

11% of UK construction spend is on fit-out

Buildings may have 30 fit-outs during their lifecycle

**FIS**  
Representing the finishes & interior sector

Ongoing vetting of contractors  
Setting higher standards  
Driving quality through a focus on

**PRODUCT  
PROCESS  
PEOPLE**

www.thefis.org

Sponsored by FT and TERRIX

FIS Fit-out Day...

1

**The Big 3 2023**

**FIS**

GREENFELL FOREVER IN OUR HEARTS

Environmental Protection and Enhancement

Sustainable Development

Social Progress

Economic Development

IM – 10.00-10.03 mins

2

**FIS**

*Delegates are reminded they agree to conform to FIS policy to comply with the Competition Act 1998. The meeting is convened and held in accordance with the Memorandum and Articles of Association of FIS and the regulations made by the Association. The Association has in place procedures to ensure compliance with all relevant competition laws and the meeting is subject to those procedures*

3

**Wifi HDGuest**

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**FIS**

**Reducing the industry's environmental impact**

Flavie Lowres, FIS Sustainability Champion

FL – 10.03-10.10 mins

5

**FIS Sustainability leadership**

**Mission:** To support sustainable transformation and a net zero approach within the finishes and interiors sector

**Key aims:**

- Informing Design
- Increasing understanding and expertise
- Establishing targets and standardisation
- A sharing network

**Key projects**

**Defining sustainability for the sector**

- A Dynamic Sustainability Network
- A Central Hub for Information
- An E-learning platform with SCSS
- Bi-monthly networking events

**A Focus on Waste**

- Cat A Fit-out
- Standardised strip audit templates

**Project Green Thread**

**Circular Solutions**

- Launching the Pallet Loop Network
- A co-operative reuse initiative


PRODUCT PROCESS PEOPLE | SUPPLY CHAIN SUSTAINABILITY | SCHOL | ConstructZERO

6

## WG2 training

FIS Sustainability Awareness: Doing Business Better

Now live – here:  
<https://learn.supplychainschool.co.uk/local/t/actionplans/learningpath.php?id=1268>

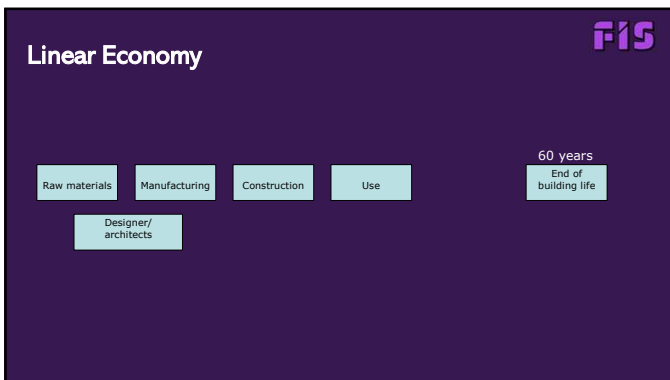
SUPPLY CHAIN SUSTAINABILITY  
**SCHOL**

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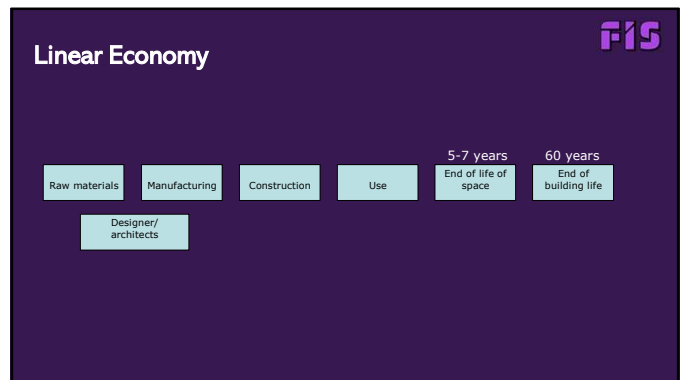
## Impact of the industry

- The construction industry represents:
  - 50% of resource extraction
  - 30-45% of waste production
  - 50% of GHG emissions, including 10% from materials
  - A building gets refurbished on average every 5-7 years
  - 300 tonnes of fit-out material goes to landfill every day

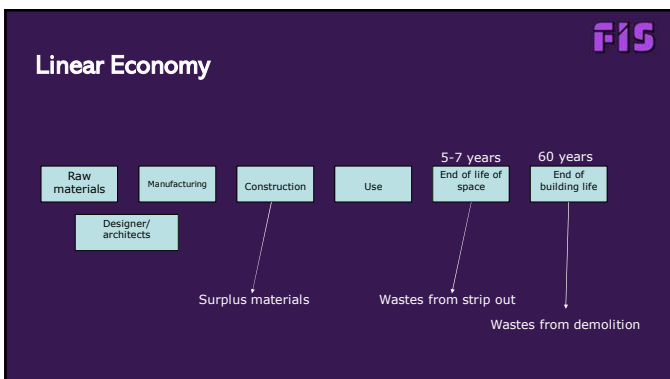
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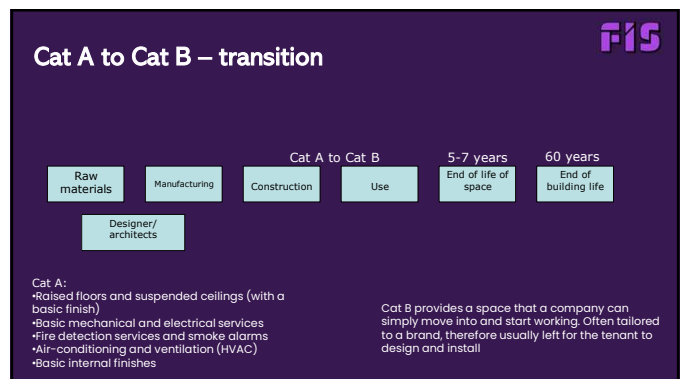
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10



11



12

## Cat A to Cat B – transition

weeks/months?

Raw materials    Manufacturing    Construction    Use    5-7 years End of life of space    60 years End of building life

Designer/architects

**Cat A:**

- Raised floors and suspended ceilings (with a basic finish)
- Basic mechanical and electrical services
- Fire detection services and smoke alarms
- Air-conditioning and ventilation (HVAC)
- Basic internal finishes

**Cat B provides a space that a company can simply move into and start working. Often tailored to a brand, therefore usually left for the tenant to design and install**

13

## Cat A to Cat B – transition

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Designer/architects

**Cat A:**

- Raised floors and suspended ceilings (with a basic finish)
- Basic mechanical and electrical services
- Fire detection services and smoke alarms
- Air-conditioning and ventilation (HVAC)
- Basic internal finishes

**Products are taken out of buildings before the end of their service life – sometimes never used!**

**Cat B provides a space that a company can simply move into and start working. Often tailored to a brand, therefore usually left for the tenant to design and install**

14

## Why do we need to change?

**DESIGN FOR A CIRCULAR ECONOMY PRIMER**

**BREEAM**

**ConstructZERO**  
The Construction Industry's Zero carbon change programme

**Construction activity**

- 7 Implementing carbon measurement, to support our construction projects in making quantifiable decisions to remove carbon
- 8 Become world leaders in designing out carbon, developing the capability of our designers and construction professionals to design in line with circular economy – shifting commercial models to reward measurable carbon reductions
- 9 Support development of innovative low carbon materials, as well as advancing low carbon solutions for manufacturing production processes and distribution

Net Zero agenda

15

## Why do we need to change?

Three key areas will enable the accelerated delivery of our Pathway:

- 1 Reducing the energy use and greenhouse gas emissions of our historic London estate in Mayfair and Regentia.
- 2 Reducing the embedded carbon in our developments and designing buildings that are genuinely net zero.
- 3 Reducing the carbon emissions from our supply chain.

Using our E300 Programme we will retrofit our existing buildings and collaborate with occupiers to reduce their emissions through smart energy use and renewable energy sources. By 2025, for example, we aim to have encouraged and implemented at least 75% of occupiers by Regentia to use energy sourced from renewables.

All developments will be low embodied carbon (<500kgCO<sub>2</sub>e/m<sup>2</sup> from 2025), have low energy demand, be all electric and powered from renewable energy sources (on and offsite). Larger office developments will also follow the Regentia Performance approach.

By 2025, our aim is at least 40% of our suppliers by emissions will have set a Science Based Target and procure their energy from renewable sources, and supplier vehicles serving our London estate will be electric by 2025.

Think Zero

THE CONSTRUCTION PLAYBOOK  
Government Guidance on sourcing and contracting public works projects and programmes  
March 2022

16

## Rethinking the process

*is the CAT A - CAT B cycle sustainable?*

Paul Gaughan

AS – 10.10-10:35 mins

17


## Rethinking the process

*is the CAT A - CAT B cycle sustainable?*

Adam Strudwick, Perkins + Will

AS – 10.10-10:35 mins

18



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Perkins&Will

**Rethinking the process**  
Is the CAT A - CAT B cycle sustainable

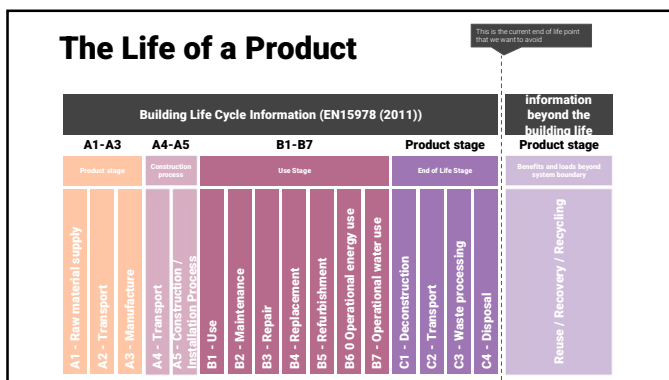
Adam Strudwick  
Principal

19

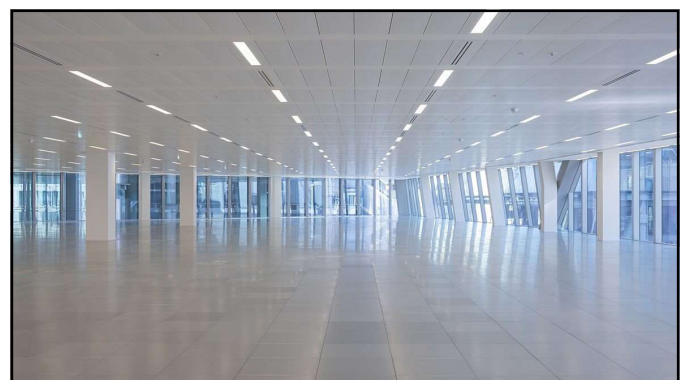
**Fit out is responsible for 40% of energy in a building, and 300 tonnes of fit out goes to landfill every day.**



20



21



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**“that’s a lovely Cat A” – said no client ever**

23




**JUST SAY NO TO CAT A**  
(MOST) CAT A IS EMBARRASING TO OUR INDUSTRY

24



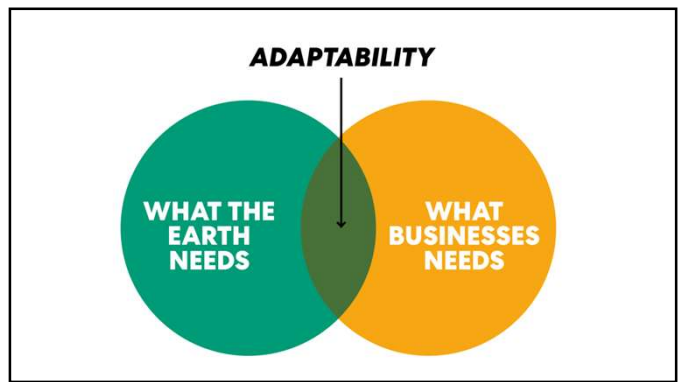
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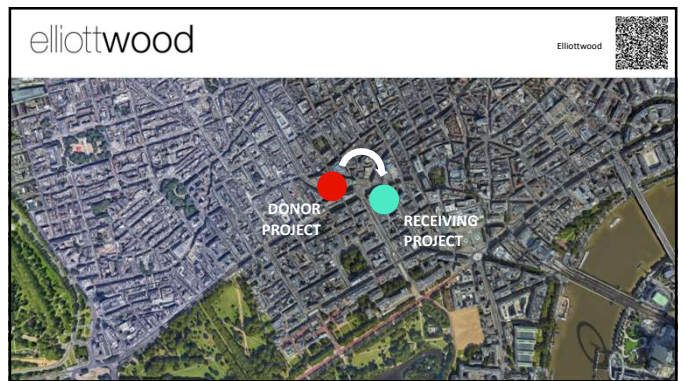
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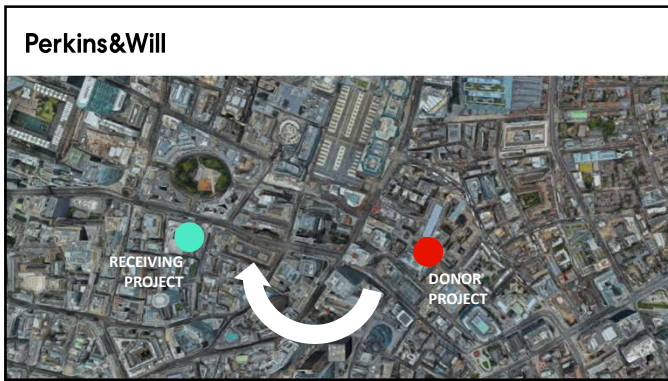
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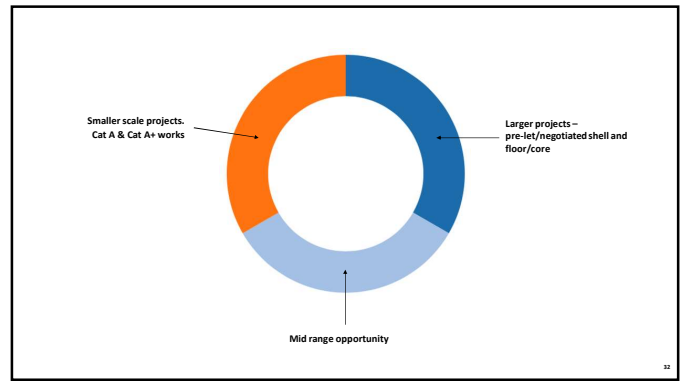
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34

***Extending the construction market, together.***

*The system of the global construction industry needs to be redesigned if Net Zero Carbons targets are to be met.*

*Current approaches don't go far enough.*

*A redesigned system puts circular principles and extended value at its heart – **we believe together we can reinvent to system and global market.***

35



36



37

# Comments & Questions




Adam Strudwick  
Principal

Perkins&Will

38

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Perkins&Will

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Is there still a need for Cat A?

Start presenting to display the poll results on this slide.

40

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Do we need new standard definitions of the fit-out options to support understanding (Cat A, Cat A+, Cat B, Shell and Core)?

Start presenting to display the poll results on this slide.

41

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How are strip-outs typically managed on your projects? (tick all that applies)

Start presenting to display the poll results on this slide.

42

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## Discussion 1:

1. Why do we do Cat A and Cat B, is there still a need? Is going back to Shell and Core the better option and who would pay for it?
2. What are the actions that can be taken to enable a less wasteful transition from Cat A to Cat B? Where does CAT A+ fit in?
3. How much are commercial lease decisions impacting our ability to be sustainable? Does our relationship with Landlords need to change? Should commissioning Cat B routinely be linked to any Cat A?
4. What should we be recommending as best practice?

*Think about the commissioning design, manufacturing, supply and construction process*  
Paul Gaughan: 10:40 – 11:10

43

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## Re-use in fit-out: Introduction

Flavie Lowres, FIS Sustainability Champion

FL – 11.20-11.25 mins

44

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## Linear to Circular Economy

How do we do more with less?

45

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## Linear to Circular Economy

46

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## Linear to Circular Economy

Pre-fitout audit

- identify quantities and types of materials
- identify routes for best "disposal" focus on reuse

47

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## Pre-fitout audit


- The CIWM code of practice provides clear guidance for pre-demolition audit, see: <https://condemwaste.org/wp-content/uploads/2018/10/Code-of-Practice-Pre-redevelopment-audit-July-17-V1.pdf>

- This document focuses on the requirements for a pre-fit out audit

48



## Innovate UK - LINK



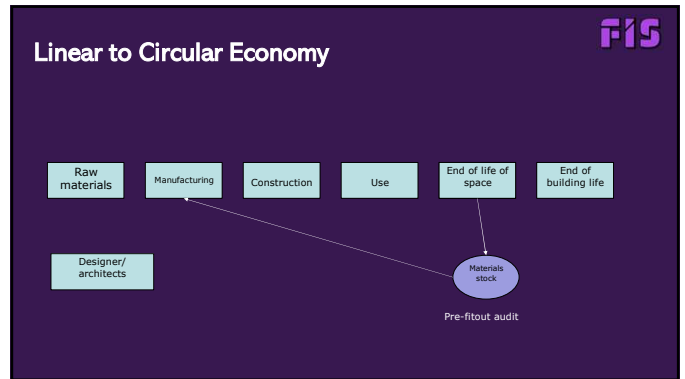
**Project LINK** - Creating a digital direct connection between owners and buyers of salvaged construction material (Circular Economy)

This project will create a rapid listing app (using AI and machine learning), an online platform and green certificate support.

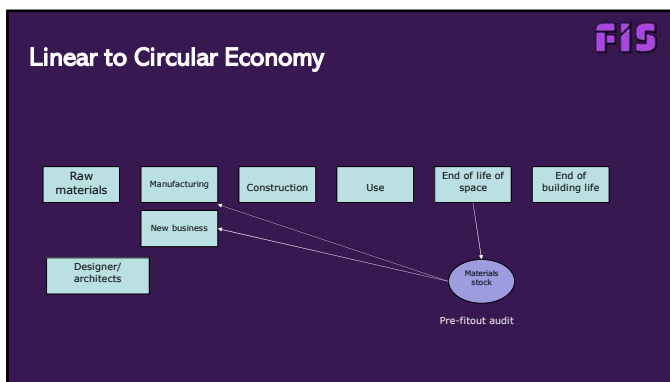
Partners include: AI/machine learning experts, Circular Economy experts, University, FIS

18 months starting 1<sup>st</sup> October 22

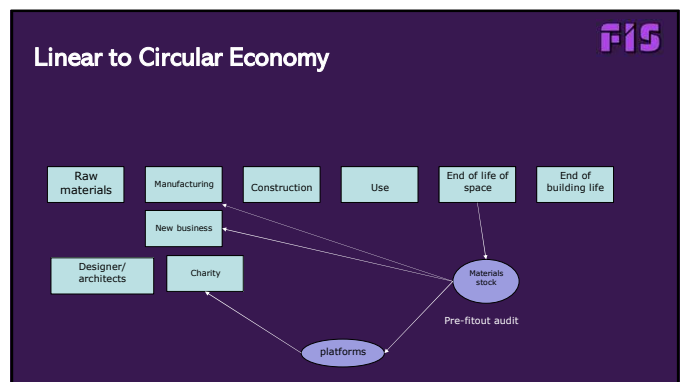
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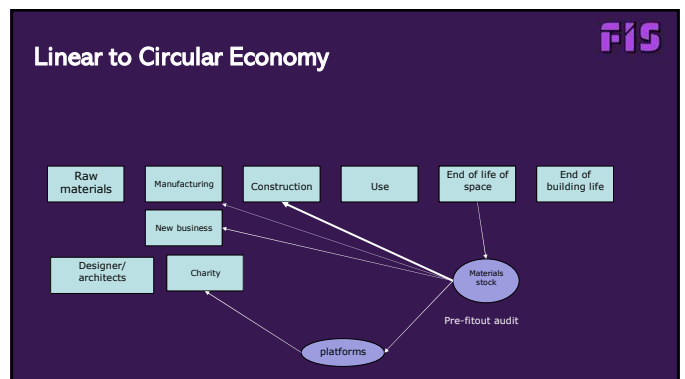
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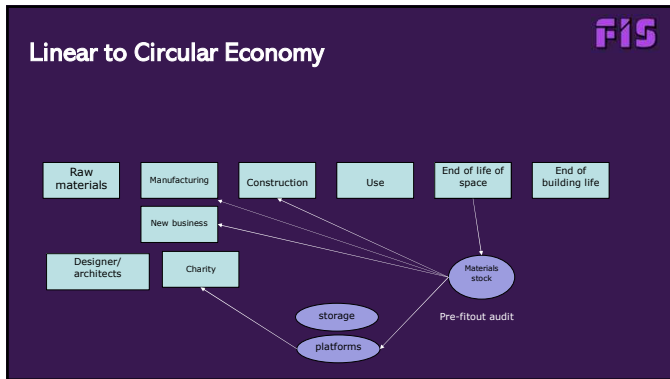
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Scheme	Description	Website	Product covered	Region covered	Home	List	Transit	Contact
RFP - Raised Modular Flooring	A raised flooring refurbishment and recycling operation Collection of raised access flooring from site and supply of refurbished systems	<a href="https://www.rmf-services.co.uk">https://www.rmf-services.co.uk</a>	raised access flooring	National	Y	Y	Y	If you have raised floor system that is no longer required and is to be removed, contact: <a href="mailto:info@rnf-services.co.uk">info@rnf-services.co.uk</a>
Community Wood Recycling (CWR)	Register on the system, separate wood on site, contact CWR when you have 12 cubic yard for collection. Timber is then sorted by CWR to optimise reuse (60% is reused) in the workshop for community project	<a href="https://communitywoodrecycling.org.uk/">https://communitywoodrecycling.org.uk/</a>	Timber products	National	Y	Y	Y	<a href="mailto:info@communitywoodrecycling.org.uk">info@communitywoodrecycling.org.uk</a>
CAMA	A storage company that allows users to take control of what assets are in stock via an asset management platform	<a href="https://cama-storage-reuse-recycle.com/">CAMA - Storage, Reuse, Recycle - specialists in sustainability and storage solutions</a>	All products	National	Y	Y	Y	<a href="mailto:info@cama.co.uk">info@cama.co.uk</a>
Traco UK (The Recycled Assets Company Ltd)	A UK based furniture and equipment (F&E) clearance and storage business.	<a href="https://recycledassets.co.uk/">https://recycledassets.co.uk/</a>	Furniture	Portsmouth is based - but national?	Y	Y	Y	Used Furniture, B-Corp, B Corp ( <a href="mailto:recycledassets.co.uk">recycledassets.co.uk</a> )
Globechain	A reused items marketplace: items available are listed on the Globechain Marketplace, an alert is sent to all members and items are collected by the requesting members. Only paying members can list items, but it is free to request items but need to sign up	<a href="https://globechain.com/how-it-works/">Globechain   How it works   List, Request, Collect</a>	All products	National	N	Y	N	Send a message here: <a href="https://globechain.com/reuse-marketplace-for-business">Globechain   Reuse Marketplace for Business</a> Otherwise, list or find items via the website
ReLondon	Platform that links data from Globechain and eBay. Link to Enviroimate to be done shortly	<a href="https://re-london.com/">Home - Material Reuse Portal</a>	All products	National	N	Y	N	Send a message here: <a href="https://re-london.com/">Contact - Material Reuse Portal</a>

53



54



55

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Have you ever used a materials exchange platform?

Start presenting to display the poll results on this slide.

56

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Have you ever re-used materials in a fit-out?

Start presenting to display the poll results on this slide.

57

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What is normally the biggest barrier to re-use (select 2)?

Start presenting to display the poll results on this slide.

58

FIS

Re-use: The art of the possible

Peter Kelly, ISG

PK - 11.25-11:35 mins

59

ISG

Re-use: The art of the possible

17/05/2023  
Peter Kelly - Group Director of Sustainable Operations at ISG

60

### ISG and the circular economy

The circular economy aims to change the way ISG:

- Designs
- Procures
- Installs

➢ Products, systems and materials,

➢ So at end of use, these products/systems/materials can be:

- Reused
- Repurposed
- Remanufactured

➢ At their highest value,

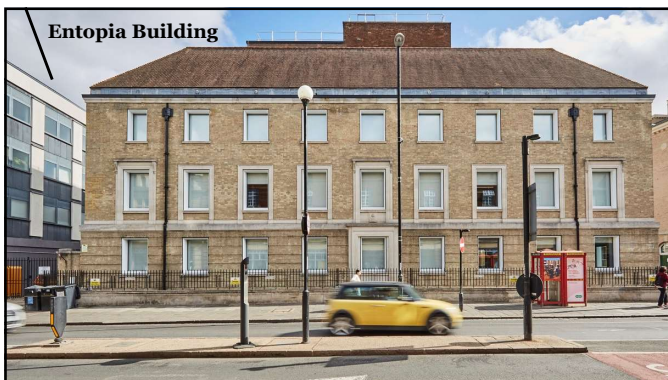
➢ Without causing adverse environmental impact,

➢ At cost neutral or less.

61

### Reuse of materials

62



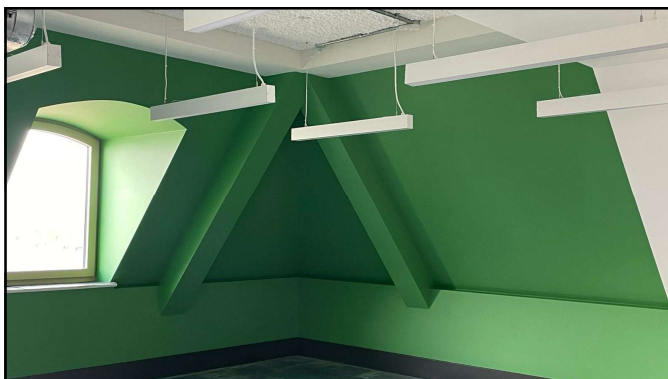
63

### Reused LED lights

"I can't think of any examples where this has been done. It's very tricky, I guess it's something we have to go back to manufacturers and push them to provide an inspection and re-warranty service." Dave Cheshire, Aecom.

- The project is the first to reuse lighting from another fit-out, re-testing and maintaining the warranty on more than 350 LED lights.

64



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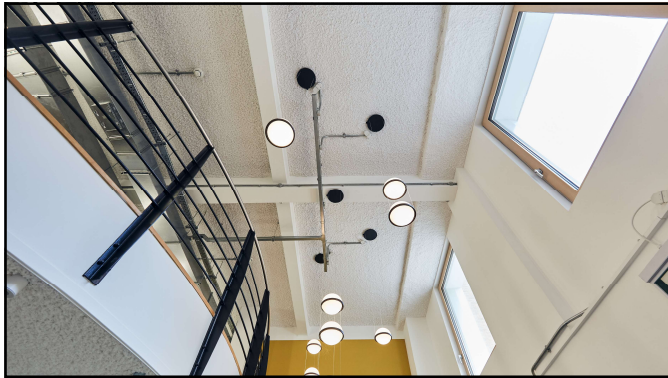
### 3D printed light fittings

- No paint, less parts, no screws
- ≤50% lower carbon footprint on materials
- Closed loop, within factory, re-use of material
- Manufactured and assembled in printing hubs
- Customer = short travel distance
- Significant lower product weight = lower carbon emissions for transport

These light fittings have been incorporated into the:

- Reception area
- Hunter Douglas ceilings
- Above tea points
- Pendants in main areas.

66



67



68

**Reused steel** 15g

- A total of 3.79 tonnes of steel were reused, saving an embodied carbon equivalent of 2 tonnes of CO2e.

69



70

**Reception desk** 15g

- Piercy and Co. designed reception desk with Bill Amberg studio leather salvaged from The Copyright Building
- Returned to original manufacturer, Benchmark Joinery for modification to suit a wheelchair user

71



72

**Take-aways**

Materials are available, you just need to find them

Ask the original manufacturer – you never know!

It's easier to reuse materials than you may think

73

**Questions**

Questions

**Peter Kelly**  
Group Director of Sustainable Operations  
Peter.Kelly@sigltd.com

74

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Logistic and storage solution for circular economy

Michelle French, CAMA

MF – 11:35-11:45 mins

75

Sustainability and the film industry

**CAMA ASSETSTORE**

Posted on 1st September 2020

**Sustainable set and asset disposal – an Impossible Mission?**

One of the key challenges that any production has to contend with when trying to behave sustainably is how to dispose of its set and assets. As a production finishes and the crew disperses, there is often limited time to reuse or recondition a set for future use.

Case Study

Michelle French, Director and  
Micheale Apostolides, Managing Director

**FIS**  
FILMS & VISUALS SECTOR

76

From the set of great dramas...

77

Your assets have a secure new home...

78



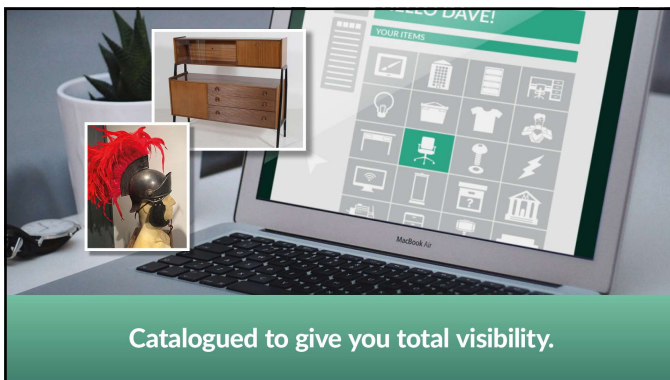
Where props and costumes are the stars of the show

79



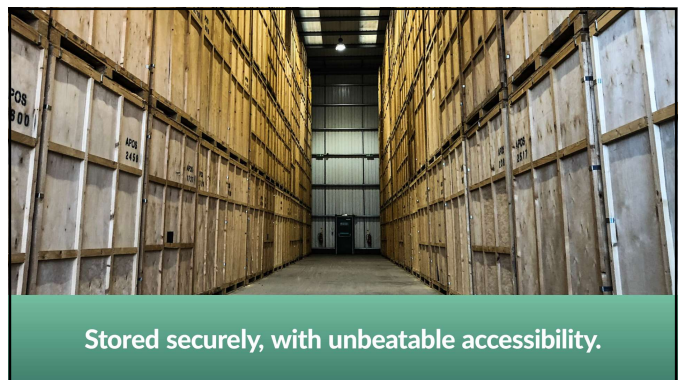
where they get the star treatment they deserve.

80



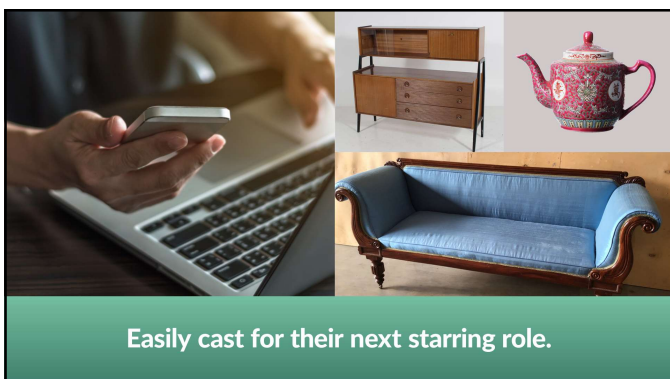
Catalogued to give you total visibility.

81



Stored securely, with unbeatable accessibility.

82



Easily cast for their next starring role.

83

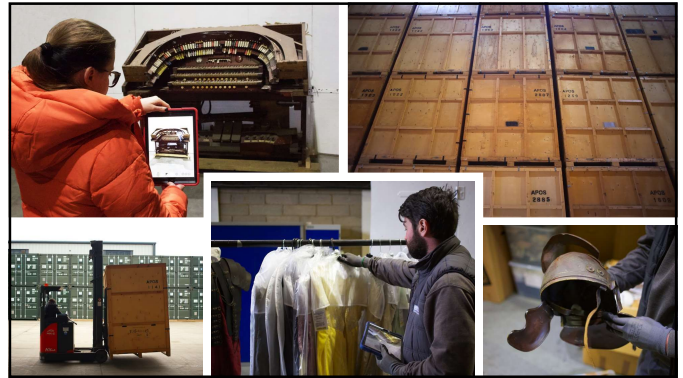


Or kept safe until you choose to reuse, loan or donate them.

84



85



86



87



88



89



90

Our services recognised at BAFTA in 2021

**makers & shakers**  
AWARDS 2021  
Celebrating Excellence in Global Production

CAMA ASSETSTORE  
WINNER  
SUSTAINABILITY AWARD

AWARDS 2021  
Celebrating Excellence in Global Production

SUSTAINABILITY AWARD

**CAMA ASSETSTORE**

91

**WILLMOTT DIXON**

CAMA Assetstore worked with Willmott Dixon Interiors transforming the iconic and popular Grade 2\* EMD Cinema into a multi-purpose entertainment venue for Waltham Forest

We helped to preserve two important heritage items during the renovation process.

92

Every business - no matter their size - has a role to play in tackling climate change.  
Make a commitment today.

Over 90% of the world's businesses are SMEs.  
A greener future must include them.

Halve emissions by  
**2030**

**CLIMATE**  
essentials

93

**FIS**

## Discussion 2:

1. What are the elements of your process that are particularly wasteful?
2. Why is more reuse not done at the moment?
3. What practical solutions are needed to help?
4. What products would best be suited for reuse?
5. Is a focus on Re-use important? Why would we not consider it? Where are the other priorities?

FL: 11:45 - 12:15

94

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## What can we do to accelerate re-use?

Flavie Lowres, FIS Sustainability Champion

MF - 12.15-12:25 mins

95

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Do you think FIS should explore the concept of re-use further?

Start presenting to display the poll results on this slide.

96



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Would you consider including reused products in your fit-out project if you could source them?

Start presenting to display the poll results on this slide.

97

**FIS**

### Poll Time 3

Do you think FIS should explore this concept further?  
Yes No

Would you consider including reused products in your fit-out projects if you could source them?  
Yes No

Are there any other elements of our process that are particularly wasteful?  
Write in

FL - 12.15-12.25 mins

98