

Safe Software®

WV DOT GIS Day | AI in FME



**Dan
Minney**

Customer Solutions Specialist

Agenda

1. Introduction
2. AI in FME
3. Resources
4. Discussion and Q&A

Introduction

Safe Software



Safe Software

40K+

FME Community members

128

countries with FME customers

25K+

organizations worldwide



30+

years of solving data challenges

140+

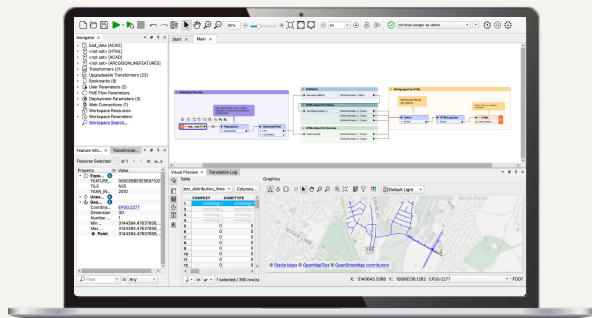
global partners with FME services

200K+

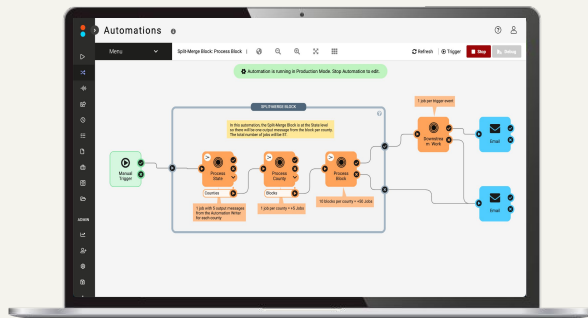
users worldwide

FME Enterprise Integration Platform

The only All-Data, Any-AI Platform.



All Data *workflows* are built here.



Brings life to FME Form *workflows*



FME Flow Hosted

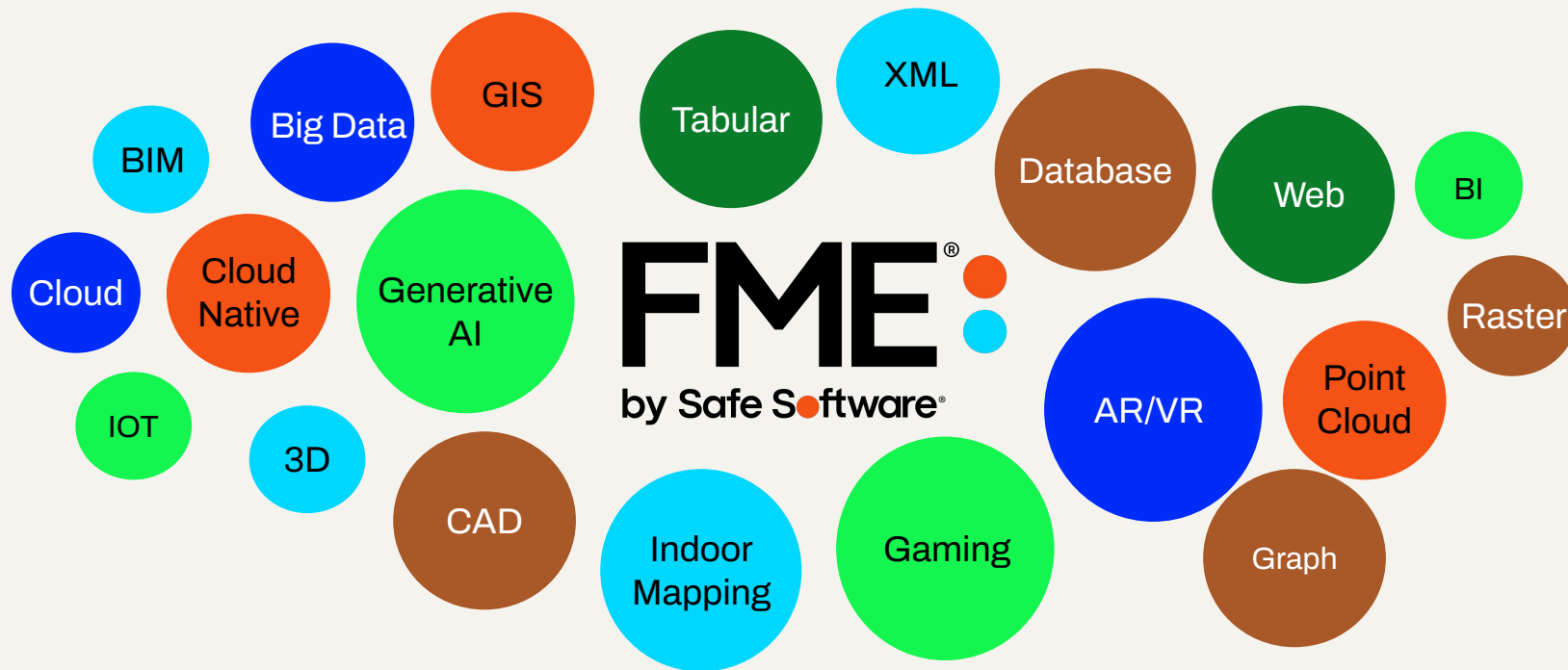
SaaS version of FME Flow



Experience your data where it matters most. In context

Only FME Supports All-Data

Safe Software





OpenAI

Gemini



~~FML~~ Connecting Data to AI Services



Amazon Bedrock



Microsoft Azure



Hugging Face



Gemma



Which AI should you use?



It depends on the problem you are trying to solve.

AI Customer Stories

Real World Story #1

UK Power Networks uses
AI to extract data from
Scanned Documents.



Address 81 Addison Way Appl. No. 2952

Date of Coupling May 14th 1912

" Connecting May 14th 1912

Service Cable on Premises 26 ft. 2X007 Section.

" " to be charged Nil ft.

Remarks: Group 1212 Service 2814

THE HENDON ELECTRIC SUPPLY CO., LTD.

Ref. 6909 Youngs A.C. SERVICE

Pipe 137 Essex Street

Cable 13.9.6.0225 Twb Drum No. 36468 Length Across Road

Joint Box Small Sleeve Along Path 1-1

Fuse Box Tucker Into Premises 5-0

Date connected 27.5.27 6-1

F.W. 22900

Jointer REPAIRS Phase White

T.0256: 13/12/43 = disconnected owing to enemy action = H. Bales

Century-old Handwritten Service Record Cards

SERVICE

Ref. 2907 Parker, Riverside

Pipe • 2" W.I. 305' 0" , 3 bends.

Cable Outlets: 19/17. Dialite, Dr. 2389. } Another
± :- 7/16. Gloves, from Hospital. } Overhead.

Length:—Across Road
 Along Path 138-1
 Into Premises 31-0
169-1

Boxes Insto B.I.W. box in Gateway of Boulton & Pauls.

Fuse Box 2. No. 3 ~ 50 amp. 2 way Keylock.

Date Connected 18-11-07. Jointer _____ Polarity 3 wire.

REPAIRS

Jan. 13:10. 50% + better caused by insulation being cut by branches of trees. Rejoined cables.

6-8-13. R. 96. Dialite 19. 73-0.

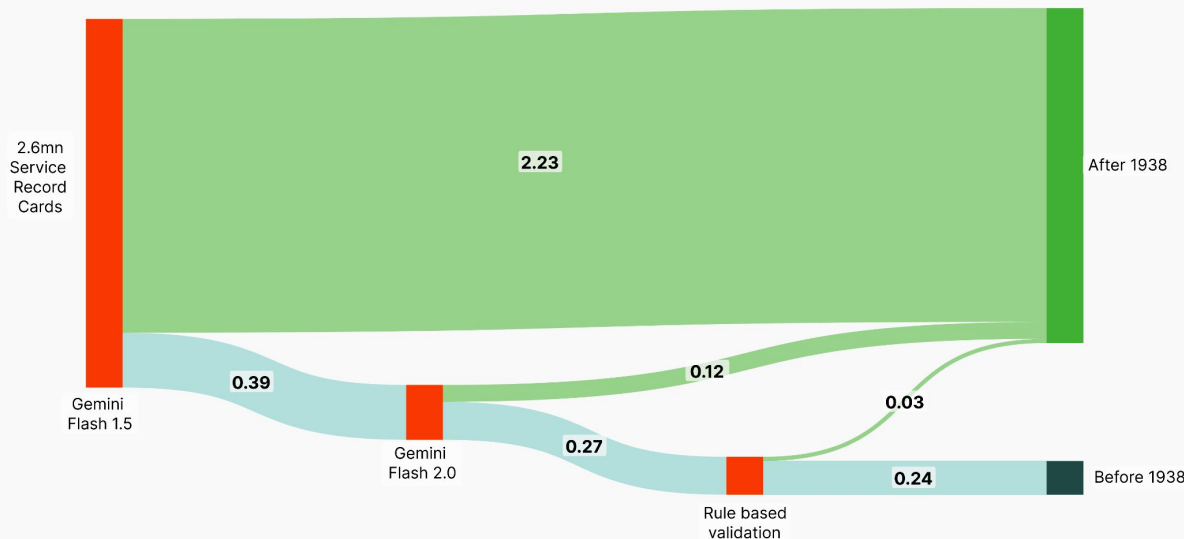
R. 2091. Service Delayed 10-2-20 - 12 yds N.E. of
105 Yd. Dr. 10539. 1 No. 16 Fuse box.
3 wire

Liberty Ltd. 60, Wilton Street, E.C.

Extract Dates from Service Record Cards

Identify cards older than 1938
 (Total of 2.6 million cards)

Using the Right AI models



Gemini 1.5 Flash to screen records

Gemini 2.0 Flash for more accurate extraction

Result:

22 Years of effort completed in 60 hours

FME & Gemini

- 2.6mn records in 2.5 days
- Gemini cost ~ £320
- Oldest card discovered:
9th January 1907

Manually

- 1 min per record, 8 hrs per day,
240 working days per year
- ~22 years of work

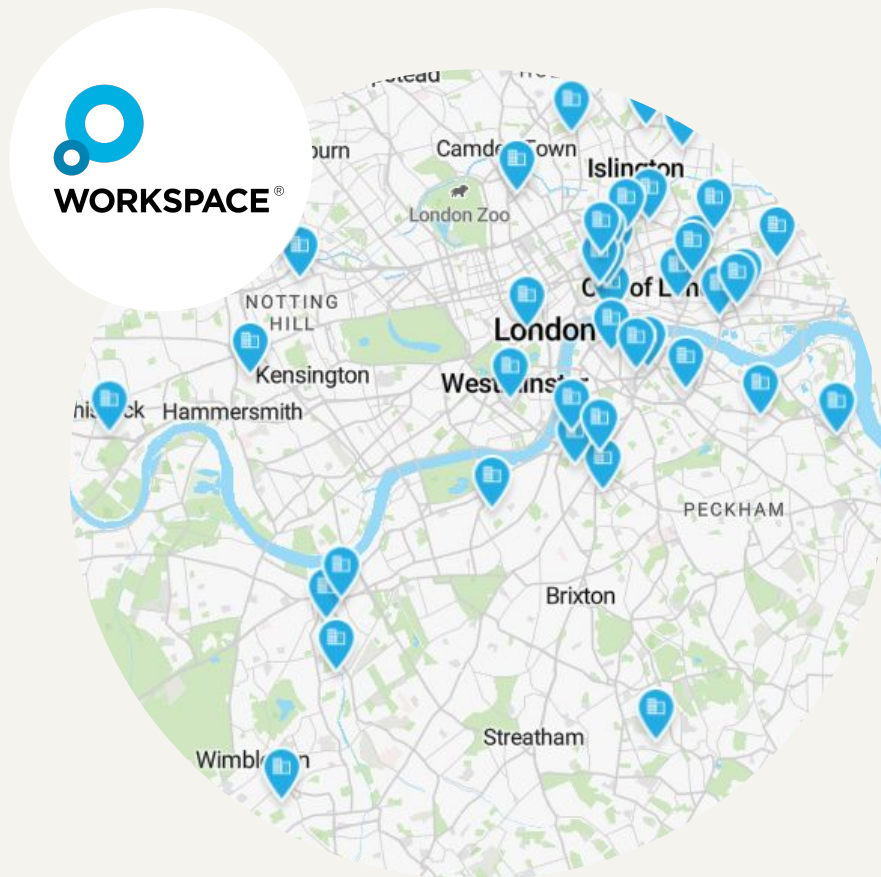


22 years of Manual work -> £320 (US \$432)

Real World Story #2

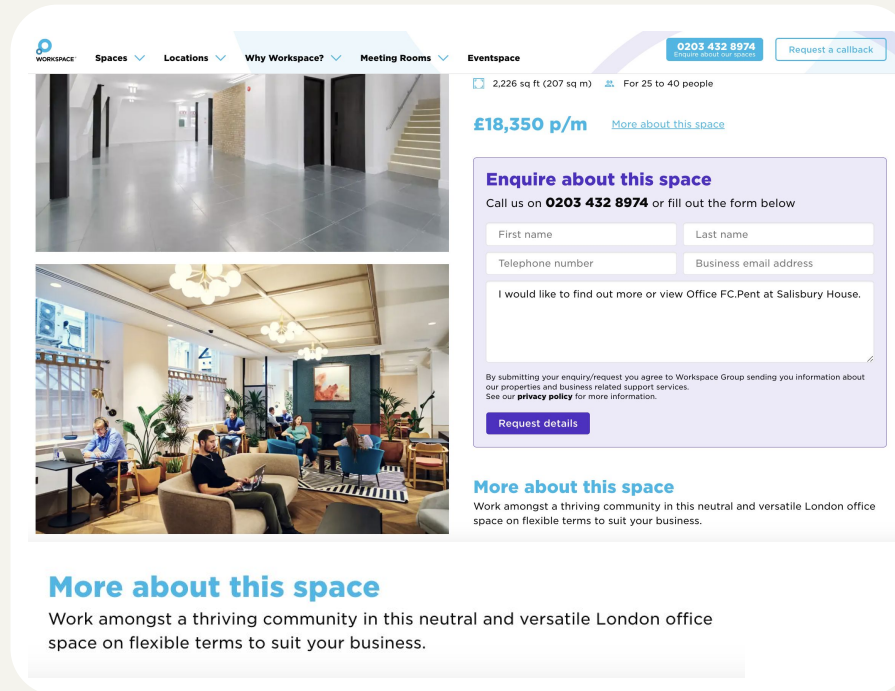
Workspace Group uses Multi-Modal AI to market its properties.

- Leading provider of flexible office spaces in London since 1987
- FTSE 250 listed
- 77 properties in London
- Home to 4,000+ diverse businesses



Before AI

- Unit descriptions were short and generic
- No detail was provided;
 - Style
 - Views
 - Flooring
 - Windows/doors
 - Amenities eg. AC
 - Natural light
 - Specifications
 - Size
- Occasionally written by copywriter 'as-and-when' units need a boost



The screenshot shows a Workspace listing for a London office space. The top navigation bar includes links for Spaces, Locations, Why Workspace?, Meeting Rooms, and Eventspace. A contact number 0203 432 8974 and a 'Request a callback' button are visible. The listing features two images: a modern hallway and a lounge area with people working. Key details include a size of 2,226 sq ft (207 sq m), capacity for 25 to 40 people, and a price of £18,350 p/m. A 'More about this space' link is provided. Below the images is an 'Enquire about this space' section with a form for first name, last name, telephone number, and business email address. A text box for additional comments is also present. A 'Request details' button is at the bottom of the form. A disclaimer states that by submitting an enquiry, the user agrees to Workspace Group sending information about properties and business-related support services, with a link to the privacy policy. Below the form, another 'More about this space' section describes the office as a thriving community in a neutral and versatile London office space on flexible terms.

WORKSPACE Spaces Locations Why Workspace? Meeting Rooms Eventspace 0203 432 8974 Enquire about our spaces Request a callback

2,226 sq ft (207 sq m) For 25 to 40 people

£18,350 p/m [More about this space](#)

Enquire about this space
Call us on **0203 432 8974** or fill out the form below

First name Last name
Telephone number Business email address

I would like to find out more or view Office FC.Pent at Salisbury House.

By submitting your enquiry/request you agree to Workspace Group sending you information about our properties and business related support services. See our [privacy policy](#) for more information.

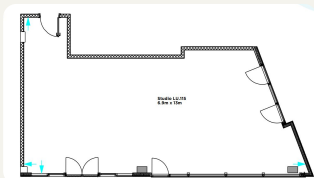
Request details

More about this space
Work amongst a thriving community in this neutral and versatile London office space on flexible terms to suit your business.

More about this space
Work amongst a thriving community in this neutral and versatile London office space on flexible terms to suit your business.

Multimodal AI Processing

CAD Floorplans



Interior Images



Exterior Images



Descriptions

	Unit Type	Comments
297	Office	Long narrow unit with concrete flooring, floor to ceiling windows, A/C high ceiling. Need notice to view as unit tenanted.
305	Office	Resin flooring, floor to ceiling window, A/C. Kiosk available. Front facing, A/C, high ceiling, floor to ceiling window, concrete resin flooring.
316	Office	Notice needed as unit is tenanted.
333	Office	Rear facing A/C, high ceiling, concrete resin flooring, narrow unit. Floor to ceiling window. Notice to view needed as unit tenanted.
334	Office	Road facing with large windows, sliding window door, A/C, high ceiling, concrete resin flooring. CUSTOMER IS HAPPY TO LEAVE FURNITURE (AT A PRICE).
340	Office	Rear facing with terrace, A/C, high ceiling, concrete resin flooring. Floor to ceiling window. Notice to view needed as unit tenanted - looking to move out asap.
346	Office	Rear facing with large windows, sliding window door, A/C, high ceiling, concrete resin flooring available.
436	Office	Rear facing with terrace, A/C, high ceiling, concrete resin flooring. North side of building. Need notice to view as unit tenanted.
554	Office	Road facing, A/C, high ceiling, concrete resin flooring. Floor to ceiling windows. Notice to view needed as unit tenanted.
705	Office	Road facing A/C, high ceiling, concrete resin flooring.



FME
by Safe Software



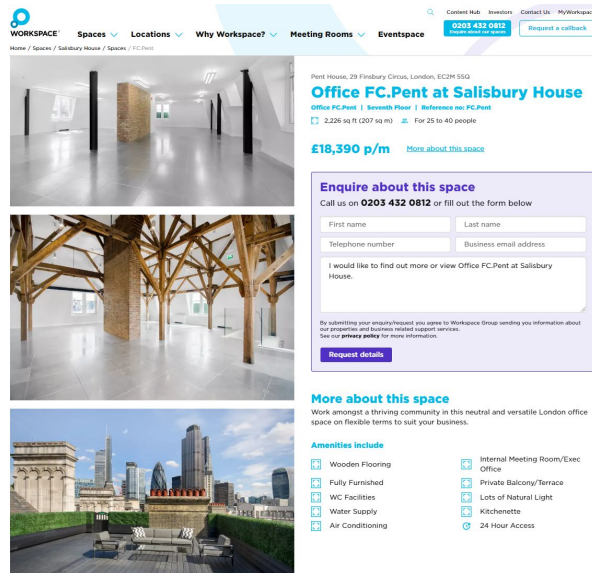
 **OpenAI**

Gemini

Different AI for different types of data

Results:

- Unit descriptions are generated at scale, instead of reactively
- Now it is possible to have good detailed listings for every property.



This premium penthouse office space at Salisbury House offers a stunning blend of modern functionality and elegant design, perfectly suited for businesses seeking a sophisticated environment.

The standout feature of this space is the expansive private terrace, providing breathtaking views of London's iconic skyline. This outdoor area is not only ideal for breaks but also offers a unique setting for informal meetings or events, enhancing the overall work experience.....

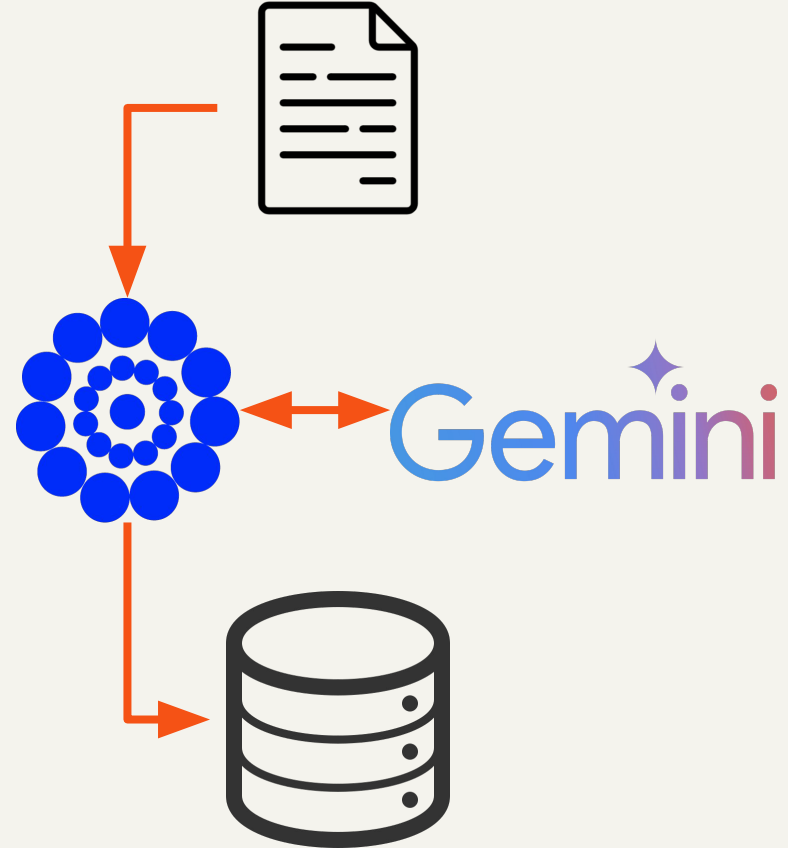
Real World Story #3

Agentic AI Schema
Mapping with Google
Gemini



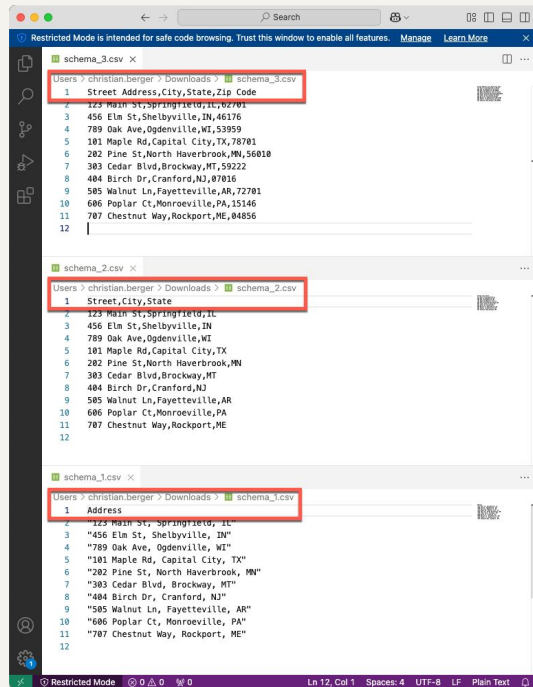
Agentic Schema Mapping

- Leverage Google Gemini for intelligent parsing and structuring of highly variable address data.
- FME's dynamic workspace capabilities enable seamless integration.
- Outputs are standardized, ready for downstream use.



Schema Variability Challenge

- Data providers deliver address datasets with inconsistent schemas, data types, and in various data formats.
- Variability makes it difficult to integrate data into downstream processes.
- Manual efforts to standardize data are time-consuming and prone to errors.



Schema Variability Solution

- **AI Processing:** Use Gemini to:
 - Identify key attributes (e.g., street name, number, postal code).
 - Concatenate or parse fields dynamically.
 - Resolve inconsistencies with Structured Outputs
- **Output:** Standardized attributes for seamless downstream use

The diagram illustrates the process of standardizing data from multiple CSV files. Three CSV files are shown in a code editor:

- schema_1.csv**:

```
1 Street,Address,City,State,Zip Code
2 123 Main St, Springfield, IL, 62701
3 456 Elm St, Shelbyville, IN, 46176
4 789 Oak Ave, Ogdenville, WI, 53959
5 101 Maple Rd, Capital City, TX, 78701
6 202 Pine St, North Haverbrook, MN, 56010
7 303 Cedar Blvd, Brockway, MT, 59222
8 404 Birch Dr, Cranford, NJ, 87016
9 505 Walnut Ln, Fayetteville, AR, 72701
10 606 Poplar Ct, Monroeville, PA, 15146
11 707 Chestnut Way, Rockport, ME, 84856
12
```
- schema_2.csv**:

```
1 Street, City, State
2 123 Main St, Springfield, IL
3 456 Elm St, Shelbyville, IN
4 789 Oak Ave, Ogdenville, WI
5 101 Maple Rd, Capital City, TX
6 202 Pine St, North Haverbrook, MN
7 303 Cedar Blvd, Brockway, MT
8 404 Birch Dr, Cranford, NJ
9 505 Walnut Ln, Fayetteville, AR
10 606 Poplar Ct, Monroeville, PA
11 707 Chestnut Way, Rockport, ME
12
```
- schema_3.csv**:

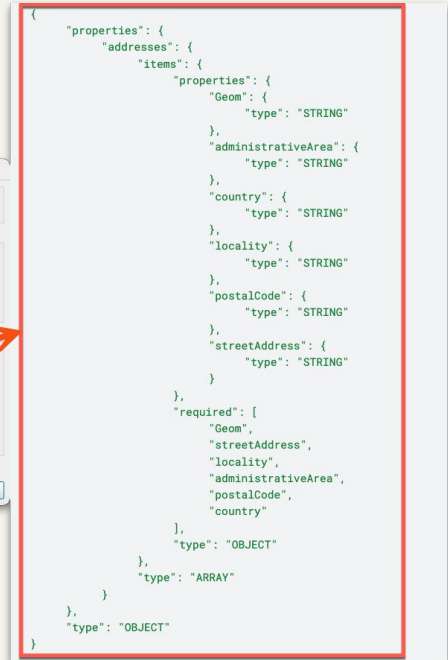
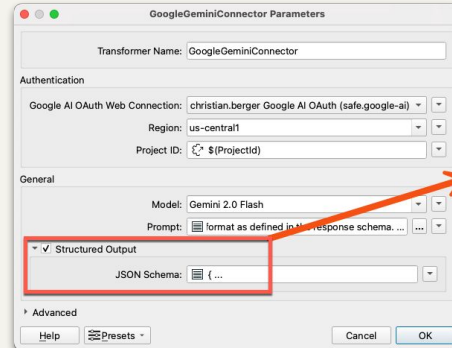
```
1 Address
2 "123 Main St, Springfield, IL"
3 "456 Elm St, Shelbyville, IN"
4 "789 Oak Ave, Ogdenville, WI"
5 "101 Maple Rd, Capital City, TX"
6 "202 Pine St, North Haverbrook, MN"
7 "303 Cedar Blvd, Brockway, MT"
8 "404 Birch Dr, Cranford, NJ"
9 "505 Walnut Ln, Fayetteville, AR"
10 "606 Poplar Ct, Monroeville, PA"
11 "707 Chestnut Way, Rockport, ME"
12
```

These files are transformed into a standardized table, **TabularSubmission_2025-01-15**, which has the following structure:

streetAddress	locality	administrativeArea	country	postalCode
123 Elm St	Springfield	IL	US	62701
456 Oak Ave	Chicago	IL	US	60614
789 Pine Rd	Bloomington	IN	US	47401
321 Maple Blvd	Madison	WI	US	53703
654 Cedar Ln	Detroit	MI	US	48201

Schema Variability Solution

- **AI Processing:** Use Gemini to:
 - Identify key attributes (e.g., street name, number, postal code).
 - Concatenate or parse fields dynamically.
 - Resolve inconsistencies with Structured Outputs
- **Output:** Standardized attributes for seamless downstream use





Choice of AI made these
solutions possible.



The Future is exciting

We are at the beginning of the beginning

Many breakthroughs and their impacts are ahead.

- Agentic AI, and A2A
- MCP
- Digital Twins (AR)
- Global-Scale Data Models are still ahead

Technology is moving faster than ever.

The future belongs to those who keep choice at the center of their strategy.



AI in FME

Safe Software

AI Connectors

- OpenAIConnector
- AzureAIFoundryConnector
- GoogleGeminiConnector
- AmazonBedrockConnector
- and more . . .

*Available on the FME Hub



AmazonBedrockConnector

by safe-lab



AzureAIFoundryConnector

by safe-software-verified



Gemini

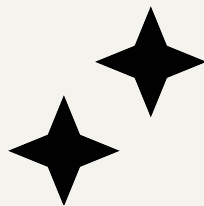
GoogleGeminiConnector

by safe-sandbox



OpenAIConnector

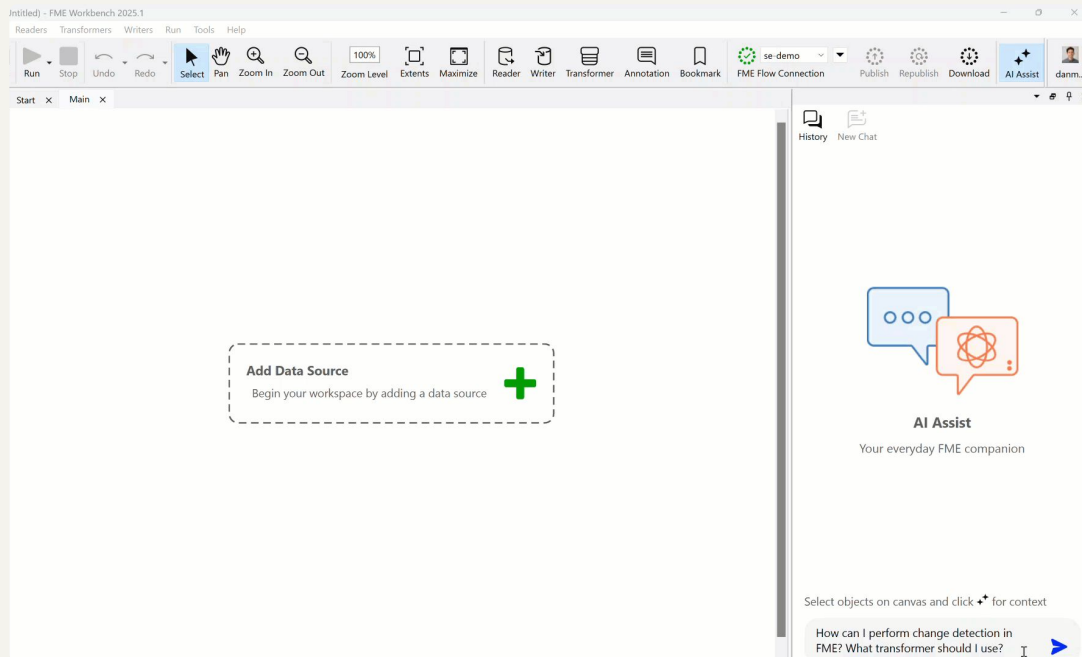
by safe-software-verified



AI-Assist

AI Assist

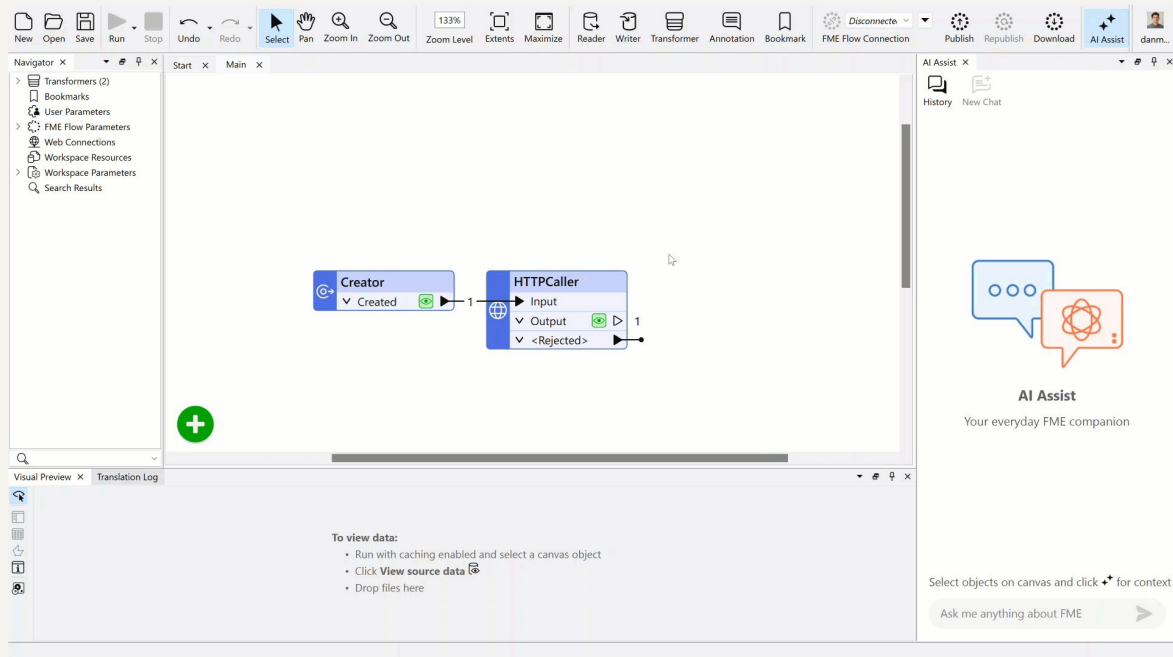
- High-quality FME Knowledge chat integrated within FME Form
- Enables users to ask questions about building workflows in FME
- Format & transformer suggestions
- Ask AI Assist how you can optimize your workspace



Available in FME 2025.1

AI Assist

- Select canvas objects to provide more context to AI Assist



Available in FME 2025.1



Knowledge Base

Explore our extensive collection of how-to guides and tutorials.

Welcome to the FME Community!
Join our global community of FME users to connect, share insights and use FME to its fullest.

Search this space, and more

- Forums**
Browse or discuss the most common and difficult problems to solve in FME.
- Community Resources**
Discover the knowledge and expertise of the FME community.
- Ideas**
Submit ideas, share feedback and influence the future of FME.
- Product Updates**
Get the latest news on FME, including new features and capabilities.
- Events**
Find out about upcoming events, webinars and conferences.
- Blog**
Catch all the latest FME news and tips from the FME team.

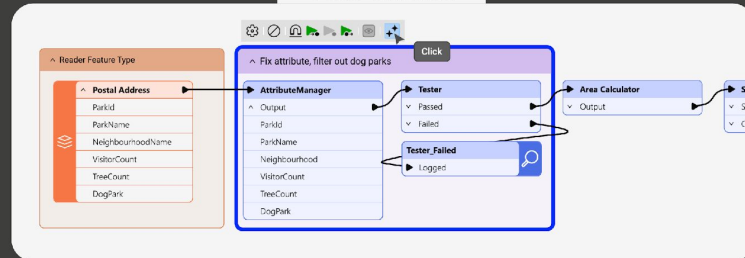
FME Documentation

Search

FME Platform

- FME FME Administrator's Guide**
Build, manage and optimize your FME workspace.
- FME Workbench**
All about the FME Workbench, the FME development environment for creating and testing FME workspaces.
- FME Transformations**
Over 1000 ways to transform your data.
- FME Readers and Writers**
Discover the many ways to read and write data in FME.
- FME Data Inspector**
Monitor your FME workspace and data in real-time.
- FME Transformer Preference Guide (PDF)**
Learn about the many options for customizing FME.
- FME Coordinate Systems**
Find out how to use FME to work with different coordinate systems.
- FME Quick Translator**
Perform quick translations with FME's Quick Translator.
- FME Transformer Designer**
Design your own FME transformers with FME's Transformer Designer.

Your Canvas

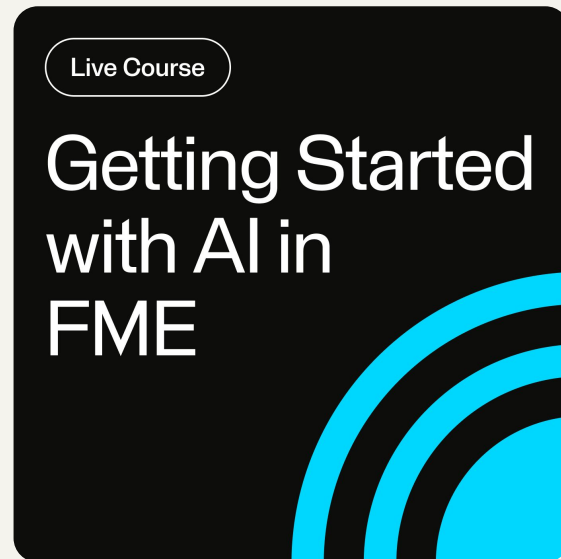


Resources

Safe Software

Resources

- Knowledge Base Article
 - [Tutorial: Getting Started with Any AI in FME](#)
- Webinars
 - [5 Things to Consider When Deploying AI in Your Enterprise](#)
- Live Training
 - [Getting Started with AI in FME](#)
 - Dec 2 @ 9am PST



Q&A

Safe Software

Thank You

Safe Software

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