How to build a House 101

(A Quick Introduction FME)

1. First Fix – Building a house

- **Purpose**: The first fix focuses on the structural and foundational aspects of the construction, preparing the building for further work. It involves tasks that are completed before plastering or other wall finishes are applied.
- **Common Tasks**:
  - **Structural Framework**: Erecting the building's frame, including floors, walls, and roofing.
  - **Pipework**: Installing plumbing and heating pipes that will be covered up later.
  - **Electrical Wiring**: Laying out wiring for sockets, lights, and switches within walls and ceilings.
  - **Door Frames and Stud Walls**: Fixing door frames and partitions.
- **Key Goal**: To have all essential "hidden" elements in place so that they can be covered or plastered over.

2. Second Fix – Building a house

- **Purpose**: The second fix is focused on the finishing touches after walls and ceilings are plastered, making the building ready for occupancy. It deals with elements that are visible and functional.
- **Common Tasks**:
  - **Doors and Skirting**: Hanging doors, fitting skirting boards, architraves, and other moldings.
  - **Electrical Finishes**: Fitting light switches, socket outlets, and other visible electrical components.
  - **Plumbing Finishes**: Installing sinks, toilets, radiators, and taps.
  - **Kitchen and Bathroom Fixtures**: Fitting cabinets, countertops, and appliances.
- **Key Goal**: To complete all visible and functional parts, readying the space for decorating and final touches.

1. First Fix (Data Integration and Preparation)

- **Purpose**: The first fix in data work involves gathering, cleaning, and preparing data to ensure it is structured, reliable, and ready for further analysis or reporting.
- **Common Tasks**:
  - **Data Extraction**: Pulling data from various sources (databases, APIs, files, etc.).
  - **Data Transformation**: Standardizing formats, removing duplicates, filling missing values, and ensuring data consistency.
  - **Data Storage**: Loading the cleaned data into a data warehouse or other storage solution, where it can be accessed for further processing.
  - **Data Mapping and Modeling**: Structuring and organizing the data, defining relationships, and creating data models for efficient querying.
- **Key Goal**: To establish a stable and accurate foundation by making data consistent, usable, and ready for further analysis.

2. Second Fix (Data Reporting and Visualization)

- **Purpose**: The second fix is focused on turning prepared data into meaningful insights by creating reports, dashboards, and visualizations for end-users.
- **Common Tasks**:
  - **Data Visualization**: Creating charts, graphs, and dashboards that present data in an understandable way.
  - **Report Generation**: Building reports with specific metrics, KPIs, and summaries that stakeholders can interpret and act upon.
  - **User Interactivity**: Adding filters, drill-downs, and other interactive elements to reports for customized analysis.
  - **Data Interpretation**: Highlighting trends, patterns, and insights that support decision-making.
- **Key Goal**: To translate structured data into actionable insights, delivering reports and visualizations that help users understand and make decisions based on the data.

Summary

- **First Fix** in data work is about preparing and integrating data, ensuring it’s ready for use: - FME
- **Second Fix** is about making that data accessible and turning raw information into actionable insights for stakeholders: – Power BI

The five things you need to know about FME

- **Data Integration Platform**: FME is a software platform primarily used for integrating, transforming, and moving data between different formats and systems, making it ideal for handling diverse data sources.
- **Supports 450+ Formats**: It can read and write data in over 450 formats, including GIS, CAD, database, spreadsheet, and web data, making it highly versatile for various data types.
- **Visual Workflow Design**: FME uses a visual, drag-and-drop interface to design workflows, which allows users to build complex data transformations without needing to write code.
- **Data Transformation Powerhouse**: It has a vast array of tools (known as transformers) for manipulating data, enabling tasks like filtering, merging, reformatting, and spatial analysis.
- **Automates Data Workflows**: FME can automate recurring data tasks, reducing manual effort by scheduling workflows, triggering on events, or integrating with other applications.

What is FME?

- **FME Desktop**: A desktop application for building, testing, and running data integration workflows using a visual interface. It's where most users create and design data transformations.

- **FME Server**: A server application for automating and managing FME workflows. It allows workflows to run on schedules, respond to real-time events, or be accessed via web services.

- **FME Cloud**: A cloud-hosted version of FME Server, offering the same automation and management features but with the flexibility and scalability of a cloud environment, reducing the need for on-premise infrastructure.

A Selection of Demos

- **Demo 1:** Data Anonymisation – basic data reading and output

- **Demo 2:** Email Validation – taking a set of emails and running some validation and exposing this using the FME Server and allowing users to interact with it.

- **Demo 3:** Cleansing the Data using AI – using a FME transformer to take the bad emails and then attempt to fix them.