

Scaling BIM Process in Light-speed Projects

Agata Kostrzewa

Senior Design Technology Lead

wework



Welcome



About the speaker

Agata Kostrzewa

Senior Design Technology Lead at Wework, helping implement BIM process in projects from London to Moscow and beyond as well as developing workflows and tools to help design teams across the EMEA region. Originally from Poland, Agata graduated with an MEng in Architecture and Environmental Design from the University of Nottingham in 2011 and has worked in practices in Poland, China and UK since – first as a designer and later as BIM specialist.

Learning Objectives – what we'll do

- Design a streamlined BIM process
- Explain the basics of BIM management automation
- Learn about the priorities for teams involved in a project
- Describe best practices for managing consultants in cloud-collaborated projects

What we won't do

- Re-invent the wheel
- Reference a rigid industry standard
- Make robots take our jobs

Streamlined BIM process

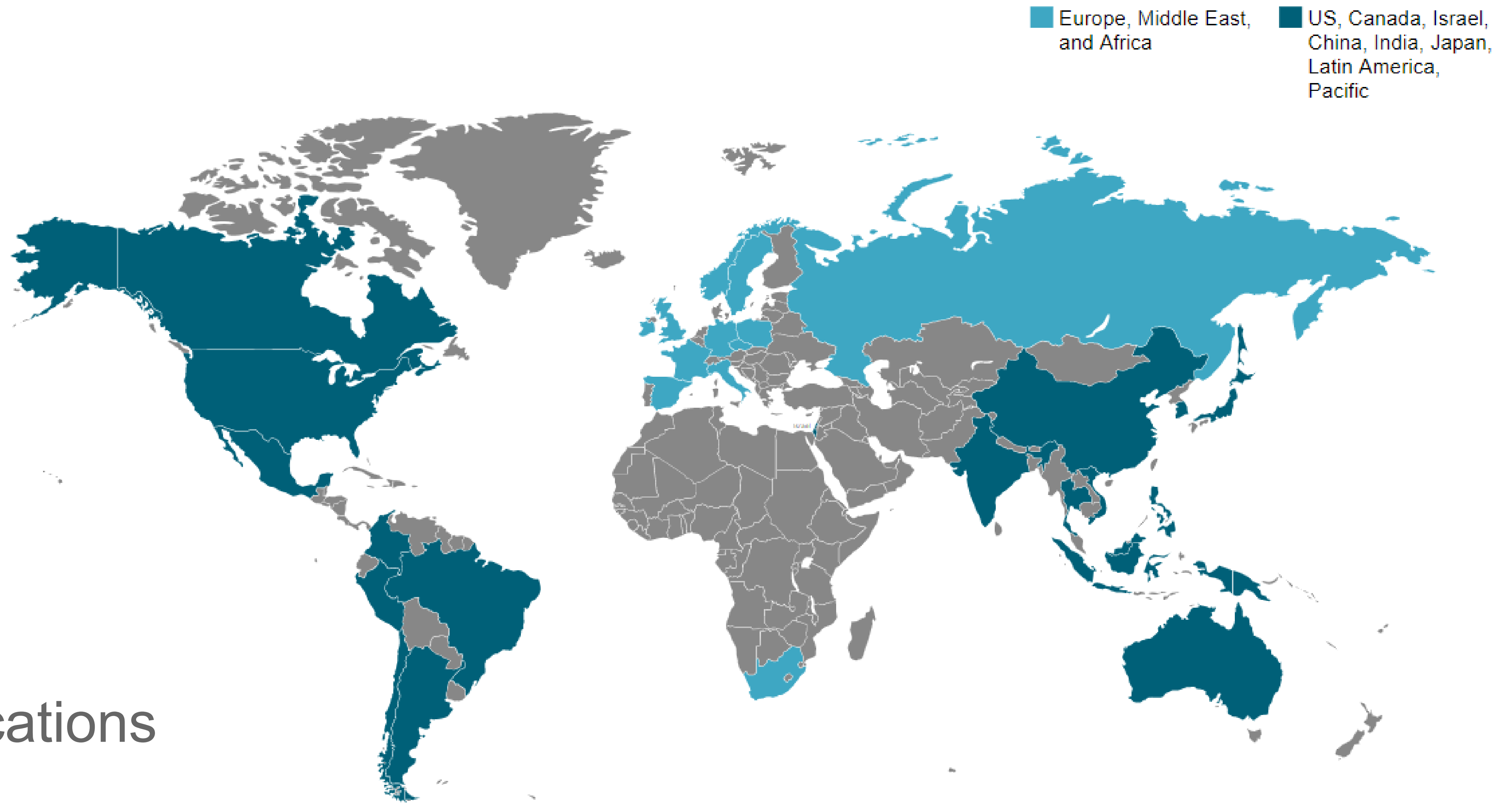


“What does that mean”?

Everyone

we work

Locations



In numbers

29

COUNTRIES

All over the world

111

CITIES

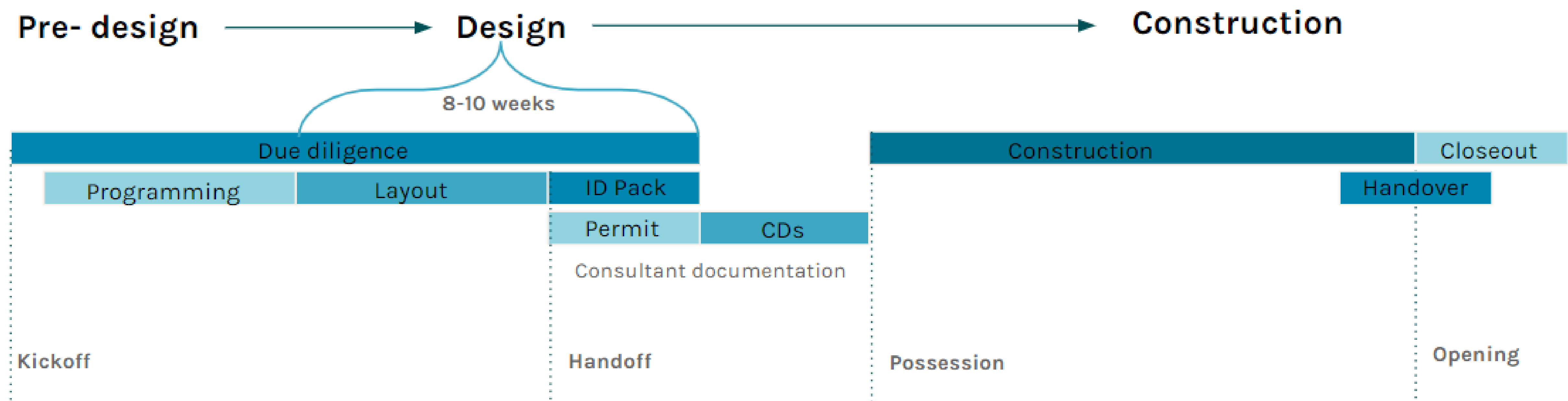
Globally

100+

PROJECTS

In EMEA Region

The process



Tools



AUTODESK®
REVIT® 2019





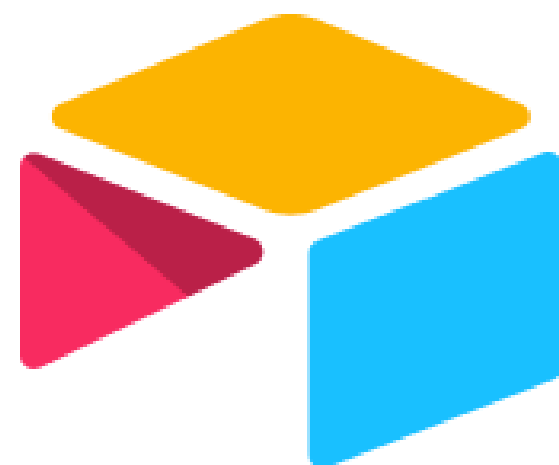
FORGE



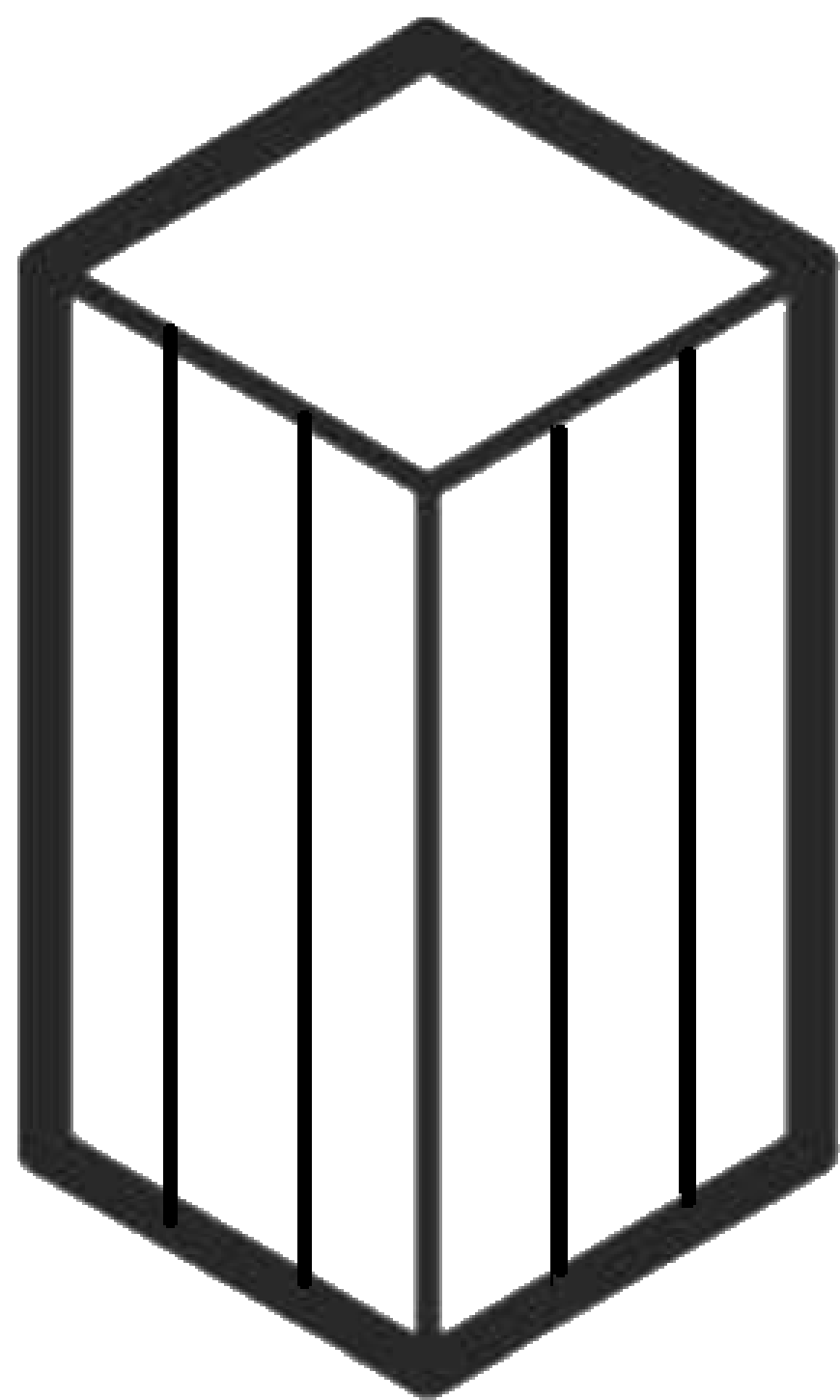
 **AUTODESK®**
BIM 360™



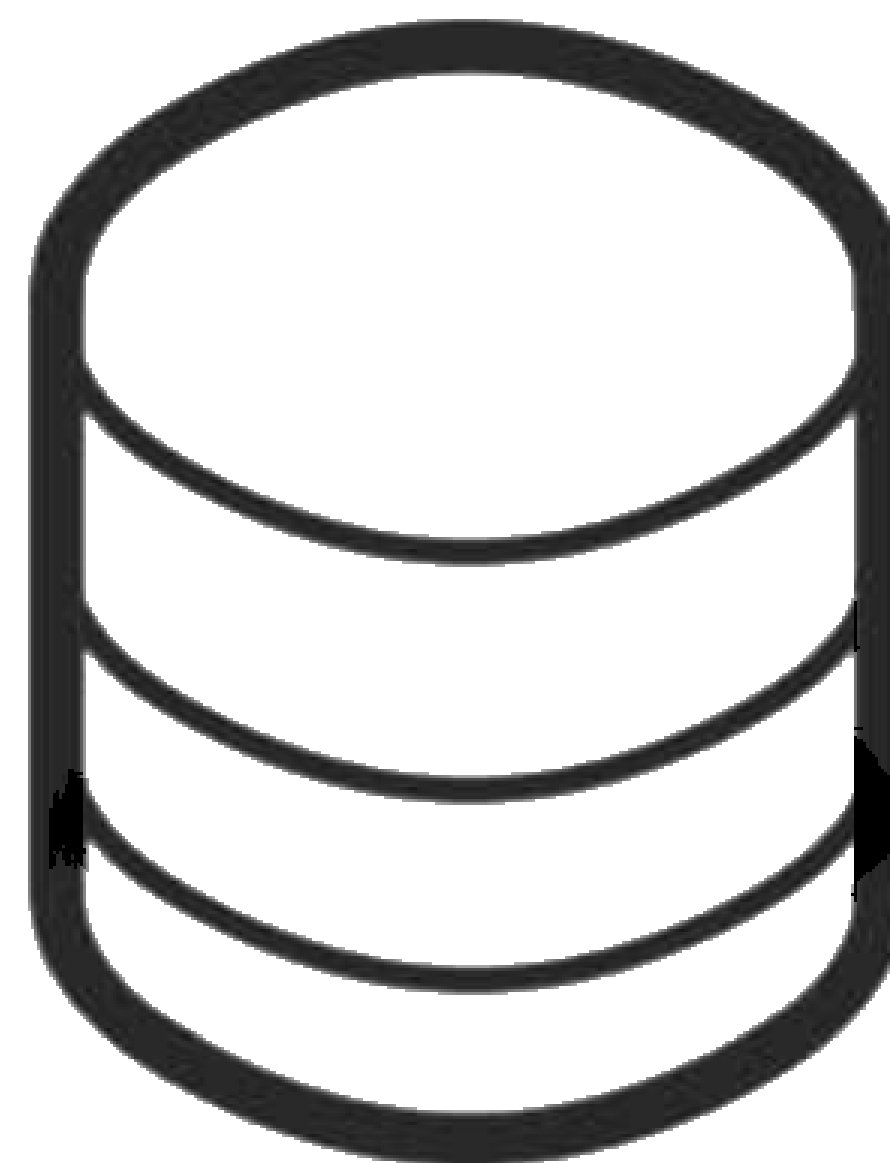
FORGE



Airtable



bldgs

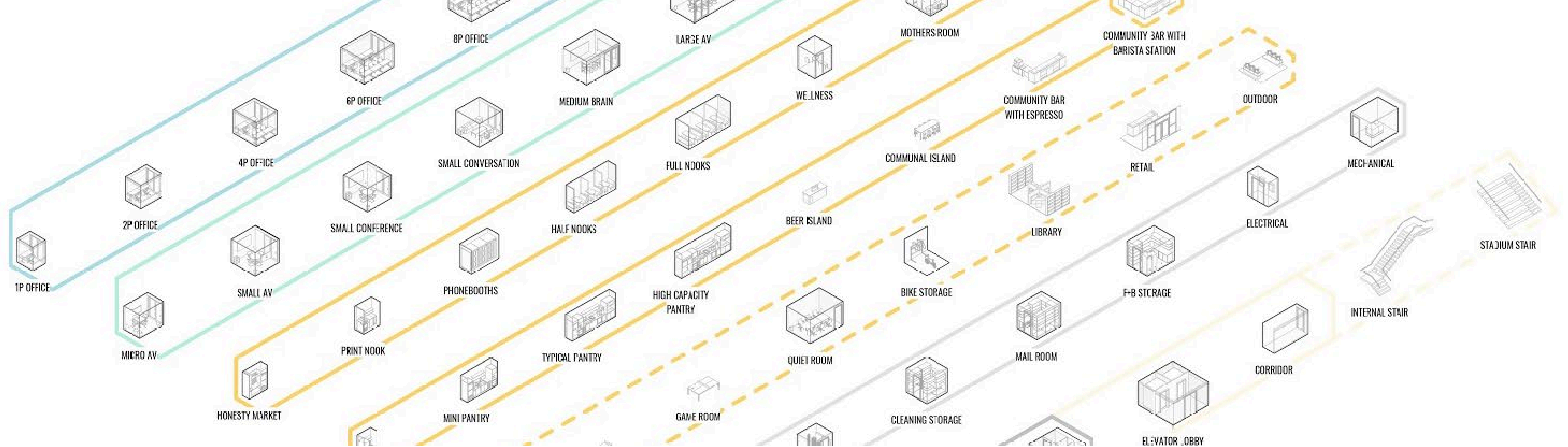


data

Standardise

What?

Content - Process - Information

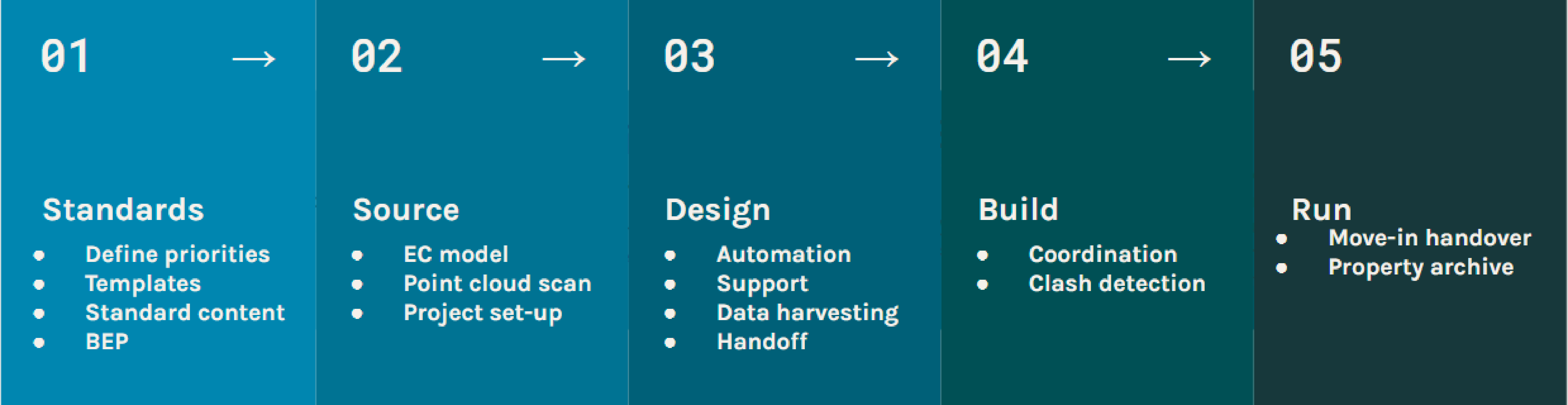


Templates

- Tailored to business line
- Lightweight blank canvas
- Multiple view templates set up for teams tailored to their needs

Content

- In line with QA/QC requirements
- Regionalised
- Content Management System
- Reviewed and updated as new design guidelines are published



Clearly defined tasks

- Design Tech overview
- Stripped-back process
- Clear assignment of each task to the phase

BIM Execution Plan

- Roles and responsibilities
- Clear deliverables
- Software and CDE specification
- Wiggle room

Data Management

- Consistent through your organization
- Naming convention
- Shared parameters
- File locations

Automation



What would you like to
automate?

AUTOMATE



ALL THE THINGS!

Why?

“Technology is the answer,
but what was the question?”

Cedric Price

What are you solving for?

Goals

- Streamline day to day support
- Reduce manual admin tasks
- Save cost
- Gain time for innovation

Examples

Tools

APIs

- Application Programming Interfaces
- Get information out of software without opening it
- Add/modify information in your software without opening it
- Send requests via methods

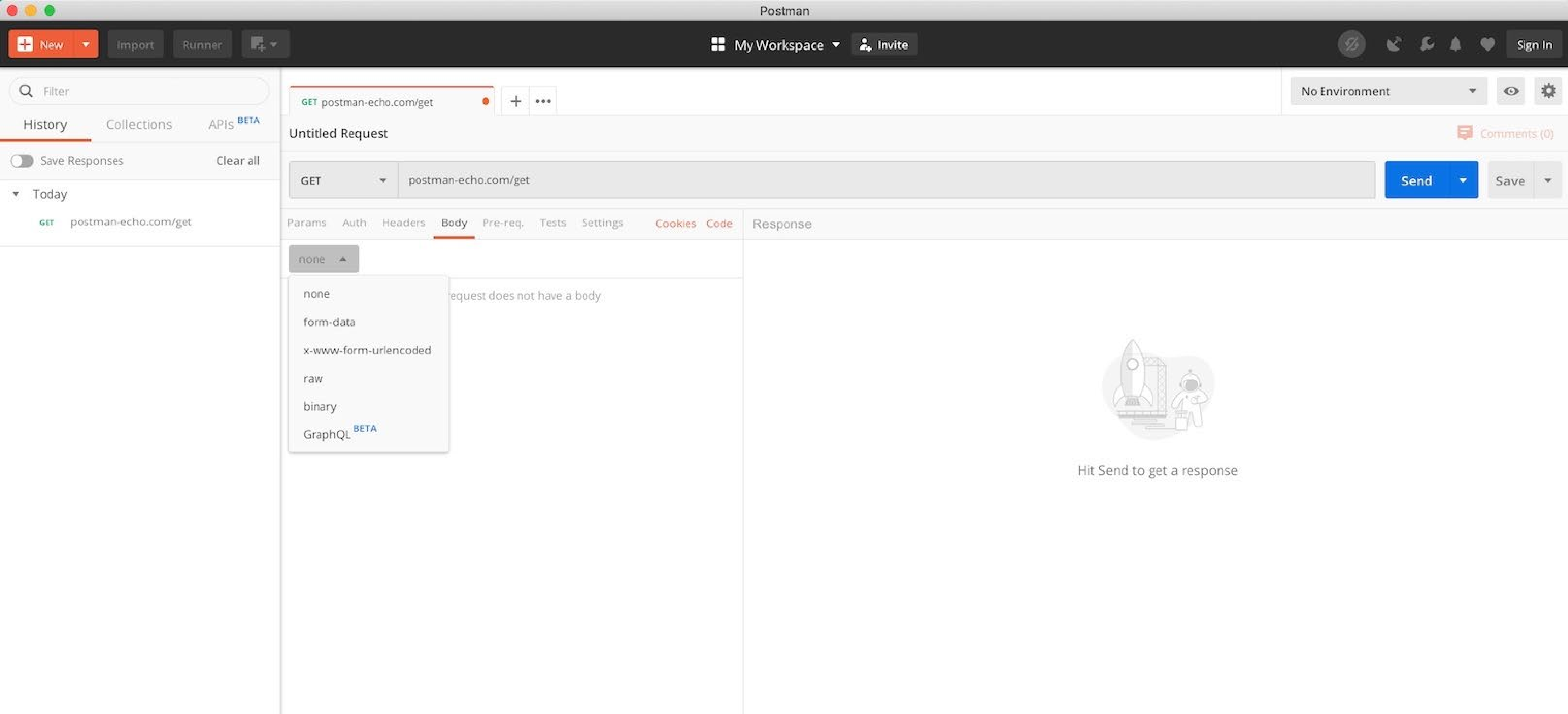
API methods

- GET - retrieve the information you requested
- POST - create the input you are sending
- PUT - completely replace an existing record
- PATCH - update an existing record
- DELETE

Postman

Postman

- Send requests
- View responses
- Share collections



Forge API

APIs & Services

Access information on how to use Forge APIs and Services

Authentication

Generate tokens based on the OAuth 2.0 standard to authenticate requests made to Forge APIs and SDKs.

[Developer's guide](#) >

[API reference](#) >

BIM 360

Integrate with the Autodesk BIM 360 platform to extend its capabilities to reach segments of the construction ecosystem that don't have direct access to BIM data.

[Intro](#) >

[Developer's guide](#) >

[API reference](#) >

Data Management

Access data across BIM 360 team, Fusion Team, BIM 360 Docs, and the Object Storage Service to build apps to display and extend your data in ways that add value to your users.

[Intro](#) >

[Developer's guide](#) >

[API reference](#) >

Design Automation

Automate repetitive tasks by leveraging on the scale of the Forge Platform and running scripts on your design files in the cloud.

[Intro](#) >

[Developer's guide](#) >

[API reference](#) >

Model Derivative

Derive outputs viewable by the Forge Viewer from more than 60 CAD file formats, and extract metadata about the models as well as the individual objects within the model.

[Intro](#) >

[Developer's guide](#) >

[API reference](#) >

Reality Capture

Convert digital images into high resolution textured meshes, dense point clouds and orthophotos.

[Intro](#) >

[Developer's guide](#) >

[API reference](#) >

My Apps

CREATE APP >

Personal

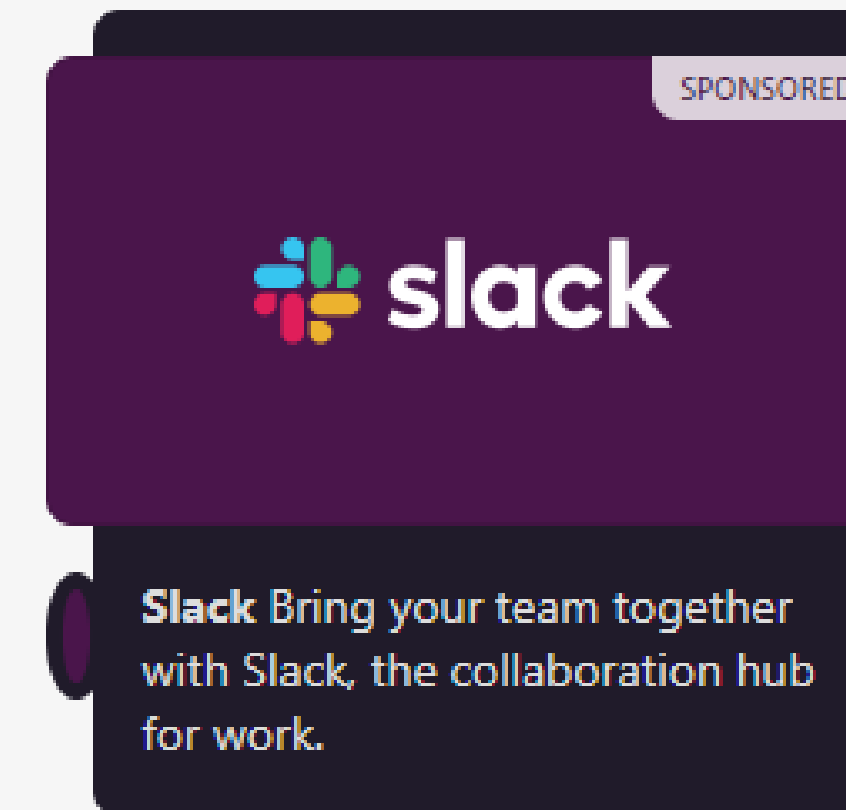
agata test
Created 08 Jul 2019

test

Revit API

- > Grasshopper
- > Navisworks
- > Revit
- > RhinoCommon

supported by



Support the Project

Buy Me Coffee

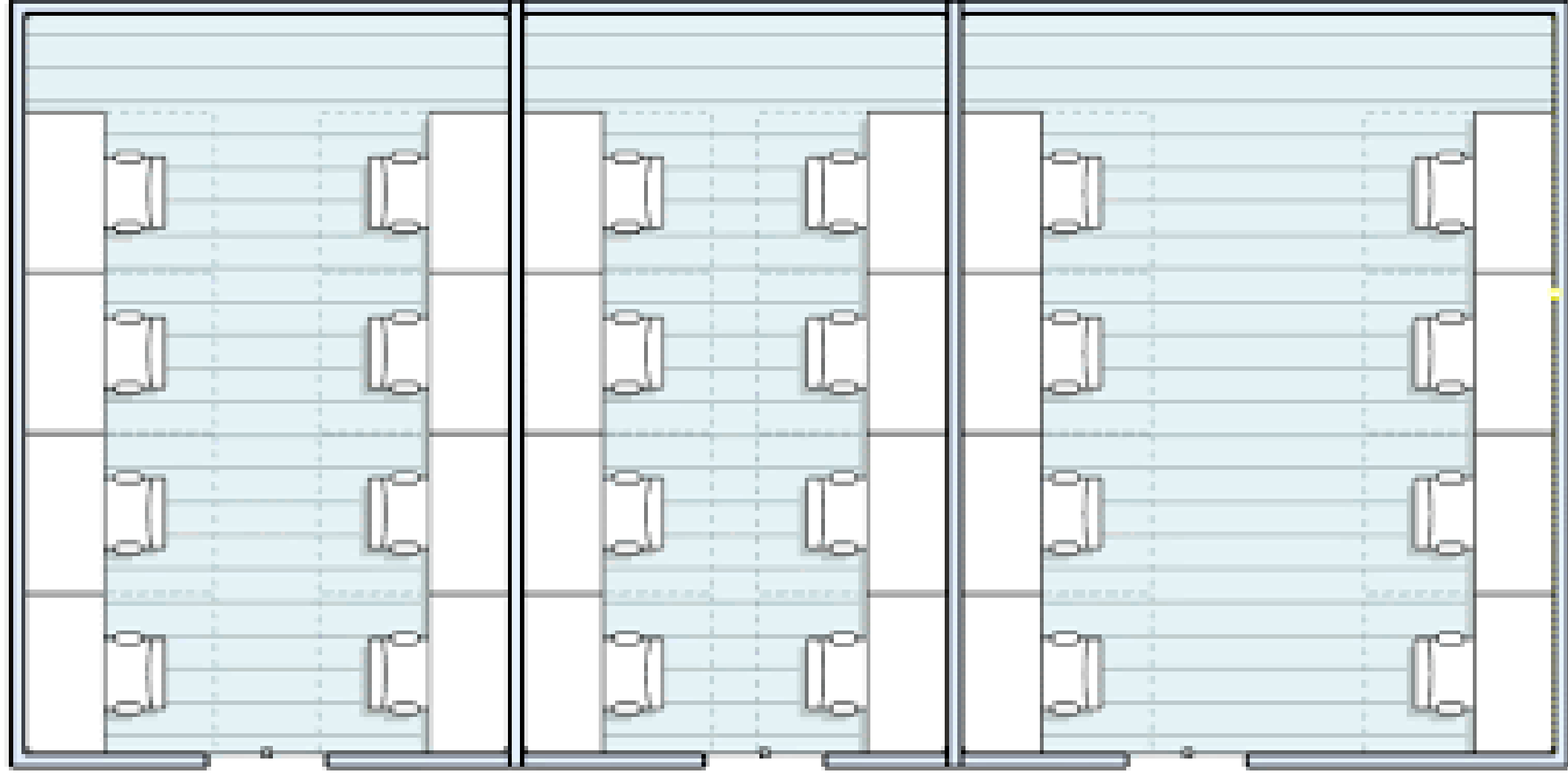
Reoccurring Support

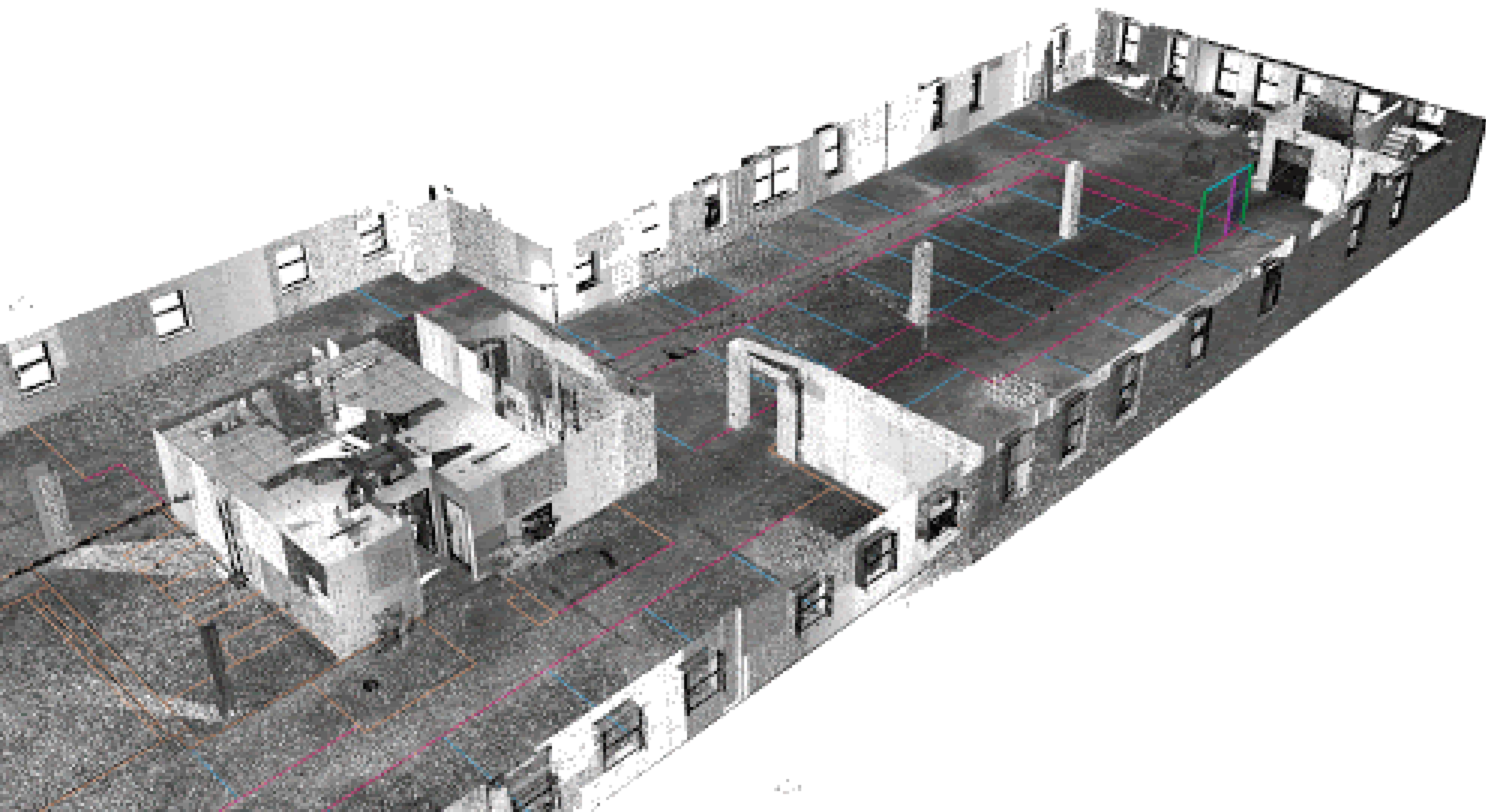
 Follow @ApiDocsCo

ApiDocs.co offers searchable and versioned API Documentation for Grasshopper, Navisworks, RhinoCommon, and Revit. All content is provided free of charge for education and information purposes.

Legal Stuff

Cool examples





AUTOMATIC LAYOUT CALCULATION

COST ESTIMATION

CALCULATE COST ESTIMATE

Size (mm)	Length (mm)	Cost per m (£ / m)	Total Cost (£)
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Total: £0.00

EXPORT TO REVIT MODEL

- ☒ Grid
- ☒ Rooms
- ☒ Background

- ☐ Resistance Map
- ☒ Path Nodes
- ☐ Size Tags

- ☐ MEP Info
- ☐ Debug Tooltip

ADD OBSTACLES

ADD WAYPOINTS

EXPORT TO PDF

DEBUG / BETA TOOLS

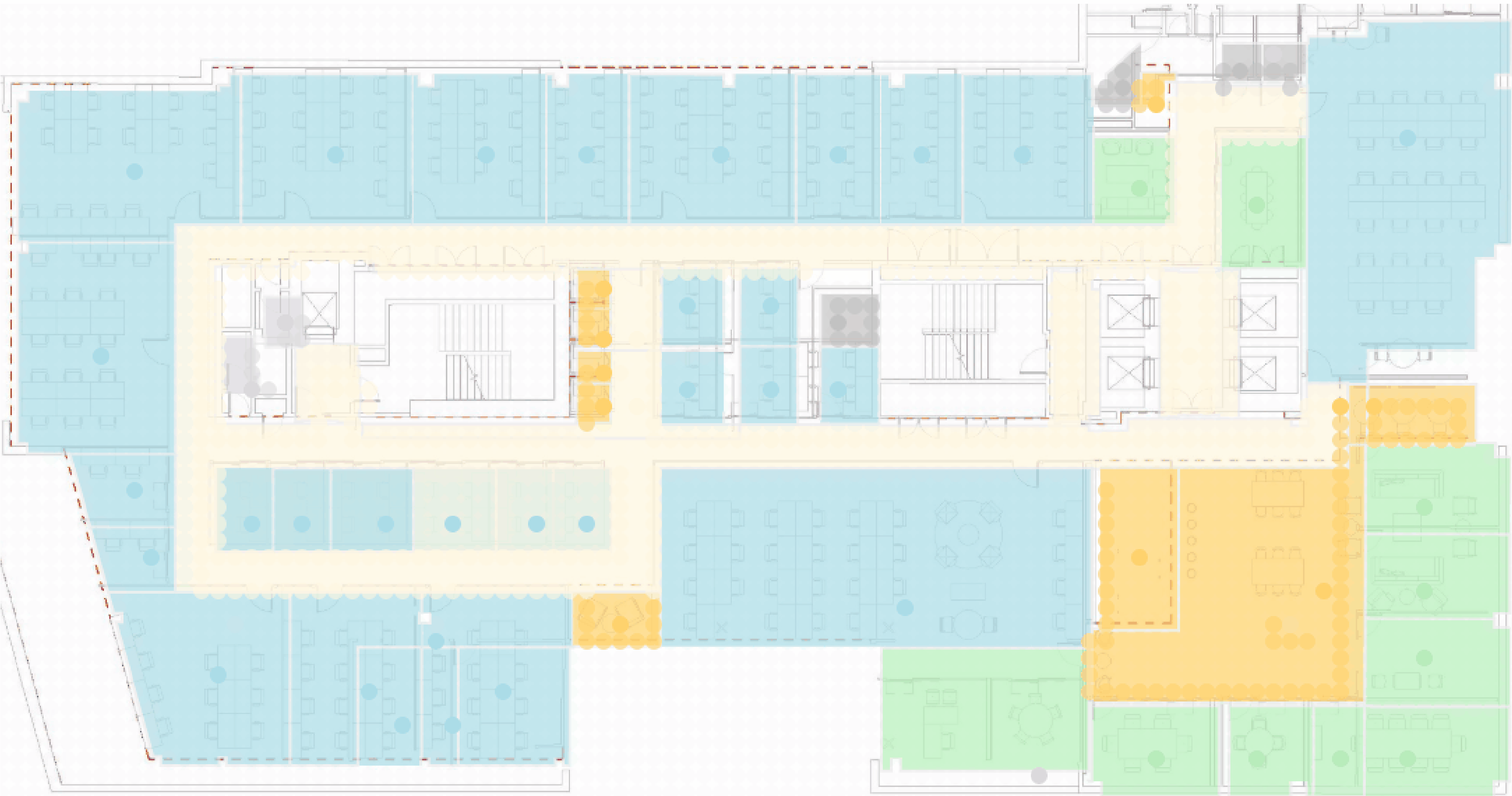
DEBUG INFO PANEL

ROUTE FINDING OPTIONS

PATH RESISTANCE RULES

RISER INFORMATION

ROUTE INFORMATION



Priorities



Priority planning

- Milestones
- Deliverables
- Task dependencies
- Accountability

How do they know?

Information Overload

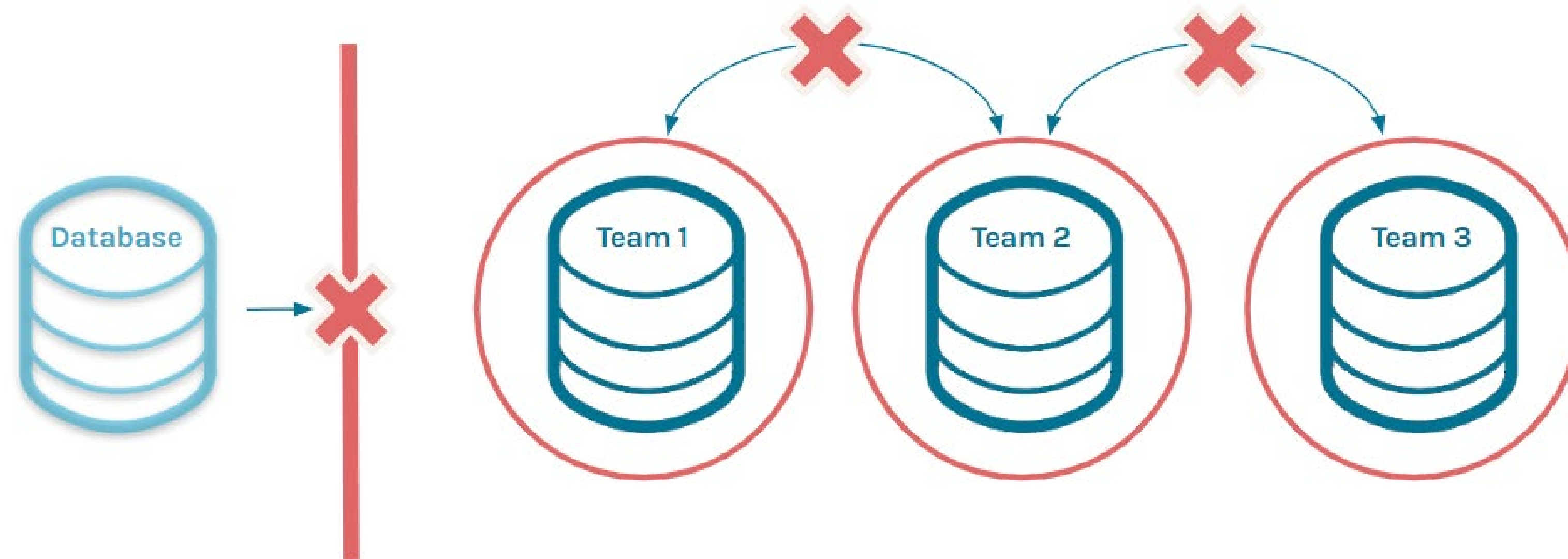


“In God we trust, all
others must bring data”

W. Edwards Denning

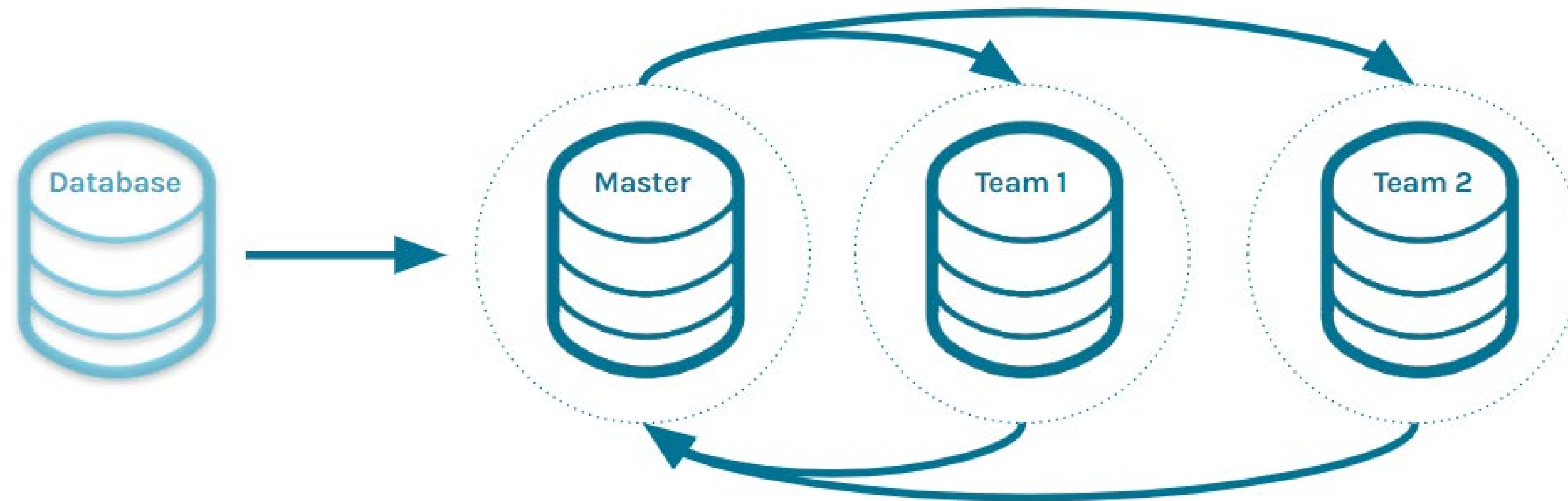
So you have a database...

Siloed information



Enter automatic triggers

Information sharing



Managing consultants



Back to basics (BEP)

BEP points to discuss

- CDE
- Software versions
- Version control system
- Deliverables

Why cloud-collaborate?

Cloud Collaboration

- Live work-sharing
- Real- time coordination
- Version control
- Accountability
- Security

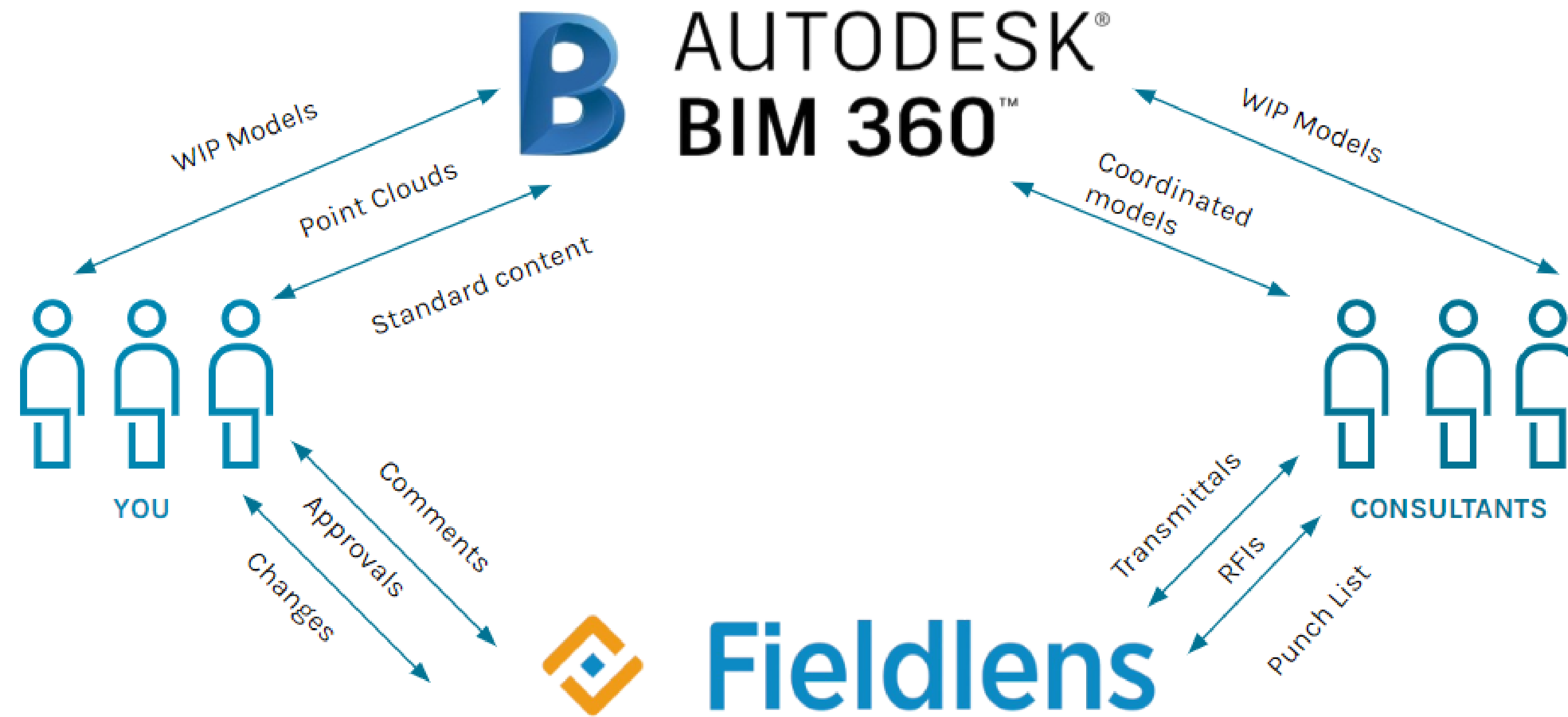
Communication

- What needs to be communicated
- How?
- Can you reduce email?
- Accountability



- Assign people to tasks with due dates
- Visibility across the company
- Pin posts to a drawing
- Generate reports

Simple comms matrix



Onboarding

Culture of trust

- Explain your process
- Be available for questions
- Listen

Thank you



Created by Tomas Knopp from the Noun Project

Questions?