

FIT-OUT FOR THE FUTURE: A GUIDE FOR THE INDUSTRY



Agenda of the morning

- 08:45 A Sustainable Fit-out: an Owner's Perspective
Jenny Pidgeon, Head of Sustainability at TH Real Estate
- 08:55 An Occupier's Perspective: Know Your Place - Merging Sustainable and Organisational Performance
Richard Francis, Principal at the Monomoy Company
- 09:05 The Toolkit: What Will it Cover?
Chris Botten, Programme Manager at the BBP
- 09:15 Case Study: Hammerson / Costa Ecopod & King's Place
Richard Quartermaine, Environmental Manager at Hammerson
- 09:30 Top 10 Sustainability Design Considerations
Sean Lockie, Director - Head of Sustainability at Faithful + Gould / Atkins
- 10:00 Panel Discussion and Q&A

AN OWNER'S PERSPECTIVE

Occupier demand for productive spaces



British Land shared:

Visit our new website, The Office Agenda, about the role an office and its environment play in helping firms attract and keep the talent they need to succeed: <http://ow.ly/4n48NK>



The Office Agenda

86% of workers say they'd stay longer with an employer that had the ideal office location and features

#BLOfficeAgenda



39%

Proportion of UK workers who've moved jobs to find an office with better features

SOURCE: British Land Research: UK Businesses

+36%

How much more productive office workers believe they'd be if they were working in the ideal office

SOURCE: British Land Research: UK Businesses

Regulatory exposure

Minimum Energy Efficiency Standards

Unlawful in England & Wales to let residential or business premises that do not meet EPC rating of 'E' or above



Regulations published

Soft start

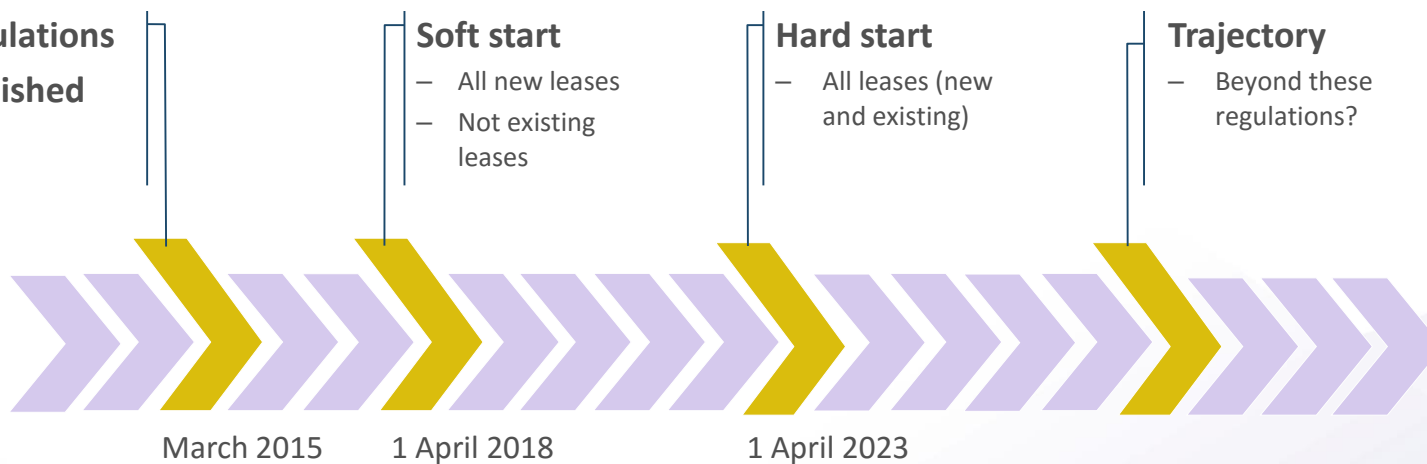
- All new leases
- Not existing leases

Hard start

- All leases (new and existing)

Trajectory

- Beyond these regulations?



Investor demand



Q38 Does the entity have a fit-out and refurbishment program in place for tenants that includes sustainability-specific issues?

☐ Yes

Select all topics included (multiple answers possible)

☐ Fit-out and refurbishment assistance for meeting the minimum fit-out standards

Percentage of portfolio covered ▼

☐ Tenant fit-out guides

Percentage of portfolio covered ▼

☐ Minimum fit-out standards are prescribed

Percentage of portfolio covered ▼

☐ Procurement assistance for tenants

Percentage of portfolio covered ▼

☐ Other _____

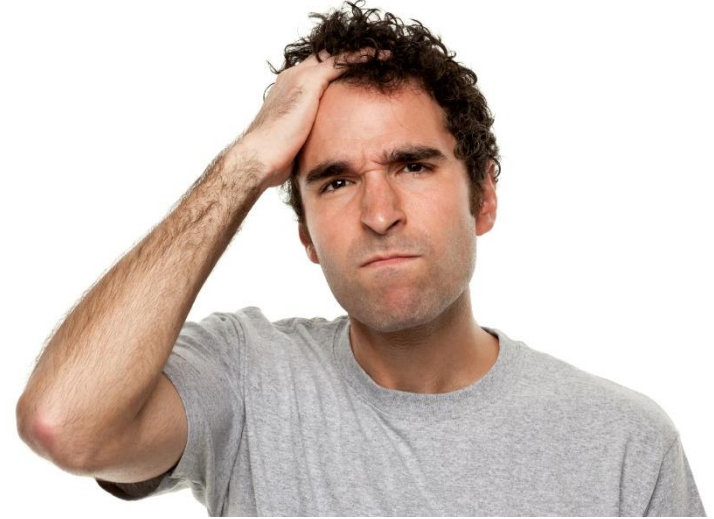
Percentage of portfolio covered ▼

☐ No

☐ Not applicable

So why isn't it happening?

- Lack of time, resource, knowledge and communication
- Cat A fit out doesn't align with tenants' requirements → stripped out
- 'Return to shell' clause at end of lease
- 'Green' and 'Sustainable' costly and time-consuming
- Sustainability frameworks not commonly used
- Disconnect between leasing, property and sustainability teams
- Owners' sustainability guides only – HoT / lease?
- Occupiers' standard specifications limit potential for change
- Value engineering capex vs totex



AN OCCUPIER'S PERSPECTIVE

Know Your Place: Figuring Out the Future Fit-out



Richard Francis



2-10%

increase in sales after
targeted LED installation

6.5%

reduction in sick leave
through improved views
and daylighting

4-6%

reduction in performance due
to poor temperature control

1%

increase in visitor dwell
time equals

1.3%

increase in sales

Reduced stress & anxiety

with direct access to green space

8-11%

improved productivity
through improved air quality

15%

more time spent on primary
task with outside views

100%

improved cognitive
function in 'green offices'

66%

drop in performance when
exposed to distracting
noise

40%

fall in sick leave

9%

gain in typing speeds

7-26%

reductions in headaches, colds and flu, fatigue
and concentration

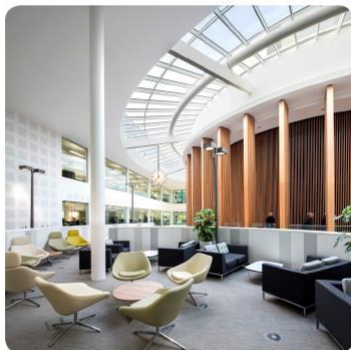
following refurbishment at 500 Collins
Street office block in Melbourne by Lend Lease

\$4m

increased business through new
deposit and loan accounts per in
LEED certified PNC Financial
Services Group branch

61%

higher cognitive functioning
working in well-ventilated offices
with below-average levels of
indoor pollutants and CO₂



Health, Wellbeing & Productivity in Offices

The next chapter for green building

September 2014

Sponsors



SKANSKA



BETTER PLACES
FOR PEOPLE

PUT WELLBEING AT THE
HEART OF YOUR BUILDING



HEALTH, WELLBEING & PRODUCTIVITY IN RETAIL: THE IMPACT OF GREEN BUILDINGS ON PEOPLE AND PROFIT

FEBRUARY 2016

PROJECT LED BY:



CAMPAIGN SPONSORS:

ARUP

M&S

B+H

WITTEN
SANT-GOMERY

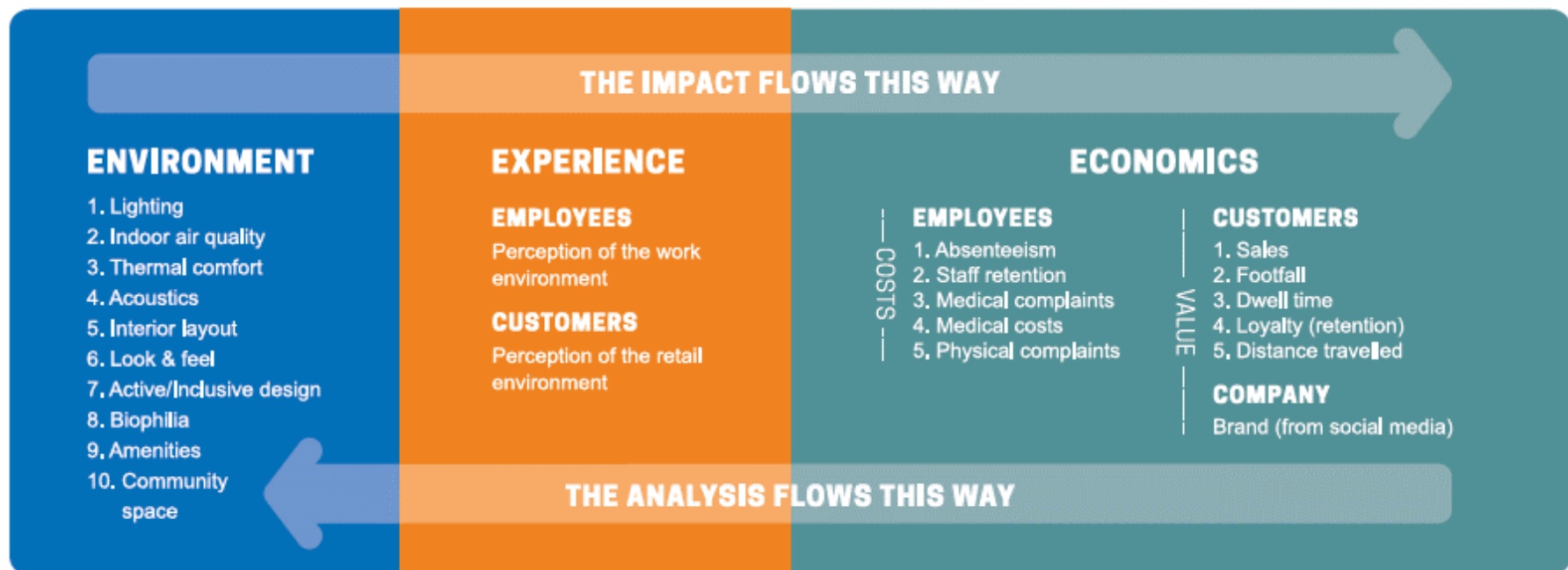


LandSecurities

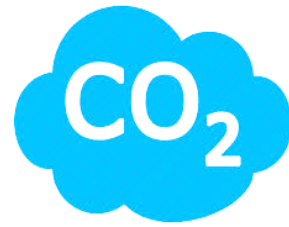
SKANSKA



uponor

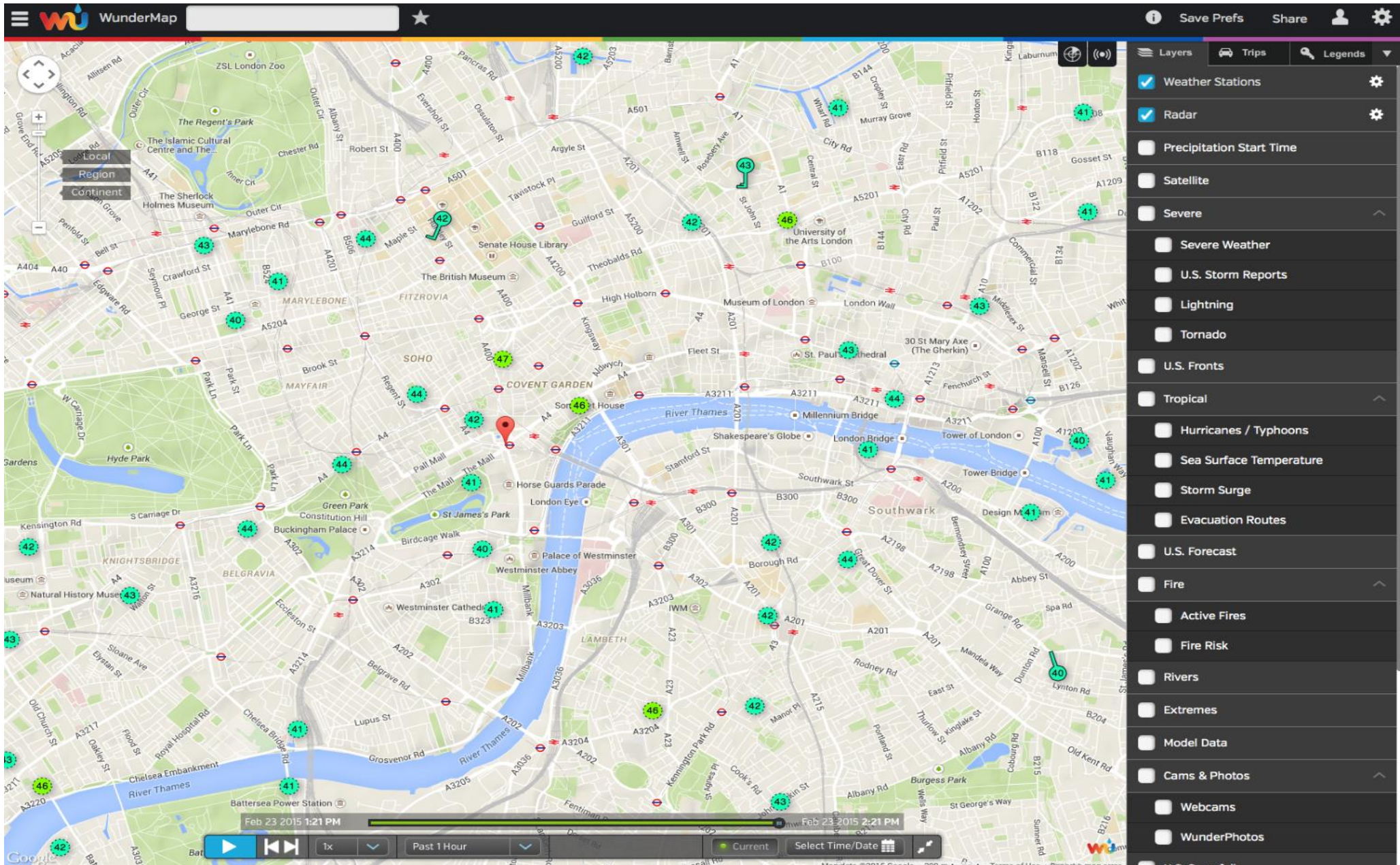


“The Framework follows a simple logic that aligns with the mission of retailers everywhere: better environments lead to better experiences for people and that leads to better economics for retailers.”





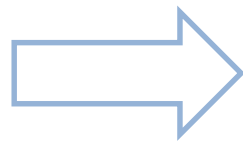


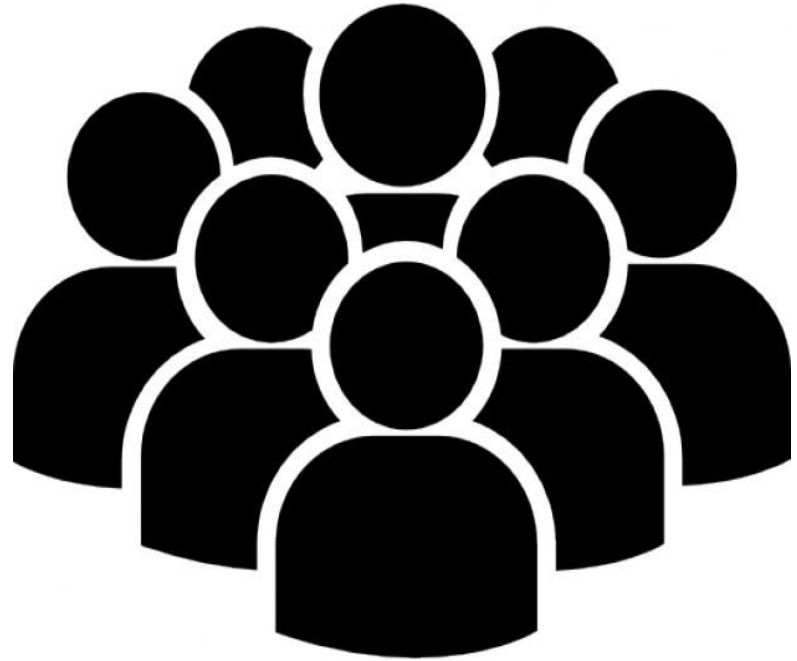
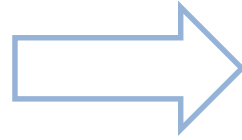


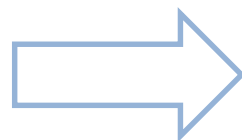
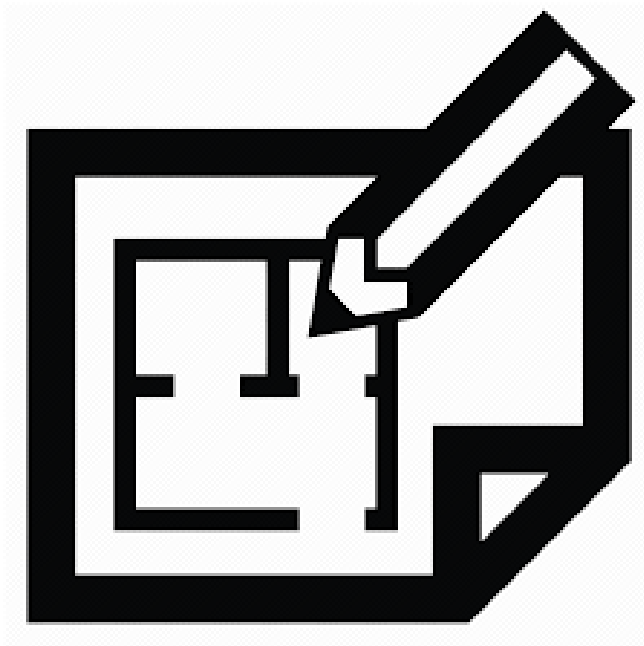


ASK[↑]ENANTS

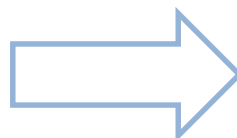
5 Fundamental Changes

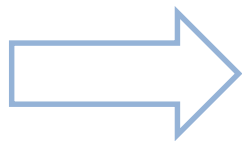






PRIVATE





Thank you for listening.

To learn more about us please visit:

monomoycompany.com

**THE TOOLKIT: WHAT WILL IT
COVER?**

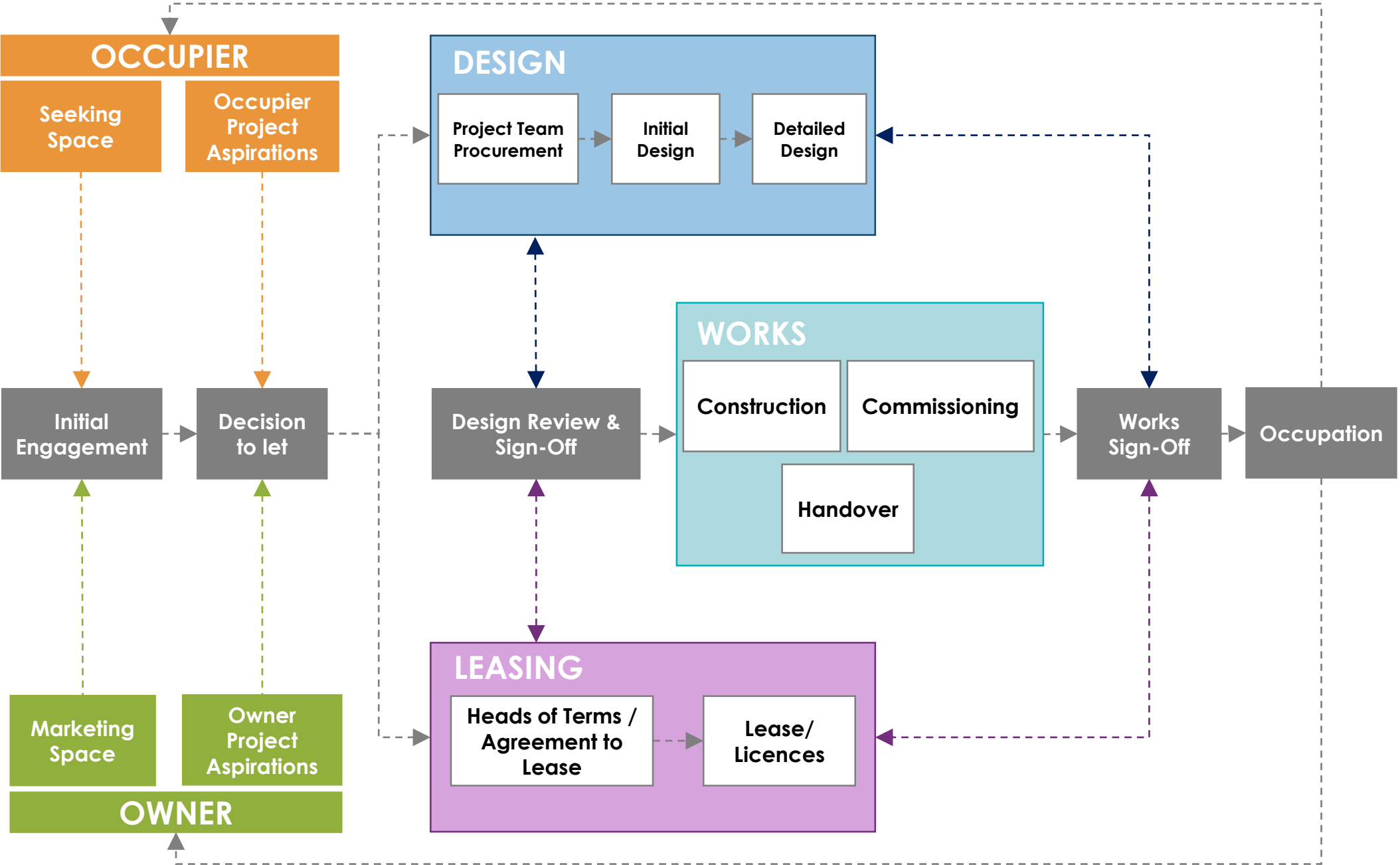
Aim

- ❑ Provide **industry best-practise** on how sustainability can be incorporated in **office & retail fit-out** projects.
- ❑ Practical guidance
- ❑ Focus on **benefits** & strong **evidence base** with practical examples and case studies
- ❑ Pooling existing resources

Who is it for?



Fit-out Process



Next steps...



c.botten@betterbuildingspartnership.co.uk

CASESTUDY: HAMMERSON

Positive Places

Challenge & Innovate

Protect & Enhance

Serve & Invest

Partner & Collaborate

Upskill & Inspire



Hammerson

Case Studies

EcoPod

King's Place



EcoPod
A Successful Partnership



Project Objective

Deliver a “Zero Energy” retail unit which epitomised both Hammerson and Costa’s commitment to sustainability





COSTA



Challenge & Innovate

Challenging the status quo and trialing new approaches and solutions to support the transition to a more sustainable business model

Protect & Enhance

Protecting and enhancing our natural environment by minimising resource consumption and delivering restorative projects

Serve & Invest

Delivering social value to the communities we serve, measured in jobs, skills, civic pride and investment

Partner & Collaborate

Taking a stakeholder led approach to create collaborative projects and evolve from client to partner

Upskill & Inspire

Investing in our people, and recognising and rewarding those that deliver change



EcoPod

Commercial Reality

- Challenge of combining the project goal of “zero energy” with the commercial realities landlord and tenant relationship
- Open book approach was adopted
- Lower energy & water usage allowed Costa to pay additional rent
- Additional rent received allowed Hammerson to fund an enhanced shell to deliver cheaper running costs



EcoPod Outcomes

- Photovoltaic array
- Rainwater harvesting
- Radiant under-floor heating and cooling
- Passive ventilation strategy
- Careful orientation and design to minimise solar gain yet maximise day light



EcoPod

Complimentary Energy and Water Saving Benefits

- Costa retail park fit out 45% more efficient than its 2010 design
- Refrigeration is 54% more efficient
- New ventilation canopy being tested to reduce heat gain from equipment
- Low flow sensor taps and systems as standard
- Dishwasher used saves approximately 1500lt of water per year through steam recovery
- Leak detection equipment and solenoid valves to avoid unnecessary water waste



More energy efficient

A+

◀ -20 This is how energy efficient the building is.

Net zero CO₂ emissions

A 0-25

B 26-50

C 51-75

D 76-100

E 101-125

F 126-150

G Over 150

Less energy efficient

40% reduction
in operational
energy cost



King's Place Fit Out
Hammerson's New London Office



King's Place Fit Out

Hammerson's New London Office

Early Engagement

- Part of project brief
- Sustainability questionnaire for design team
- Setting a sustainability brief
- Targets

Implementing Targets

- Opportunities for reuse
- Contractor appointment
- Supply chain engagement

King's Place Fit Out

Outcomes

- Ska Gold rating
- Reuse of existing fit out
- Lighting
- Materials
- Furniture
- Contractor initiatives

Fit-out Sustainability
Assessment

This is to certify that

Hammerson Plc

Kings Place
90 York Way
London
N1
United Kingdom

has achieved the Ska Rating of

Gold





Sentinel RPI
Accredited Assessor

Hammerson Plc
On behalf of

EDGE
Architect

Hurley Palmer Flatt
Building Services Engineer

Paragon
Contractor

EDGE
Interior Designer

GVA Second London Wall
Project Manager

Kings Place
Certificate Reference

02/10/2015
Date

This certificate has been produced
using Ska Rating for Offices
version 1.2

 **RICS**

the mark of
property
professionalism
worldwide

EcoPod and King's Place

Lessons Learnt

Early consideration

Understand performance

Agree targets

Continuous engagement

Communicate results



Positive Places

Challenge & Innovate

Protect & Enhance

Serve & Invest

Partner & Collaborate

Upskill & Inspire



Hammerson

Thank You

richard.quartermaine@hammerson.com



TOP 10 DESIGN PRINCIPLES

Introduction – Detailed Design Section Overview



1. Lighting



5. Water



9. Layout



2. HVAC



6. Biodiversity



10. Equipment



3. Metering &
Monitoring



7. Transport



11. Materials



4. Resource
Efficiency &
Waste



8. Furniture

Rating Tools



BREEAM®



1. Functionality of Space

- ❑ Maximum Space Utilisation (1.4 FTE/workstation);
- ❑ Variety of flexible work spaces;
- ❑ Office 'Look and Feel'-cluttered vs. clean desk;
- ❑ Flexible, open plan layout with meeting rooms and cellular offices in the core;



2. Designing for an active workforce

- Frequent circulation should be part of the design strategy;
- Sit stand desks to counteract the sedentary aspect of office life;



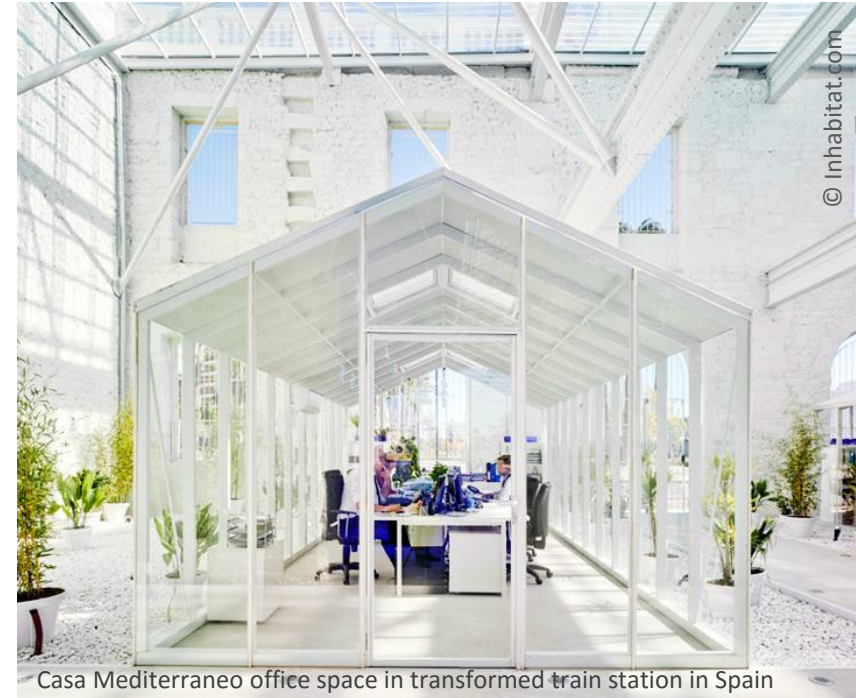
3 h standing = 144 Kcal



- 'Avoiding a culture of 'eating at the desk';
- 'Stand up' meetings

3. Efficient Lighting

- Daylight = performance = office moral = concentration
- Avoiding glare and overheating;
- LED overhead lighting + task lighting;
- Smart controls
(PIRs, photocells, localised controls)



4. Metering and Monitoring

Indoor Environmental Conditions



AIR
TEMPERATURE
(unit: °C)



HUMIDITY
(unit: %)



CARBON DIOXIDE
EMISSIONS LEVELS
(unit: ppm)



VOC,
FORMALDEHYDE
CONCENTRATION
(unit: µg/m³)

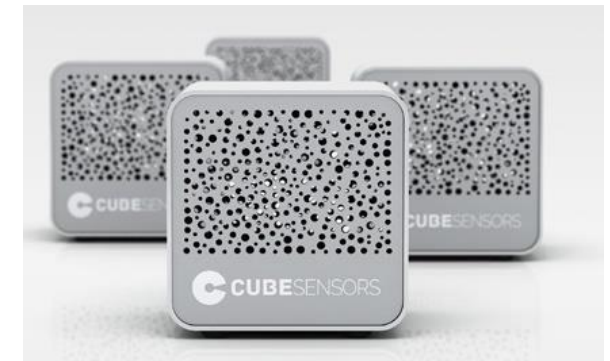


ILLUMINANCE LEVELS
(unit: lux)



NOISE LEVELS
(unit: dB)

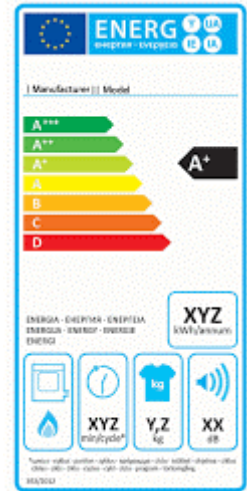
Energy Sub-Metering



5. Efficient equipment

□ Water efficient sanitary fittings:

- Taps, showers, WC flush, appliances;



□ Energy efficient office equipment:

- Printers, copiers, scanners, monitors, domestic white appliances.



6. HVAC

Efficiency Hierarchy:

- ☐ Natural Ventilation/Comfort Cooling;
- ☐ Mixed Mode Ventilation;
- ☐ Active Cooling.
- ☐ Localised zone control for occupant comfort;
- ☐ Excessive internal gains = overheating;
- ☐ Comms rooms & IT intensive areas.



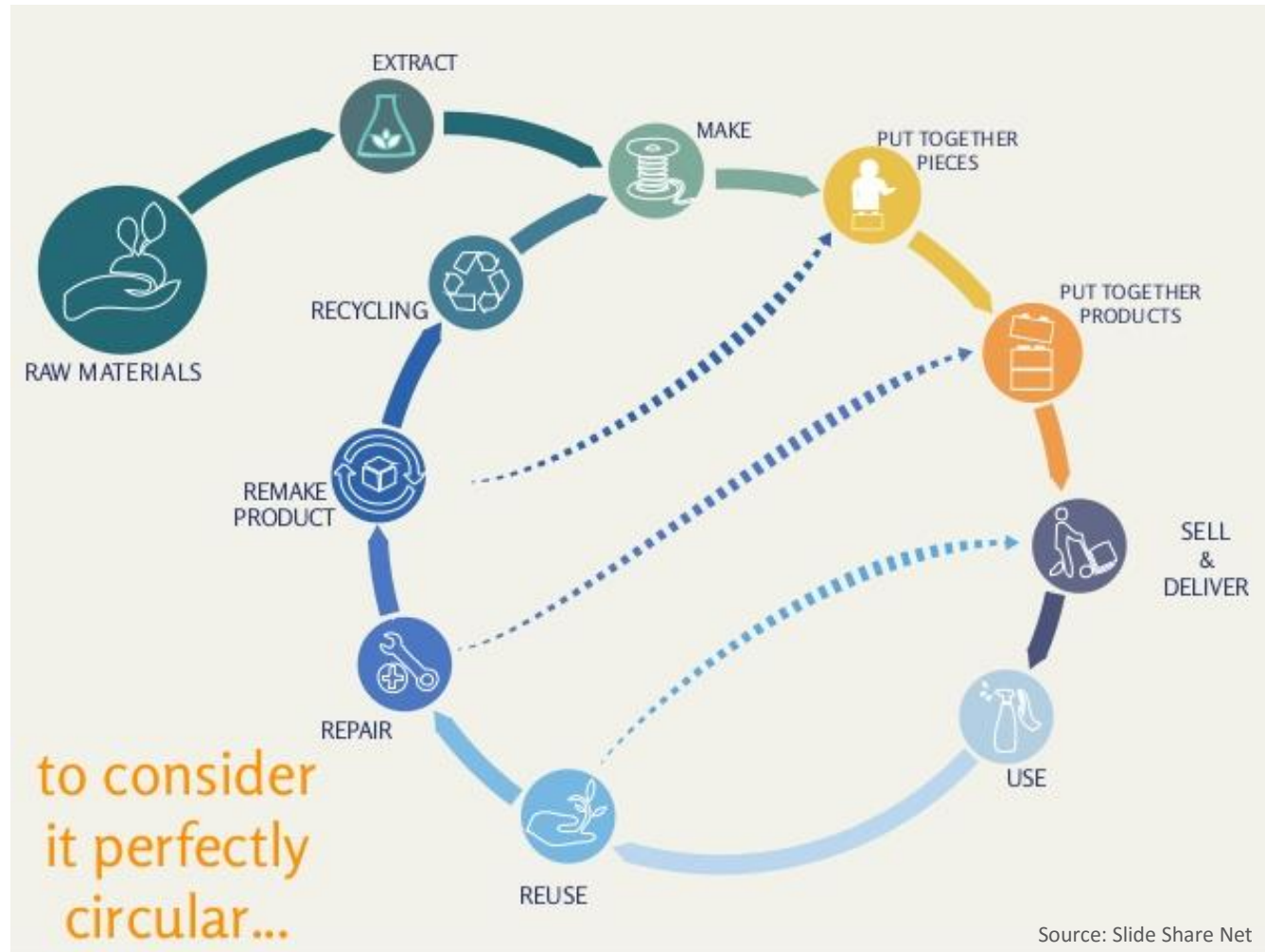
7. Responsible Sourcing

Materials and furniture which:

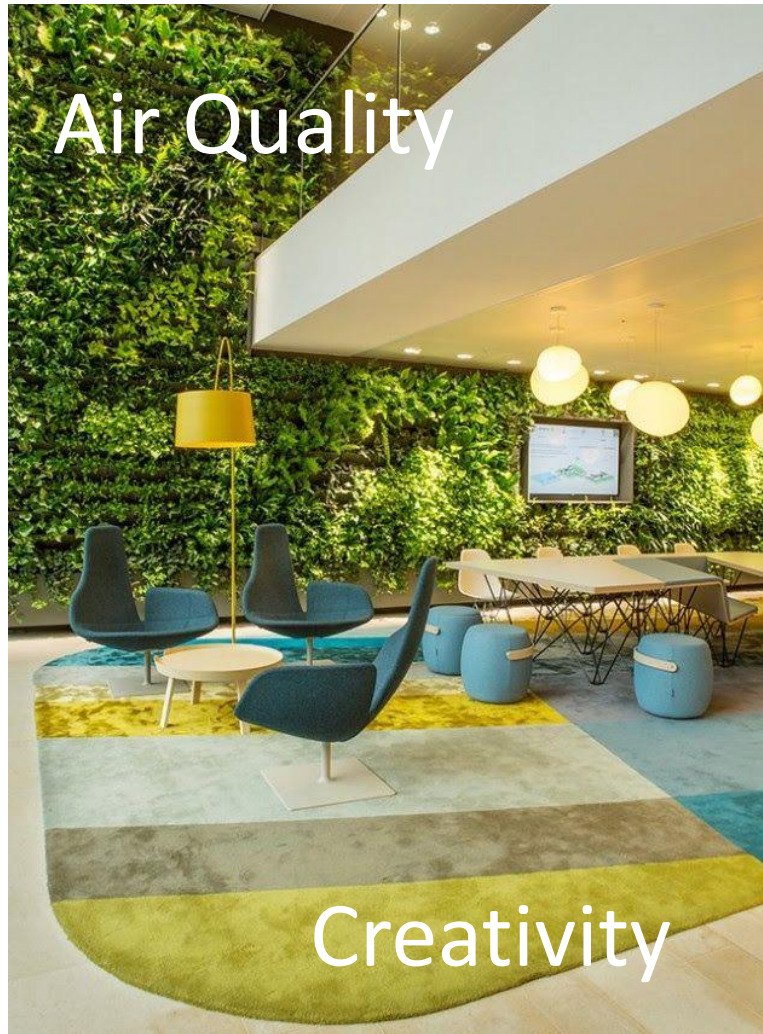
- ☐ Are low/no VOC certified;
- ☐ Have environmental credentials (e.g. EPD, cradle to cradle certificate);
- ☐ Have high recycled content (> 60%);
- ☐ Are 100% recyclable;
- ☐ Are locally sourced;
- ☐ Are reclaimed;
- ☐ Have been sourced according to ISO14001.



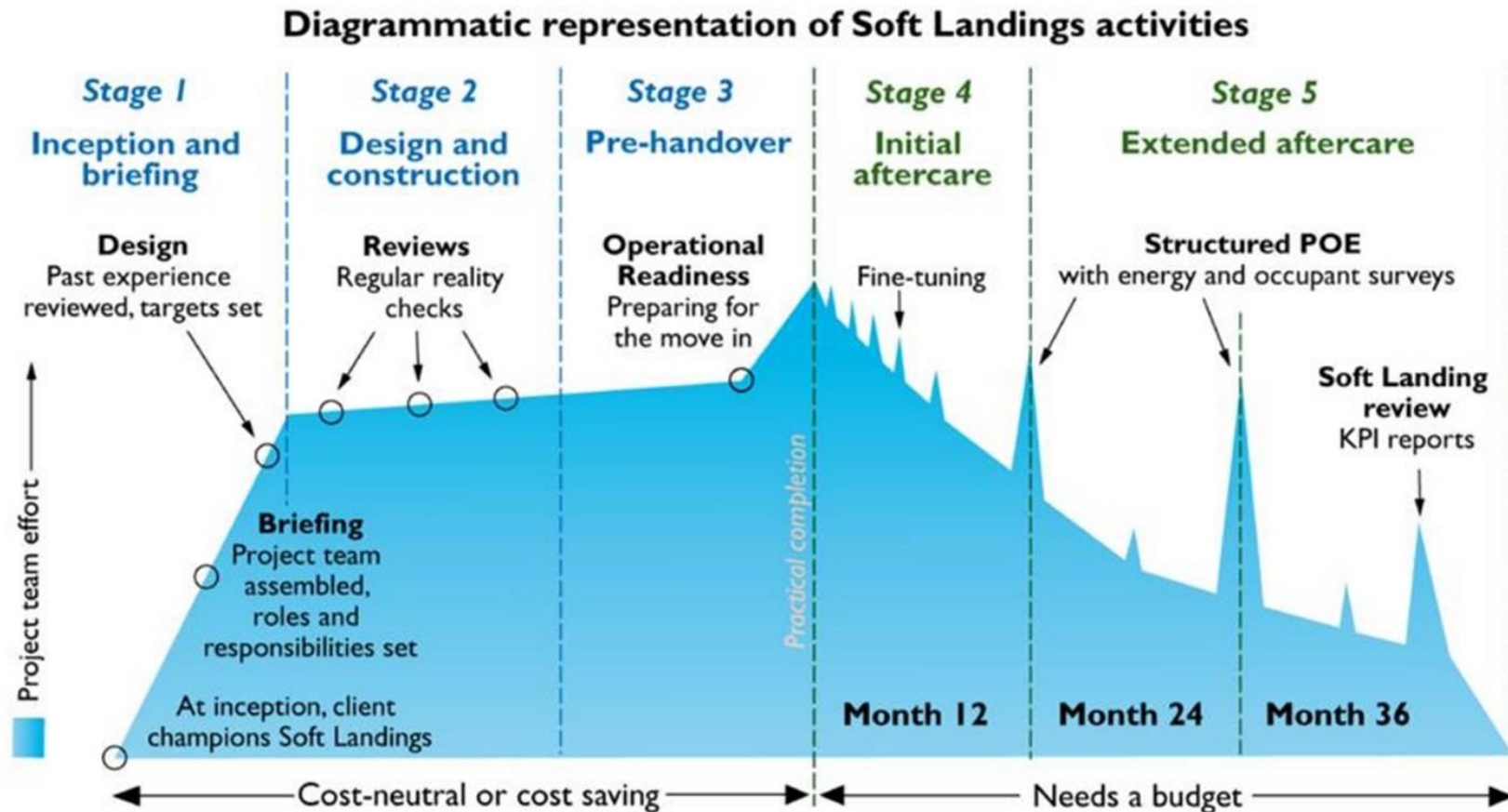
8. Waste/Resource Efficiency



9. Biodiversity



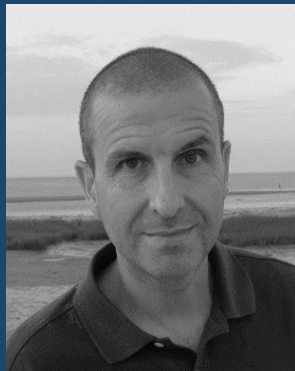
10. Soft Landings & Post Occupancy Evaluation



PANEL / Q&A



Richard Quartermaine
Environmental Manager
Hammerson



Richard Francis
Principal
Monomoy Company



Sean Lockie
Director - Head of
Sustainability
Faithful + Gould /
Atkins



Phil Birch
Sustainable
Development Manager
John Lewis
Partnership



Jenny Pidgeon
Head of Sustainability
TH Real Estate

Keeping in touch with the BBP

