THE PEAK OF DATA INTEGRATION
2022 UC

Introduction to FME Desktop

Slides: fme.ly/iduc

SAFE SOFTWARE

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Team Lead, Customer Education

Mark Ireland

FME Evangelist

Overview

Start Your Journey

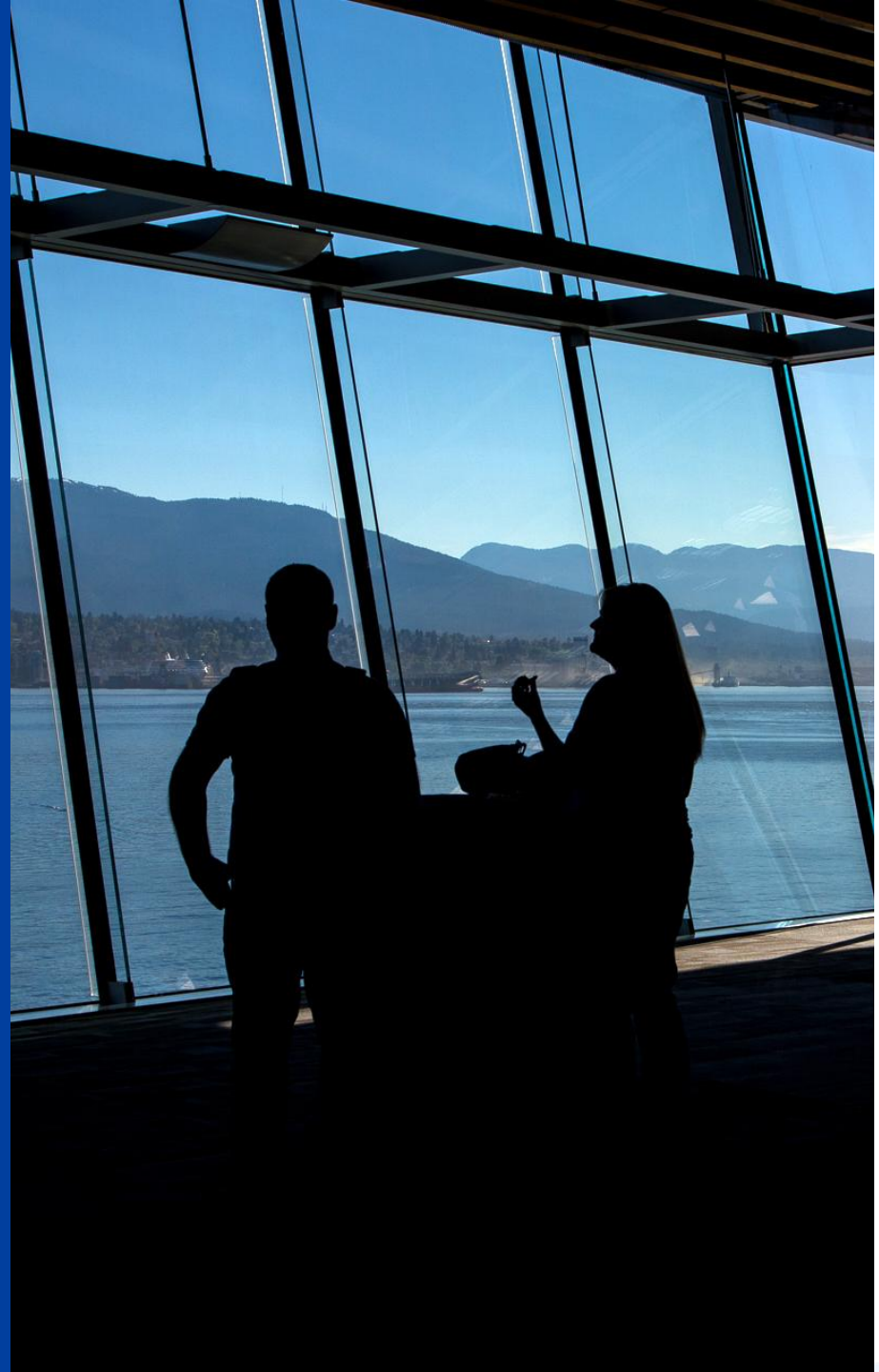
Request a virtual machine (scroll down): fme.ly/uctraining

Training machine credentials:

`Administrator` / `FMElearnings#1`

The FME Server credentials:

`admin` / `FMElearnings`



Agenda

9:00 - 10:30 am

Why Data Integration?

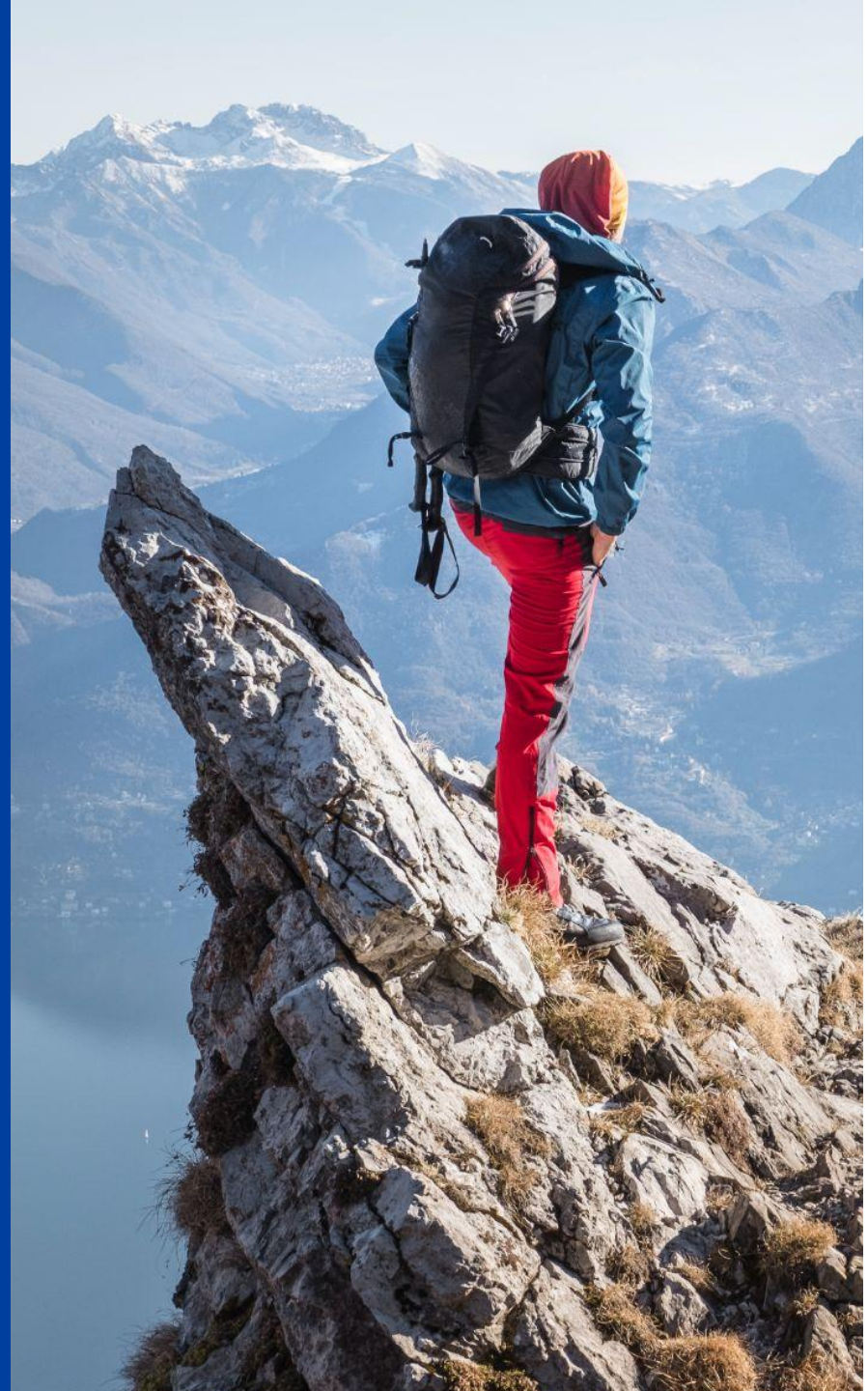
Connect to Data

10:30 - 10:45 am

Coffee Break

10:45 am - 12:15 pm

Transform Data



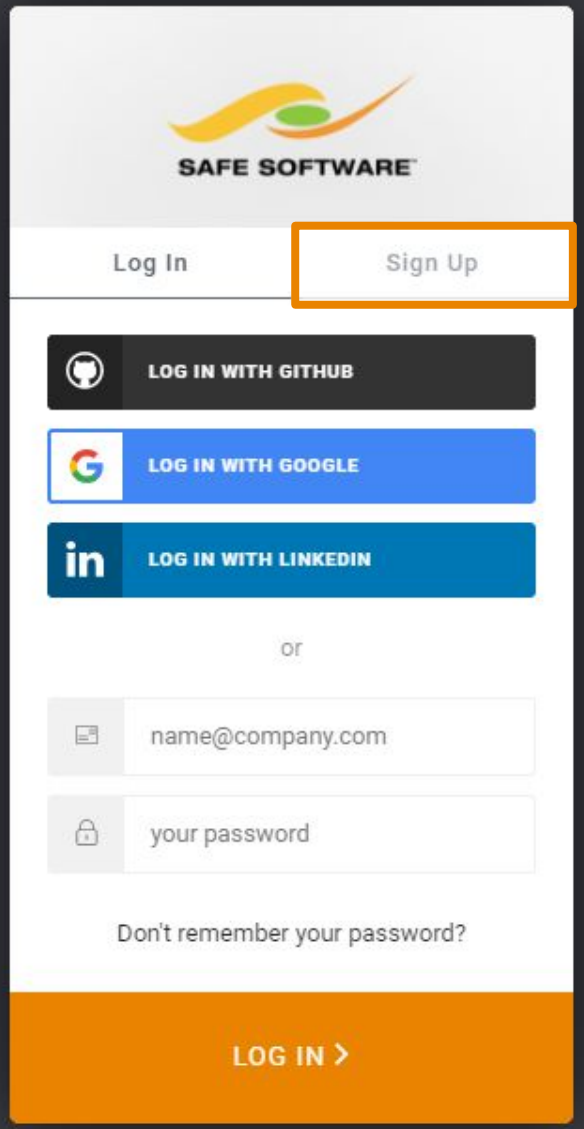
Material

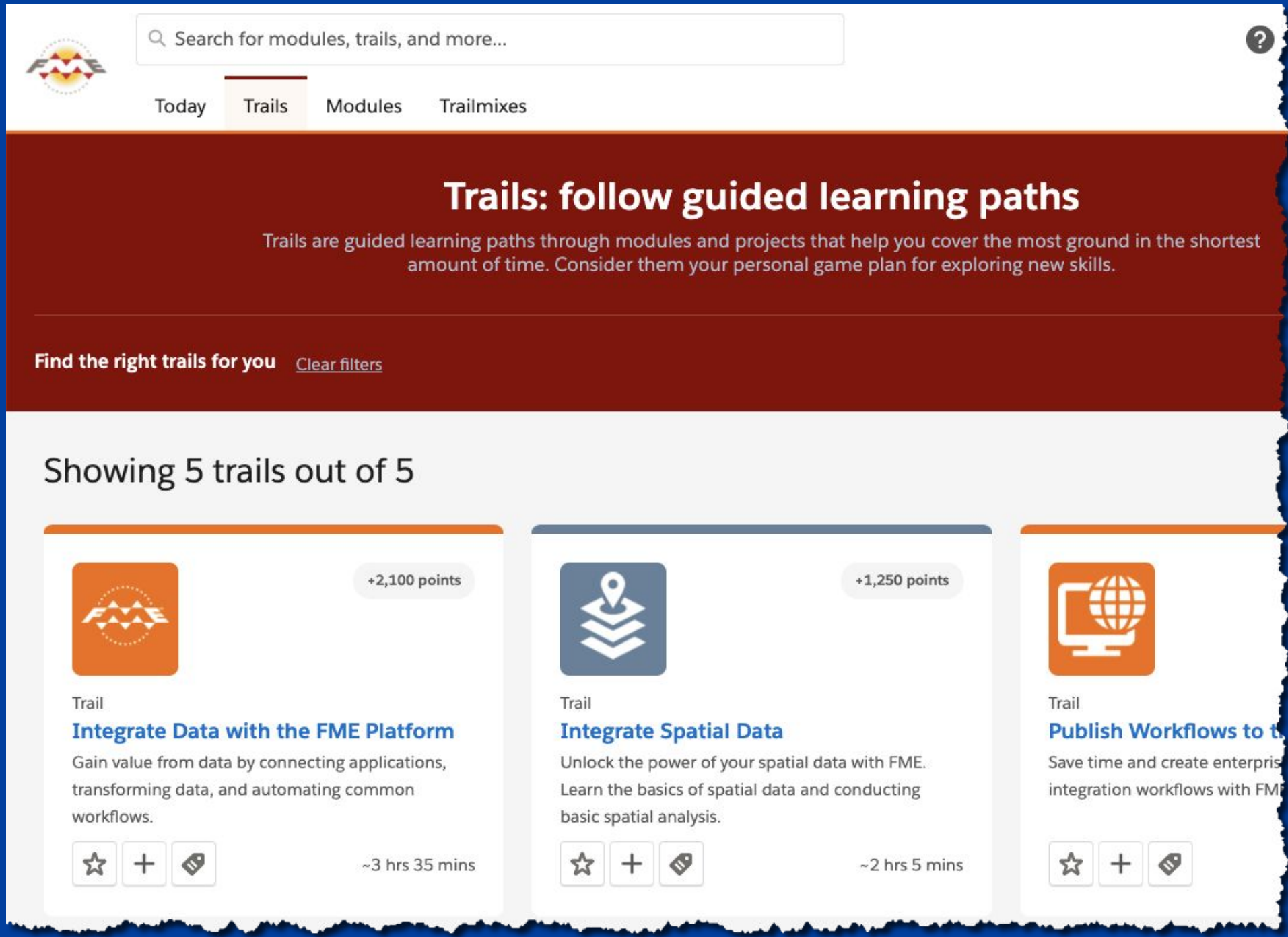
FME Academy “trail”: Integrate Data with the FME Platform

FME Academy

https://community.safe.com/s/academy

- FME learning platform
- Free with FME Community account
- Earn badges by signing in and completing quizzes
- Sign in or create an FME Community account


SAFE SOFTWARE
Log In
Sign Up
LOG IN WITH GITHUB
LOG IN WITH GOOGLE
LOG IN WITH LINKEDIN
or
name@company.com
your password
Don't remember your password?
LOG IN >


Search for modules, trails, and more...
Today
Trails
Modules
Trailmixes
Trails: follow guided learning paths
Trails are guided learning paths through modules and projects that help you cover the most ground in the shortest amount of time. Consider them your personal game plan for exploring new skills.
Find the right trails for you
Clear filters
Showing 5 trails out of 5
+2,100 points
Trail
Integrate Data with the FME Platform
Gain value from data by connecting applications, transforming data, and automating common workflows.
~3 hrs 35 mins
+1,250 points
Trail
Integrate Spatial Data
Unlock the power of your spatial data with FME. Learn the basics of spatial data and conducting basic spatial analysis.
~2 hrs 5 mins
Trail
Publish Workflows to t
Save time and create enterpris
integration workflows with FM

Quiz

+100 points

1 **Which kind of platform is FME?**

A Data governance

B Blockchain

C Customer relationship management (CRM)

D Data integration

2 **Which of the following is not an example of a data silo?**

A AutoCAD drawing datasets stored on a single CAD technician's computer.

B Excel files of budgeted financial statements stored on a network drive shared by a few members of an Accounting department.

C An asset management system with data only accessible by members of the facilities management team.

D All the spatial data used by an organization stored in a single cloud database, integrated with other systems where necessary.

Time Estimate

About **10** mins

Topics

Learning Objectives

Powering the Flow of Data

What is FME?

Breaking Down Data Silos

The Value of Spatial Data Integration

Challenge +100 points

Exercise

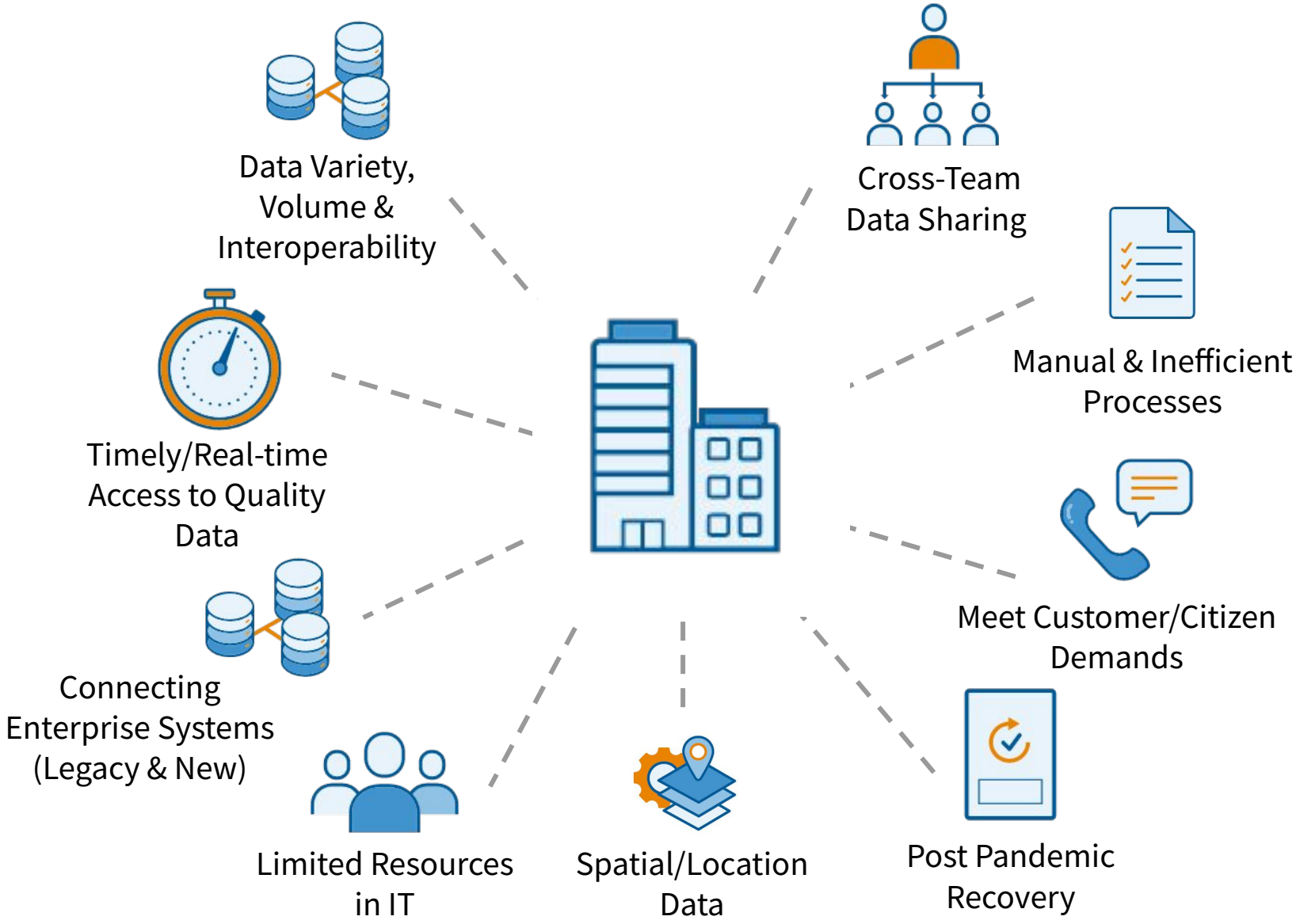
CONNECT • TRANSFORM • AUTOMATE
Read DWG submission
water_pipes
Validate geometries and attributes
Tester
Passed
Failed
Generate error messages
GeometryValidator
Passed
Failed
Repaired
IssueLocations
InvalidParts
<Rejected>
Validate geometry
AttributeCreator
Output
Invalid attribute
Invalid geometry
AttributeCreator_2
Output
Save successfully validated features to Esri File Geodatabase
Generate validation time stamp
DateTimeStamper
Output
WaterDistributionLines
FEATURE_ID
DIAMETER
DRAW
MATERIAL
STATUS
TIMESTAMP
Create buffer around invalid location
Bufferer
Buffered
<Rejected>
Generate Excel report for quality assurance
ArcGISOnlineMap
Input
Image
Use ArcGISOnline to retrieve maps for the invalid locations
QA_report
TILE
FEATURE_ID
DIAMETER
WNM_TYPE
Error Remarks
Map
FME AR and FME DX
FME Cloud
FME Server

Why Data Integration?

The FME® Platform

Run Your Business on Data

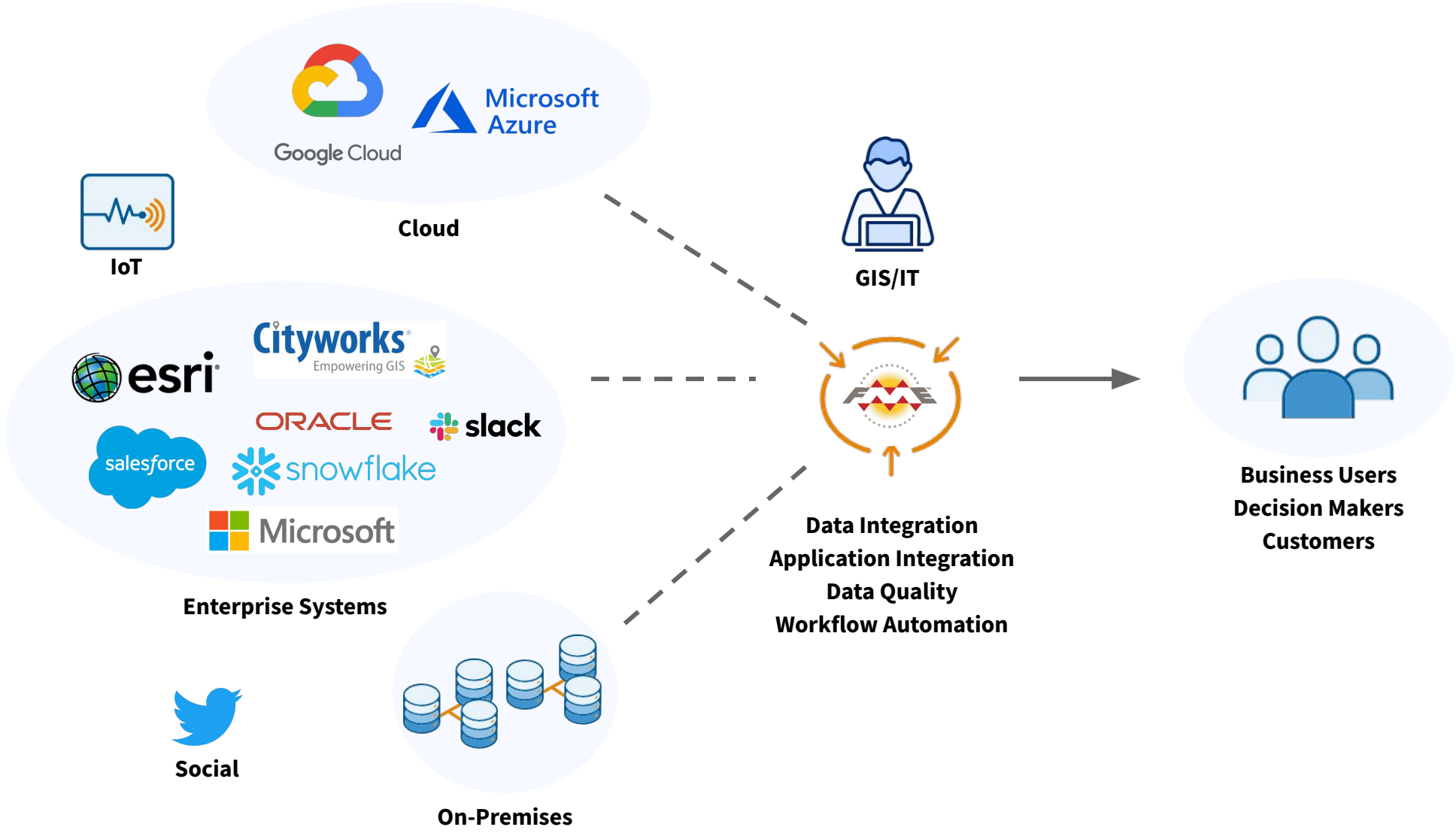
Challenges Facing Organizations Today



Data is the most critical business asset for any organization.

Serve your customers better with data-driven decisions.

Solution: Enterprise Integration



Our Mission

To help you maximize the value of data.

SAFE SOFTWARE™

Our Technology Partners

esri
THE SCIENCE OF WHERE

AUTODESK
Authorised Developer

OGC
Making location count.

Google Cloud
Partner

Cityworks
Empowering GIS

Microsoft

IBM
Registered
Business Partner

snowflake

Trimble

ORACLE | Partner

teradata.

databricks

Bentley
Developer Network

and many more...

Our Key Markets

Utilities

Government

Energy

AEC

Commercial

Telecom

Transportation

and more...

Our Customers

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

DENVER INTERNATIONAL AIRPORT

The Weather Network

Transport for London

IOWA DOT
SMARTER | SIMPLER | CUSTOMER DRIVEN

UNIVERSITY OF OXFORD

United States™ Census Bureau

wsp

Georgia Power

IHS Markit®

safe.com/customers

and many more...

Supported Enterprise Business Systems

Asset Management

IBM maximo

IBM TRIRIGA

Cityworks A TRIMBLE COMPANY

Business Intelligence

Qlik

salesforce

tableau

Power BI

Database & Data Warehouse

ORACLE

Microsoft SQL Server

PostgreSQL

snowflake

Open Data

Socrata

ckan

esri THE SCIENCE OF WHERE

and many more...

Our Strength

We bring the power of spatial data to your decision making.

SAFE SOFTWARE™

The Importance of Spatial Data

Leverage Location to Power Strategic Decision Making

The Rise of Spatial Data

The value of Spatial Data is recognized by more and more vendors.

And many more....

Spatial Data Optimizes Business Decisions

Location Data

Drive Sales with Customer Location

- Understand customer behaviours
- Deliver personalised promotions
- Drive store traffic and purchases

Improve Operations with Asset Location

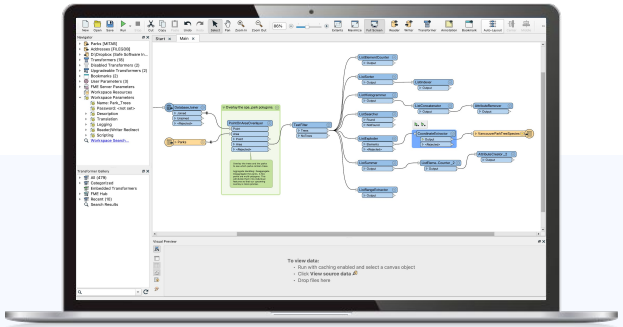
- Track asset location & condition
- Predict maintenance
- Improve workforce coordination

Increase Situational Awareness with Event Location

- Track people, places & resources
- Improve disaster response and recovery
- Improve workplace safety

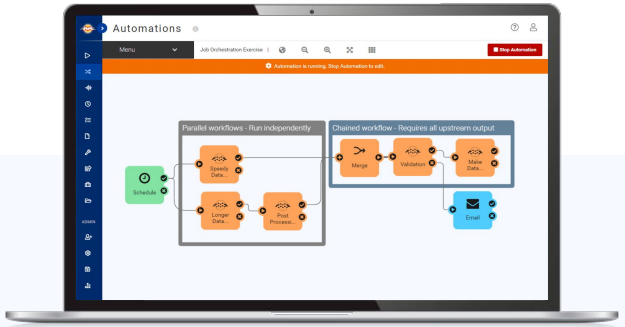
FME® Enterprise Integration Platform

*The **only** Enterprise Integration Solution with comprehensive support for Spatial Data*



FME Desktop

Build & Run Data Workflows



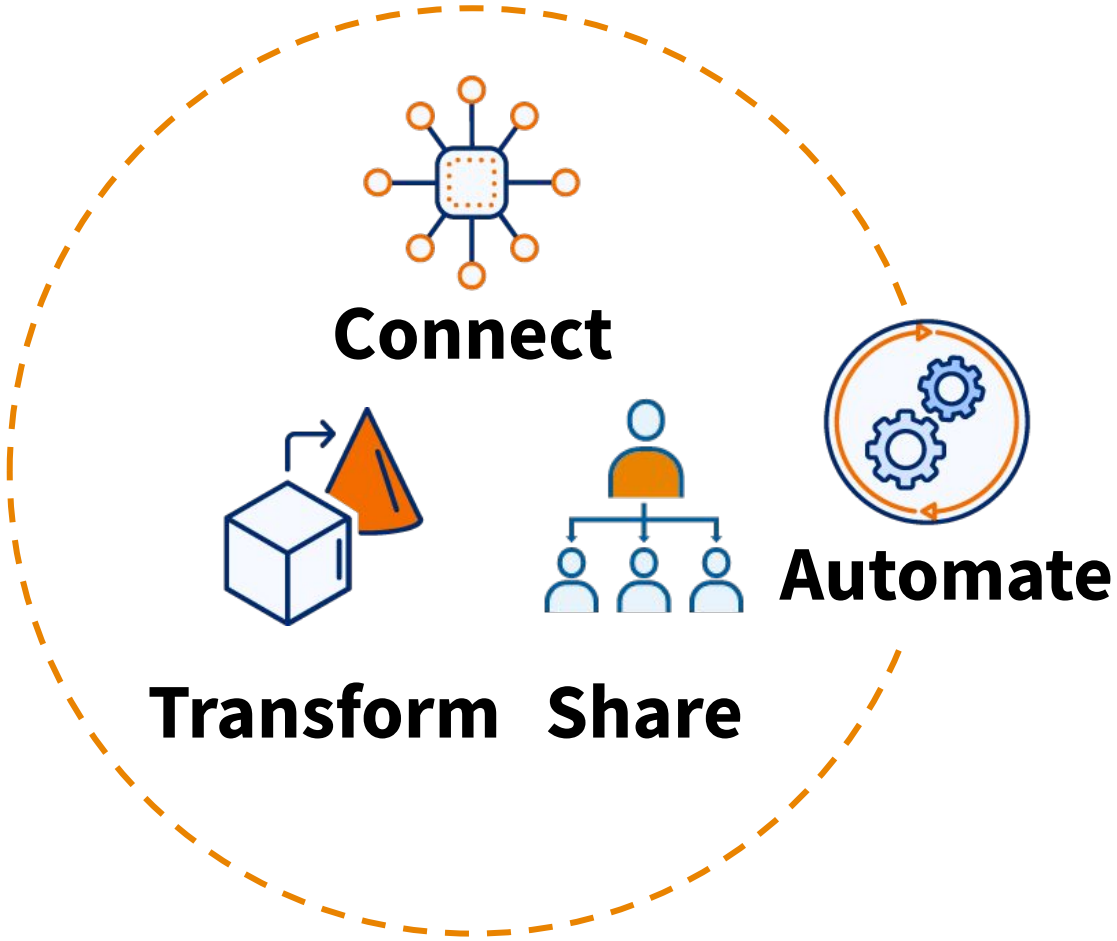
FME Server

Automate Data Workflows
Can be hosted on **FME Cloud**

FME Mobile

Deliver the Power of
FME to Mobile

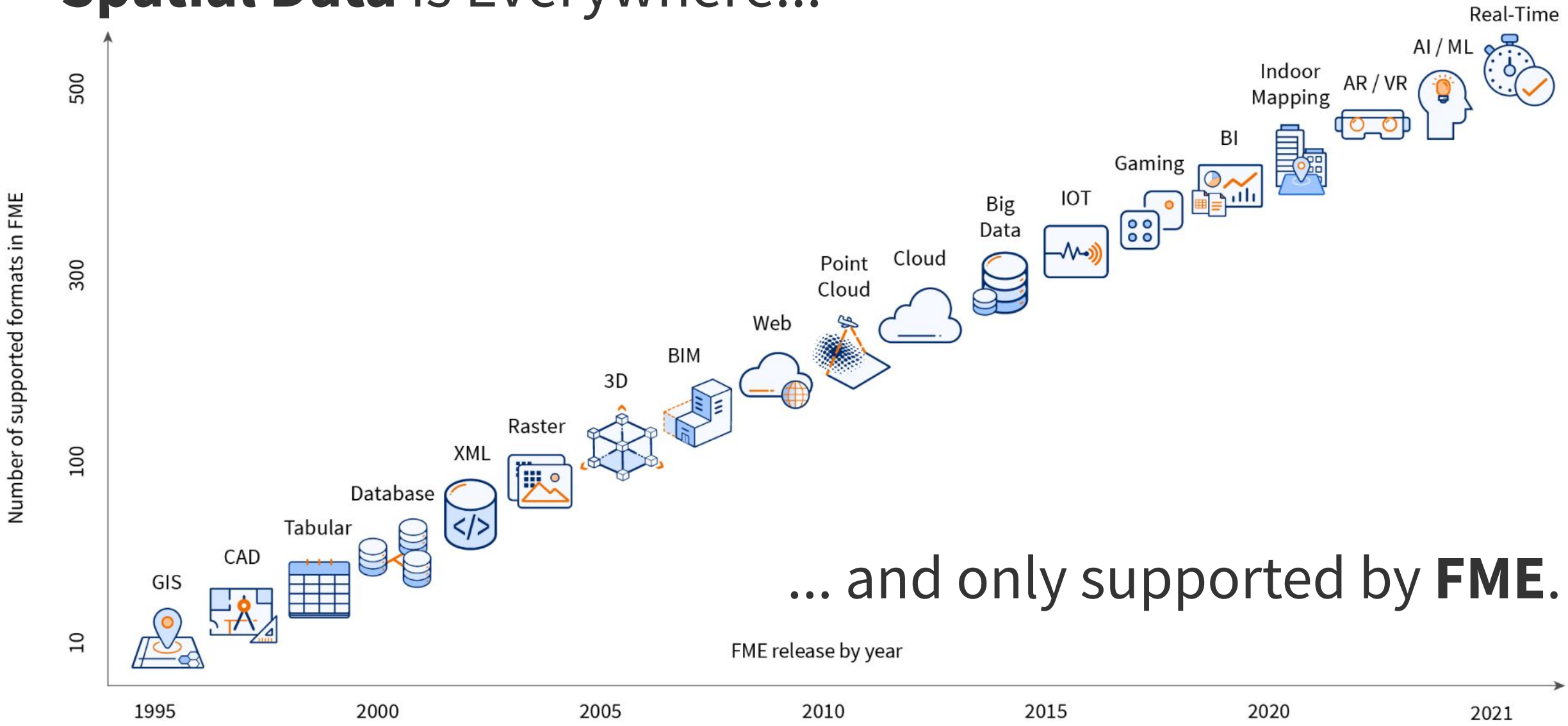
Powering your dataflows on premises, in the cloud, and on mobile



Power your business decisions with enterprise integration and no-code automation.

- Connect data across **450+ systems** including geospatial data, big data, and real-time data
- Combine, restructure, and transform your data with over **500+ transformers**
- Automate your data workflows including **batch, event-based, and stream processing**.
- Improve data accessibility and sharing with **self-serve apps**
- Scale to your organization's needs with **flexible, secure, and platform-agnostic deployment**

Spatial Data is Everywhere...



... and only supported by **FME**.

We're all about **Free Resources**

FME Community
+19,000 Global Users

- Join discussions with Safers and other FME users
- Submit ideas for FME

Knowledge & Training
Learn FME

- Live online training
- FME Academy
- Articles & tutorials

FME Hub
Discover More

- Access transformers, templates, connectors, and more

Technical Support
Report a Problem

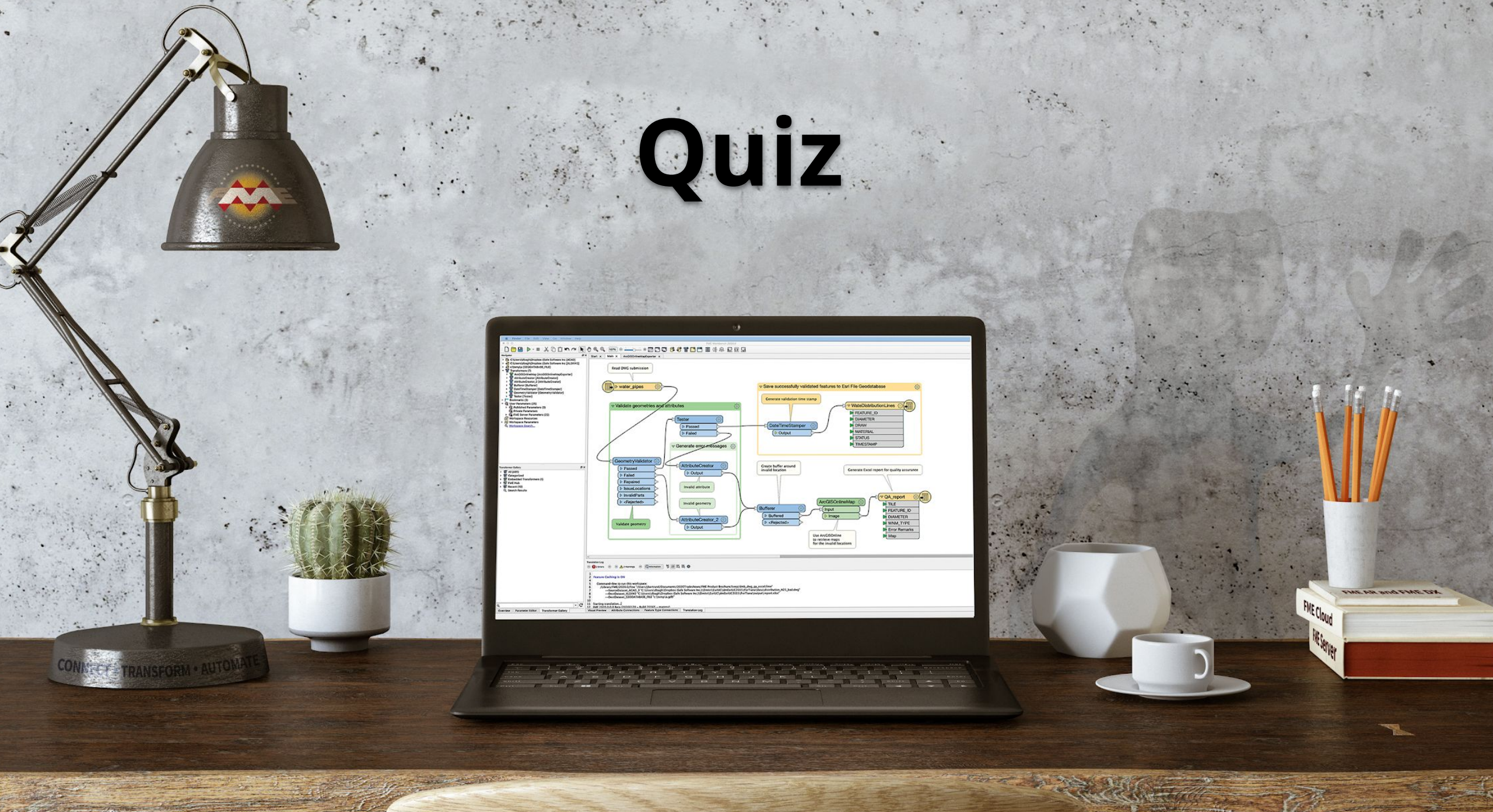
- Ask how-to questions on FME Community Forums
- Support cases

When in doubt, ask us on **Live Chat!**

*"FME sets the standard for **support** and is the **leader** by far". - Brad*

*"Very helpful and went **above and beyond** to help find a solution to my request! A+" - Justin*

Quiz


CONNECT • TRANSFORM • AUTOMATE
Read DWG submission
water_pipes
Validate geometries and attributes
Tester
Passed
Failed
Generate error messages
GeometryValidator
Passed
Failed
Repaired
IssueLocations
InvalidParts
<Rejected>
Validate geometry
AttributeCreator
Output
Invalid attribute
Invalid geometry
AttributeCreator_2
Output
Save successfully validated features to Esri File Geodatabase
Generate validation time stamp
DateTimeStamper
Output
WaterDistributionLines
FEATURE_ID
DIAMETER
DRAW
MATERIAL
STATUS
TIMESTAMP
Create buffer around invalid location
Bufferer
Buffered
<Rejected>
Generate Excel report for quality assurance
ArcGISOnlineMap
Input
Image
Use ArcGISOnline to retrieve maps for the invalid locations
QA_report
TILE
FEATURE_ID
DIAMETER
WNM_TYPE
Error Remarks
Map
FME Cloud
FME Server

Exercises

- FME Academy has download links for workspaces
- But they are already on your virtual machine
  - C:\FMEData2022\Workspaces
- We recommend having FME Academy open on your own computer (not virtual machine), so you can easily keep working on the quizzes after the course
- Use the starting workspaces on your Strigo machine when instructed

Connect to Data

Transform Data

Wrap-Up

Don’t forget to finish your quizzes and earn your badge.

The last module, Automate Workflows, shows you how to use FME Server to save time and money. Finish it to complete the trail!

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Thank you!

Please fill out the feedback survey.

Have product feedback? Visit the UX team at their booth this week.