

# Implementation: Refresh

**Martin Coyne**

BIM Manager

Associate Principal

**Max Fenton**

BIM Specialist

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## About the speakers

### Martin Coyne

Martin is the BIM Manager for KPF's London office, joining the office in 2013 to help lead firmwide efforts on technology, standards and training.

An architect by trade, with design and process management experience across a number of key sectors, notably aviation, commercial and residential.



## About the speakers

### Max Fenton

Max is a BIM Specialist and joined KPF in 2015. He's worked in both KPF's London and Hong Kong offices.

He is currently based in London, supporting global technology and project efforts with a particular focus on international high-rise commercial developments and high-end residential projects here in London.

# Learning Outcomes

## ASSESS YOUR CURRENT LEVEL OF IMPLEMENTATION

What is your current skill level, BIM uptake, etc. and any factors that may be restricting progress

## UNDERSTAND DIFFERENT STRATEGIES TO ACHIEVE YOUR GOALS

Consider target setting, training plans, strategic thinking

## UNDERSTAND HOW TO DEVELOP A STRATEGY TO ASSESS TECHNOLOGY IMPLEMENTATION

Are you using the correct tool, can you help to ensure a good tool is used effectively (or at all) once you have rolled it out

**KPF IS A GLOBAL ORGANISATION THAT OPERATES AS A SINGLE ENTITY – OUR SIX OFFICES UNIFIED THROUGH TECHNOLOGY, CULTURE, PEOPLE AND PURPOSE.**

OUR “ONE FIRM” MODEL ALLOWS US TO PROVIDE EACH CLIENT WITH AN INTERNATIONAL STANDARD OF EXPERTISE AND ACCESS OUR TALENT, KNOWLEDGE, EXPERIENCE AND INNOVATION.



HERON TOWER, LONDON



ONE VANDERBILT, NEW YORK



KPF LONDON



SHANGHAI WORLD FINANCIAL CENTRE



**1976**

KPF FOUNDED IN NEW YORK



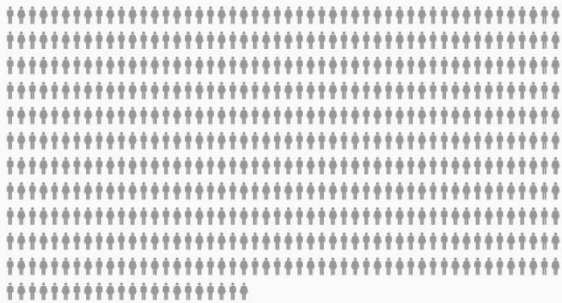
**6**

OFFICES WORLDWIDE



**1990**

LONDON OFFICE OPENED



**570+ STAFF**

**40+**  
LANGUAGES  
SPOKEN

**54**  
DIFFERENT  
COUNTRIES



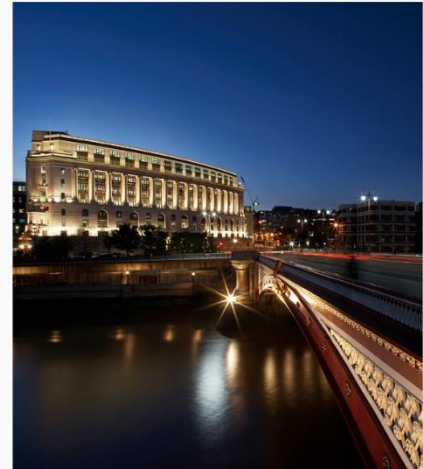
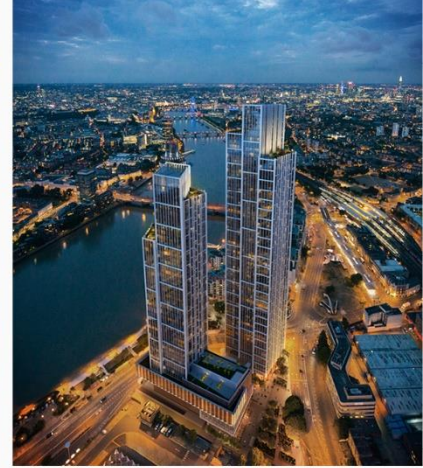
**69**

LED BY 30 PRINCIPALS  
& 39 DIRECTORS



**300+**

300+ DESIGN AWARDS &  
100+ GREEN RATINGS



# PROJECT EXPECTATION TIMELINE

**2007**

**FIRST “FULLY  
COORDINATED”  
PROJECT**

**RESPONSE TO  
COMPLEX  
COORDINATION  
CHALLENGE**

# PROJECT EXPECTATION TIMELINE

**2007**

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**2010**

FIRST LONDON  
"BIM" PROJECT

RESPONSE TO  
COMPLEX  
COORDINATION  
CHALLENGE

CLIENT DESIRE  
FOR BIM BEGINS  
TO MANIFEST



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**2010**

**FIRST LONDON  
“BIM” PROJECT**



**2013**

**“PHASE II” BIM  
PROJECTS KICK  
OFF**



**RESPONSE TO  
COMPLEX  
COORDINATION  
CHALLENGE**



**CLIENT DESIRE  
FOR BIM BEGINS  
TO MANIFEST**



**ABILITY TO  
UTILISE  
DEVELOPED  
KNOWLEDGE &  
EXPERTISE**





**2007**

FIRST “FULLY  
COORDINATED”  
PROJECT



**2010**

FIRST LONDON  
“BIM” PROJECT



**2013**

“PHASE II” BIM  
PROJECTS KICK  
OFF



**2017**

FIRST FORMAL  
EIRs RECEIVED



RESPONSE TO  
COMPLEX  
COORDINATION  
CHALLENGE



CLIENT DESIRE  
FOR BIM BEGINS  
TO MANIFEST



ABILITY TO  
UTILISE  
DEVELOPED  
KNOWLEDGE &  
EXPERTISE



NOTICEABLE  
IMPACT OF  
“LEVEL 2” ON  
PRIVATE SECTOR



Are you where you want to be?

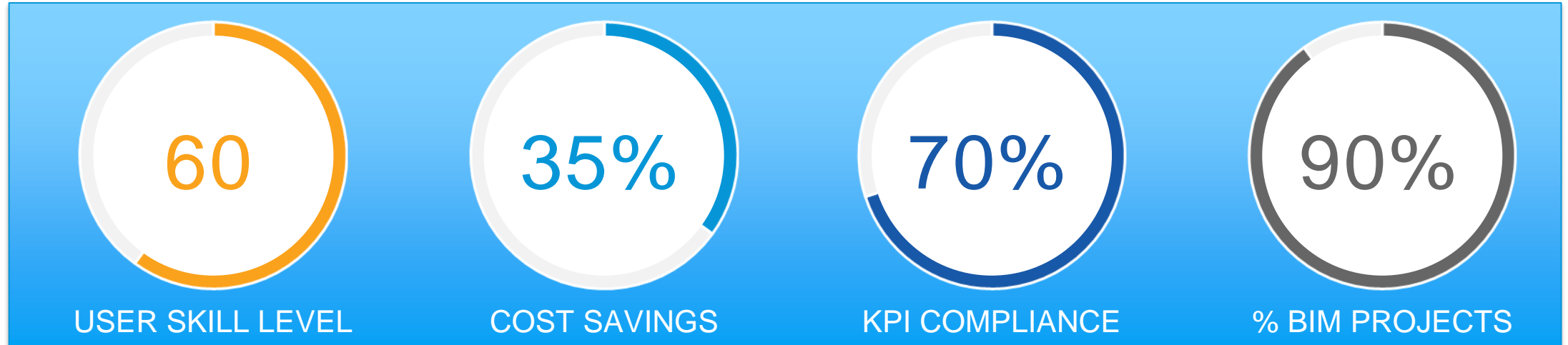


# CHECK YOUR TARGETS

Do you work for a **goals** driven business?

How frequently do you **review progress** against your **targets**?

Do you review how **appropriate** those targets are?



“**Design-led**” businesses may be less target driven, especially on the technology front

# SKILLS TRACKING

Ensuring that employees have the **appropriate skills** is a huge part of successful implementation...

...you can buy all the software you want, but if no one can use it, what's the point?!

Important to remember that the skills employees need are **not limited to software**...

...what are the 'soft skills' required?

- Managing projects and/or staff
- Methods of collaboration
- Clear communication

Course Name	Score	Time
Additional users (2010-12) (592)	100	00:10:00
016 Fundamentals (Metric) (5854)	97	00:20:00
Fundamentals (Metric) (3391)	96	00:24:00
Fundamentals (4105)	95	00:42:00
uction (1301)	95	00:38:00
Fundamentals (Metric) (2601)	91	00:36:40
Fundamentals (Metric) (2016)	90	03:32:35
damentals (0)	88	00:08:00
ons (2582)	82	01:33:05
on (1301)	80	00:47:35
n (1301)	80	00:30:55
-12) (733)	80	00:14:20
ntals (4105)	77	00:36:15
1301)	75	01:08:30
301)	75	00:46:15
301)	75	01:07:50
6) (6156)	73	01:30:10
5 (4105)	73	
(4105)	73	

# SKILLS TRACKING

Do you make use of **regular assessments**?

Without **regular reviews**, can you show progress?

Do you just take a snapshot as people join the company... but **how long is that information valid for?**

**Don't collect data you won't use**, it's a waste of everyone's time!

Have a **plan for how the data will be used**, gain buy-in THEN start undertaking assessments.

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# SKILLS TRACKING

Can you use **self assessments**?

**Less time consuming** than full assessments

What **level of detail** do you go in to – overall software use, level of experience or more specific skills for tools like Revit, Rhino, etc.?

Make sure you **define** each skill level!

How much are they **affected by personality type**?

How do you **review progress** on a personal level?



**Martin Coyne** ARB RIBA

AP

Joined KPF April 2013

Software Expertise:

Edit



AutoCAD

Dynamo

Microsoft Excel

Microsoft PowerPoint

Microsoft Word

Revit



360 Renderings

Adobe Illustrator

Adobe Photoshop

Adobe Premiere Pro

Bluebeam Revu

Flux

MassMotion



3Ds Max

Adobe InDesign

Grasshopper

Microstation

Program Expertise:

Edit



Education

Master Planning

Office

Research & Healthcare

Residential

Retail

Transport & Infrastructure



Cultural & Entertainment

Supertall

# SKILLS TRACKING

What use will you make of the data?

Need a good % of employees to complete to **make sure the data is worthwhile**

Do you set targets, or simply **report** on overall progress?

Can you use the data to **identify skills gaps**?

Or to **identify subject-matter experts**?

Is the data used to help **resource teams effectively**?

Search Employees

First Name:  Last Name:

Office:

Skills:

Involvement:

Others:

Reset



Master Planning

	Count	Skill Level	Percentage of UK Headcount		Count	Skill Level	Percentage of UK Profiles
●	12	Expert	19%	●	12	Expert	19%
●	14	Intermediate	22%	●	14	Intermediate	22%
●	8	Beginner	13%	●	8	Beginner	13%
●	108	No data	47%	●	30	No data	47%
Total employees in UK	142		100%	Completed profiles	64		100%

SAMPLE DATA ONLY

# EXTERNAL APPRAISAL

Thinking **beyond individuals**... to assess the **whole office** is it worth considering a **3<sup>rd</sup> party assessment** of your office or company

Not only **assess how you are progressing**, but where you stand in relation to your peers and wider industry

Is falling behind others a business risk, or a conscious decision?

Carefully consider **WHO you engage**... do they have ulterior motives?

Be clear on **what YOU want to gain** from the assessment

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# GAIN INSIGHT

You don't have to pay others to compare you against your peers – you can research it yourself

**Reports & surveys** – i.e. NBS BIM Survey, but consider likely audience and respondees, how representative/relevant is it?

**Conferences** (!) – great opportunities to see what others are doing... but are they sharing **best practice** as opposed to **common practice**!

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# Summary: How to Assess Your Current Position

## CHECK YOUR TARGETS

Are you progressing and are your targets appropriate?

## REVIEW YOUR ASSESSMENT METHODS

What data do you want, how do you collect it and how do you use it?

## CONSIDER EXTERNAL ASSESSMENT

Measure yourself against the industry... but try to avoid paying for a sales pitch! There's other ways to assess yourself against your peers.

Where are you going?



# WHAT'S YOUR STRATEGY?

## GOAL ORIENTATED VS. PROGRESS ORIENTATED

(Yes, I suppose progress is still a goal but...)

### GOALS

Agreed targets/outline dates

Requires agreed spending plan?

Resource intensive?

Review, update, advance



# WHAT'S YOUR STRATEGY?

**GOAL ORIENTATED VS. PROGRESS ORIENTATED**

## **PROGRESS**

No fixed targets but progress reviewed at regular intervals

May be metric based or anecdotal...

Do you need to show proof of progress, or is the proof  
apparent?

Remember that delivering a project that is fit for purpose  
is also essential... and can you add excitement too?



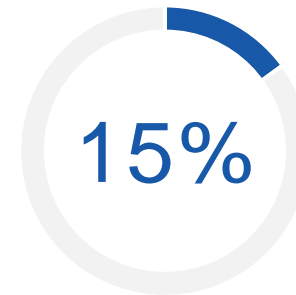
# DEFINE YOUR DIRECTION

Very few can afford to implement change on a firmwide basis...

If you've not got as far as you hoped, can you **focus your direction** more effectively?

Does your BIM strategy relate to your **business strategy**? The more closely they are aligned, the higher the chance of success

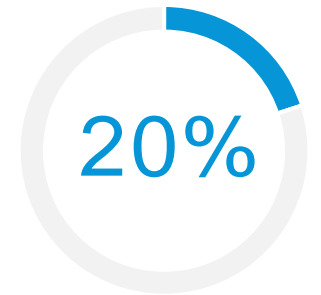
Do you focus on a **core sector**? Allows you to focus resources, develop staff skills, overcome hurdles and hopefully focus on 'big win' projects to gain wider support



Education

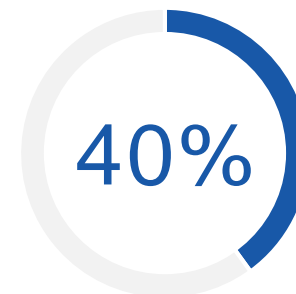


Commercial

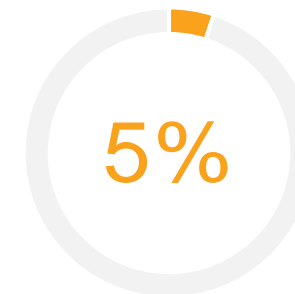


Residential

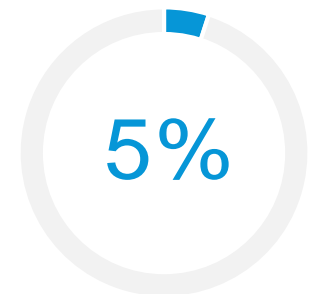
vs.



Education



Commercial



Residential

# Summary: Define/Review Your Strategy

## IS GOAL OR PROGRESS BASED APPROACH MOST APPROPRIATE?

Consider the **nature of your business** – what is likely to get the best results?

## CONSIDER YOUR APPROACH

How can you best **target your resources** to enable efficient and effective progress – office-wide, sector based, etc.

Who is leading the way?



# IMPACT OF HIERARCHY

The way your company is set up will greatly affect your strategy...

**Who is responsible** for the strategy?

A well-intentioned BIM Coordinator may write a good BIM Strategy/documentation... but do they have **appropriate influence**?

Consider who you need to get on board/to engage to **enable efficient and effective progress**?



# WHO'S IN CHARGE?

Who prepares/updates your BIM strategy?

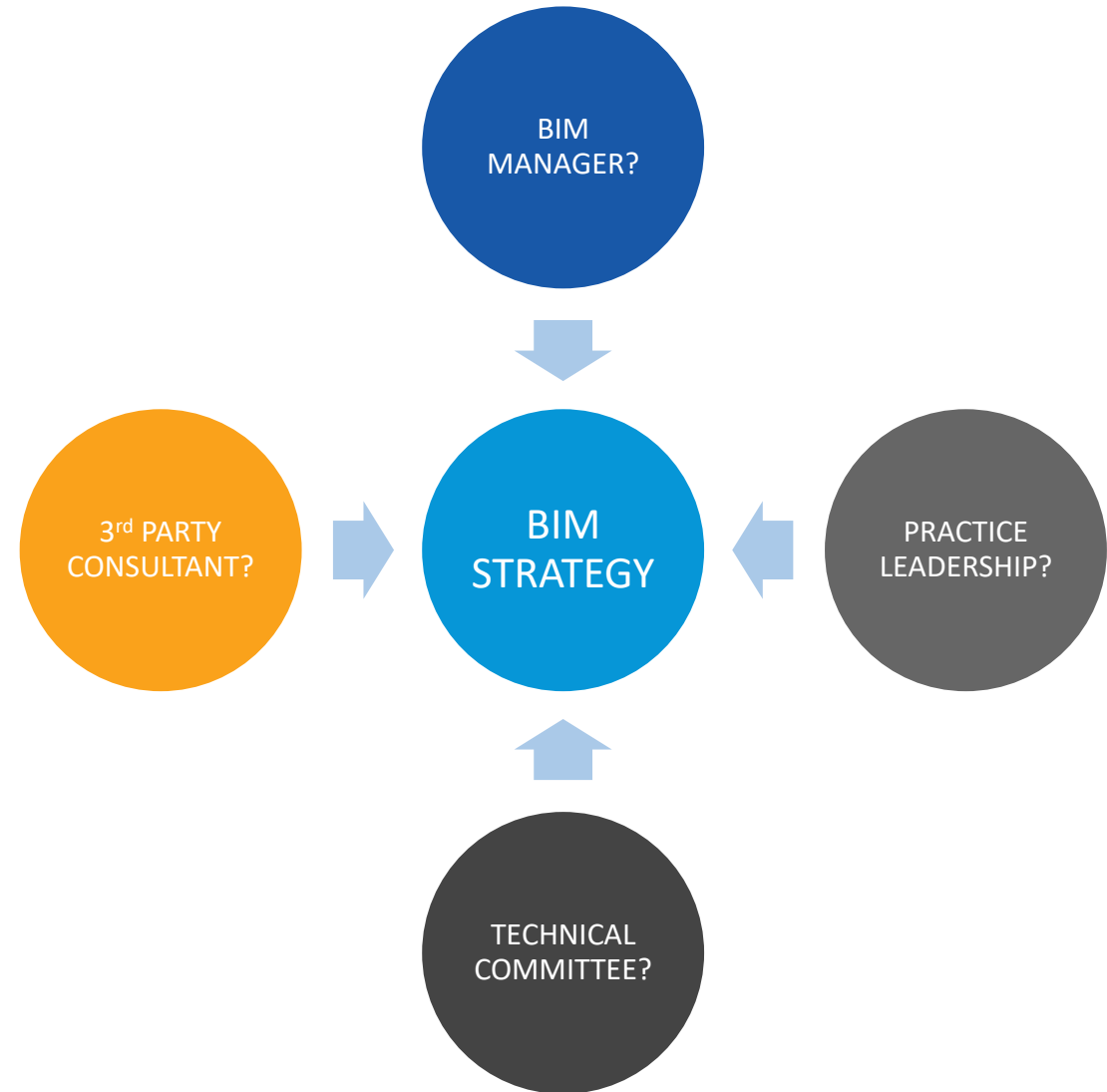
An existing **BIM Manager**?

A newly appointed/designated internal '**expert**' or technical committee?

Firm **leadership**?

3<sup>rd</sup> Party **Consultant**?

If prepared by a technical role/3<sup>rd</sup> party – who will 'sponsor' the process?



# WHO'S IN CHARGE?

## Small Practice

Will an individual take on implementation responsibility in addition to another role?

## Medium Practice

Do you need to appoint (or recruit) a dedicated BIM Manager?

How do you handle multiple locations (a remote or limited presence may not be effective)

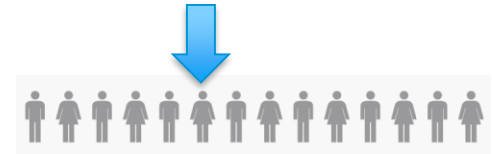
Do you need to establish a **variety of BIM roles** at both management and project level?

Are BIM roles **dedicated or shared** with other responsibilities?

Do you need to establish a **clear hierarchy**?

## Small Practice

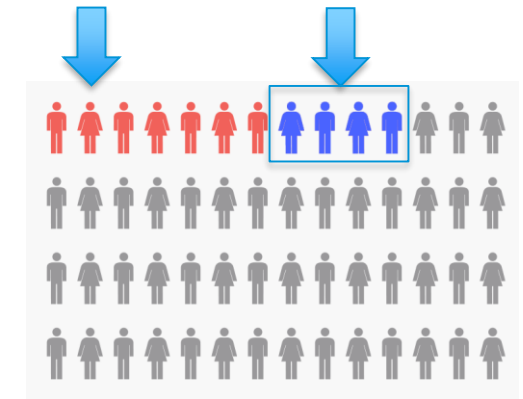
"The BIM Person"



## Medium Practice

Tech lead

BIM Support team



# WHO'S IN CHARGE?

## Large Practice

What hierarchy do you need to establish?

Who oversees strategy and implementation?

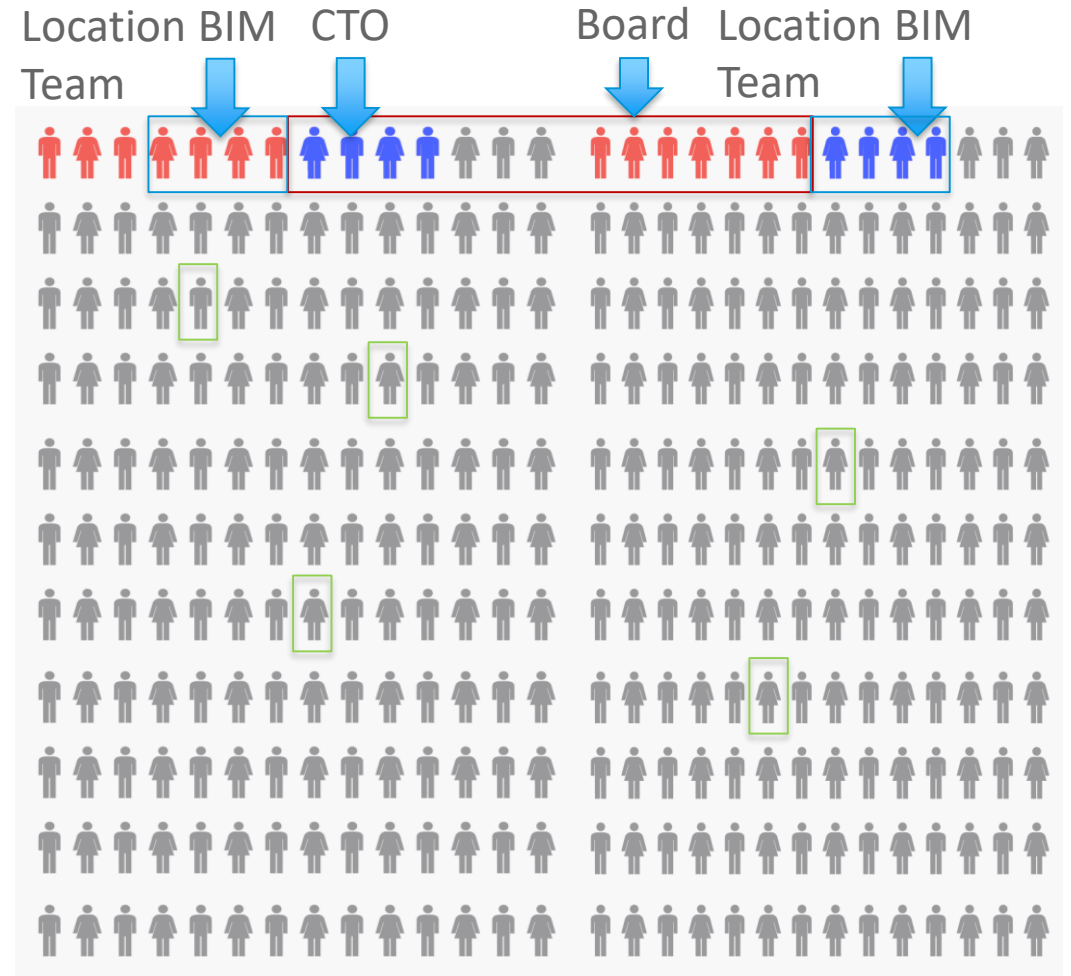
Who takes responsibility and oversight at board level?

Does an individual have authority to say “this is how we do things here”?

Who has technical oversight, an individual or a committee?

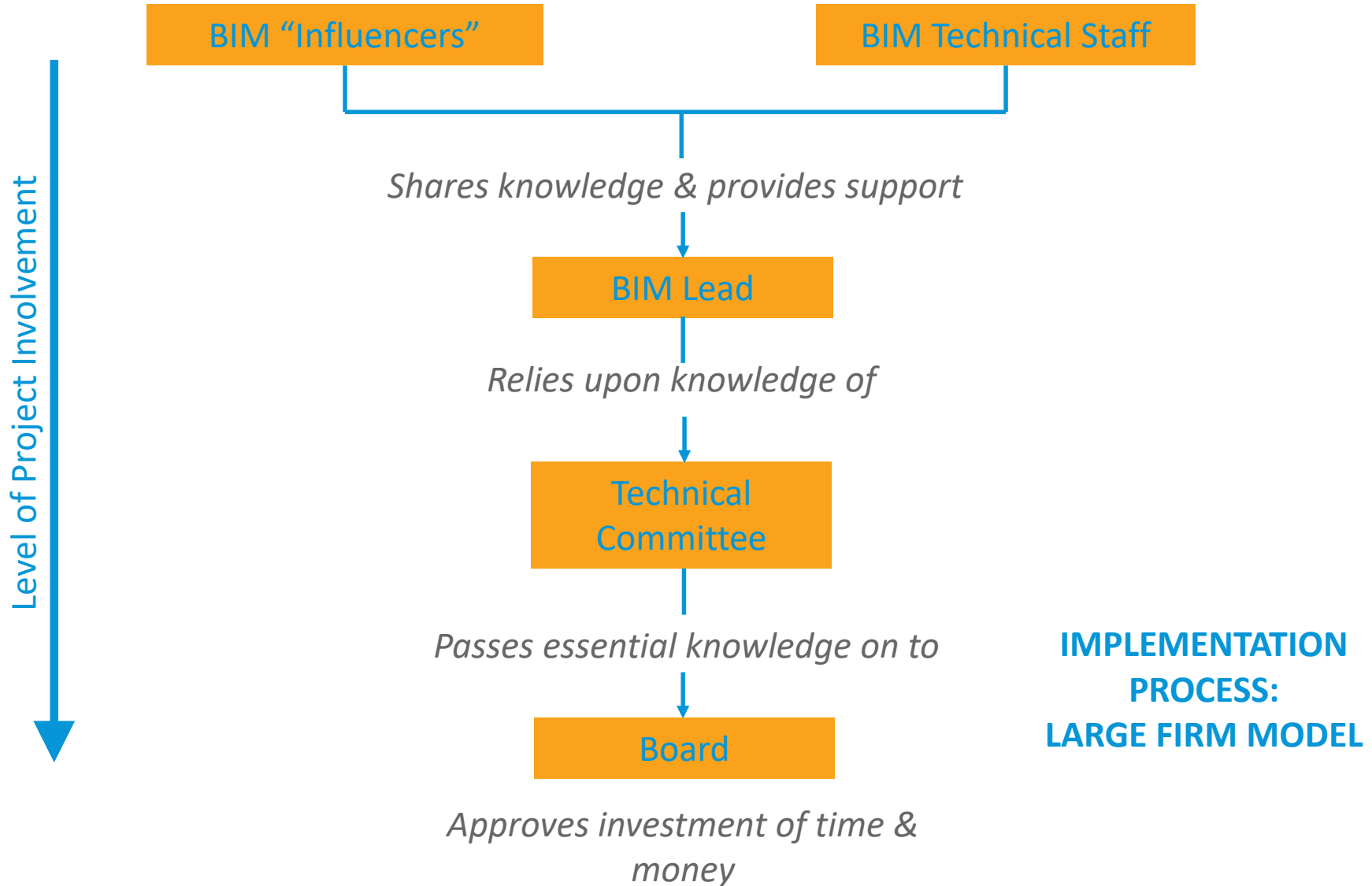
Where do ‘coordinators’ (as you define them) sit in relation to team and core BIM team?

## Large Practice

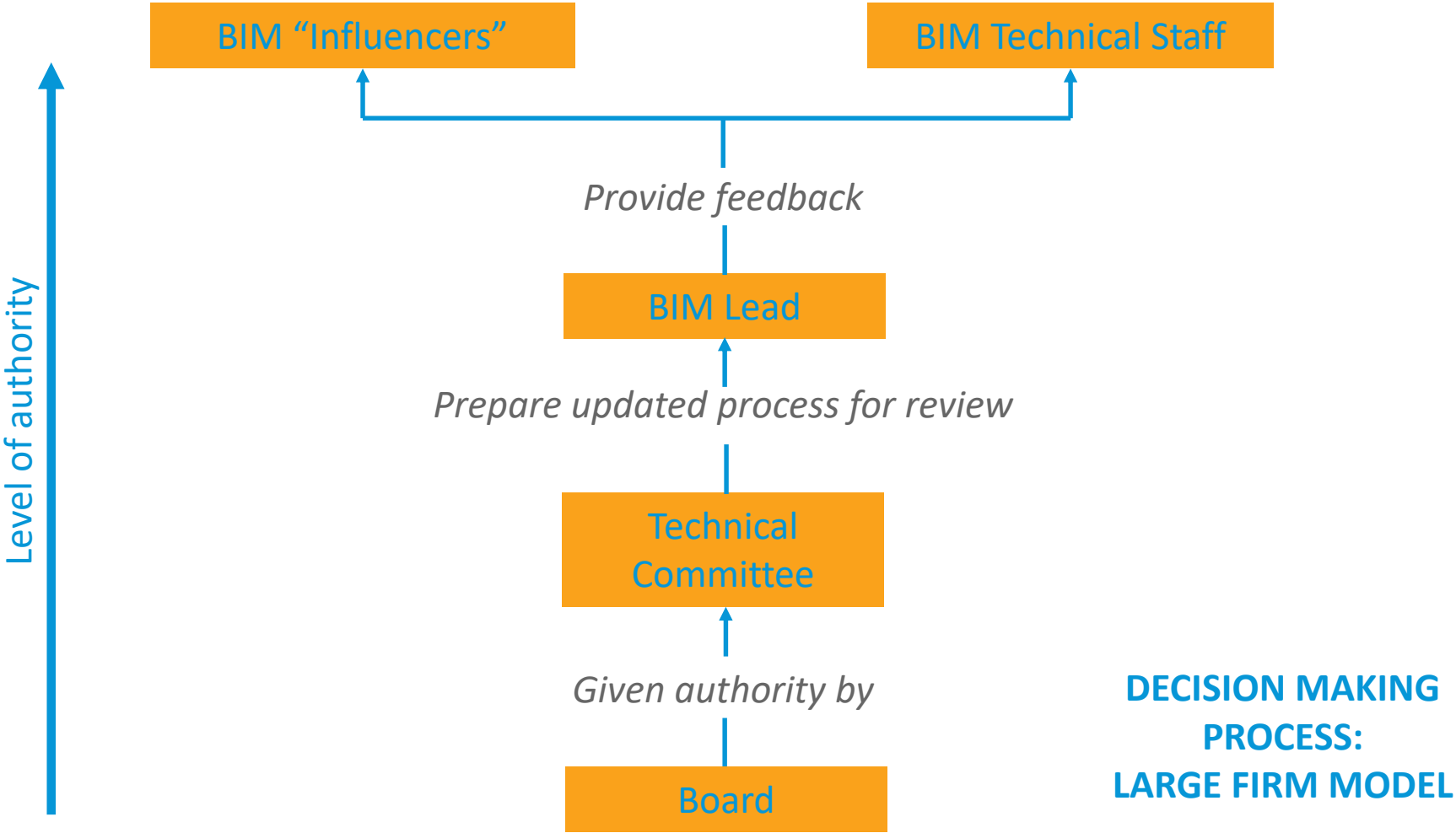


Team-level coordinators

# WHO HAS INFLUENCE?



# WHO HAS AUTHORITY?



# Summary: Understanding the Effect of Hierarchy

## HOW DOES YOUR BUSINESS OPERATION AFFECT YOUR STRATEGY

Business size, hierarchical structure, etc. will all affect your approach and how effective implementation is

## WHO SPONSORS AND WHO SUPPORTS SOFTWARE/PROCESS IMPLEMENTATION

Who takes overall leadership... and who provides technical knowledge and experience... are they the same person (smaller business?), a board-level leader and technical expert (medium business) or a dedicated team/committee (larger business?)

## WHO HAS THE AUTHORITY TO APPROVE AND ENFORCE CHANGE?

Preparing standards is great... but do you have the authority to ensure it is applied? Businesses that are reluctant to change will struggle without technical/process leadership

Is everything in place to guide  
you along?



# WHAT MAKES A GOOD DOC?

What documentation do you need?

A suite of templates are necessary to ensure project consistency and efficiency

QA/QC, Model Reviews, Peer Review, BEP, MPDT, etc.  
all need to be standardized

Is it possible to make a document that suits all projects...  
if a project diverges from standard templates, is that a  
problem, a challenge or an opportunity?

What is the effect of global influence?

# THE LONG & SHORT OF IT

How long should a BEP be?

Consider it's use as both a process and a communication tool... who are you communicating the information with?

While you may still be doing 'lonely BIM' hopefully you now need to communicate with a wider team

BEP should be a response to the EIR... demonstrating how all requirements are intended to be met

Hopefully the EIR doesn't request a history of BIM, and yet it often turns up in the BEP!

# THE LONG & SHORT OF IT

While an EIR is an ideal starting point... they are still far from universal on projects

Should you work with a client to produce and EIR (to PAS1192:2) and educate them about appropriate processes as part of your standard procedure?

Or focus on delivering what the client requests, and see BIM and other processes to your 'base level' of delivery (i.e. may not include COBie)

If you have two levels of process, do you produce two template BEPs? Or one flexible document?



# THE LONG & SHORT OF IT

Consider easy customization of BEPs

Inclusion of 'optional' paragraphs/tables required only in certain circumstances

Worthwhile to provide document guidance, both to raise awareness and understanding but also to aid completion of the document in different circumstances

Be aware there may be a level considered too highly customizable and just confusing!

Consider smart methods of producing and sharing key documentation

## INTRODUCTION TO THE BIM EXECUTION PLAN (BEP)

[This is a proposed Pre-Contract BIM Execution Plan (BEP). Where provided, this document has been produced as a response to the Employer's Information Requirements (EIR). The intent of this document is to propose methods for delivering the requirements of the EIR and to outline the key areas of the BEP that would be developed upon the appointment of KPF (and/or the wider Design Team) to the project in the Post-Contract BEP.]

[This document is shared as a Post-Contract BIM Execution Plan (BEP). Where provided, this document has been produced as a response to the Employer's Information Requirements (EIR) and, where appropriate has been further developed from the Pre-Contract BEP.]

The intent of the BIM process is to enable better collaboration between multiple design disciplines. For this to be effective, all members of the Project team must be aware of, and in alignment with, the BIM Execution Plan.

Current BIM technology permits highly coordinated design across multiple design disciplines. This workflow can shorten design time as well as highlight major design conflicts earlier in the process allowing for efficient coordination of a design.

It is important to note that the BEP is a working document and should be reviewed and updated at regularly agreed intervals to ensure it remains up to date and relevant to the project.

### Reviewing and editing the BEP

Any information highlighted within square brackets relates to optional sections and/or text which should be reviewed when completing the BEP. If the text is required, remove the brackets and ensure the appropriate formatting is applied. If the text is not required, it should be deleted from the BEP.

[EXAMPLE]

Any information highlighted within curly brackets requires a value to be entered when completing the BEP i.e. the project title or document reference.

{EXAMPLE}

For any sections that are removed you should retain the sections title and replace any following text with "Not applicable to this project" for clarity and to allow section numbering to be as consistent as possible across all KPF documentation.

## GUIDANCE NOTES

### BIM EXECUTION PLAN

For KPF BEP Template v4.0

January 2018

# Summary: Review your document set

## REVIEW CORE DOCUMENTATION

Standards, templates, BEPs, etc. – are they fit for purpose, are they used as you expect, are they effective at communicating what they need to?

## CONSIDER YOUR TRAINING DELIVERY METHODS

What roles do classroom learning, eLearning, documents, etc. all play

## ALIGN YOUR DELIVERY

All formats/methods should be based on the same base information for familiarity, easy reference and consistency

Did I really agree to that??



# DID WE SAY WE'D DO THAT?

Many stories of companies **caught out** by suddenly realising exactly what they'd agreed to

Various consultants/resellers/etc. commenting “We had to help X out at the **last minute** to understand what they'd agreed to provide”!

(While I'm sure they're always glad of the work... they'd probably much prefer to help you along gradually through the project)

No harm in **reaching out for help and guidance** – it's for the benefit of the projects... talk to colleagues, form partnerships, engage consultants...



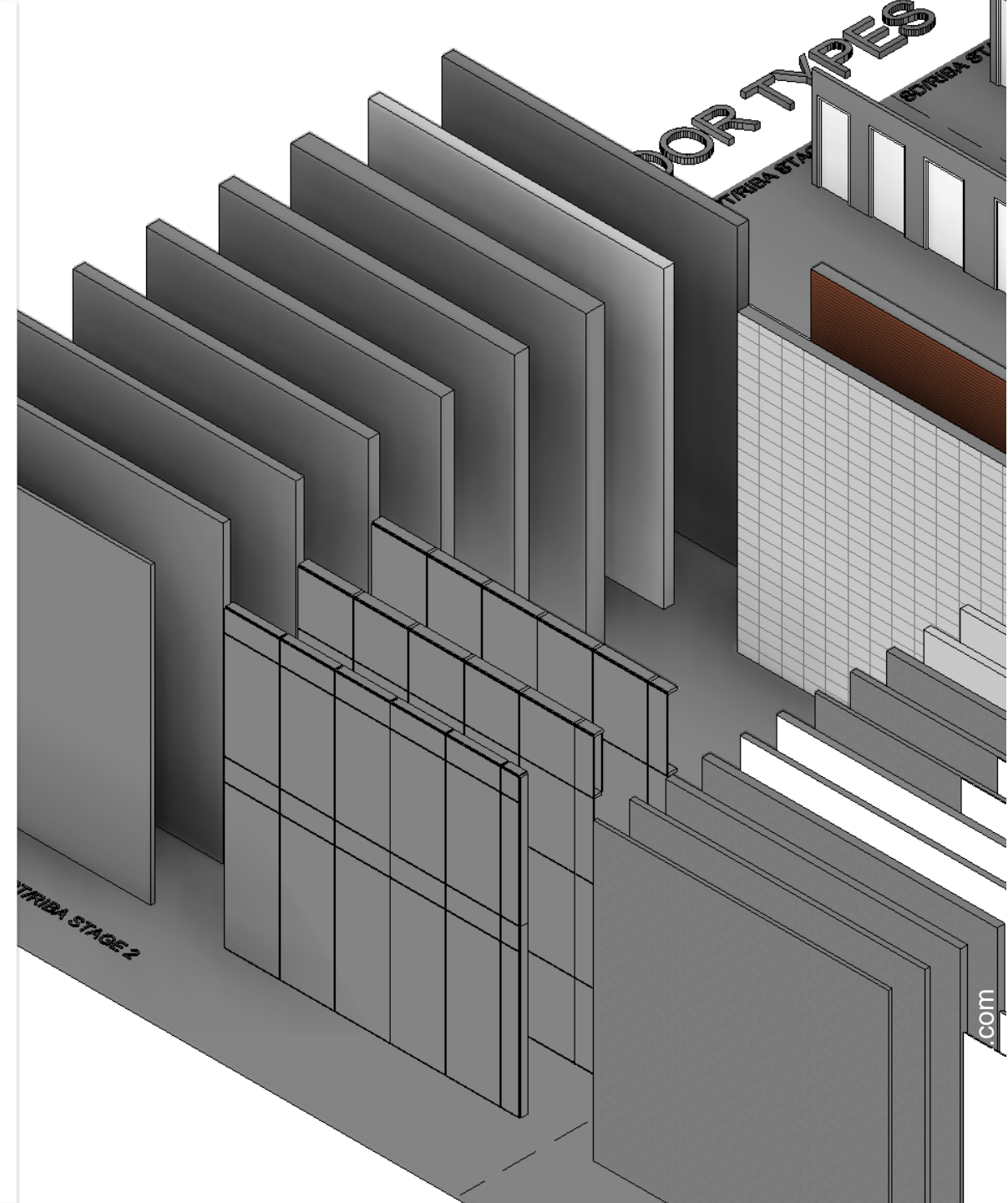
# UNDERSTAND YOUR DELIVERABLES

As you increase the range of deliverables you provide it's worth it to **revisit all your processes and setup**... not necessarily just a case of adding to what you have

i.e. COBie, easier to develop meta-data **as you progress** rather than a last minute push to populate everything

Consider reviewing templates/libraries, easy to start populating classification data, descriptions, etc.

Also consider how you jump between LODs – scripts to add data, visibility settings in library content... or higher LOD content to swap out as appropriate?



# UNDERSTAND YOUR DELIVERABLES

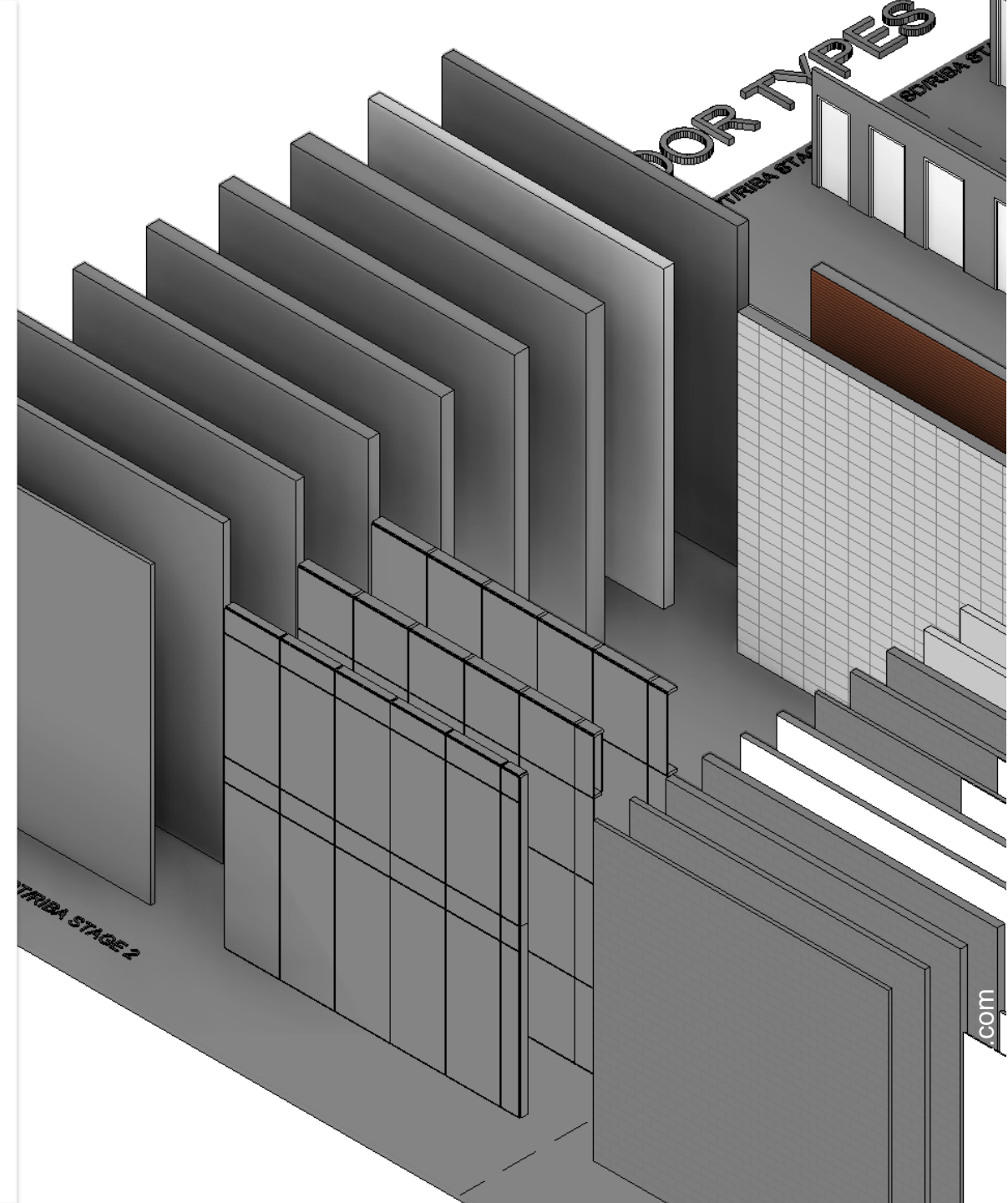
What becomes your **'base level' BIM delivery**?

Some take the route of **producing COBie as standard** for all projects – great for staff understanding, process building and increased ease of delivery

Others **target certain projects** where it is mandated

Don't be afraid to review and question the amount of information required at each data drop... aids your understanding and reduces wasted effort

COBie as a standard format may be more flexible than you think...



# UNDERSTAND YOUR DELIVERABLES

Remember certain COBie fields form an essential part of the data schema

Many fields are replicated from other sheets (i.e. Contacts)

Some are automatically populated by your authoring tool

Others are optional, this does not mean you can avoid completing them all together...

...but try to understand where that data could be useful and add value to a project

COBie Field	Sample data	Notes	Responsibility	Info Exchange	Required
<b>KEY</b>					
required		Must be completed to meet minimum COBie schema compliance			
reference to other sheet or pick list		Also required as above, typically refers to an Item on another COBie sheet			
external reference		Automatically populated by authoring tool			
if specified as required		Optional fields that may be required - please refer to project EIR			
<b>Facility</b>					YES
Name	Big BIM Building A	Formal/official name of the facility	Client	1,2,3,4,5,6,7,8	YES
CreatedBy	team@kpf.com	Contact email of the person/team/company responsible for updating a line of COBie data, must be an email address featured on COBie 'Contact' sheet	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
CreatedOn	2018-05-22T14:53:00	The date on which a specific row was created or updated typically automatically populated	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
Category	Co_20_50_53: Mixed use complexes	Confirm use of Uniclass references and appropriate Complex information for each facility	Client	1,2,3,4,5,6,7,8	YES
ProjectName	Big BIM Rebuild	Official project name	Client	1,2,3,4,5,6,7,8	YES
SiteName	Big BIM Estate	TBC - Confirm Facility Naming Strategy	Client	1,2,3,4,5,6,7,8	YES
LinearUnits	millimeters	The units for all relevant measurements in this document, confirm alignment between sources	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
AreaUnits	squaremeters	The units for all relevant measurements in this document, confirm alignment between sources	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
VolumeUnits	cubicmeters	The units for all relevant measurements in this document, confirm alignment between sources	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
CurrencyUnits	pounds	The approved currency to cost the project	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
AreaMeasurement	RICS BCIS	Area measurement as stated by client/EIR	Client/DesignTeam	1,2,3,4,5,6,7,8	YES
ExternalSystem	Autodesk Revit 2019	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalProjectObject	ifcProject	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalProjectIdentifier	8964cf00-dba8-4634-8964-71323a35df63	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalSiteObject	ifcSite	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalSiteIdentifier	8964cf00-dba8-4634-8964-71323a35df63	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalFacilityObject	ifcBuilding	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
ExternalFacilityIdentifier	8964cf00-dba8-4634-8964-71323a35df63	Automatically populated by authoring tool	Design Team	1,2,3,4,5,6,7,8	YES
Description	Facility description	Not currently required as per EIR	n/a	n/a	NO
ProjectDescription	The project is intended to provide...	Not currently required as per EIR	n/a	n/a	NO
SiteDescription	The site is located... and contains...	Not currently required as per EIR	n/a	n/a	NO
Phase	Concept Design	Chose based on project stages, i.e. AIA (SD, DD, etc.) or CIC (1,2,3,etc.)	Client/DesignTeam	1,2,3,4,5,6,7,8	YES

# QA/QC: WHO ME?

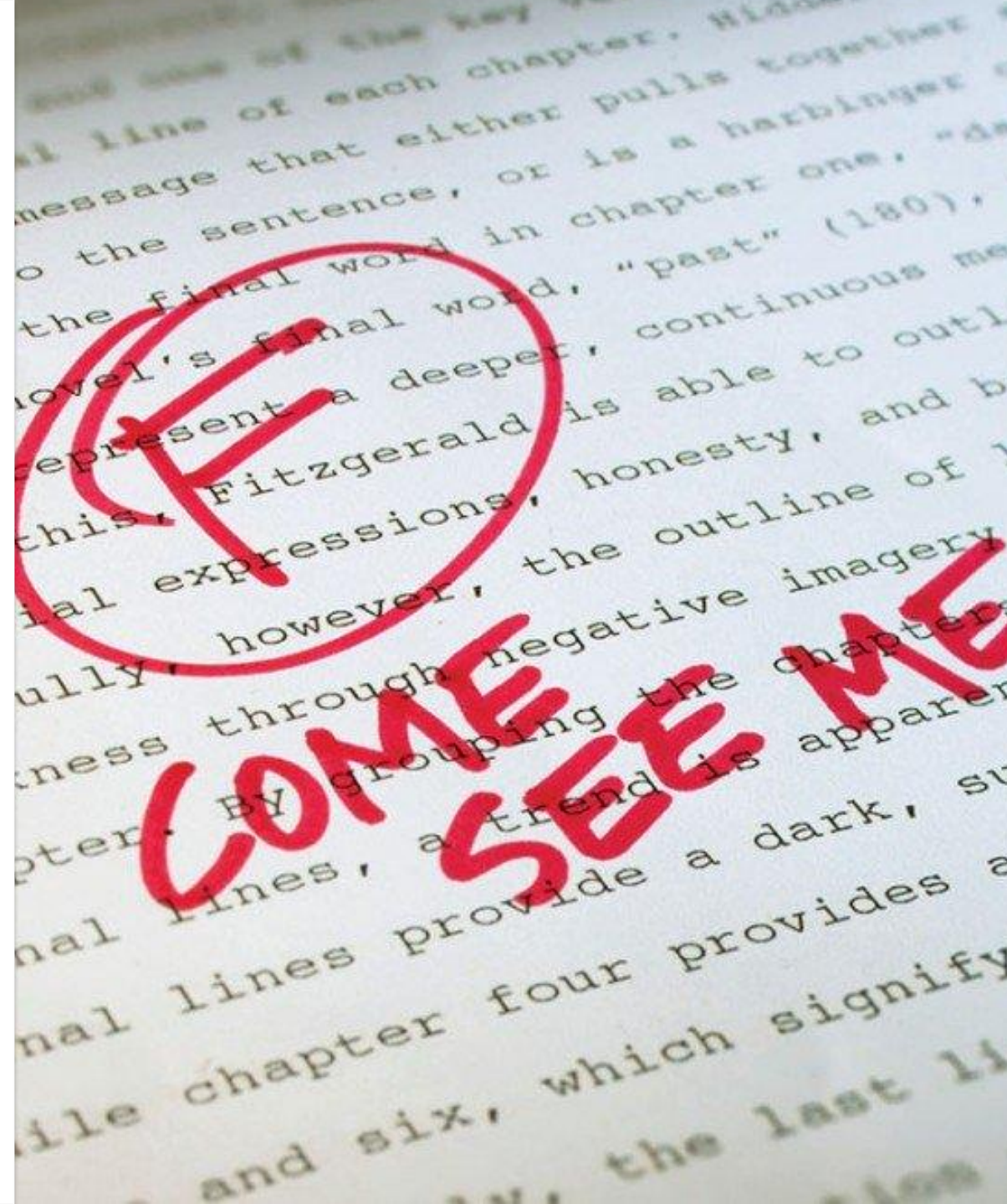
The nature of deliverables also changes processes you may not consider...

QA/QC used to be red pen markups (for many it still is!)

How do you red pen a complex model?

Yes, 3D markup technology exists (Navisworks, Revizto, etc.) but that technology is best targeted at detailed collaboration efforts

Consider automation techniques for checking various requirements in relation to your deliverables



# QA/QC: WHO ME?

Establish what you would like to check:

## **LOD & how do you define it/test it?**

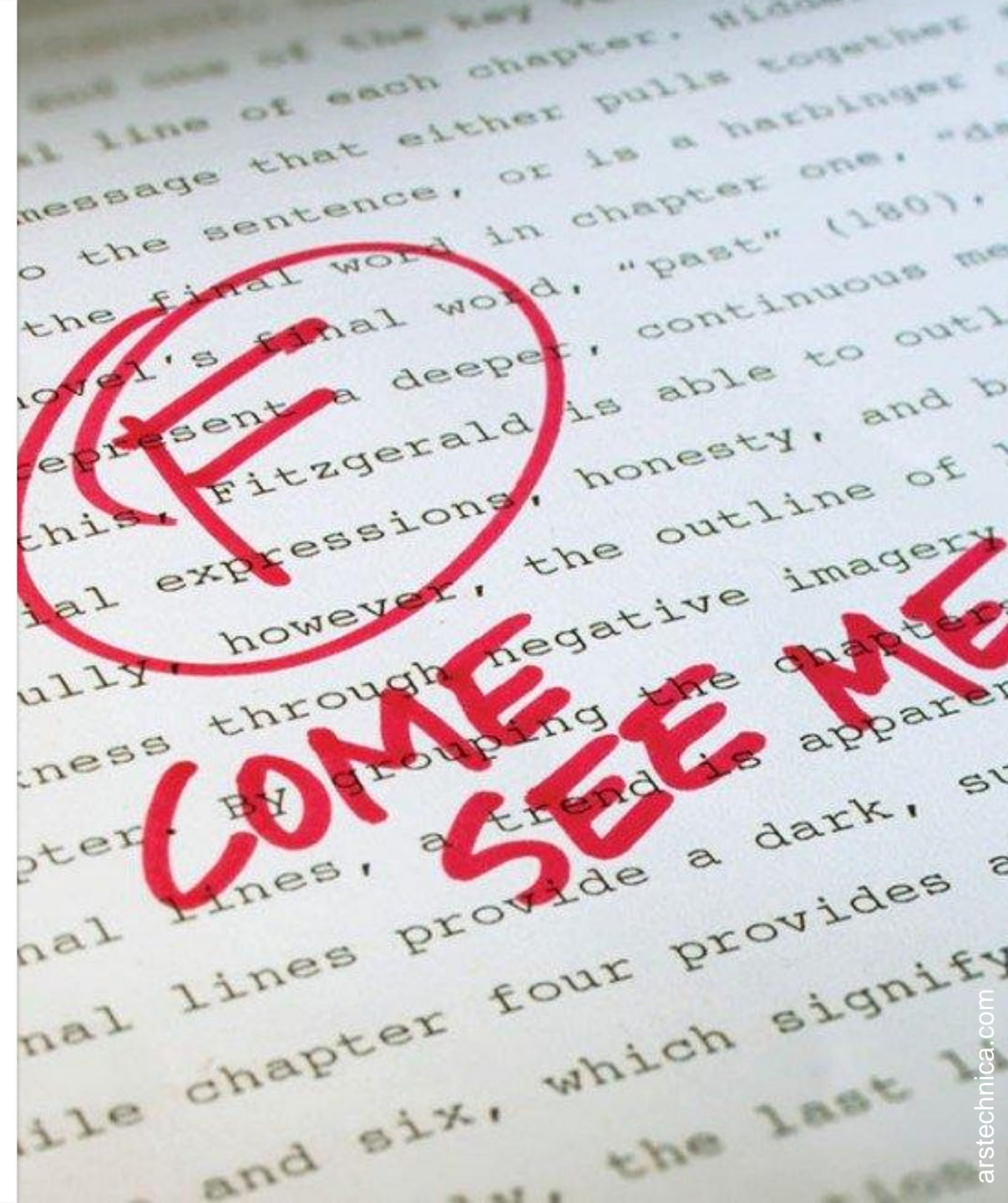
We are testing library content checked against NBS/BIM Forum guidelines with an LOD parameter for information

## **Code/brief compliance**

Can you automate various regulation or client requirement checks i.e. fire regulations, area checks, etc.

## **Meta-data completion**

Are agreed parameters populated (verify) and contain appropriate information (validate)



# QA/QC: WHO ME?

Then consider how you test it:

## Script

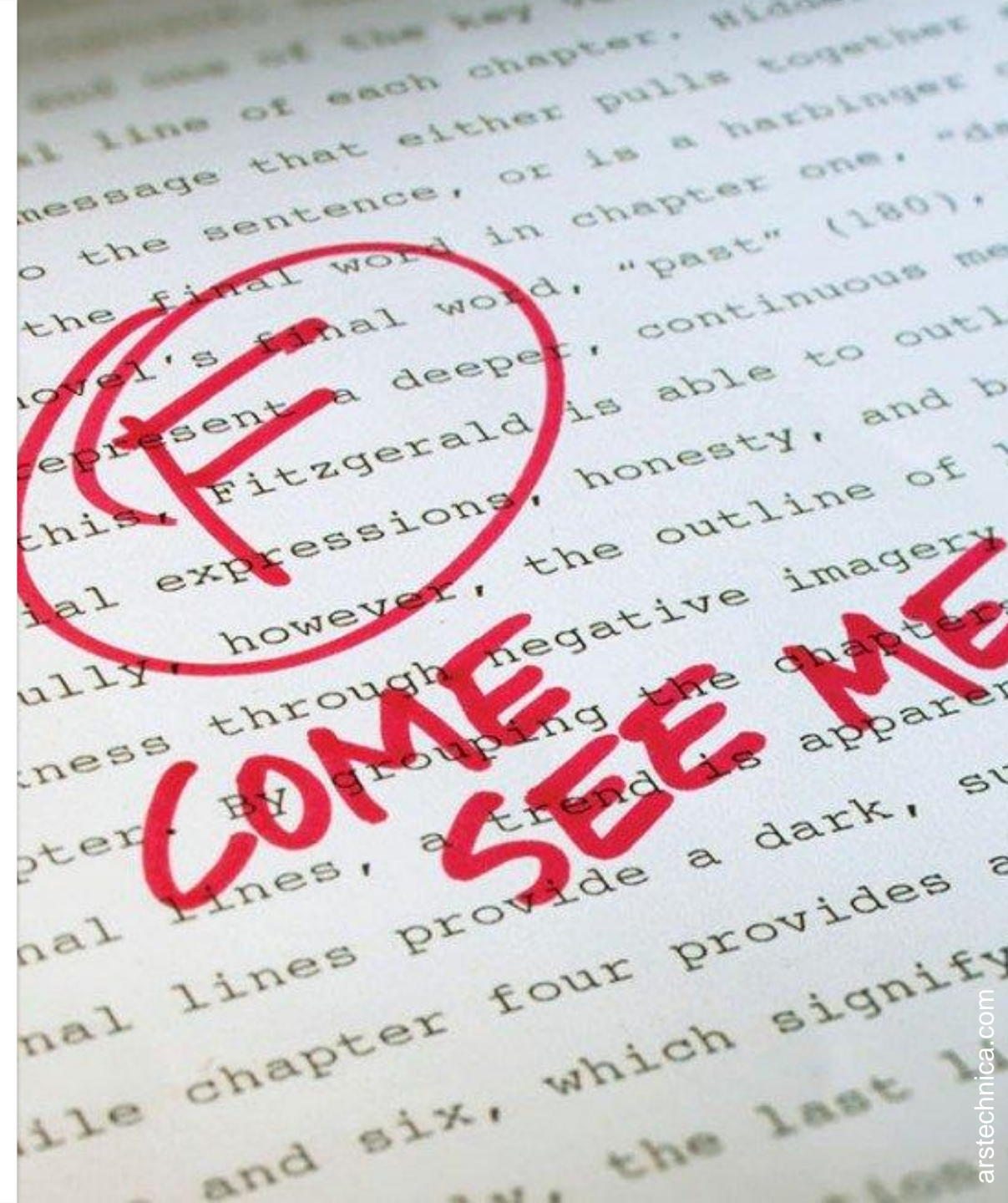
i.e. Dynamo or Grasshopper driven, or a custom tool –  
also consider how the information is presented clearly...  
view overrides, reports, etc,

## Dashboards

Easy to interpret... but consider how often data is  
populated/refreshed – upon running script, daily, weekly...

## Model reviewers

Tools such as Solibri, software plugins i.e. Xinaps, etc.



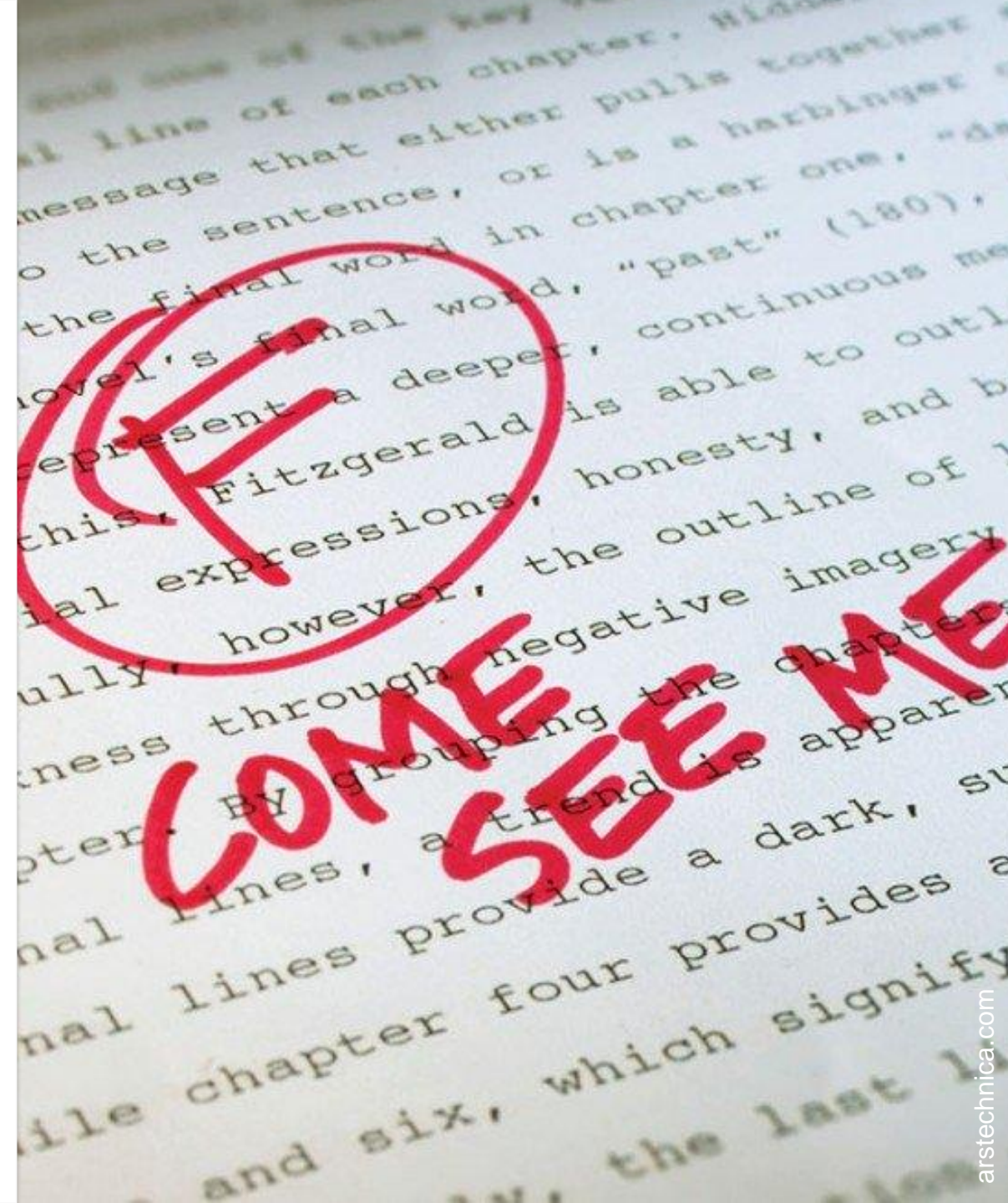
# QA/QC: WHO ME?

It doesn't stop with the output though...

What is your **process to rectify errors** or omissions?

How do you consider and **report on recurring issues**,  
and update your processes accordingly?

How do you **consider lessons learned** and share these  
with your team/office?



How do you get there?



# HOW TO BUILD THE PLAN

How do you progress employee knowledge and learning?

It's **time for a new learning model** to become popular...

Why pay for **3 days 'introduction'** or 'basics'... 2/3 of course content **likely forgotten!**

Consider '**just in time**' models and multi-platform learning (i.e. interoperability, coordination workflows)

Training focused on just Revit, Solibri, etc. only are less useful than **delivering knowledge of a process**

*3 DAY TRAINING  
COURSE?*



# WORKFLOW PLANNING

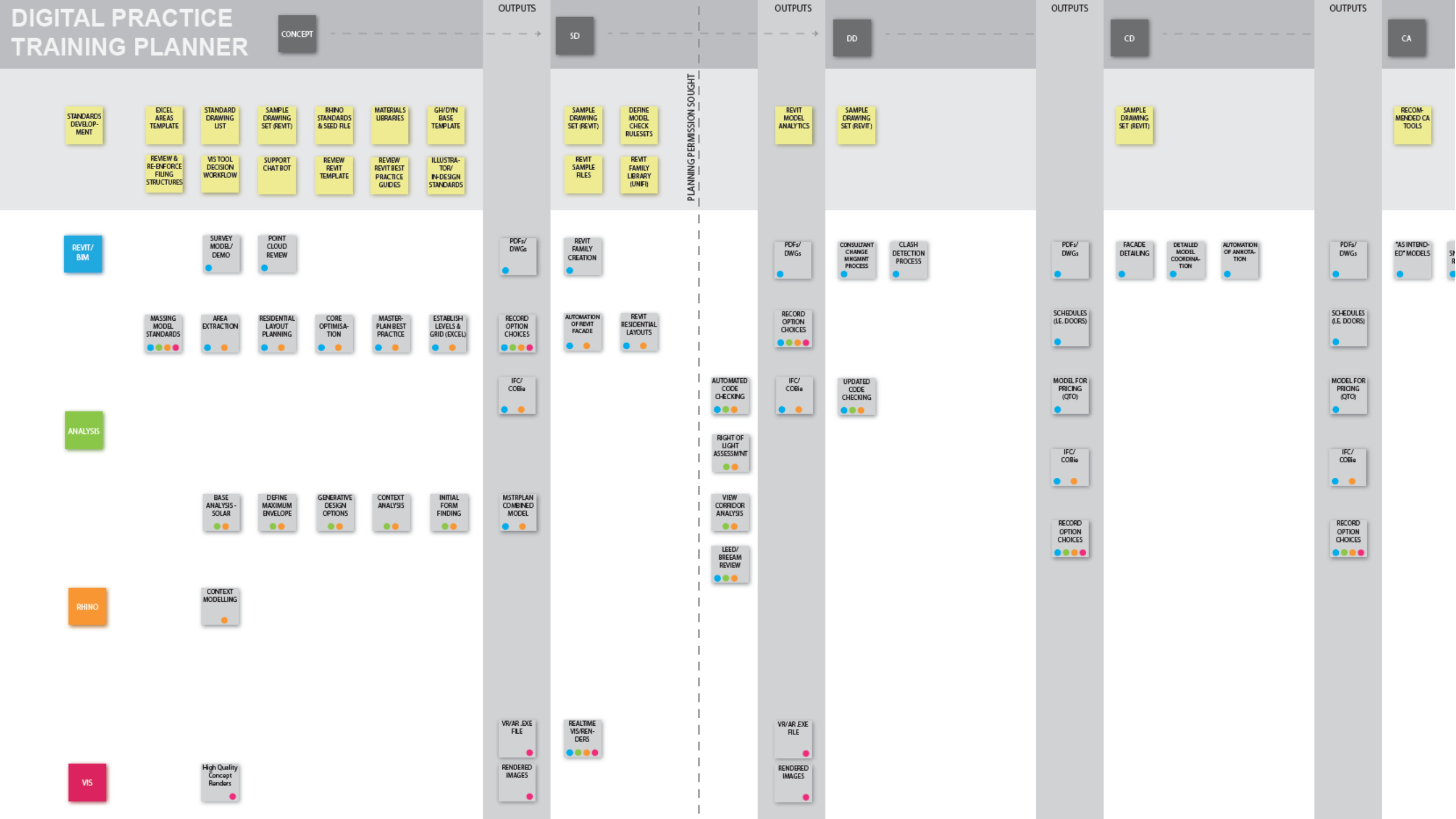
Good opportunity to bring subject-matter experts together

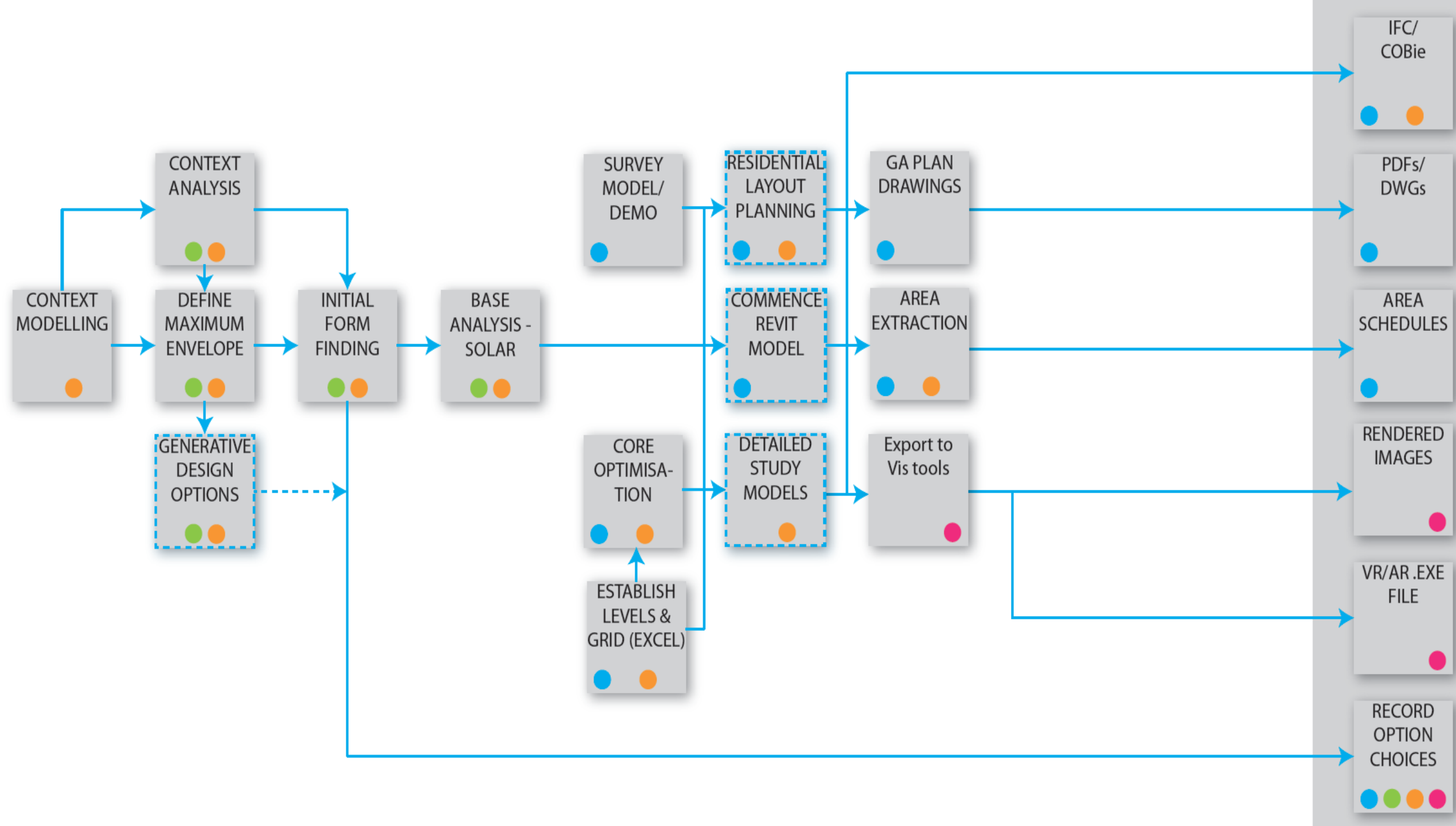
Everyone has a slightly different idea of how a project actually develops... can you reach agreement?

Are some steps optional, or relevant only to certain types of project?

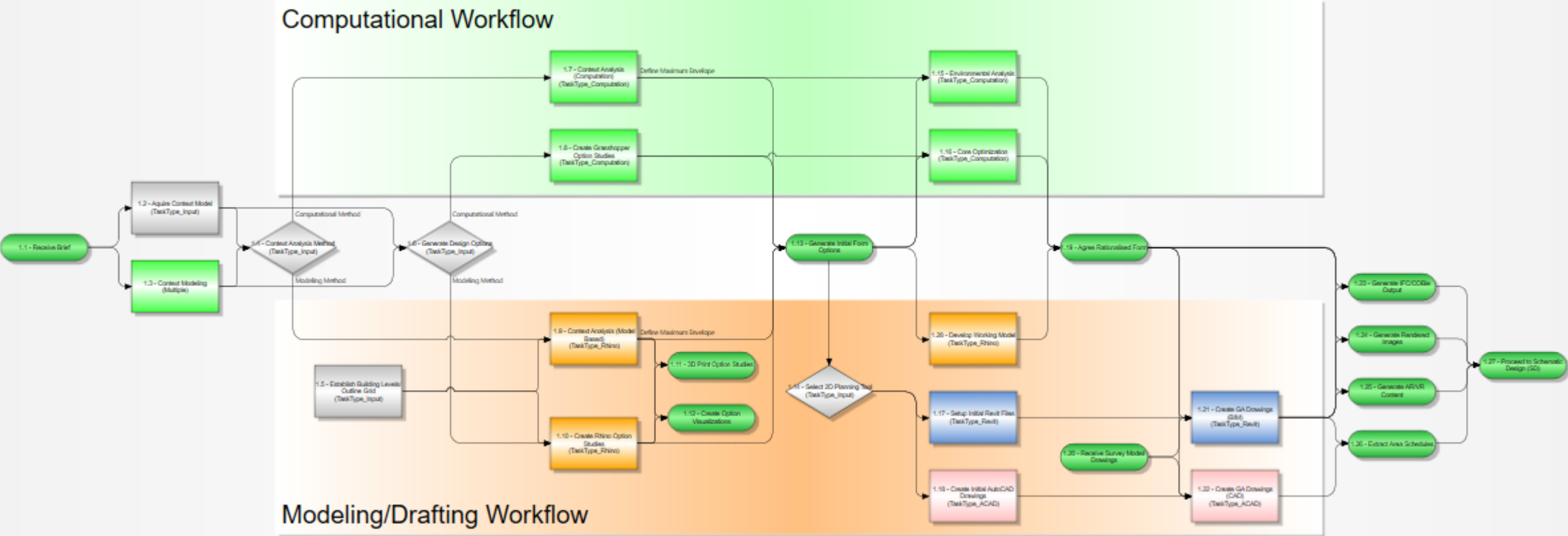


# DIGITAL PRACTICE TRAINING PLANNER





# Concept Design Process



# HOW IS TRAINING DELIVERED?

How do you ensure training is relevant to your business?

Is generic training suitable... or do you workflows differ?

What delivery methods do you use...

...and how do you ensure consistency across them?

Do you take different preferred learning methods in to account?

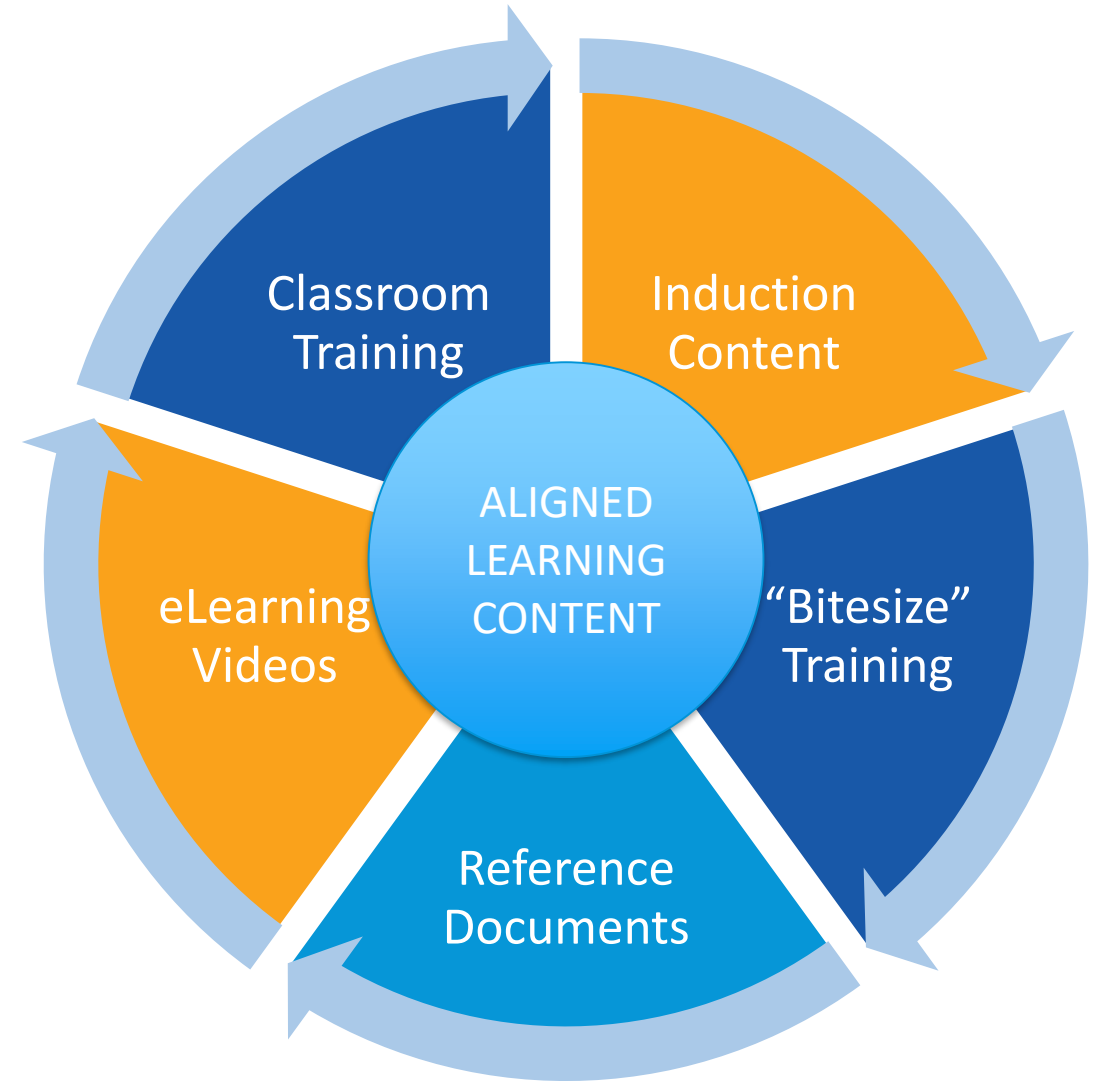
# HOW IS TRAINING DELIVERED?

All content should be aligned:

If you attend classroom training, you should be able to review similar video content or handouts

If you're new to a piece of software, you should be able to follow the same content in a classroom setting or self-led via the intranet

Content/sample files should be available as training materials for 3<sup>rd</sup> party trainers if you use them



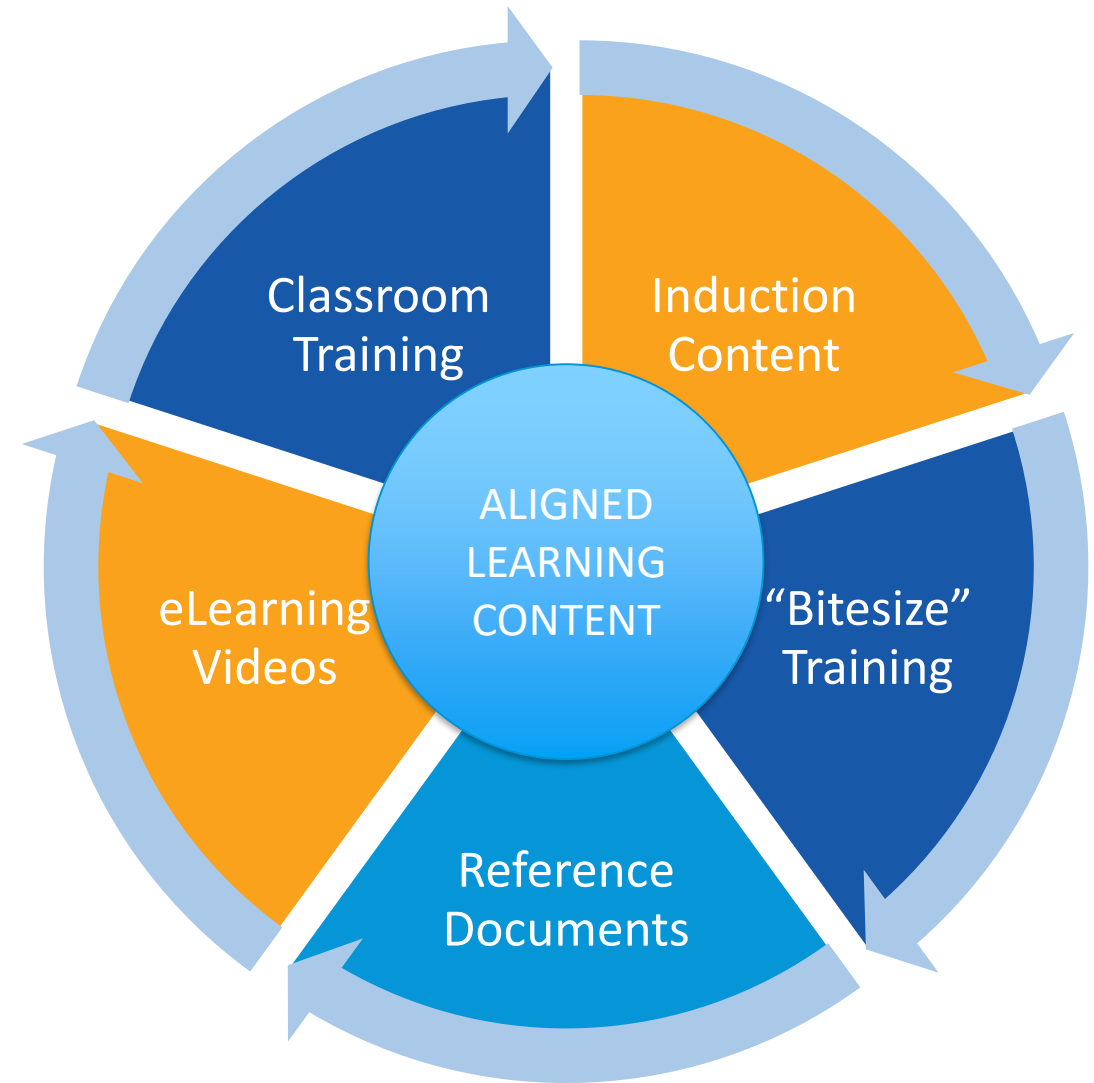
# HOW IS TRAINING DELIVERED?

Remember some people may prefer training manuals as opposed to following through multiple bitesize chunks

Your standards and best practices should also be part of your training workflows... but remember you may need to share these with a 3<sup>rd</sup> party collaborator

The effort goes in to making good quality content - it doesn't take too much additional thought to make it as universal as possible

Manuals can become a master source for modular learning, video scripts, etc. if prepared with that in mind!



# HOW IS TRAINING CONTENT CREATED?

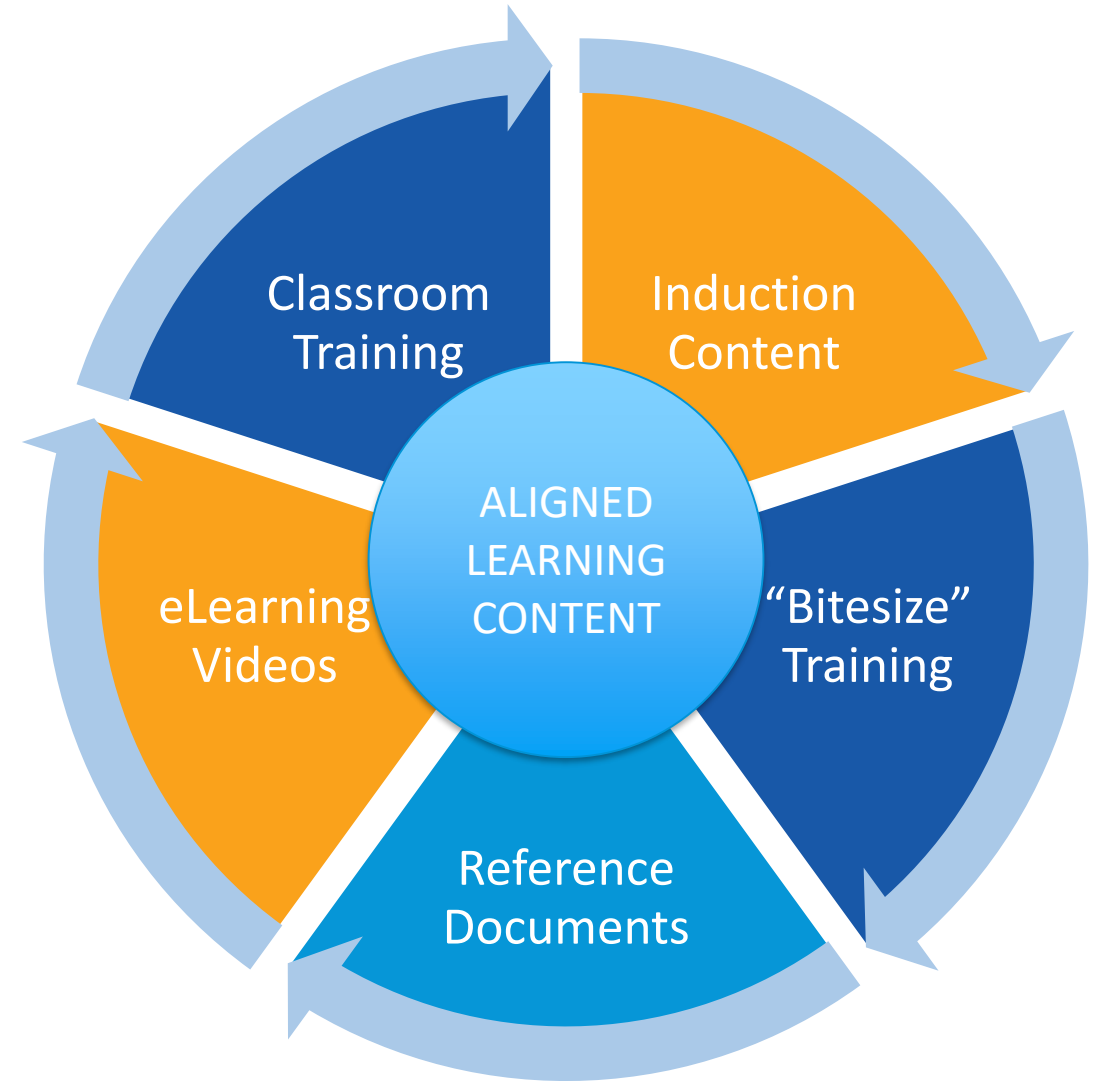
You don't have to create all of the content yourself

How can existing eLearning (i.e. Lynda, GeT, Pinnacle) fit in to your learning methods

Possible to mix proprietary and custom content

Ensure content is kept up to date... PDFs from AU2012 on Vasari might not be much use...

Branding/formatting should be kept as consistent as possible



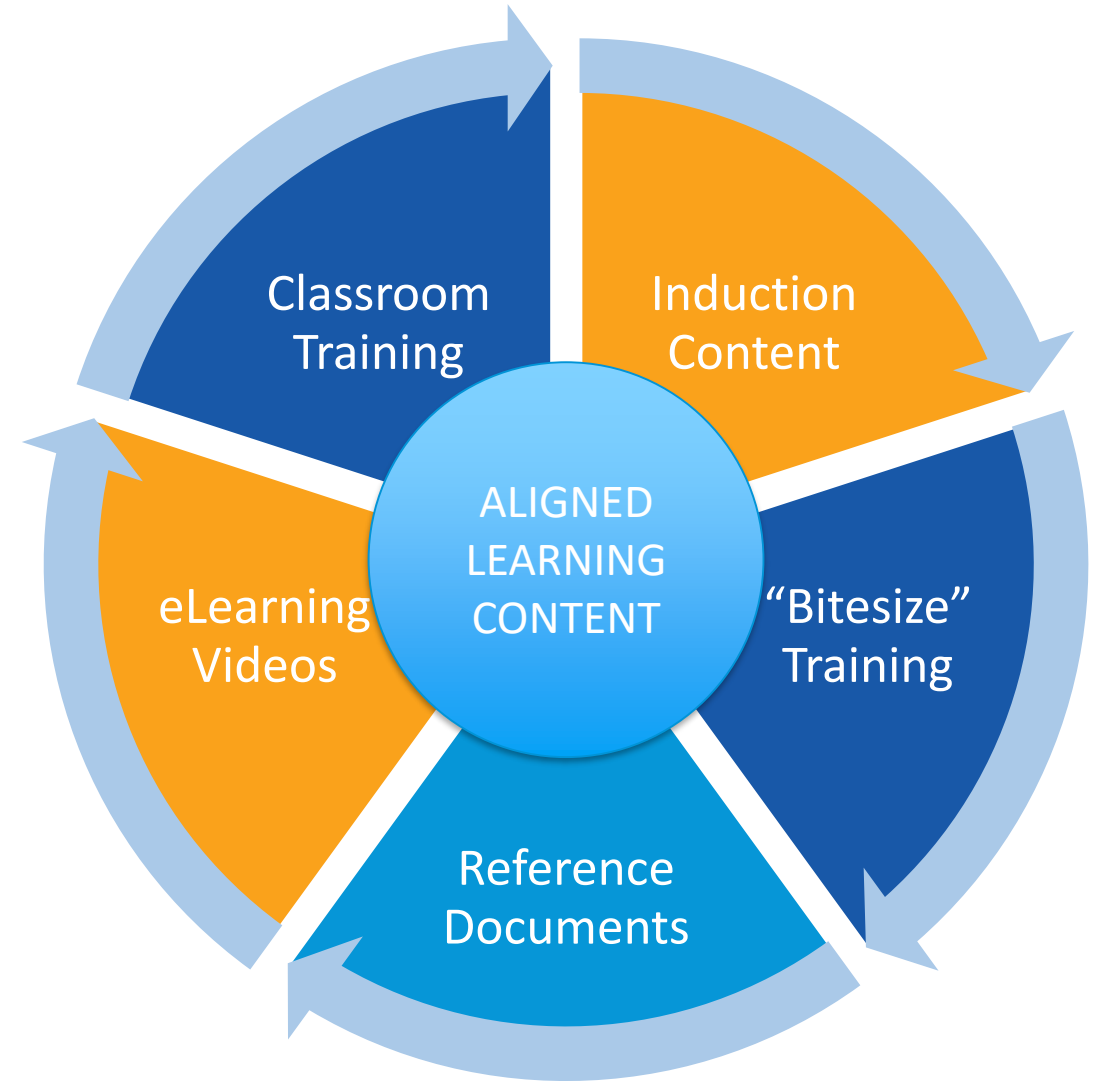
# HOW IS TRAINING DELIVERED?

There's plenty of good (and bad!) trainers out there

They can form a core part of your training plan... but less so if they don't allow customized training relevant to you

You won't attend every training session - important to seek staff feedback, both on your own content and on the performance of any external trainers

Consider a training committee – subject/track leaders reviewing content and training requests on a regular basis



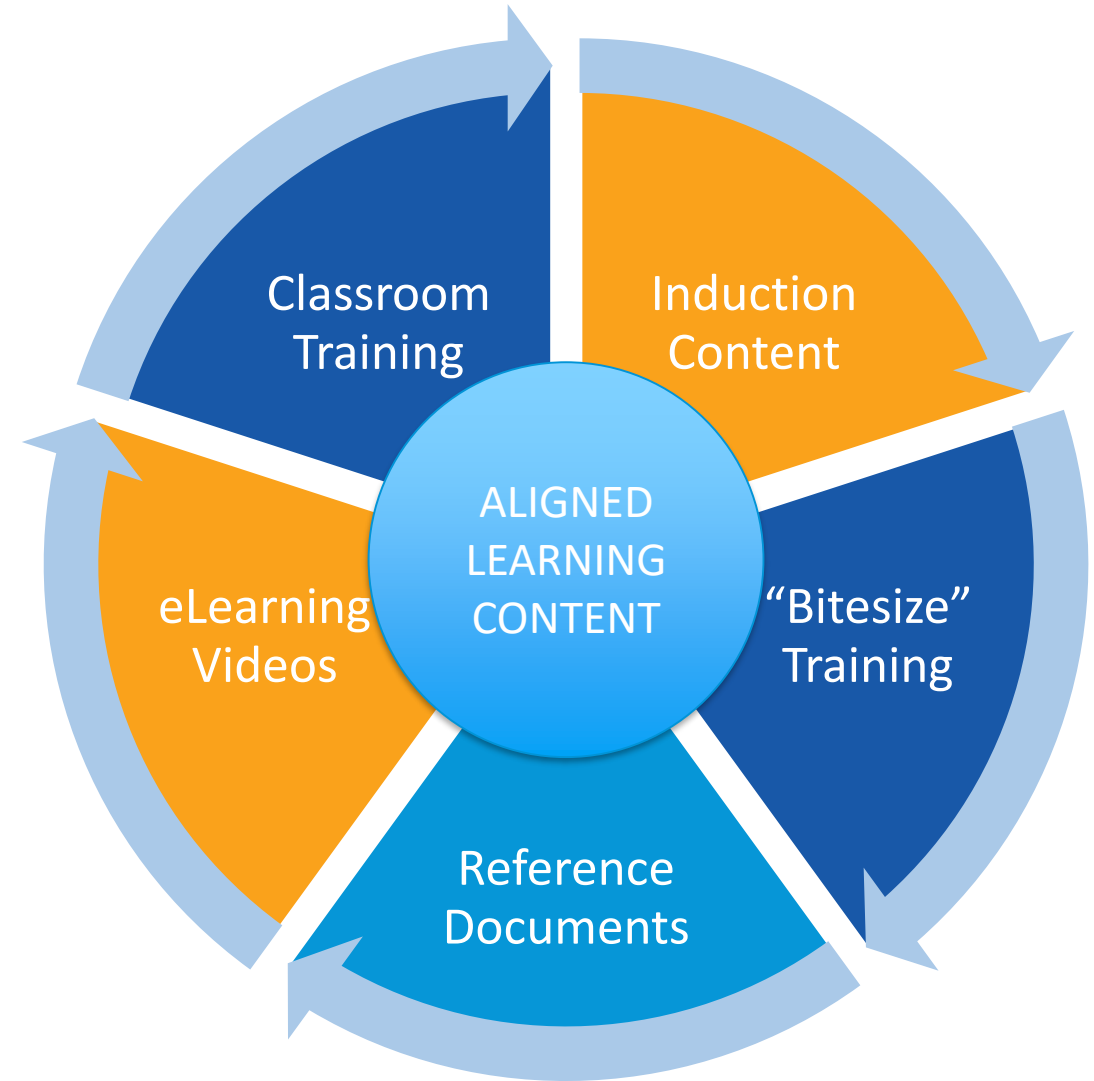
# WHO IS TRAINING TARGETTED AT?

Consider the use of Skills Profiles, and outline essential and preferred skills for each role

How do you review personal progress?

Many eLearning platforms have a reporting function, but will that cover all of your learning methods?

It should be a core part of your personal reviews, discuss with employees if they have the appropriate skills to complete the tasks expected of them



# Summary: Establish a Strong Training Plan

## UNDERSTAND YOUR WORKFLOWS

Teaching software as standalone topics is increasingly less appropriate... what do your staff actually need to know to deliver projects effectively

## CONSIDER YOUR TRAINING DELIVERY METHODS

What roles do classroom learning, eLearning, documents, etc. all play

## ALIGN YOUR DELIVERY

All formats/methods should be based on the same base information for familiarity, easy reference and consistency

# Summary: Establish a Strong Training Plan

## UNDERSTAND YOUR OBLIGATIONS

Asses your ability to deliver... then agree to deliver it! Don't assume it's all okay and then run in to trouble...

## MAKE IT EASY FOR YOURSELF

Yes you may need to update your processes, but what improvements can you make in order to ease the change – i.e. improved library content, etc.

## MORE DELIVERABLES MEAN MORE CHECKING

What processes can you put in place in order to make sure what you are delivering is relevant, useful and complete?

Let's try something new...



# I'VE FOUND THIS GREAT TOOL...

You want to introduce a new tool/process and you're convinced it's just what you need...

...but take a quick step back and run through the following steps

1. What problem/gap does the tool solve... is it really a problem?
2. Define your desired outcome... what criteria would a new tool need to meet (don't try and fit the solution in to the problem)
3. Review multiple options – speak to colleagues, research, consider custom tools, cost benefits, etc.



# I'VE FOUND THIS GREAT TOOL...

4. Test/trial the tool (or tools) against your criteria, don't rely on marketing... does it work for YOUR process?
5. Identify potential users – will you roll the tool out office wide, to just your support team, or to select users only?
5. Discuss – you may think the tool is great, but do those that actually use see the same benefits?
6. Build the process – define where and how the tool should be used
7. Educate – before unleashing the tool, prepare necessary learning materials and sessions



# I'VE FOUND THIS GREAT TOOL...

8. Release – install the tool/introduce the process as appropriate (to all/some/specific projects?)
9. Review – after a set period revisit the use of the tool, is it actually being used, is it being used as intended?
10. Update – build on lessons learned in the initial usage period, re-define your processes if necessary and educate users on changes



# I'VE FOUND THIS GREAT TOOL...

This process should apply to all technology implementation... you should at least run through the steps, but it really needs to be a documented process – record your criteria, your assessment, lessons learned, etc.

Equally applicable to:

Authoring tools

AR/VR kit

Software plugins

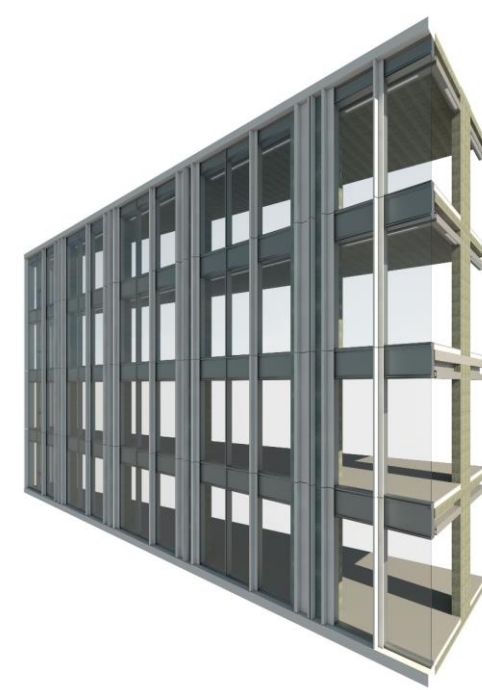
Additional software

eLearning tools

New hardware

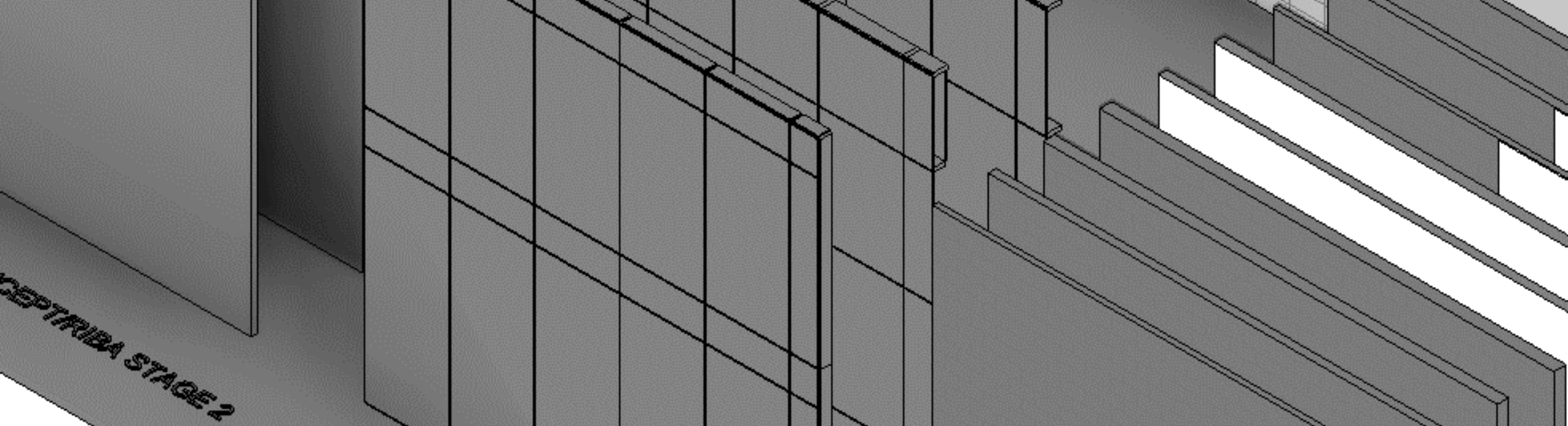
Etc.





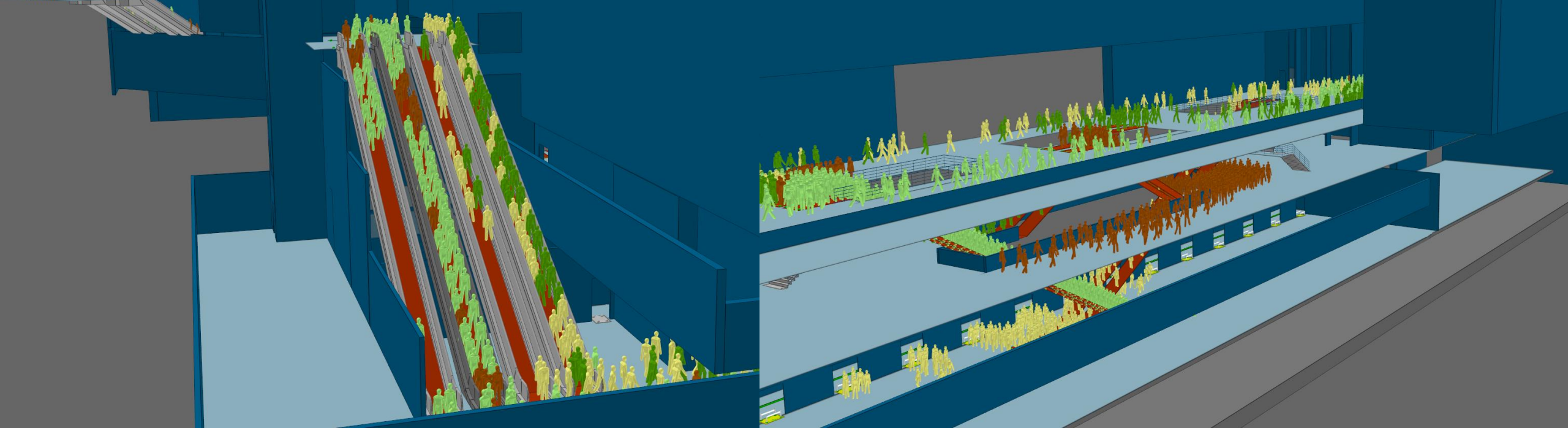
# Implementation Case Study 1: Enscape

Problems to solve:	Time/complexity involved in producing render/VR content
Comparisons:	vRay, 3DSMax, etc.
Rollout strategy:	Included in default PC image
Training provided:	Lunchtime session and associated user guide
Usage/uptake:	Widespread



## Implementation Case Study 2: Content Library

Problems to solve:	Time/complexity involved in producing render/VR content
Comparisons:	vRay, 3DSMax, etc.
Rollout strategy:	Included in default PC image
Training provided:	Lunchtime session and associated user guide
Usage/uptake:	Widespread



## Implementation Case Study 3: MassMotion Flow

Problems to solve:	Lack of understanding of pedestrian interaction with buildings
Comparisons:	Predictive diagrams or employ crowd dynamics consultant
Rollout strategy:	Limited to core BIM team
Training provided:	User attendance at software training
Uptake/usage:	Limited – renewal reviewed annually

# Summary: Analyse your implementation

## DON'T ASSUME A TOOL THAT LOOKS FANTASTIC IS PERFECT FOR YOU

Understand what problem needs solving, don't buy a tool and try and find a problem for it to solve

## DEFINE YOUR USAGE CRITERIA

Outline what goals/improvements you hope to achieve and establish what rules you will use to evaluate multiple options

## PREPARE YOUR IMPLEMENTATION

Not just a case of installing on everyone's computer – who will you roll out to, how will you educate them, how will you evaluate the use of a new tool?

A large audience is seated in a conference hall, facing a stage. The stage features multiple large projection screens displaying a speaker and a Jordan brand logo. The room is illuminated with blue and green spotlights, creating a high-tech atmosphere. The text "Any Questions?" is overlaid in the center of the image.

Any Questions?



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## Make anything.

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