

Industry Needs Survey

A study of expected information needs that will be required by the wider building industry in the immediate and medium term
(Abridged for Publication)

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Contact details

Address

Physical address:

Level 1, 7 Falcon Street,
Parnell
Auckland 1052
New Zealand

Postal address:

PO Box 6621, Wellesley Street
Auckland 1141
New Zealand

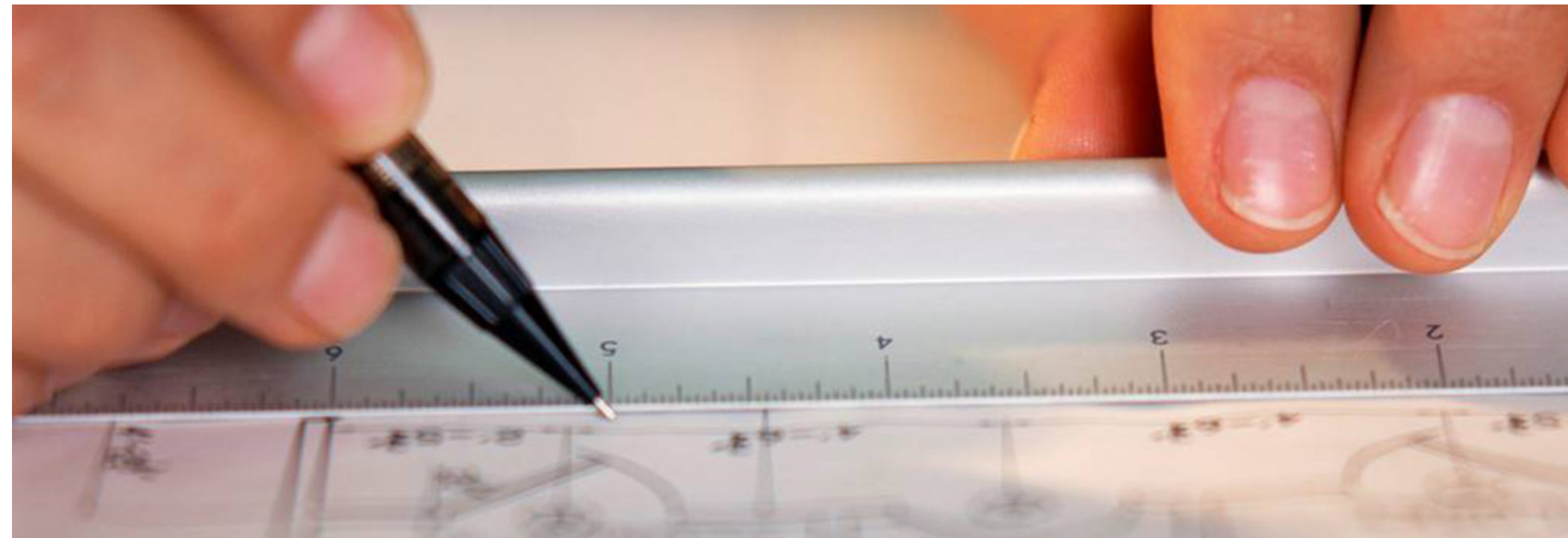
Contact

David Mustard

Senior Consultant
t: +64 9 366 6880
f: +64 9 307 3575
e: david.mustard@tns-global.com

Contents

	Page
Section 1 Background	4 – 5
Section 2 Research Objectives	6 – 7
Section 3 Methodology & Technical Notes	8 – 9
Section 4 Executive Summary	10 – 16
Section 5 Information Needs for the Immediate Future	17 – 26
Section 6 Evaluation of Areas Requiring New Information	27 – 41
Section 7 Longer Term Information Needs	42 – 45
Section 8 Information Sources	46 – 58
Section 9 Product Performance	59 – 63
Section 10 Segmentation of Industry Groups	64 – 70
Section 11 Demographics	71 – 73
Section 12 Appendix	74 – 95



1. Background

Background...

- BRANZ Ltd (BRANZ) exists to provide independent and impartial research, testing, consulting and information for the building industry. Specifically, the organisation aims to provide a complete information service to builders, architects, local authorities, regulatory bodies, manufacturers of building products and educational institutions on all matters relating to construction
- As a service provider, BRANZ has a strong focus on meeting the needs of the industry in terms of industry research that it undertakes, how it communicates with stakeholders and the ease at which industry members can source high quality, reliable technical information. In line with these objectives, an Industry Needs Survey has been conducted for a number of years, the output from which is used as a guide for determining and prioritising research projects
- An overarching objective for BRANZ is to ensure that it continues to add a high level of value and to positively influence the physical environments constructed by the building industry. Additionally, since BRANZ covers a diverse market, the Industry Needs Survey for 2010 was designed to provide information to support a range of key decisions concerning what the industry requires from BRANZ and what knowledge gaps need to be addressed in both the immediate and medium terms



2. Research Objectives

Research objectives in relation to future information needs for the industry are summarised...

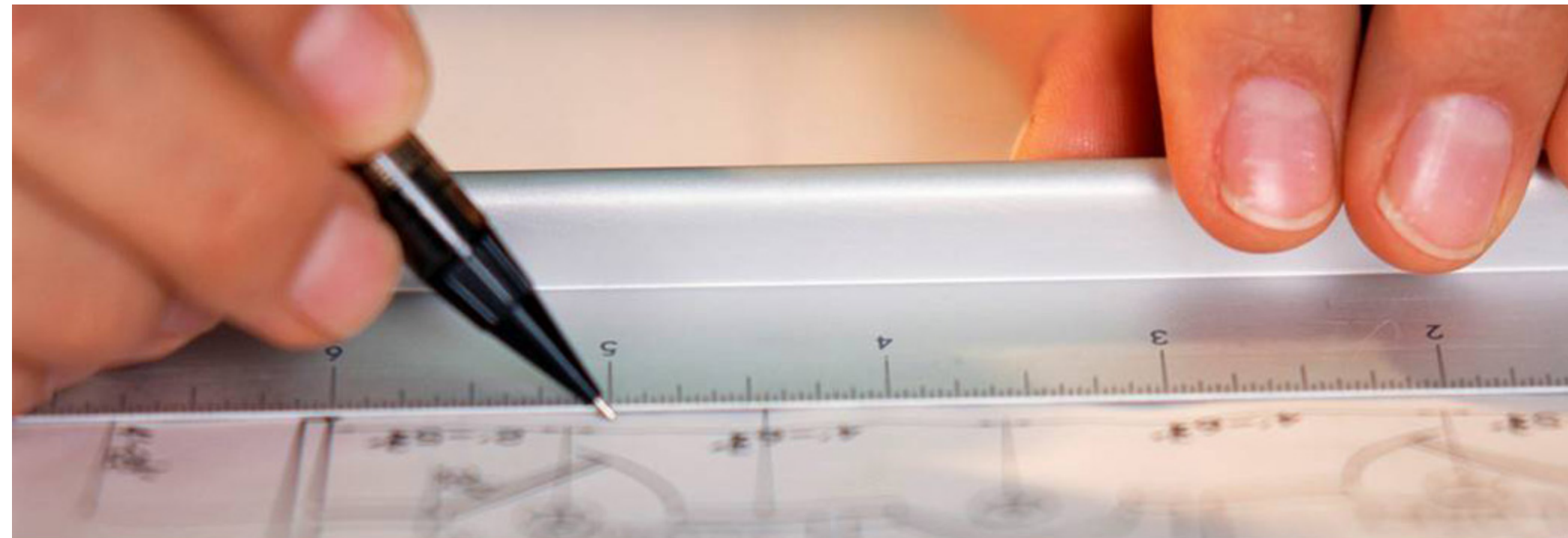
- The 2010 Industry Needs Survey was designed to provide actionable insights concerning the views, opinions and needs of the wider building industry and in particular, how these relate to the specific decisions that BRANZ is looking to make

- The following objectives were defined for the study:
 - To quantify and prioritise the current information needs of building industry groups
 - To provide an indication of expected information needs that industry groups anticipate in the medium term covering the period 4 to 5 years in the future to facilitate research planning
 - To identify whether the needs of innovative subgroups differ from the needs of the wider industry groups

3. Methodology & Technical Notes

The research...

- **The research was conducted between 15th April 2010 and 17th May 2010 using an online questionnaire. Email invitations were sent to prospective respondents. Those invited to complete the survey comprised:**
 - Architects and designers
 - Builders and developers
 - Educators and building officials
 - Local and Government agency representatives
- **Lists of names and email addresses were provided by BRANZ and are understood to represent the population of members of each group**
- **Respondents received two email 'reminders' to assist the response rate. Additionally, respondents were entered into a draw for three cash prizes of \$1000, \$500 and \$250 to provide further incentive to complete the survey**
- **A total of 1082 responses were achieved from the list of industry members representing a response rate of 23% (1082 ÷ 4638). The total response is higher than the 948 achieved in 2008 and considerably higher than the 190 responses in 2007**
- **The maximum expected margin of error for the study using a 90% confidence interval is +/- 2.5%. BRANZ can therefore be confident that the results of the study are highly representative of the industry views and opinions**
- **Respondents have been classified in to occupational groups in consultation with BRANZ to provide meaningful analysis and comparisons**



4. Executive Summary

Key Take-outs

■ Information needs for the immediate future; 1-2 years

- The Building Envelope is seen as the area that industry members collectively place the greatest importance on in terms of creating new information
- Building officials are more concerned about the Building Envelope relative to other groups
- Rain Penetration and Joint & Junction detailing are the two most important subject areas within the Building Envelope
 - Master Builders have greater concerns than other builder groups around:
 - Rain penetration
 - Wind effects
 - Plaster cladding systems, and
 - Wind loadings
- The next most important topic areas that the industry seeks new information for in the next 1-2 years are:
 - Materials Performance
 - Codes & Standards
 - Energy & Insulation
- Builders are more concerned than others about Materials Performance
- Designers have greater interest around Energy & Insulation
- Designers, Builders and Building Officials have a high level of interest in Codes & Standards relative to other industry groups

Key Take-outs

■ Information needs for the immediate future; 1-2 years (Continued)

- Within the Materials Performance area, the most important topics for generating new information are:
 - Assessment of new materials entering the market
 - Durability performance of systems
 - Definitions of failure criteria and life expectancy
 - Durability of timber frames
 - Actions of materials on one another
- Within Energy & Insulation, the most pressing need for new information is in the areas of:
 - Renewable energy systems
 - Efficient heating costs
 - Insulation efficiency
 - Passive heating & cooling
- Within Codes & Standards, industry members most require:
 - Plain English explanations
 - Illustrations and descriptions
 - Updates on new or superseded compliance documentation

Key Take-outs

■ Information needs for the immediate future; 1-2 years (Continued)

- Within the Sustainability & Environment all industry groups consistently identified issues relating to water and water recycling as important
- The major topic areas identified as requiring new information for the short term are consistent with the findings from the 2008 Industry Needs Survey

■ Most immediate information need

- The single most pressing area in need of new information relates to Codes & Standards
- 20% of industry members identified this as the one area that they most need new information for in the immediate future

■ Longer term information needs are highly similar to those for the short term

- Whilst the priority order is slightly different, the four subject areas that industry members expect to require new information for in the longer term of 4-5 years are the same as those for the shorter term
 - Building Envelope
 - Materials Performance
 - Energy & Insulation
 - Codes & Standards
- Builders remain most concerned about Materials Performance and in particular, Master Builders are more concerned relative to other builder groups

Key Take-outs

■ Information sources; the Internet

- Industry members have a strong preference for the Internet as a source of information
- Notwithstanding preferences for the Internet, compliance documents and Codes & Standards remain highly preferred in hard copy
- However, Codes & Standards is the topic area that the industry most prefers to have more information about available via the Internet
- The next topic area that that the industry most wants more information about available via the Internet is building products
- There is a high level of support for the capability of submitting Building Consents via the Internet. Building Officials and Builders are the two groups with the least preference for this option

■ Web based seminars

- There is quite strong support for web based seminars with Continuing Professional Development (CPD) points
- On average, 64% of industry members state that they would watch a web based seminar with CPD points
- Consultants, Designers, Architects and Builders are the groups that are most likely to be attracted to a web based seminar

Key Take-outs

■ Product performance

- There is strong support for the concept that every construction product should be required to have a standard of performance verification that recognises the level of risk associated with that product in use
- Architects and Merchants / Manufacturers indicate less support for the proposal relative to other groups
- Information about product performance is most likely to be sought on behalf of customers. The next most likely groups that product performance information is sourced on behalf of are builders and territorial authorities

■ Performance based building control system

- None of the industry groups believe that the performance based building control system is well understood
- Overall, the industry provided a score of 4.1 out of a possible 10 as an indication as to how well the system is understood
- Architects and Building Officials hold a lower perception as to the level of understanding within the industry relative to other industry groups

Key Take-outs

■ General

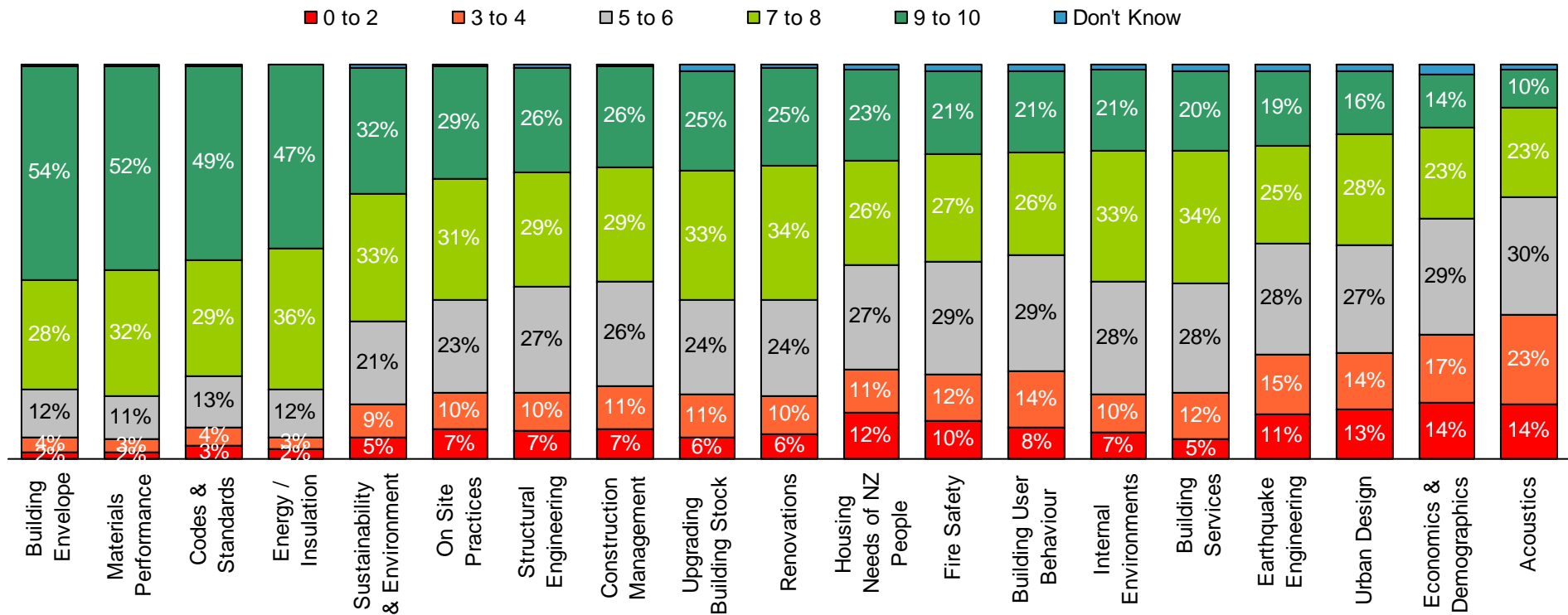
- Industry members are generally open to trying new approaches and methods. Overall, 78% state that they are receptive to new approaches
- In terms of actually adopting new methods, Builders and Building Officials are more likely to retain the tried and proven
- Only about a quarter of the industry members indicate that they regularly read an industry publication
- A segmentation based on the extent to which industry members seek out and adopt new approaches and methods categorised members into three groups:
 - Innovators; those most likely to be early adopters
 - Majority; those that would wait until there was a reasonable mass of acceptance before adopting
 - Stalwarts; those that would hold strongly to established and proven methods
- Analysis of information needs for the next 1-2 years revealed no differences between these groups and the industry as a whole. Priorities remain as;
 - Building envelope
 - Materials Performance
 - Energy & Insulation, and
 - Codes & Standards



5. Information Needs for the Immediate Future

Overall, building envelope is seen as the area that is most important to develop new information about, followed by materials performance, codes & standards, and energy & insulation. A high proportion of respondents indicated that these were very or extremely important

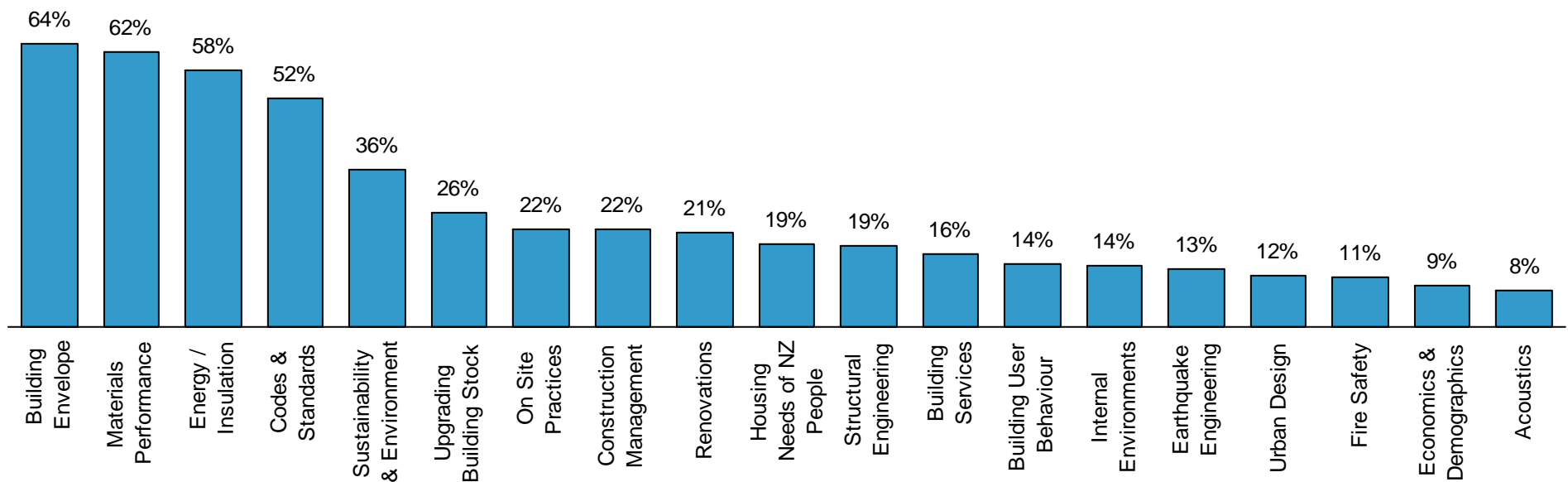
Importance Evaluation of Information for Next Two Years ⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1082; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 extremely important.

This result is similarly reflected across each respondent's top 5 subject areas – with building envelope, materials performance, energy / insulation, and codes & standards revealed as the most important areas to develop new information

Importance Evaluation of Information for Next Two Years ⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1082; (2) Q1 Information you are likely to require in the next year or two. [Top five areas selected based on highest importance ratings]

Table of mean importance measures for areas most requiring new information ⁽³⁾

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽¹⁾	Consultant ⁽²⁾	Educator	Merchant/ Manufacturer/ Supplier	Total
Building Envelope	8.3	8.5	8.3	8.8 ▲	7.2	7.8 ▼	8.2	7.8	8.3
Materials Performance	8.0	8.1	8.6 ▲	8.1	7.6	7.8 ▼	7.4 ▼	7.6	8.2
Energy / Insulation	7.9	8.4 ▲	8.2	7.9	7.8	7.5 ▼	8.1	7.5	8.0
Codes & Standards	7.3 ▼	8.3 ▲	8.2 ▲	8.5 ▲	7.8	7.5 ▼	7.9	6.8 ▼	7.9
Sustainability	7.4 ▲	7.1	7.0	6.7 ▼	7.0	6.9	8.2 ▲	7.2	7.1
On Site Practices	5.7 ▼	6.2 ▼	7.4 ▲	6.5	5.9	6.8	6.7	6.8	6.7
Renovation	6.4	6.8	6.9 ▲	6.8	6.3	6.4 ▼	7.1	6.6	6.7
Upgrading	7.4 ▲	6.9	6.4 ▼	7.0	5.6	6.6	6.8	6.6	6.7
Construction Management	5.6 ▼	6.3	7.0 ▲	6.3	6.3	6.9	6.7	6.4	6.6
Structural Engineering	5.7 ▼	6.3	7.3 ▲	7.1	6.4	6.3	6.4	6.0	6.6
Building Services	6.4	6.9	6.6	7.0 ▲	6.5	6.2	6.6	5.3 ▼	6.5
Internal Environment	6.2	6.9 ▲	6.5	6.7	6.3	6.2	7.1	6.2	6.5
User Behaviour	5.8 ▼	5.9	6.4	6.8 ▲	6.8	6.0	6.5	5.9	6.2
Fire Safety	5.7 ▼	6.3	6.2	7.7 ▲	5.7	6.0	5.9	5.4 ▼	6.2
Housing Needs	6.0	6.4	6.5 ▲	6.1	6.0	5.9	6.5	5.4 ▼	6.2
Earthquake Engineering	5.3 ▼	6.0	6.1	6.8 ▲	5.0	6.0	5.8	5.6	5.9
Urban Design	6.4 ▲	5.8	5.9	5.7	6.4	5.3 ▼	6.6 ▲	5.3	5.9
Economics & Demographics	5.2	5.2	5.8 ▲	5.1	5.7	5.5	5.8	5.4	5.5
Acoustics	5.5	5.5	5.1	5.4	5.4	5.1	5.1	5.0	5.2
Base	157	143	408	99	23	160	41	50	1081

Notes: (1) Caution low base; (2) Consultants include Surveyors, Engineers and Project Managers; (3) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

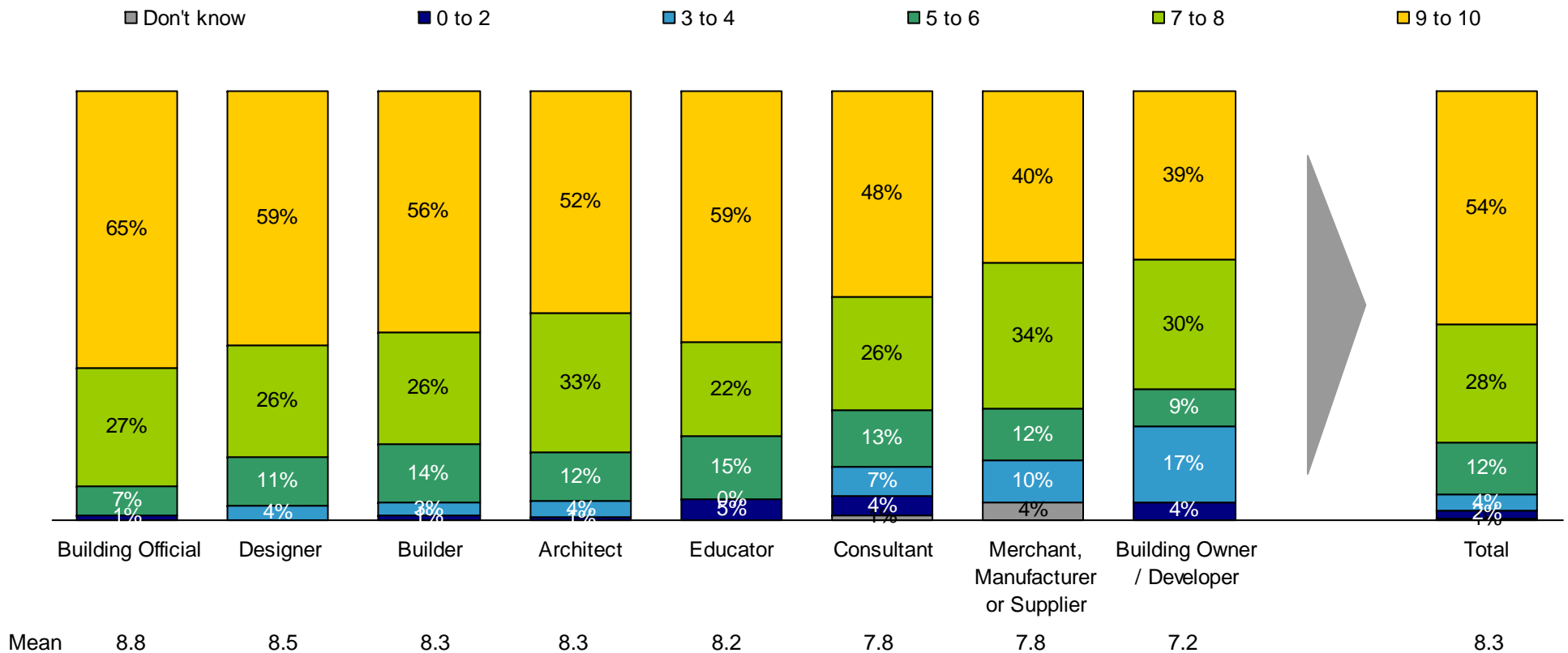
Table of mean importance measures for areas most requiring new information⁽²⁾

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽¹⁾	Total
Materials performance	8.5	8.5	8.8	8.5	8.6	8.6
Building envelope	8.4	8.5	8.4	8.0	8.6	8.3
Energy / insulation	8.3	8.4	8.3	7.9	7.7	8.2
Translating codes and standards	8.2	7.9	8.3	8.2	8.2	8.2
Practices on site	7.2	7.2	7.7	7.2	6.9	7.4
Structural engineering	7.2	7.3	7.4	7.2	7.3	7.3
Sustainability and environmental issues	7.2	6.6	7.3	6.8	7.3	7.0
Construction management	6.7	7.1	7.4 ▲	6.5	6.9	7.0
Retrofit renovations	7.3	6.1 ▼	7.0	6.9	7.6	6.9
Building services	6.6	6.5	7.0	6.2 ▼	7.0	6.6
Internal environments	6.5	6.1	6.8	6.3	6.5	6.5
Housing needs of NZ people	6.7	6.1	6.9 ▲	6.0 ▼	5.6	6.5
Upgrading / re-use of existing building stock	6.7	6.0	6.6	6.1	6.5	6.4
Building user behaviour / expectations	6.6	6.1	6.5	6.2	6.8	6.4
Fire safety science and engineering	6.3	6.4	6.5	5.6 ▼	6.4	6.2
Earthquake engineering	6.4	5.7	6.3	5.8	5.6	6.1
Urban design	6.2	5.1 ▼	6.3 ▲	5.5	5.9	5.9
Economics & demographics	5.8	5.8	6.0	5.3 ▼	5.9	5.8
Acoustics	5.4	4.8	5.3	4.5 ▼	4.8	5.1
Base	90	52	154	94	18	408

Notes: (1) Caution low base; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Importance of Building Envelope information in next 2 years. Building officials are significantly more concerned about generating new information on this subject relative to other groups

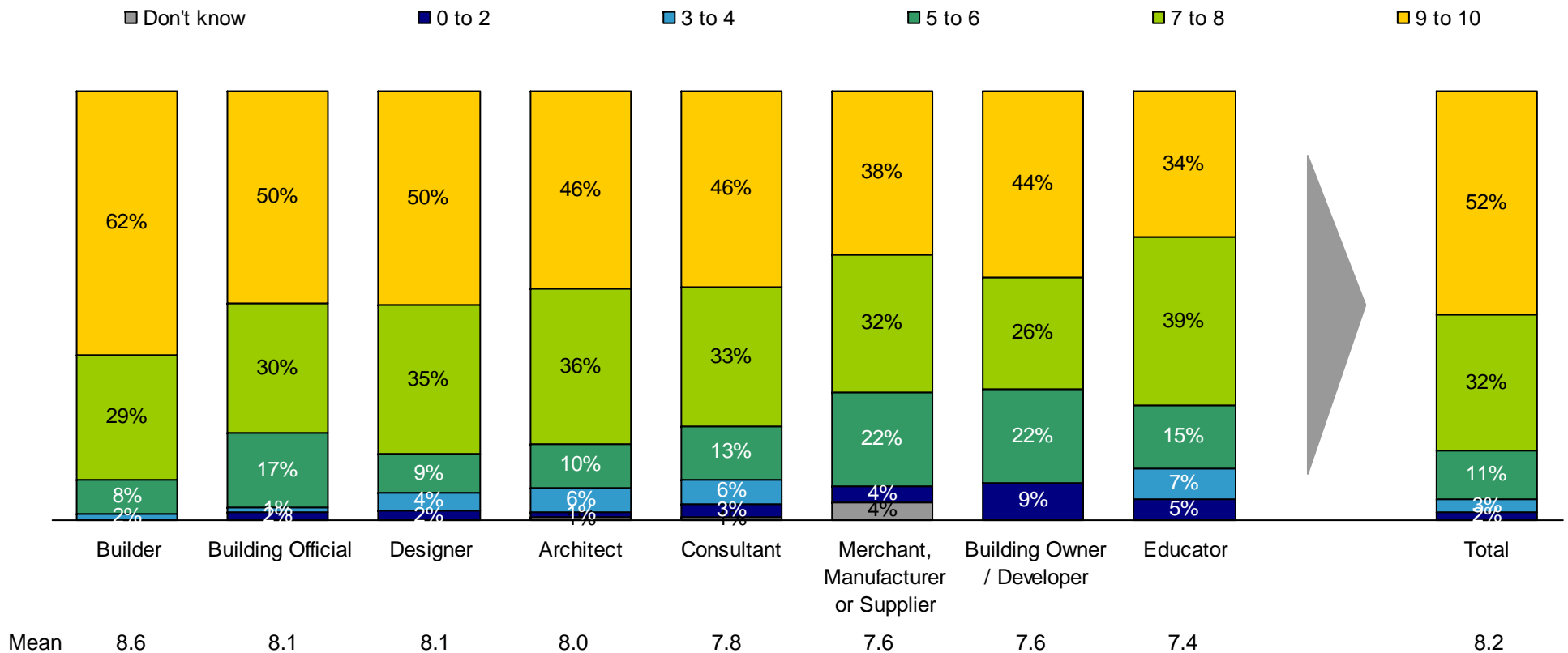
Importance of Building Envelope Information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Importance of Materials Performance information in the next 2 years is of greatest concern to builders while consultants and educators have less concern about creating new information on the subject

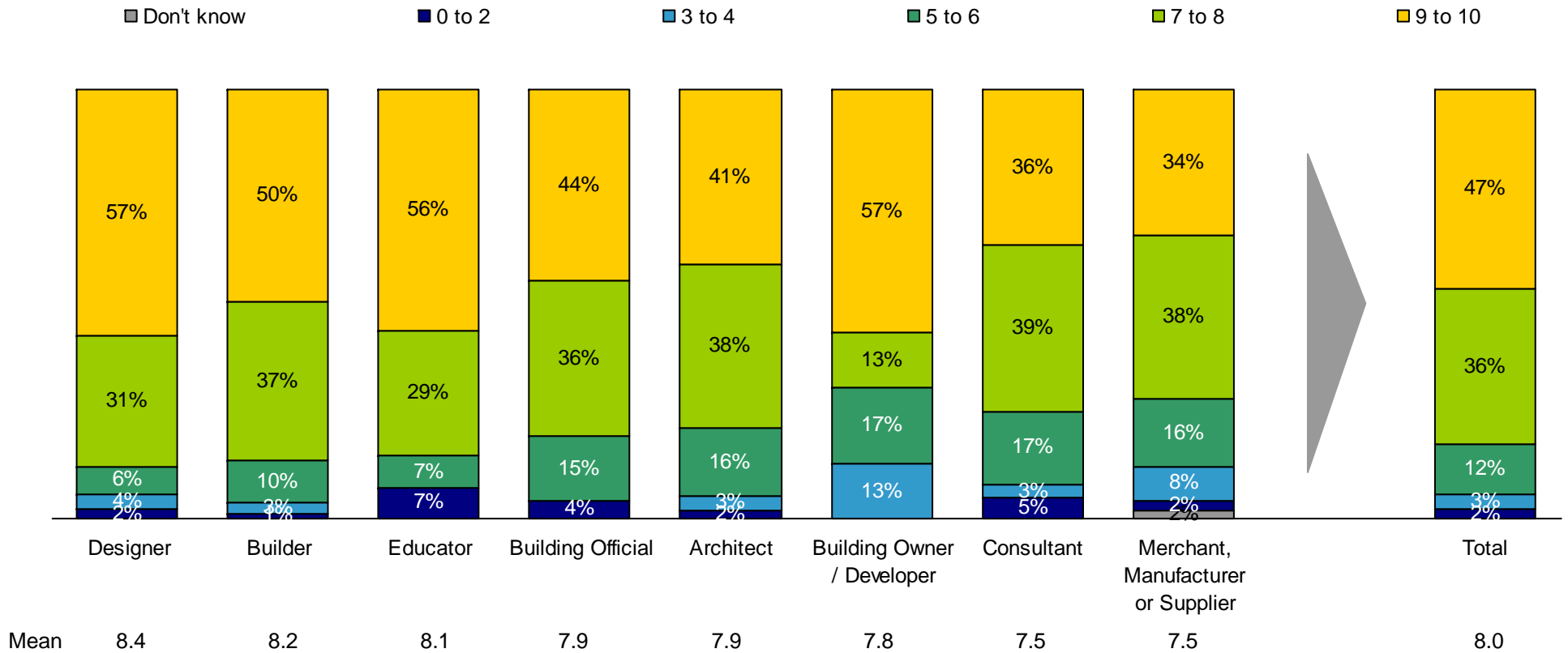
Importance of Materials Performance Information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Designers are significantly more concerned about creating new information in the field of Energy / Insulation within the next 2 years relative to others

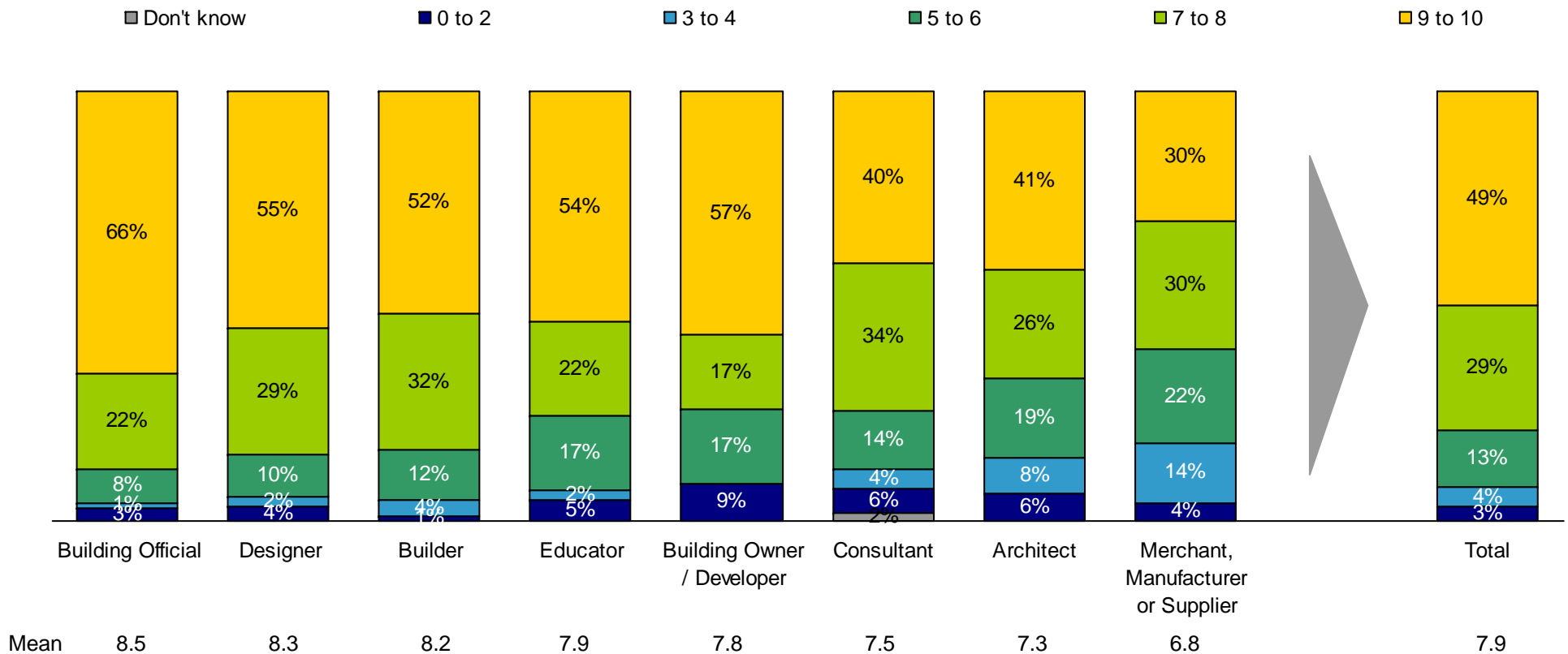
Importance of Energy / Insulation Information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Importance of Codes and Standards information in the next 2 years is of significantly greater concern to officials, designers and builders

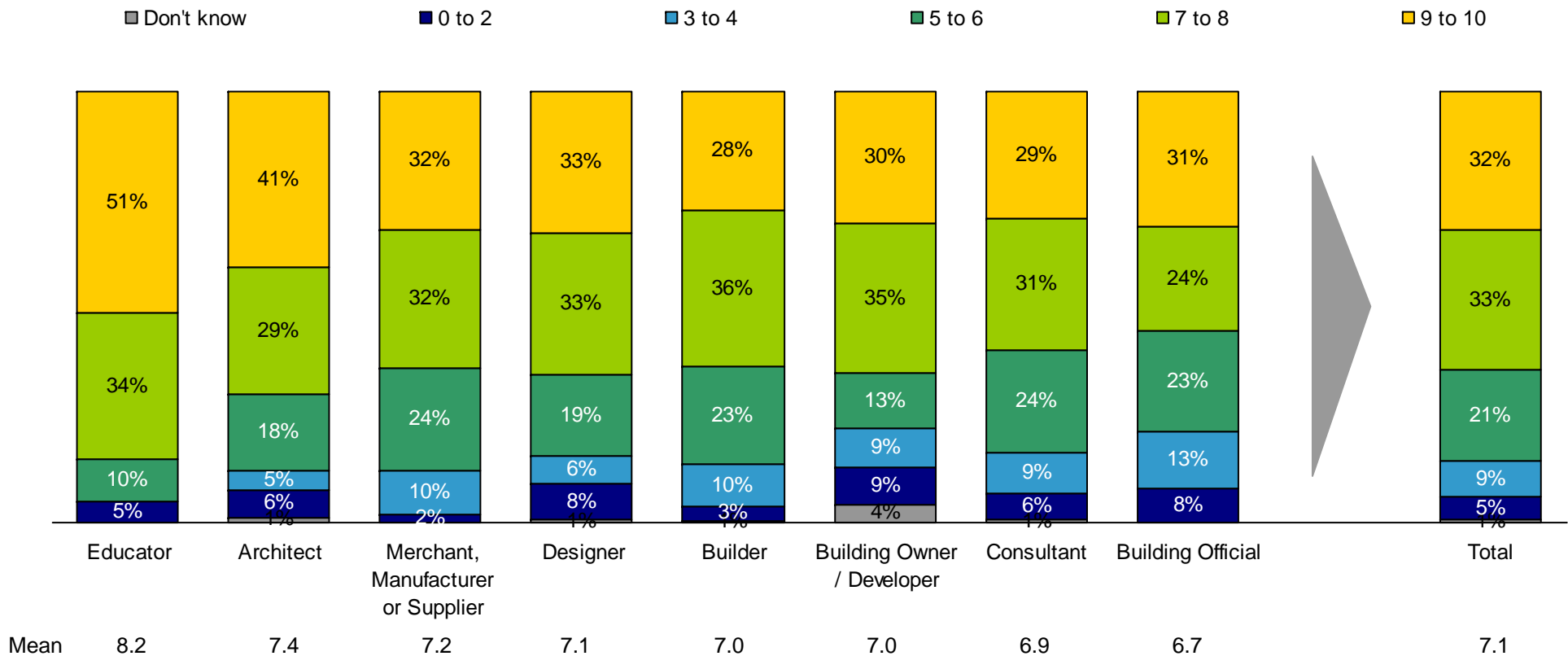
Importance of Codes and Standards Information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Architects and educators stand out as the two groups most concerned about creating new information concerning Sustainability and Environment information in the next 2 years

Importance of Sustainability and Environment Information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important



6. Evaluation of Areas Requiring New Information

Within the subject of Building Envelope, rain penetration and joint detailing have been identified as being of greatest concern. Architects see rain penetration, wind effects, plaster cladding systems and wind loadings as being less important relative to the industry average

Building Envelope – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Rain penetration	8.5 ▼	9.0	9.2	9.2	8.8	8.9	9.2	8.4	9.0
Joint & Junction detailing	8.7	9.0	9.1	9.1	9.0	8.6	9.5	8.3	8.9
Wind effects at entrances / openings	7.1 ▼	7.9	8.2 ▲	8.2	7.0	7.6	8.3	6.3	7.8
Plaster cladding & EIFS systems	6.0 ▼	7.1 ▼	8.2 ▲	8.5 ▲	7.8	7.9	7.6	6.5	7.6
Wind loadings on cladding	7.1 ▼	7.7	7.6	8.0	6.6	7.7	7.5	6.5	7.5
Base	110	103	252	72	9	97	23	26	692

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

A closer evaluation of builders indicates that Master Builders have a greater concern to generate new information about most of the sub-topics than do other groups of builders

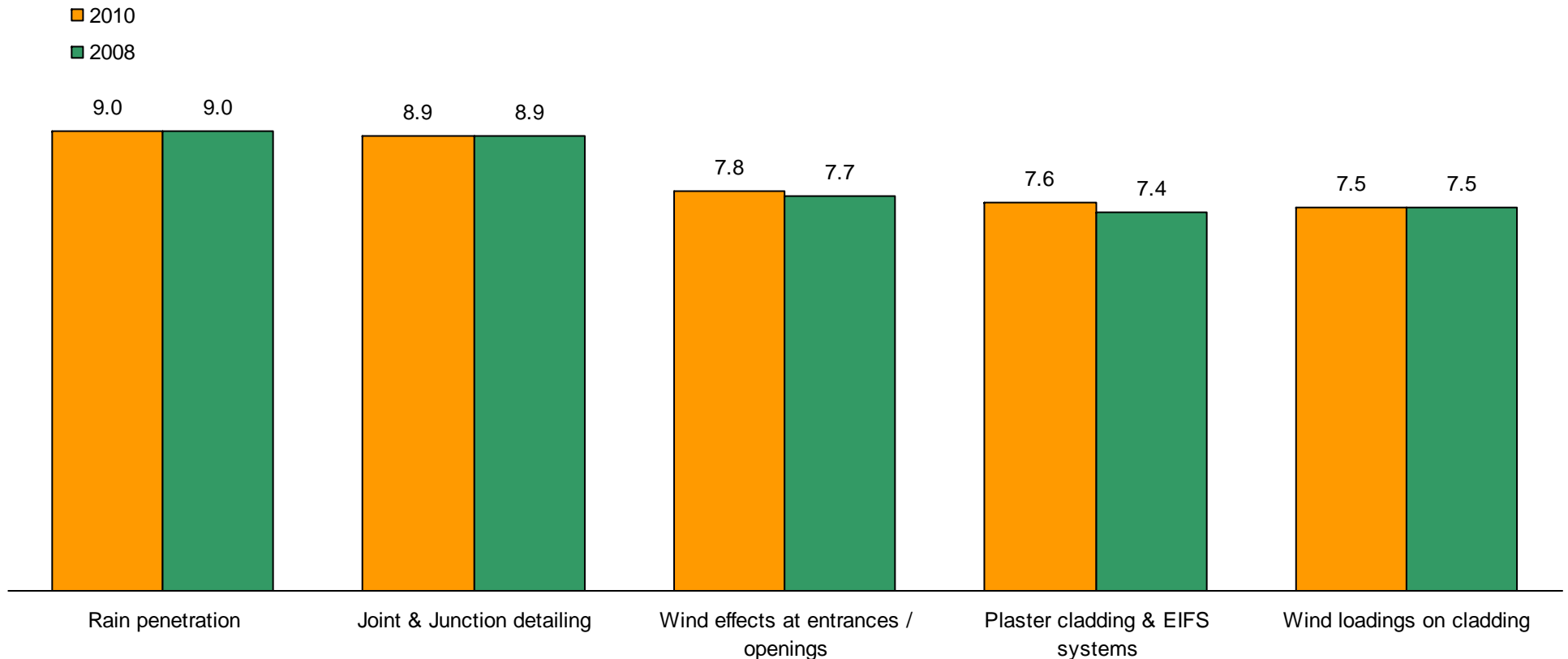
Building Envelope – Importance Evaluation of Information in Next Two Years

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽¹⁾	Total
Rain penetration	9.1	8.9	9.5 ▲	8.9	9.4	9.2
Joint & Junction detailing	9.2	9.0	9.2	9.0	9.1	9.1
Wind effects at entrances / openings	8.1	7.9	8.6 ▲	8.0	7.8	8.2
Plaster cladding & EIFS systems	8.0	8.2	8.7 ▲	8.1	7.2	8.2
Wind loadings on cladding	7.5	7.3	8.0 ▲	7.3	7.7	7.6
Base	60	35	88	56	13	252

Notes: (1) Caution low base; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

There has been very little change in the importance of the Building Envelope subjects between 2008 and 2010, with rain penetration and joint & junction detailing remaining the most important subjects within the area of Building Envelope

Importance of Building Envelope - 2008 vs 2010 ⁽¹⁾⁽²⁾



Notes: (1) Base size 2010 n = 690, 2008 n=309; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

All sub-topics within Materials Performance have been evaluated as important areas to develop new information about in the next two years. Builders stand out as having higher concern for durability of timber frames and accelerated test methods

Materials Performance – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Assessment of new materials entering the market	8.6	8.8	9.0	9.3	9.1	8.7	8.6	7.9	8.9
Durability performance of systems (including building services)	7.7 ▼	8.2	8.5	8.5	8.7	8.3	8.9	7.8	8.3
Definitions of failure criteria and service life	7.9	8.3	8.4	8.8	9.0	8.1	7.5	7.7	8.3
Durability of timber frames	7.4 ▼	8.5	8.6 ▲	8.5	9.1	7.8 ▼	8.4	7.0	8.2
Actions of materials on one another	7.5 ▼	8.1	8.4	8.5	8.7	8.1	7.6	7.8	8.2
Reliability of accelerated test methods	7.1	7.5	8.3 ▲	8.5	8.6	7.7	7.1	7.5	7.9
Base	98	88	296	51	10	88	17	23	671

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Results are highly consistent across the groups of builders. The only exception is in relation to the evaluation of definitions of failure criteria by building practitioners

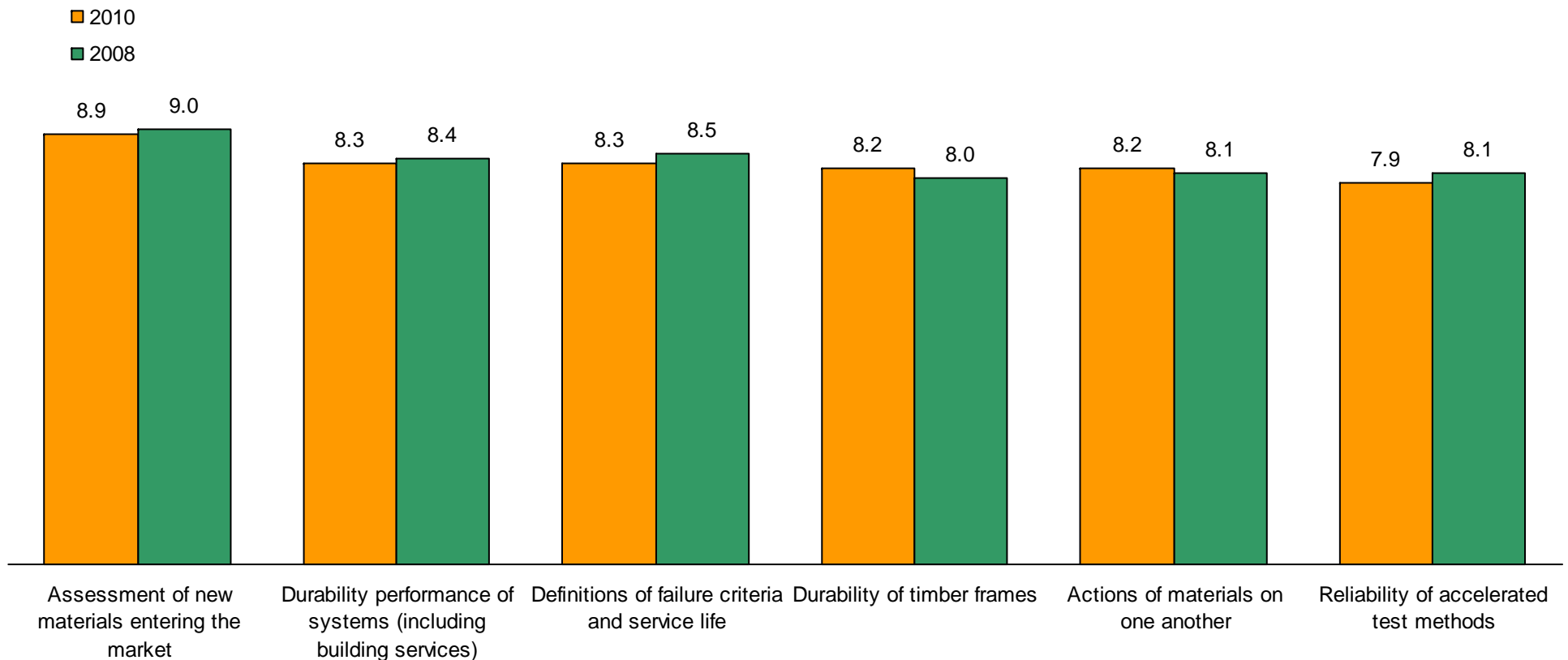
Materials Performance – Importance Evaluation of Information in Next Two Years

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽²⁾	Total
Assessment of new materials entering the market	9.0	8.5	9.1	9.0	9.3	9.0
Durability performance of systems (including building services)	8.5	7.9	8.7	8.4	8.7	8.5
Definitions of failure criteria and service life	8.5	7.7 ▼	8.8	8.3	8.3	8.4
Durability of timber frames	8.6	8.3	8.8	8.3	8.5	8.6
Actions of materials on one another	8.6	7.9	8.4	8.4	8.7	8.4
Reliability of accelerated test methods	8.3	8.1	8.5	8.1	8.0	8.3
Base	64	37	114	66	15	296

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Comparing the recent study with 2008 reveals a similar level of importance being placed on the various subjects

Importance of Materials Performance - 2008 vs 2010 ⁽¹⁾⁽²⁾



Notes: (1) Base size 2010 n = 671, 2008 n=333; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Renewable energy, efficient heating, insulation and passive heating / cooling are areas that have been identified by all groups as important for the immediate future

Energy / Insulation – Importance Evaluation of Information for Next Two Years

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Renewable energy systems, including solar	8.5	8.5	8.6	8.0	9.4	8.1	9.1	7.6	8.4
Energy efficient heating and cooling	8.4	8.4	8.4	8.0	9.2	8.1	8.3	8.1	8.3
Insulation efficiency as installed	7.9	8.2	8.2	8.4	8.5	8.0	8.2	7.9	8.2
Passive heating / cooling	8.3	8.4	8.0	7.8	9.0	7.9	8.6	7.6	8.1
Innovative water heating systems	7.8	8.1	8.3 ▲	7.9	8.9	7.4 ▼	8.5	6.9	8.0
Retrofit of energy efficiency measures	7.9	8.1	7.8	8.2	8.3	7.7	8.5	8.0	7.9
Impact of moisture on insulation	7.4	7.9	8.1	8.1	8.5	7.6	7.9	7.1	7.9
Cost / benefits of double / triple glazing	7.3 ▼	8.0	8.1 ▲	7.5	7.7	7.5	8.0	7.7	7.8
Smart Meters	6.1	6.3	6.8 ▲	6.4	7.7	6.4	6.3	6.3	6.5
Base	95	102	244	46	12	82	21	27	630

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Examining the various groups of builders reveals that there is a high level of consistency across the various topic areas

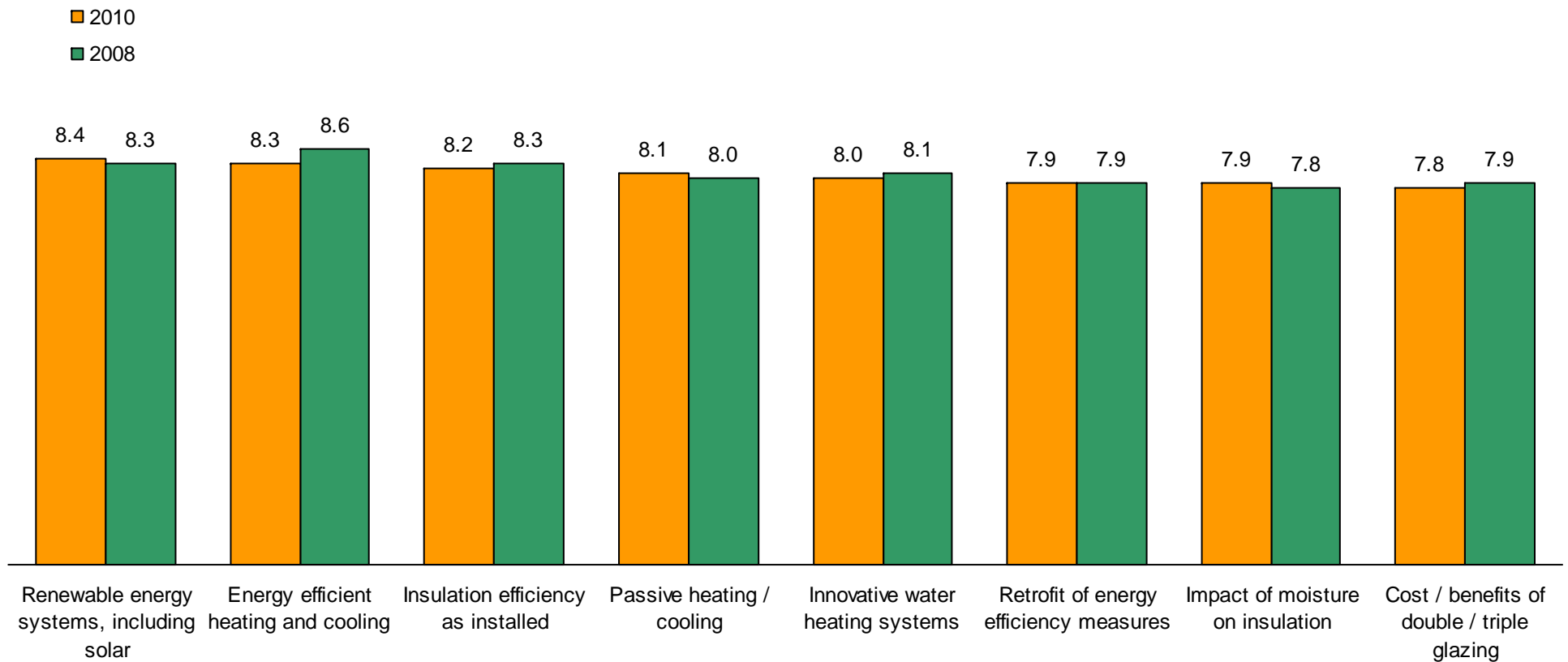
Energy / Insulation – Importance Evaluation of Information in Next Two Years

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽²⁾	Total
Renewable energy systems, including solar	8.5	8.6	8.8	8.2	8.9	8.6
Energy efficient heating and cooling	8.1	8.2	8.7	8.5	7.9	8.4
Insulation efficiency as installed	8.1	7.7	8.5	8.1	8.1	8.2
Passive heating / cooling	7.9	8.0	8.3	7.8	8.0	8.0
Innovative water heating systems	8.2	7.9	8.7	8.3	7.9	8.3
Retrofit of energy efficiency measures	7.9	7.3	7.9	7.8	7.4	7.8
Impact of moisture on insulation	7.8	8.2	8.4	8.0	7.3	8.1
Cost / benefits of double / triple glazing	7.9	8.4	8.4	7.5 ▼	8.3	8.1
Smart Meters	6.4	6.9	7.5 ▲	6.4	4.5	6.8
Base	60	33	90	54	7	244

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Topics within the energy and insulation area are also shown to be virtually identical to importance scores provided in the 2008 survey

Importance of Energy / Insulation - 2008 vs 2010 ⁽¹⁾⁽²⁾



Notes: (1) Base size 2010 n=630, 2008 n=352; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Plain English explanations and illustrations of compliant details and solutions are the two most important areas within the Codes and Standards area. The industry groups have all provided highly similar evaluations for each of the topics

Translating Codes & Standards – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Plain English explanations of Code and Standards	8.5	8.9	9.1	9.1	9.4	9.0	8.8	9.2	9.0
Illustrations and descriptions of compliant details and solutions	8.5	9.2	9.0	9.0	8.9	8.8	8.7	8.4	8.9
Updates on new and superseded compliance documents	8.2	8.7	8.7	8.5	8.6	8.2	7.7	7.9	8.5
Relationships between code clauses and standards, and secondary reference standards	7.9	8.4	8.2	8.7	7.9	8.2	7.7	7.9	8.2
Seminars and workshops on the application of codes and standards to design & construction	7.5	8.3	7.7	8.6 ▲	8.1	7.9	8.7	7.4	7.9
Base	64	83	234	62	13	72	16	16	560

Evaluation of codes and standards was added in the 2010 survey so there is no comparable measures available within the 2008 study

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Viewed by builder groupings reveals that there is a high degree of consistency in the way that the various sub-topics have been evaluated

Translating Codes & Standards – Importance Evaluation of Information in Next Two Years

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽²⁾	Total
Plain English explanations of Code and Standards	9.0	9.3	9.3	8.9	9.3	9.1
Illustrations and descriptions of compliant details and solutions	9.1	9.0	9.1	9.0	9.0	9.0
Updates on new and superseded compliance documents	8.7	9.2	8.6	8.6	9.3	8.7
Relationships between code clauses and standards, and secondary reference standards	8.3	8.3	8.3	7.8	9.0	8.2
Seminars and workshops on the application of codes and standards to design & construction	7.7	8.4	7.7	7.5	7.9	7.7
Base	46	26	89	61	12	234

Evaluation of codes and standards was added in the 2010 survey so there is no comparable measures available within the 2008 study

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

All industry groups have consistently identified water issues and recycling as important

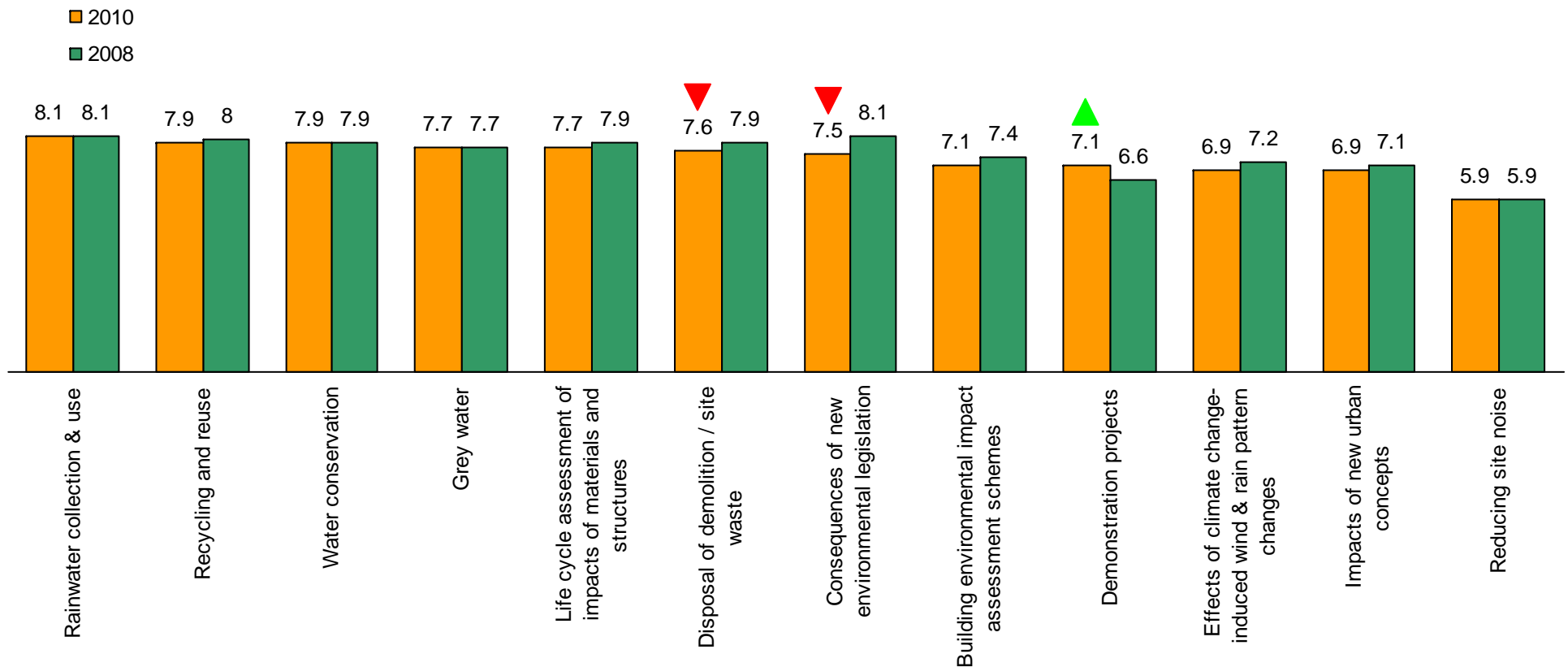
Sustainability & Environment – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Rainwater collection & use	8.1	8.6	8.3	8.1	8.2	7.8	7.4	7.1	8.1
Recycling and reuse	7.8	8.0	8.3	7.2	7.9	7.6	8.5	7.4	7.9
Water conservation	7.8	8.3	7.8	7.9	7.9	7.9	8.0	6.8	7.9
Grey water	7.8	8.2	7.9	8.2	8.0	7.5	6.8	6.7	7.7
Life cycle assessment of impacts of materials and structures	8.0	7.7	7.9	8.0	7.3	7.2 ▼	7.3	7.9	7.7
Disposal of demolition / site waste	7.0 ▼	7.8	7.9	8.1	7.8	7.4	7.7	6.7	7.6
Consequences of new environmental legislation	7.5	7.8	7.5	8.4	8.0	7.2	7.6	6.2	7.5
Building environmental impact assessment schemes	6.9	7.0	7.0	7.7	7.7	7.3	7.6	7.0	7.1
Demonstration projects	7.1	7.1	7.0	7.4	7.8	6.9	7.7	6.5	7.1
Effects of climate change-induced wind & rain pattern changes	6.8	7.0	7.0	7.9	6.6	6.8	7.4	5.8	6.9
Impacts of new urban concepts	7.3	7.2	6.8	7.5	7.1	6.5	6.9	5.5	6.9
Reducing site noise	5.3 ▼	6.3	6.4 ▲	6.6	5.1	5.7	6.0	5.4	5.9
Base	82	54	108	27	12	58	22	19	382

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

The disposal of waste water and impact of environmental legislation are now considered to be a lower priority than two years ago while demonstration projects have increased in importance. Importance scores for other topics are all similar to 2008

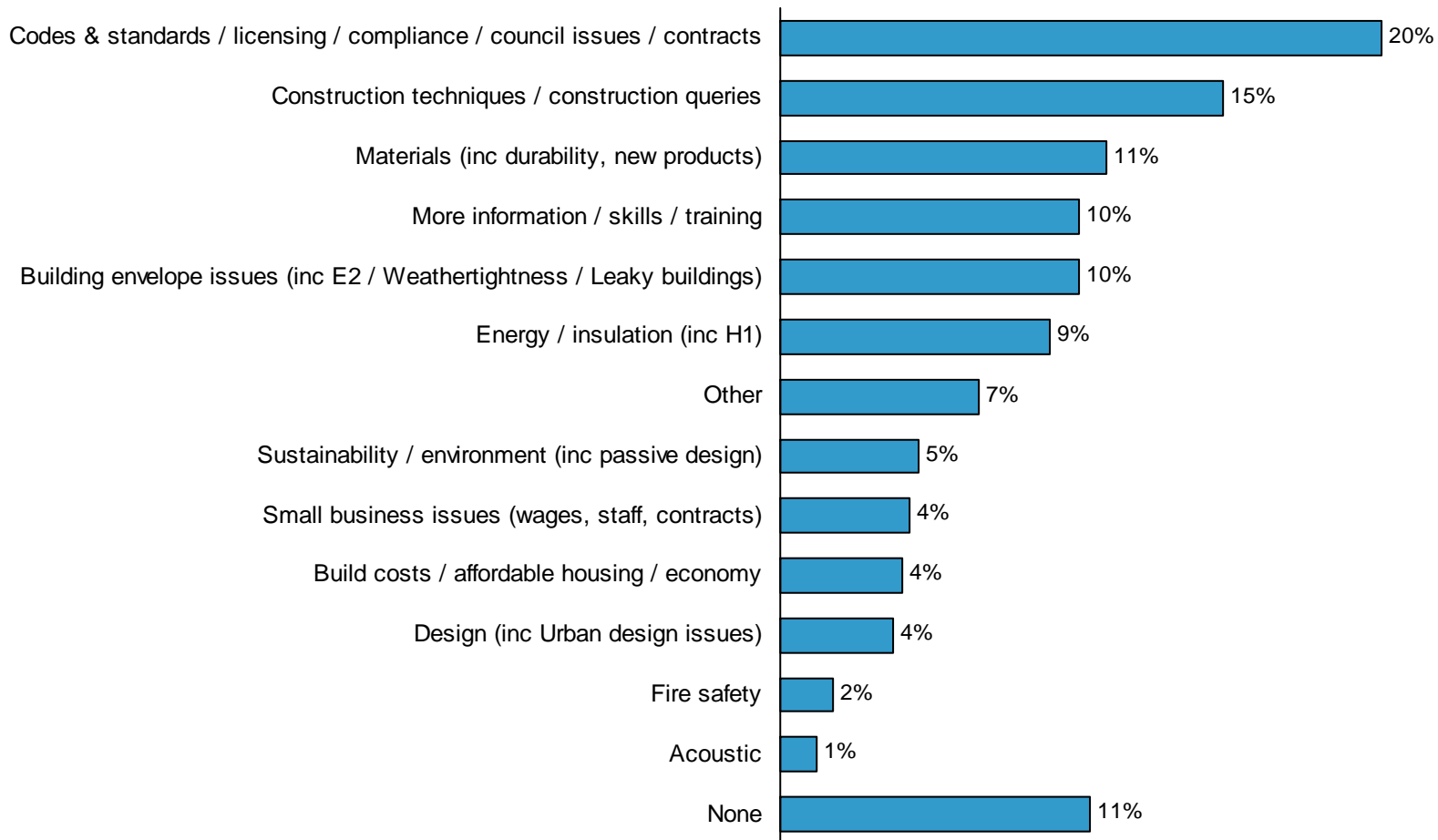
Importance of Sustainability and Environmental Issues - 2008 vs 2010 ⁽¹⁾⁽²⁾



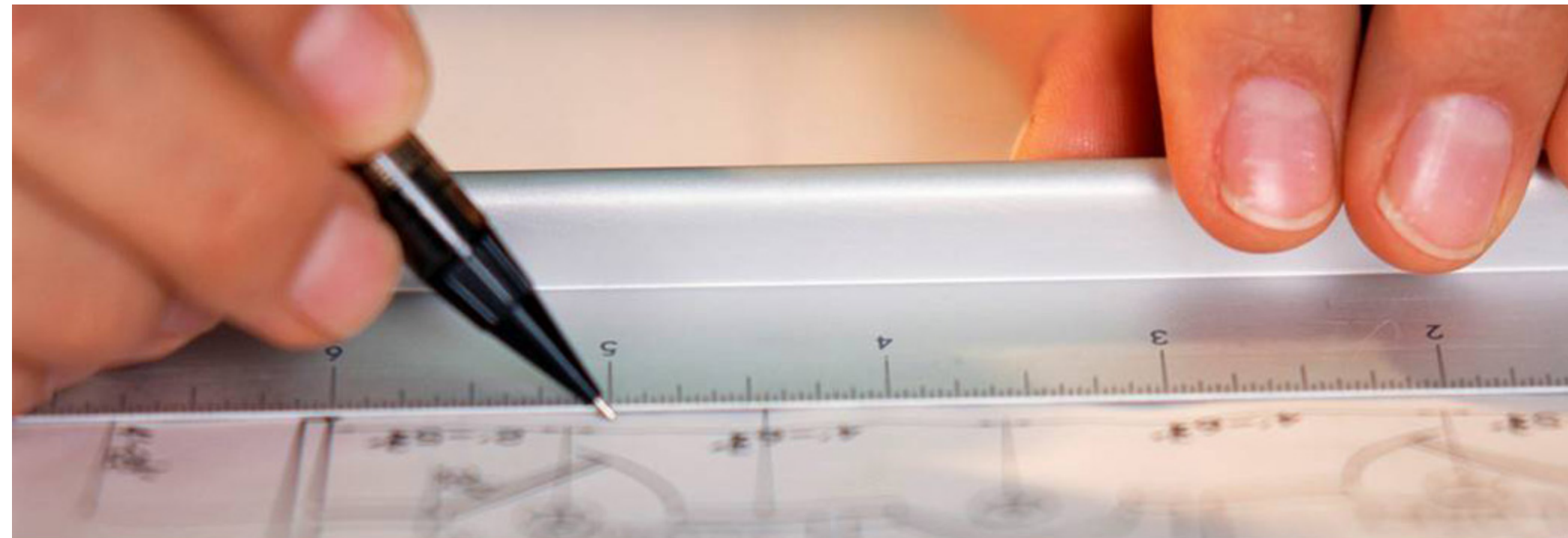
Notes: (1) Base size 2010 n=379, 2008 n=437; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Issues relating to codes and compliance represent the single most significant topic that the industry most seeks information about to address current work related situations

Specific Work Related Issue Most Requiring an Answer Now ⁽¹⁾⁽²⁾



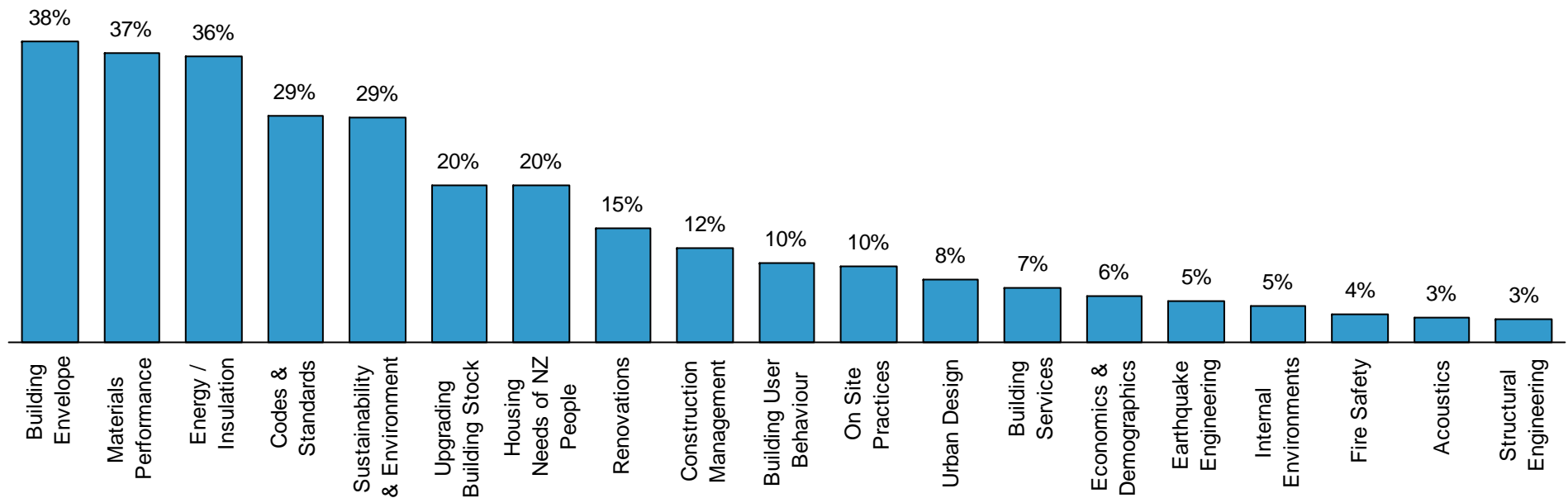
Notes: (1) Base: All Respondents n = 1082; (2) Q4 What is the one specific work related issue that you most need an answer to right now?



7. Longer Term Information Needs

The areas that the wider building and construction industry seeks new information about for the longer term is essentially the same as that for the immediate future; Building Envelope, Materials Performance, Insulation and Energy, Codes & Standards and Environmental

Importance Evaluation of Information for the Longer Term; Next 4-5 Years ⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1082; (2) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term

Table of Proportion Identifying Subject as Requiring New Information for the Long Term

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽¹⁾	Consultant ⁽²⁾	Educator	Merchant/ Manufacturer/ Supplier	Total
Building envelope	45%	41%	38%	39%	22%	34%	34%	26%	38%
Materials performance	27% ▼	33%	44% ▲	40%	39%	32%	22% ▼	42%	37%
Energy / insulation	36%	45%	38%	24% ▼	35%	32%	37%	42%	36%
Translating codes / standards	19% ▼	31%	34%	37%	22%	26%	22%	14% ▼	29%
Sustainability and environmental issues	40% ▲	31%	24%	19%	35%	26%	46% ▲	36%	29%
Upgrading / re-use of existing building stock	31% ▲	20%	15% ▼	19%	17%	25%	22%	14%	20%
Housing needs of NZ's people	15%	19%	21%	19%	35%	21%	20%	18%	20%
Retrofit and renovation	22% ▲	17%	12%	14%	13%	11%	15%	16%	15%
Construction management	3%	8%	12%	14%	17%	20% ▲	15%	24%	12%
Building user behaviour / expectations	10%	6%	10%	12%	9%	13%	12%	8%	10%
Practices on site	3% ▼	3%	13% ▲	10%	4%	10%	12%	16%	10%
Urban design	18% ▲	9%	5% ▼	5%	9%	5%	17%	6%	8%
Building services	10%	8%	6%	6%	0%	8%	5%	4%	7%
Economics and demographics	9%	6%	5%	4%	4%	5%	0%	12%	6%
Earthquake engineering	1%	6%	6%	7%	4%	5%	7%	2%	5%
Internal environments	3%	6%	5%	4%	4%	4%	7%	6%	5%
Fire safety science and engineering	3%	3%	2% ▼	15% ▲	4%	3%	2%	4%	4%
Acoustics	3%	3%	2%	3%	4%	5%	5%	6%	3%
Structural engineering	1%	3%	3%	4%	4%	4%	0%	2%	3%
Base	157	143	408	99	23	160	41	50	1081

Notes: (1) Caution low base; (2) Consultants include Surveyors, Engineers and Project Managers; (3) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term

Table of Proportion Identifying Subject as Requiring New Information for the Long Term

	Certified Builders	Licensed Building Practitioners	Master Builders	Building Levy Members	Other builders ⁽¹⁾	Total
Materials performance	32% ▼	50%	54% ▲	35%	39%	44%
Building envelope	40%	48%	37%	37%	22%	38%
Energy / insulation	43%	31%	36%	39%	28%	38%
Translating codes / standards	30%	40%	29%	40%	44%	34%
Sustainability and environmental issues	23%	21%	23%	24%	39%	24%
Housing needs of NZ's people	23%	17%	23%	18%	22%	21%
Upgrading / re-use of existing building stock	18%	10%	14%	16%	22%	15%
Practices on site	17%	10%	14%	13%	6%	13%
Retrofit and renovation	13%	4%	10%	19%	17%	12%
Construction management	12%	10%	14%	9%	11%	12%
Building user behaviour / expectations	9%	8%	10%	13%	17%	10%
Building services	4%	8%	7%	7%	0%	6%
Earthquake engineering	8%	6%	6%	4%	11%	6%
Economics and demographics	2%	13%	5%	5%	6%	5%
Internal environments	4%	2%	3%	7%	17%	5%
Urban design	6%	4%	4%	6%	0%	5%
Structural engineering	1%	6%	5%	2%	0%	3%
Acoustics	2%	2%	3%	0%	0%	2%
Fire safety science and engineering	2%	0%	1%	3%	0%	2%
Base	90	52	154	94	18	408

Notes: (1) Caution low base; (2) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term



8. Information Sources

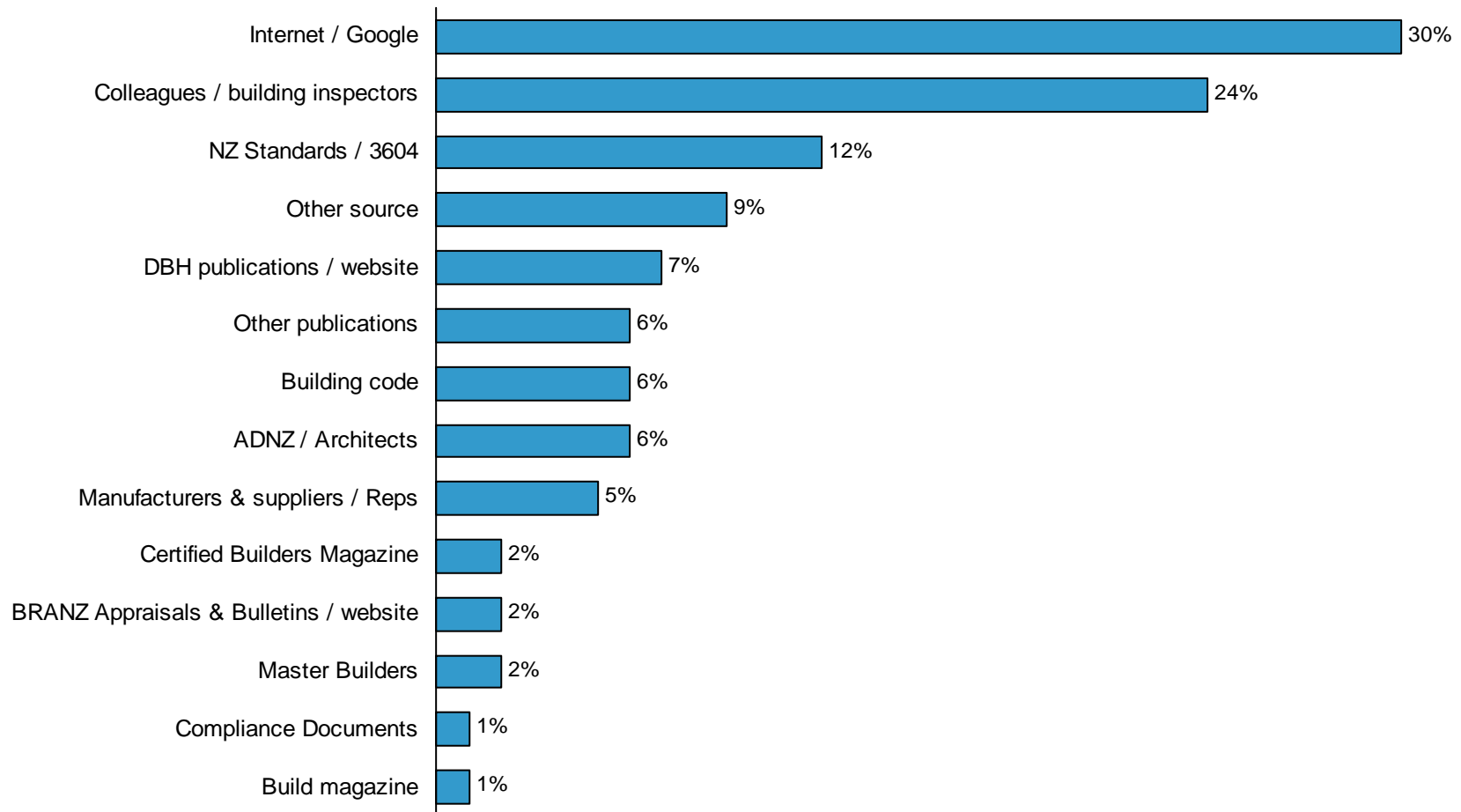
Manufacturers literature, Good Practice Guides and the Build Magazine are the most favoured sources of information amongst the industry generally

	Rank
Manufacturers trade literature	1
Good Practice Guides	2
Build Magazine	3
Other BRANZ publications	4
Industry trade journals	5
Seminars & workshops	6
Other publications	7
Formal training courses (3-10 day duration)	8
Block courses (up to a months duration)	9

Notes: (1) Base: All Respondents n = 1082; (2) Q9 Please rank the information sources below in ranked order with the source that you most rely on at the top and the one you least rely on at the bottom (based on average rank)

The internet, colleagues and building inspectors were also identified by a large part of the industry as information sources that they rely on

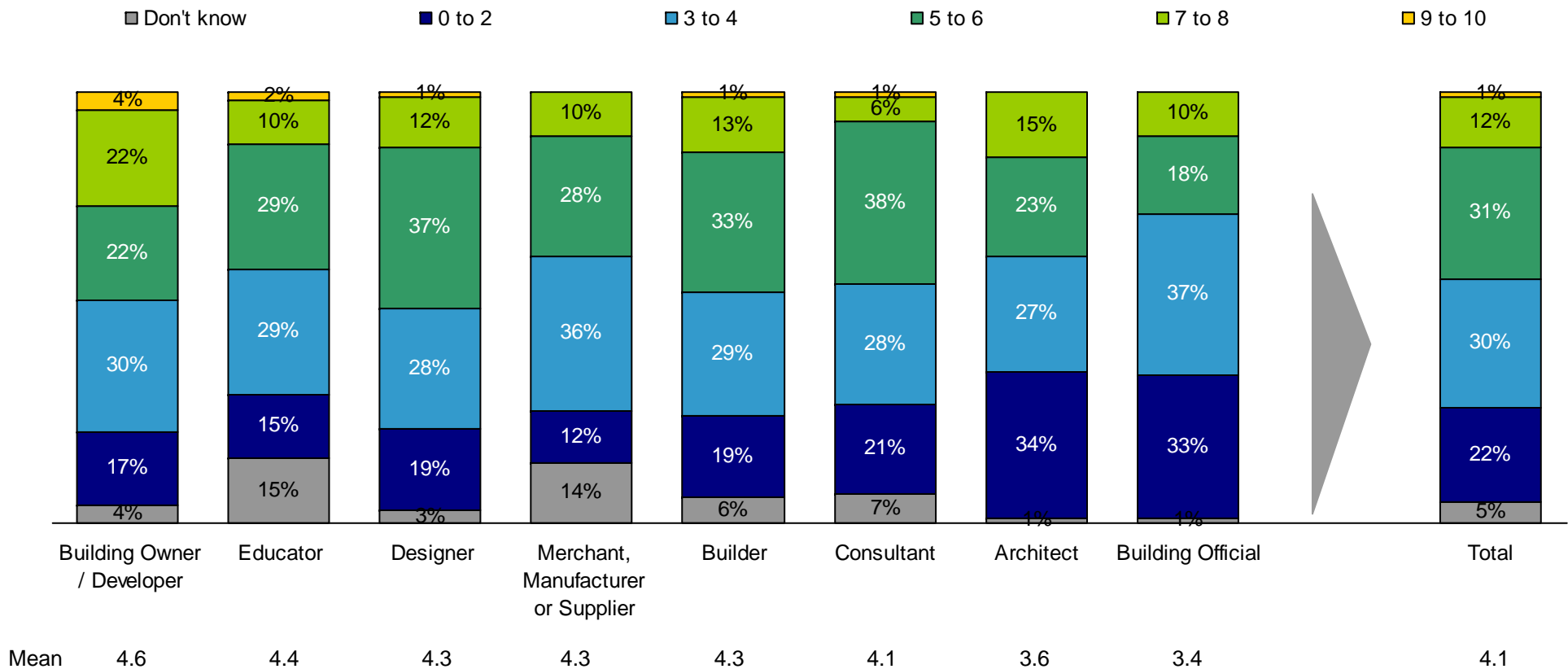
Other Areas Members Rely on for Information ⁽¹⁾⁽²⁾



Notes: (1) Base: Respondents who gave an answer n = 790; (2) Q10 Are there any other sources that you rely on for information about the building and construction industry?

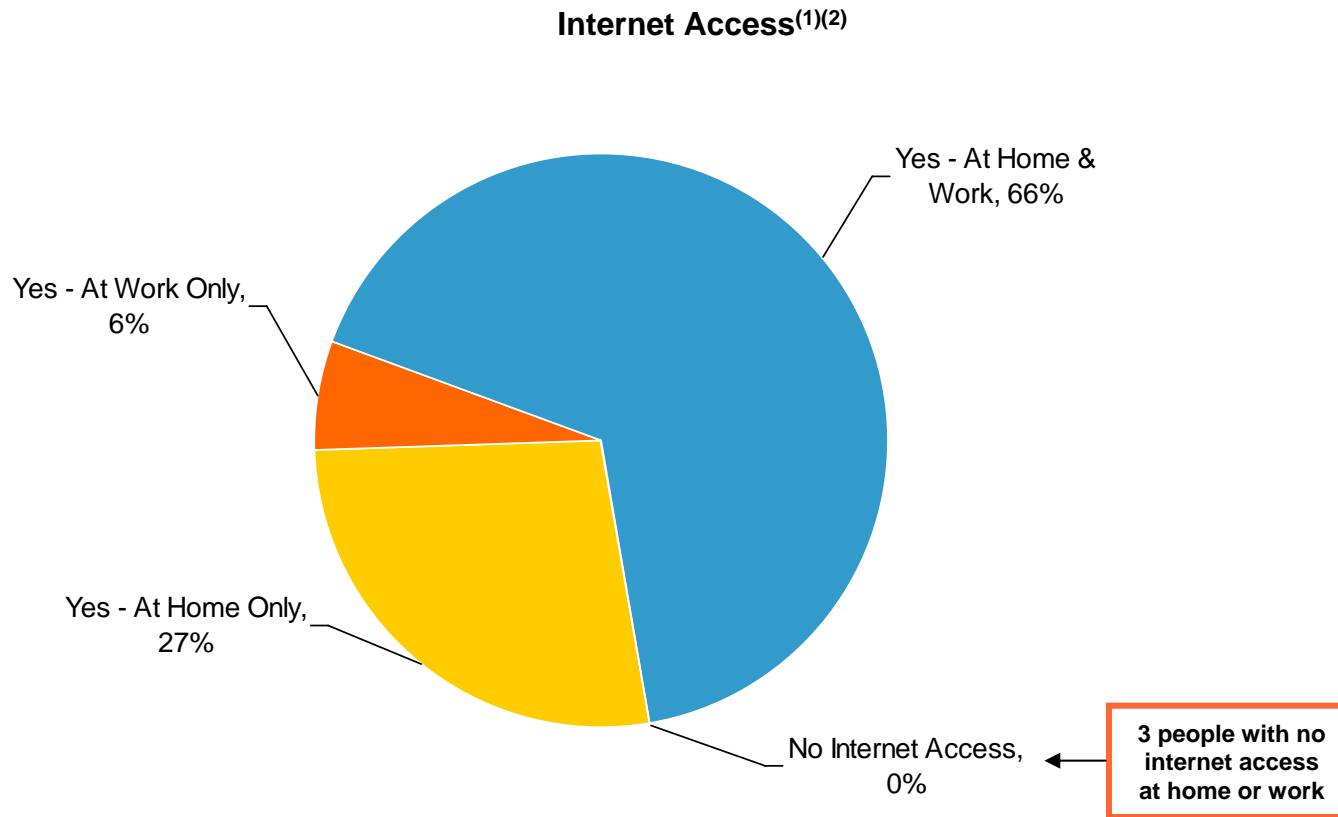
None of the industry groups believe that the performance based building control system is well understood. Overall, the mean score on a 0-10 scale is 4.1

Understanding of the Building Control System⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q11 How well do you think that the performance based building control system is understood?

Of the 1,082 respondents, only three indicated that they had no internet access at home or work

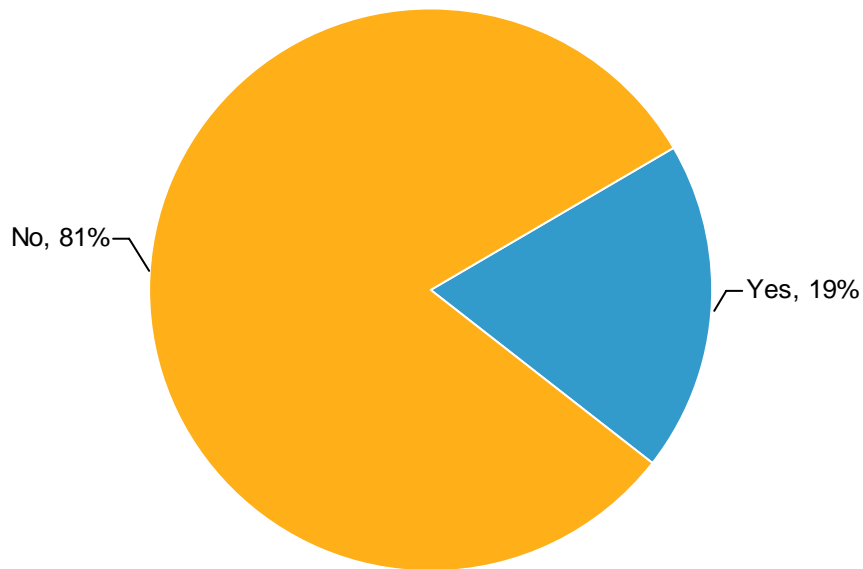


Notes: (1) Base: All respondents n = 1082, (2) Q12 Do you have access to the internet, either at home or at work?

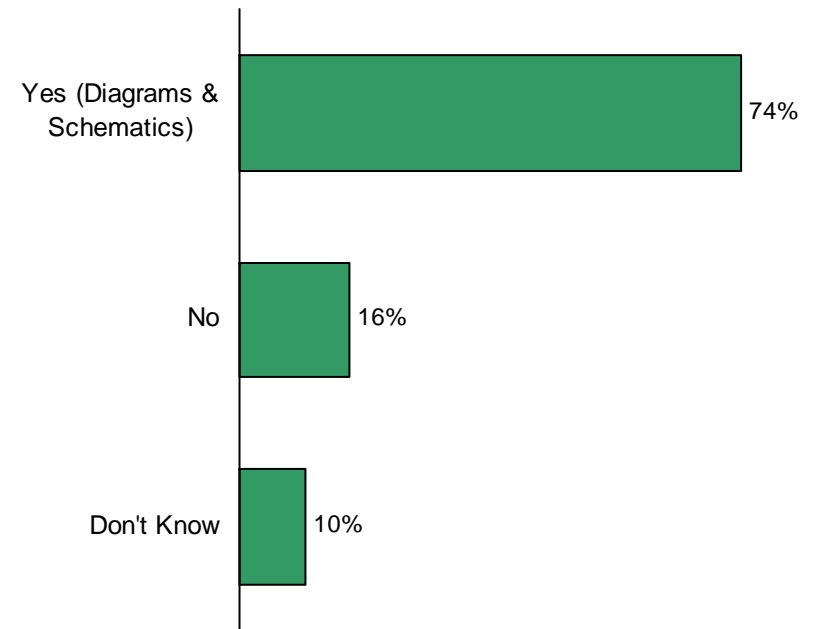
Use of smart phones such as a Palm or Blackberry remains relatively low at around 20%. Of those that do use these devices, three quarters state that they can receive or view diagrams and schematics

Smartphone Use

Use a Smart phone on site



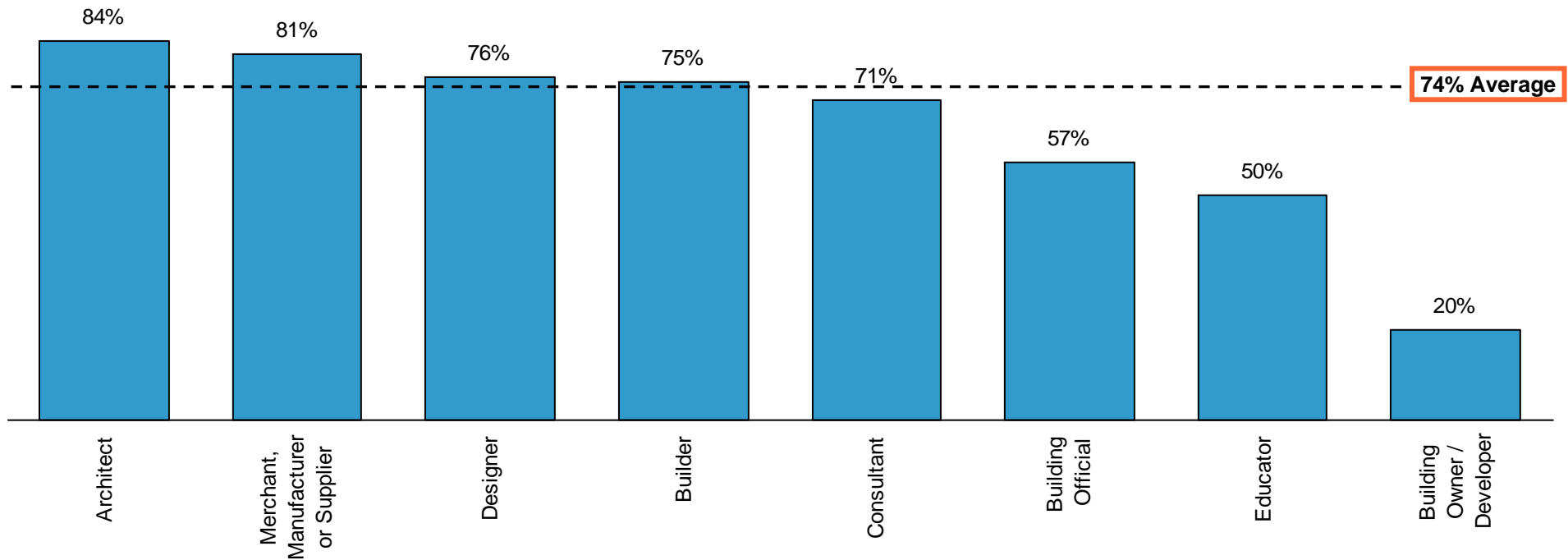
Can Phone Display Graphical Information



Notes: (1) Q13 When working on site do you use a 'smart phone' such as a Palm or Blackberry? n=1082 (2) Can your smart phone display graphical information? n=204

Of those with smart phones, building officials, educators and building owners / developers are most likely to state that they are unable to access diagrams and schematics

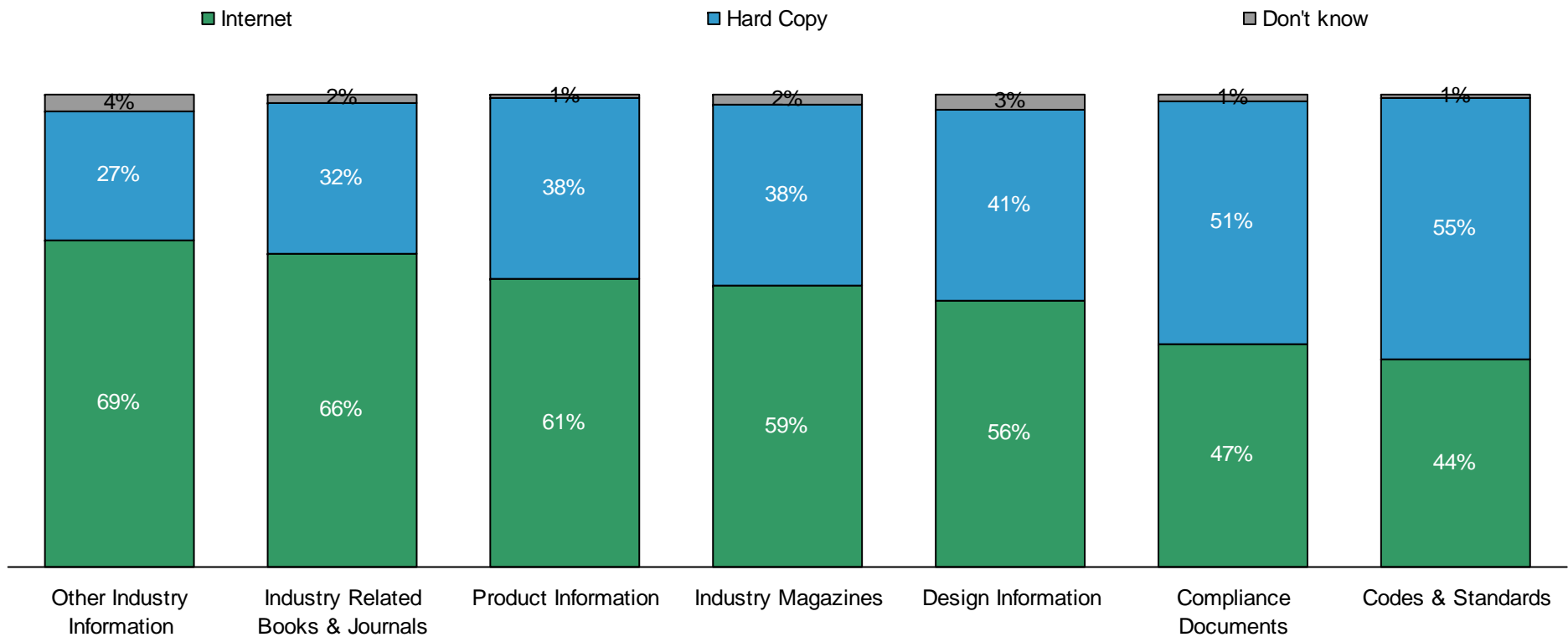
Proportion Able to to Display Graphical Information ⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents with smart phones n = 204; (2) Q14 Can your phone display graphical information such as diagrams and schematics?

With the exception of compliance documents and codes and standards, industry members identify that they prefer the internet as a means of sourcing information relative to hard copy

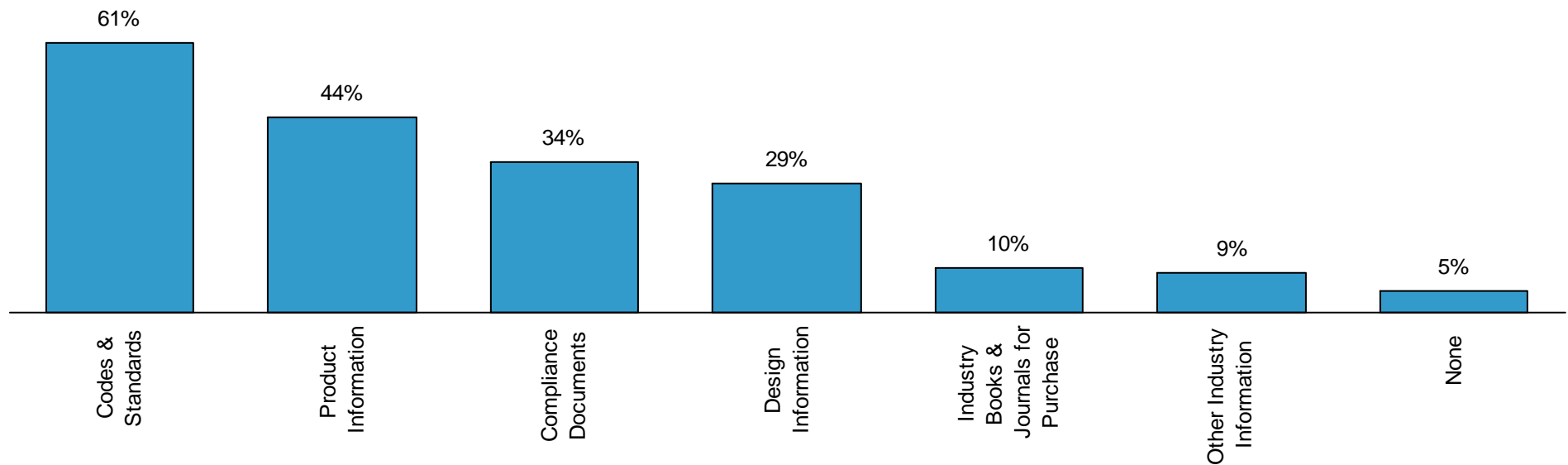
Access to Information⁽¹⁾⁽²⁾



Notes: (1) Base: Respondents with internet access n = 1079; (2) Q15 How would you most prefer to access the following types of information, in hard copy, or on the internet?

Notwithstanding this, some 61% state that Codes and Standards is the subject that they would most like to have more information about available on the internet

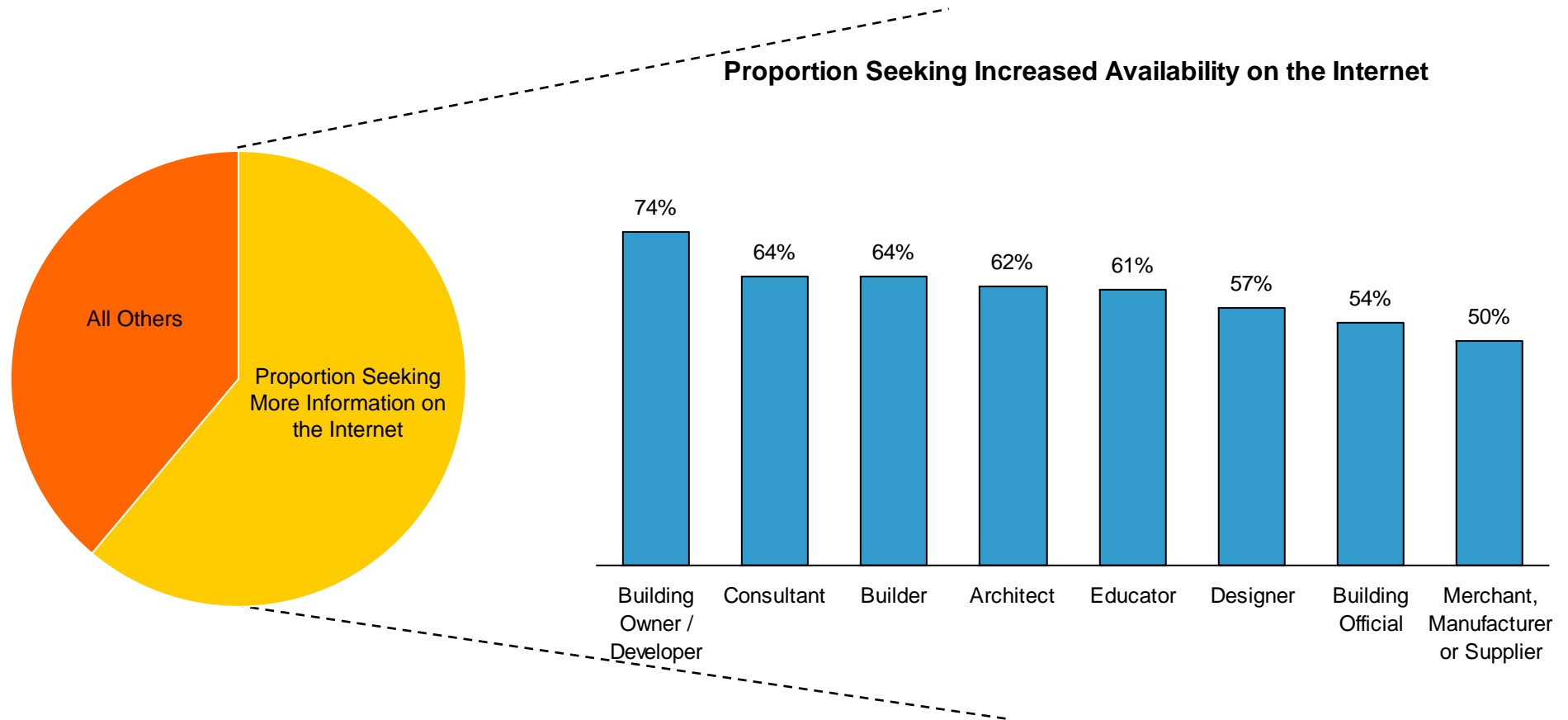
Subject Would Most Like to have More Information on the Internet ⁽¹⁾⁽²⁾



Notes: (1) Base: Respondents with internet access n = 1079; (2) Q18 What two topics would you most want to have more information about available on the Internet?

All industry groups show a high level of interest in increased availability of information about Codes and Standards on the internet

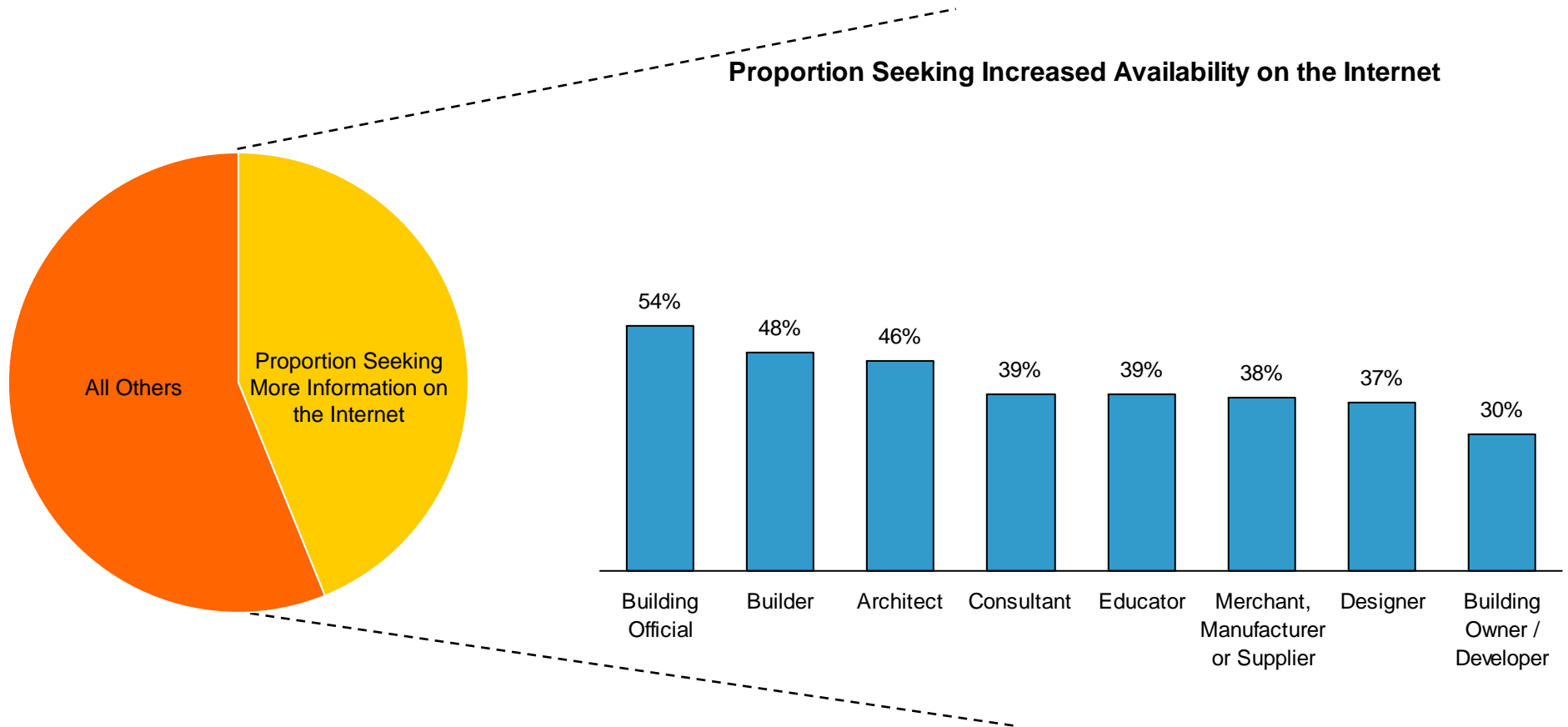
Codes and Standards⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents with internet access n = 1079; (2) Q16 What two topics would you most want to have more information about available on the Internet?

Building officials, builders and architects are the groups that are most seeking to have more product information available on the internet

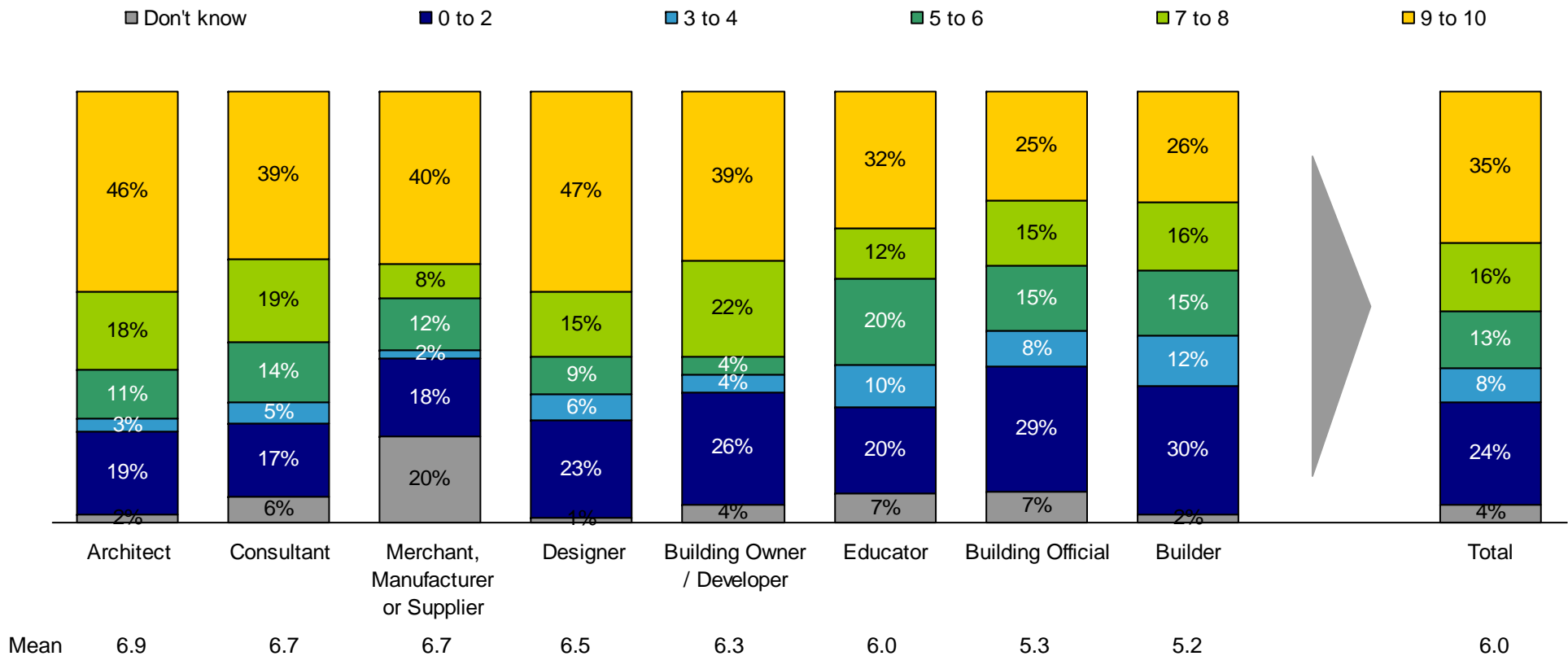
Product information⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents with internet access n = 1079; (2) Q16 What two topics would you most want to have more information about available on the Internet?

There is a reasonably strong desire to be able to submit building consents via the internet. Of interest, Builders and Building Officials are the two groups that least favour this option

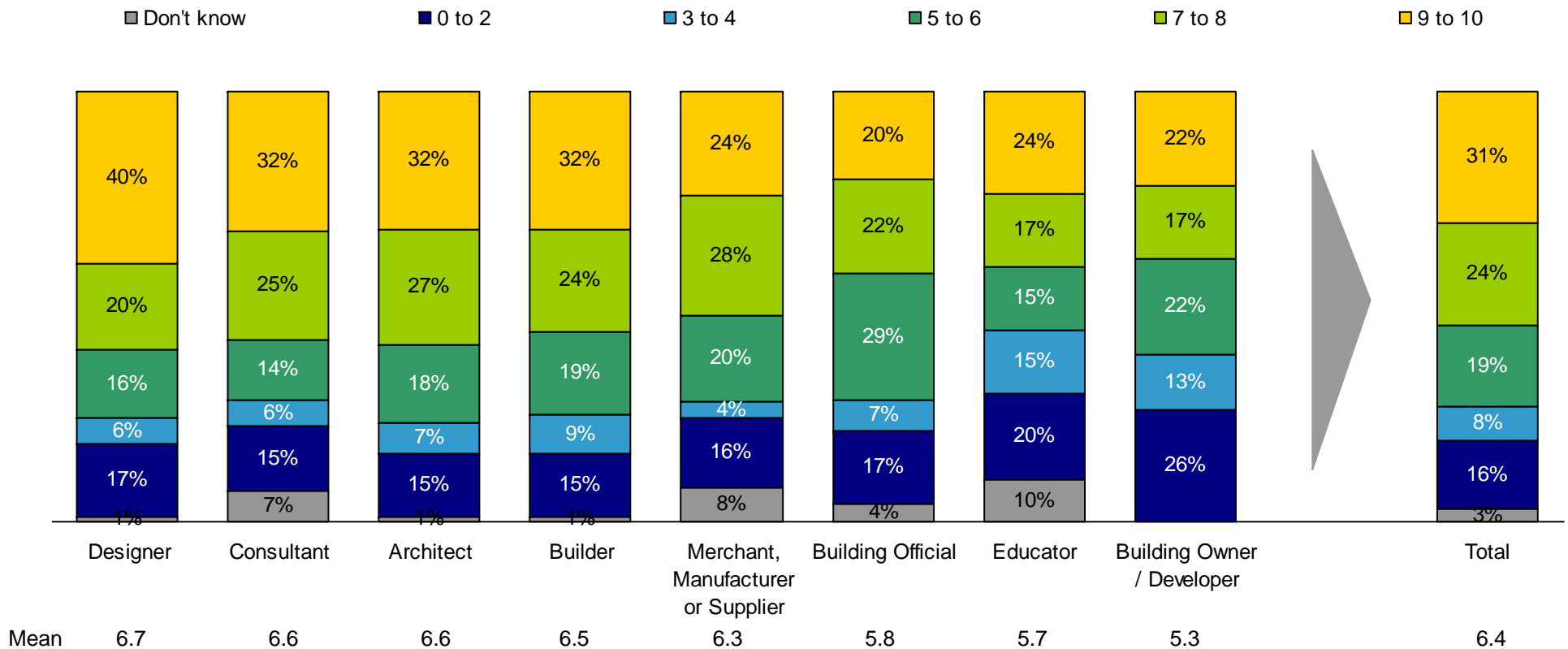
Probability of Submitting Building Consents Via the Internet⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents with internet access n = 1079; (2) Q17 If it were possible to submit building consent applications electronically via the internet, how likely would you be to use this facility? Use the 0-10 scale where 0 means very unlikely and 10 means extremely likely

Designers, Consultants, Architects and Builders are more likely to watch a web based seminar than other groups

Probability of Watching a Web Based Seminar with CPD Points⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1079; (2) Q18 How likely would you be to watch a web based seminar if it had Continuing Professional Development Points (CPD Points) available under the Licensed Building Practitioners scheme. Use the 0-10 scale where 0 means very unlikely and 10 means extremely likely



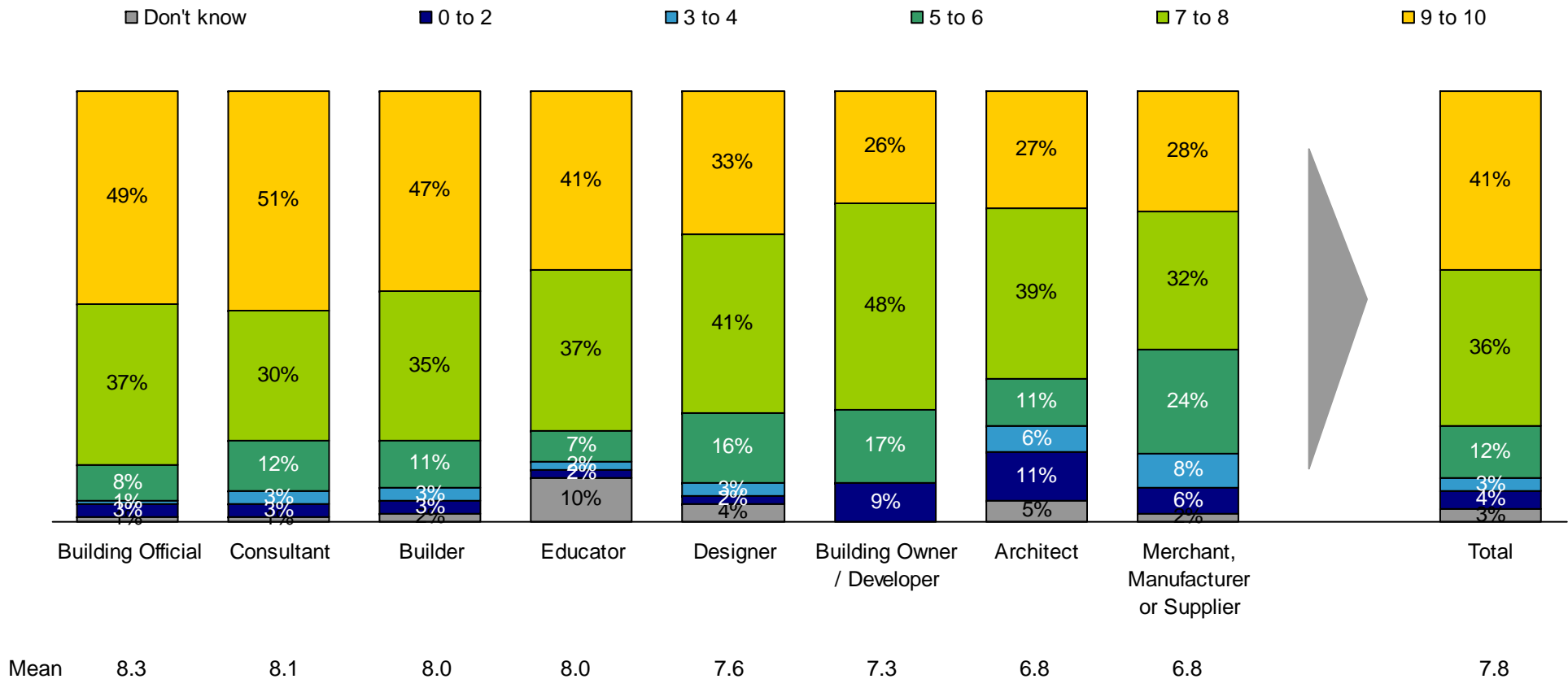
9. Product Performance

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There is quite strong agreement that performance verification should relate to the level of risk. Architects and merchants / manufacturers are less in favour of the proposal

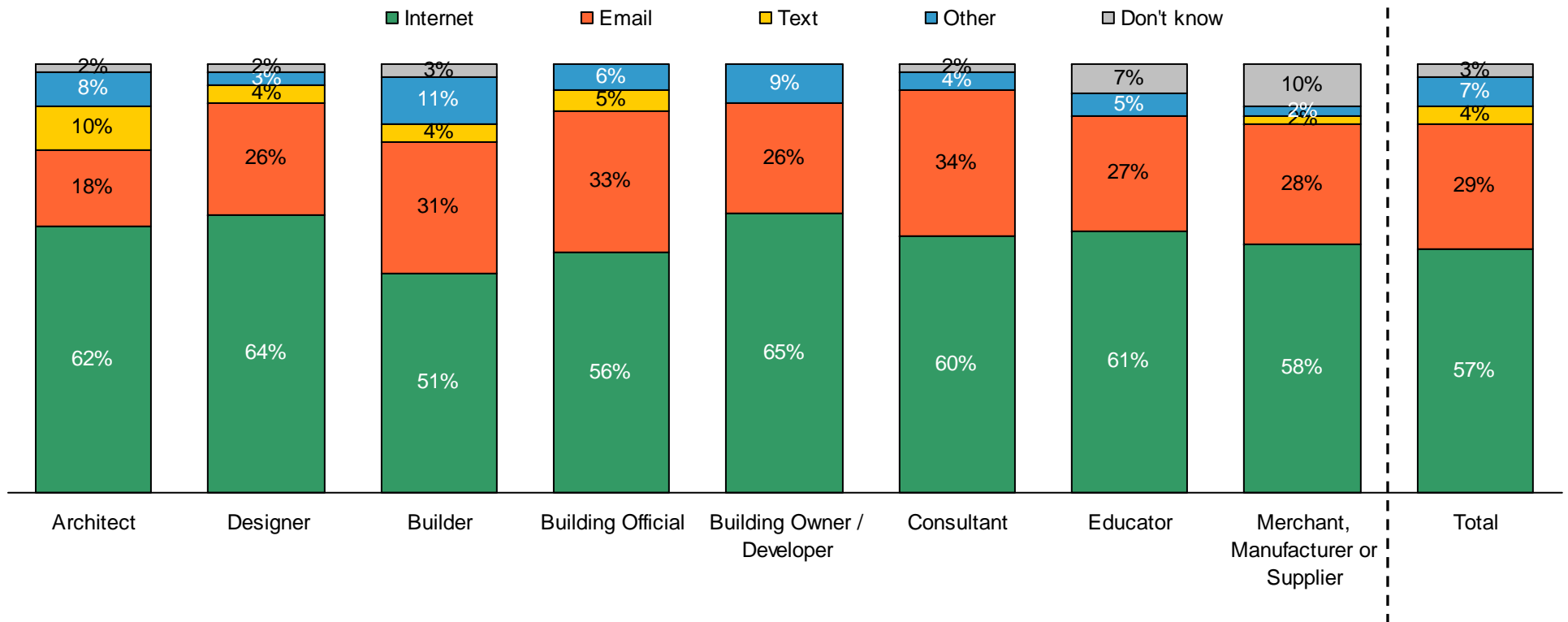
Performance Verification that Relates to the Level of Risk⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q32 How much do you agree or disagree that every construction product should be required to have a standard of performance verification that recognises the level of risk associated with that product in use; i.e. high risk products have a high level of verification required, low risk products still need a verification standard but at a reduced level. Use the 0-10 scale where 0 means strongly disagree and 10 means strongly agree

Industry members would most prefer to receive product assurance information via the internet followed by email

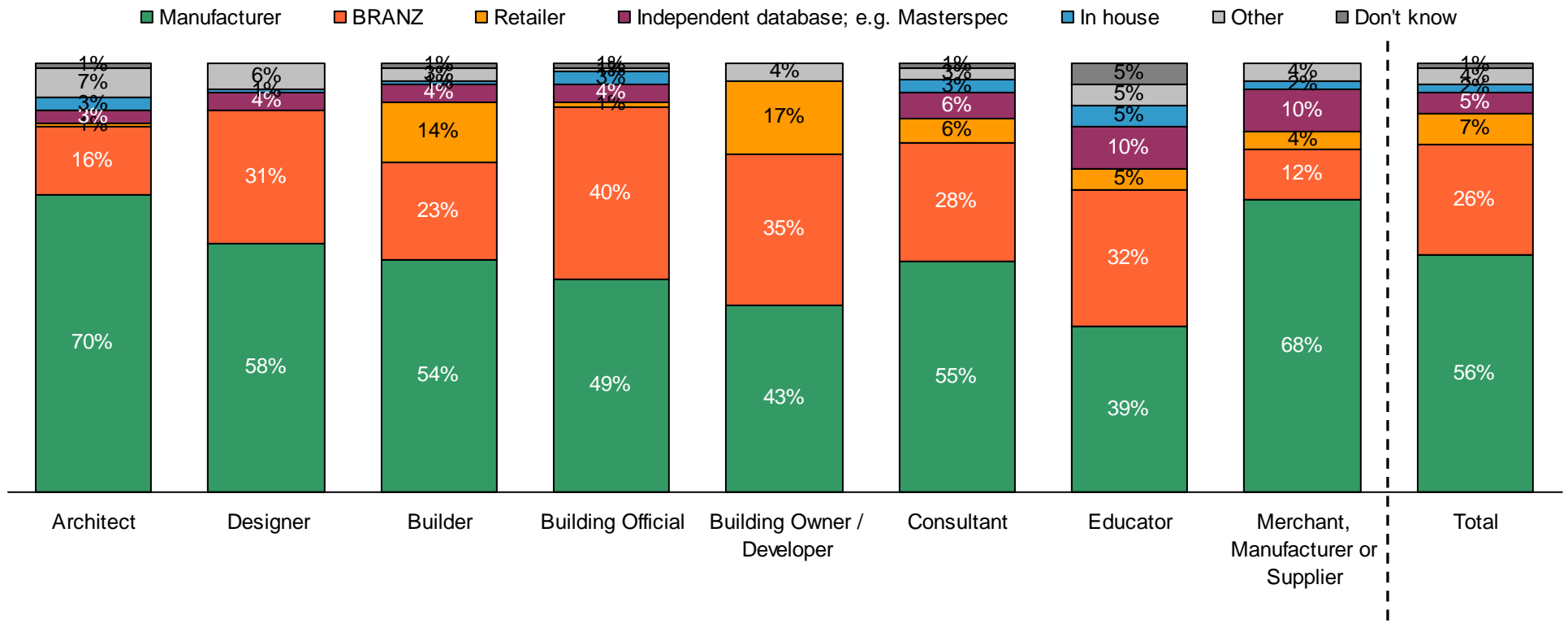
Most Like to Receive Product Assurance Information ⁽¹⁾⁽²⁾



Notes: (1) Base n = 1081; (2) Q33 How would you most like to receive product assurance information?

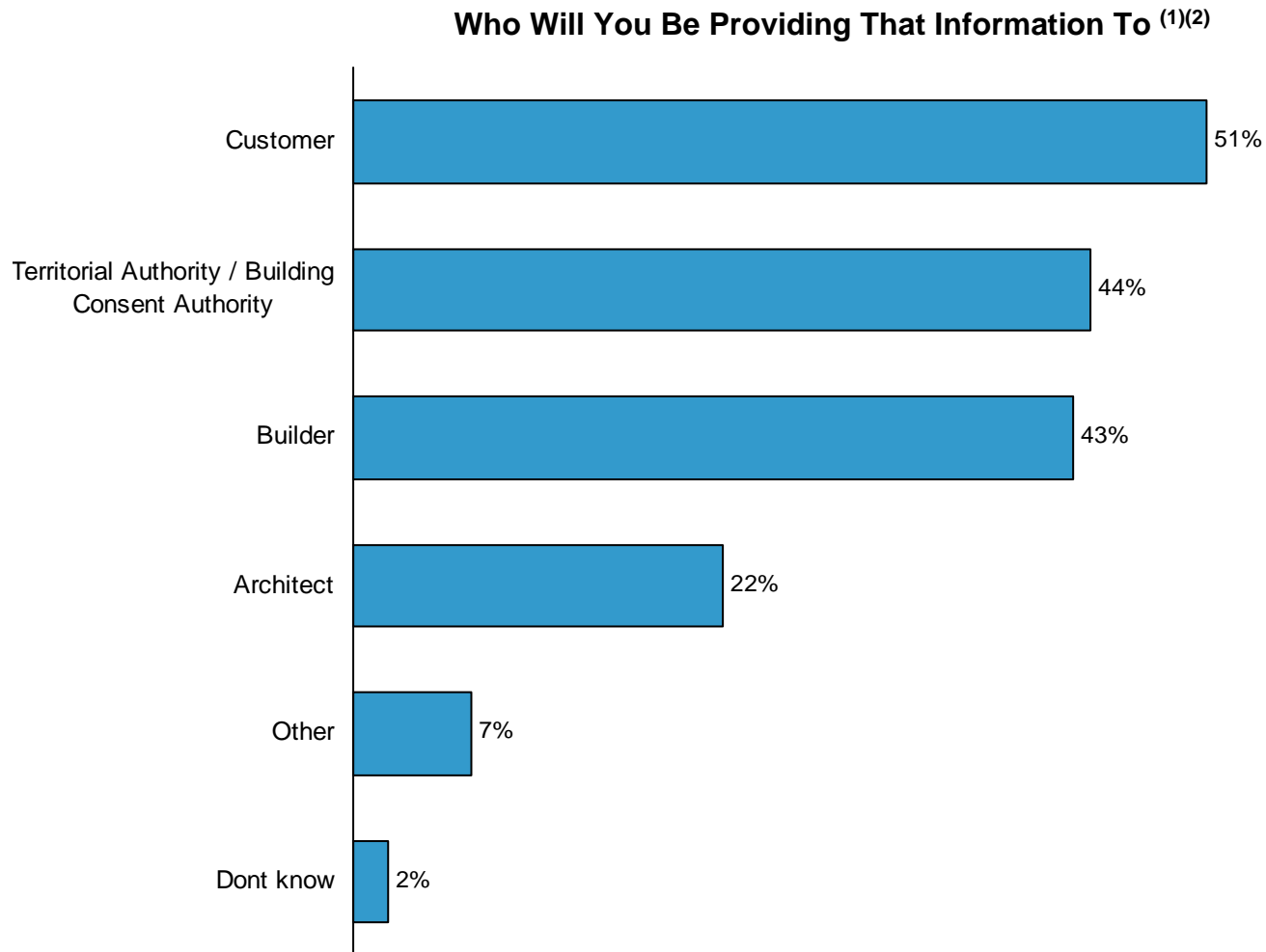
Industry members would most likely source information about a products performance from the manufacturer with BRANZ being the second most likely source. Building Officials are more likely than other groups to go to BRANZ

Where Most Likely to Seek Information About a Products Performance ⁽¹⁾⁽²⁾

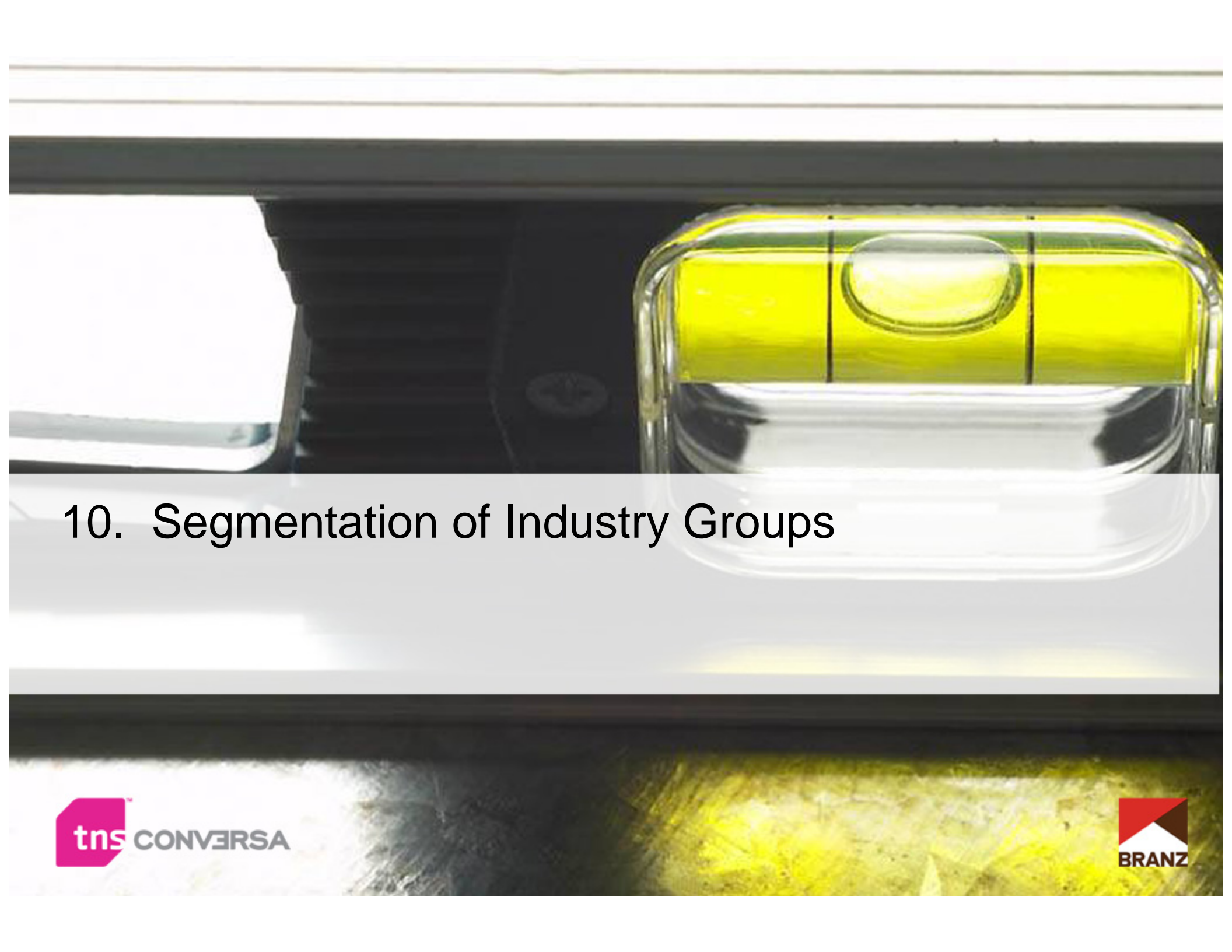


Notes: (1) Base n = 1081; (2) Q34 Where would you most likely go to seek information about a product's performance?

Information about product performance is most likely to be sourced on behalf of the customer, for a territorial / consent authority or for a builder



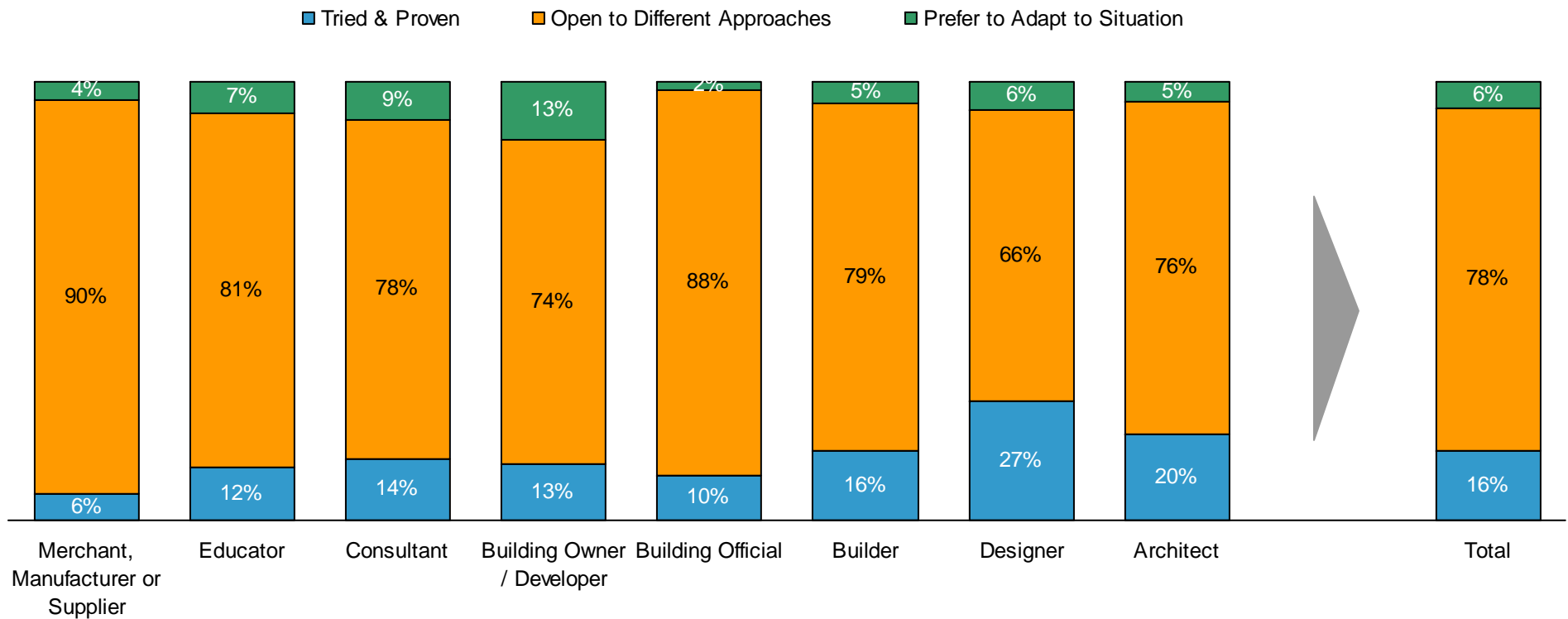
Notes: (1) Base: All Respondents n = 1082; (2) Q35 Who will you providing the information that information to as per Q34 ?



10. Segmentation of Industry Groups

The majority of the industry indicates that they are open to trying new approaches. Designers and Architects are more likely to stay with the tried and proven relative to other groups

What Best Describes How You Most Like to Work⁽¹⁾⁽²⁾

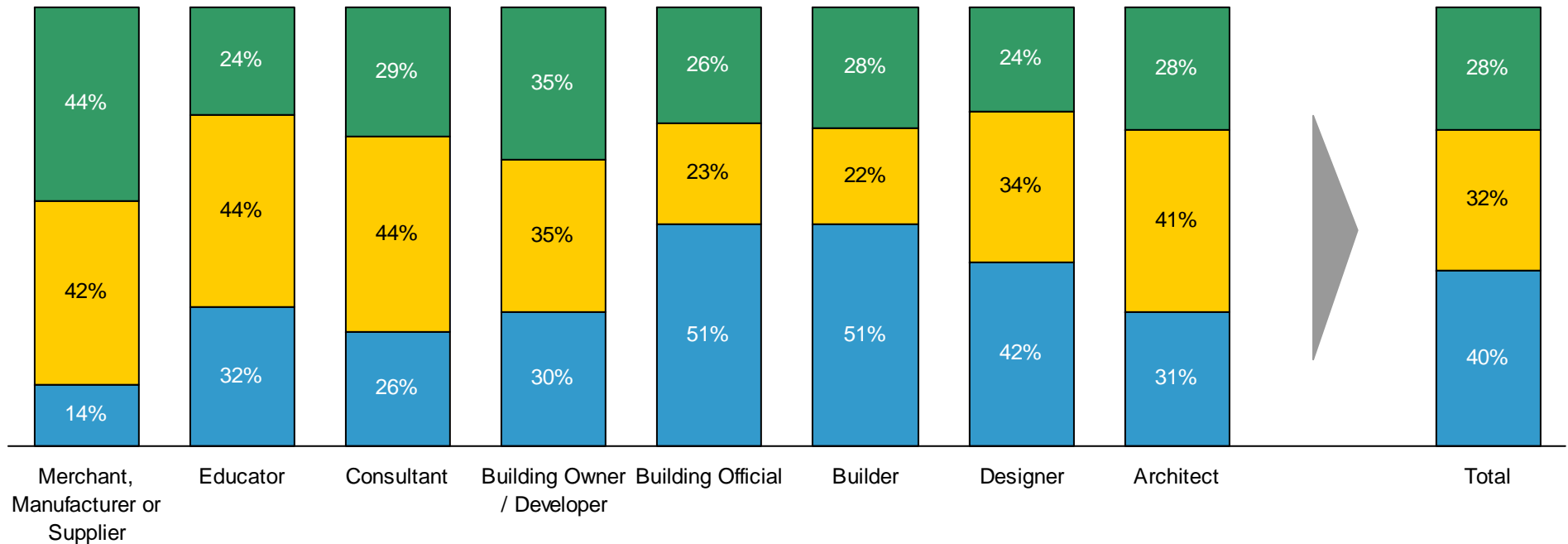


Notes: (1) Base: All Respondents n = 1081; (2) Q36 In relation to your job, what statement best describes the way that you like to work?

In terms of actually adopting new methods, Builders and Building Officials are far more likely to retain the tried and proven

Adoption of New Methods⁽¹⁾⁽²⁾

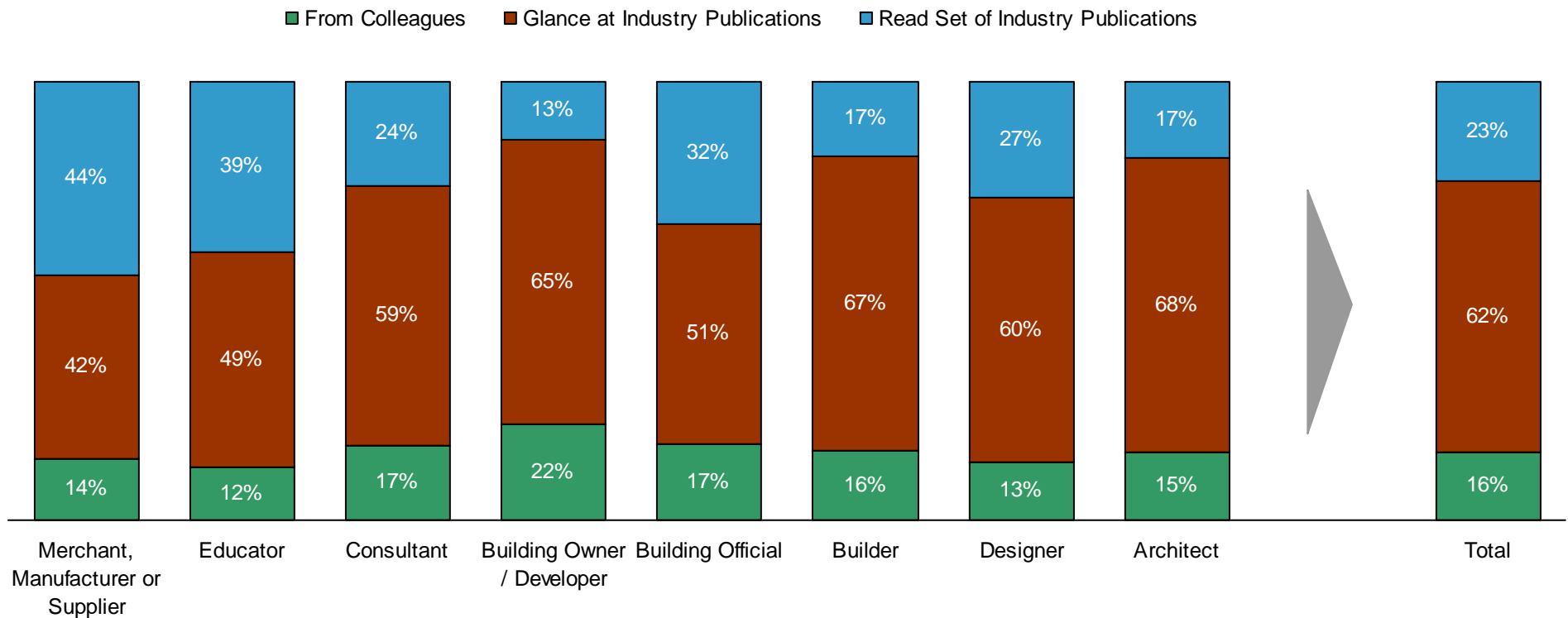
■ Stay with Tried & Proven ■ Wait Till Others have Tried ■ Immediately Try



Notes: (1) Base: All Respondents n = 1081; (2) Q37 If a new method for doing something relating to your job was detailed in a reputable magazine, what best describes how you would react?

The majority of the industry keeps up to date by glancing at industry publications. A relatively small segment of the industry regularly reads industry publications

How Industry Members Keep Up To Date⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1081; (2) Q38 What best describes how you keep up to date with industry trends and changes for your sector?

A segmentation was undertaken to group industry members according to their willingness to seek out and adopt new ideas. The hypothesis is that more innovative types may have different priorities for information than others

Innovator Score – Subgroup Breakdown

	Majority	Innovators	Stalwarts	Total
Builder	32%	39%	42%	38%
Consultant	19%	15%	11%	15%
Architect	17%	15%	12%	15%
Designer	13%	11%	15%	13%
Building Official	7%	9%	11%	9%
Merchant	4%	7%	4%	5%
Educator	4%	3%	4%	4%
Building Owner	2%	2%	2%	2%
Base	387	261	434	1082

Notes: (1) Base: All Respondents n = 1081

None of the major groups stand out as being more likely than others to be ‘Innovators’. Consultants, Designers and Architects are more likely to be classified as ‘Stalwarts’ being more strongly entrenched in the tried and proven and less likely to adopt new ideas

Innovator Score – Subgroup Breakdown

	Builder	Consultant	Architect	Designer	Building Official	Merchant	Educator	Building Owner
Majority	42%	36%	31%	29%	39%	46%	39%	32%
Innovators	24%	20%	25%	23%	26%	24%	22%	34%
Stalwarts	34%	44%	45%	47%	35%	30%	39%	34%
Base	157	143	408	99	23	160	41	50

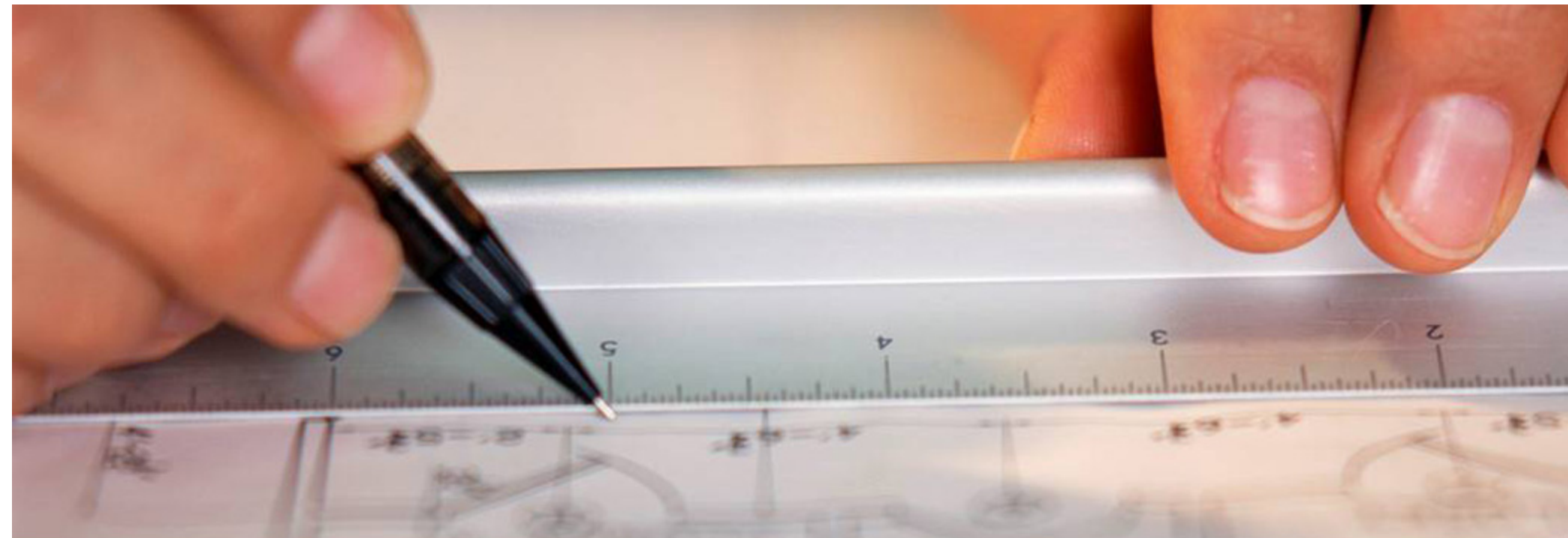
Notes: (1) Base: All Respondents n = 1081

All three groups identify Building Envelope, Materials Performance, Energy / Insulation and Codes and Standards as the areas that they will most likely need new information about in the next two years. Thus, the segments do not differ from the industry groups

Innovator Score – Overall Top Ten Importance Scores`

	Majority	Innovators	Stalwarts	Total
Building envelope	8.0	8.3	8.4	8.3
Materials performance	8.0	8.1	8.4	8.2
Energy / insulation	7.9	8.1	8.1	8.0
Translating codes and standards into practical use	7.7	8.0	8.1	7.9
Sustainability and environmental issues	7.1	7.2	7.0	7.1
Practices on site	6.5	6.8	6.9	6.7
Upgrading / re-use of existing building stock	6.7	6.6	6.8	6.7
Retrofit renovations	6.7	6.6	6.8	6.7
Structural engineering	6.4	6.8	6.8	6.7
Construction management	6.4	6.7	6.6	6.6
Base	387	261	434	1082

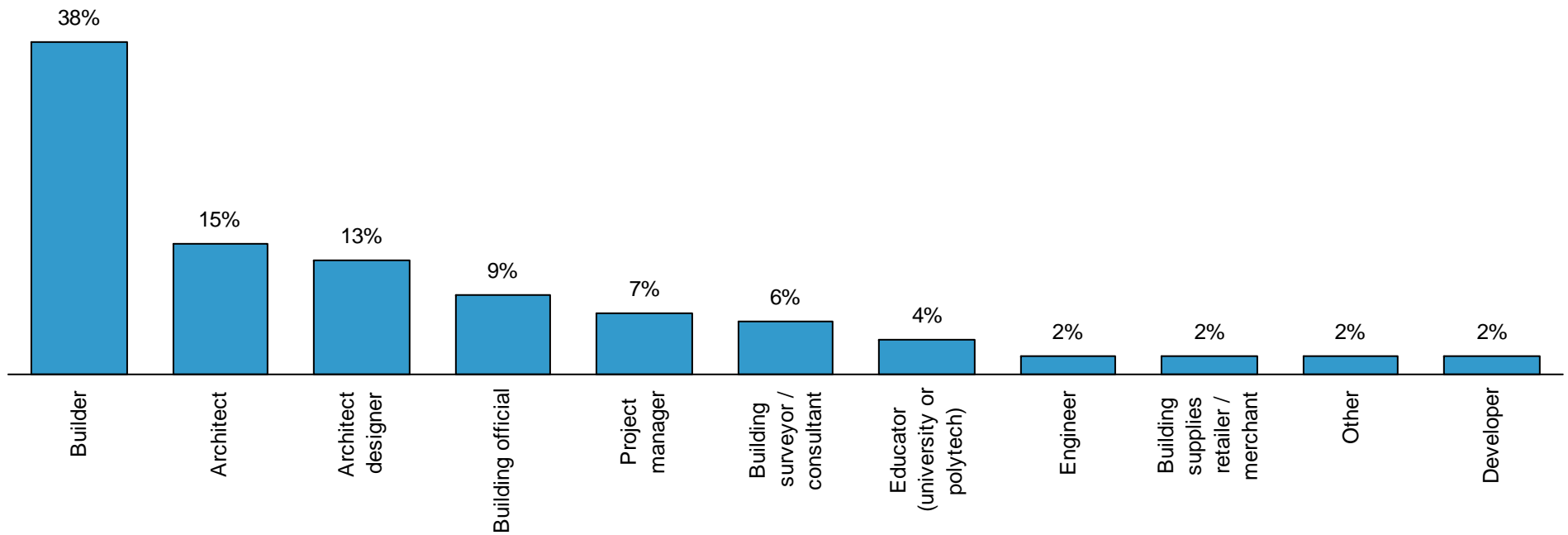
Notes: (1) Base: All Respondents n = 1082



11. Demographics

Distribution of Occupation

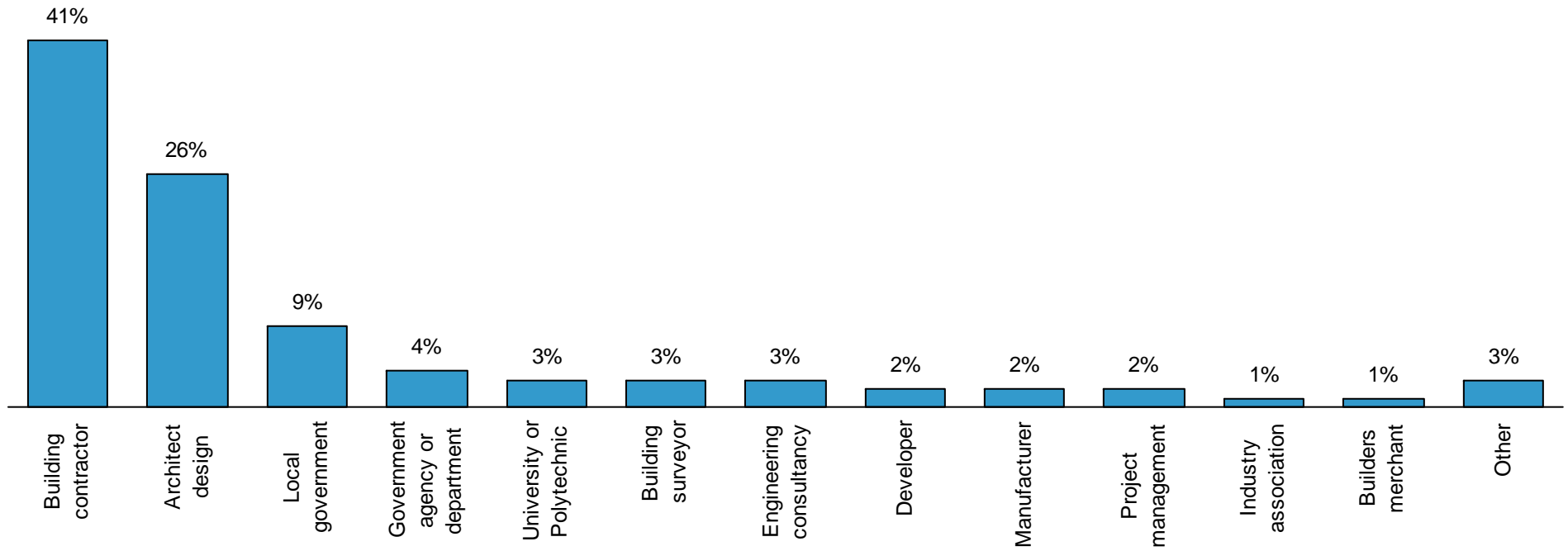
Distribution of Occupation ⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1082; (2) Q39 Please indicate what best describes your role

Distribution of Organisation

Distribution of Occupation⁽¹⁾⁽²⁾



Notes: (1) Base: All Respondents n = 1082; (2) Q40 Please indicate the type of organisation that you work within



12. Appendix

2008 vs 2010 Comparisons - Short Term, 1-2 years

	Architect		Designer		Building Official		Total	
	2008	2010	2008	2010	2008	2010	2008	2010
Building Envelope	1	1	2	1	3	1	3	1
Materials Performance	4	2	4	4	2	3	2	2
Energy / Insulation	2	3	1	2	1	4	1	3
Codes & Standards	5	6	2	3	5	2	4	4
Sustainability	3	4	5	5	5	12	5	5
On Site Practices	18	14	11	14	11	14	11	6
Renovation	7	7	7	9	10	10	6	7
Upgrading	6	5	6	6	7	8	9	8
Construction Management	16	16	10	11	11	15	8	9
Structural Engineering	10	15	8	12	11	6	7	10
Building Services	9	9	9	8	8	7	12	11
Internal Environment	15	10	13	7	15	13	16	12
User Behaviour	14	12	15	16	18	9	13	13
Fire Safety	12	13	17	13	4	5	13	14
Housing Needs	12	11	11	10	9	16	10	15
Earthquake Engineering	18	18	19	15	14	11	19	16
Urban Design	8	8	13	17	15	17	17	17
Economics & Demographics	16	19	17	19	17	19	18	18
Acoustics	10	17	15	18	19	18	15	19
Base	156	157	67	143	81	99	948	1081

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q1 Information you are likely to require for your work within the next year or two; (3) This question was modified in 2010 to be a rating score grid, therefore the data for 2008 and 2010 have been ranked from most important to least important to enable fair comparisons. Equal scores have been given equal ranks.

2008 vs 2010 Comparisons - Short Term, 1-2 years

	Building Owner		Consultant		Educator		Merchant/Manufacturer	
	2008	2010	2008	2010	2008	2010	2008	2010
Building Envelope	1	4	1	1	2	1	4	1
Materials Performance	3	3	2	2	5	5	1	2
Energy / Insulation	1	2	3	3	1	3	3	3
Codes & Standards	5	1	4	4	8	4	8	6
Sustainability	3	5	5	6	2	2	2	4
On Site Practices	5	14	12	7	4	10	16	5
Renovation	5	11	9	9	13	7	12	8
Upgrading	17	17	6	8	13	8	16	7
Construction Management	11	12	7	5	6	9	10	9
Structural Engineering	9	9	14	10	9	15	5	11
Building Services	13	7	9	11	13	11	10	18
Internal Environment	13	10	13	12	6	6	5	10
User Behaviour	13	6	11	13	10	13	16	12
Fire Safety	17	15	15	14	13	16	8	15
Housing Needs	5	13	7	16	13	14	12	16
Earthquake Engineering	19	19	15	15	13	18	12	13
Urban Design	9	8	19	18	10	12	19	17
Economics & Demographics	13	16	15	17	19	17	12	14
Acoustics	11	18	15	19	10	19	7	19
Base	36	23	64	160	28	41	31	50

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q1 Information you are likely to require for your work within the next year or two; (3) This question was modified in 2010 to be a rating score grid, therefore the data for 2008 and 2010 have been ranked from most important to least important to enable fair comparisons. Equal scores have been given equal ranks.

2008 vs 2010 Comparisons - Short Term, 1-2 years

	Certified Builders		Master Builders		Building Levy Members	
	2008	2010	2008	2010	2008	2010
Building Envelope	4	2	4	2	1	3
Materials Performance	3	1	1	1	1	1
Energy / Insulation	1	3	2	3	4	4
Codes & Standards	2	4	3	4	3	2
Sustainability	7	6	5	8	6	8
On Site Practices	8	6	9	5	9	5
Renovation	5	5	6	10	4	7
Upgrading	8	10	11	13	11	13
Construction Management	8	11	7	7	7	9
Structural Engineering	6	8	9	6	9	6
Building Services	12	13	12	9	15	12
Internal Environment	19	14	18	12	18	10
User Behaviour	11	12	13	14	13	11
Fire Safety	15	16	16	15	18	16
Housing Needs	13	9	8	11	8	14
Earthquake Engineering	18	15	17	17	15	15
Urban Design	15	17	19	16	15	17
Economics & Demographics	14	18	15	18	14	18
Acoustics	17	19	13	19	12	19
Base	103	90	233	154	91	94

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q1 Information you are likely to require for your work within the next year or two; (3) This question was modified in 2010 to be a rating score grid, therefore the data for 2008 and 2010 have been ranked from most important to least important to enable fair comparisons. Equal scores have been given equal ranks.

2008 vs 2010 Comparisons - Longer Term, 4-5 years

	Architect		Designer		Building Official		Total	
	2008	2010	2008	2010	2008	2010	2008	2010
Building Envelope	40%	45%	33%	41%	31%	39%	33%	38% ▲
Materials Performance	33%	27%	30%	33%	33%	40%	35%	37%
Energy / Insulation	35%	36%	40%	45%	36%	24%	37%	36%
Codes & Standards	NA	19%	NA	31%	NA	37%	NA	29%
Sustainability	63%	40%	55%	31%	44%	19%	46%	29% ▼
Upgrading	23%	31%	21%	20%	16%	19%	17%	20%
Housing Needs	13%	15%	31%	19%	21%	19%	20%	20%
Renovation	14%	22%	6%	17% ▲	11%	14%	14%	15%
Construction Management	4%	3%	6%	8%	4%	14% ▲	13%	12%
User Behaviour	11%	10%	16%	6% ▼	17%	12%	18%	10% ▼
On Site Practices	4%	3%	1%	3%	6%	10%	10%	10%
Urban Design	19%	18%	18%	9%	5%	5%	10%	8%
Building Services	15%	10%	12%	8%	11%	6%	10%	7% ▼
Economics & Demographics	9%	9%	5%	6%	4%	4%	7%	6%
Earthquake Engineering	0%	1%	1%	6% ▲	10%	7%	3%	5% ▲
Internal Environments	9%	3% ▼	10%	6%	5%	4%	7%	5%
Fire Safety	1%	3%	1%	3%	26%	15%	4%	4%
Acoustics	1%	3%	0%	3% ▲	5%	3%	4%	3%
Structural Engineering	2%	1%	3%	3%	7%	4%	3%	3%
Base	156	157	67	143	81	99	948	1081

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term

2008 vs 2010 Comparisons - Longer Term, 4-5 years

	Building Owner		Consultant		Educator		Merchant/Manufacturer	
	2008	2010	2008	2010	2008	2010	2008	2010
Building Envelope	25%	22%	47%	34%	25%	34%	19%	26%
Materials Performance	22%	39%	34%	32%	21%	22%	39%	42%
Energy / Insulation	39%	35%	25%	32%	32%	37%	35%	42%
Codes & Standards	NA	22%	NA	26%	NA	22%	NA	14%
Sustainability	42%	35%	38%	26%	75%	46%	61%	36% ▼
Upgrading	8%	17%	25%	25%	14%	22%	13%	14%
Housing Needs	36%	35%	16%	21%	7%	20%	6%	18%
Renovation	6%	13%	14%	11%	11%	15%	6%	16%
Construction Management	19%	17%	14%	20%	18%	15%	3%	24% ▲
User Behaviour	22%	9%	17%	13%	18%	12%	29%	8% ▼
On Site Practices	17%	4%	13%	10%	18%	12%	10%	16%
Urban Design	11%	9%	6%	5%	14%	17%	6%	6%
Building Services	6%	0%	13%	8%	7%	5%	6%	4%
Economics & Demographics	17%	4%	8%	5%	4%	0%	6%	12%
Earthquake Engineering	3%	4%	3%	5%	0%	7%	6%	2%
Internal Environments	8%	4%	11%	4%	7%	7%	19%	6%
Fire Safety	0%	4%	2%	3%	4%	2%	3%	4%
Acoustics	11%	4%	5%	5%	7%	5%	10%	6%
Structural Engineering	0%	4%	3%	4%	4%	0%	10%	2%
Base	36	23	64	160	28	41	31	50

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term

2008 vs 2010 Comparisons - Longer Term, 4-5 years

	Certified Builders		Master Builders		Building Levy Members	
	2008	2010	2008	2010	2008	2010
Building Envelope	35%	40%	29%	37%	34%	37%
Materials Performance	38%	32%	42%	54% ▲	40%	35%
Energy / Insulation	42%	43%	43%	36%	38%	39%
Codes & Standards	NA	30%	NA	29%	NA	40%
Sustainability	29%	23%	42%	23% ▼	35%	24%
Upgrading	16%	18%	11%	14%	15%	16%
Housing Needs	22%	23%	22%	23%	21%	18%
Renovation	12%	13%	13%	10%	21%	19%
Construction Management	16%	12%	21%	14%	15%	9%
User Behaviour	20%	9% ▼	19%	10% ▼	15%	13%
On Site Practices	12%	17%	16%	14%	11%	13%
Urban Design	9%	6%	7%	4%	7%	6%
Building Services	14%	4% ▼	8%	7%	8%	7%
Economics & Demographics	4%	2%	7%	5%	10%	5%
Earthquake Engineering	5%	8%	2%	6%	1%	4%
Internal Environments	2%	4%	3%	3%	8%	7%
Fire Safety	3%	2%	1%	1%	1%	3%
Acoustics	3%	2%	5%	3%	4%	0%
Structural Engineering	3%	1%	3%	5%	2%	2%
Base	103	90	233	154	91	94

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q5 Information you are likely to require for your job in the longer term, 4-5 years. What three subjects do you think it will be most important for the industry to develop new information about for the longer term

Table of mean importance measures for areas most requiring new information with top 5 areas for each industry group

	Architect	Designer	Builder	Building Official	Building Owner / Developer ⁽¹⁾	Consultant ⁽²⁾	Educator	Merchant/ Manufacturer/ Supplier	Total
Building Envelope	(1) 8.3	(1) 8.5	(2) 8.3	(1) 8.8	(4) 7.2	(1) 7.8	(1) 8.2	(1) 7.8	8.3
Materials Performance	(2) 8.0	(4) 8.1	(1) 8.6	(3) 8.1	(3) 7.6	(2) 7.8	(5) 7.4	(2) 7.6	8.2
Energy / Insulation	(3) 7.9	(2) 8.4	(3) 8.2	(4) 7.9	(2) 7.8	(3) 7.5	(3) 8.1	(3) 7.5	8.0
Codes & Standards	7.3	(3) 8.3	(4) 8.2	(2) 8.5	(1) 7.8	(4) 7.5	(4) 7.9	6.8	7.9
Sustainability	(4) 7.4	(5) 7.1	7.0	6.7	(5) 7.0	6.9	(2) 8.2	(4) 7.2	7.1
On Site Practices	5.7	6.2	(5) 7.4	6.5	5.9	6.8	6.7	(5) 6.8	6.7
Renovation	6.4	6.8	6.9	6.8	6.3	6.4	7.1	6.6	6.7
Upgrading	(5) 7.4	6.9	6.4	7.0	5.6	6.6	6.8	6.6	6.7
Construction Management	5.6	6.3	7.0	6.3	6.3	(5) 6.9	6.7	6.4	6.6
Structural Engineering	5.7	6.3	7.3	7.1	6.4	6.3	6.4	6.0	6.6
Building Services	6.4	6.9	6.6	7.0	6.5	6.2	6.6	5.3	6.5
Internal Environment	6.2	6.9	6.5	6.7	6.3	6.2	7.1	6.2	6.5
User Behaviour	5.8	5.9	6.4	6.8	6.8	6.0	6.5	5.9	6.2
Fire Safety	5.7	6.3	6.2	(5) 7.7	5.7	6.0	5.9	5.4	6.2
Housing Needs	6.0	6.4	6.5	6.1	6.0	5.9	6.5	5.4	6.2
Earthquake Engineering	5.3	6.0	6.1	6.8	5.0	6.0	5.8	5.6	5.9
Urban Design	6.4	5.8	5.9	5.7	6.4	5.3	6.6	5.3	5.9
Economics & Demographics	5.2	5.2	5.8	5.1	5.7	5.5	5.8	5.4	5.5
Acoustics	5.5	5.5	5.1	5.4	5.4	5.1	5.1	5.0	5.2
Base	157	143	408	99	23	160	41	50	1081

Notes: (1) Caution low base; (2) Consultants include Surveyors, Engineers and Project Managers; (3) Q1 Information you are likely to require in the next year or two. Provide a rating for each to indicate the areas you think are the most important for the industry to develop new information to directly help you do a better job. 0 – 10 scale where 0 = not important, 10 = extremely important

Mean importance measures - Acoustics

Acoustics – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official	Building Owner / Developer	Consultant ⁽¹⁾	Educator	Merchant/ Manufacturer/ Supplier	Total
Acoustics separation technology	8.3	8.5	8.3	8.8	7.2	7.8	8.2	7.8	8.3
Effects of flanking noise	8.0	8.1	8.6	8.1	7.6	7.8	7.4	7.6	8.2
Acoustics privacy requirements	7.9	8.4	8.2	7.9	7.8	7.5	8.1	7.5	8.0
Develop database of NZBC conforming acoustics details	7.3	8.3	8.2	8.5	7.8	7.5	7.9	6.8	7.9
Understanding low frequency sound performance of buildings	7.4	7.1	7.0	6.7	7.0	6.9	8.2	7.2	7.1
Base (Caution low base)	18	14	15	7	4	20	4	7	89

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Building Services

Building Services – Importance Evaluation of Information in Next Two Years

	Architect	Designer	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Drainage & septic tank systems	6.2 ▼	7.8	8.0 ▲	7.1	5.0	6.7	8.3	5.3	7.2
Plumbing systems	6.6	7.7	7.5	7.6	5.5	6.7	8.8	5.0	7.2
Lighting systems	6.1	5.6	6.4	5.9	5.0	5.6	7.3	7.2	6.0
Microbial (Legionella) control	4.2 ▼	4.4 ▼	5.9	5.9	4.0	6.1	8.8	5.7	5.4
Lifts & elevators	4.3	4.2	4.9	5.8	3.0	4.6	7.3	2.8	4.6
Base	31	36	55	16	2	28	4	6	178

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Building User Behaviour

Building User Behaviour – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Perception of building stability	6.2	6.3	7.8▲	7.7	5.3	6.9	7.0	7.4	7.1
Perception of building safety	6.4	6.3	7.4	7.5	6.0	6.9	7.0	7.0	7.0
Effects of building user on energy efficiency measures	7.3	6.1	7.0	7.3	6.7	6.7	7.7	8.7	7.0
Drivers of maintenance decisions	6.8	5.8	7.0	7.8	6.2	7.2	5.7	8.2	7.0
Concept of User Manual	6.8	5.6	6.9	7.3	7.3	7.1	5.2	8.0	6.8
Perception of building comfort	7.5	6.6	6.4	6.6	7.2	6.1	7.5	8.2	6.7
Perception of lighting levels for tasks	6.0	6.6	7.1	6.6	6.2	5.8	6.2	7.2	6.6
Changing use of buildings	7.1	5.5	6.3	7.2	4.8	6.3	7.0	7.0	6.4
Effects of building user on air quality	7.4	4.9	6.1	7.3	5.8	6.0	6.3	7.6	6.3
Cultural suitability	6.2	3.4	3.9▼	5.3	5.2	4.8	6.5	7.0	4.7
Base	17	17	51	23	5	27	6	6	152

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Construction Management

Construction Management – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Interactions between project participants	7.9	7.2	7.9	7.8	6.2	7.9	8.3	8.1	7.8
Standardised detailing	5.6	7.5	8.2 ▲	6.7	7.0	7.3	7.0	7.5	7.6
Productivity	5.1	7.2	7.9	5.5	6.7	7.8	8.3	7.9	7.6
Common specification arrangements	6.0	8.4	7.6	6.8	6.0	7.5	7.6	7.1	7.5
Dispute resolution methodologies	5.3	7.1	7.2	7.9	6.2	7.4	7.5	6.2	7.1
Procurement	5.4	6.8	7.2	5.9	6.2	7.0	7.7	7.3	6.9
Multi-proof	5.1	6.2	7.2 ▲	5.4	8.2	6.6	6.9	5.8	6.7
Specification of tolerances	5.7	6.3	7.0	6.4	5.5	6.5	5.9	6.5	6.6
Prefabricated or modular systems	6.1	5.7	6.2	6.0	8.0	6.0	6.5	6.7	6.2
Base	10	17	113	16	6	52	8	15	237

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Earthquake Engineering

Earthquake Engineering – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾⁽²⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Structural performance in earthquakes	7.7	8.7	8.9	8.9	10.0	8.2	8.5	8.9	8.7
Seismic performance of specific elements / systems	7.5	8.2	8.6	8.5	9.0	7.8	7.5	8.3	8.3
Damage avoidance design	7.3	7.9	8.0	8.1	9.0	7.6	8.7	7.8	7.9
Assessment of risks to person and property damage	6.0	7.5	7.8	8.6	9.0	6.7	7.3	6.9	7.5
Treatment of lifelines	5.4	7.0	7.5	7.9	7.5	6.4	7.2	5.6	7.1
Regional & local seismicity	5.3	6.9	7.4	8.3	7.0	6.6	7.0	5.7	7.0
Internal building services reaction	5.6	6.5	7.0	7.6	7.0	6.3	6.2	5.3	6.6
Base	10	18	60	16	2	19	6	8	140

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Economics & Demographics

Economics & Demographics – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾⁽²⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Costs / benefits of alternative construction methods	8.2	6.9	7.8	7.4	8.3	7.9	6.7	7.2	7.7
Lifecycle costs	8.5	6.9	6.7	8.0	6.8	7.5	7.9	8.0	7.4
Cost / benefit of replace vs refurbish	8.2	6.4	7.4	5.6	8.3	7.2	7.0	7.8	7.4
Cost in use studies	7.9	6.9	6.4	6.8	8.0	6.9	7.3	6.9	7.0
Effects of a changed age structure in the population	6.8	6.3	6.1	8.0	7.8	7.0	7.6	5.8	6.7
Building to meet the needs of different ethnic social groups	5.7	5.0	4.3 ▼	6.8	5.3	5.7	6.3	4.8	5.2
Base	17	7	31	5	3	22	7	9	101

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Fire Safety

Fire Safety – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾⁽²⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Fire performance of construction materials	8.5	8.2	8.6	8.7	8.7	7.4	9.0	9.2	8.5
Fire / smoke spread	8.2	8.2	8.3	9.0	8.3	7.2	9.4	7.8	8.4
Design criteria	8.4	7.8	7.8	8.7	6.0	7.8	9.4	7.6	8.2
Assessment of risks to persons and property damage	7.5	7.7	7.8	8.5	6.7	7.2	9.0	7.4	7.9
Toxicity of materials when burnt	7.0	7.5	8.1	8.1	7.7	5.9	9.6	7.8	7.7
Risk assessment techniques	7.1	7.8	7.3	8.3	5.0	7.5	8.4	6.4	7.6
Occupant behaviour in fire	7.6	7.6	7.2	8.3 ▲	7.7	6.7	9.0	5.0	7.6
Use of fire models	6.4	6.8	7.1	7.9	7.0	7.7	9.6	6.2	7.4
Active suppression systems	6.9	7.1	7.5	7.9	6.7	6.4	8.8	5.6	7.4
Retrofit of energy efficiency measures	7.2	7.4	7.3	6.7	7.0	5.7	8.8	5.4	6.9
Base	11	13	31	37	3	15	5	5	120

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Housing Needs

Housing Needs – Importance Evaluation of Information in Next Two Years

	Architect	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Housing affordability	8.2	8.2	8.4	7.9	9.1	8.4	8.8	8.3	8.3
NZ houses should be more sustainable	7.8	7.9	8.2	7.9	8.1	7.6	8.4	7.8	8.0
Maintenance of NZ's existing house stock	7.6	7.6	7.8	8.4	7.8	8.3	7.8	7.8	7.8
NZ's aging population should be able to stay in their houses	7.8	7.6	7.8	8.1	7.0	7.8	8.8	7.3	7.8
Cultural suitability	6.0	5.8	5.5	6.8	6.0	5.7	6.0	5.3	5.8
Iwi owned housing projects	5.7	4.2	4.5	6.2	4.8	5.1	6.6	4.2	5.0
Base	33	27	69	17	7	31	8	11	203

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Internal Environments

Internal Environments – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾⁽²⁾	Educator ⁽²⁾	Merchant/Manufacturer/Supplier ⁽²⁾	Total
Condensation and similar moisture problems	8.2	8.8	8.6	8.6	8.7	8.7	8.5	8.3	8.6
Ventilation effectiveness	8.7	8.5	8.6	8.3	8.7	8.4	8.3	9.2	8.5
Passive ventilation	8.7	8.3	8.0	7.4	8.3	7.9	8.5	7.2	8.1
Toxic moulds	7.3	8.0	8.5	7.9	9.3	8.2	8.2	8.0	8.1
Health and safety aspects of building materials	7.8	7.5	8.4	7.2	8.7	7.9	8.7	6.3	8.0
Indoor pollutants	7.7	7.5	8.1	7.0	8.7	7.3	8.3	7.0	7.7
Health and productivity impacts of internal environments	7.3	7.5	7.4	7.7	8.0	7.4	7.2	8.2	7.4
Acoustics	6.6	6.7	7.1	7.0	7.3	6.5	7.1	6.2	6.8
Accessibility for all	6.5	7.0	6.7	6.9	8.0	6.4	6.5	4.5	6.6
Design rules for space efficient offices	4.7	5.6	6.0	6.7	7.5	4.3	6.0	3.2	5.4
Base	24	23	47	11	2	23	11	6	147

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Practices on Site

Practices on Site – Importance Evaluation of Information in Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Safety issues on site	6.9	6.1	8.6	8.4	8.8	8.3	9.1	7.4	8.2
Achieved vs specified requirements	7.1	7.8	8.3	8.1	8.3	8.4	8.8	7.8	8.2
Efficiency of training methods	7.2	6.7	8.1	9.2	8.0	8.1	9.0	7.7	8.1
Productivity	7.2	6.2	8.4	8.5	7.3	7.9	8.6	7.9	8.0
Quality assurances application	6.6	6.1	8.2	8.1	8.0	8.5	8.2	8.1	8.0
Impact of information technology on site work	6.1	5.5	7.8	7.8	8.0	7.7	8.0	7.1	7.5
Issues involved in prefabrication versus site construction	7.0	5.3	7.3	7.5	7.8	7.0	7.0	7.6	7.1
Ergonomics on site	5.3	5.4	7.1	7.1	7.0	6.9	7.6	6.0	6.8
Small-scale automation for site tasks	6.3	4.2	7.1	7.0	7.8	6.6	6.8	6.7	6.7
Base	13	16	121	14	4	45	10	16	239

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Retrofit Renovations

Retrofit Renovations – Importance Evaluation of Information in Next Two Years

	Architect	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
When a Building Consent is required	6.9 ▼	8.2	8.3 ▲	8.1	8.2	7.3	8.1	6.1	7.8
Adaption of buildings to other use	7.3	8.0	7.4	8.7	7.0	6.7	8.2	6.6	7.4
Getting information on previous materials	6.8	8.4	7.4	7.2	7.0	7.2	7.9	6.4	7.3
Getting information on previous designs	6.6	8.7	7.4	7.2	6.0	7.1	7.4	6.3	7.3
Base	37	24	99	15	5	29	9	12	230

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 = extremely important. Mean scores

Mean importance measures – Structural Engineering

Structural Engineering – Importance Evaluation of Information for Next Two Years

	Architect ⁽²⁾	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Fastening and connection systems	7.8	8.6	8.6	8.9	9.3	8.1	6.9	7.1	8.4
Effect of design on structural performance	7.3	8.7	8.4	8.2	8.0	8.4	7.7	7.8	8.3
“Risk versus performance” regarding structural stability	7.6	7.8	8.3	8.6	8.7	7.7	7.8	6.8	8.1
Different requirements for steel versus timber versus concrete	7.8	8.1	8.1	8.3	9.5	8.1	7.3	7.6	8.1
Design for easy maintenance	7.2	8.5	8.2	7.8	9.3	8.0	7.2	6.8	8.0
Innovative framing systems	7.5	7.6	7.8	7.1	8.0	7.8	7.9	7.9	7.7
Serviceability requirements	7.1	7.4	7.9	7.9	8.5	7.5	7.9	6.6	7.7
Composite systems	7.9	8.1	7.5	7.8	9.5	7.7	6.8	7.7	7.7
Base	12	22	99	21	3	27	9	8	201

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 extremely important. Mean scores

Mean importance measures – Urban Design

Urban Design – Importance Evaluation of Information for Next Two Years

	Architect	Designer ⁽²⁾	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾⁽²⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Effect of legislation and regulations	8.6	8.7	8.1	8.5	8.3	7.2	8.3	7.0	8.2
New buildings	8.3	8.5	7.8	8.1	7.0	7.1	7.8	6.8	7.9
Leadership	8.1	8.6	6.9 ▼	8.4	6.0	7.5	7.6	7.7	7.6
Mixed use buildings	8.2	8.0	6.5 ▼	8.5	6.8	7.4	7.9	7.2	7.5
Existing buildings	7.8	7.9	6.8	7.6	7.0	7.3	7.9	6.7	7.4
Delivery including public / private partnerships	7.8	7.6	6.6	8.1	6.8	7.5	5.8	8.0	7.3
Base	37	11	36	8	4	14	8	6	124

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 extremely important. Mean scores

Mean importance measures – Upgrading & Re-using Buildings

Upgrading & Re-using Buildings – Importance Evaluation of Information for Next Two Years

	Architect	Designer	Builder	Building Official ⁽²⁾	Building Owner / Developer ⁽²⁾	Consultant ⁽¹⁾	Educator ⁽²⁾	Merchant/ Manufacturer/ Supplier ⁽²⁾	Total
Retrofit of services and insulation	8.1	8.4	7.9	8.5	7.3	8.3	9.6	8.7	8.2
Assessment of remaining durability	8.0	8.0	7.6	8.4	6.3	7.8	8.4	6.4	7.8
Structural retrofitting	7.3	7.6	7.9	8.0	7.0	7.6	7.0	7.1	7.6
Structural survey techniques	6.9	7.0	7.2	7.8	6.0	7.0	6.5	5.7	7.0
Base	64	38	72	25	4	48	8	18	277

Notes: (1) Consultants include Surveyors, Engineers and Project Managers; (2) Caution low base; (3) Q3A How important do you anticipate the topics will be to the industry in the future. 0 – 10 scale where 0 = not important, 10 extremely important. Mean scores