Property Services

Soft Landings for Public Sector

WHY WE NEED IT

HOW TO DO IT

Hampshire County Council

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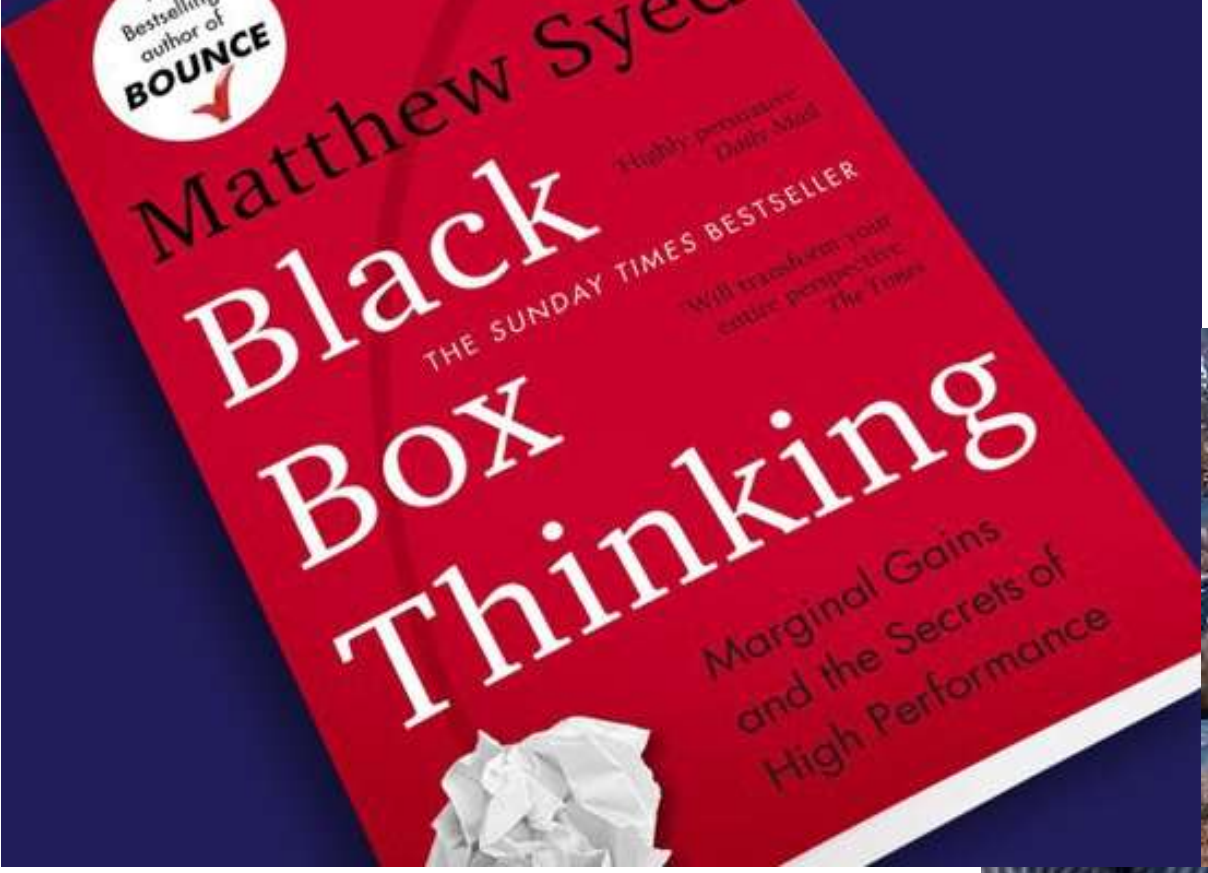
… Everything we know in aviation, every rule in the rule book, every procedure we have, we know because someone somewhere died…Captain ‘Sully’ Sullenberger



- **Duty to carry out independent investigation**
- **Inadmissable in court – no blame**
- **Duty to act on recommendations**
- **Duty to share with everyone.**


The
Guard


BOVIS
HOMES
BOVIS
HOMES
BOVIS
HOMES
BOVIS
HOMES

‘This is most definitely not just a question of the specification of cladding systems, but of an industry that has not reflected and learned for itself.’

‘This is a call for action for an entire industry and those parts of government that oversee it.
True and lasting change will require a universal shift in culture.’

Hackitt Review May 2018

The Climate of De-regulation?

Property Services

‘This review will give housebuilders and smaller construction businesses a powerful voice as part of our £10 billion deregulation drive. Where rules are too complicated, ineffective or poorly enforced, I want to hear about it and the government will take action. Together we can cut red tape and get Britain building.’

Business Secretary Sajid Javid Cutting Red Tape Review 2015

‘Currently over 8% of construction workers are from the EU, and in London this rises to a third. Recent FMB research shows that skills shortages across construction are already at a record high…’

Federation of Master Builders

Property Services

Cost

Time

Quality

Property Services

Meet Vinnie; HCC's embedded fire officer.

The Fire Service has lost estimated 25% of specialist fire safety staff since 2011 – people like Vinnie.

How far can an industry go before lowest cost becomes a problem?

We've seen this before.

"Our industry spares no expense to get something on the cheap"

SELF REGULATION
A matter of culture

Can we learn lessons from Toyota?

Jidoka

The principle of stopping work immediately, when a problem occurs.
(central to Lean)

自働化

JI DOU KA

JIDOKA

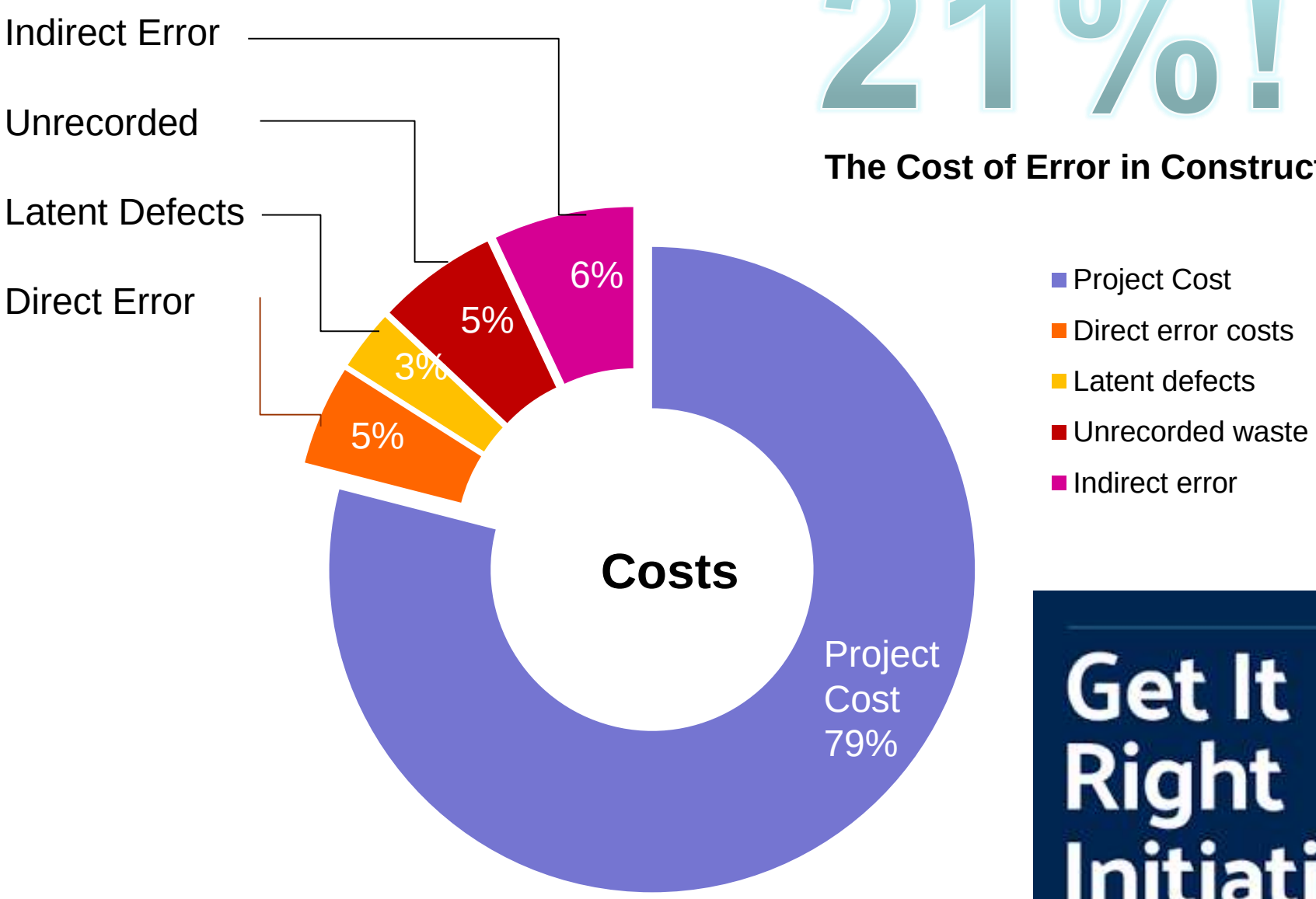
Autonomation

"automation with a human element,"


Bodgit and Scarpa
The principle of building something
anyway even when you know its wrong

21%!

The Cost of Error in Construction



Source: Institution of Civil Engineers Get it Right Research Report 2016

Get It Right Initiative

www.getitright.uk.com

Property Services

Home > Campaigns

Construction Quality Commission

It has become clear that changes are needed in how construction quality is managed. As the professional body responsible for construction management, the CIOB has a duty to respond to this issue and provide solutions.

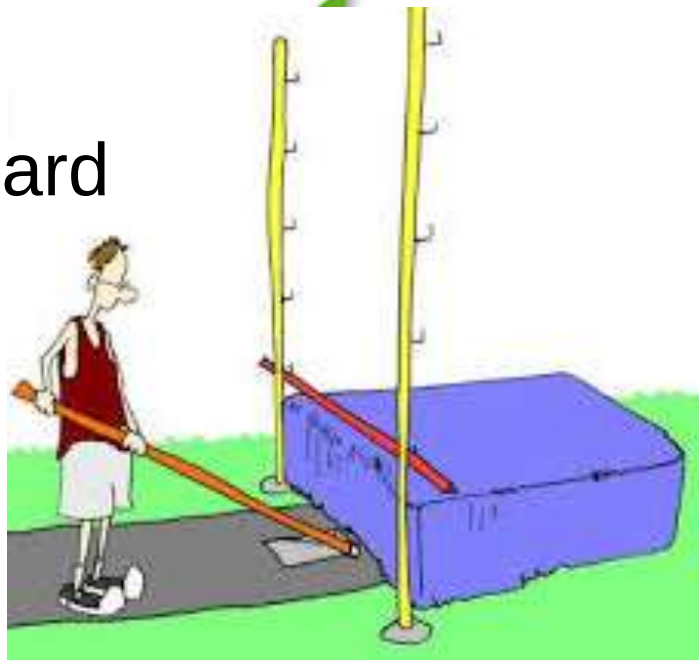
Bovis pre-tax profits rocket 41% on improved build quality

September 6, 2018 / Isla MacFarlane

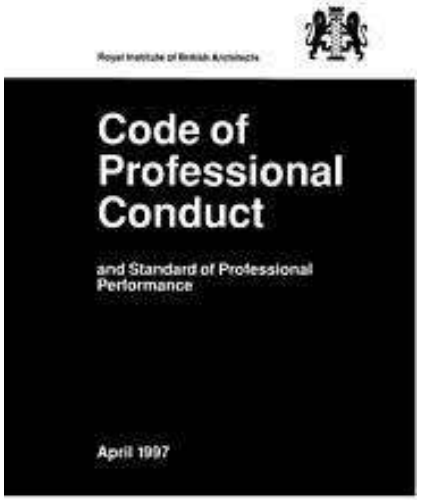
SO WHAT DO WE DO?

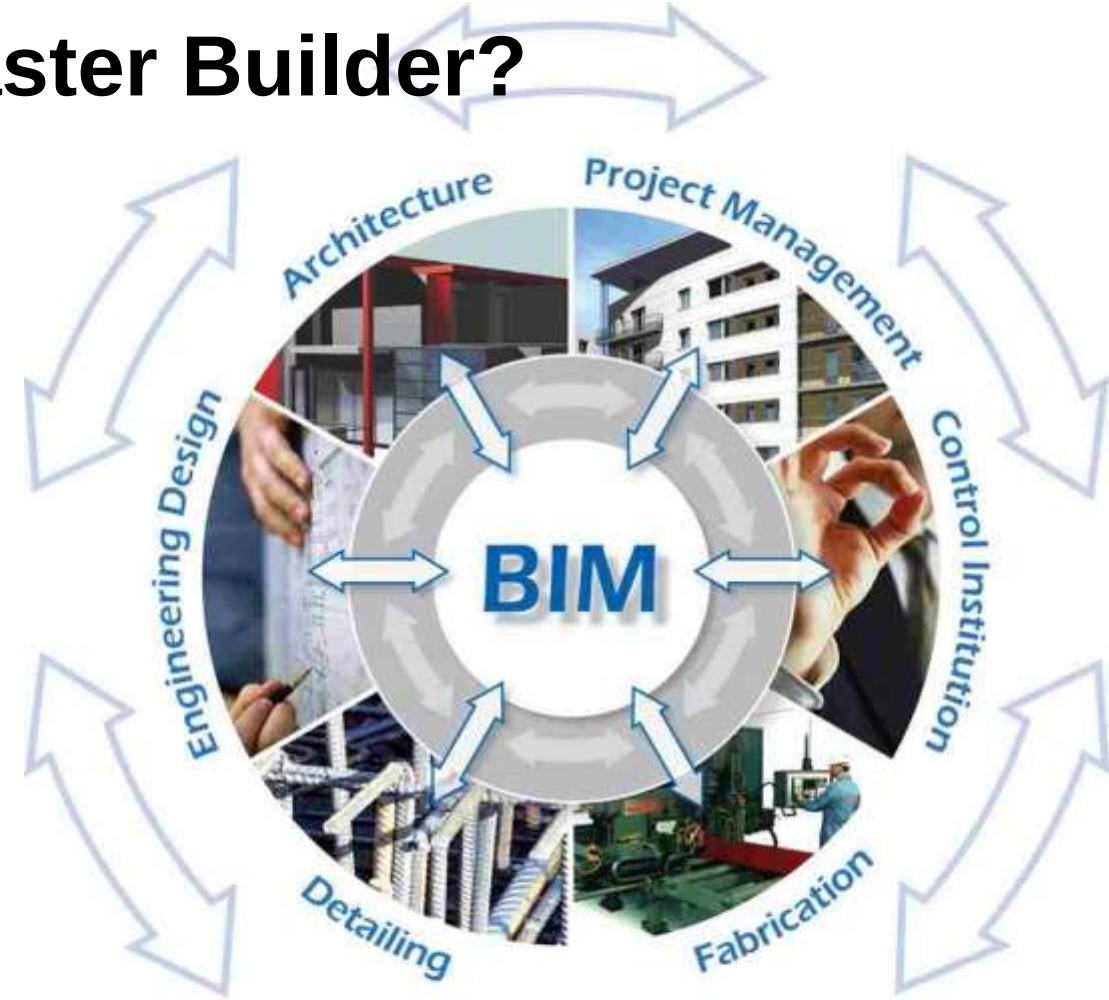
REGULATE?

- How long will it take?
- Minimum standard = THE standard
- Compliance is King



Bring back the Master Builder?

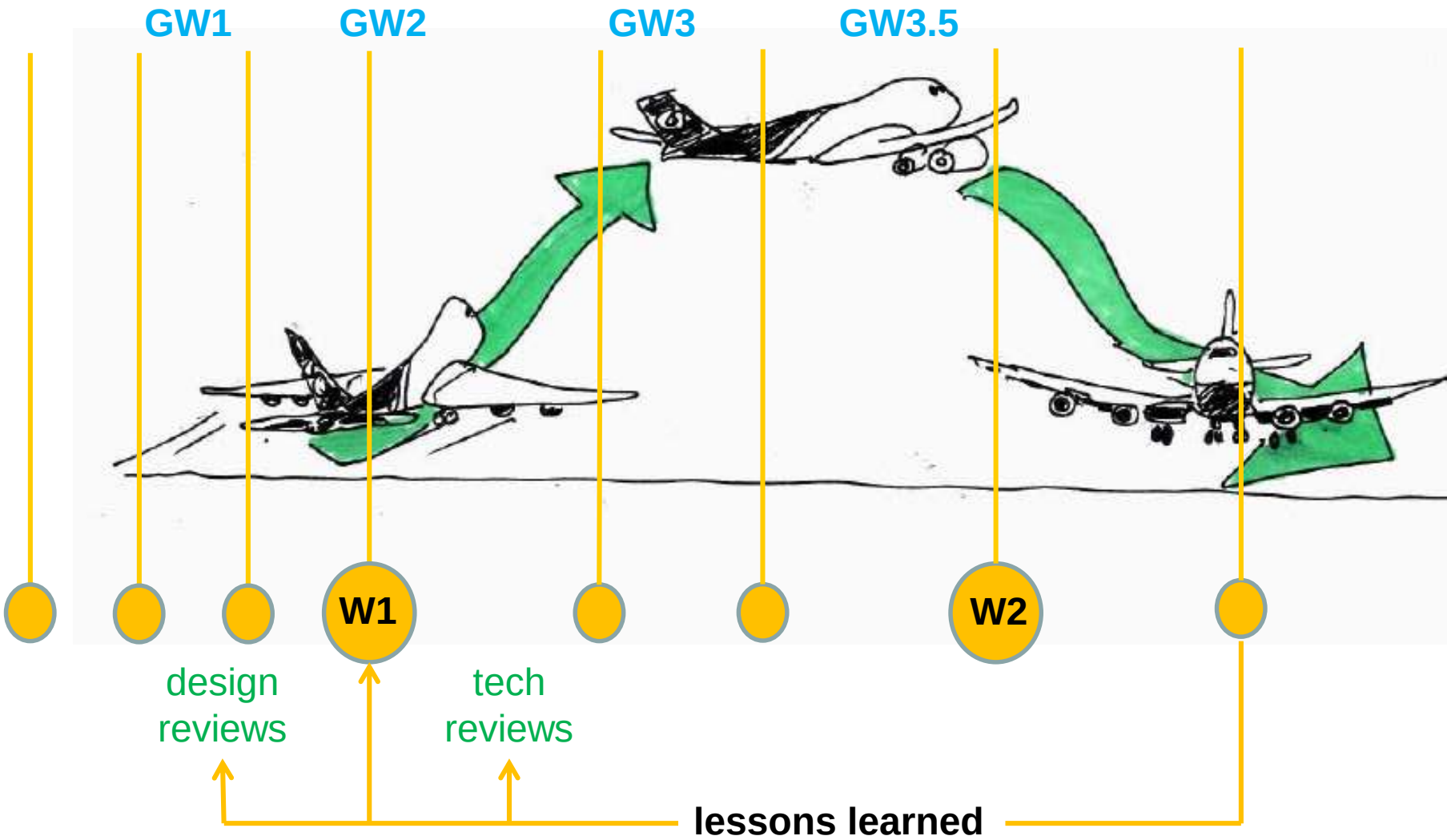




RIBA
Royal Institute of British Architects

How to get to business as usual

Property Services



If only there was an independent fix that everyone could sign up to… oh wait a minute there is!


BPF
AFTERCARE GUIDE


Get it Right Initiative
Improving value by eliminating error


ZERO
DEFECT


INTERNATIONAL
WELL
BUILDING
INSTITUTE™


SOFT
LANDINGS™


BETTER
BUILDINGS
PARTNERSHIP


Certified
Passive House
Passive House Institute


SKArating®
criteria compliant
product

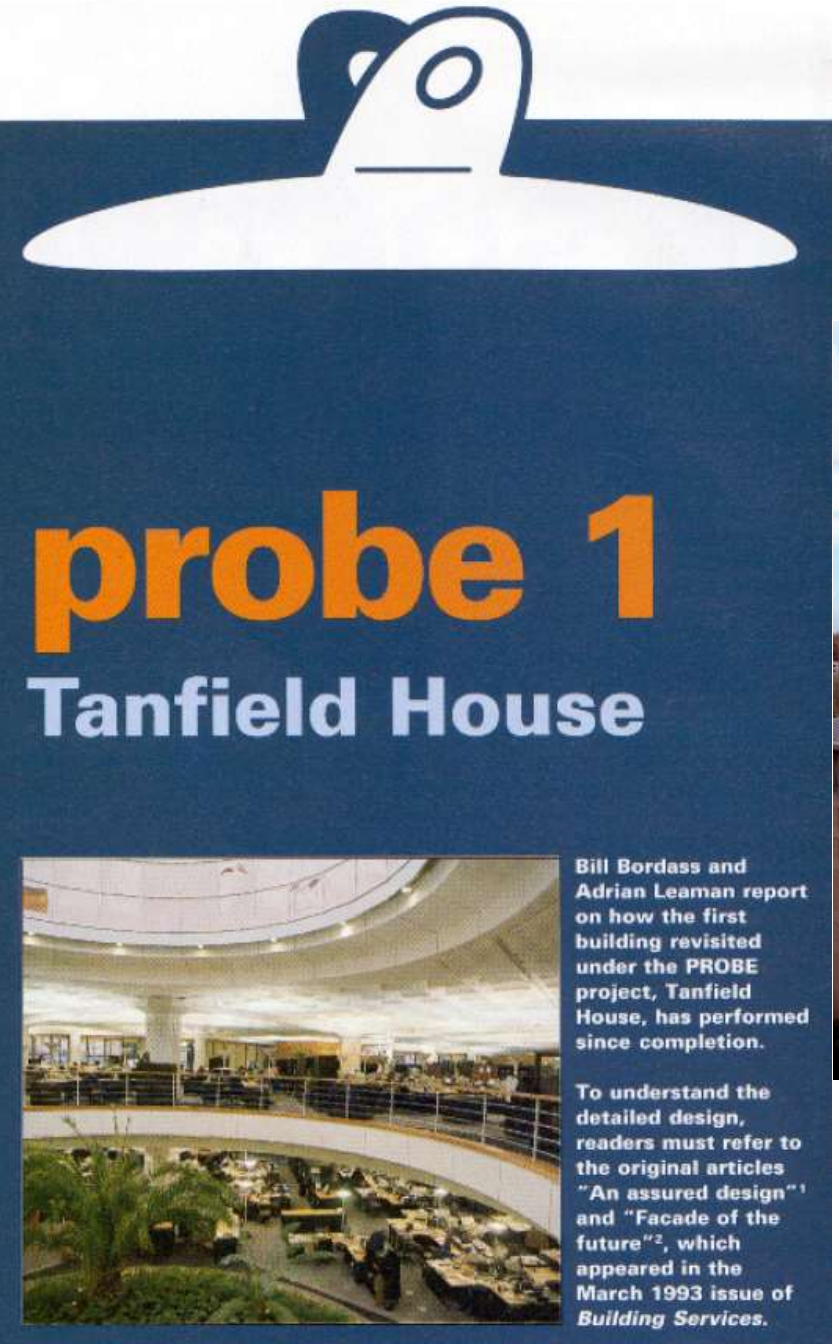

bpn
Building Performance Network

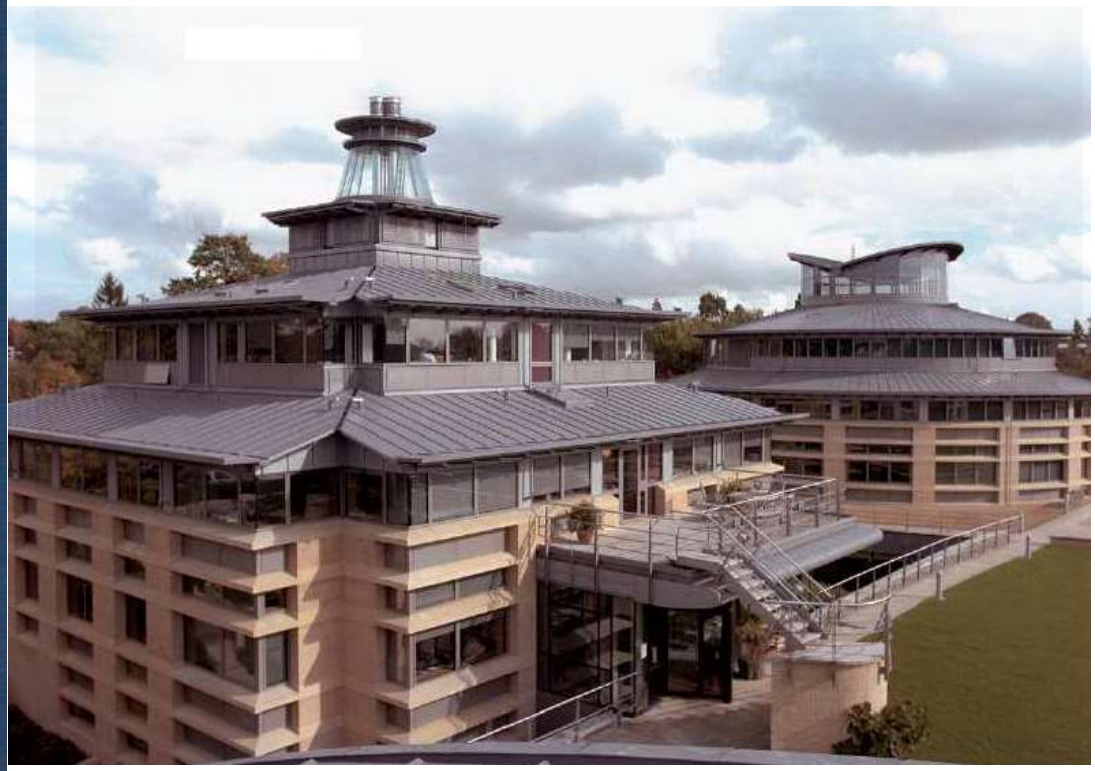

NABERS


BREEAM®


U.S. GREEN BUILDING COUNCIL
LEED
USGBC

PROBE Studies 1995 – 2002
15 initial studies





Study 23 = School of Mathematics
Cambridge University
Cullinan Studio – architect Mark Way

UBT BSRIA

www.softlandings.org.uk

the SOFT LANDINGS FRAMEWORK

for better briefing, design, handover and building performance in-use

BSRIA BG 4/2009

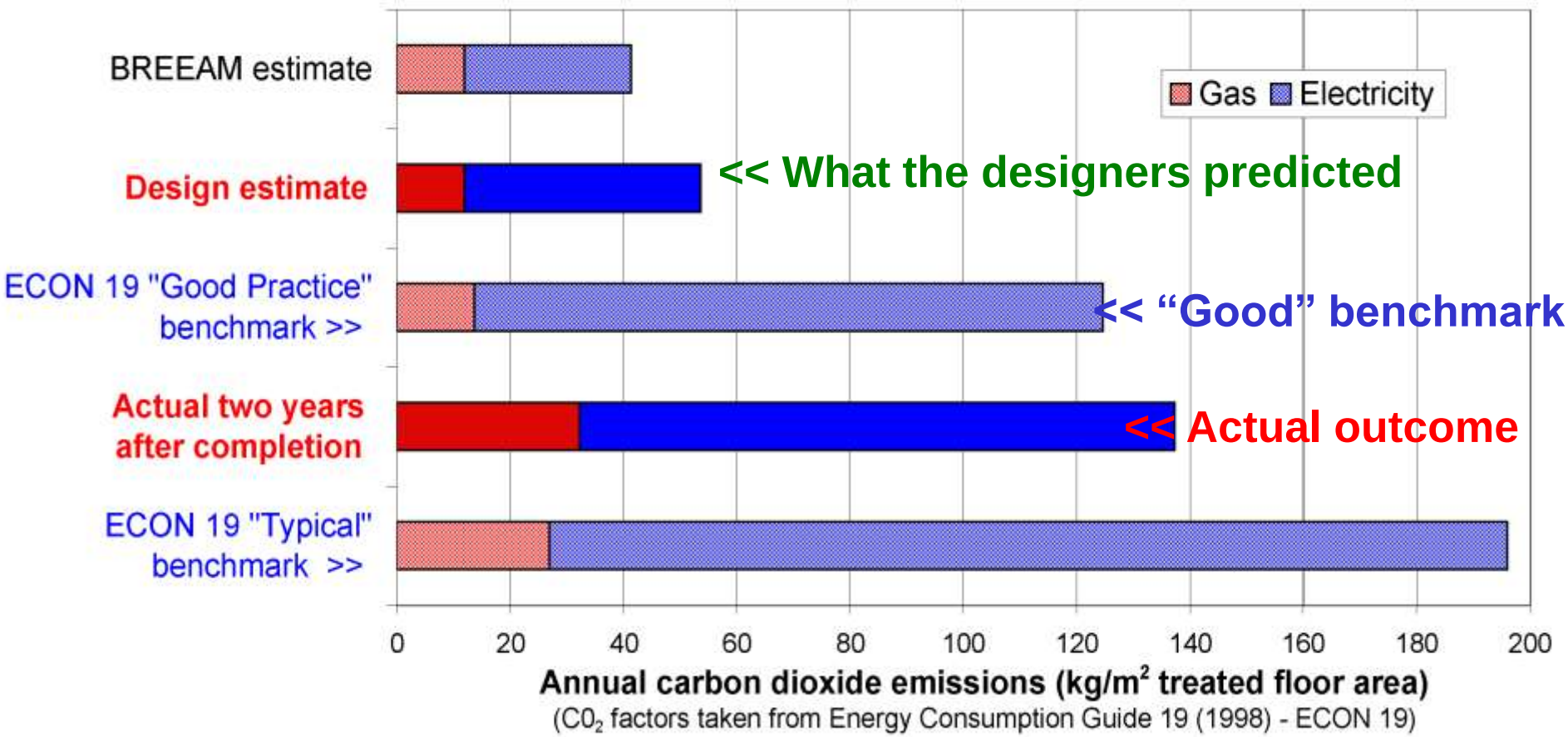
Table 1: How the Soft Landings process can be integrated in the UK with the 2008 edition of the RIBA *Plan of Work* and the Gateway process of the Office of Government Commerce (OGC). The additional Soft Landings worksteps are shown in the orange boxes. Note that specific Soft Landings guidance for Stage 2: Design development is still work-in-progress. Additional guidance (and generic worksteps for Stage 2) will be made available as downloads from www.softlandings.org.uk, and www.usablebuildings.co.uk.

RIBA Plan of Work 2008				Soft Landings		OGC Gateways (at end of stage) and milestones in the RIBA *Plan of Work*
Stage letter and name			*Main activities*	*Principal additions*	*Supporting activities*	
Preparation	A	Appraisal	Identify client needs. Do feasibility studies		Define roles and responsibilities	1. Business justification
	B	Design brief	Develop an initial statement of requirements and procurement methods	Stage 1. Briefing: Identify all actions needed to support the procurement	Explain Soft Landings to all participants. Identify processes and sign-off gateways	2. Procurement strategy
Design	C	Concept	Implement and expand the brief. Prepare the concept design. Review the procurement route	Stage 2. Design development: to support the design as it evolves	Review past experience Agree performance metrics Agree design targets	3A: Design brief and concept approval
	D	Design development	Develop concept design. Update outline specification and costs. Complete project brief		Review design targets Review usability and manageability	Apply for detailed planning permission
	E	Technical design	Prepare technical design and specification sufficient for coordination and information for statutory standards		Review against design targets. Involve the future building managers	3B: Detailed design approval
Pre-construction	F	Production information	Prepare detailed information for construction. Review information provided by specialists		Review against design targets. Involve the future building managers	Apply for statutory approvals
	G	Tender documentation	Prepare or collate tender information		Include additional requirements related to Soft Landings procedures	
	H	Tender action	Identify and evaluate potential contractors and/or specialists. Submit recommendations to client		Include evaluation of tender responses to Soft Landings requirements	3C. Investment decision
Construction	J	Mobilisation	Let the contract. Issue information to the contractor. Arrange site handover to the contractor		Confirm roles and responsibilities of all parties in relation to Soft Landings requirements	
	K	Construction to practical completion	Administer the contract. Provide further information as required. Review information provided	Stage 3. Pre-handover: Prepare for building readiness. Provide technical guidance	Include FM staff and/or contractors in reviews. Demonstrate control interfaces. Liaise with move-in plans	4. Readiness for service Practical completion
Use	L	Post-practical completion	L1 Administer the contract after practical completion and make final inspections		Incorporate and Soft Landings requirements	Final account
			L2 Assist building users during the initial occupation period	Stage 4. Aftercare in the initial period: Support in the first few weeks of occupation	Set up home for resident on site attendance	
			L3 Review of building performance in use	Stage 5. Years 1 to 3 Aftercare: Monitoring, review, fine-tuning and feedback	Operate review processes. Organise independent post-occupancy evaluations	5. Benefits evaluation

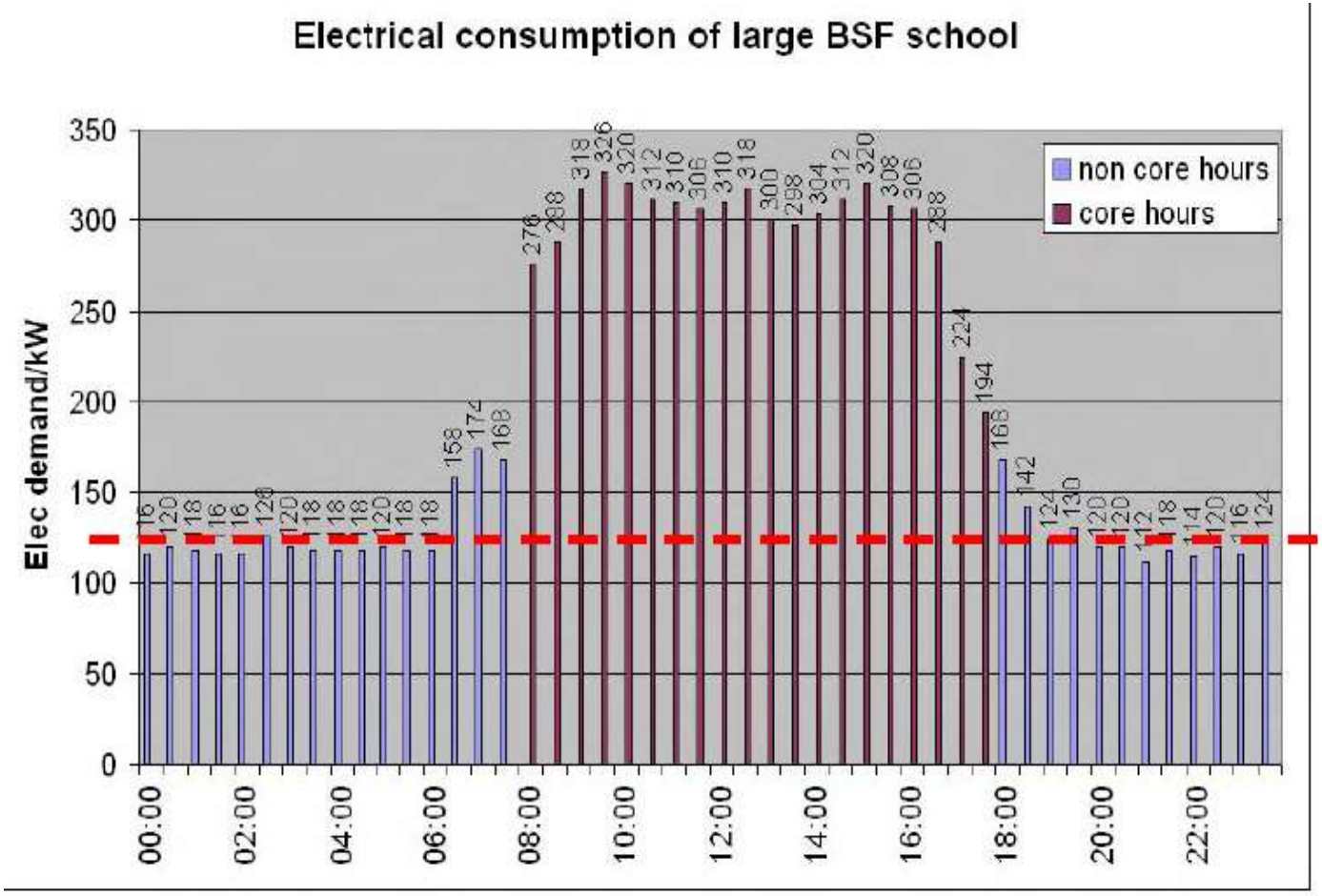
Soft Landings Framework 2009 – BSRIA / Useable Buildings Trust

The Credibility Gap:

Data from the winner of a Green Building of the Year Award



SOURCE: see discussion in S Curwell et al, Green Building Challenge in the UK, Building Research+Information **27**(4/5) 286 (1999).



120 kW baseload: ca. 7 W/m² or 45 kWh/m² p.a.

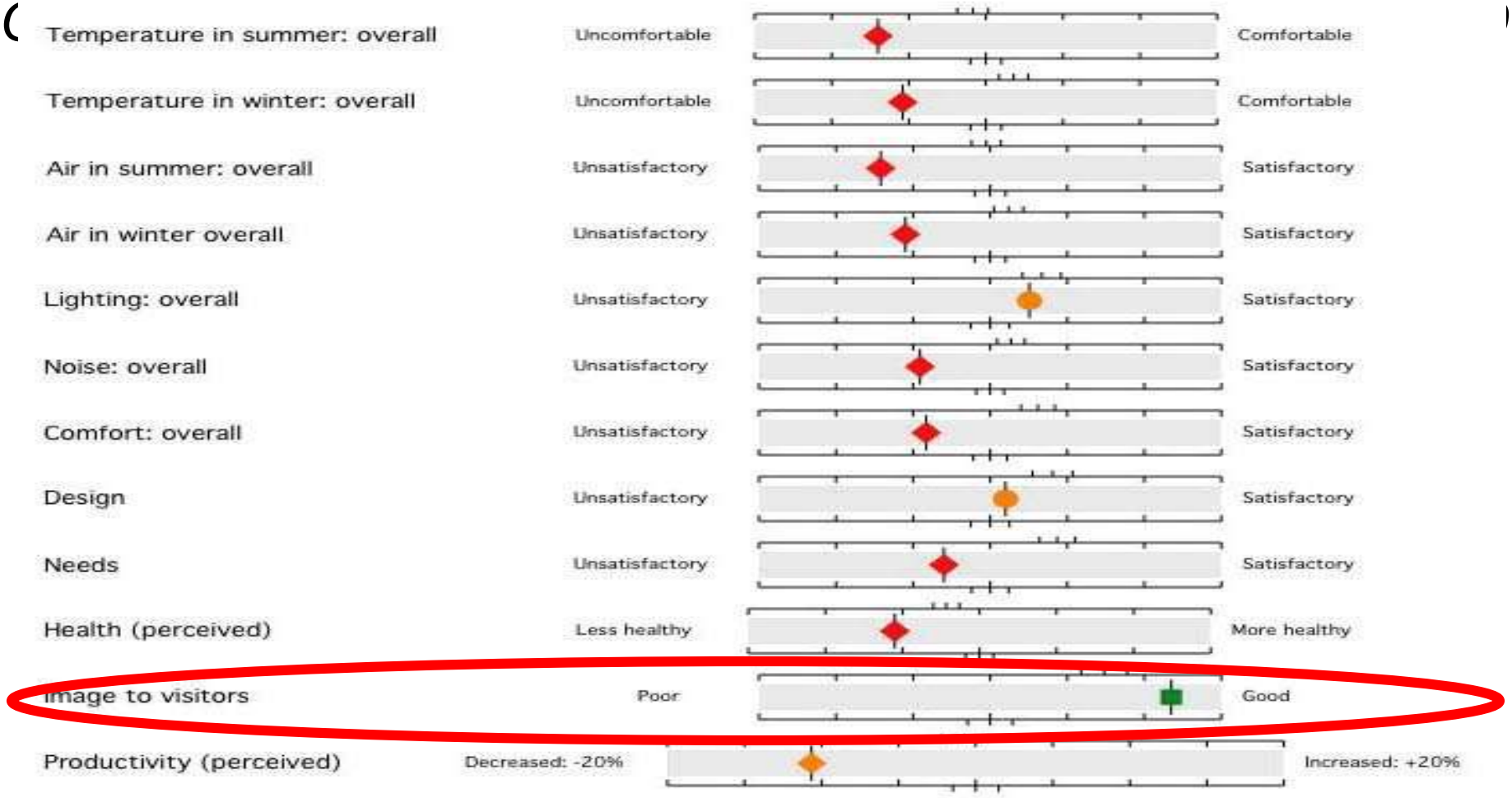
Equivalent to 60% of all lighting or 1000 PCs including screens. printers etc.

Breakdown of annual electricity use: **44% used between 0800-1800 on term time days**

56% (~£75,000) of electricity used at other times: 14% term weekends, 26% term nights, 16% holidays

SOURCE: Buro Happold monitoring (October 2009)

Credibility gaps: Occupant satisfaction

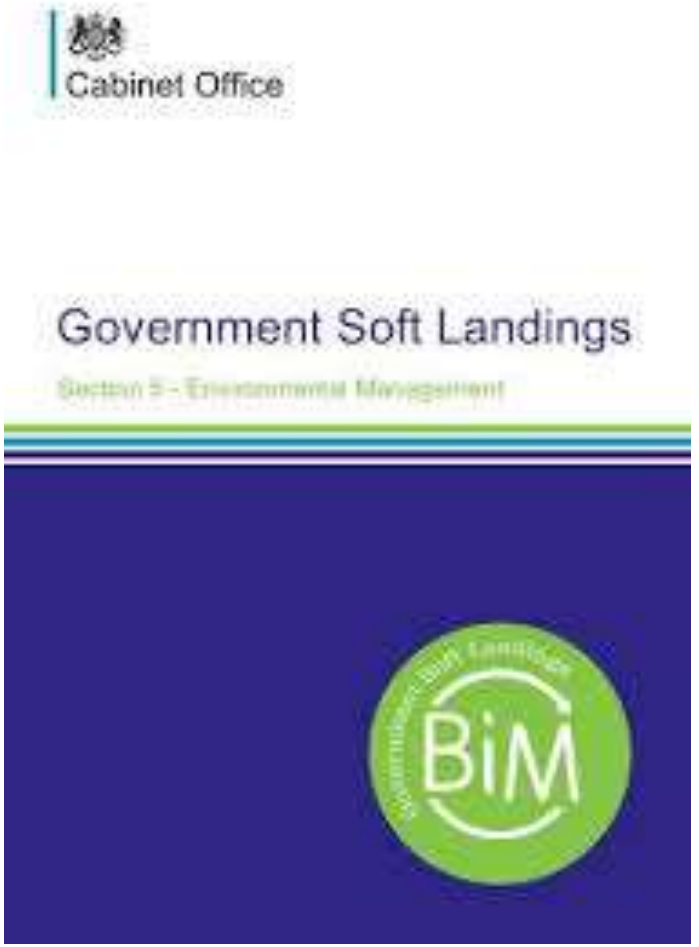


What impresses the judges may not impress the users!

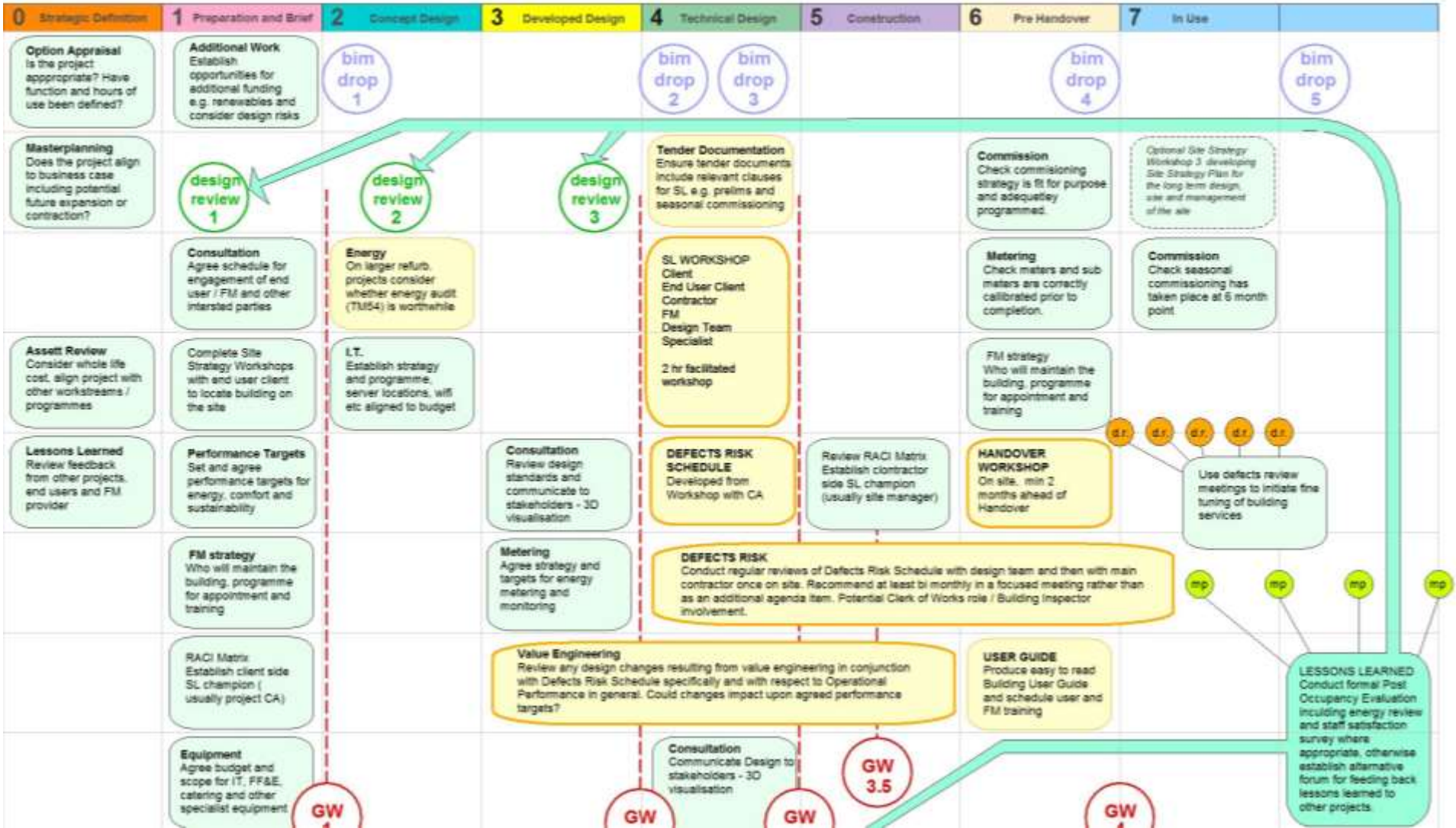
SOURCE: Unpublished occupant survey of an award-winning school 2009. Courtesy of Building Use Studies Ltd.

BSRIA/UBT 2009

GSL 2016



Soft Landings for Public Sector: Activities by RIBA Workstage



Soft Landings for Public Sector

Property Services

HCC Education Capital Programme £60m
HCC Adult Services Capital Programme £26m
Reading Borough Council Capital Programme £60m
External Client Projects £40m

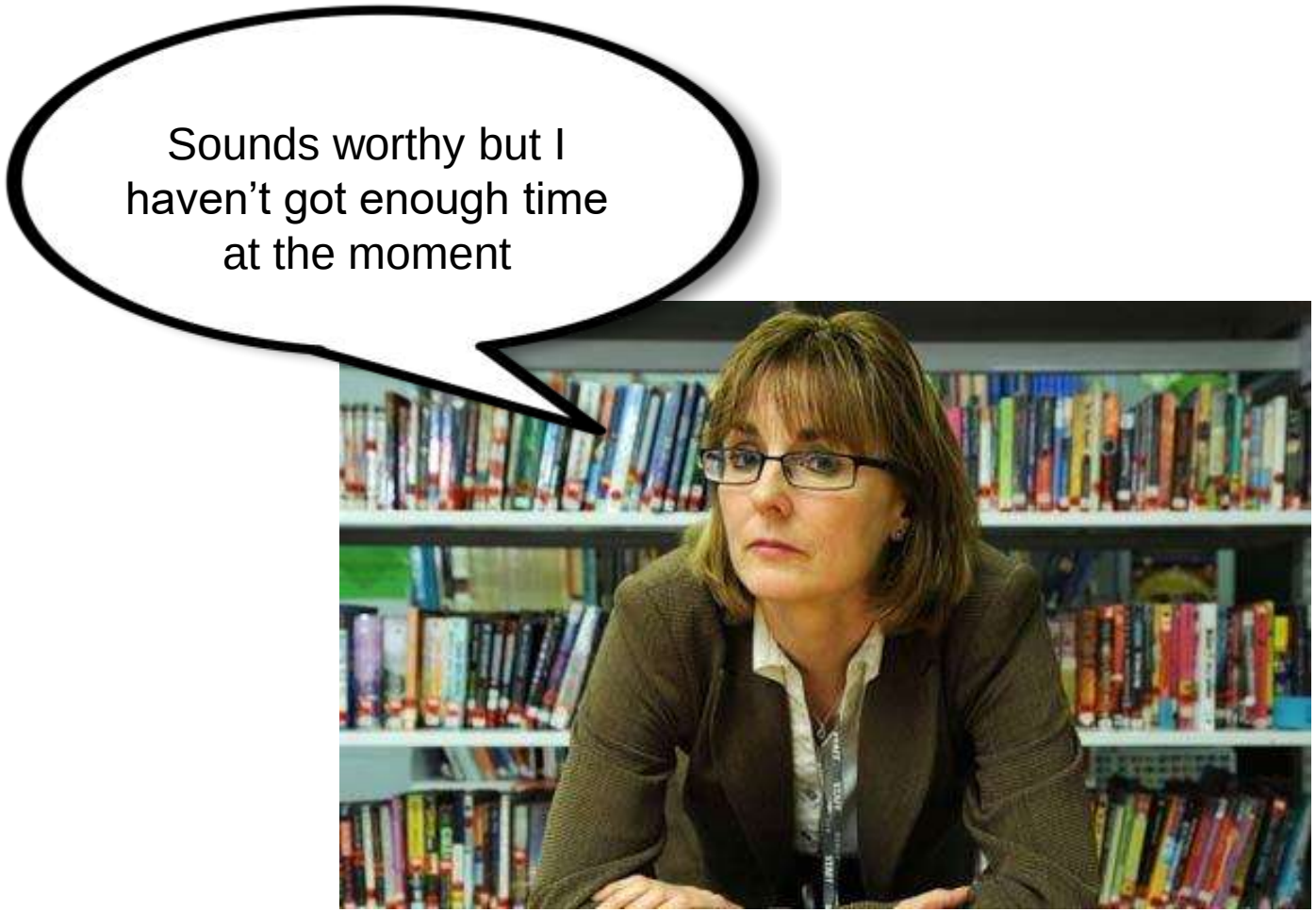





Client says……


With all the fees I am paying them, they should be giving me this anyway.

End User says……



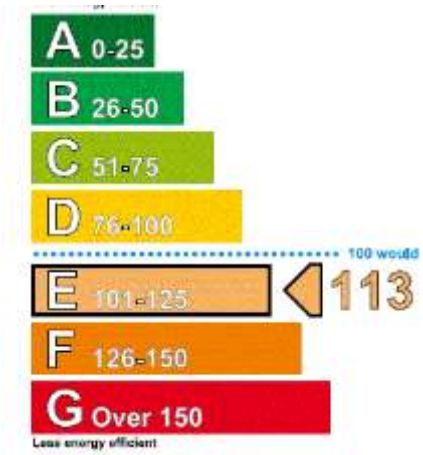
Engineer says……

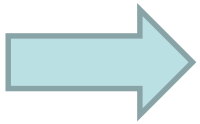
Contractor says……

I'm really sorry my car's just got a puncture.

Sounds like another acronym for wasting time!

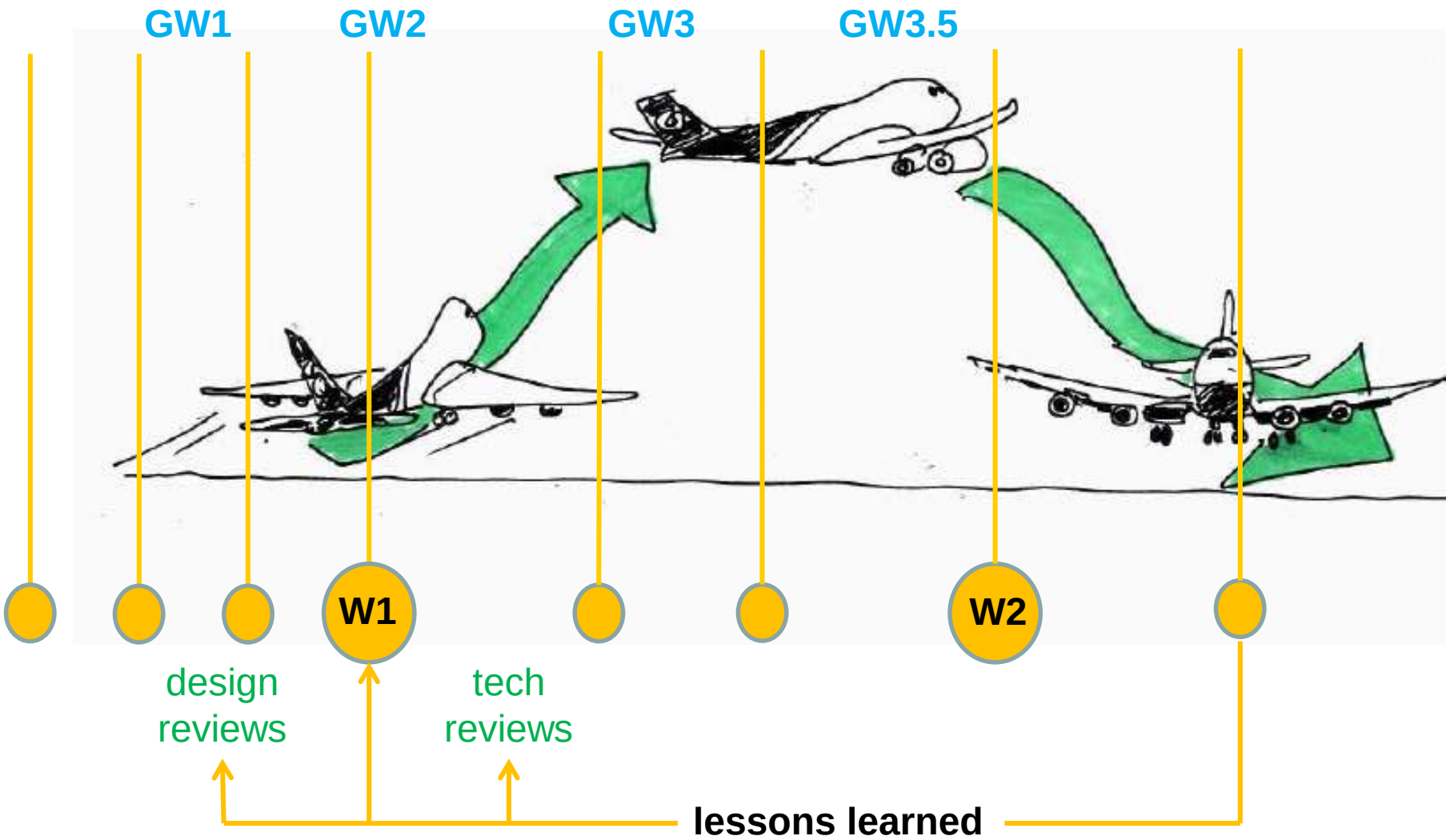
……"You can't afford not to do it"





Difference equal to £85,000 per year per secondary school
…or £5m over life cycle

How to get to business as usual



Briefing Stage

Property Services

- Establish SL Delivery – who are SL leads?
- Review Performance Targets , Expectations
- Identify potential flashpoints
- Establish Stakeholder Engagement
- Contractual Obligations, form of contract
- Introduce SL to design, delivery team and FM team
- Establish level of Transition Planning available
- Review intensity of use
- Review future proofing / flexibility / responsiveness.

Design Stage

Stakeholder Workshops

- Balanced participation – mixing different stakeholder groups with each other and design team
- Asking difficult questions
- Reflect back what is important
- Build Trust
- Tangible outcome – the Defects Risk Register

Over summer 2009, this frost thermostat *(improperly set at 17°C on installation)* energised the wall heater in a plant room of a new low-energy building, and wasted more electricity than the wind generator *(designed to offset the entire building's annual heating energy use)* created.

Property Services

Defects Risk Management

Design out risks you can

Manage those you can't

Defects Risk Register

Issue Date	**14.03.18**
Project	Castle Hill Primary
RIBA	Stage H
Risk	Mechanical Installation

Element	Risk	Action 1	Responsible	Date Complete	Action 2	Responsible	Date Complete	Action 3	Responsible	Date Complete	Action 4	Responsible	Date Complete	Action 5	Responsible	Date
M01	Incorrect location of heating zone controllers create imbalances in system	Agree all locations of internal and external sensors as part of detail design. Agree locations of CO^2 sensors within classroom with end user client to avoid distraction to both teacher and pupils	Des Client		Contractor to ensure sound disabled on CO^2 sensors when commissioned	Con		Include clear guidance on purpose of sensors in user guide	Con		Run commissioning check on ability to zone - i.e from main building.	Con				
M02	Heating system currently constant temperature. Potential risk that this could be changed to variable temperature as part of VE - Confirm which type	Client to agree change to Variable Temp acknowledging risks to efficacy, especially in end classrooms.	Des Client		Review pump capacity in the event of V.E.	Des Con										
M03	External Water supply	Establish requirement and location of external tap with school.	Con													
M04	Isolation of services		Des Client		Ensure clear labelling of isolation switches in services cupboards, ensure levers etc are easily accessible, facing outwards. Check nothing else in there that could be mistaken.	Con Des		Clear information in user guide with photographs to show how isolation is completed.	Con Des							
M05	TMV's and local water heaters wrong type, cannot be accessed. I noticed this being a problem on the first phase	check compliance with Ers - query on type and requriement for filter	Con		check access is not obstructed by timber carcassing., lift off panels	Con		demonstrate how TMV's are accessed during snagging period.	Con		School to check TMVs turned off after use in occaisional use rooms as	Client				

Construction

Property Services

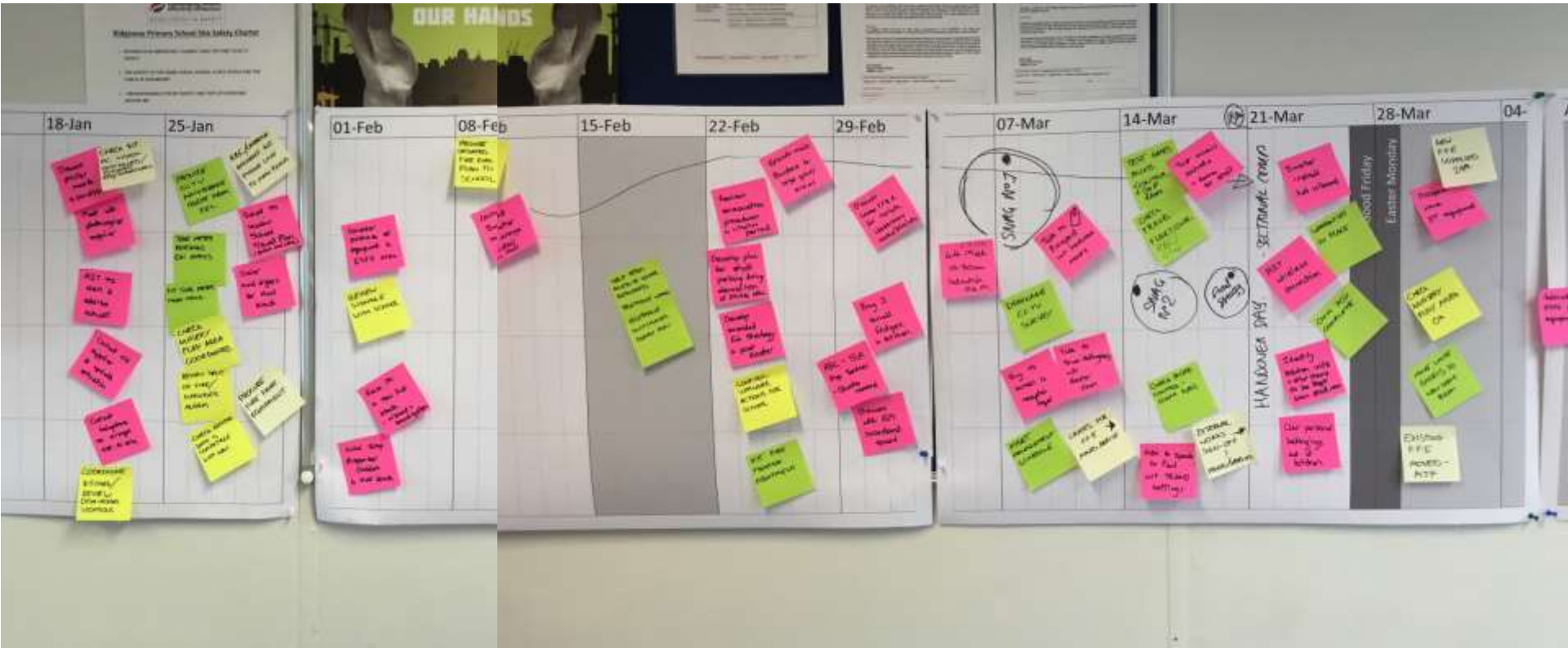
- Change Control – think beyond cost.
- Collaborative Workshops – e.g. air tightness.
- Review Defects Risk at regular points
- Don’t build without drawings!

PreHandover

Property Services

Collaborative Handover Planning Workshop

Clear Snagging & Defects protocol
Handover Schedule & Programme
Agreed Aftercare support
Robust Building and Asset Information



What Is It?

Classroom Lighting : Controls

How Does It Work?

The classroom lighting are linked in rows which can be controlled by the bank of 4 switches next to the door. The lights are also fitted with movement sensors which mean that they will automatically switch off if there is no one in the room.

What do I Need to Do?

Use the light switch just as you would at home; switch on when you come into the room and switch off when you leave.
If you are alone in the room and being very still you might find that the lights switch off ; either wave your arms around or switch them back on at the switch.

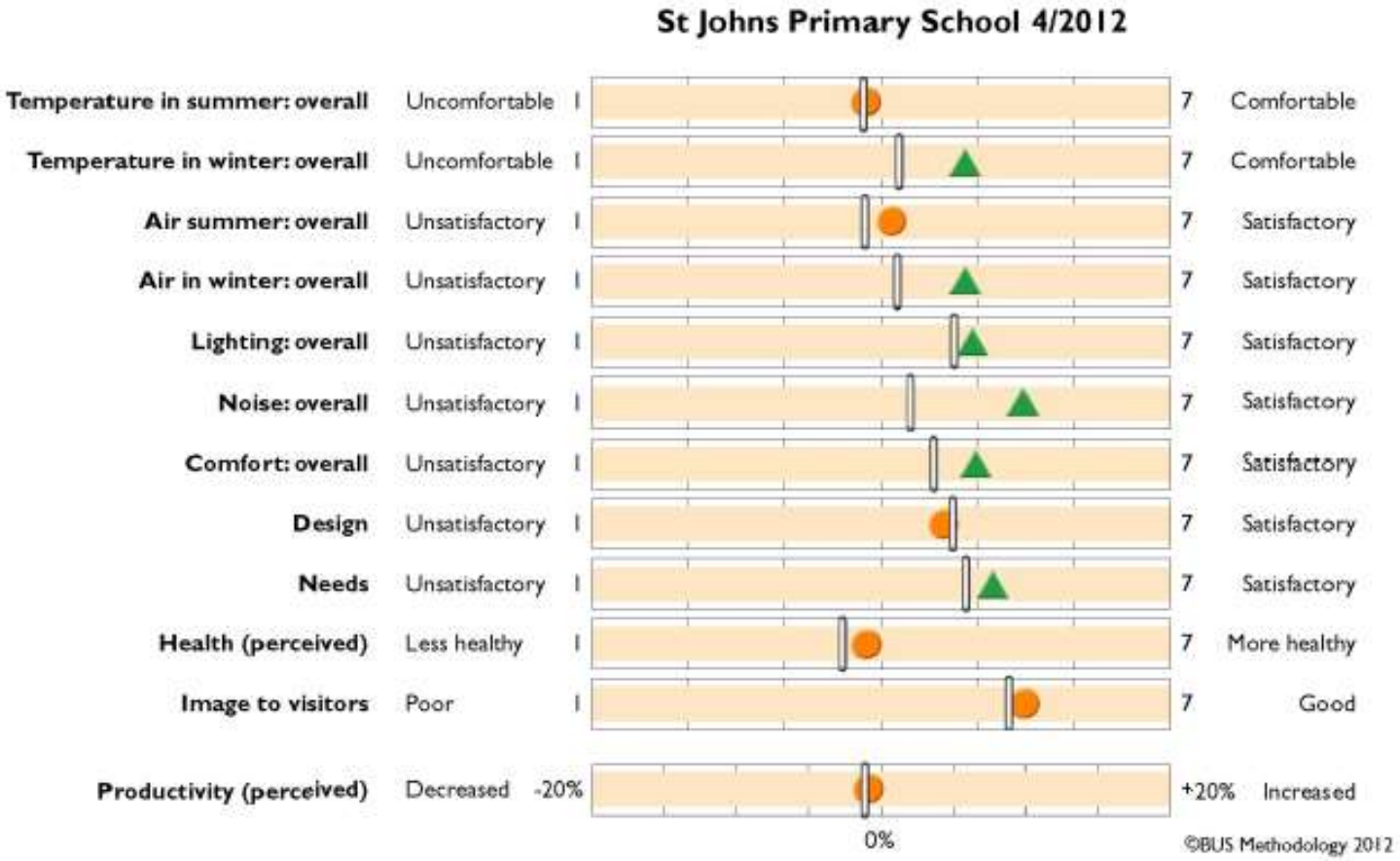
Please Note
Don’t hold the switches down unless you want to adjust light levels.

Aftercare

Property Services

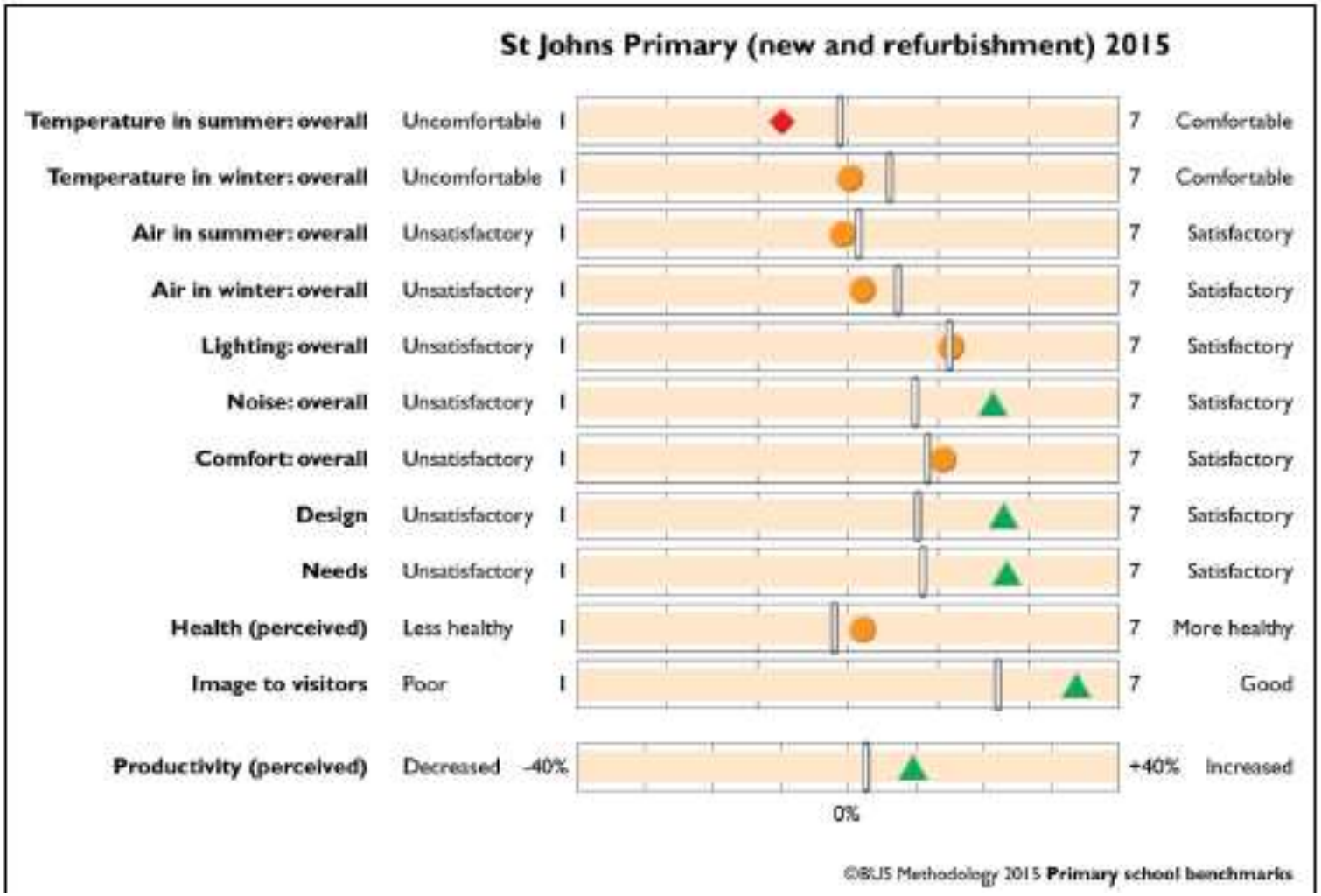
- Graduated handover from project team to FM
- Additional training / building familiarisation
- Agreed schedule for defect review visits
- Agreed dates for seasonal commissioning
- Alignment with energy monitoring

Post Occupancy Evaluation



Green triangles represent mean values significantly better or higher than both the benchmark and scale midpoint. Amber circles are mean values no different from benchmark. Red diamonds are mean values worse or lower than benchmark and scale midpoint. The UK benchmarks are represented by the white line through each variable.

Be careful to read the directions of the scales and the scale labels.


St Johns Primary (new and refurbishment) 2015
Temperature in summer: overall
Uncomfortable
1
7
Comfortable
Temperature in winter: overall
Uncomfortable
1
7
Comfortable
Air in summer: overall
Unsatisfactory
1
7
Satisfactory
Air in winter: overall
Unsatisfactory
1
7
Satisfactory
Lighting: overall
Unsatisfactory
1
7
Satisfactory
Noise: overall
Unsatisfactory
1
7
Satisfactory
Comfort: overall
Unsatisfactory
1
7
Satisfactory
Design
Unsatisfactory
1
7
Satisfactory
Needs
Unsatisfactory
1
7
Satisfactory
Health (perceived)
Less healthy
1
7
More healthy
Image to visitors
Poor
1
7
Good
Productivity (perceived)
Decreased
-40%
+40%
Increased
0%
©BUS Methodology 2015 Primary school benchmarks

Lessons learned

Property Services

- POE may need to be selective, not every project can afford one
- Continued liaison with Facility Managers during defects period
- Lesson learned building visits
- Make sure you have a way of feeding back to the start of the loop!




SOFT LANDINGS for PUBLIC SECTOR

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