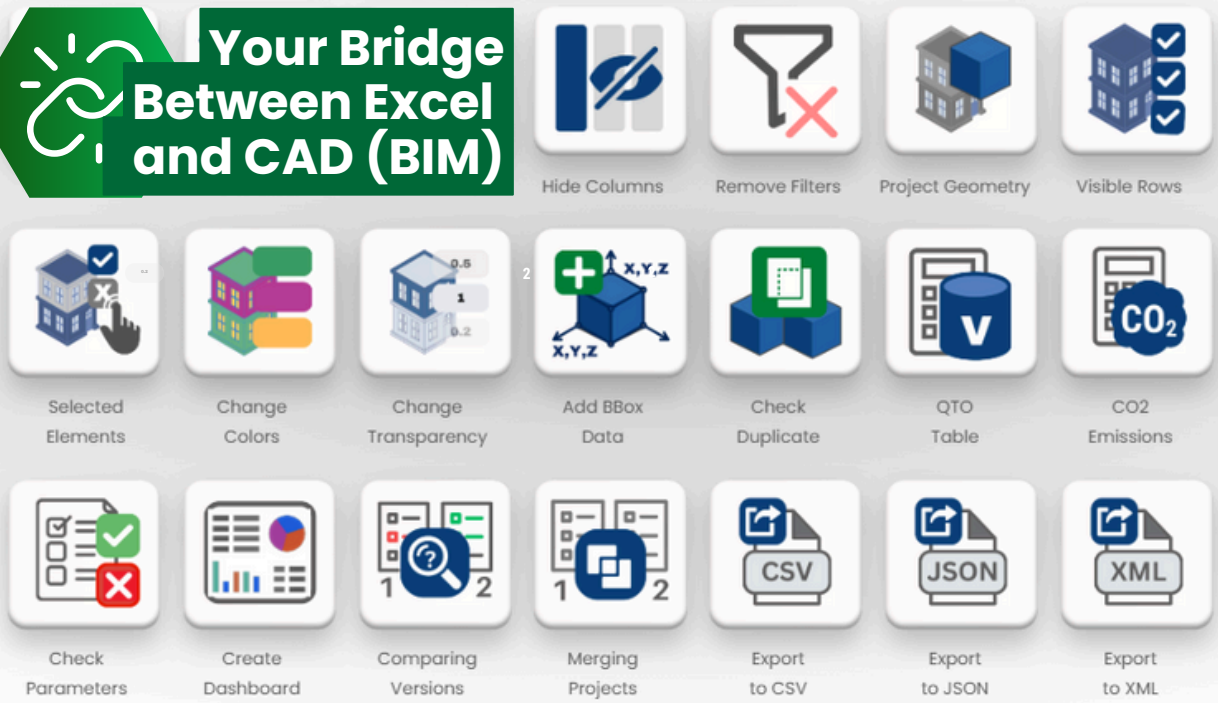
RVT X

IFC X

.dwg DWG X

FUNCTIONAL APPLICATIONS AVAILABLE IN THE DATADRIVENCONSTRUCTION PLUGIN FOR EXCEL

Your Bridge Between Excel and CAD (BIM)



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Data filling in CAD (BIM)

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Move to BIM level 3

Your data is Yours

converter

DDC

data export

plugin

API

model filling

project data

Benefits

Data Security
Data is under complete control and accessible without third-party vendors

Interoperability
Interoperability between different systems, regardless of their origins

Improved Collaboration
Collaborate in real time with open data and tools

Scalable Solutions
Solutions that easily scale to any project size

Cost Efficiency
Reduce costs by utilizing free and open source tools

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build smart, build precise

Date analytics in construction

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Move to BIM level 3

Your data is Yours

Key Benefits

Improved Project Planning
Data analytics enable predictive modeling for better accuracy in timelines and budgeting

Efficient Resource Management
Optimize allocation of materials, machinery, and manpower with real-time data

Risk Mitigation
Advanced analytics help identify potential risks and devise proactive strategies to mitigate them

Our Approach

Data Integration
Seamless aggregation of data from various sources including BIM, CAD, and IoT devices

Custom Analytics Solutions
Tailored analytics frameworks that align with specific project needs and goals

Continuous Support and Training
Ensuring your team is equipped to utilize analytical tools and methodologies effectively

Life Is Short, Use Python

to work with construction project data

R, μ, .dwg

XLSX, CSV, JSON, XML

Data Manipulation
- Pandas
- NumPy
- Polars
- Datatable

Data Visualization
- Plotly
- Matplotlib
- Seaborn
- Folium

Machine Learning
- Keras
- Tensorflow
- Scikit-learn
- PyTorch

App Development
- Streamlit
- Flask
- Django
- FastAPI

Statistical Analysis
- SciPy
- Statsmodels
- PyMC3
- pingouin

Database
- dask
- Pyspark
- kafka
- Koalas

Insights and process automation

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TEXT TO ACTION

LLM for CAD-BIM

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Move to BIM level 3

Your data is Yours

GROUPING AND PROCESSING WITH ONE LINE OF CODE

Input

```python
# Whether each element contains the values

df[df['Category'].isin(['Wall', 'Window'])]
```

Id	Category	Length	Volume
12577	Wall	3200	1.0
15889	Wall	5400	6.0
74456	Window	1700	0.5

Input

```python
# Grouping a Revit or IFC project by parameters

df.groupby('Category')['Volume', 'Length'].sum()
```

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

Input

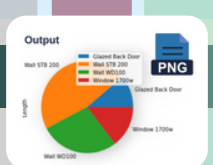
```python
from fpdf import FPDF

# Determining the volumetric characteristics of the group
s_cat = 'Window'
dfq= df[df['Category'].str.match(s_cat)]
dfq = dfq.groupby('Category')['Volume', 'Length'].sum()
cat_len = str(dfq.iloc[0]['Length'])
cat_vol = str(dfq.iloc[0]['Volume'])

# Creating a PDF document based on the parameters found
pdf = FPDF()
pdf.add_page()
pdf.set_font('Arial', 'B', 16)
pdf.cell(190, 8, 'Category: ' + s_cat, 2, 1, 'L')
pdf.set_font('Arial', '', 14)
pdf.cell(190, 8, 'Sum of volumes: ' + cat_vol, 2, 1, 'L')
pdf.cell(190, 8, 'Sum of lengths: ' + cat_len, 2, 1, 'L')

# Saving a document in PDF format
pdf.output('c:\Report_DataDrivenConstruction.pdf', 'F')
```

Output



PDF

TEXT REQUESTS VIA PROMTS IN LLM CHATS

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

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Moving from Files to Granular Data

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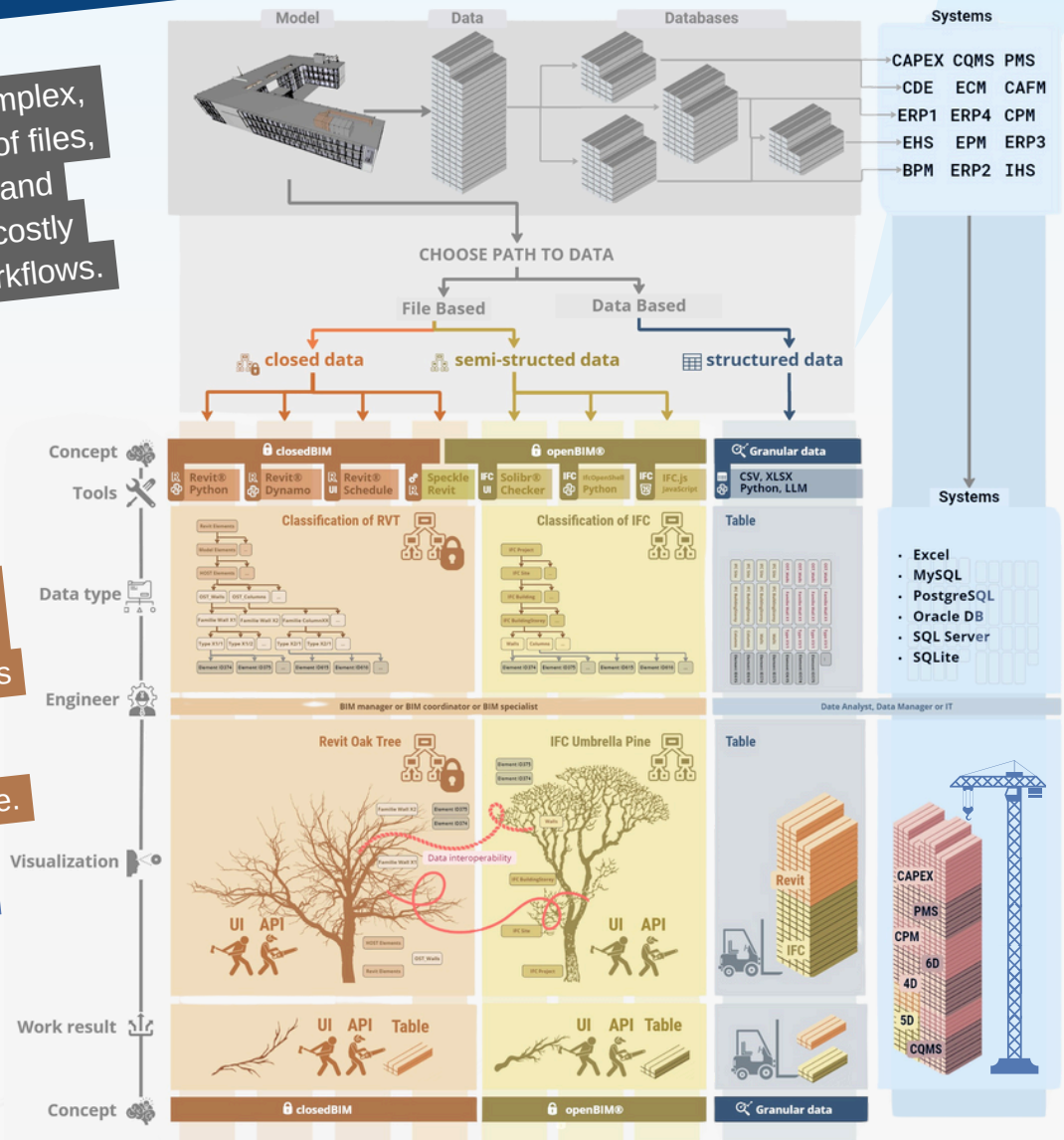
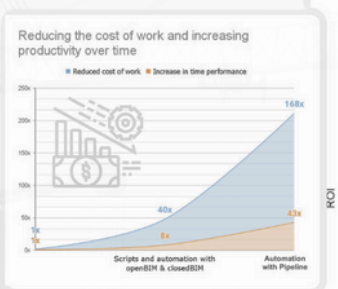
CAD (BIM) project management is complex, the sheer number of files, different schemas and versions leads to costly and inefficient workflows.

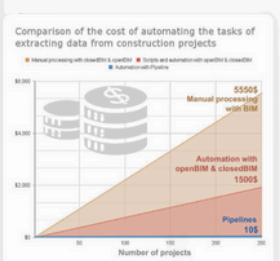
Different project formats have different data schemas that need to be adapted to when processing each business case. Dozens of different schemas make unified data processing impossible.

Complex structured formats in semi-structured form make it difficult to access element properties.

With DDC Data Models, you unlock efficiency, reduce costs, and gain a reliable source of truth to achieve your project goals faster.







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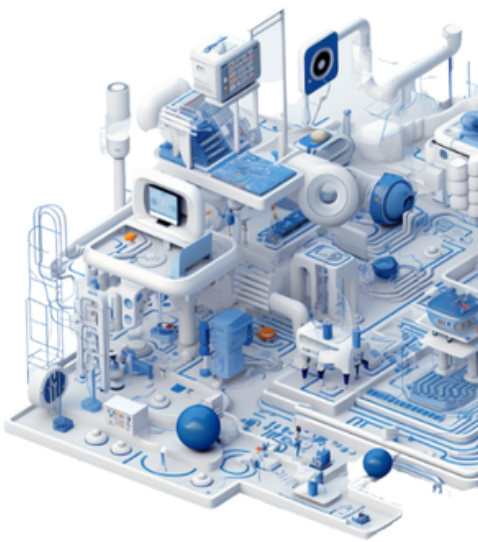
Unlock the full potential of your construction projects with our specialized consulting services at DataDrivenConstruction.io. Our expertise in CAD (BIM) data integration and management transforms your workflow efficiency and decision-making process.



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

Your Benefits

Reduce Costs and Save Time
Our strategies optimize resource allocation and project timelines

Enhanced Decision Making
With better data at your fingertips, make more informed decisions that lead to successful project outcomes

Competitive Edge
Stay ahead in the industry with cutting-edge data practices that set your projects apart

Transform your approach with DataDrivenConstruction and lead your projects to success with data!

Greater Karlsruhe Area.
Obergrombacher Str. 31, 76646 Bruchsal
+49 (0152) 58901584
info@datadrivenconstruction.io

Become our ambassador or partner and help spread the word about simple and open tools for working with CAD/BIM data

Join the Open Data and Tools Movement!

We offer everyone the opportunity to be part of the future where data is accessible, open, and easy to integrate. With our support, you can transform complex design and construction processes into automated, efficient, and accessible solutions

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🔓 Your data is Yours

Why Become an Ambassador?

Influence the Industry
You will have the chance to directly impact industry standards and practices by promoting the use of open tools

Exclusive Access to Resources
Gain early access to our materials, updates, webinars, and tools that will keep you at the forefront of innovation

Build Your Personal Brand
As an ambassador, you position yourself as an expert in using simple and open technologies, boosting your reputation in the professional community

Professional Growth
You will learn and grow alongside leading experts in automation, data analytics, and open formats, expanding your skill set

How to Become a Partner?

Submit an Application
Share your contact details and tell us about yourself, including why you're interested in this project

We'll discuss cooperation together
We will provide you with all the necessary materials and instructions to become an expert in using our solutions

Start Sharing Knowledge
Host training events, write articles, or share information on social media, helping others implement simple and open tools in their work

Who Are We Looking For?

We are seeking enthusiasts, experts, and innovators who want to:

- Promote the use of open data formats and tools
- Organize training sessions, seminars, or webinars
- Contribute to the development of open technologies through articles, blogs, social media, or videos
- Collaborate with us to attract new companies and professionals to the use of simple and free tools

Benefits for Ambassadors and Partners

- **Exclusive** materials and tools
- **Discounts and bonuses** on products and services
- **Support** from our team every step of the way
- **Recognition** for your contribution to the community

Ready to Join?

Contact us to learn more about becoming an ambassador or partner, and let's build the future together with open data and simple solutions!

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DataDrivenConstruction Guidebook

Navigating the Data Age in the Construction Industry

Martin Loureiro-Barrientos
BIM Coordinator | Populous, London

★★★★★

Probably the most interesting book of the last two years that I know of. Required reading to break free from the 'matrix' perpetuated by software vendors, this book delves into how emerging tools like artificial intelligence offer fresh opportunities for data management without extensive technical expertise, poised to revolutionize even the most antiquated sectors like construction.

With flawless translation and mind-bending graphics, it's a must-read. Eagerly anticipating the sequel. Very good buy in my opinion...

I will read it again and waiting for the second part!

Paul Ransley
PLU Systems Engineer | Transport for Lon

★★★★★

I highly recommend Artem's book that addresses, as the title says, a data driven information management approach for AECO. I am currently using it to help initiate a number of discussions with various groups. I have found it a very accessible reference.

As well as a thorough overview of the history context of tools in AECO, data and introducing several key technologies the book contains a number of very useful diagrams, that outline the scope of data sources and end user artefacts, common database types encountered, applications working on that data and output artefacts in organisations or projects, with sample workflows.

It strikes me that these are the types of diagrams we need more of when developing and monitoring information strategies and contribute to BEP's - defining the overall enterprise data model onto which the boundary for a PIM and AIM can be overlaid.

Pierpaolo Vergati
Senior Construction Project Manager | Finl

★★★★★

For anyone in the construction industry, from rookies to seasoned pros, this book is a game-changer! It's not your typical dusty read—it's packed with insights, strategies, and a touch of humor to keep you engaged. From ancient data recording methods to cutting-edge digital technologies, it covers the evolution of data usage in construction.

It's like taking a time machine through the evolution of construction data—minus the wonky flux capacitor.

And shoutout to Artem Boiko , our "Doc E. Brown", for crafting this data-packed journey!

Whether you're an architect, engineer, project manager or data analyst, this comprehensive guide will revolutionize the way you approach projects. Get ready to optimize processes, enhance decision-making, and manage projects like never before!

Salih Ofluoğlu
Antalya Bilim University | Dean, Faculty of

★★★★★

I think that the book addresses a significant, contemporary topic relevant to the construction industry. As it was also emphasized in the book, information is a crucial asset for the construction sector, and having it in accessible formats greatly facilitates accurate decision-making and expedites project timelines.

The book offers a neutral and efficient approach to accessing and taking advantage of this source in decision-making. The methodology presented in the book leverages a contemporary approach that combines artificial intelligence-driven programming with accessible open-source tools.

By harnessing the power of AI and utilizing open-source software, the methodology aims to enhance automation, optimize processes, and promote accessibility and collaboration within the field. The language of the book is clear and easy to follow.

Congratulations on the quality work! I have enjoyed reading it. Wishing you continued success as well.

Natasha Prinsloo
BIM Coordinator | energylab UK

★★★★★

All I can say is, WOW! The way you incorporated history, ChatGPT, the graphics, and the overall ease of understanding your points is truly remarkable. The flow of the book is amazing.

There are so many brilliant aspects to this book; it's genuinely a game-changer. It's a great source of information, and I commend you for the effort and passion you've put into it. Congratulations on creating such a remarkable work.
I could go on, but suffice it to say, I'm incredibly impressed!