FME in Education: Automating Data Flows with FME Server and FME Cloud

Plaid Consulting
www.plaid.is

Safe Software
www.safe.com

FME in Education Series

Topic
How to accelerate and improve data analysis
Combining data from web-based and on-campus systems
Automating data flows with FME Server and FME Cloud
Suggestions welcome for future installments

www.plaid.is/#webinars

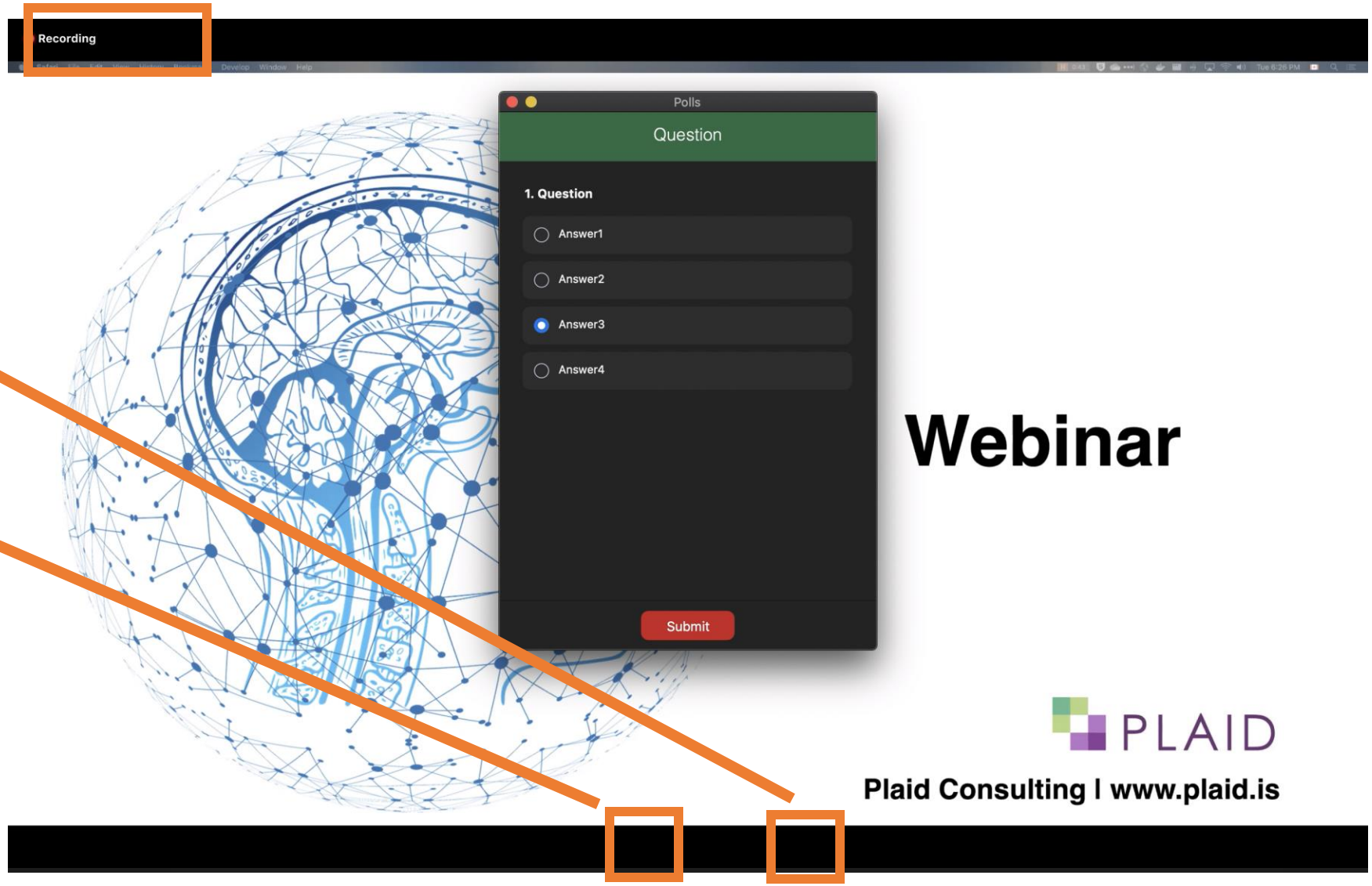
ZOOM HOUSEKEEPING

Indicates the webinar in being **Recorded**

Questions for the presenters? Use the **Q&A**

Want to chat with other attendees? Use the **Chat**

We occasionally use **Polls**



*Plaid provides **data integration**, **research**, and **analysis** services to higher education institutions to improve policies, processes, and services.*

PLAID

AGENDA

- What are FME Server and FME Cloud?
- Automations
- Server apps

PRESENTERS

Andrew Drinkwater

Co-Founder

Plaid Consulting

PLAID

PRESENTERS

Patrick Lougheed

Co-Founder

Plaid Consulting

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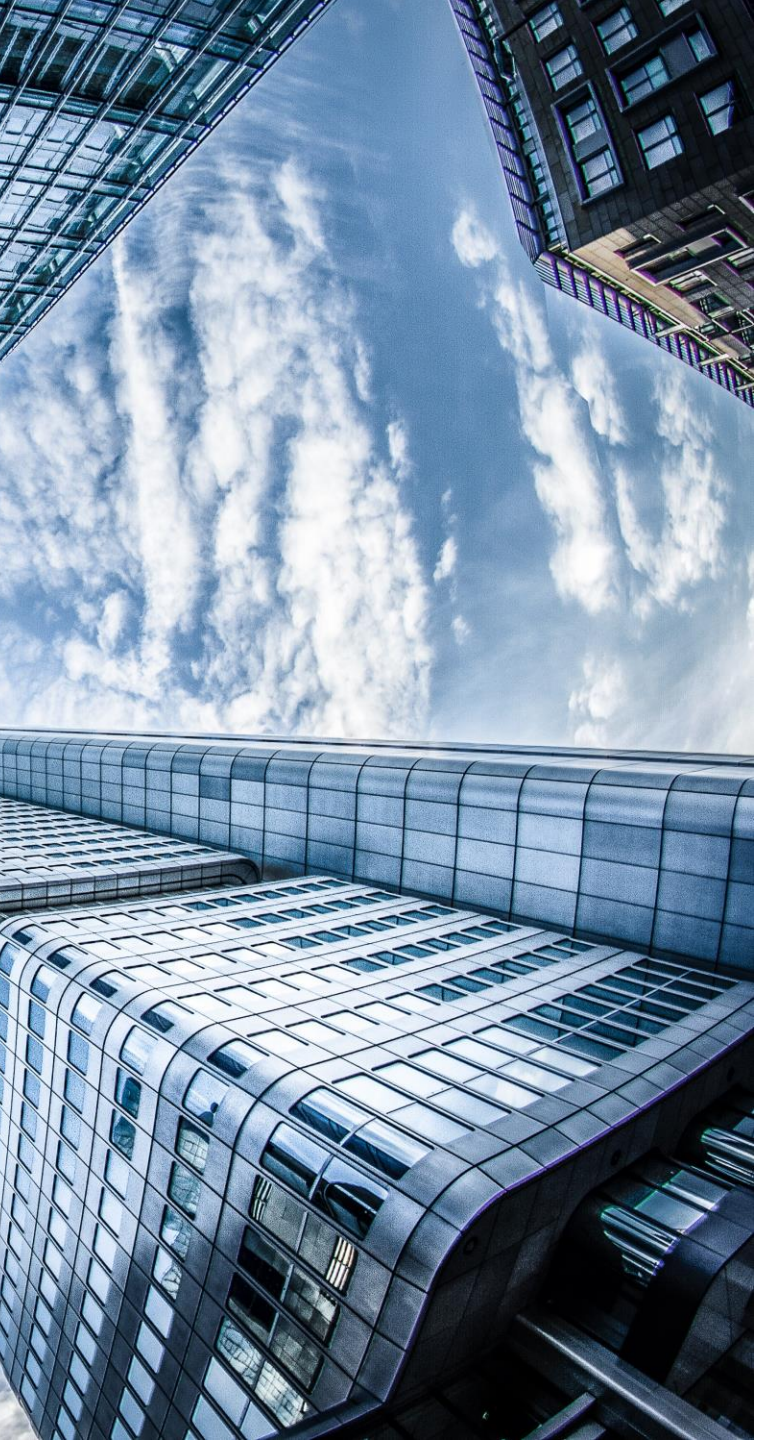


WHAT IS DATA INTEGRATION?

Data integration involves combining data residing in different sources and providing users with a unified view of them (Wikipedia).

Introduction to

THE FME® PLATFORM

SAFE SOFTWARE

OUR MISSION

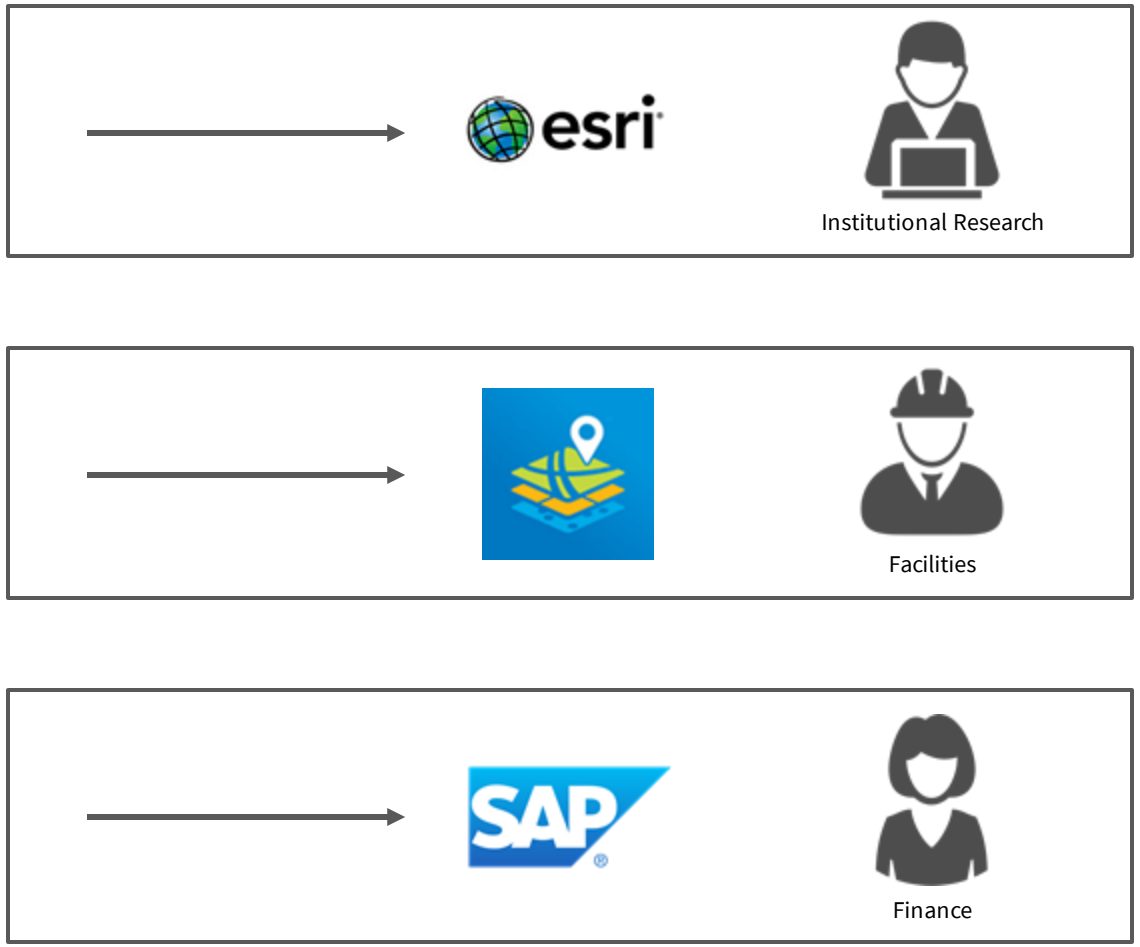
To help you maximize the value of your data.

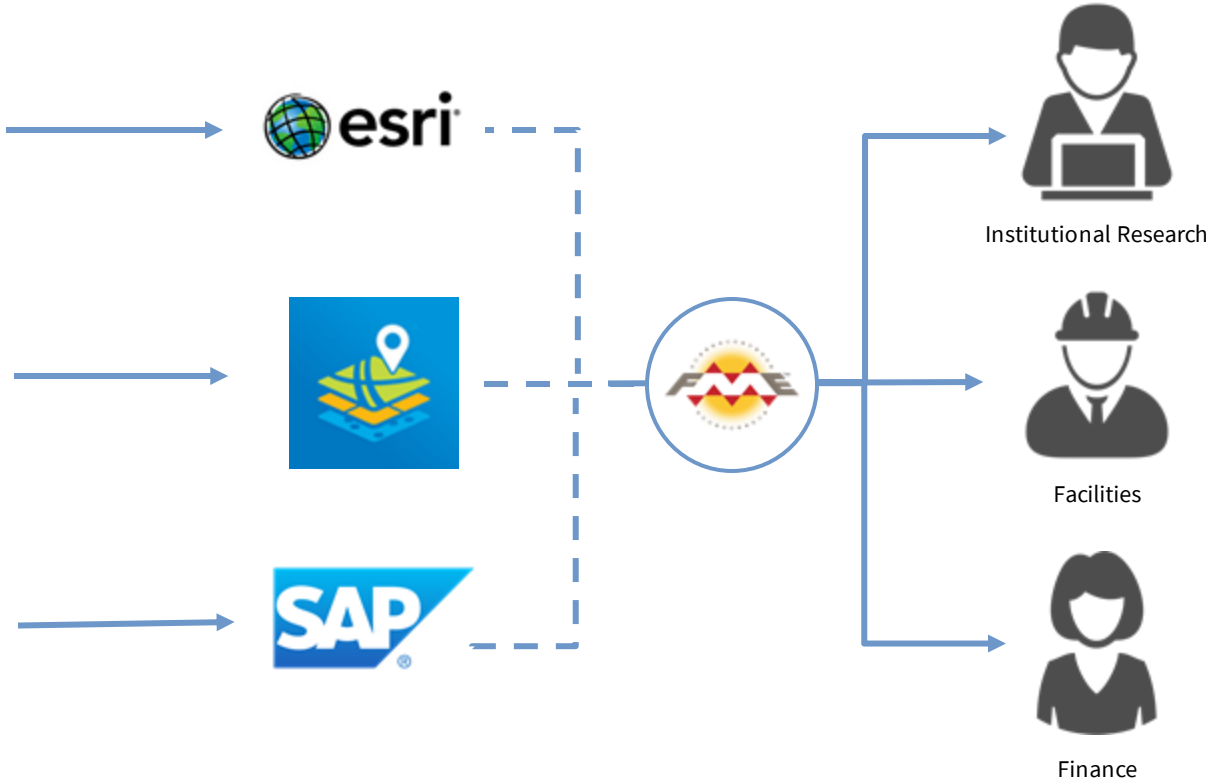
SAFE SOFTWARE

CHALLENGE: DATA SILOS

Organizations spend a lot of money collecting data.

However, the data is often stored in unuseable formats, siloed in other department's systems or needs to be transformed.





SOLUTION: DATA INTEGRATION

"The discipline of data integration comprises the practices, architectural techniques and tools for **achieving the consistent access and delivery of data** across the spectrum of data subject areas and data structure types in the enterprise to meet the data consumption requirements of all applications and business processes." - *Gartner*

COMPANY PROFILE

Safe Software

www.safe.com

25+

Years of solving data challenges

10,000+

Organizations trusting us worldwide

128

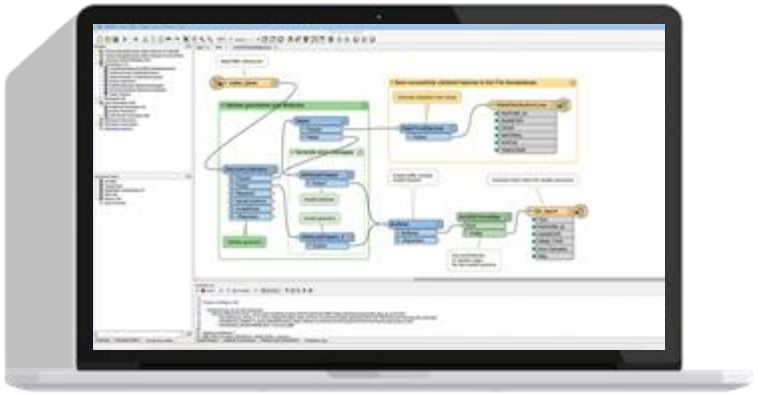
Countries with FME customers

150+

Partners supporting our network

FME® Integration Platform

Connect. Transform. Automate.

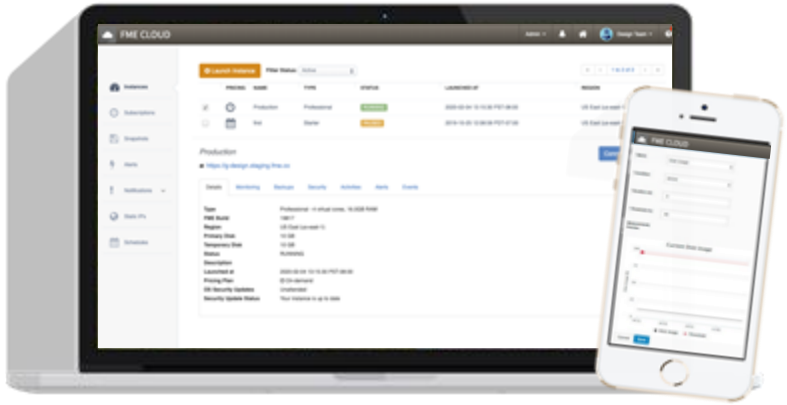


FME Desktop

Build & Run Workflows

FME Server

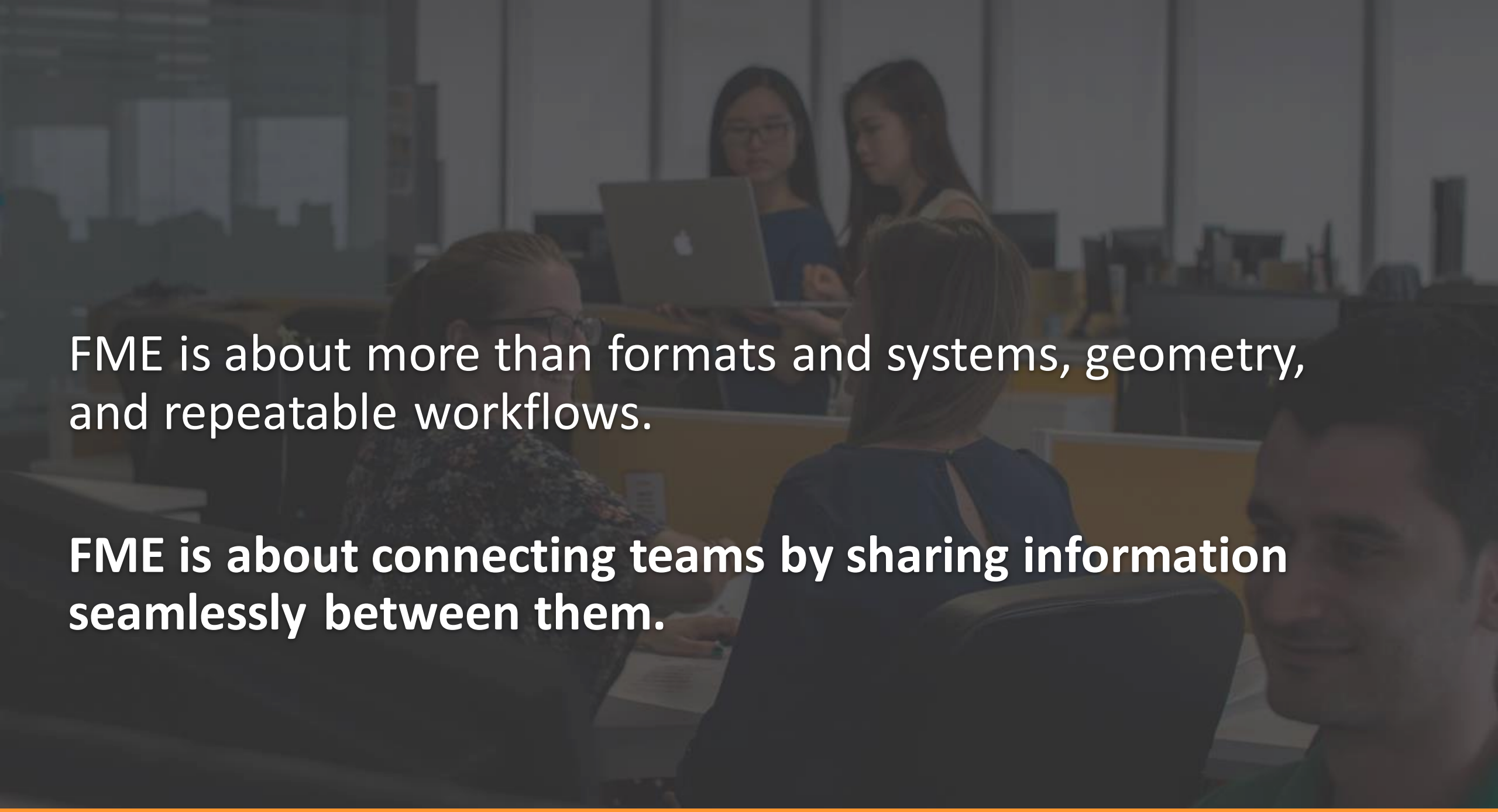
Automate Workflows



FME Cloud

Hosted FME Server

FME is the data integration solution with the best support for spatial data worldwide.



FME is about more than formats and systems, geometry, and repeatable workflows.

FME is about connecting teams by sharing information seamlessly between them.

CONNECT YOUR DATA SOURCES

FME supports geospatial data, structured and unstructured data, linked data, and time series.

Share

Connect data between 450+ sources

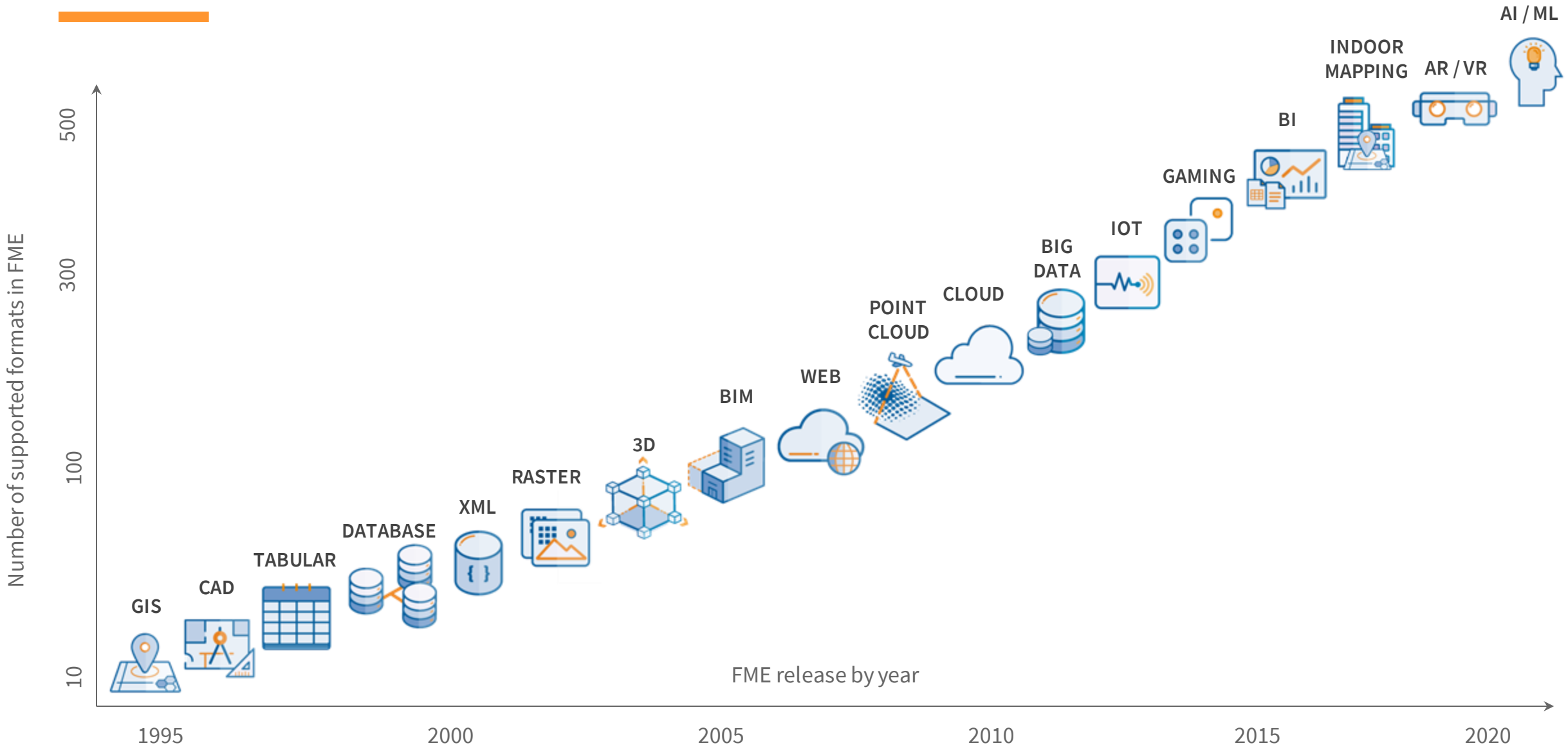
Extend

Extend FME's capabilities with custom connections

Enable

Power business decisions by removing data silos

CONNECT


AI / ML
INDOOR MAPPING
AR / VR
BI
GAMING
IOT
BIG DATA
CLOUD
POINT CLOUD
WEB
BIM
3D
RASTER
XML
DATABASE
TABULAR
CAD
GIS
Number of supported formats in FME
500
300
100
10
FME release by year
1995
2000
2005
2010
2015
2020

TRANSFORM YOUR DATA

Use any combination of transformers to address all levels of complexity.

Modify

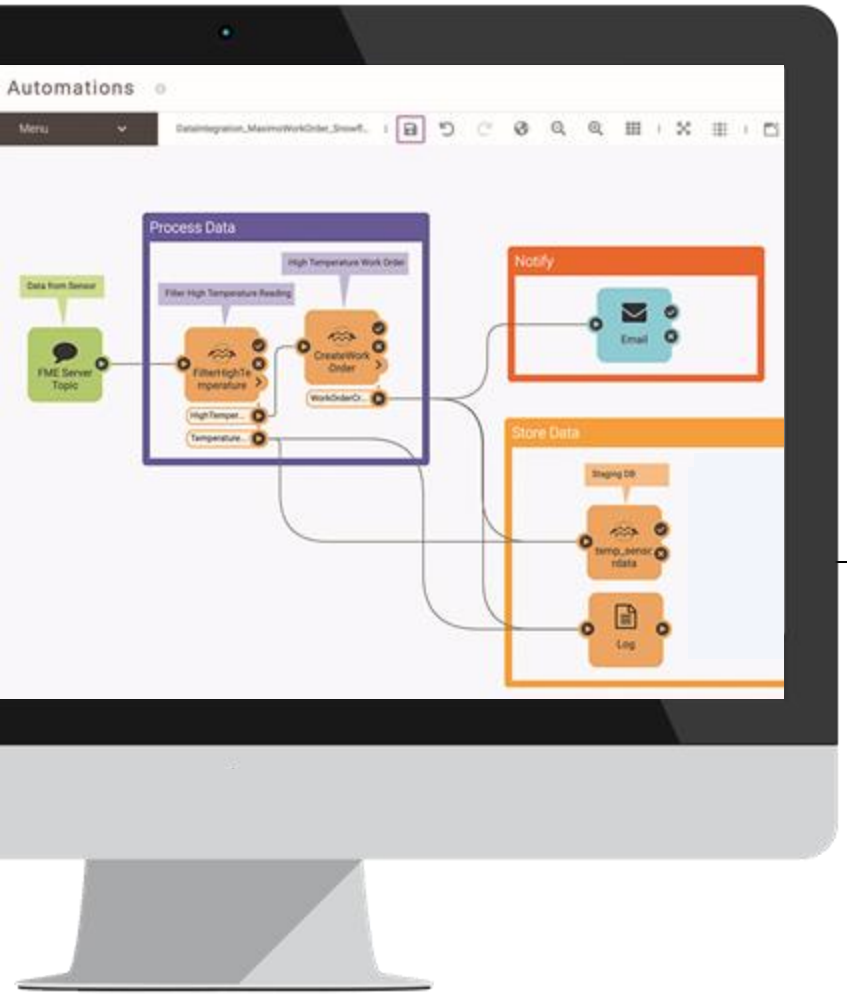
Restructure, filter, calculate & more

Validate

Validate to ensure high quality data

Adjust

Adjust workflows to meet changing requirements



AUTOMATE YOUR WORKFLOWS

Automatically provide integrated data to stakeholders on a real-time or scheduled basis.

Trigger

Automate data integration using event-based workflows

Assemble

Easily build automations using a visual interface

Eliminate

Eliminate the manual effort of complex and repetitive tasks

OPERATING SYSTEMS & DEPLOYMENT OPTIONS

Windows

MacOS

FME Desktop Only

Linux

Docker

Kubernetes

FME Cloud

Fully Hosted on AWS

LICENSING OPTIONS

Education Subscription

- Subscription pricing based on student enrollment
- Access to unlimited FME Desktop & FME Server licenses

Perpetual License

- Includes permanent license + annual maintenance
- Designed for smaller deployments

Cloud Deployment

- Unlock enterprise automation without the hassle of hardware
- Flexible pricing options including hourly and annual subscription

More info: ***safe.com/pricing***

Education Subscription

Use More FME at a Lower Price

Since budgets are often fixed, this lets your team use as much FME as you need with zero limits on FME Desktop and FME Server licenses.

“Free” FME for All Other Departments

For one annual price, your entire organization can use FME, allowing other departments to use FME at no additional cost.

Leverage OpEx Funds

Instead of a CapEx item, population-based subscription pricing is an operating expense.

Predictable Budgeting

Take the guess out of budgeting. Simply pay the amount matching the size of your student population.

Eliminate Time Lag on Projects

Since you have unlimited FME, your projects will never get delayed waiting on licenses.

Reduced Procurement Costs

Save your finance team time by opting for a single purchase instead of multiple one-offs.

Education Subscription

Number of Students	Maximum Annual Subscription	Amount of FME Desktop & FME Server
1 to 14,999	$ 7,500 CAD	✓ Unlimited
15,000 to 24,999	$ 10,000 CAD	✓ Unlimited
25,000 to 49,999	$ 15,000 CAD	✓ Unlimited
50,000 to 99,999	$ 25,000 CAD	✓ Unlimited
100,000 +	Contact Us	Contact Us

Note: Pricing above is for end use in Canada, as of September 10, 2020. To obtain pricing for use in another country, please contact sales@safe.com or your local partner.

What is FME Server?

FME Server

Automate Workflows

Brings your workspaces from FME Desktop to the web and allows anyone within your network to harness the data integration power of FME.

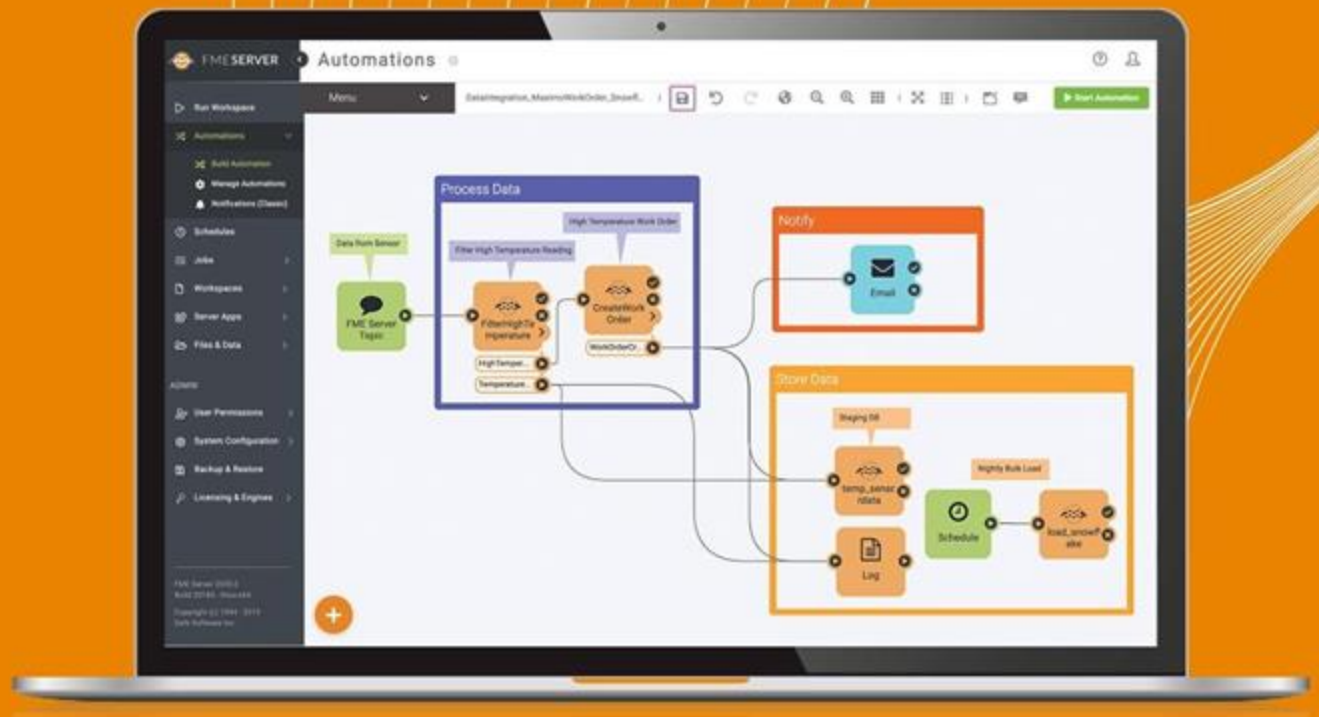
- Run workflows on a schedule or when an event is triggered to keep your data flowing.
- Keep up-to-date with any changes by automatically sending notifications to any stakeholder.
- Licensed based on number of engines running.
- Can be run on-premise or in the cloud.

Save time and money by automating your data integration workflows with FME Server.

7 Common

FME Server

Use Cases



SAFE SOFTWARE

FME Server Use Cases

1. Automate Data Integration
2. Deliver Application Integration
3. Provide Self-Serve Data Integration
4. Send Emails & Notifications
5. Deliver Self-Serve Data Access
6. Integrate Data Streams
7. Scale Data Integration Power

Up to 4 hours of manual work removed

The City of Coquitlam uses FME to manage a self-serve spatial data catalogue.

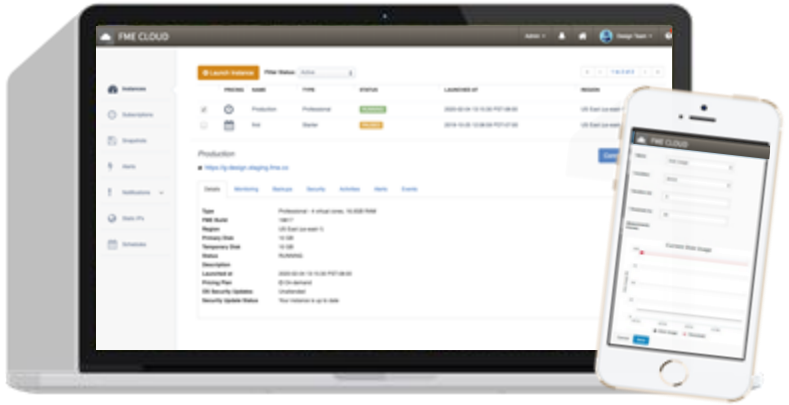
FME **automates** the packaging and delivery process of incoming requests, **saving city staff up to 2-4 hours of manual processing** per request.

Coquitlam

What is FME Cloud?

FME Cloud is a hosted deployment option for FME Server. Instead of spending hours on set-up and configuration, you can have FME Server up and running in minutes.

- All the features and functionality of FME Server.
- Managed by Safe and, if desired, an MSP partner like Plaid.
- Pay-as-you-go based on server runtime.



FME Cloud

Hosted FME Server

Automations: Triggers

- Schedule
- Directories/files changed
  - local, FTP, Dropbox, Amazon S3
- Email
- Webhook
- External message received
  - Amazon SNS, Amazon SQS, Azure Event Grid, JMS, UDP, WebSocket
- Internal messages
  - FME Server topics, system events

Automations: Actions

- Run a workspace
- Merge, log, and filter messages/events
- Send an email
- Send a message
  - HTTP, Amazon SNS, Amazon SQS, Azure Event Grid, JMS, WebSocket
- Upload a file
  - FTP, Dropbox, or Amazon S3
- Notify an FME Server topic

FME Server Apps

- Apps create an easy-to-use interface for non-FME users to run workspaces.
- Fully customizable look – colours, logos, banners, and instructions
- Gallery apps provide a landing page, allowing you to have a single page from which users can access multiple workspaces

DEMONSTRATION

1: Send an email based on an S3 event

Send an email when a new document is received

Place a file in AWS S3

Watch S3, set up notifications

Send email

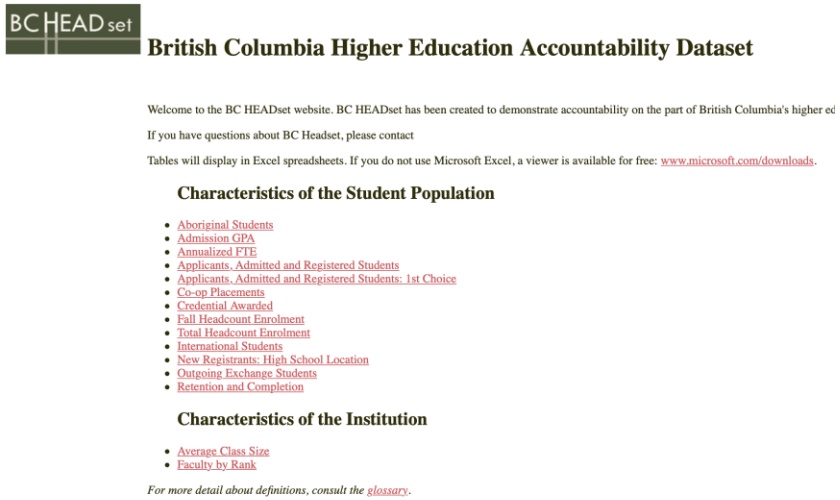
Icons: FME (Safe Software), S3 (Amazon), Email by il Capitano from the Noun Project

2: Nearest Schools in London, Ontario

3: Combine data for BC HEADset

BC HEADset

BC HEADset is an open dataset from British Columbia, Canada's six research-intensive universities.
This demonstration re-imagines the submission process.


BC HEADset

British Columbia Higher Education Accountability Dataset

Welcome to the BC HEADset website. BC HEADset has been created to demonstrate accountability on the part of British Columbia's higher ed

If you have questions about BC Headset, please contact

Tables will display in Excel spreadsheets. If you do not use Microsoft Excel, a viewer is available for free: www.microsoft.com/downloads.

Characteristics of the Student Population

- Aboriginal Students
- Admission GPA
- Annualized FTE
- Applicants, Admitted and Registered Students
- Applicants, Admitted and Registered Students: 1st Choice
- Co-op Placements
- Credential Awarded
- Fall Headcount Enrolment
- Total Headcount Enrolment
- International Students
- New Registrants: High School Location
- Outgoing Exchange Students
- Retention and Completion

Characteristics of the Institution

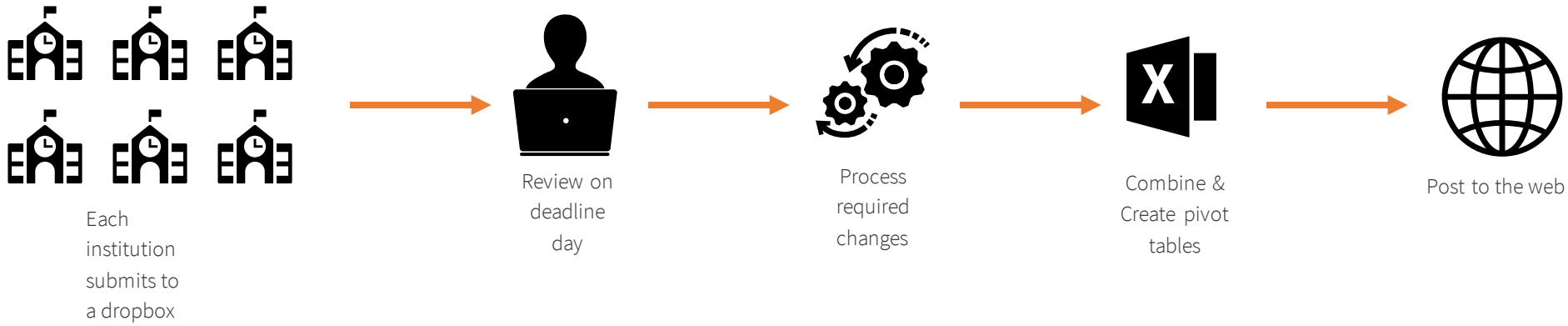
- Average Class Size
- Faculty by Rank

For more detail about definitions, consult the glossary.

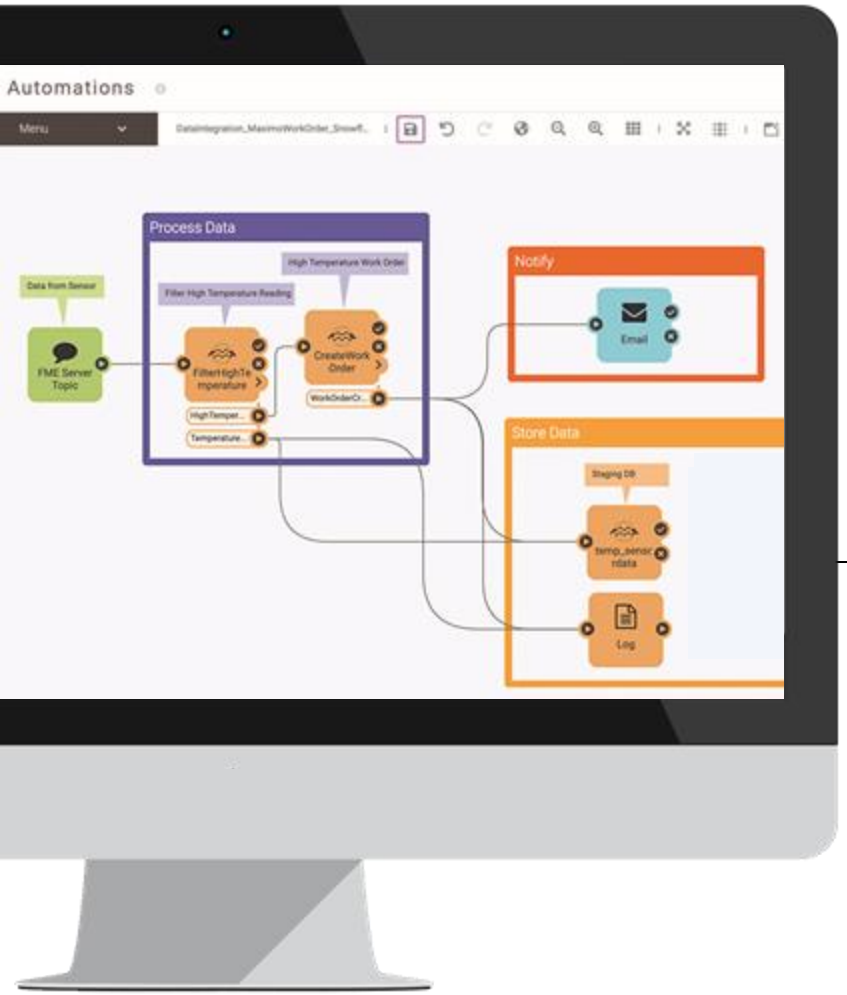
Note: this demonstration is neither affiliated with nor endorsed by BC HEADset.

BC HEADset Current Process

The current process involves several steps requiring manual intervention



Icons: FME (Safe Software), college by MRK, User by TukTuk Design, Gears by Dan Hetteix, web by Rainbow Designs, excel by Robin Richards from the Noun Project



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Automatically provide integrated data to stakeholders on a real-time or scheduled basis.

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Automate data integration using event-based workflows

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Easily build automations using a visual interface

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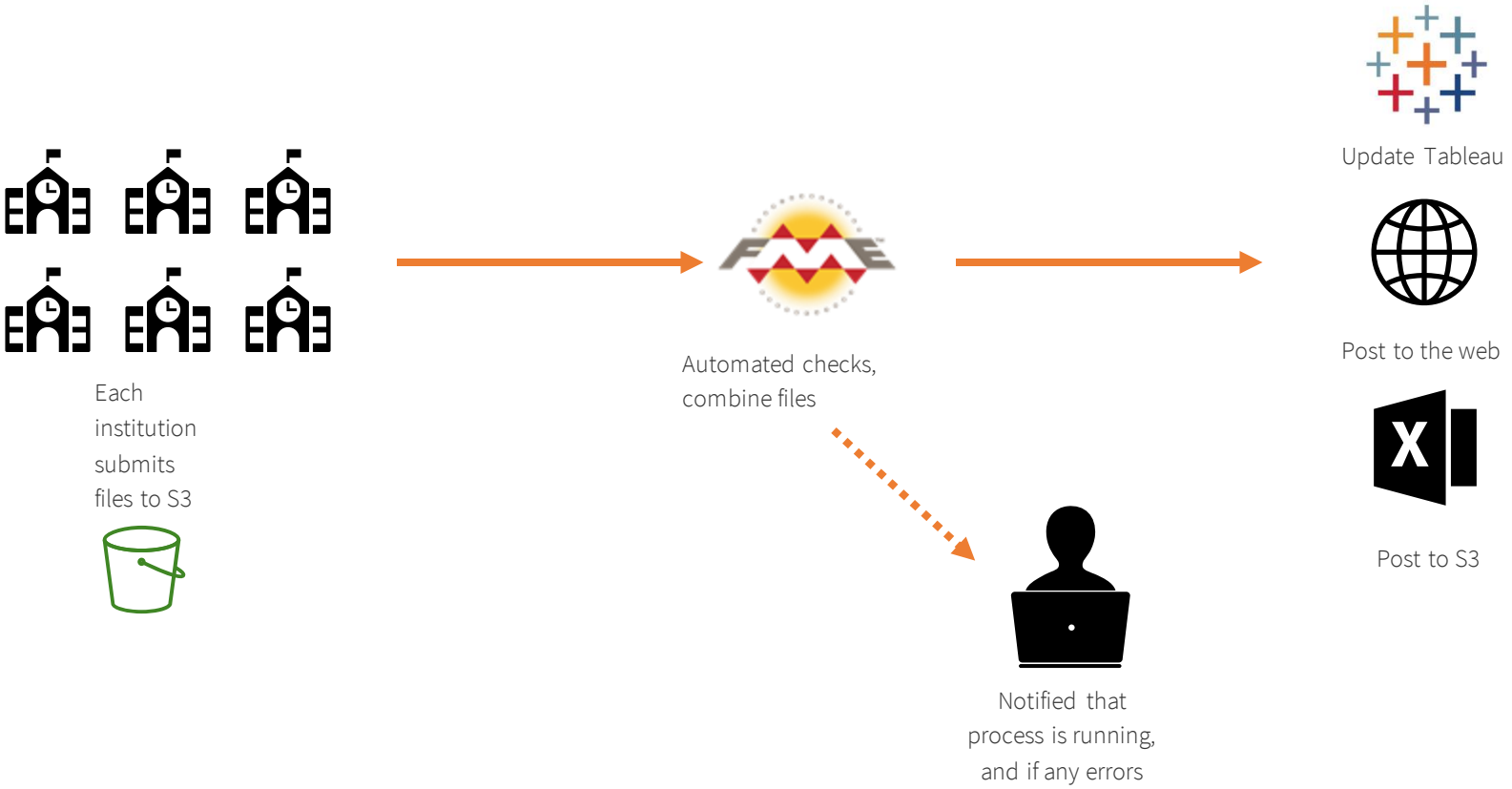
Eliminate the manual effort of complex and repetitive tasks

BC HEADset Reimagined Process

The re-imagined process sees FME do the heavy lifting



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Get started with free resources at safe.com

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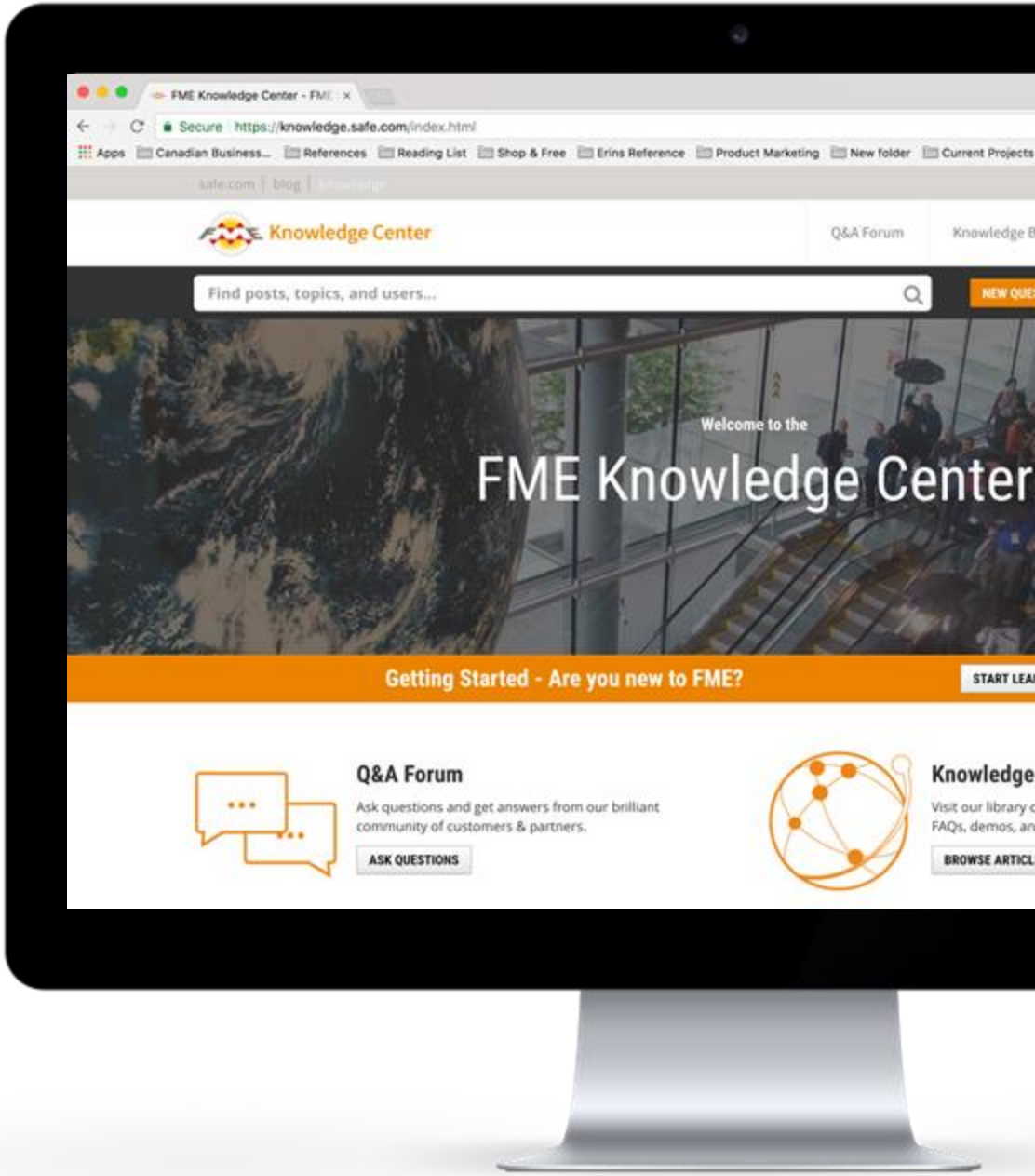
- ✓ Free Online Training
- ✓ Free Tutorials
- ✓ Free Webinars
- ✓ Free Knowledge Center



NEXT STEPS

Set up a demo for your educational organization:

info@plaid.is

www.plaid.is

WEBINAR RECORDING

Now available

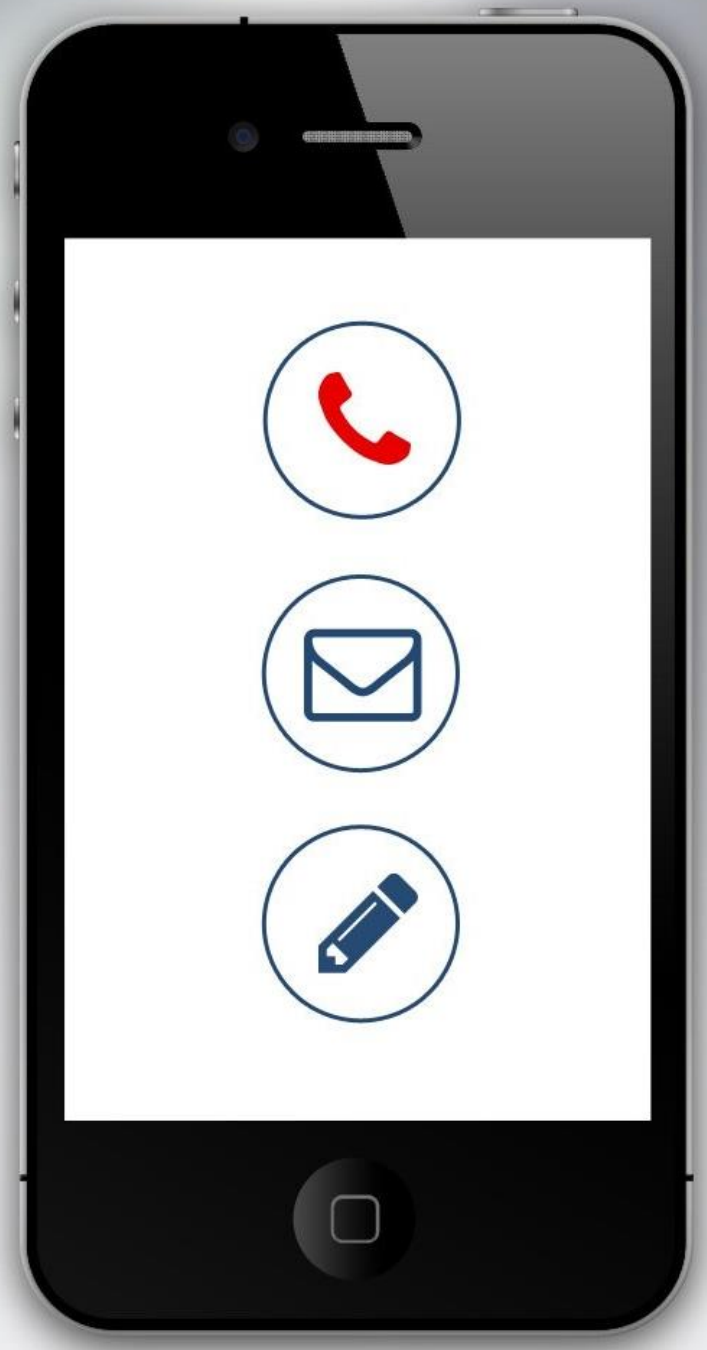
www.plaid.is/#webinars

CONTACTS

Andrew / Pat (Plaid):

info@plaid.is

www.plaid.is



Thank you!

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