

SEDA Seminar - MAINSTREAMING POE
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Bringing POE Techniques and results into the mainstream

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the **USABLE BUILDINGS TRUST**
www.usablebuildings.co.uk
making feedback and POE routine

POE has been around for a long time

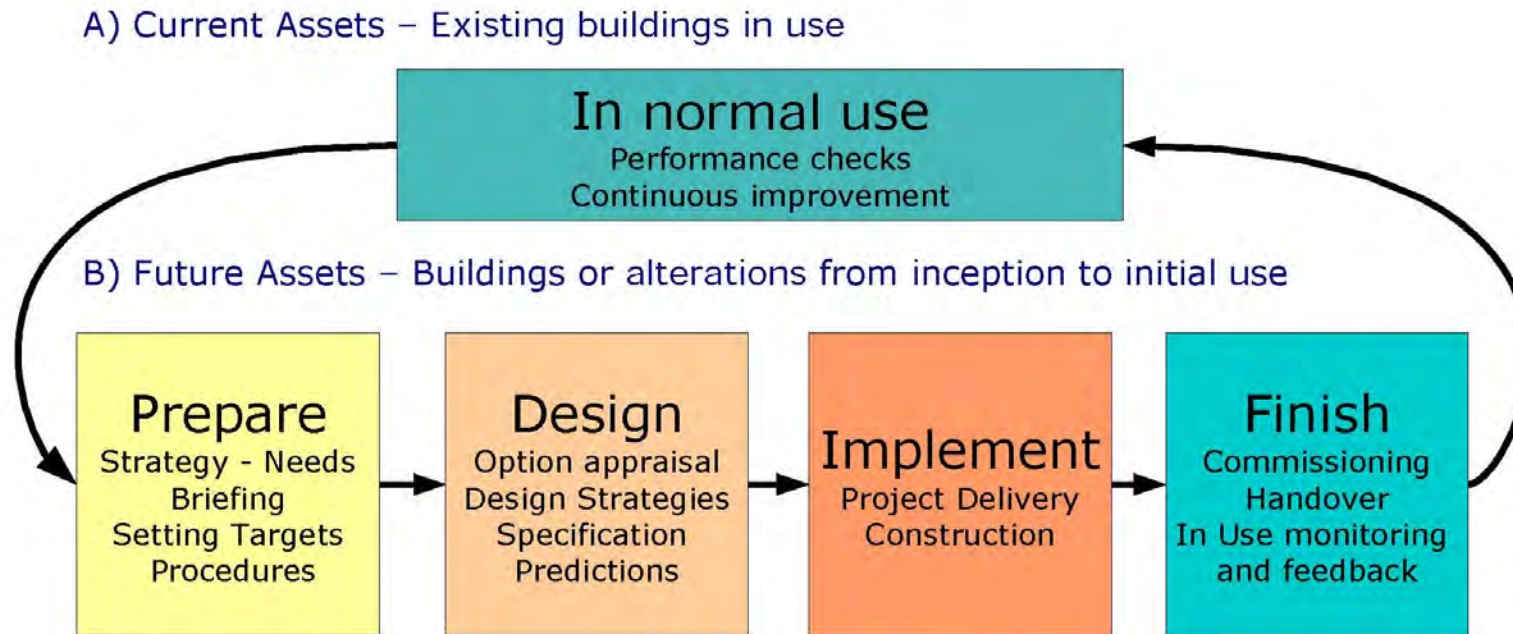
So why isn't it routine?

- Often too remote from the delivery process.
So the uninvolved are seen as being wise after the event, while the closely involved don't learn.
 - But the supply side detaches at handover
Even the procurement departments of repeat clients.
 - There tends to be more bad news than good.
So blame someone or shoot the messenger!
 - It can be difficult to get problems fixed ...
if everybody is not on board. Need more troubleshooters!
 - Everyone benefits, but nobody wants to pay,
and not always seen to be good value for money.
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POE: Getting started

- You must want to improve.
 - Start small, with what interests you most.
 - Link feedback to project delivery: *Try to get all team members committed to feedback from the start, as part of their conditions of appointment.*
 - Formulate at least some project targets in ways that can be measured afterwards.
 - Ease transition from handover to occupation.
 - Progress to Knowledge Management systems.
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POE, from post-mortem to life support: *Making follow-through, POE and Feedback routine*



You can use POE at any stage in the life cycle of a building or project

HINDSIGHT: After you've completed a project (*learning and fine tuning*)

FORESIGHT: Before you do something new (*existing situation + analogues*)

INSIGHT: During a project (*reality checking, managing expectations*).

*Our processes need to bring it all together, and reinforce the **Finish** stage*

A New Professionalism: *Projects that don't end when the work is physically complete*

- All those involved need to learn from their experiences and share insights with the users, managers and owners of the building.
- As discussed in part 1, you can start off by doing four types of thing:
 - EXPERT OVERVIEW: *but one also needs hard facts.*
 - SOFT ISSUES: *questionnaires on how people see things.*
 - HARD ISSUES: *technical and/or environmental performance.*
 - DISCUSSION: *getting people to talk.*
- **We also need processes** to make feedforward, follow-through and feedback routine, *and better support with fine tuning.*
- **We need to do this fast** if we are to achieve more sustainable buildings, and put our efforts into the things that really do add value.

*the Usable Buildings Trust charity is promoting these activities
In the public interest and has information on its website
www.usablebuildings.co.uk*

Two UK initiatives to start to make feedback and POE routine 2001-05

Feedback for construction clients and the industry

- Sponsored by government, the Confederation of Construction Clients, the Usable Buildings Trust, and a group of designers and clients.
- Related feedback techniques to a building's life cycle.
- Case studies of individual techniques in action.

Soft Landings

- Initiated by architect Mark Way for Glaxo when at RMJM.
- Sponsored by the University of Cambridge and a group of designers and contractors working with them.
- Developed a framework for incorporating the techniques.

Soft Landings: *What does it do?*

It helps design and building teams to:

- Relate design targets to achieved outcomes.
- Manage expectations and review performance at intervals throughout a project, and on into use.
- Allocate responsibilities, *including client responsibilities*.
- Improve relationships with clients and users.

It can run alongside any procurement system, and:

- Link building performance and FM to design.
 - Ease transition to occupation.
 - Facilitate feedback.
 - Reduce post-handover problems.
 - Capture learning.
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Soft Landings: *How does it do it?*

It augments the duties of the design and building team, *(and of the client representatives)*, especially:

- During the critical briefing/programming stage.
- With closer forecasting of building performance.
- With greater involvement with users before and after handover, and on-site presence during settling-in; and
- including monitoring and review for the first 3 years of use.

EACH STAGE HAS A CUSTOMISABLE WORK PLAN

Soft Landings can:

- *Provide a fast track to raising building performance.*
 - *Help to provide more customer focus for the industry.*
 - *Improve client relationships and user satisfaction.*
 - *Build recognition that some debugging is to be expected.*
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Soft Landings 2008-10: *Preparing for wider adoption*

- **Feb-08.** Following interest in Australia and North America, an industry task group established. Chaired by UBT. Management and publication support from BSRIA.
 - **Nov-08.** Soft Landings *Framework* drafted. Task group recommended developing supplementary detail to suit one sector.
 - **Dec-08.** Schools sector selected after DCSF called us to a meeting on POE. Funding sought.
 - **Jun-09.** *Framework* published.
 - **Jul-09.** *Soft Landings for Schools* funding confirmed by Technology Strategy Board. Matching contributions from CABE, Willmott Dixon, Architecture & Design Scotland. Publication support from BSRIA. First outputs anticipated in late 2009 - early 2010.
 - **Sep-09.** BSRIA sets up its own group to explore detailed aspects of applying the *Framework* in practice.
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The Soft Landings Framework:

Five main stages

1. Inception & Briefing
Appropriate processes.
Assigned responsibilities.
Well-informed targets.
2. Design development
and expectations management.
3. Preparation for handover
better operational readiness.
4. Initial aftercare
Information, troubleshooting,
fine tuning, training.
5. Longer-term aftercare
monitoring, review, independent
POE, feedback and feedforward.



the **SOFT LANDINGS FRAMEWORK**
for better briefing, design, handover and building performance in-use



Soft Landings Stage 1: *Inception and briefing*

- The most important stage, because it sets the whole philosophy of engagement with outcomes.
 - BUT clients are reluctant to pay, thinking that the industry ought to be doing it anyway.
 - AND modern procurement methods have often salami-sliced things and have made it difficult to maintain *the golden thread*. Project management aspects are therefore coming to the fore.
 - HOWEVER, some clients (e.g. Cambridge University) are writing aspects into their briefs.
 - AND some PFI teams are starting to put it into their bids.
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Soft Landings Stage 2: *Review during design and construction*

- Set stretching but realistic expectations.
- Manage them through the process.
- Undertake regular reviews.
- One may need a *Soft Landings Champion* to make sure this is not forgotten, e.g. to cajole the project manager.

A process of this kind was used by Soft Landings research team members Feilden Clegg Bradley Studios and Max Fordham for the National Trust's Heelis building in Swindon.

Heelis, Swindon: *a two-storey, largely toplit building*



Soft Landings Stage 2 components:

The sustainability matrix at Heelis

Developed by the A&E team involved in Soft Landings

1. Key attributes rated on a scale

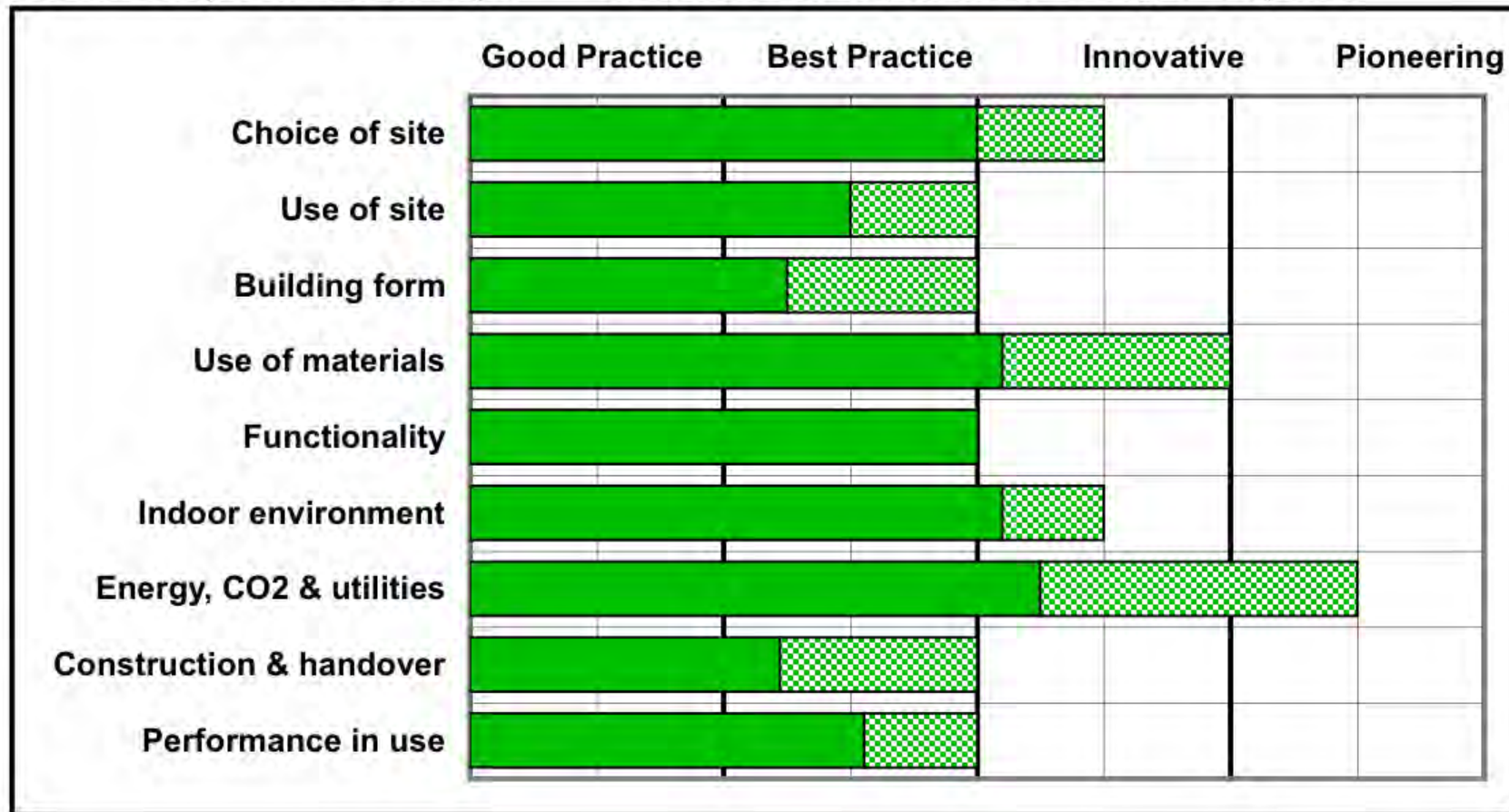
- Pioneering
- Innovative
- Best Practice
- Good practice
- *... and added later by me to generalise: Standard and Sub-standard because there will always be constraints (e.g. location)*

2. Attributes calibrated and used in progress reviews

- Client/design team discussion of appropriate qualitative standard.
- Appropriate targets identified.
- Data, techniques and costs reviewed, and targets confirmed.
- Matrix used for management review and cost checks.

Soft Landings Stage 2 components: *Simplified sustainability matrix for Heelis*

Sustainability review summary of National Trust HQ, Swindon - Designer's opinion



KEY: Solid bars = on average, Hatched = best component

Soft Landings Stage 3: *Preparation for handover*

- **A philosophical change:** Handover becomes an event within an extended *Finish* stage, not the point at which the design and building team sign off and walk away.
 - **Preparation for operational readiness** includes not just the static and dynamic commissioning of the fabric and building services, but much closer engagement with the occupier's move-in and their management and maintenance team, *if they have one*.
 - **If there is unfinished business**, e.g. owing to a forced early handover, then the *golden thread* is carried through into STAGE 4: initial aftercare and fine tuning.
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Soft Landings: involving FMs

from article in Delta T (BSRIA March 2007)

Heelis building facilities manager **Liz Adams** educated the staff on what to expect from their new home.

“We told users not to expect stable conditions. We call it a ‘layers building’ as it won’t suddenly react to changes in weather conditions, but take a while to heat up and cool down. So we remind people in September to bring in a cardigan.

“In the Autumn, when the outside temperature drops overnight, the building won’t necessarily react immediately. So out come the cardies.

“Comfort has been better in year two as the building has settled into a pattern. People are far more used to how the building’s systems work. The biggest problem is managing expectations about what the building will do in summer.

“We commissioned Max Fordham’ to carry out monitoring and fine tuning in the first two years. We have a good relationship with the design team – it’s been fantastic.”

BUS repeated their survey in 2007 and occupant satisfaction had indeed improved

Soft Landings Stage 4:

Initial aftercare

- **Design and building team members visit regularly,** number and frequency depends on project.
 - **They need a home in the building where they are visible,** not hide in the site hut.
 - **Troubleshooting and fine tuning can be undertaken,** best if they do their own work in the building and experience its facilities.
 - **They explain the building to the users,** both in events and in simple guides.
 - **They help the management take ownership.**
 - **They keep people informed,** *e.g via a newsletter on the organisation's website, e.g alerting to any problems.*
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Feeding forward at Cambridge University Mathematics: *Window control improvements*

PHASE 1

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- Difficult to understand
- Some poorly located
- Remote control problems



PHASE 2

- Improved, custom design
- Better located
- Not yet perfect



Soft Landings Stage 5: *Monitoring, POE and feedback*

- **Extended aftercare period**, typically two or three years.
 - **Occupiers must take ownership** and do most of the monitoring themselves. *This can prove difficult.*
 - **Independent POE can be incorporated**, e.g. for occupant surveys, energy analysis, and structured discussions. *Independent review and benchmarking can be very helpful and reassuring.*
 - **Much can be fed through rapidly**, to fine tuning the systems, use and operation of the building and in planning upgrades.
 - **The learning can also be spread much more widely.**
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Soft Landings: sharing information

Heelis designers report back in public



➔ Ba-graph-1-.jpg

➔ 2007-Study.jpg

Images



Building Analysis

So, how are you doing?

November 2007

Heelis, the National Trust's HQ in Swindon, is two years old. Senior engineer at Max Fordham Guy Nevill, who helped design it, takes a look at how it's been performing

By Guy Nevill

When the National Trust decided it needed a new headquarters to bring together staff from four different sites around the country, sustainability was a big part of the brief. The new building, Heelis, has now been in use for two years, so it is a good time to review how it is performing.

The Heelis complex, which covers about 7000m² and accommodates 470 people, was designed by architect Feilden Clegg Bradley with Max Fordham as M&E consultant. The site in Swindon once formed part of Isambard Kingdom Brunel's Great Western Railway Works. The total cost was £16.73 million.

Soft Landings: *Everybody can win*

- Better communication, fewer nasty surprises
- More effective building readiness. Less rework.
- Natural route for feedback + POE to improve the product.
- Teams can build reputations for customer service and performance delivery.
- Vital for progress to low-energy, low-carbon buildings.

However:

- *Everybody needs to be committed.*
 - *There is a learning curve to pay for (probably best from marketing budgets).*
 - *Independent surveys cost money (but not that much).*
 - *The industry needs more troubleshooters and fixers.*
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Client

Design and Building team

Users and facilities managers

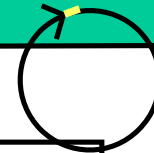
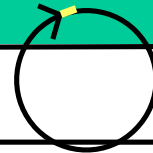
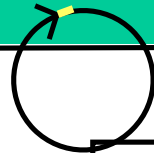
Justification

Briefing and design

Implementation

Initial use

Normal use



1. REVIEW NOW
BENEFIT NOW
Insight

Feedback and feedthrough by the team in relation to ongoing project activities and outputs

2. REVIEW NOW
BENEFIT IN FUTURE
Hindsight

Feedback from recent team experience and outcomes into possible future activities

3. REVIEW THE PAST
TO BENEFIT NOW
Foresight

Feedback of recent and past experience by the team, client and others into intended future activity

4. REMEMBER WHAT YOU DID
Knowledge management

Feedback of specific and general past experience into organisational learning systems

5. CONSOLIDATION OF
KNOWLEDGE

Research into a range of experiences activities and outcomes. Incorporation into knowledge, standards and practices.

6. LOCAL VARIABLES AND
RESPONSES

**GLOBAL INFLUENCES
AND TRENDS**

Technical and economic change.

Social and technical flux. Government and organisational policy reactions.



Summary of Lessons:

towards a new professionalism

1. Improve transparency between expectations and outcomes, *so we can prioritise realistically.*
 2. Make design intent clear to the users *especially for controls interfaces of all kinds.*
 3. Follow through from design into operation *talk to people, take account of their perspectives, tune things up, learn from the experience and feed it back.*
 4. Keep it simple and do it well, *only after that be clever. Design for robustness, usability, manageability.*
Prevention is better than cure *... and*
 5. Watch out for unintended consequences and revenge effects: *“good enough” is often better than “just right”.*
 6. Involve all the communities of interest.
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www.usablebuildings.co.uk

