



#BIMCoCo

trylight
PRODUCTIONS

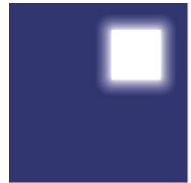
Life™

THANK YOU



CIOB

THE CHARTERED INSTITUTE OF BUILDING



CONSTRUCTING
EXCELLENCE
IN THE NORTH EAST

BIM
strategy



NBS



STROMA®



VIEWPOINT®
A TRIMBLE COMPANY



Opentree

Welcome to
#BIMCoCo.

There's a lot going
on today so please
make yourself at
home.





ARCHITECT
Worked across the North East

EVANGELIST
DISRUPTER
PRAGMATIST } **BIM**

...Software Product

Manager...

BIM CHANGED MY LIFE

Do what I can make an impact
---- **TO** ----

Agile process enthusiast

Business Leader

embrace change | **reject status-quo**

@BIMstrategy
@johnad25
#BIMCoCo

Niven

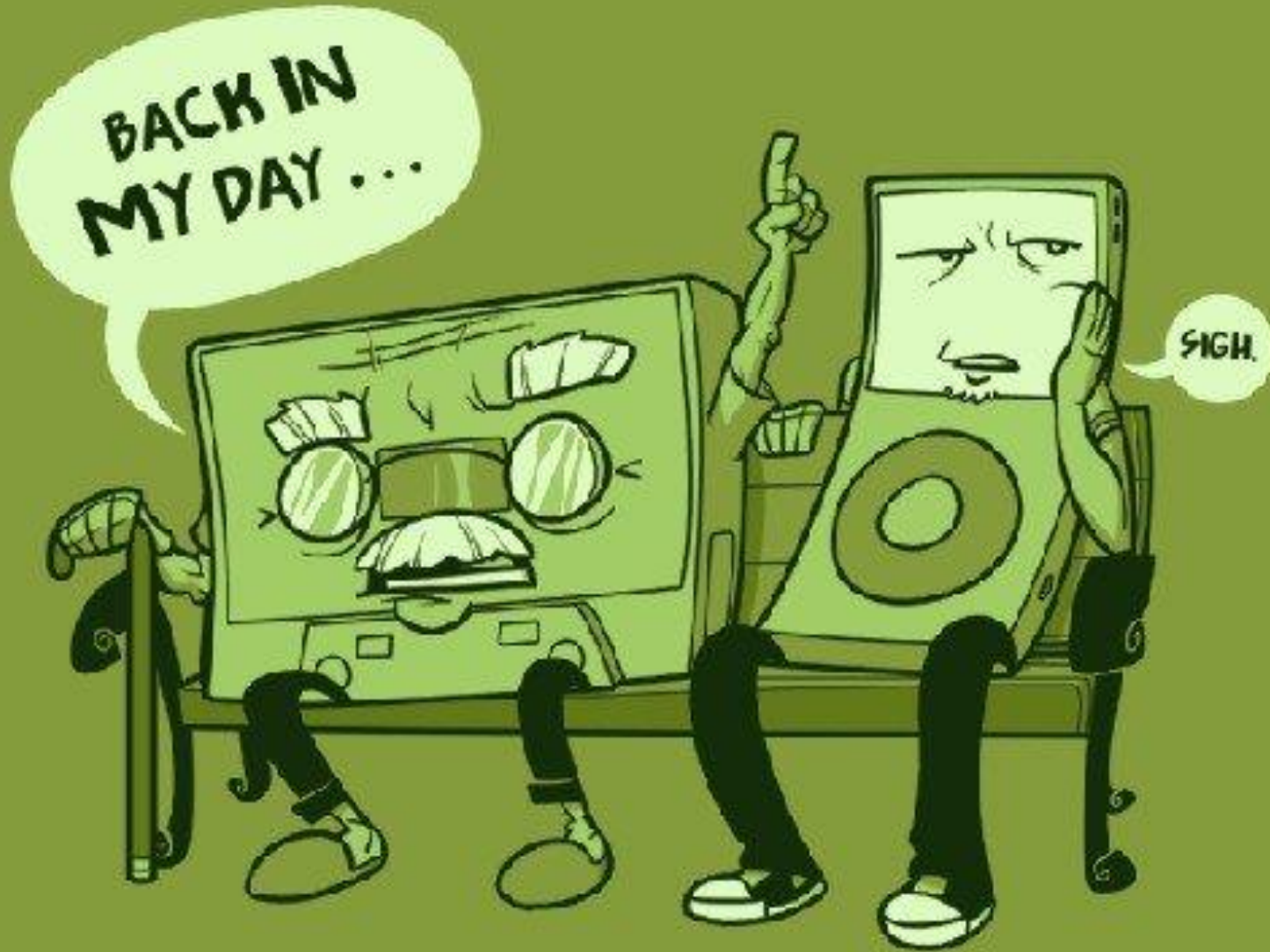


DARLINGTON



@BIMstrategy
@johnad25
#BIMCoCo

BIM: HOW & WHY

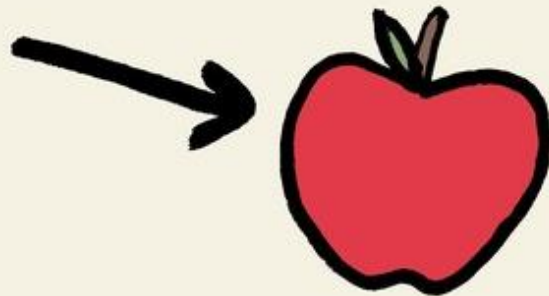


 #BIMTEES17 



**INEDIBLE
BLUE ORB**

**EDIBLE
RED ORB**



**FLAMMABLE
KNOWLEDGE**



I LOVE IT WHEN



**B A (BIM Advocate)
Baracus**

A BIM EVENT COMES TOGETHER

BIM IS... BIM ISN'T

BIM ≠ BIM Level 2 ≠ Digital Construction

The UK BIM Journey

Level 2 Principles

BIM & **BIG** DATA

BUT...WHAT ABOUT LEVEL 1?

Where to go next...

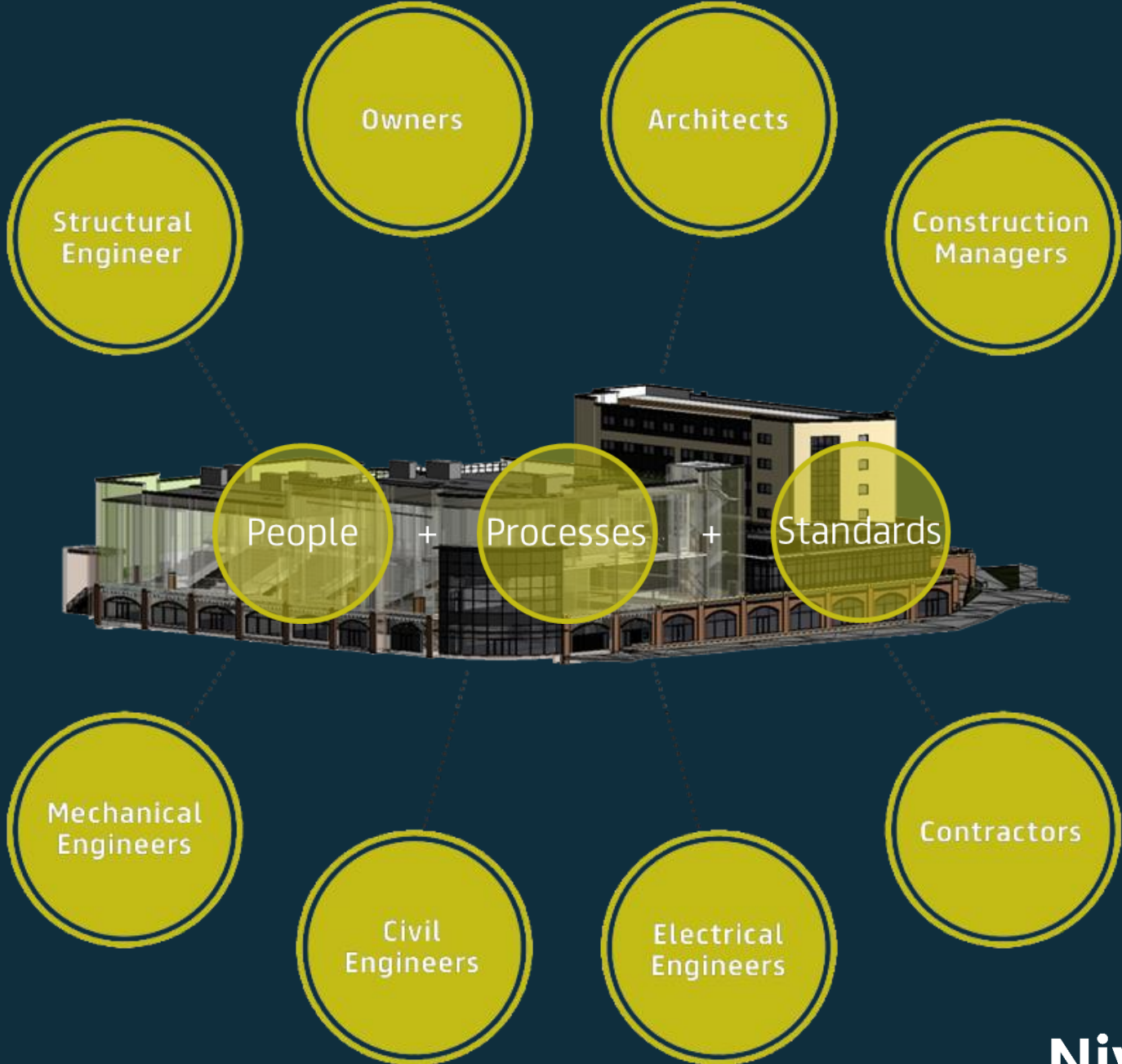
BIM STANDARDS

MYTH BUSTING

BIM Tech...vs...BIM Process

Do Clients Care?

'The means by which everyone can understand a building through the use of a digital model'

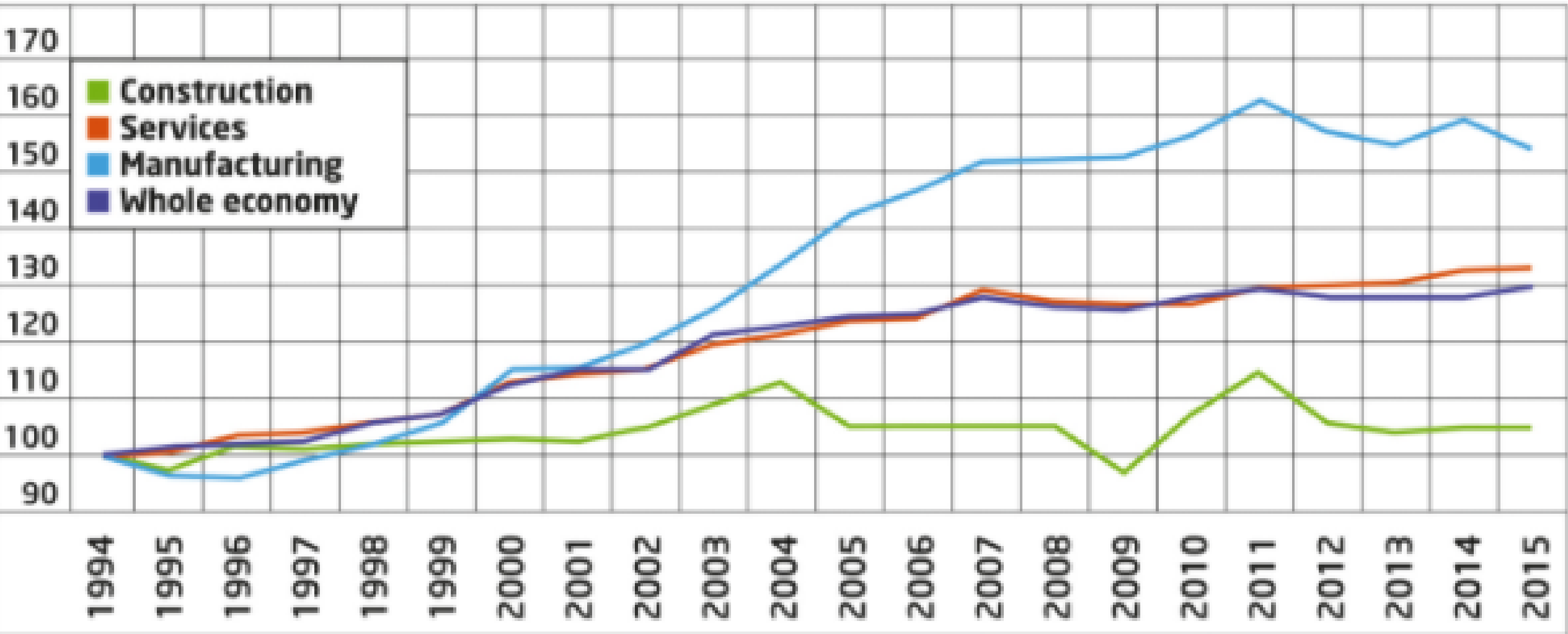




$$\left(\text{Portrait 1} + \text{Portrait 2} \right) \times \sqrt{\text{Complex Diagram}} \times \text{GOV.UK}^2$$

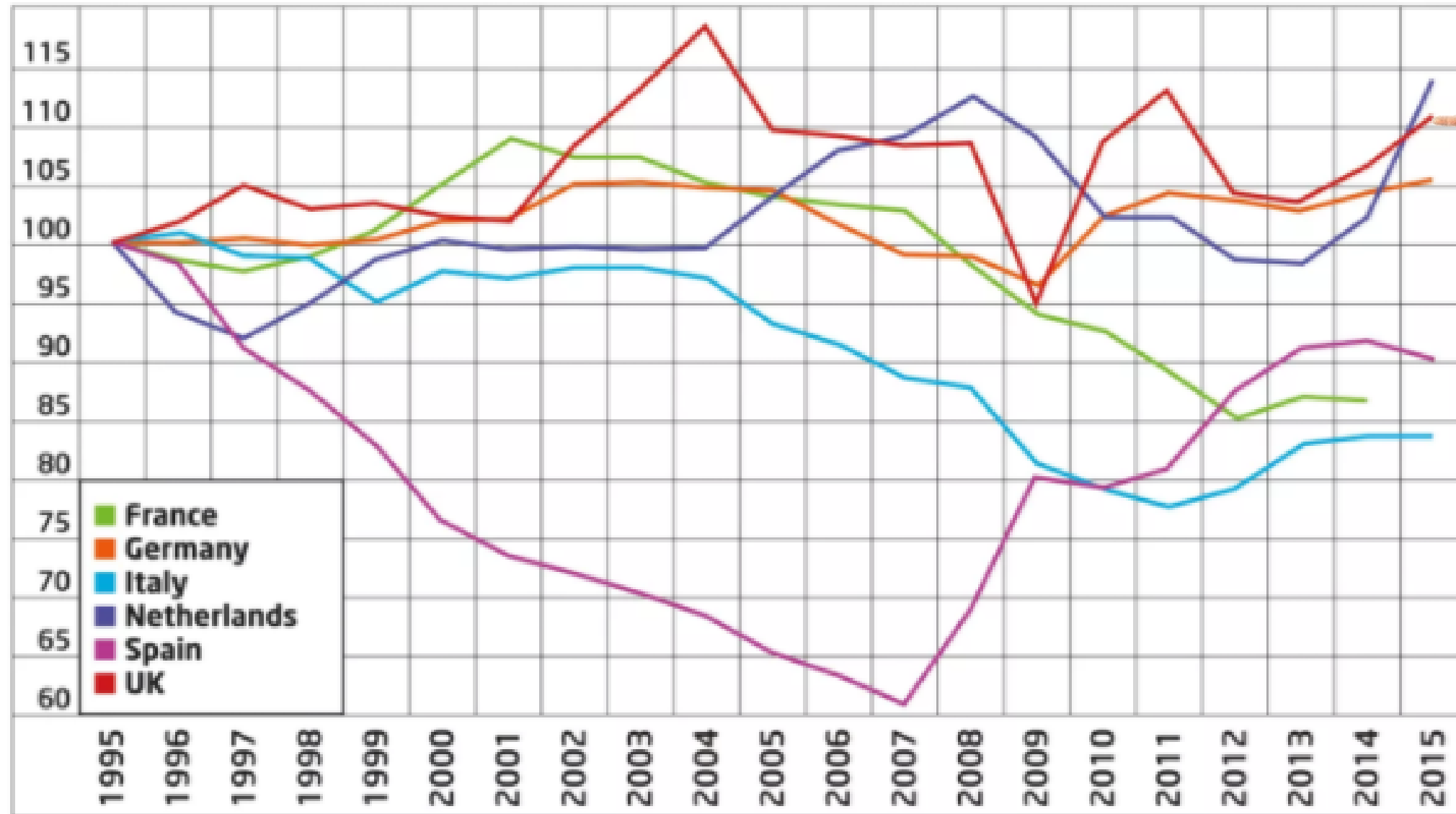
The image depicts a mathematical-style equation on a dark blue background. On the left, two black and white portraits of men are enclosed in large yellow parentheses, with a yellow plus sign between them. This is followed by a yellow 'x' and a yellow square root symbol. Inside the square root is a complex, colorful diagram of interconnected nodes and icons, including terms like 'DATA CAPTURE', 'DESIGN AUTOMATION', 'ENVIRONMENTAL', and 'SOLIBRI'. To the right of the square root is another yellow 'x', followed by a dark brown square containing a white crown icon and the text 'GOV.UK'. A large yellow '2' is positioned to the right of the 'GOV.UK' square, indicating a square operation.

Productivity comparisons by sector (UK) (% change since 1994)



Source: ONS. Index adjusted to 1994 = 100

Construction productivity comparisons across Europe (% change since 1994)



WHO DOESN'T



FREE STUFF

Lower costs

33%

reduction in the initial cost of construction and the whole life cost of built assets

Faster delivery

50%

reduction in overall time, from inception to completion, for newbuild and refurbished assets

Lower emissions

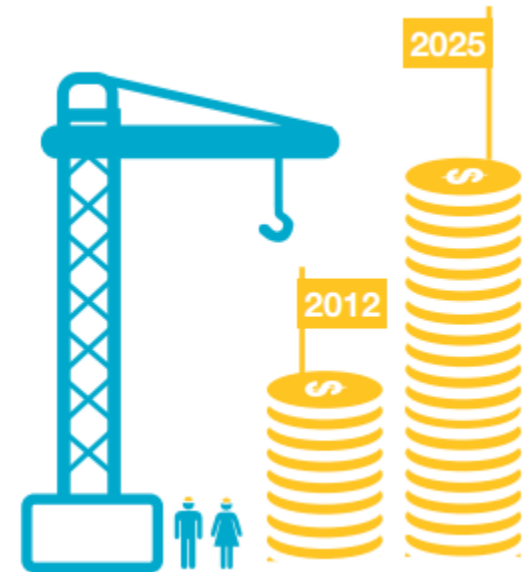
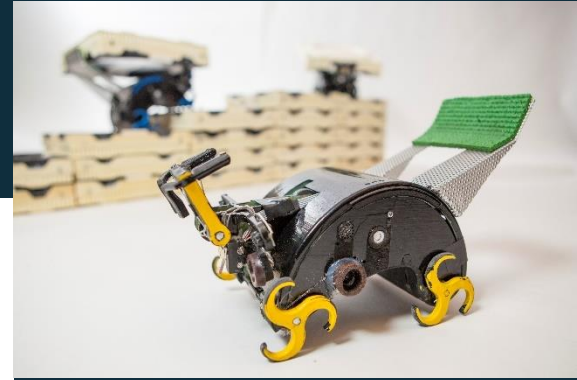
50%

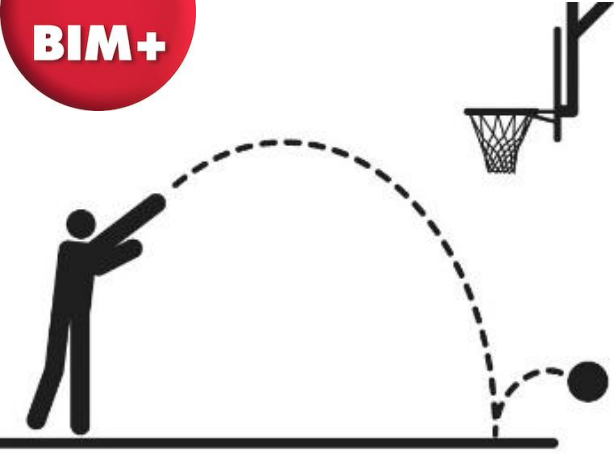
reduction in greenhouse gas emissions in the built environment

Improvements in exports

50%

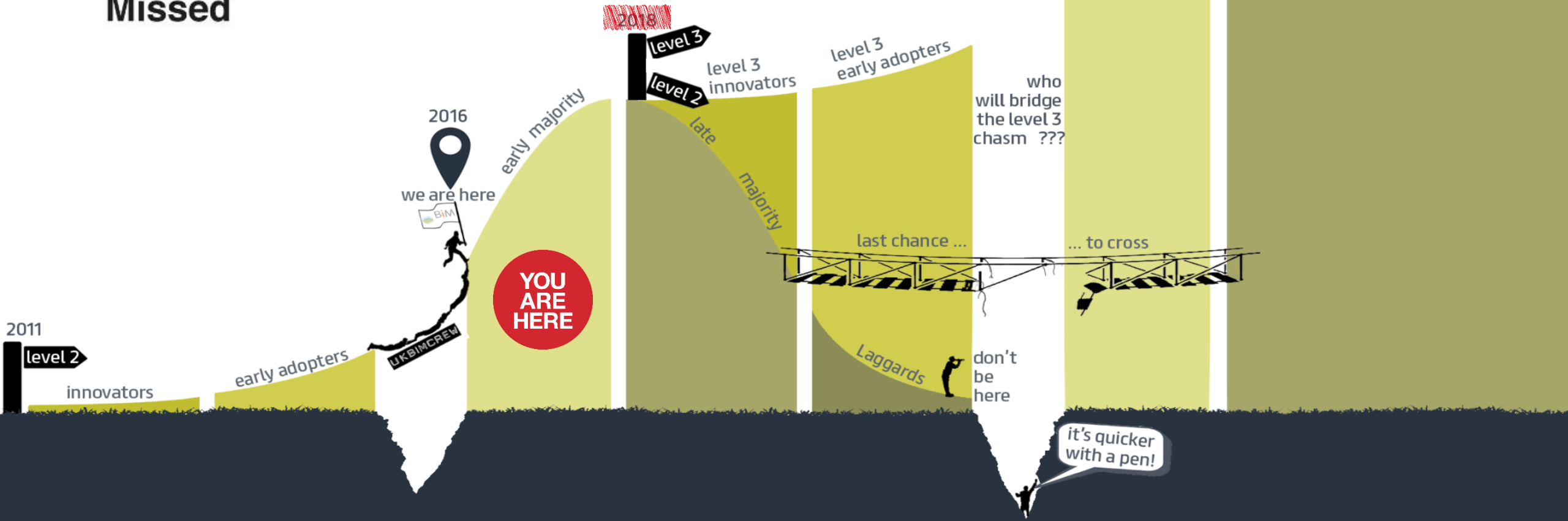
reduction in the trade gap between total exports and total imports for construction products and materials





Missed

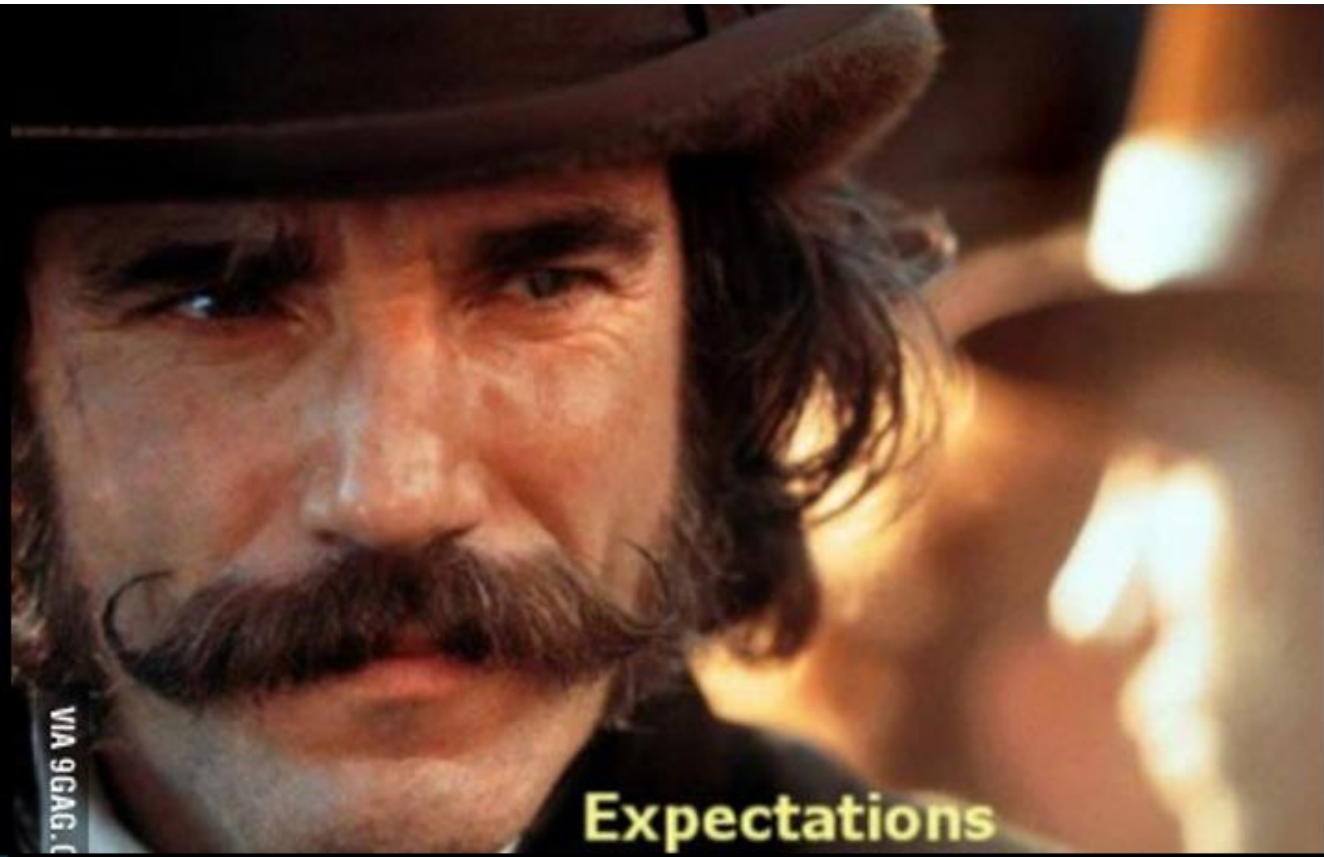
129%
of
people
exaggerate.



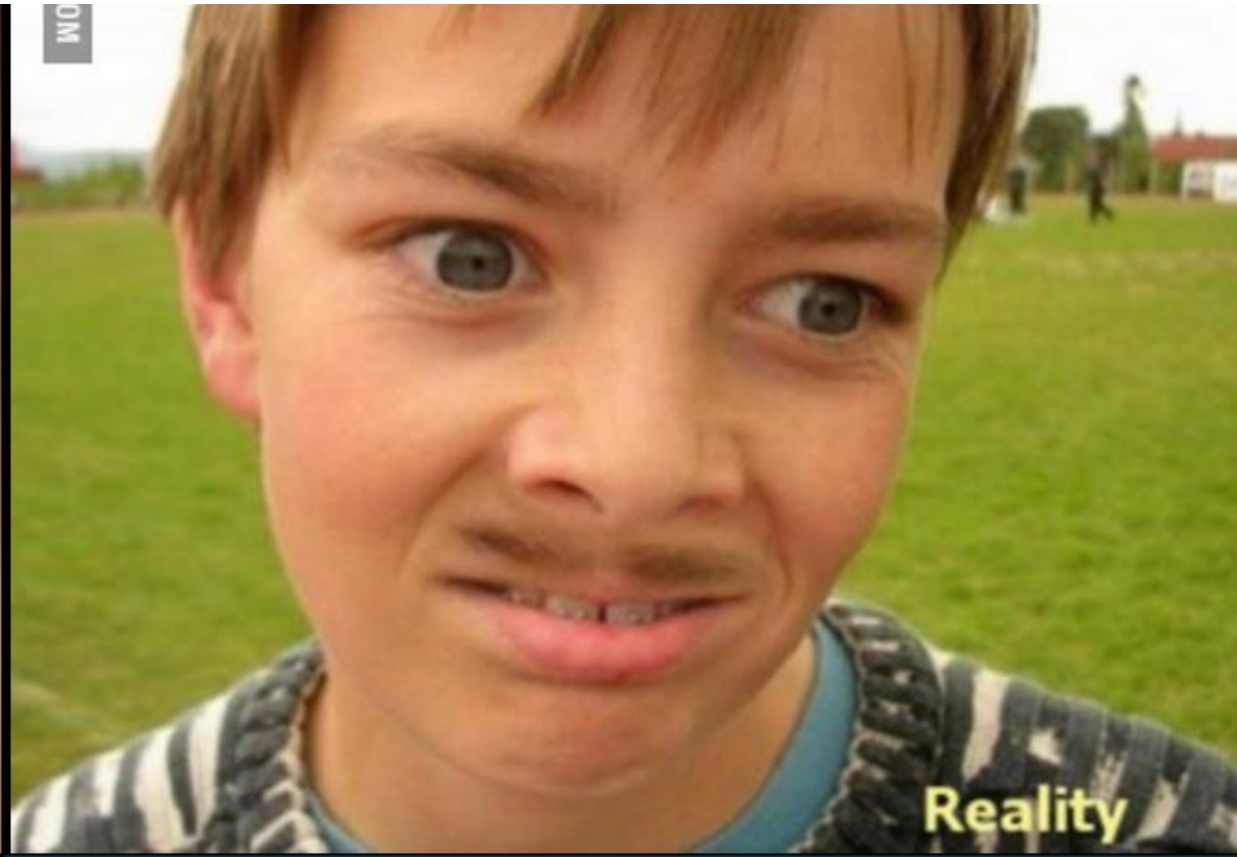
Scary BIM Question in the tender?



...Don't Panic...Organise



Expectations



Reality

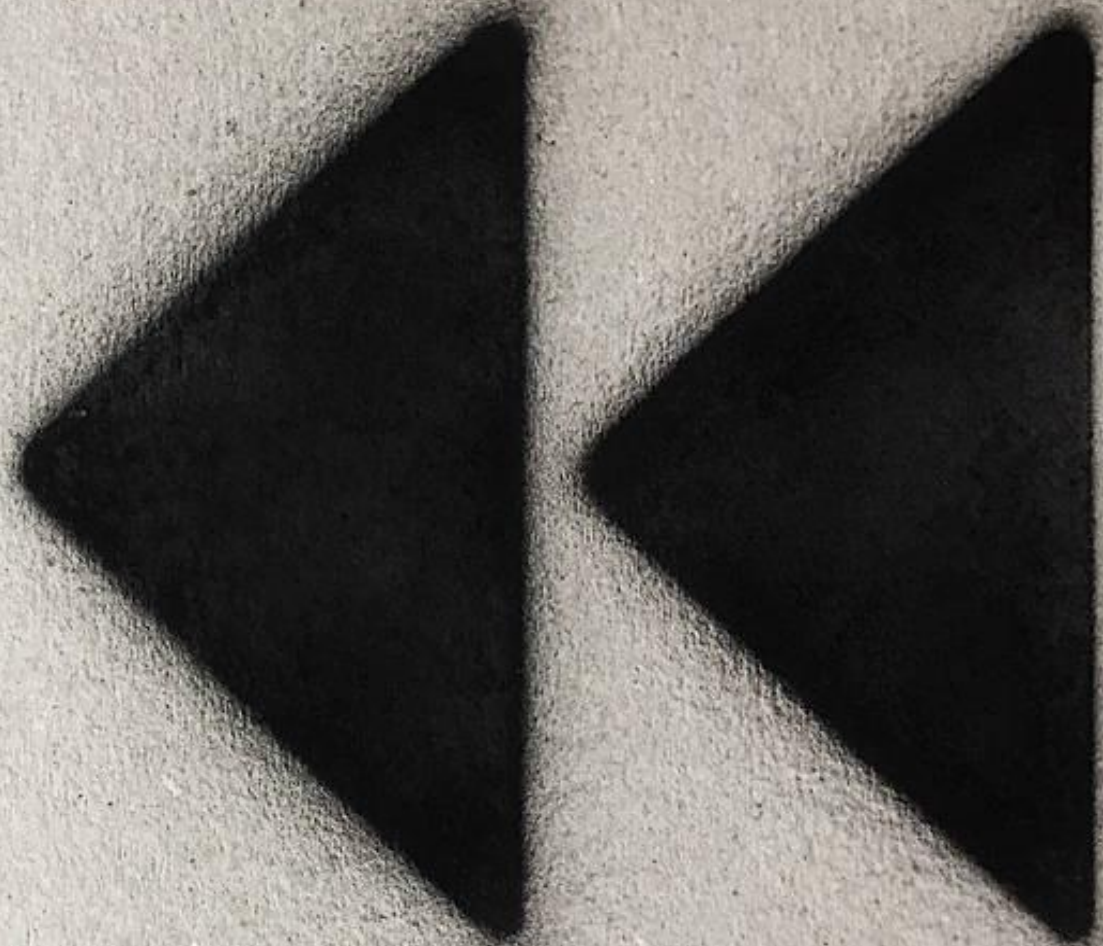


"NOW I'M INTO IT, I WANT MORE."




LEVEL

1



Is BIM Level 1 really, just doing your job?



*BS7000 not widely known.
BS1192 naming & process not adopted.
75% of project doc's shared outside of CDE.*

Level 0 BIM

In its simplest form, level 0 effectively means no collaboration. 2D CAD drafting only is utilised, mainly for Production Information (RIBA Plan of Work 2013 stage 4). Output and distribution is via paper or electronic prints, or a mixture of both. The majority of the industry is already well ahead of this now (source: [NBS National BIM Report 2014](#)).



*'We always ask for/use Revit'
'We've been doing this for years, and we've
moved to Level 2...'*

Level 1 BIM

This is the level at which many organisations are currently operating. This typically comprises a mixture of 3D CAD for concept work, and 2D for drafting of statutory approval documentation and Production Information. CAD standards are managed to BS 1192:2007, and electronic sharing of data is carried out from a common data environment (CDE), often managed by the contractor. Models are not shared between project team members.

DO THIS FIRST

Mix of 2D & 3D information produced in a traditional way

Managed production & distribution to BS1192:2007

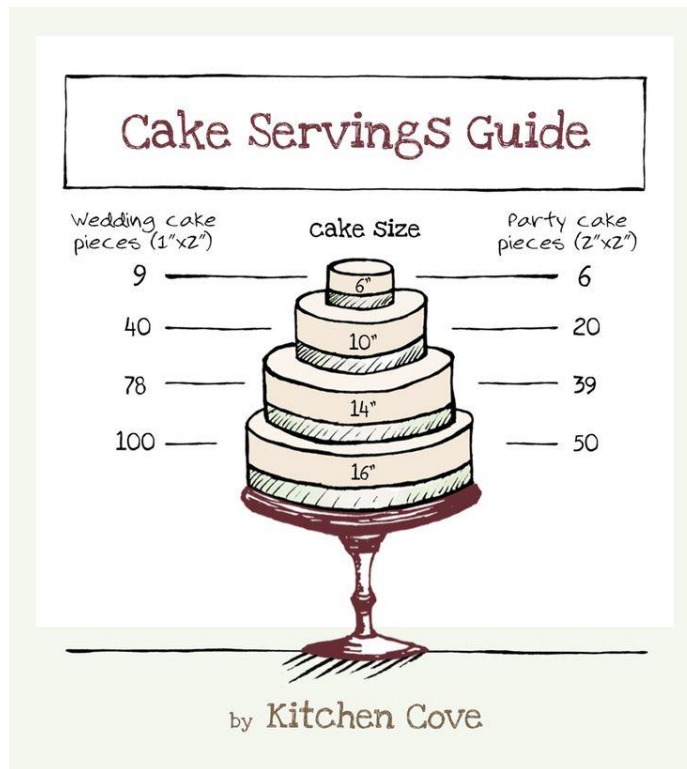
Shared drawing conventions to BS 8541-2011

Level 1 Fundamentals

COMMON DATA ENVIRONMENT USED TO ELECTRONICALLY SHARE INFORMATION.

Managed Design to BS 7000 4: 2013

WHO? BENEFITS



Level 1
Shared benefit

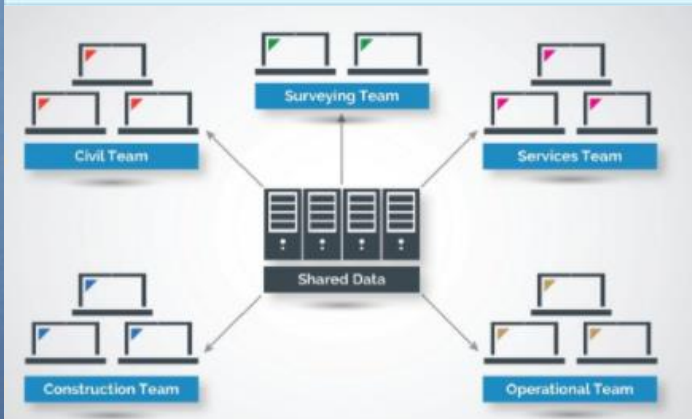


Level 2
Client wins

WHY SO SERIOUS?



THE DARK KNIGHT



Fundamental principles for Level 2 information modelling

The fundamental principles of Level 2 information modelling are:

- a) originators produce definition information in models which they control, sourcing information from other models where required by way of reference, federation or direct information exchange;
- b) provision of a clear definition of the employer's information requirements (EIR) and key decision points (to form part of the contract possibly through adoption of the CIC BIM Protocol) – see Clause 5;
- c) evaluation of the proposed approach, capability and capacity of each supplier, and their supply chain, to deliver the required information, prior to contract award – see Clause 6;
- d) a BIM execution plan (BEP) shall be developed by the supplier containing:
 - 1) assigned roles, responsibilities and authorities;
 - 2) standards, methods and procedures; and
 - 3) a resourced master information delivery index, aligned with the project programme;– see Clauses 6, 7 and 8;
- e) provision of a single environment to store shared asset data and information, accessible to all individuals who are required to produce, use and maintain it – see Clause 9;
- f) application of the processes and procedures outlined in the documents and standards indicated in Table 1; and
- g) information models to be developed using one of the following combinations of enabling tools:

- 1) discipline-based software, with individual proprietary databases, that have limited interoperability between them or with associated design analysis software;
- 2) discipline-based software, with individual proprietary databases, that are fully interoperable, but with limited interoperability with associated design analysis software;
- 3) discipline-based software, with individual proprietary databases, and associated design analysis software that are fully interoperable; or

- 4) single source platform software, with a single external relational database, and associated design analysis software that are fully interoperable.

This list of combinations of enabling tools is not exhaustive.

NOTE 1 The above principles involve the delivery of a co-ordinated project information model to the employer containing graphical and non-graphical information through a single point of responsibility, likely to be the lead designer or the contractor.

NOTE 2 One of the key Level 2 requirements is the exchange standard of COBie and PDF, as well as copies of the native files.

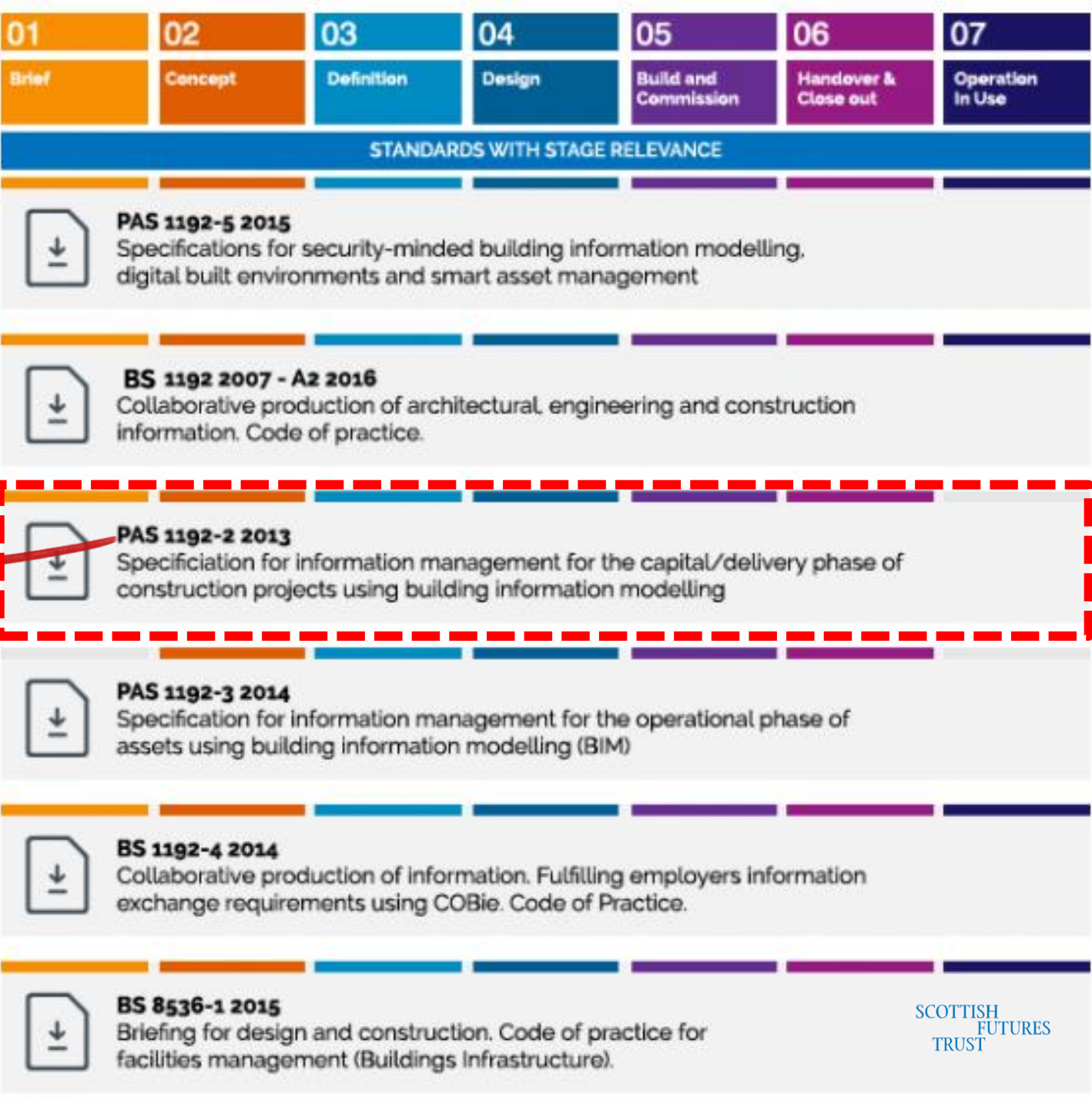
NOTE 3 The definition of BIM maturity Level 2 was originally developed as part of the UK Government BIM strategy in 2011. The terminology has been adopted widely. Level 2 is defined in this PAS with reference to best practice and the adoption of tools and standards. Given the early stage of adoption of managed methods of working in BIM at the time when this PAS was drafted, it can be expected that Level 2 practice will continue to evolve and that the scope of information sharing and exchange will vary from project to project. For this reason, it can be anticipated that the definition of Level 2 BIM will continue to evolve around the core principle of the shared use of individually authored models in a common data environment.

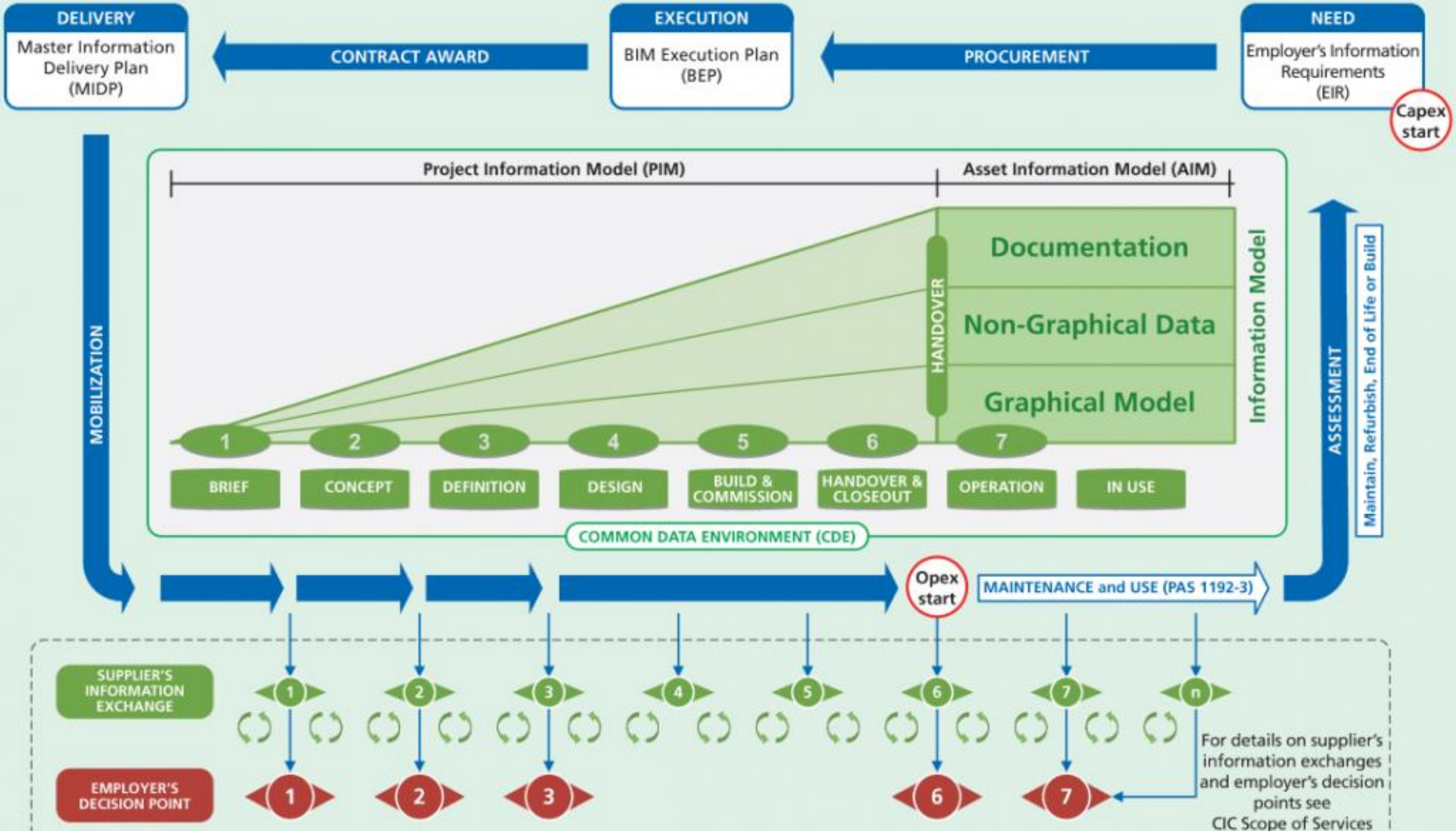


#BIMhound

Alf wants you to remember....

ISO 19650-1 and 2 are founded on the UK's standards for Information management using building information modelling as per BS 1192:2007 + A2:2016 and PAS 1192-2:2013. The principles remain as per these standards with terminology changes being preserved via the UK Annex. - CDBB



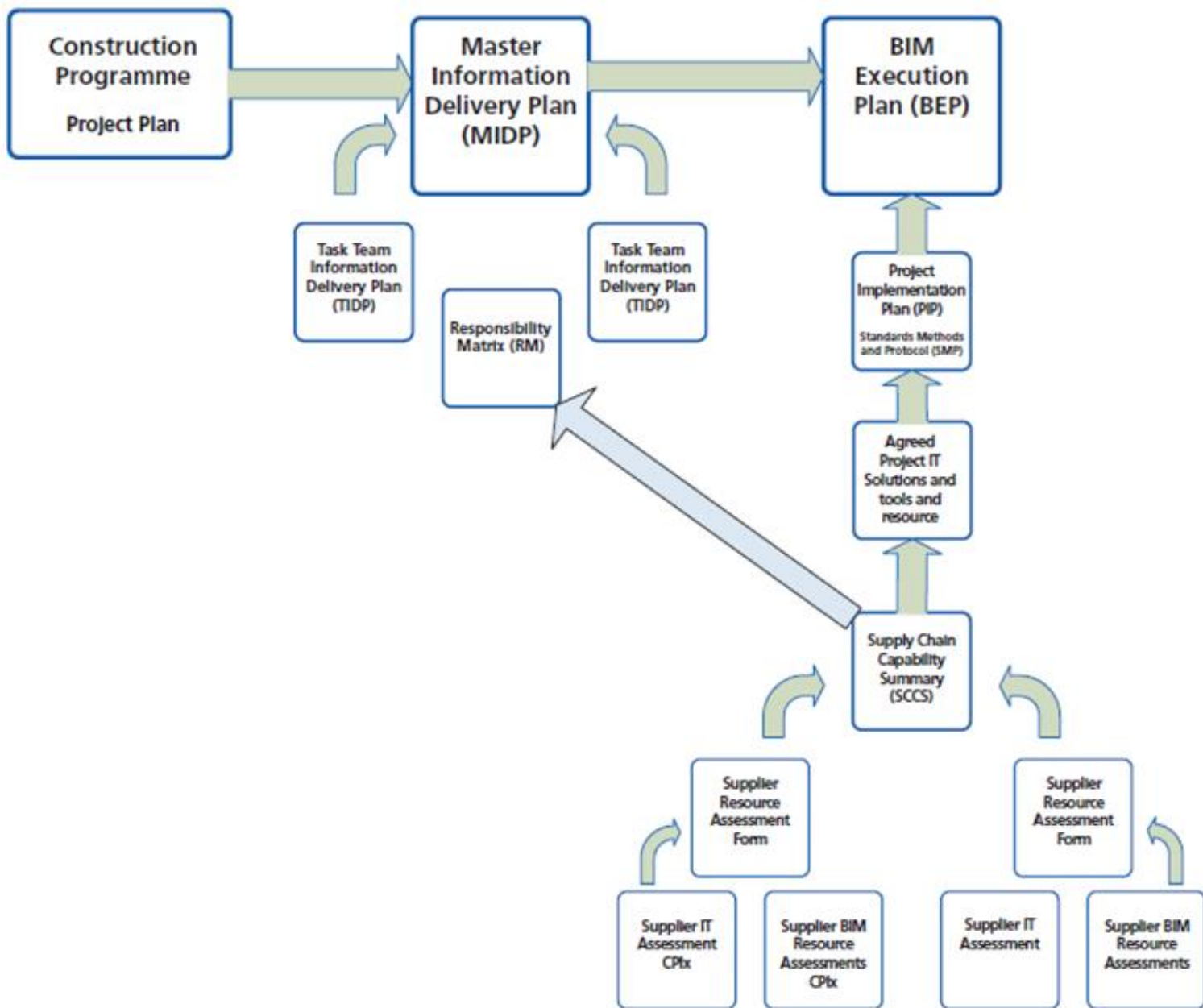




**OUTLINE SCOPE OF SERVICES
FOR THE ROLE OF
INFORMATION MANAGEMENT**

CIC/INF MAN/S
first edition 2013

Figure 4 – Relationship between documents used for information management

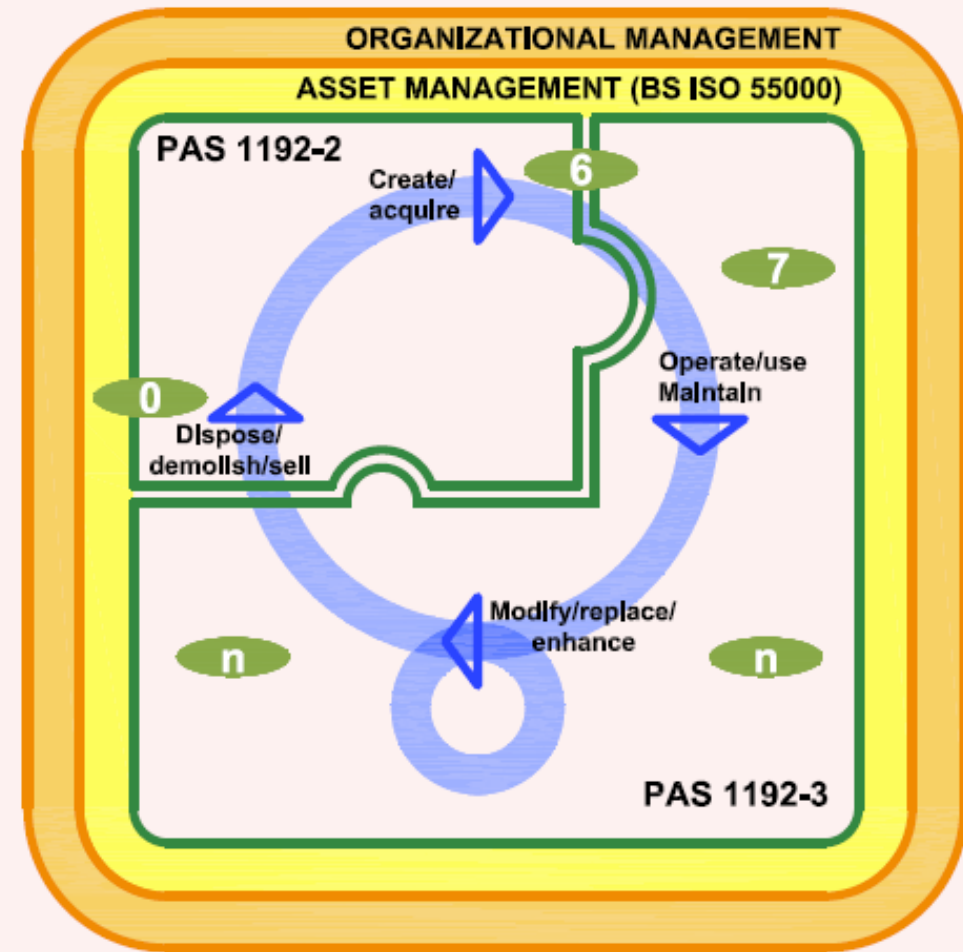
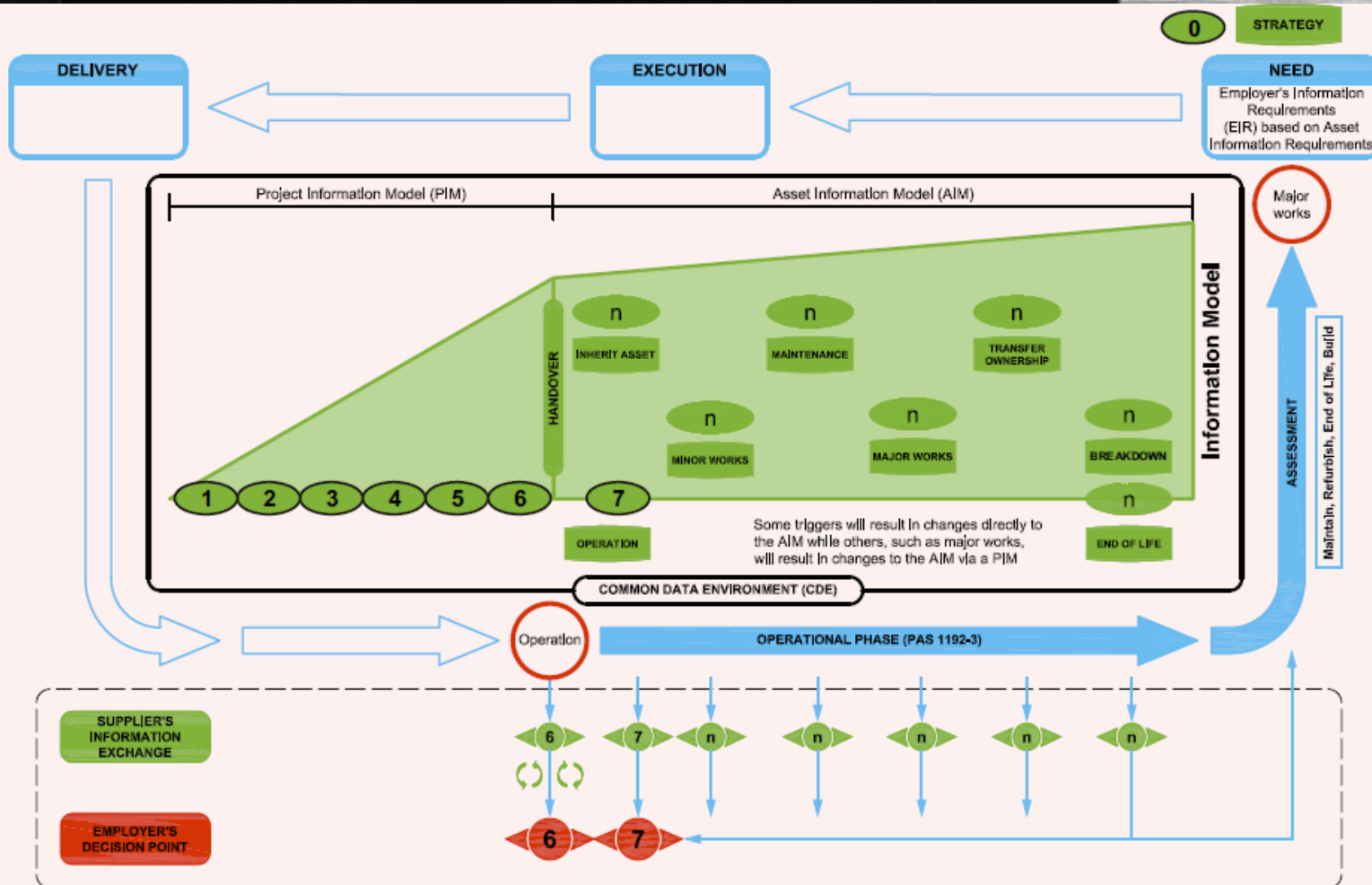


NOTE Copyright is claimed in this illustration. Reproduction of this illustration and making products from it might infringe that copyright. Details of the copyright owners can be found in the Foreword.

PAS 1192-3:2014
 Incorporating Corrigendum No. 1

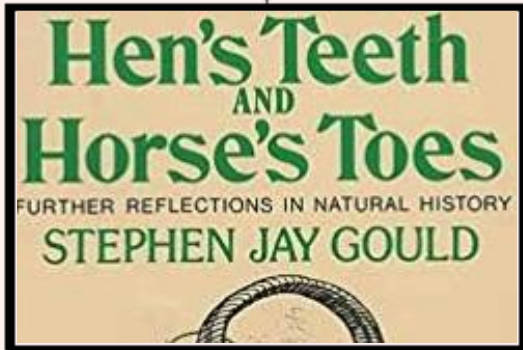
Specification for information management
 for the operational phase of assets using
 building information modelling

OCCUPIED





generates



specifies



informs

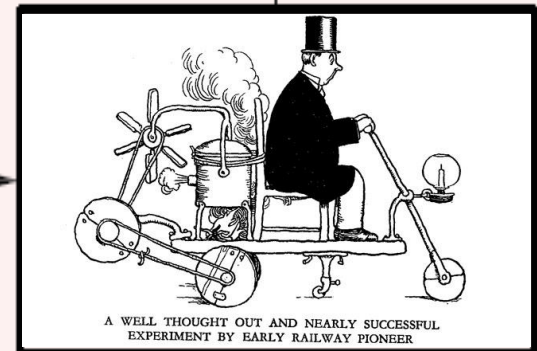
contributes to



generates



specifies

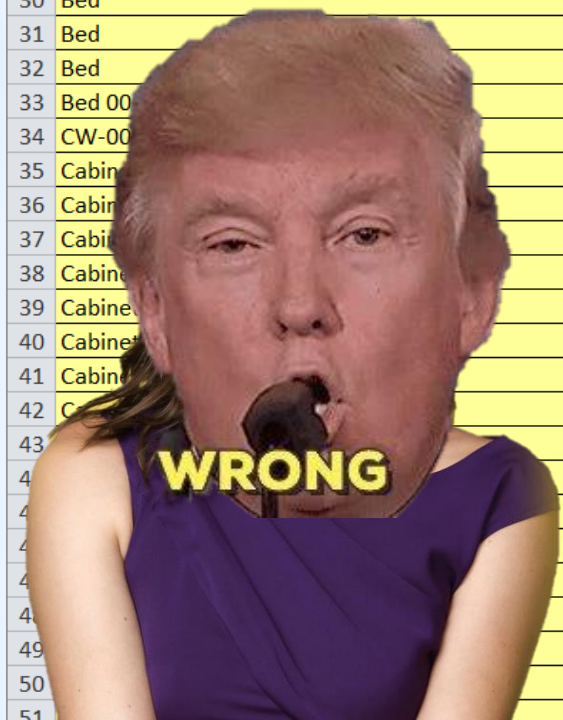


File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

Normal Bad Good Neutral

	A	G	H	I	J	K	L	M	N	O	P	Q	R
	Name	ExtSystem	ExtObject	ExtIdentifier	SerialNumber	InstallationDate	WarrantyStartDate	TagNumber	BarCode	AssetIdentifier	Length	Area	
1													
26	Beam	n/a	Beam	2OrWitJ6z	Available	n/a	n/a	n/a	Available	n/a	0,104	n/a	
27	Beam	n/a	Beam	2OrWitJ6z	Available	n/a	n/a	n/a	Available	n/a	0,157	n/a	
28	Beam	n/a	Beam	2OrWitJ6z	Available	n/a	n/a	n/a	Available	n/a	0,104	n/a	
29	Beam	n/a	Beam	2OrWitJ6z	Available	n/a	n/a	n/a	Available	n/a	0,105	n/a	
30	Bed	n/a	Furniture	2OBrcmyk	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
31	Bed	n/a	Furniture	2OBrcmyk	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
32	Bed	n/a	Furniture	2OBrcmyk	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
33	Bed 00	n/a	Furniture	2OBrcmyk	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
34	CW-00	n/a	Curtain Wall	1aQMNoq	Available	n/a	2012	n/a	Available	n/a	9,14	29,26	
35	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
36	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
37	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
38	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
39	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
40	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
41	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
42	Cabin	n/a	Furniture	0wkEuT1w	Available	n/a	2012	n/a	Available	n/a	n/a	n/a	
43		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
44		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
45		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
46		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
47		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
48		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
49		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
50		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
51		n/a	Suspended Ceiling	3bXiCStxP6	Available	n/a	n/a	n/a	n/a	n/a	n/a	n/a	



RIGHT!

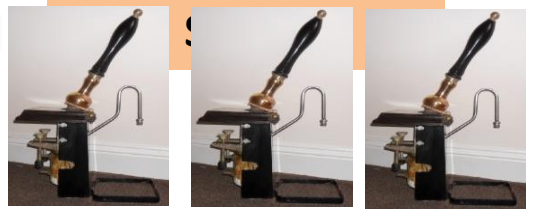
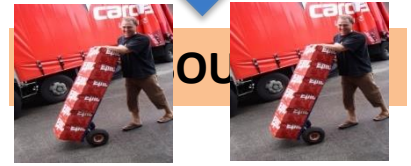
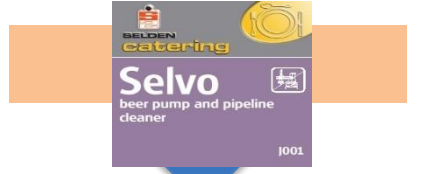
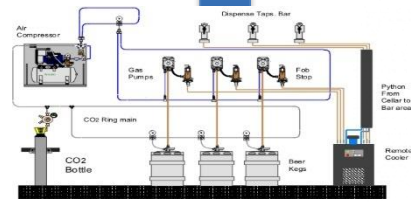
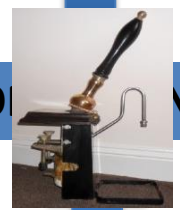
Better Informed Decision During The Project...



... And Improved Information At Handover



COOMBE ABBEY

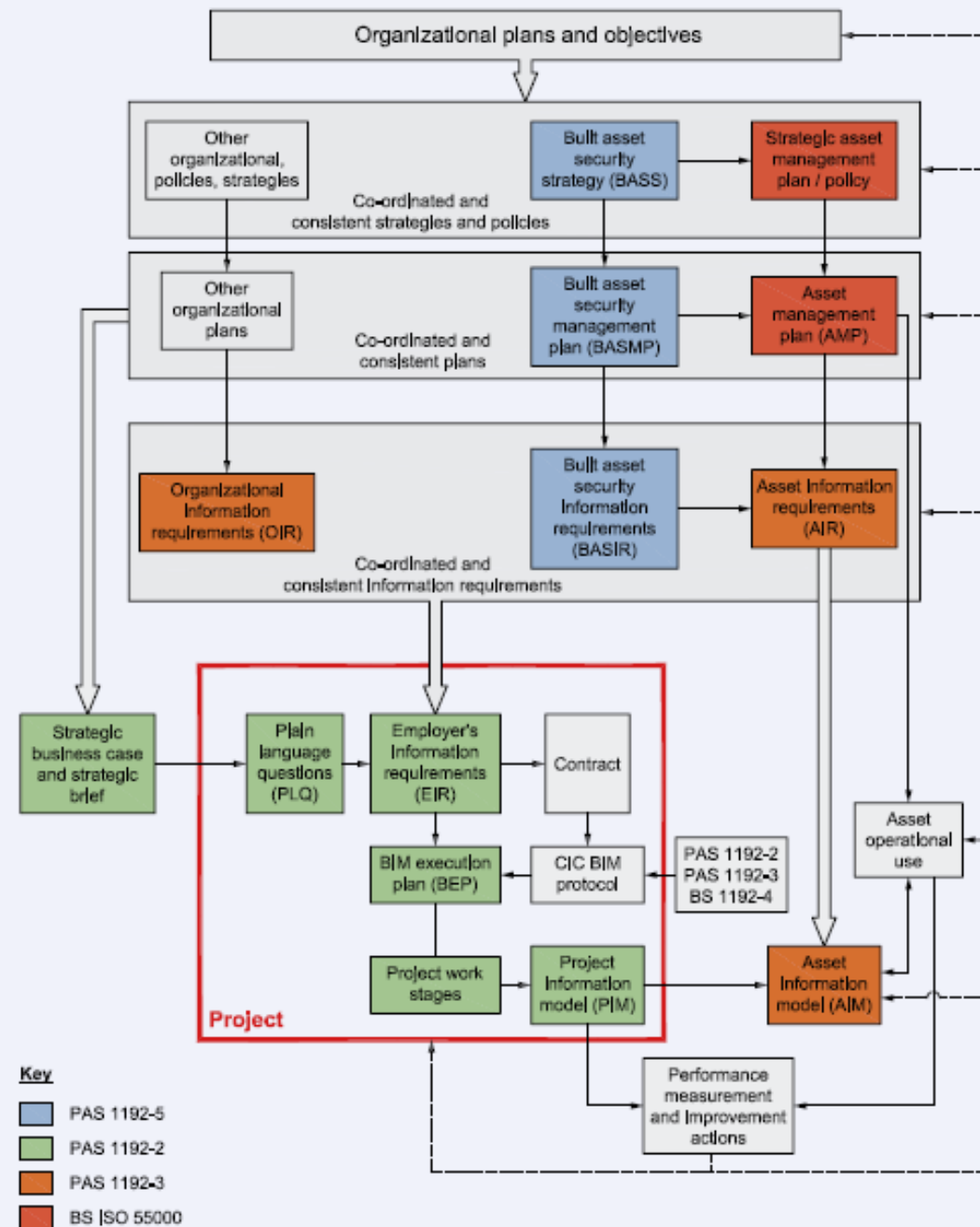




~~blame~~



Figure 2 – The integration of the security-minded approach



NOTE Developed by CPNI, Alexandra Luck and Hugh Boyes as part of the PAS 1192-5 development process.

SCHEDULE YOUR WORKPLACE ACCIDENT



SO THAT IT'S CONVENIENT FOR YOUR EMPLOYER
 EMPLOYEES WHO HAVE UNSCHEDULED ACCIDENTS WILL NOT RECEIVE DISABILITY BENEFITS OR SICK PAY



ALWAYS CONSULT A MANAGEMENT-APPROVED MEDIUM OR ORACLE

Scarfolk Council
IN CASE OF AN EMERGENCY
 or other emergencies

1. Hide under a beach towel or historically accurate cape.

2. Rub a magic, high protein infant on a sacrificial prayer pig.

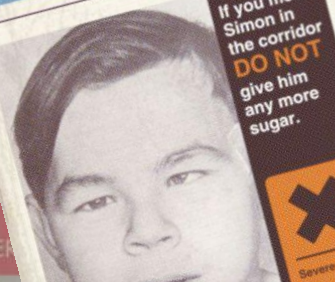
8. Make a baby whoopsie on part-time employees.

6. Hypnotise panicking colleagues with complicated shoe sole patterns

7-ish. Make the deceased look as lifelike as possible until a trained council taxidermist arrives.

1. Follow the yet to be printed signs to wherever the exits will be built.
2. Though arrows point in the direction indicated by the directional point of the arrow, the direction indicated may not be an accurate indication of the appropriate direction.
3. Shouting, yelling or screaming for help will be viewed as attention-seeking and ignored.
4. Don't.
5. To report an emergency or seek help call 0413-343 (unattended during emergencies & seances).
6. **IMPORTANT: Point profess your excellency seat outwards on.**
7. For more information please reread.**

12. Take unbaptised cadavers to the pagan funeral pyre on the 4th floor.
 Ask for Barbara in the personnel department.



If you meet Simon in the corridor **DO NOT** give him any more sugar.



Do not anger the WWII ghost.

All accidents will be televised

Palmists must not warn victims in advance

Get your flu, tetanus, diphtheria and polio vaccinations

* Employees are strongly encouraged to improvise their own safety guidelines.

The emergency doors on all floors are just paintings.
 There are no exits.

Scarfolk Council observes a strict equal opportunities injury programme, though in some cases higher-paid staff may use the management-only emergency exits.

(after rereading) this document.



ALWAYS LIGHT CHILDREN AT ARMS LENGTH

For more information please reread

getting started with a BIM project

consider

client
benefits

project
benefits

selfish
benefits

explore

BIM
uses

don't be
greedy

Build a
team

Implement

use
standards

agree
standards

contract
standards



theBIM.com

BIM FOR BEGINNERS

BIM LEVEL 2

[Home](#) [About BIM Level 2](#) [Standards](#) [Guidance](#) [Events](#) [Tools](#) [FAQs](#) [Glossary](#)



“

The process of construction, instead of being an orderly and consecutive advance down the line, is all too apt to become a scramble and a muddle.

– Alfred Bossom, *Reaching for the Skies* 1934



#BIMCOCO

OT B2U7MO COMFORTABLE

