

Sustainability in the UK

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NBS Sustainability Survey 2012



NBS carried out their first survey into sustainability and the attitudes and practices of construction professionals. You can see some of the highlights below. A full report will follow in the New Year.

Respondent Breakdown
72% Consultant (such as Architect)
16% Contractor
12% Client

Thinking about your organisation, generally how important are the following aspects of sustainability to the projects you work on?



Top 5 'Very Important' Aspects Of Sustainability In Respondents' Projects



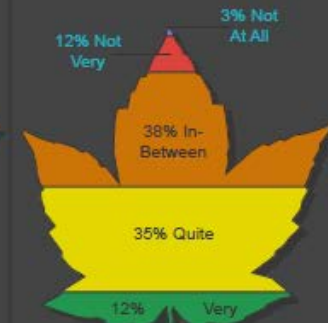
Does your organisation...?



How often is sustainability, as you define it, achieved on your projects?



How confident are you in your knowledge and skills of sustainable design?

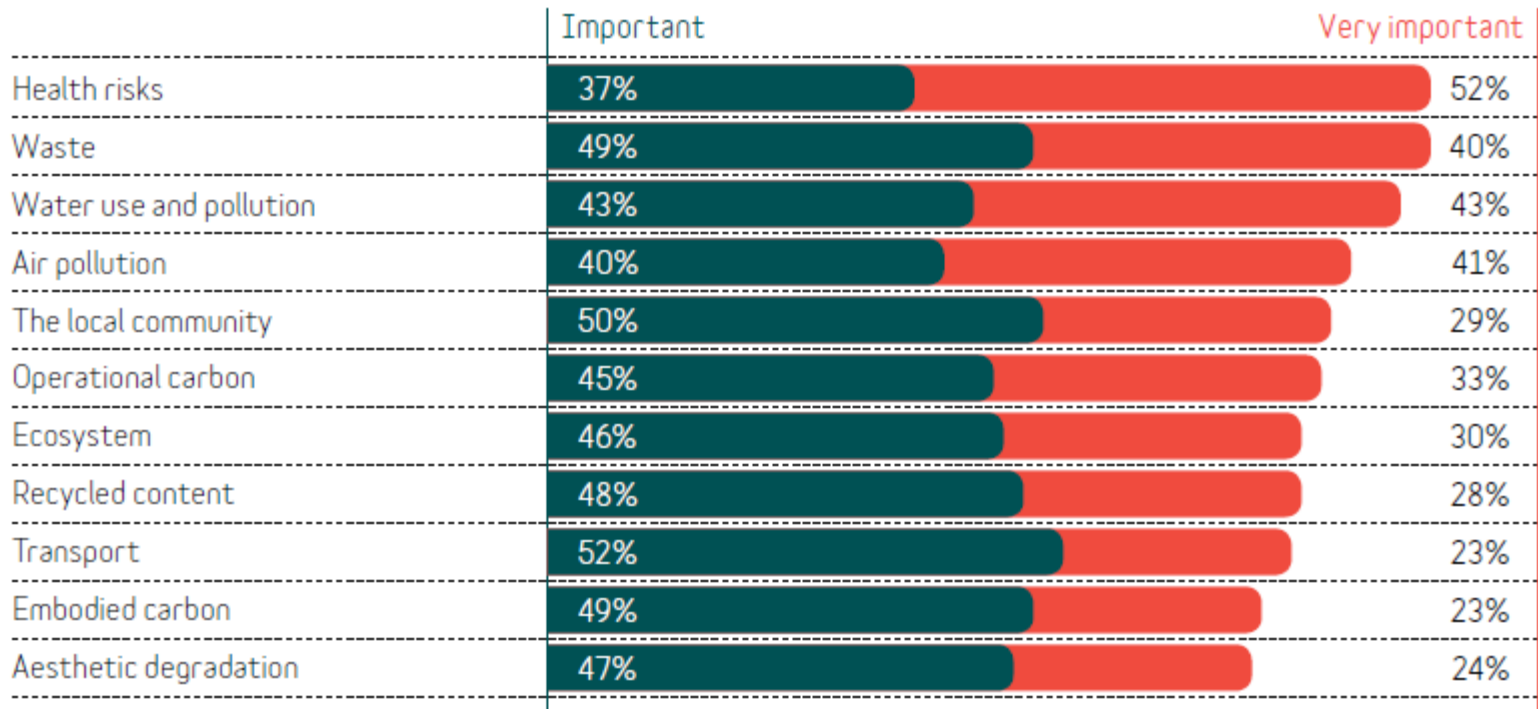




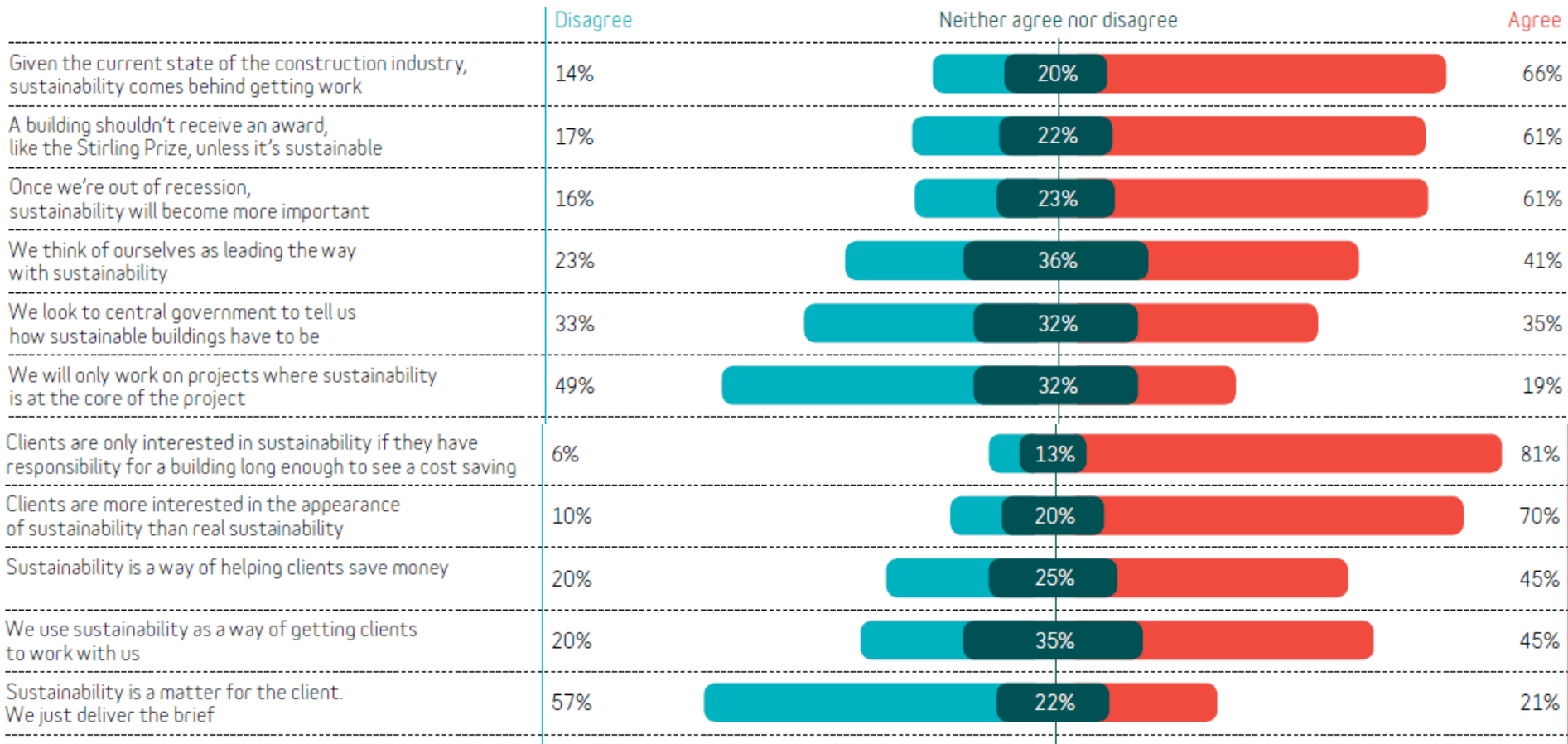
How often is sustainability, as you define it, achieved on your projects?

Always	9%	●
Usually	40%	●
About half the time	29%	●
Rarely	19%	●
Never	2%	●

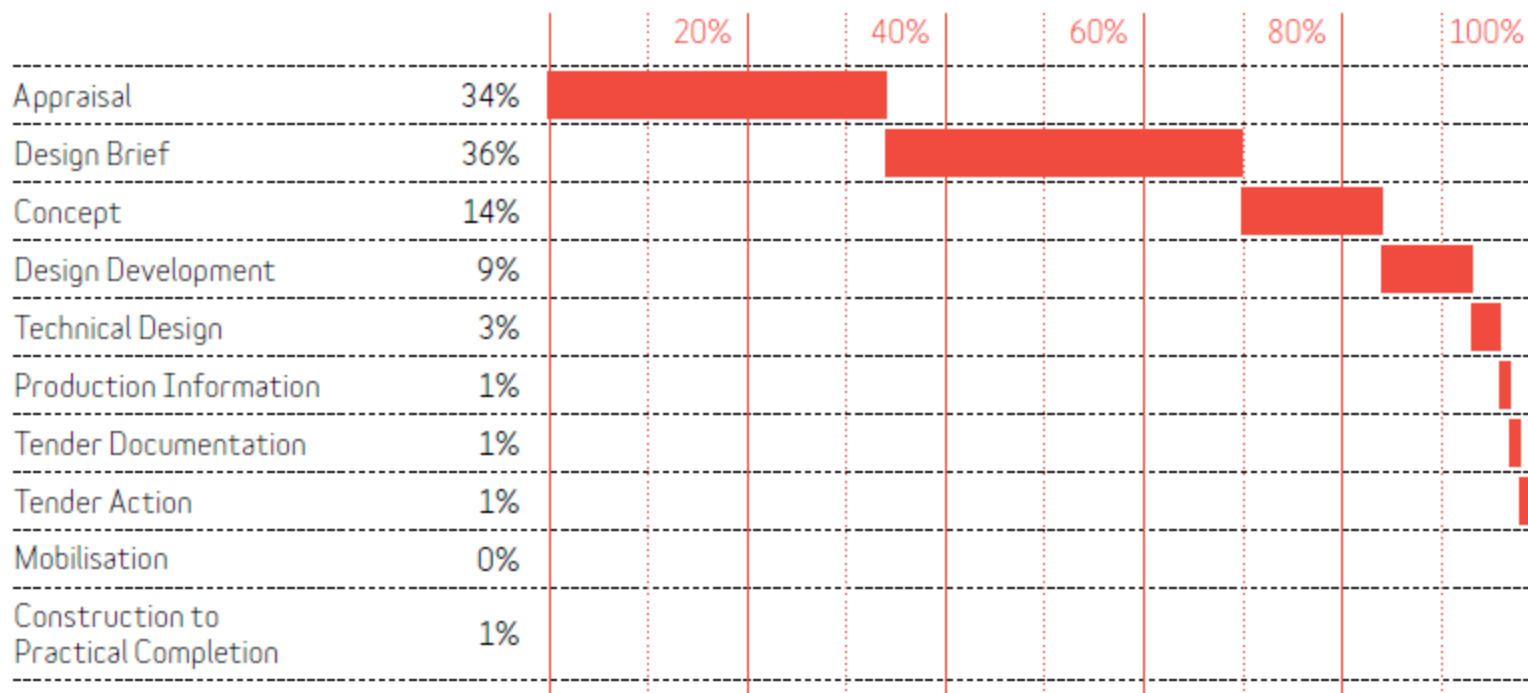
Thinking about your organisation, generally how important are the following aspects of sustainability to the projects you work on?



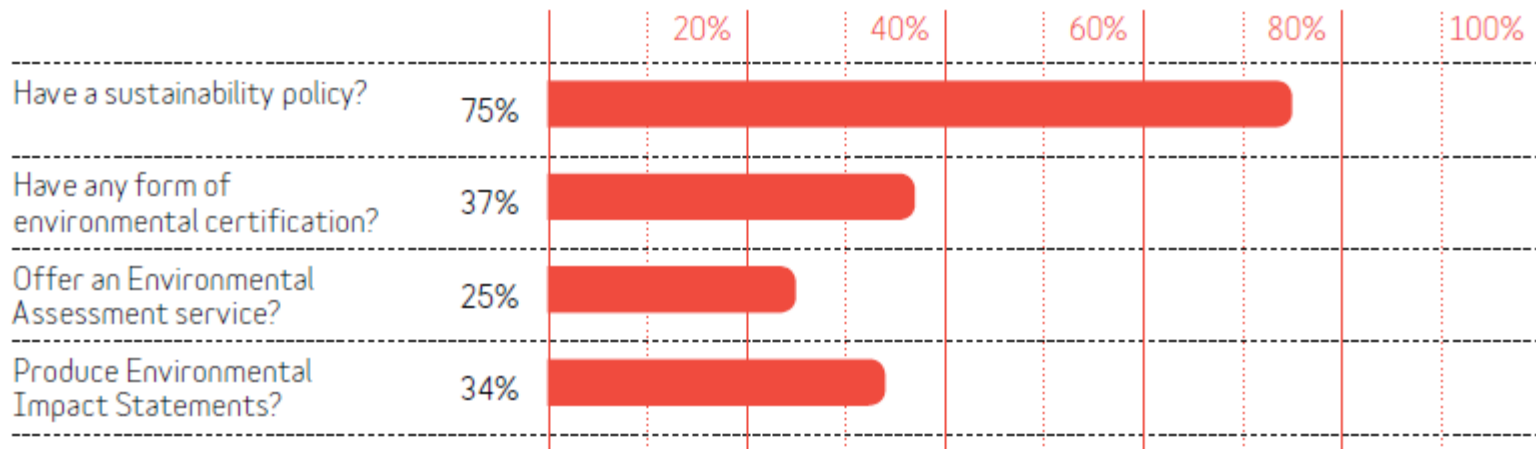
Thinking about your organisation and sustainability, how strongly do you agree with the following statements?



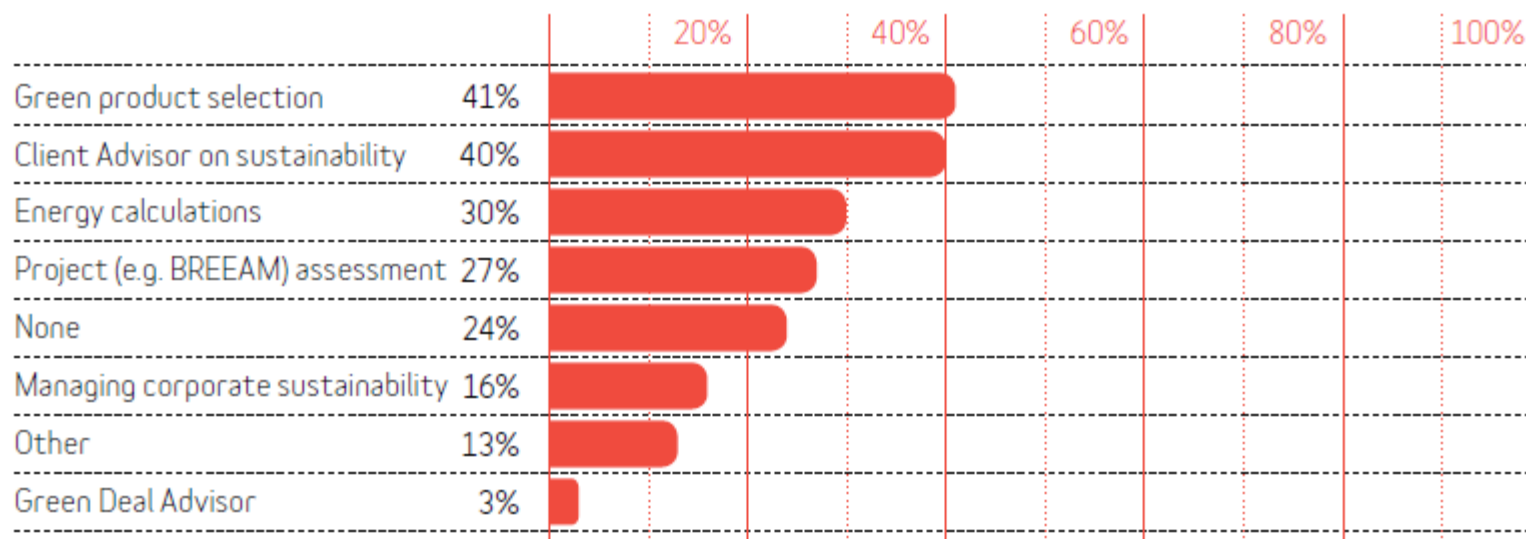
At what stage in the building process do you start to take into account sustainability?



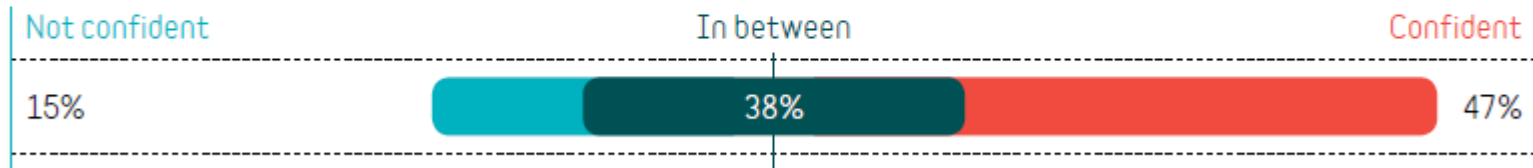
Does your organisation...



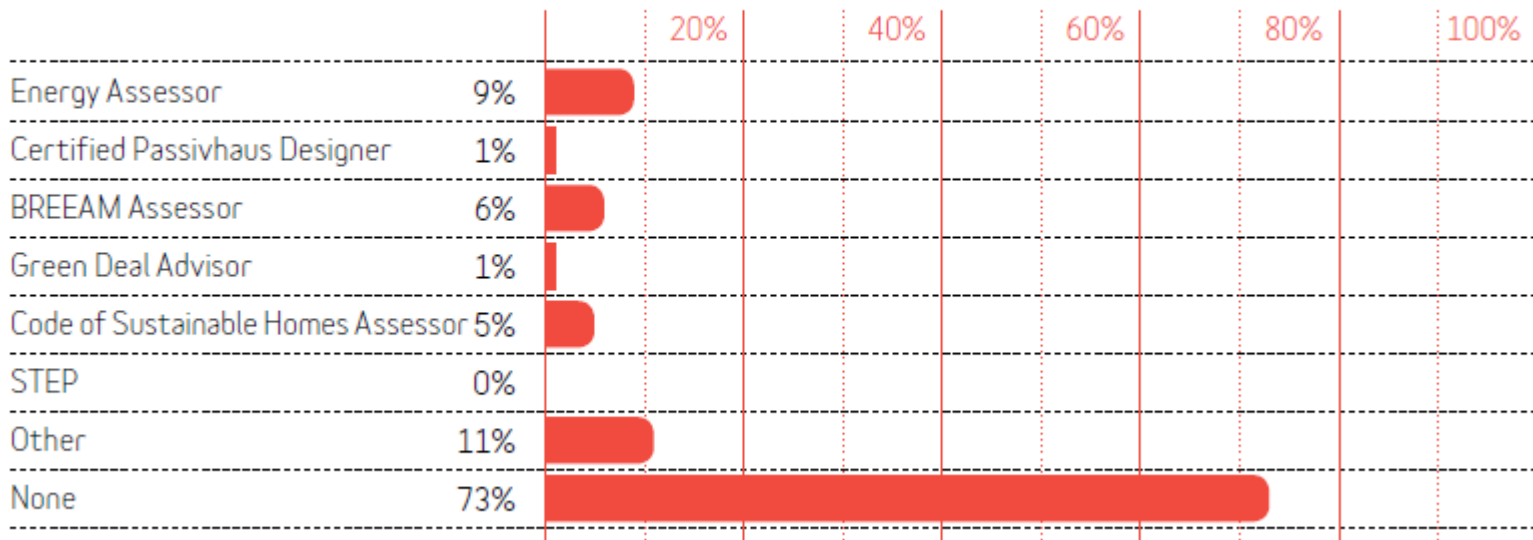
When it comes to sustainability, what roles do you carry out?



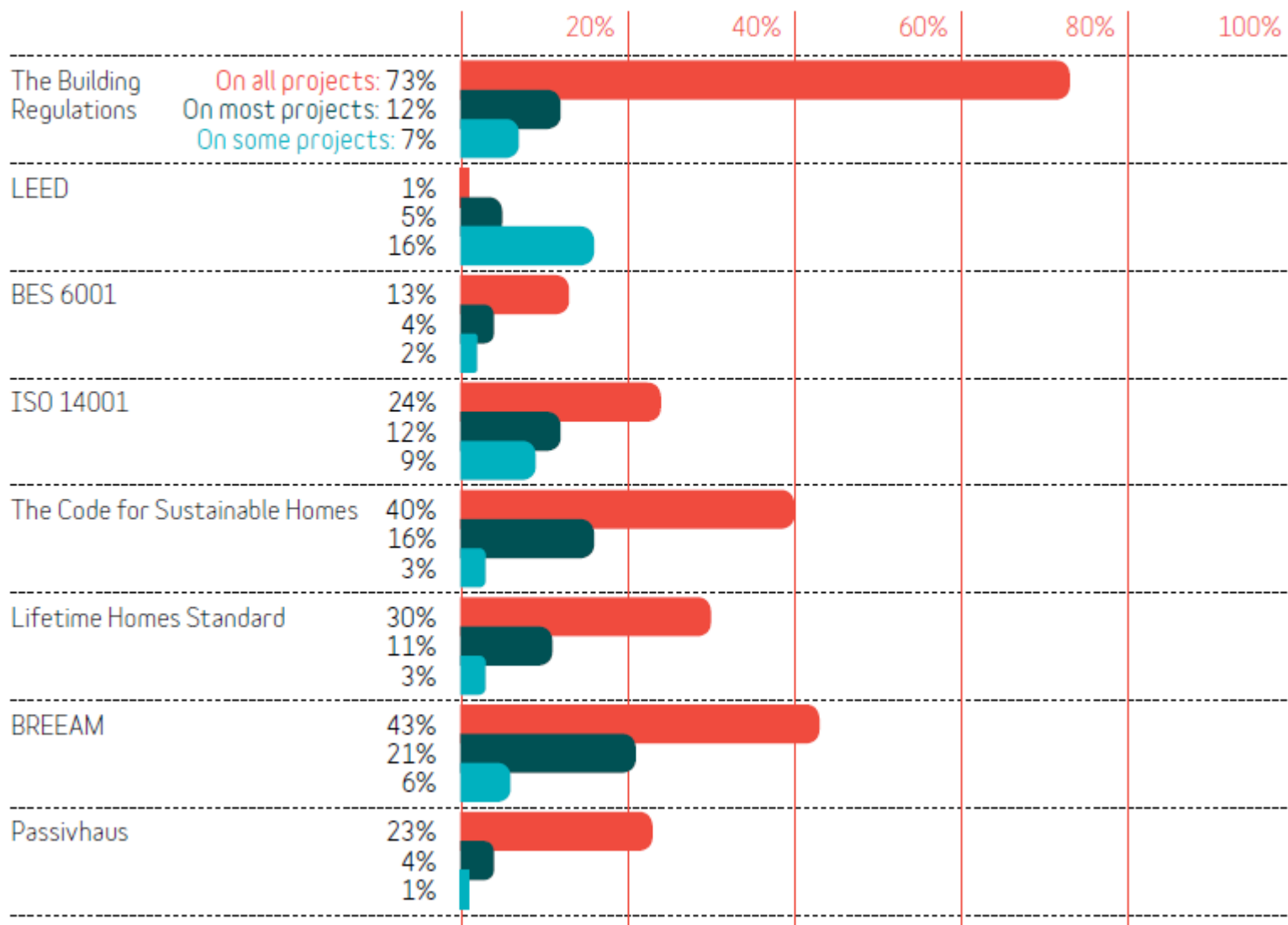
How confident are you in your knowledge and skills of sustainable design?



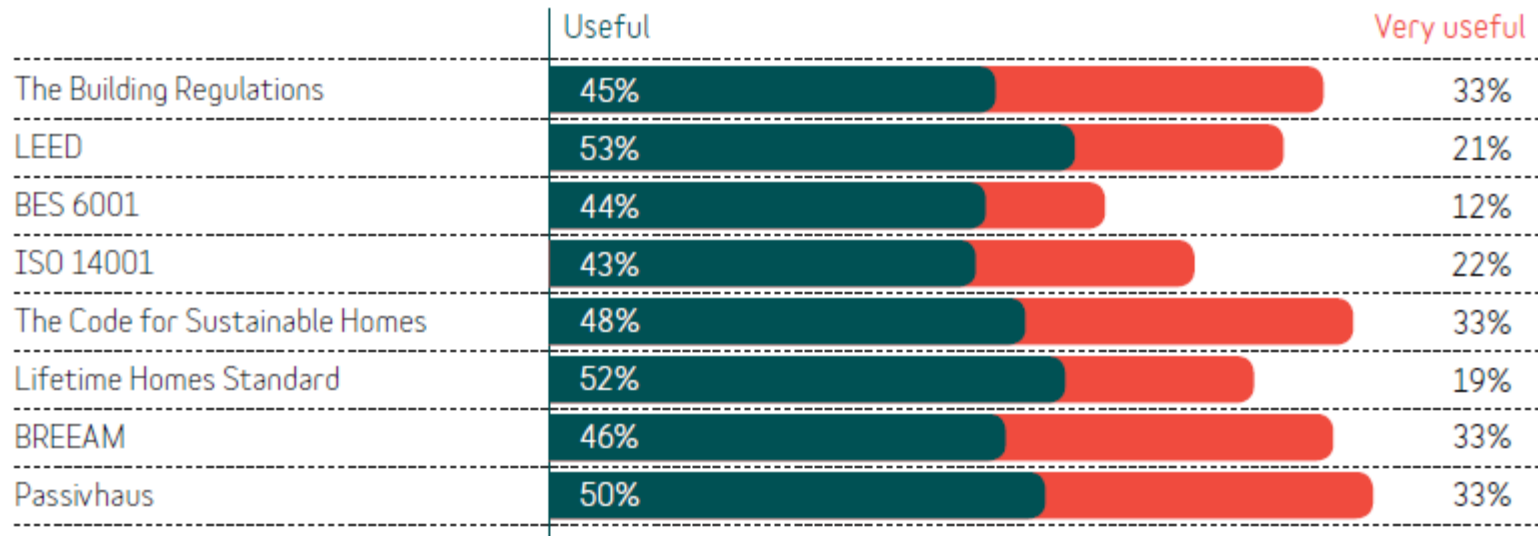
What qualifications do you have in sustainability?



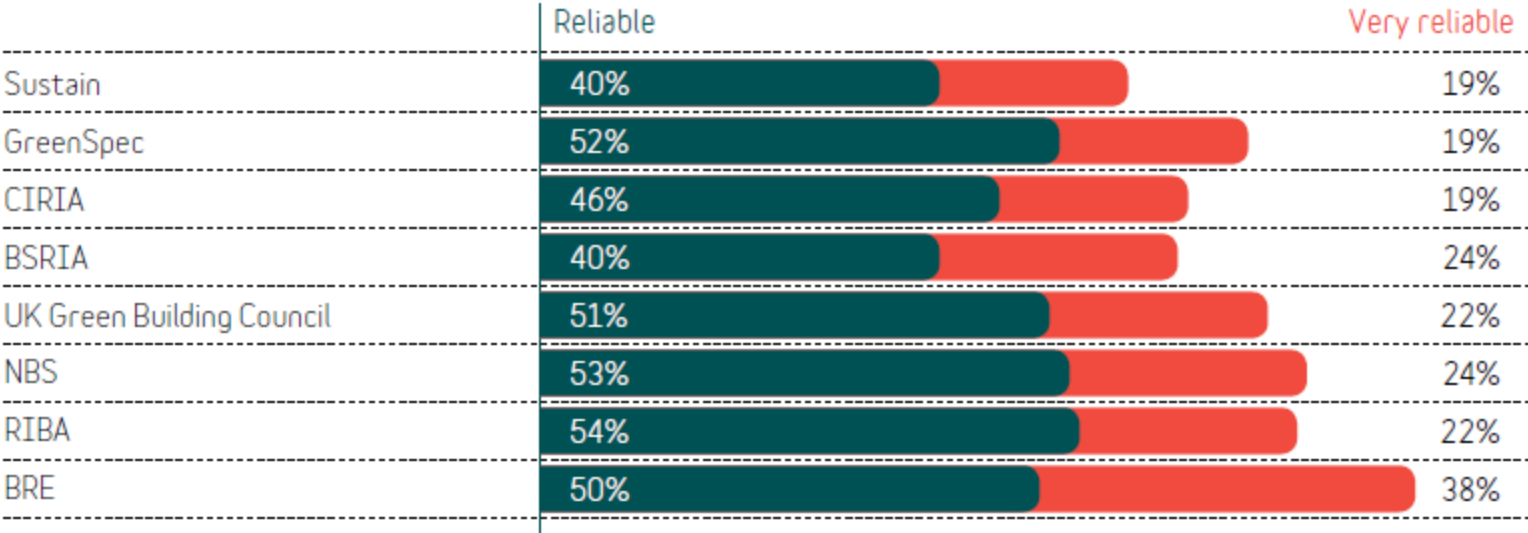
When working on projects, which of the following assessment methods have you used to help you create sustainable building?



How useful would you rate the methods you have used in terms of helping you create sustainable buildings?



Please tell us how reliable you find the following sources of information about sustainability





NBS and BREEAM

BRE environmental assessment

- Three BRE environmental assessment levels:
 - Whole buildings ([BREEAM](#) itself).
 - Elements/systems, pre-configured generic ([Green guide](#)).
 - Products, branded ([Environmental profiles](#)).
- **Lower two** are fabric-only; only **BREEAM** itself deals with fabric & services.
- [IMPACT](#) integrates the **lower two** levels with project geometry.
 - It doesn't give a **BREEAM** compliance report.
- [Uniclass2](#) is not used for object coding, yet.

NBS & National BIM Library

- Four levels of specification in [NBS Create](#):
 - Entities.
 - Elements (*planned*).
 - Systems, branded and generic.
 - Products, branded and generic.
- Three levels of pre-configured geometry in [NBL](#):
 - Elements.
 - Systems, branded and generic.
 - Products, branded and generic.
- NBS Create & NBL cover fabric & services.
- [iCIM](#) *demonstrated* the integration of NBS Create and NBL with project geometry, but fabric-only.
- Draft Uniclass 2 is used for object coding.

Object classes

BRE + project geometry: <i>fabric only</i>	BRE environmental assessment	Uniclass2 <i>object class</i>	NBS Create: <i>fabric & services</i>	National BIM Library: <i>fabric & services</i>	NBS + NBL + project geometry: <i>fabric only</i>
IMPACT	BREEAM: <i>fabric & services</i>	<i>Entities</i>	★	<i>not planned</i>	iCIM
	BRE Green guide to specification: <i>fabric only</i>	<i>Elements</i>	<i>planned</i>	★	
		<i>Systems</i>	★	★	
	BRE Environmental profiles: <i>fabric only</i>	<i>Products</i>	★	★	

BREEAM timeline

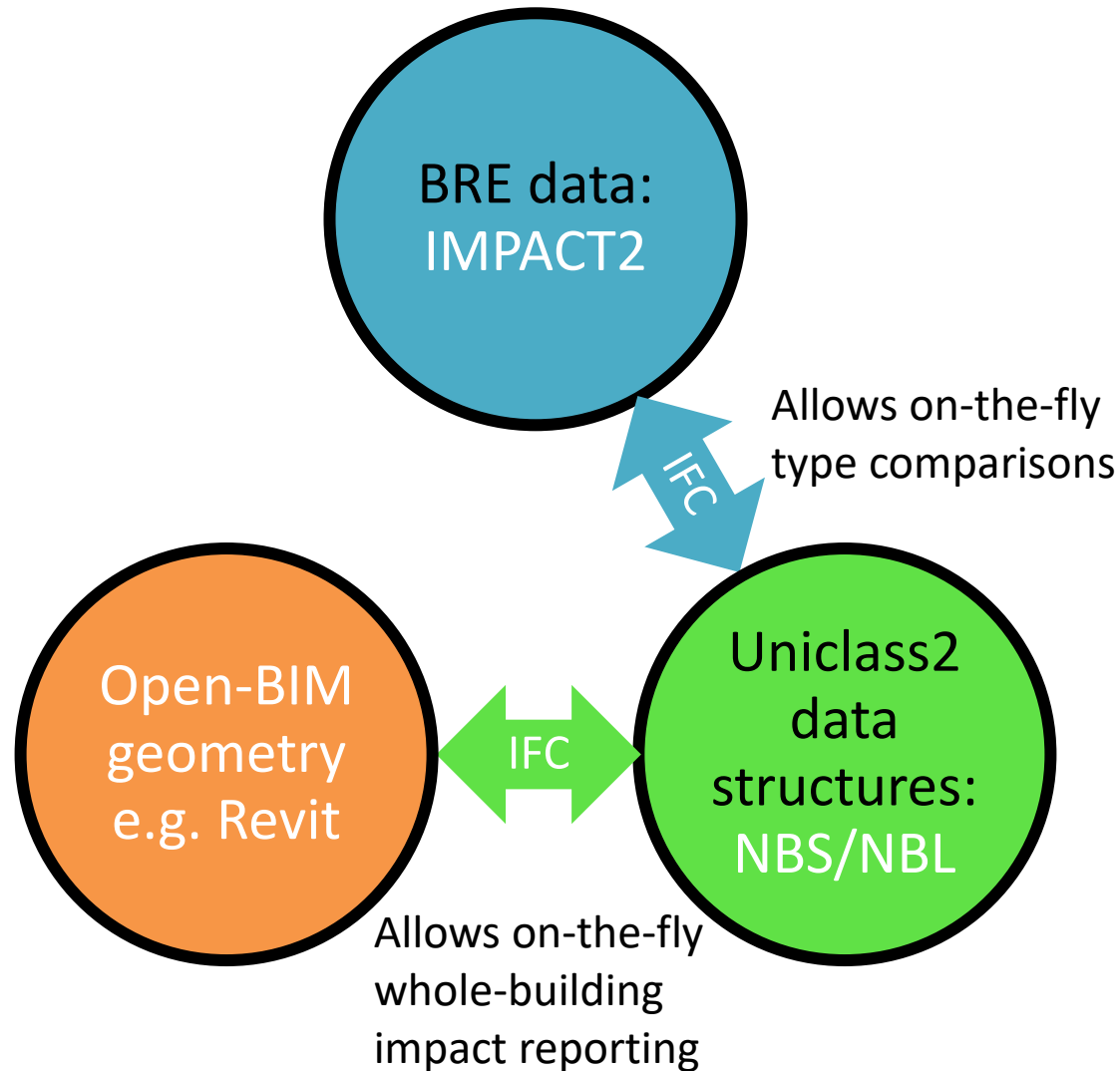
- Three tools with consistent approaches to whole-building environmental assessment:
 - Master planning: [Communities](#).
 - Design & construction: [New construction](#) & [Refurbishment](#).
 - Operation: [In-use](#).

NBS Create timeline

- Three NBS products connected in a BIM-ready chain with a consistent approach to specification:
 - NBS Create Briefing: *preliminary work underway.*
 - NBS Create Specification: launched 2012 – Systems and Products.
 - NBS Create FM: *preliminary work underway.*
- NBS Create Briefing will support BREEAM Communities, and fully support BREEAM New construction & Refurbishment.

Uniclass2 Project phases												
05 Pre-project	10 Feasibility	15 Briefing	20 Concept design	30 Design development	40 Technical design	50 Documentation	60 Construction	70 Contractor O&M	80 Owner O&M	90 Closure	95 Post-project	
BREEAM	Communities	New construction & Refurbishment						In-use				
NBS Create	Briefing: <i>planned</i>											
					Specification							
							FM: <i>planned</i>					
Districts												
Complexes												
Entities												
Activities												
Spaces												
Elements												
Systems												
Products												
Uniclass2 object class												

Bringing them together



Work to be done

- Fabric & services throughout.
- Configurable & pre-configured throughout.
- Branded & generic throughout.
- Uniclass2 into BRE products & services.
- BREEAM 2011, Green guide & Ecoprofiles into NBS Create & NBL.
 - BREEAM 2011 re-training underway.
- Integrate IMPACT, iCIM etc.
- Develop NBS Create Briefing & FM.



What's new

Construction Products Regulation

- Regulation (EU) No 305/2011.
 - <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF>
- Replacing *Construction Products Directive 89/106/EEC* due to inconsistent national implementation.
- From 1 July 2013, CE marking **mandated**.
 - *Guidance Note on the CPR*, April 2012.
 - www.constructionproducts.org.uk/publications/industry-affairs/display/view/construction-products-regulation/

CPR Annex 1

- Basic requirements for construction works:
 - Mechanical resistance and stability.
 - Safety in case of fire.
 - Hygiene, health and the environment.
 - Safety and accessibility in use.
 - Protection against noise.
 - Energy economy and heat retention.
 - Sustainable use of natural resources.

Environmental Product Declarations

- ISO [14025](#):2006 *Environmental labels and declarations – Type III environmental declarations – Principles and procedures.*
- EN [15804](#):2012 *Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products.*
- BRE Global Environmental Profiles:
 - www.bre.co.uk/page.jsp?id=53
 - search at www.greenbooklive.com/search/scheme.jsp?id=246
- GreenSpec EPDs:
 - www.greenspec.co.uk/greenspec-epd.php

Embodied carbon

- TSB-funded projects: Flavour of the month.
- **IMPACT**: Phase 1 launched October 2012 – LCA and LCC in IES VE software, Phase 2 (IFC) due in 2013.
 - BRE environmental data.
 - www.impactwba.com/
- **iCIM**: Prototype launched at Ecobuild 2012.
 - NBS & NBL data structures, ICE carbon data, WRAP waste data.
 - access via Google Chrome at <http://bim.northumbria.ac.uk/iCimWebAppEco/>

Embodied carbon

- Carbon Trust Certification to [PAS 2050](#) & WRI/WBCSD [Greenhouse Gas Protocol](#) Product Standard:
 - www.carbontrustcertification.com/
 - Carbon Reduction Label, e.g. CEMEX Cement.
 - Carbon Label.
 - PAS 2050 only, internal purposes.

Resource efficiency (RE)

- WRAP:
 - www.wrap.org.uk/content/resource-efficient-construction
 - Definition at www.wrap.org.uk/sites/files/wrap/RE%20constriction%20definition.pdf
- Two reports on RE and BIM, by Sweett, RIBAE, BIM Academy and Solstice Associates, prepared for WRAP in 2012 – work continues.

Environmental retrofit

- DECC Green Deal, under Energy Act 2011: In place from 1st October 2012.
 - www.decc.gov.uk/en/content/cms/tackling/green_deal/green_deal.aspx
 - Supply chain guidance at www.decc.gov.uk/en/content/cms/tackling/green_deal/gd_industry/supply_chain/supply_chain.aspx
- BREEAM *Domestic Refurbishment*: Launched June 2012.
 - www.breeam.org/page.jsp?id=228
- BREEAM *Non-domestic Refurbishment*: Not yet launched.
 - www.breeam.org/page.jsp?id=381