



16 April 2018



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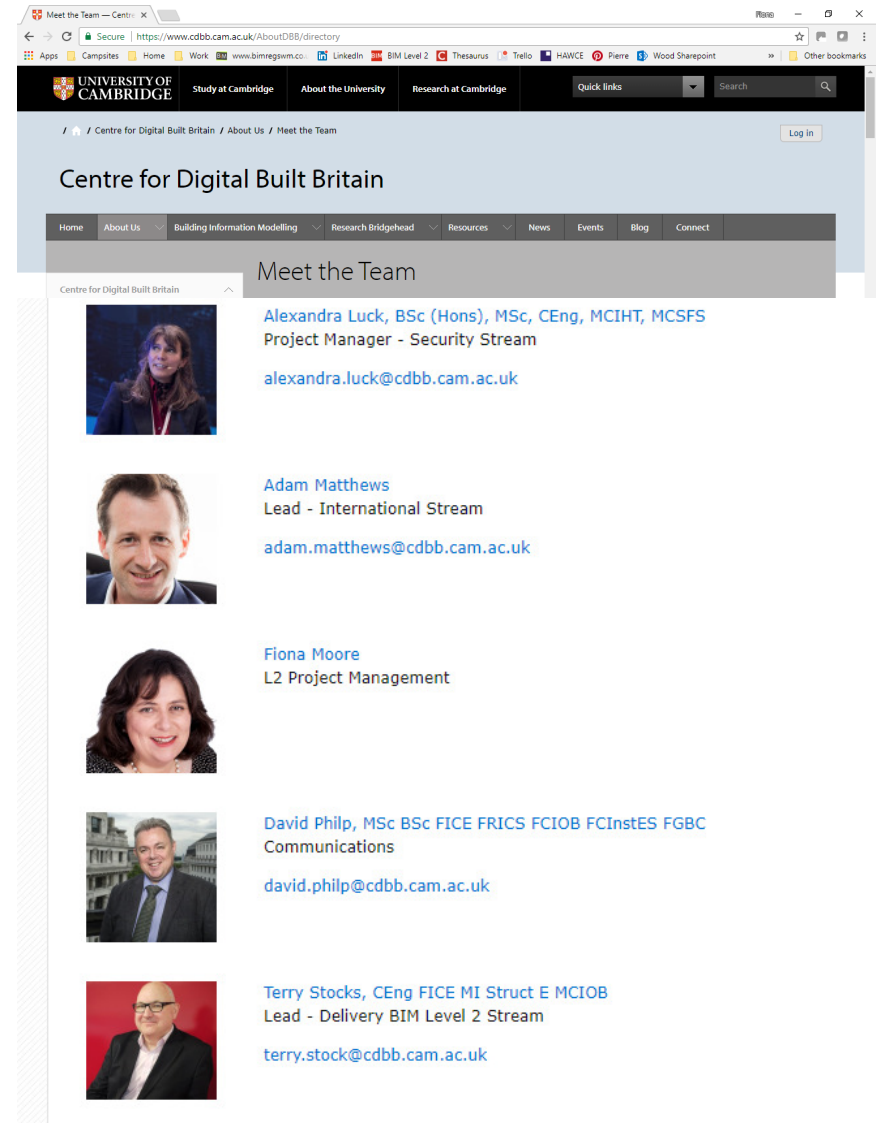
**BIM Consultancy
Training and Bids**

Fiona Moore

07872 187184

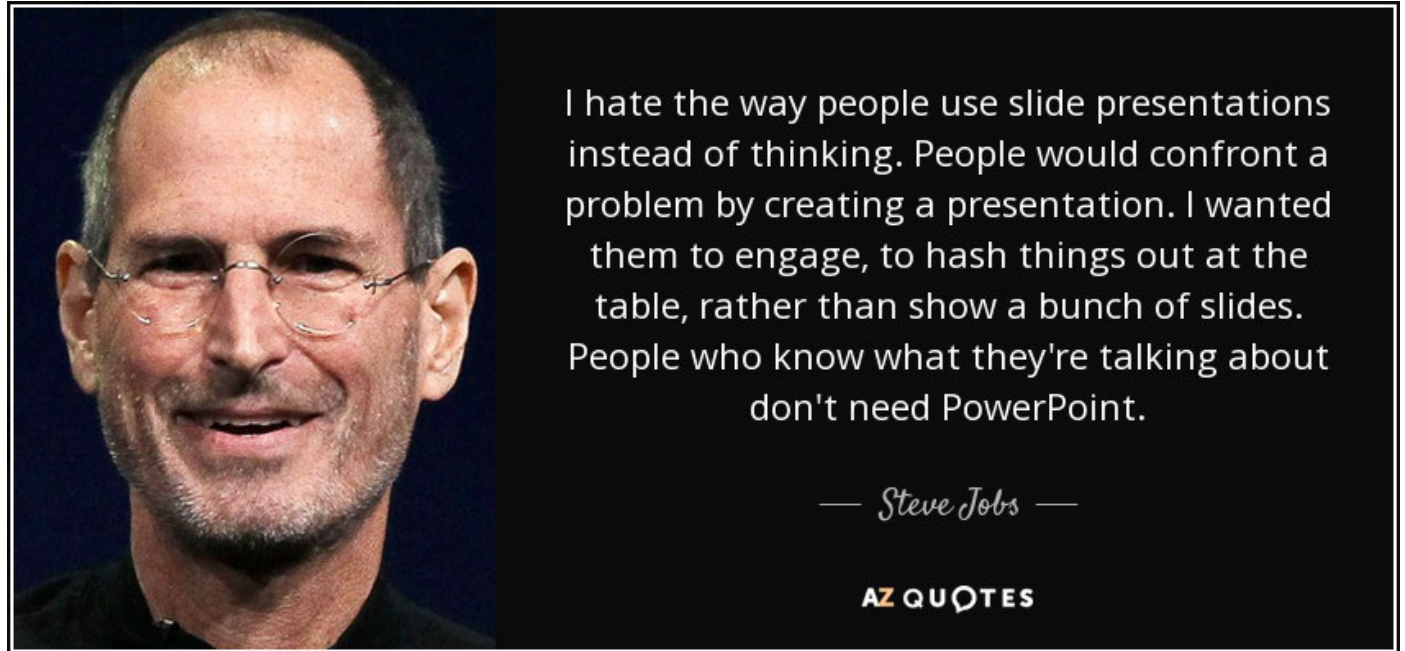
fiona.moore@cirrus-cs.co.uk

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New Year's Resolutions:

1. Ask “Why are we having a meeting?”
2. Try not to kill people with PowerPoint.

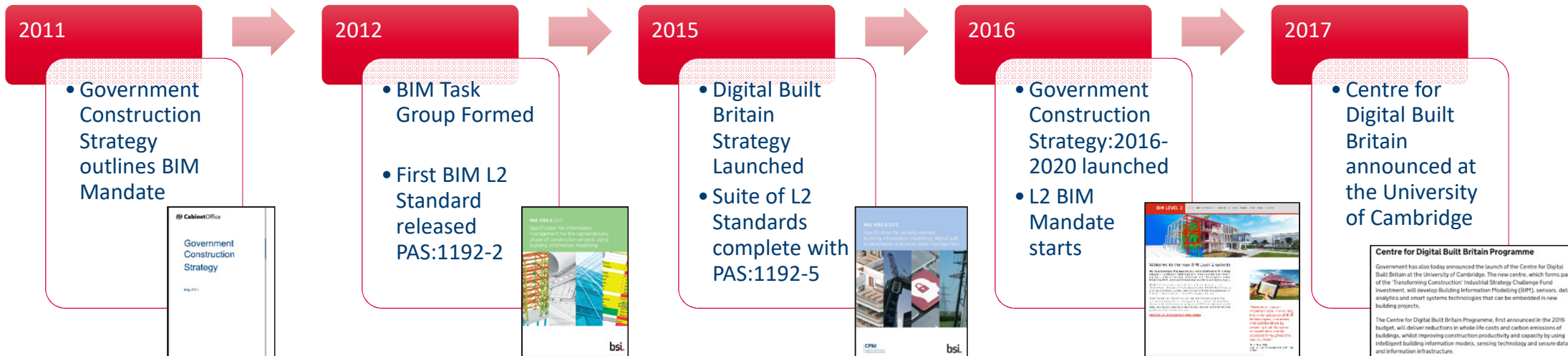


Introduction to the Centre for Digital Built Britain

BIM Region Oxford

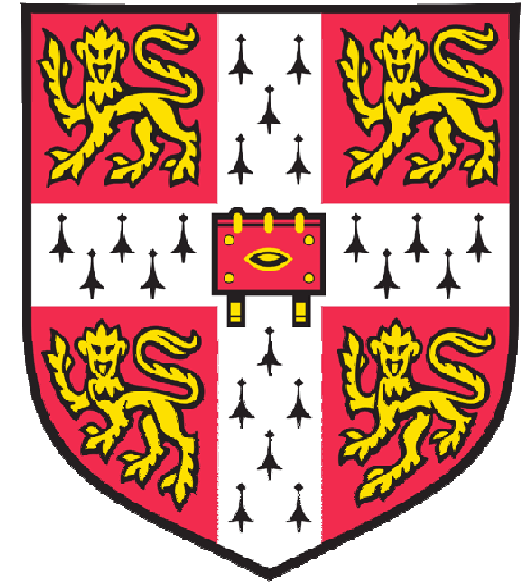
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A Short History: Digital Built Britain



The Centre for Digital Built Britain's Mission

To develop and demonstrate policy and practical insights that will enable the exploitation of new and emerging technologies, data and analytics to enhance the natural and built environment, thereby driving up commercial competitiveness and productivity, as well as citizen quality of life and well-being.



Governance

Strategic Board
Chaired by Professor Lord Mair

Management Board



Dr. Barry Blackwell
BEIS Policy Lead



Alex Luck
Project Manager –
Security Stream



Dr Mark Bew
Strategic Advisor



Prof. Andy Neely
Director



Dr Jennifer Schooling
Director of Research
Bridgehead



Alexandra Bolton
Assistant Director



Dr. Ioannis Brilakis
Academic Advisor

Expert Panel

Research
Bridgehead

Build

Operate

Integrate

International

Security

Industry
Partnership

Operations Team

CDBB Objectives

1. To act as the custodians of the integrity of the UK BIM and Digital Built Britain Programme across all the levels and to be recognised both nationally and internationally as that institution.
2. To liaise with national and international standard bodies to create and modify technical standards and protocols which remain relevant to UK needs and which support industry adoption and implementation of all levels of Digital Built Britain.
3. To develop a research bridgehead to ensure that the Digital Built Britain programme undertakes, commissions and is cognisant of new and emerging research and technological developments that will impact the built environment in the years and decades to come.
4. To track capabilities in the UK and elsewhere to ensure successful commercial exploitation of these new technological developments, identifying where capability investment may be required.
5. To develop and inspire an industrial community who, combined with academics and policy leaders, will provide leadership on adopting and implementing new digital approaches.
6. To co-ordinate and deliver a range of events and activities designed to engage industry in defining and adopting BIM levels 3 and 4, rethinking their business models and the ways in which they use technologies, data and analytics to deliver social outcomes through the built environment.
7. To ensure that findings and insights from the Centre and its engagement activities inform future policy, industrial practice, standards and research initiatives.

Next steps ahead of official launch

- Engaging with potential collaborators through workshops and an engagement process
- Co-development of industry partnership programme
- Running a series of funding calls to pump prime Research Bridgehead
- Demonstrator projects and case studies
- Recruiting operations team, including a Commercial Manager
- Expert panel and strategic board in place
- Continuing to refine the CDBB agenda



www.cdbb.cam.ac.uk



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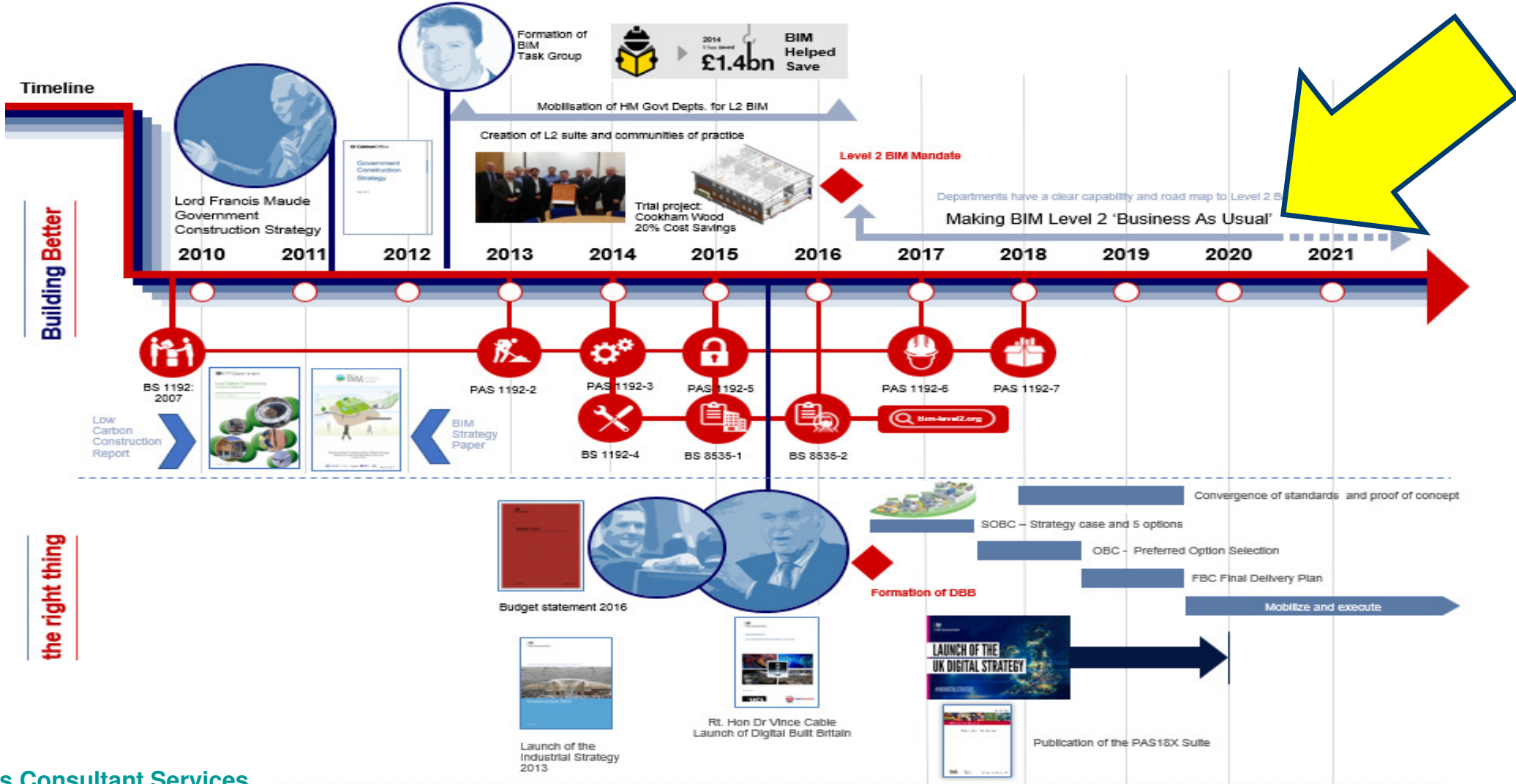
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How far have we come?



Working towards BAU – UK Govt. BIM Working Group

DBB Public Sector Level 2 BIM Working Group Who Are We?



DBB Public Client
BIM Working Group
Organisations & Members:
Chair: Terry Stocks
Programme Co-ordinator: Fiona Moore

We are a group of public sector clients
who for the last 5 years have been championing
a collaborative approach to the
Implementation of BIM Level 2



Cabinet Office



HM Revenue & Customs



Defence Infrastructure Organisation



Ministry of Defence



Home Office



CPS



Homes & Communities Agency

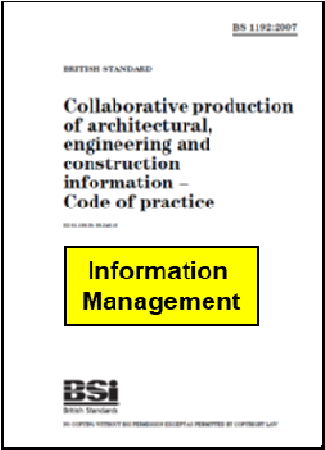


Department of Health

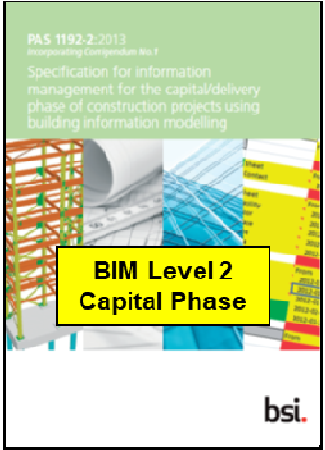


Education & Skills Funding Agency

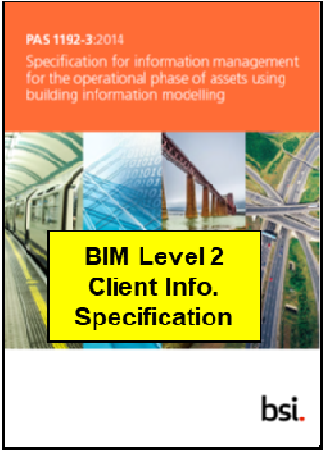
BIM Level 2 Standards



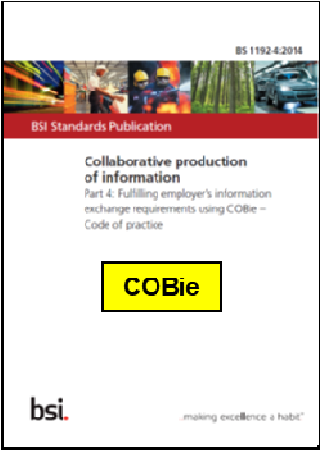
BS 1192:2007



PAS 1192-2:2013



PAS 1192-3:2014



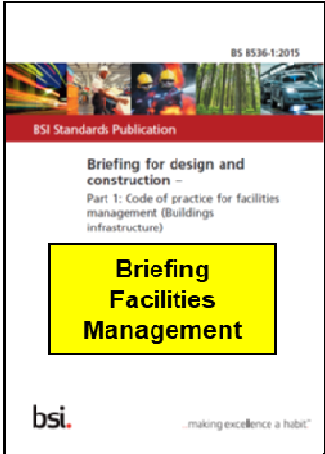
BS 1192-4:2014



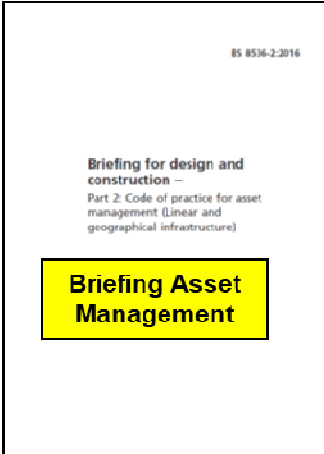
PAS 1192-5:2015



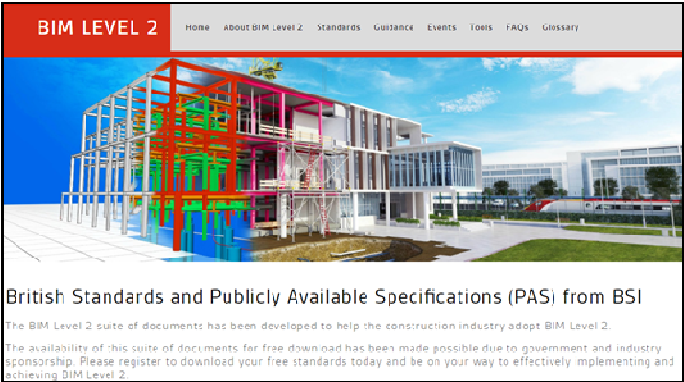
BS 1192:2007



BS 8536-1:2015



BS 8536-2:2016



<http://bim-level2.org/en/standards/downloads/>

Q: Are you/your Clients asking for BIM and if so why?

Q: Do you know why?

“Can’t remember now???”

“We’re techies and it excites us”

“Because someone (we can’t remember who) suggested it was a good idea”

“How else do we attract talented recruits to our industry?”

Q: Have you asked why?

“Because everyone else is doing it and we don’t want to be left behind”

“We went to a fantastic BIM Conference and came away convinced that BIM was the answer”

“We’ve bought the software so we might as well ‘do BIM’”

“The 2016 UK Government BIM Mandate”

Q: Are you/your Clients asking for BIM and if so why?

“Because we understand the specific benefits BIM Level 2 will bring to us.”

and...

We understand the benefits for:

- **Clients**
 - Designers
 - Consultants
 - Constructors
 - Supply Chain
- (Level 3 and beyond)*

We have a means of measuring these benefits and therefore demonstrating them.

BIM for Clients: The Why, What and How?

Why?

‘A ship engine failed, no one could fix it. Then they brought in a man with 40 years on the job. He inspected the engine carefully, top to bottom. After looking things over, the guy reached into his bag and pulled out a small hammer. He gently tapped something. Instantly, the engine lurched into life. The engine was fixed! 7 Days later the owners got his bill for £10k. ‘What?!’ the owners said “You hardly did anything, send us an itemized bill.” The reply simply said: Tapping with a hammer £2. Knowing where to tap £9,998.

Don't ever underestimate experience...

Knowledge (information) has value.



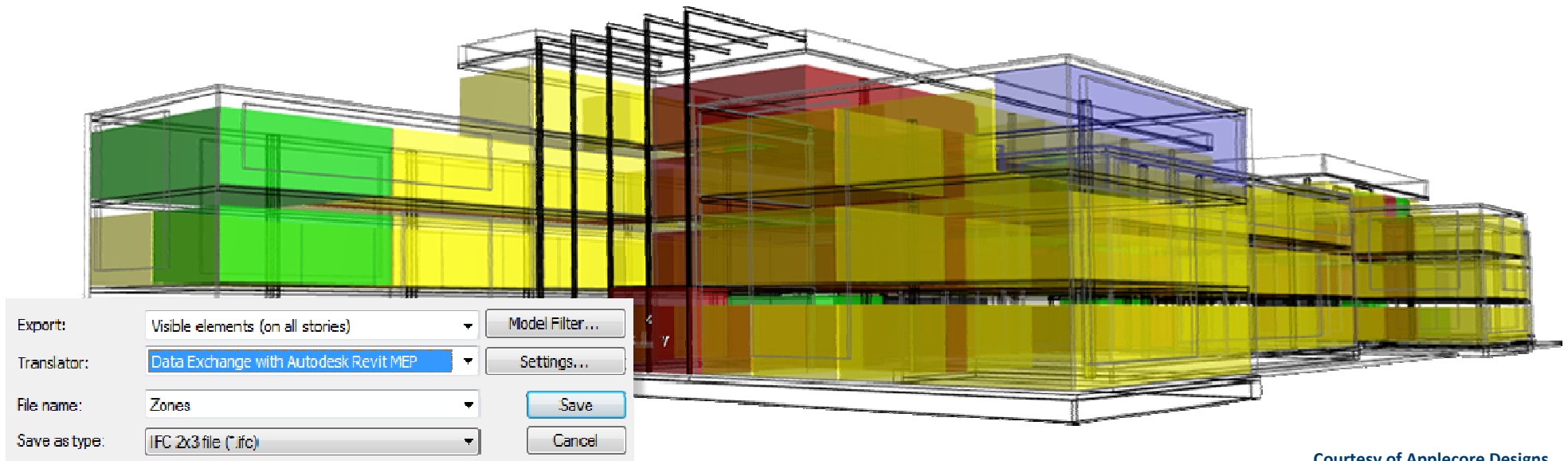
Who/what holds key knowledge in your business?

BIM for Clients: The Why, What and How?

Why?

Who owns/manages your organisation's knowledge (information/data) and hence who has the power to solve your problems?

What no 3D model?



Courtesy of Applecore Designs

Consider model geometry a sub-set of data

Honestly, which of these apply to you/your organisation/business?

**“GOOD IS NOT
GOOD WHEN
BETTER IS
EXPECTED.”**

~vin scully

D- Could do better



B- Current goal set too high



A+ On target to achieve objective

**Ask yourselves (again):
What exactly is my objective?**

BIM Level 2 BAU

Fiona's top to-dos:

1. BIM Benefits Measurement
2. Clear Employers Information Requirements (EIR)
3. Built Asset Security Requirements (BASIR)
PAS1192-5
4. Compliant Common Data Requirements (CDE)
- Verification and Validation

How to Tackle Your To-Do List

Start with priorities. Remember, everything on your to-do list is not a priority. Checking items off a to-do list doesn't determine progress; focusing on your priorities is what counts.

Don't give it a second thought. Sometimes the hardest thing to do is to get started. So fight the urge to overthink everything. Jump right in without delay.

Limit distractions. Don't let anything or anyone sidetrack you. Focus on your task at hand. Whatever is "calling" you will be there when you're finished.

Learn from mistakes. Be aware of how you procrastinate and learn from it. When people don't learn from mistakes, their actions often turn into bad habits.

Set a short-term goal. Make a commitment to yourself — even if it's an artificial deadline. A goal forces us to get things done.

Break big activities down into small pieces. Don't get overwhelmed by the magnitude of a task. Big problems are best solved in small pieces.

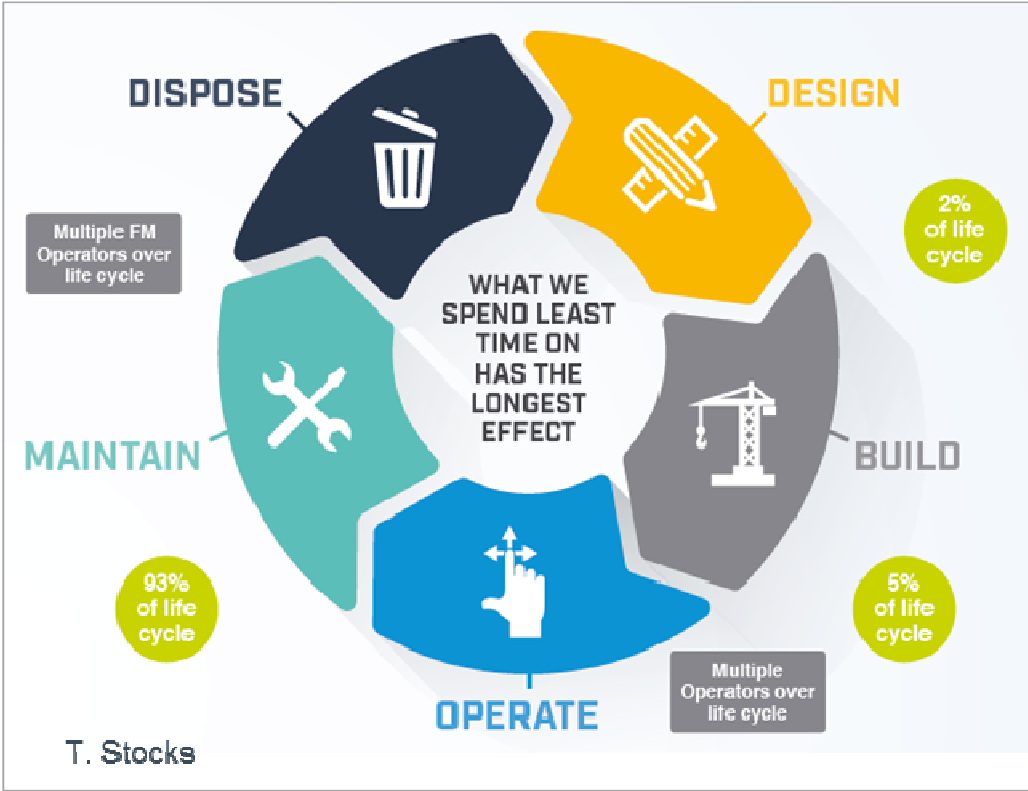
Fire the perfectionist. You'll rarely have all the information you need to make a "perfect" decision. So don't demand perfection.

Think about it. Be conscious of your thoughts. Try to replace counterproductive thoughts with positive ones that motivate you and keep you on task.

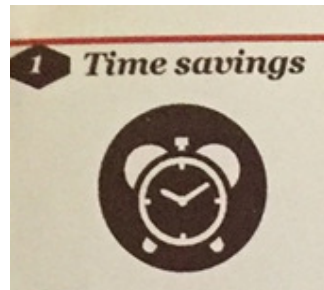


1. BIM Benefits Measurement

Asset Cycle – Focus on the right thing!



1. BIM Benefits Measurement



BIM Benefit Pathways

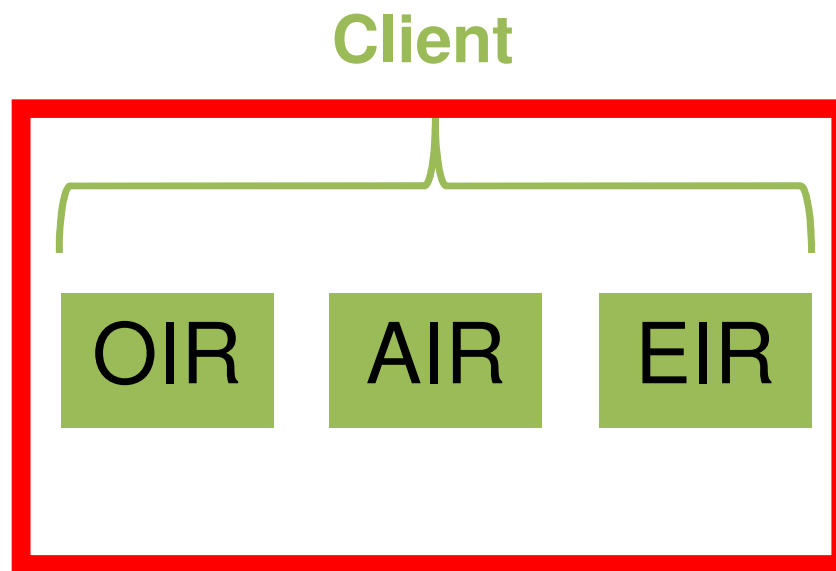
1. BIM Benefits Measurement

Project Level

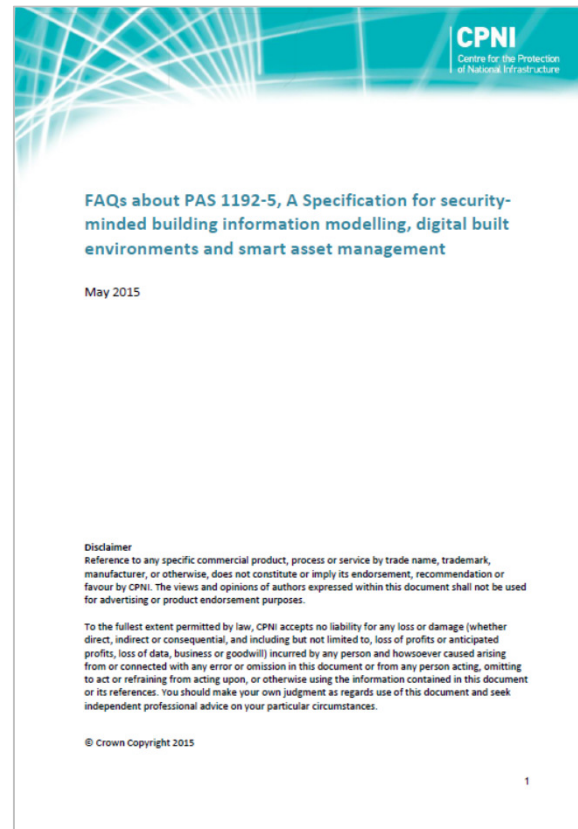
Activity	BIM enabler	Intermediate benefit	End benefit
Design authoring	BIM modelling improves accuracy of asset information and its flexibility for design changes	3D modelling & automated rule checking reduces design time	Time savings in design
	GSI bring supply chain together to focus on operational outcomes	Quick implementation of design changes by the supply chain	Time savings in design
	Creation of object and design libraries	Fewer requests for additional information during construction	Time savings in build & commission ●
Design coordination and management	Federated model enables checks	More accurate asset performance analysis based on design information e.g. Energy consumption over whole of life	Reduced cost of operations ●
		Standard design solutions that can be used on any project	Environmental benefit
	Use of Common Data Environment as defined by PAS1192	Virtual construction reduces error	Improved asset utilisation
		Automated clash detection reduces rework during construction	Time savings in design
		Design and construction are easier to coordinate and take less time	Time savings in build & commission ●
		Reduced number of project co-ordinators from client's team	Materials savings in build and commission ●
		Easier change control by the client	Time savings in build & commission ●
		Transparent audit trail in information delivery timeline	Time savings in design ●
	Use of BIM based file naming conventions	Fast access to documented information	Time savings in design ●
	Engineering rules enforced by BIM	Design optimised for lean construction based on specified rules	Time savings in build and commission ●
		Reduced chance of human error	Time savings in build and commission ●
			Improved H&S ●

Key – Benefits realised in alternative stage of asset lifecycle:
 Stage 5: Build & commission ● Stage 7: Operation & end of life ●

2. Clear Employers Information Requirements (EIR)



3. Built Asset Security Information Requirements (BASIR) PAS1192-5



CPNI PAS1192-5 FAQs



4. Compliant Common Data Environments (CDE) - Verification and Validation



My to-do list can't be done in isolation:

We all need to collaborate and support one another.



Food for Thought – The Digital Citizen:

THE DIGITAL CITIZEN

Digital citizenship is about individual behaviors that impact the quality of digital content, collaboration, and the solutions we provide.

If we as professionals, would follow these 4 tenants of Digital Citizenship, the collaboration we do today would greatly improve and we'd be well-positioned for the future.

#1 Digital Etiquette

- Treats others with respect
- Is truthful, polite and engaging
- Maintains a Positive and Professional virtual brand

#2 Share Well

- Stores data in approved locations
- Is security-minded
- Doesn't alter, customize, hide or hoard
- Communicates well

#3 Know Your Tools

- Has appropriate digital skills for their role
- Doesn't rely on others for their digital input
- Makes good use of available training

#4 Digital Excellence

- Uses technology in a responsible manner
- Aligns with standards, codes of conduct and values
- Curates their data

#DigitalCitizenship
@johnkizior

LinkedIn Article – John Kizior, Global Director, Project Technologies at Aecom, Inc.