



FCSI/rd+d Presentation

BIM Usage and Trends
Comparison of
FCSI Members vs. General Population

March, 2018

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Objectives/Methodology

- *Zoomba Group* conducted a survey to investigate end-users attitudes and usage toward BIM.
 - Adoption and usage of BIM
 - Content and its relationship to BIM
 - CAD vs. BIM
 - BIM Drivers and Barriers
 - Trends
- This study was conducted online. The study targeted foodservice Consultants, Designers and Dealers or Chain restaurants with design capabilities
- The sample was selected from *rd+d* online database. It was augmented with membership data from FCSI.
 - 145 respondents are included in this report: 54% FCSI members and 46% Non-member.

Key Observations

BIM is increasingly viewed as the tool of the future in the foodservice design world.

- The industry projects an increasing use of BIM due to an increased requirement for BIM by architects and to a lesser extent a desire to provide better service to clients.
- While older CAD users are retiring, entry level employees and recent graduate hires are highly likely to have knowledge of BIM.
- BIM is viewed as being more accurate and providing more benefits than CAD.

Key Observations

As a newer technology, BIM products are still a work in progress. Issues that need to be resolved:

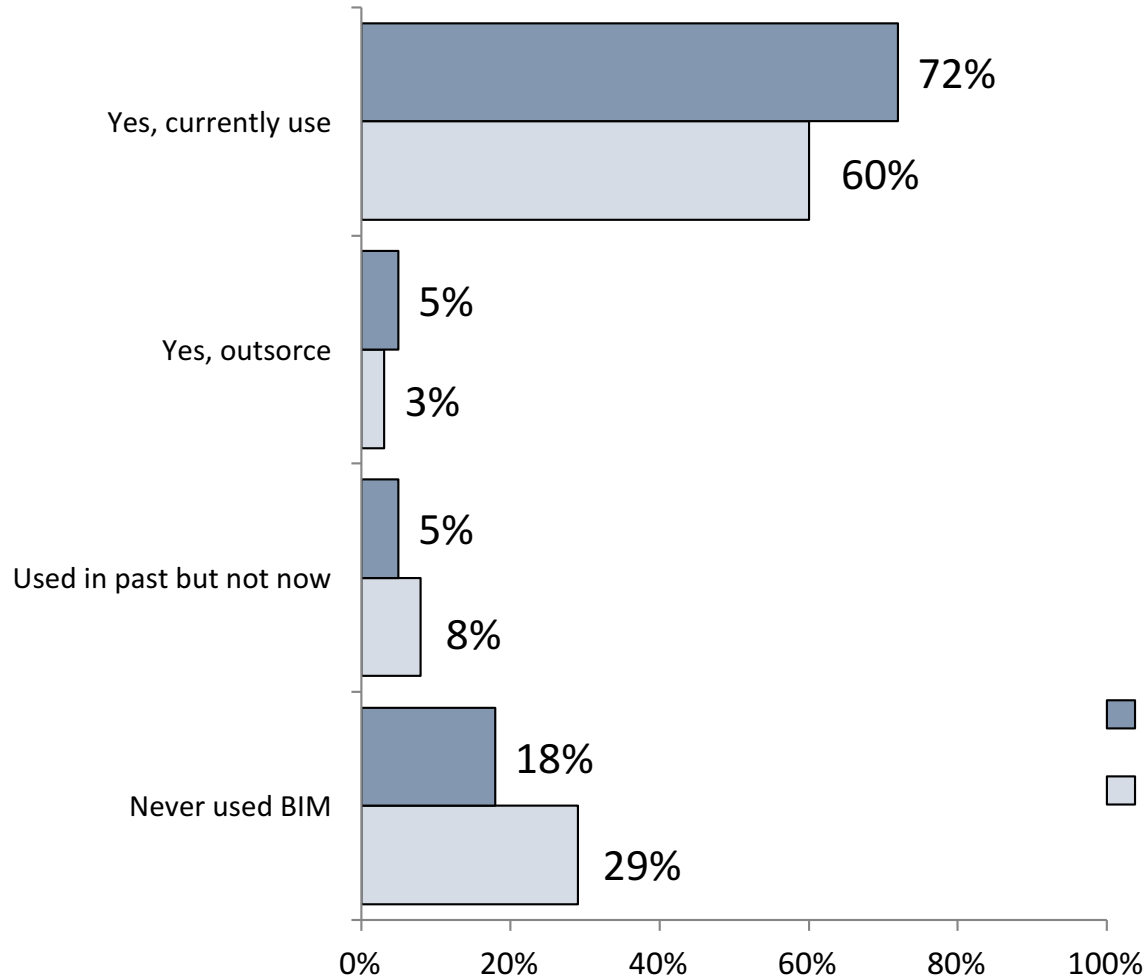
- Standardization; users adhering to standardization
- Consistency of families by manufacturers
- Improved response time by manufacturers in response to content requests
- Acceptance of higher charges to clients; better understanding of the cost/benefit ratio.



SECTION I: BIM USAGE



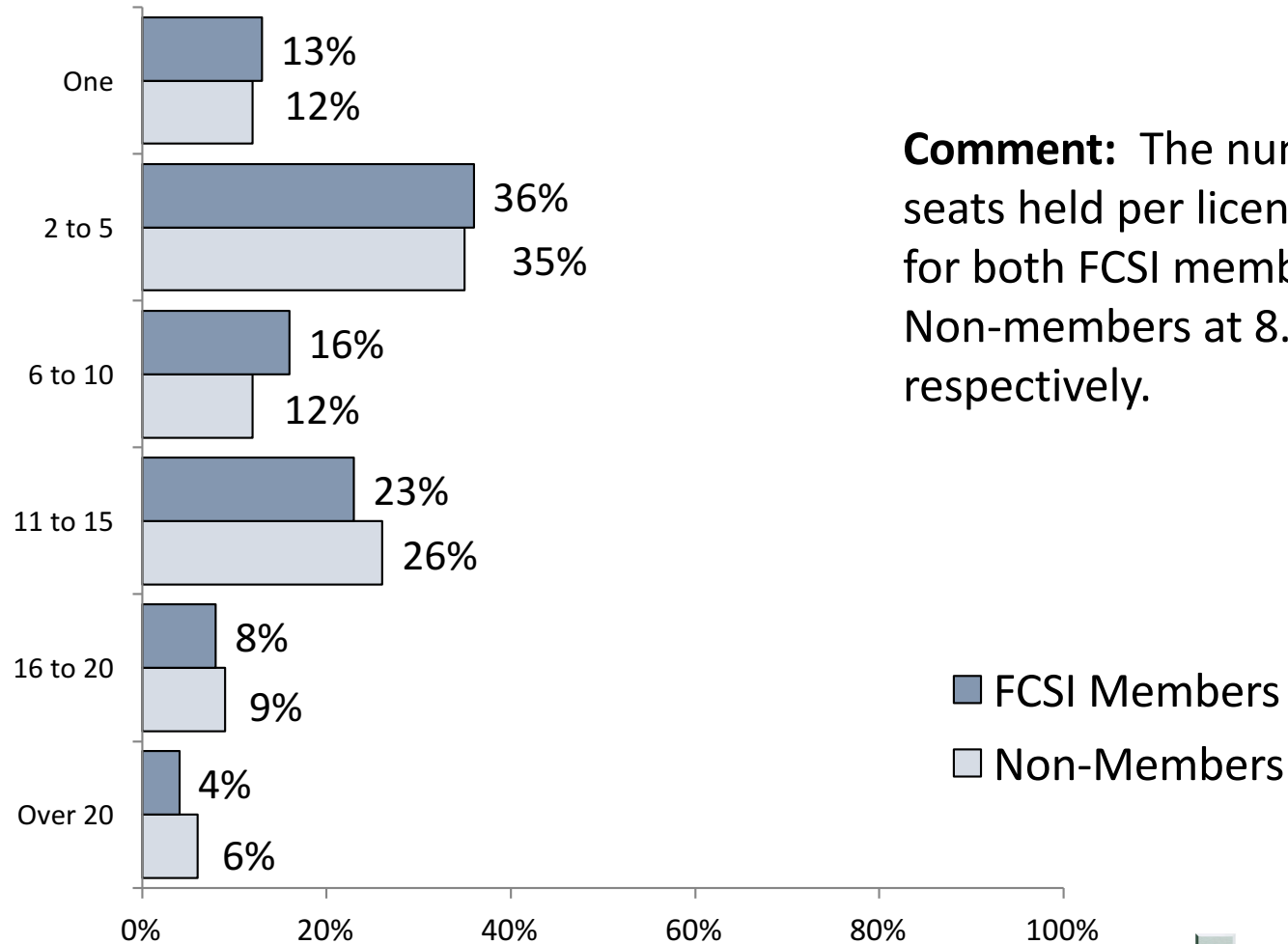
Does your company use BIM when designing Foodservice projects?



Comment: 77% of FCSI members currently use BIM either on-site or through outsourcing. This is at a somewhat higher rate than the general designer/consultant population.

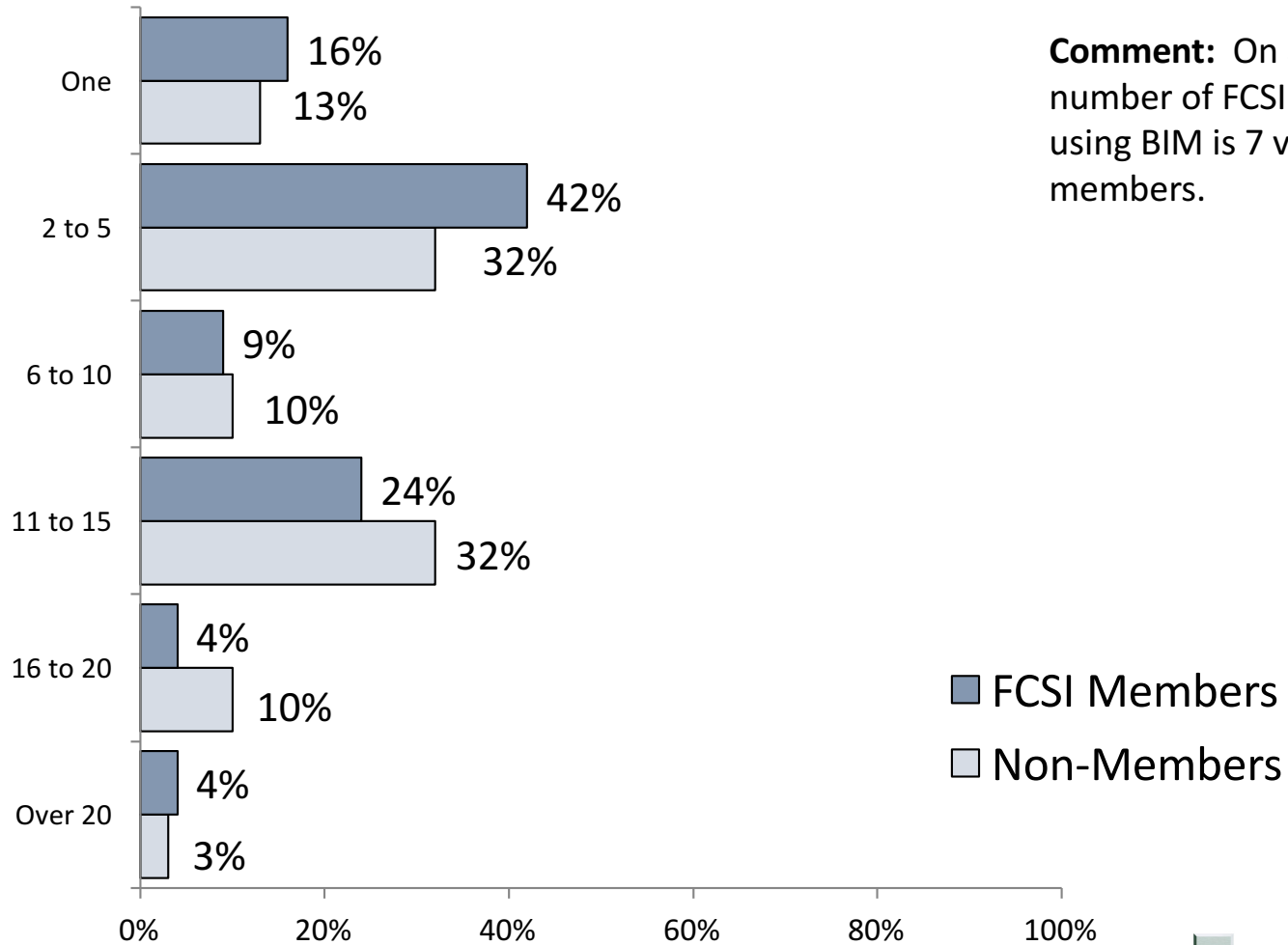
■ FCSI Members
■ Non-Members

How many seats are included in your company's BIM license?



Comment: The number of BIM seats held per license is similar for both FCSI members and Non-members at 8.2 and 9.1 respectively.

How many of your company's employees use BIM?



What is your employees expertise level with BIM?

Comments: FCSI members have a slightly higher percentage of employees with advance BIM training than non-members.

Expertise Level	FCSI MEMBR	NON-MEMBER
Beginner	16%	28%
Intermediate	47%	43%
Expertise	37%	29%

What percent of your company's employees knew BIM/CAD before hire ?– FCSI Members

	BIM	CAD
None	17%	4%
1 to 10%	11%	4%
11 to 20%	7%	0%
21 to 30%	13%	4%
31 to 40%	13%	7%
41 to 50%	20%	2%
51 to 70%	8%	2%
71 to 90%	7%	27%
91 to 99%	0%	2%
100%	4%	47%

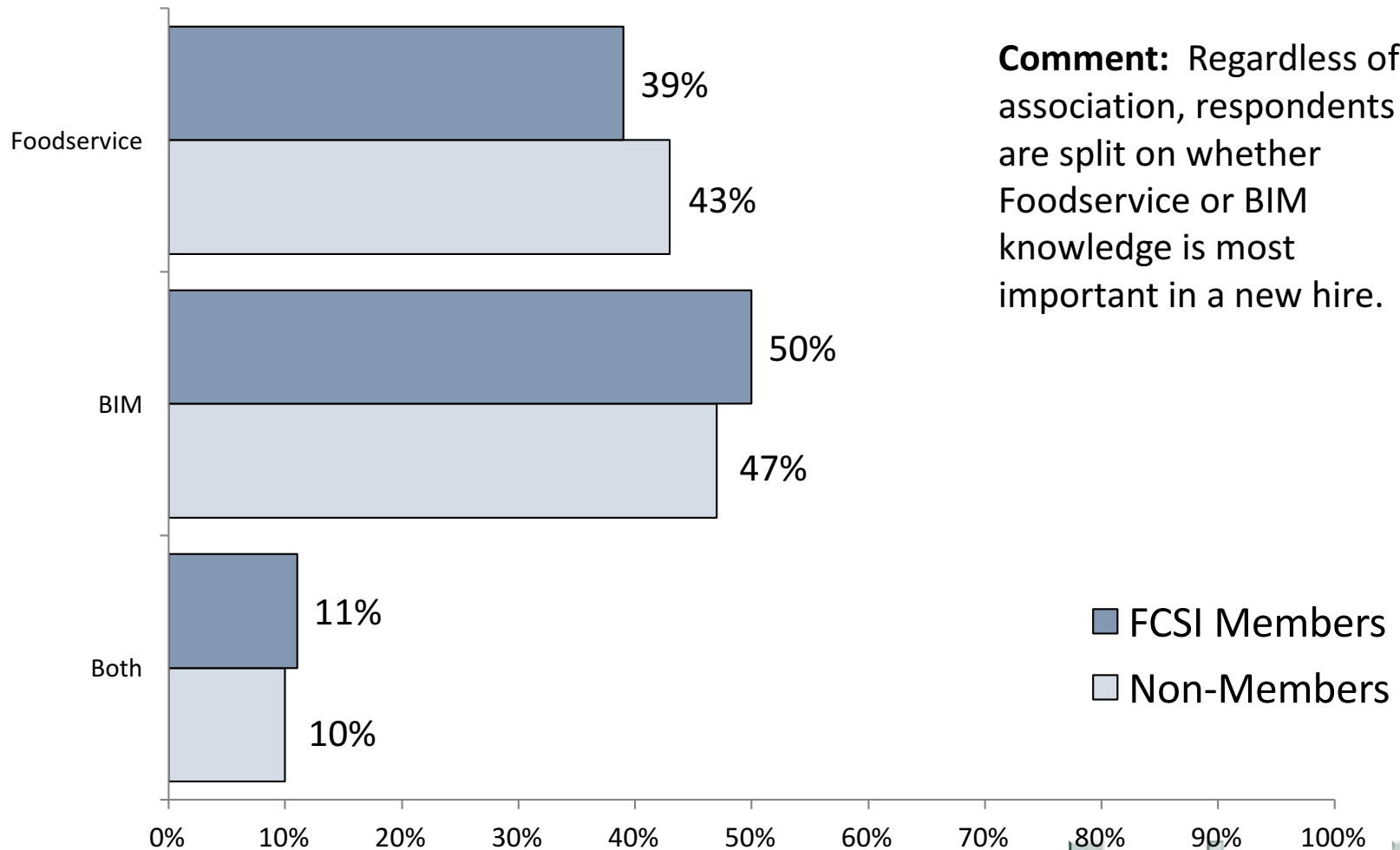
Comments: An average of 32% of employees of companies that are FCSI members knew BIM when hired vs. 76% that knew CAD.

What percent of your company's employees knew BIM/CAD before hire? – Non-Members

	BIM	CAD
None	10%	0%
1to10%	13%	0%
11 to 20%	13%	0%
21 to 30%	20%	0%
31 to 40%	0%	0%
41 to 50%	17%	17%
51 to 70%	6%	3%
71 to 90%	6%	20%
91 to 99%	3%	0%
100%	10%	60%

Comments: 40% of employees of companies that are not FCSI members knew BIM when they were hired vs. 87% that knew CAD.

When hiring new Foodservice design employees, is it more important to hire someone knowledgeable in Foodservice or BIM?



Comment: Regardless of association, respondents are split on whether Foodservice or BIM knowledge is most important in a new hire.

■ FCSI Members
■ Non-Members

Why is it more important that a new hire has Foodservice experience? (All respondents)



Foodservice is very complex (80%)

Software is not effective if user doesn't understand foodservice (42%)

BIM can be learned in a classroom – foodservice is a continual learning process (31%)

Why is it more important that a new hire has BIM experience? (All respondents)



Can teach foodservice better than BIM/not a software teacher (80%)

Need to have drawing skills to be an effective designer (45%)

Bim is needed to be competitive in the workplace (26%)



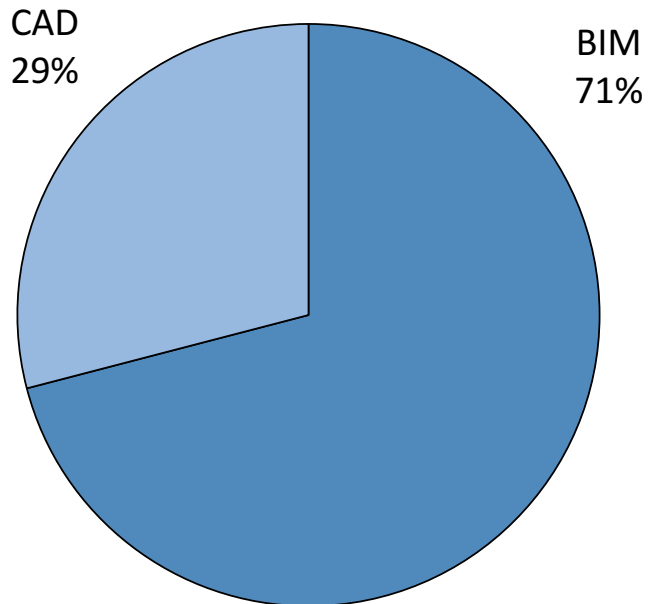
SECTION 2: BIM VS. CAD



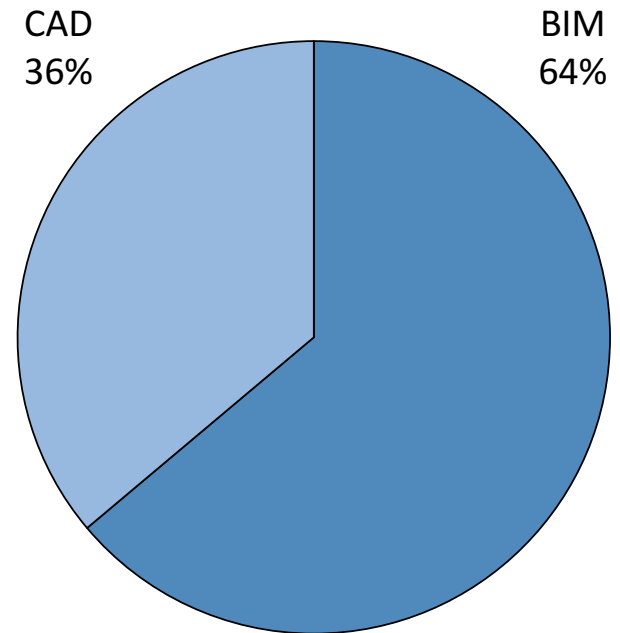
What percent of your company's work is BIM vs. CAD?

Comment: A slightly higher percent of FCSI members total work is completed in BIM. Among FCSI members, 71% of work is in BIM vs. 29% in CAD.

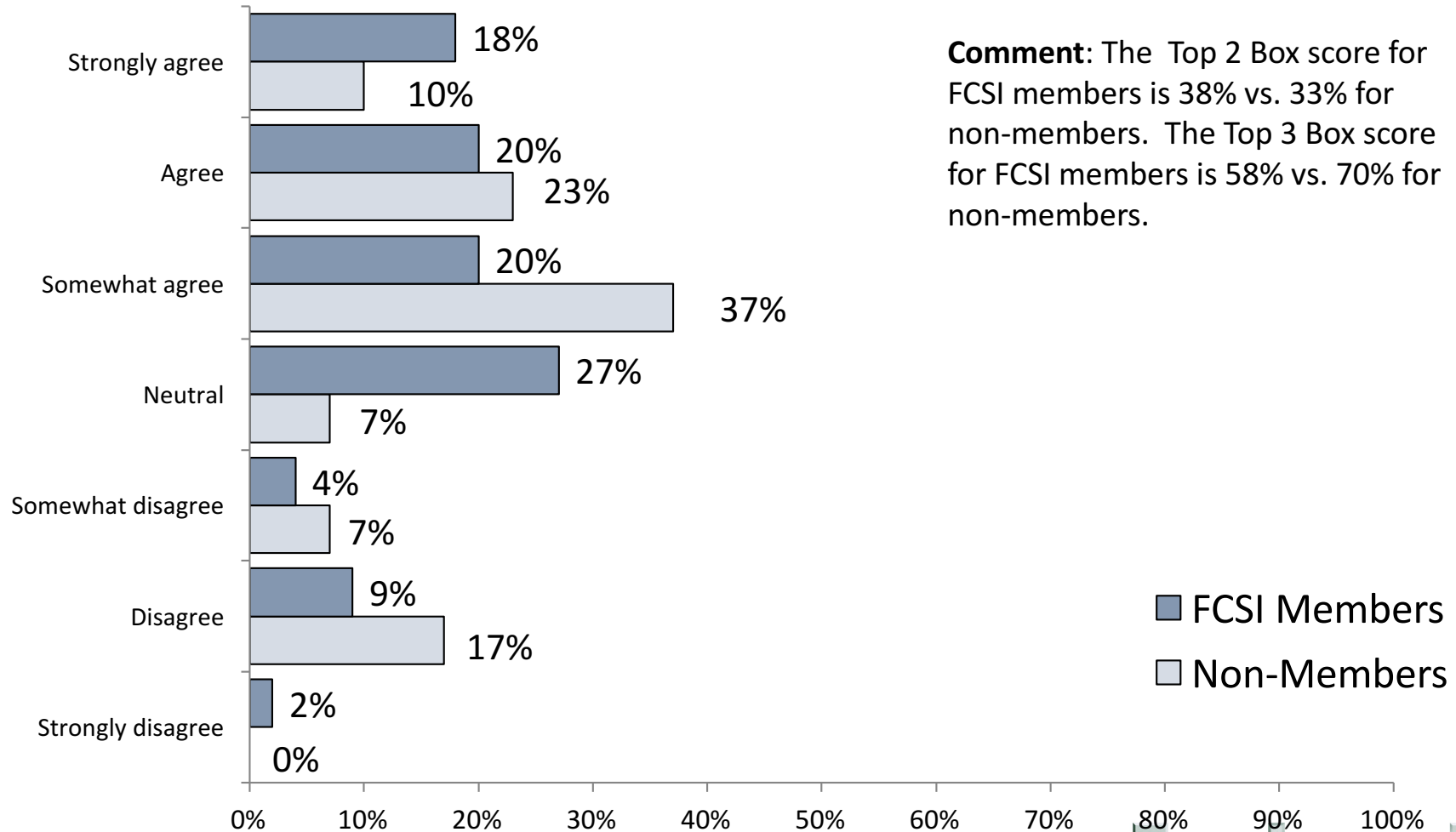
% of Work – FCSI Members



% of Work – Non-Members Events



Agreement With Statement: Knowing CAD makes it easier to learn BIM



Based on the typical scope of your company's projects, is it quicker to use CAD or BIM? – FCSI Members

	Small Projects	Medium Projects	Large Projects	Extra-Large Projects
CAD	21%	17%	14%	14%
BIM	57%	69%	79%	79%
Both equally	21%	14%	7%	7%
Not applicable	0%	0%	0%	0%

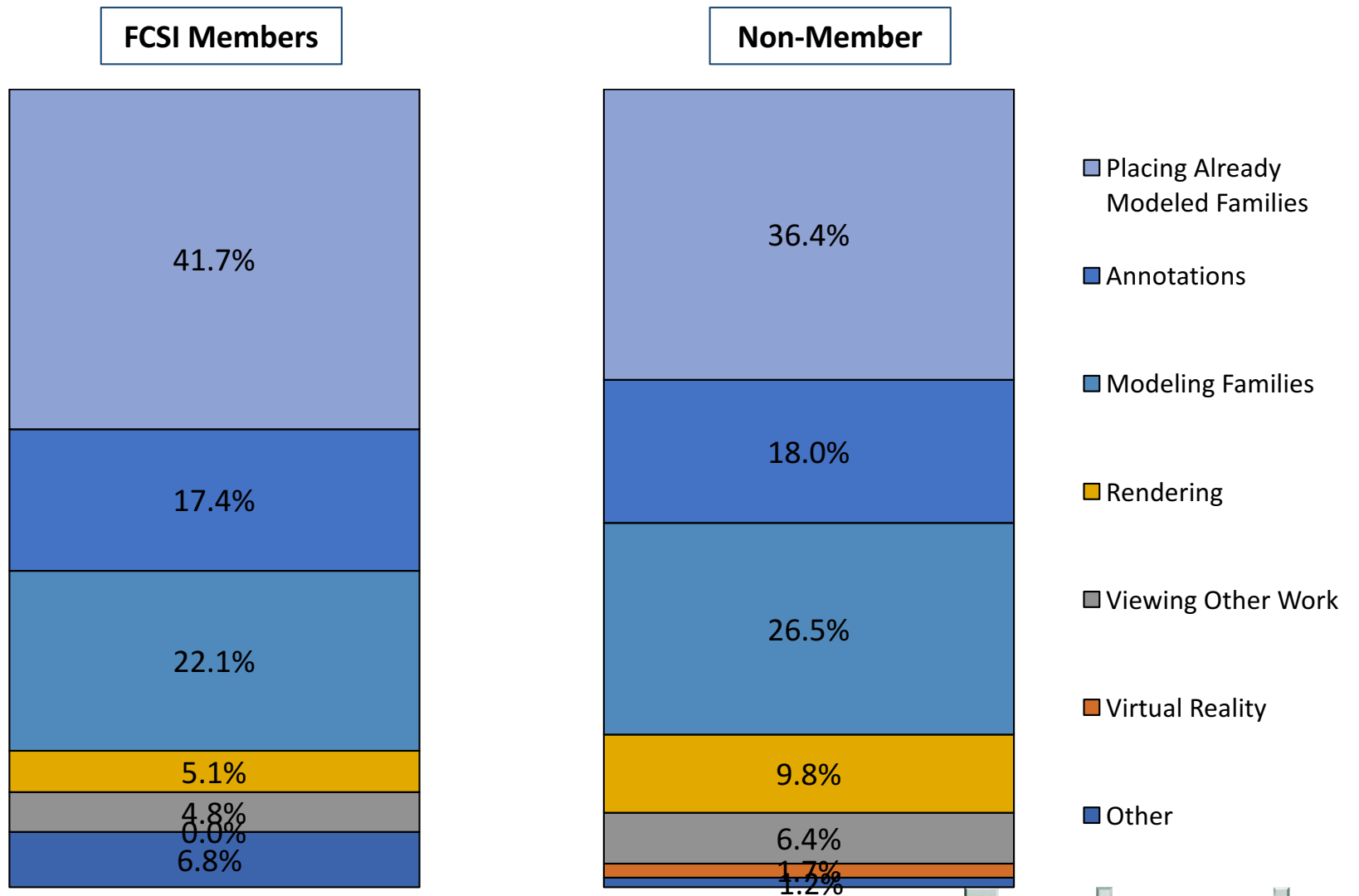
Based on the typical scope of your company's projects, is it quicker to use CAD or BIM? – Non-Members

	Small Projects	Medium Projects	Large Projects	Extra-Large Projects
CAD	30%	14%	10%	10%
BIM	50%	72%	83%	72%
Both equally	20%	14%	3%	3%
Not applicable	0%	0%	3%	14%

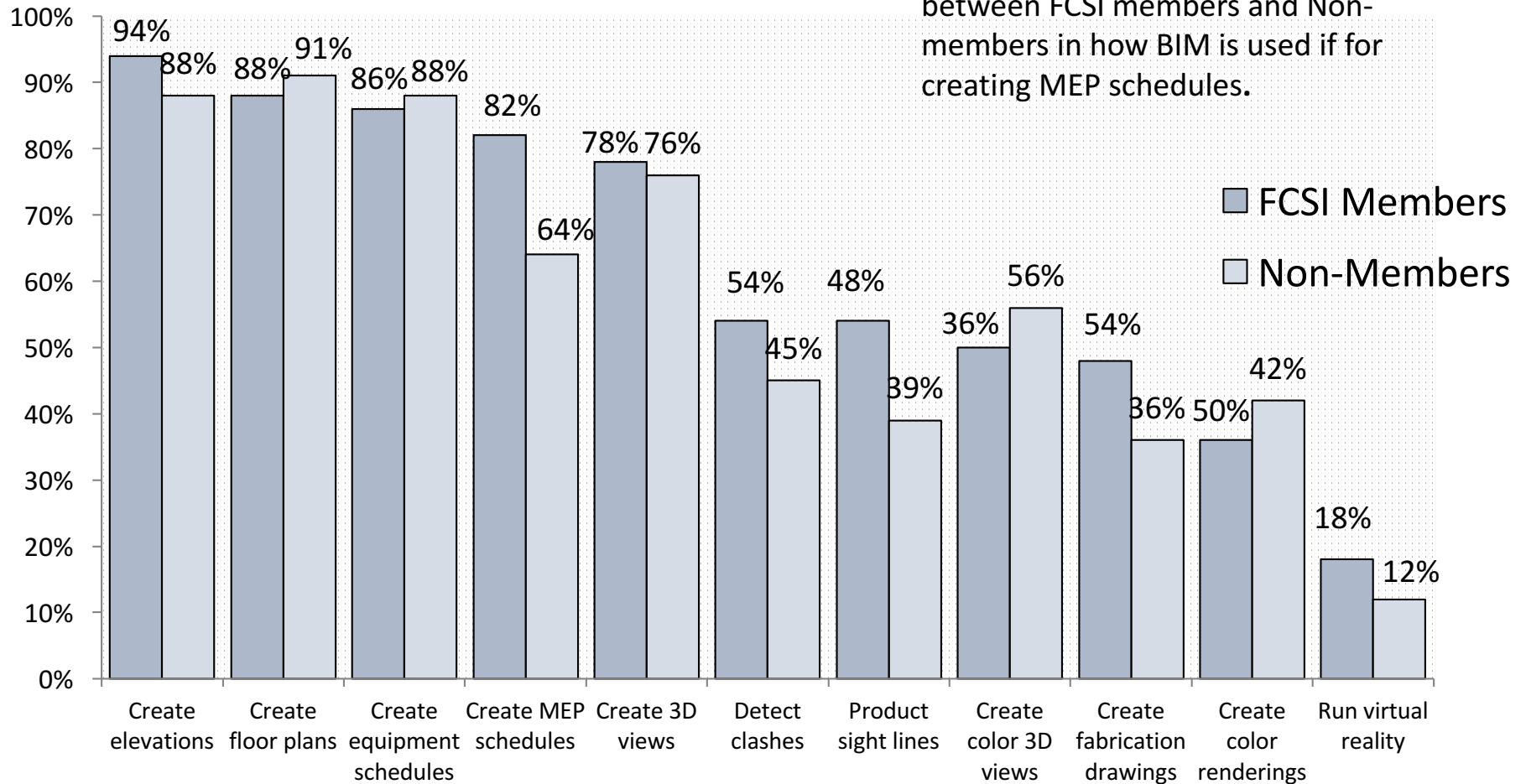


SECTION 3: BIM APPLICATIONS

What percent of total BIM work is allocated to each activity?



For which applications does your company use BIM?

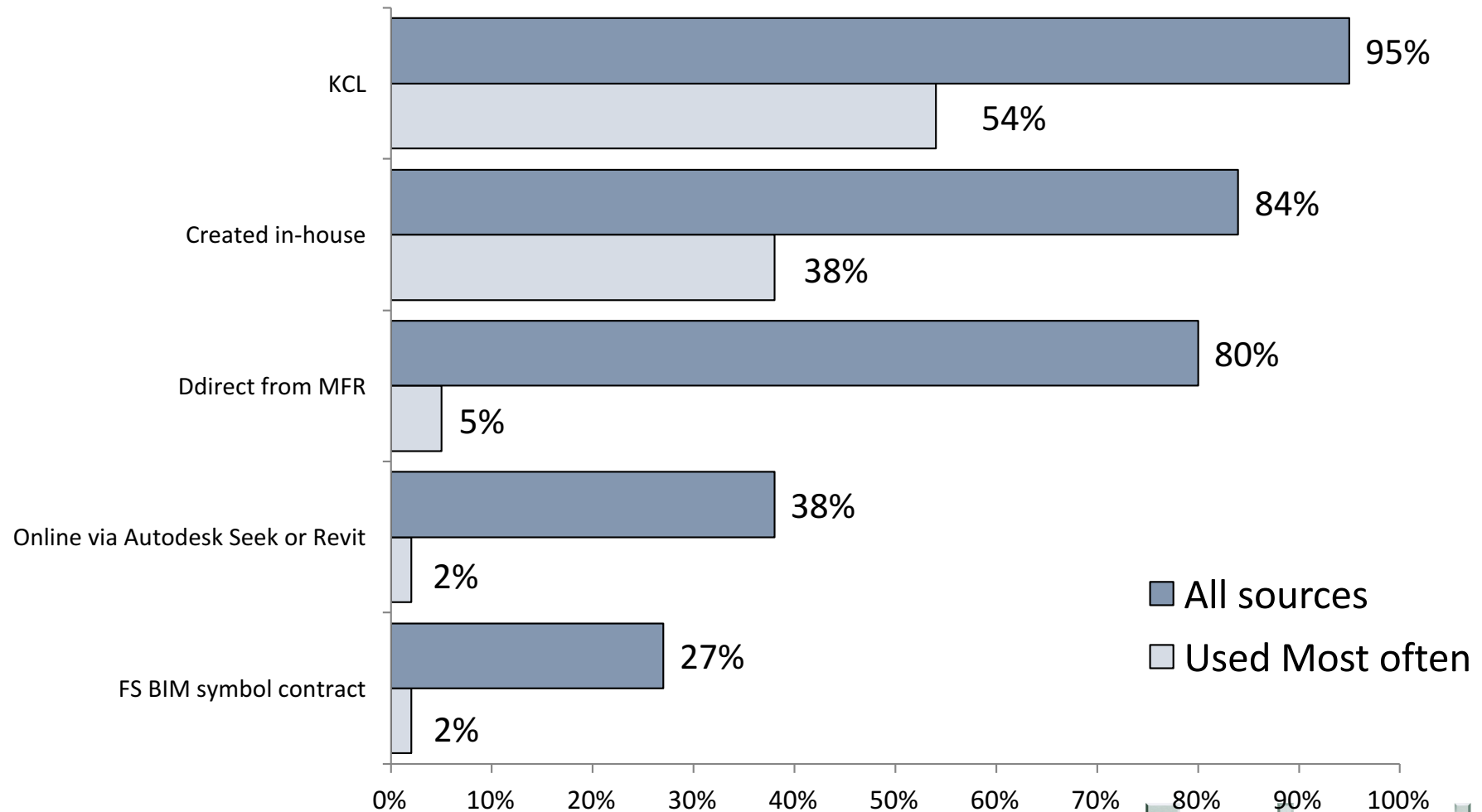




SECTION 4: CONTENT SOURCES

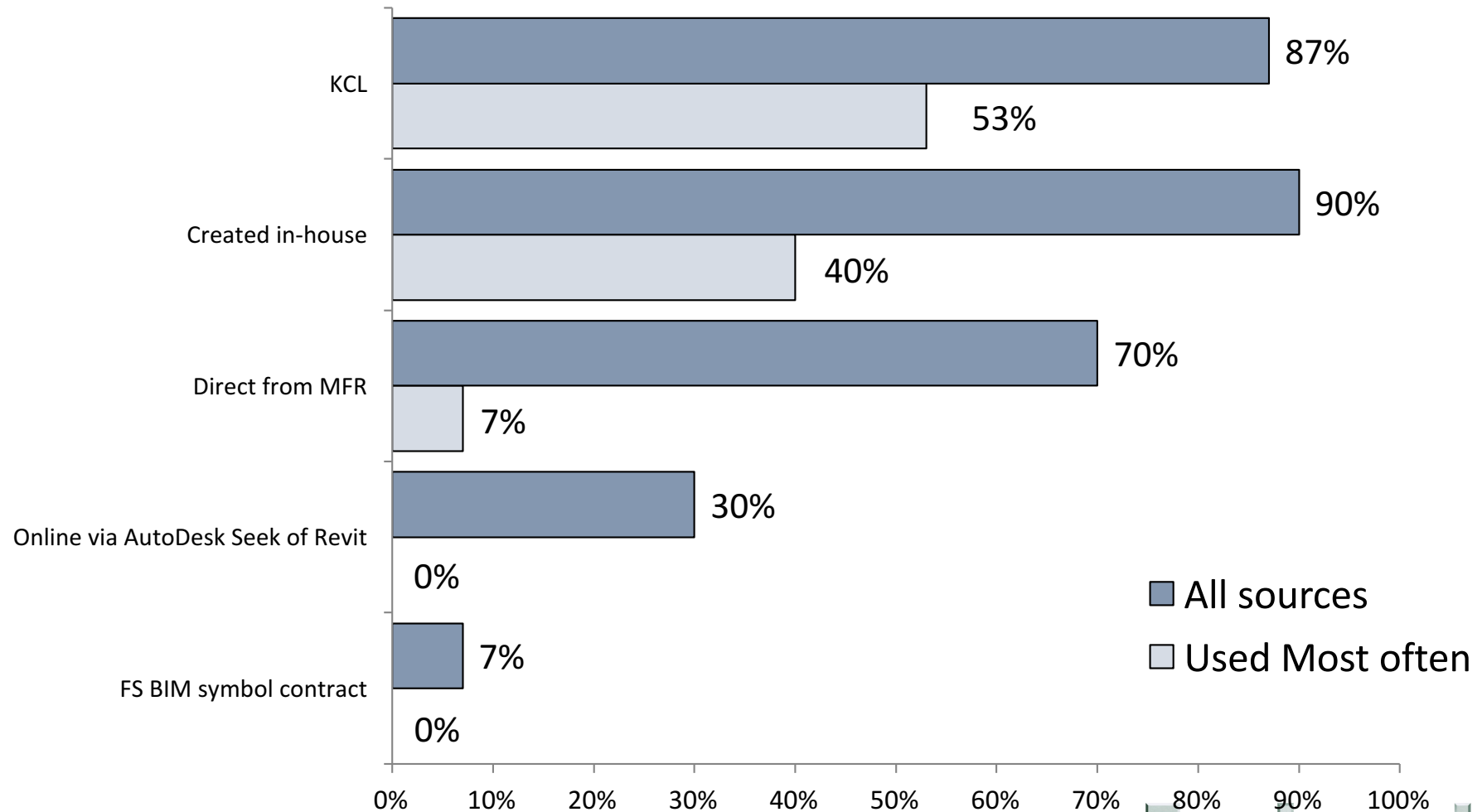
What sources do you use for content? What source do you use most often?— FCSI Members

Comment KCL is used most by over half of FCSI members for content..



What sources do you use for content? What source do you use most often?– Non-Members

Comment: Among non-members, KCL is the primary content source.



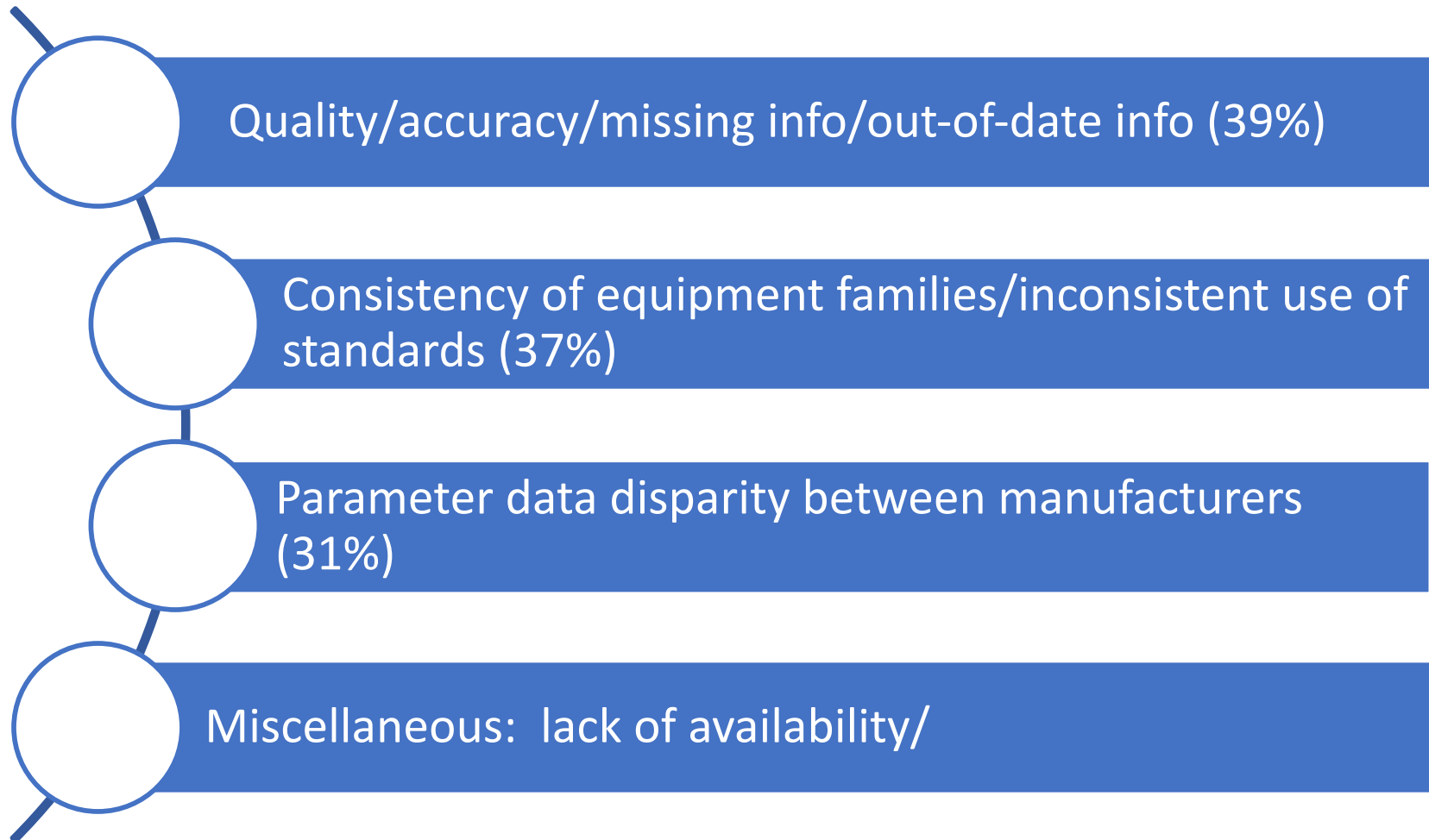
What content sources are used for each of the following> FCSI Members

	Parameter accuracy	Visualization	Consistency	Overall Quality	Complying with FCSI BIM Standards	Low Cot	Accuracy
In-House	73%	51%	70%	68%	57%	35%	64%
Direct from MFR	15%	21%	10%	18%	16%	35%	23%
KCL	35%	49%	40%	39%	51%	68%	33%
FS BIM symbol contract	8%	10%	5%	5%	11%	0%	3%
Online via AutoDesk Seek or Revit	0%	8%	3%	3%	0%	13%	3%

What content sources are used for each of the following? Non-Members

	Parameter accuracy	Visualization	Consistency	Overall Quality	Complying with FCSI BIM Standards	Low Cot	Accuracy
In-House	52%	52%	54%	46%	30%	30%	56%
Direct from MFR	30%	19%	19%	19%	25%	23%	44%
KCL	30%	59%	35%	54%	54%	58%	52%
FS BIM symbol contract	0%	0%	0%	0%	4%	0%	0%
Online via AutoDesk Seek or Revit	4%	7%	4%	4%	4%	0%	0%

What are the biggest problem with BIM content? (All respondents)



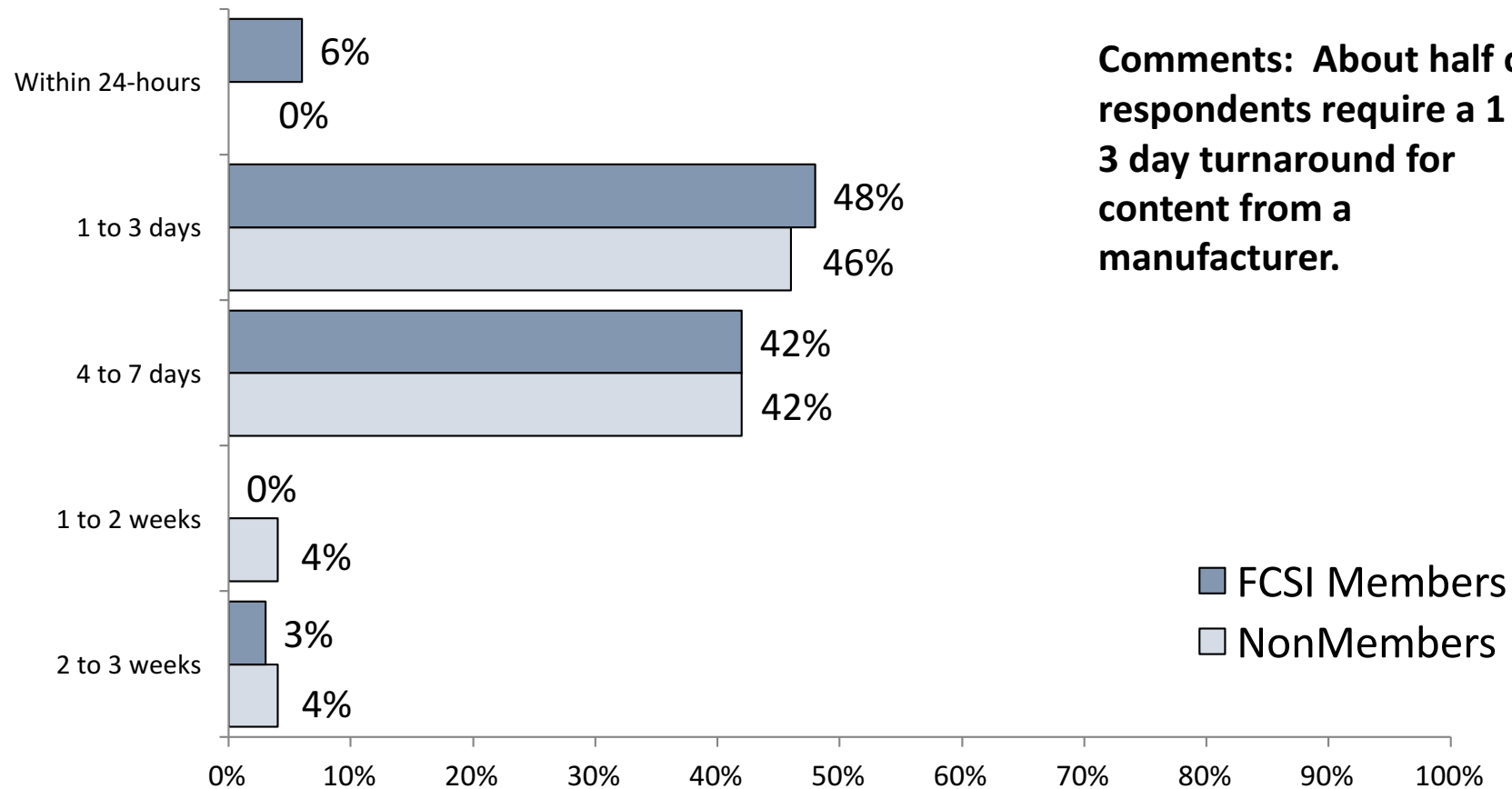


SECTION 5: BEHAVIOR AND ATTITUDES

Which of the following has your company done?

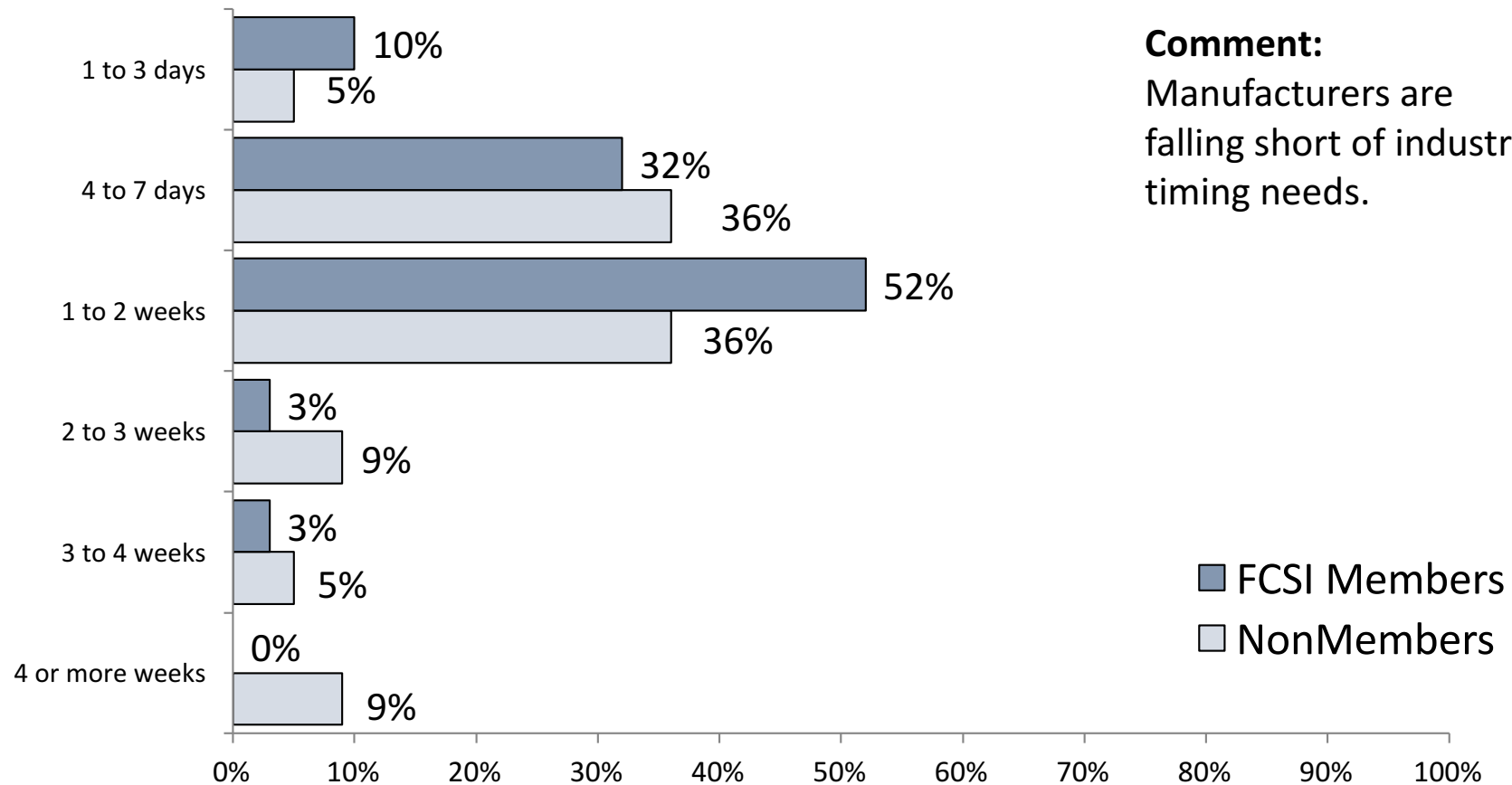
	FCSI Members Yes	Non-Members Yes
Have you ever changed an individual equipment spec due to lack of that specific equipment BIM content?	89%	48%
Have you ever changed an individual equipment spec due to BIM content that was available but of low quality?	64%	62%
Have you ever changed the prime specification of an entire company due to that company's lack of BIM content?	56%	31%
Have you ever changed the prime specification of an entire company due to that company's BIM content being of low quality?	42%	31%
Have you ever started specifying a new manufacturer based on the quality of its BIM content?	60%	59%
Do you require content on a case by case basis directly from manufacturers?	74%	83%

How fast of a turnaround time do you usually need for content from a manufacturer?

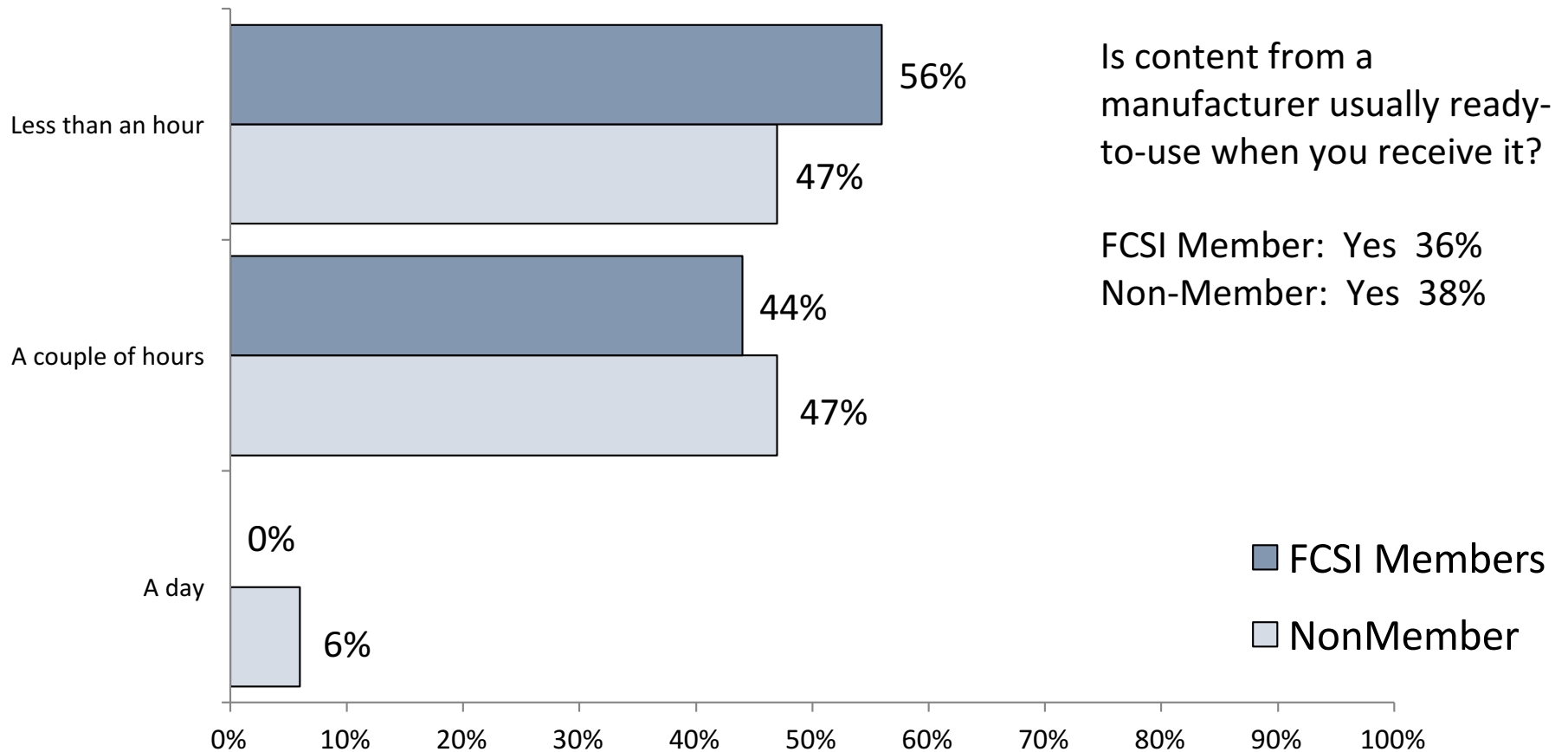


Comments: About half of respondents require a 1 to 3 day turnaround for content from a manufacturer.

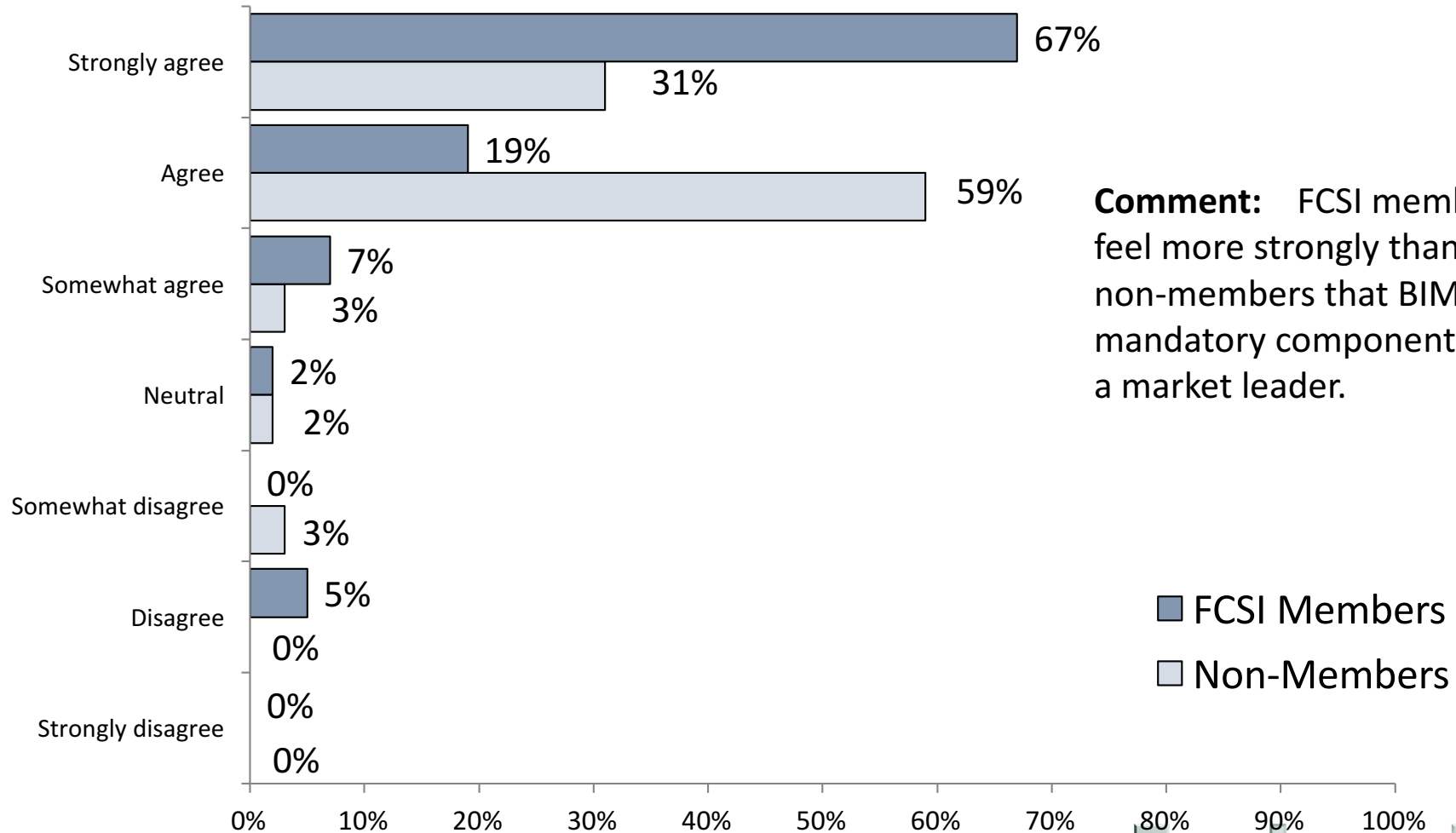
How fast of a turnaround time do you usually receive for content from a manufacturer?



How much time do you usually have to put into making a manufacturer's content ready-to-use when you receive it?



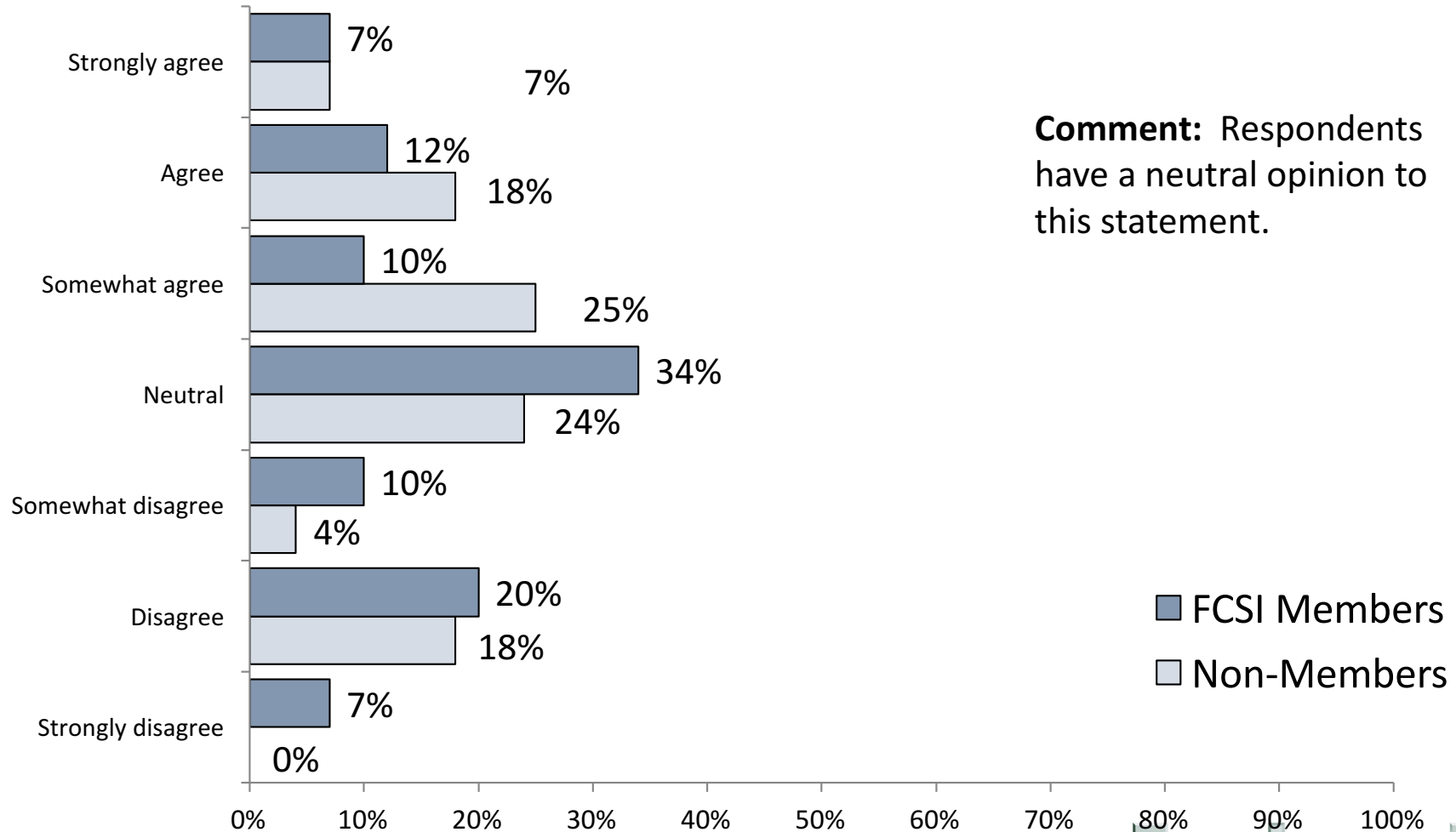
Agreement With Statement: BIM content should be mandatory for a company to be considered a market leader.



Comment: FCSI members feel more strongly than non-members that BIM is a mandatory component of a market leader.

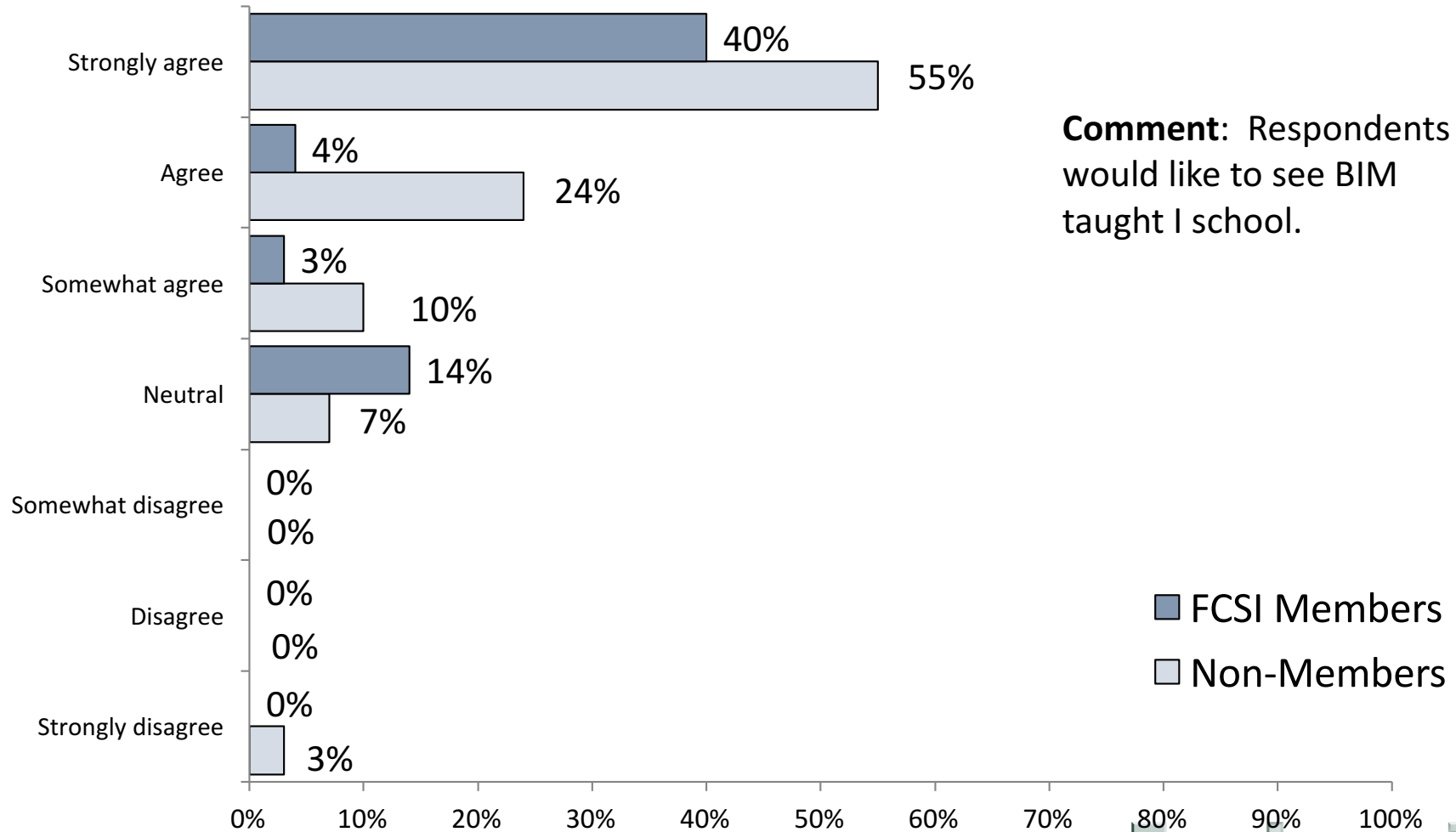
■ FCSI Members
■ Non-Members

Agreement With Statement: BIM contents' 3D geometry is more important than its MEP parameters.



Comment: Respondents have a neutral opinion to this statement.

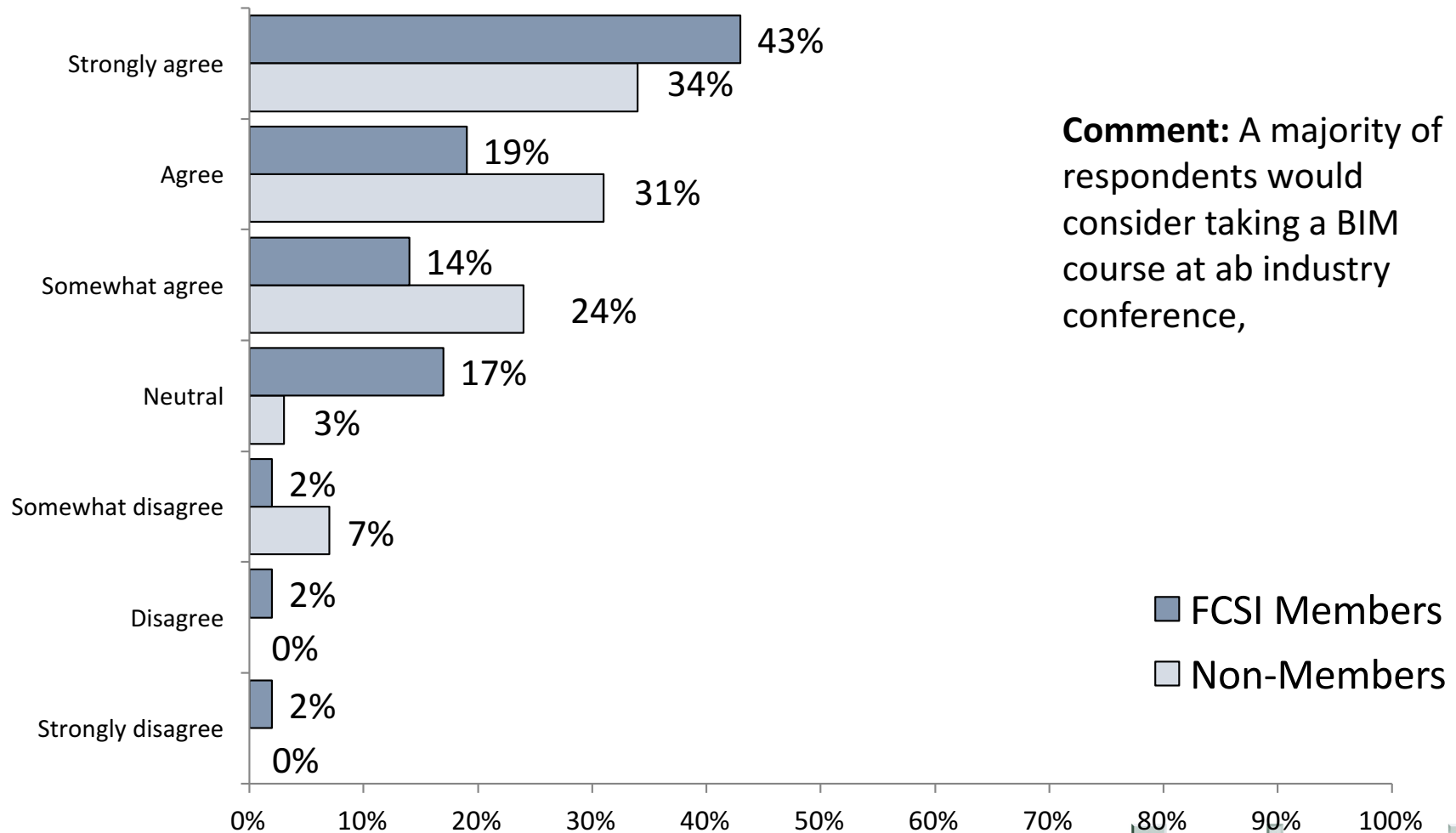
Agreement With Statement: You wish BIM was taught in schools.



Comment: Respondents would like to see BIM taught in school.

Agreement With Statement:

You would take a BIM course at an industry conference if it was offered..



Comment: A majority of respondents would consider taking a BIM course at an industry conference,

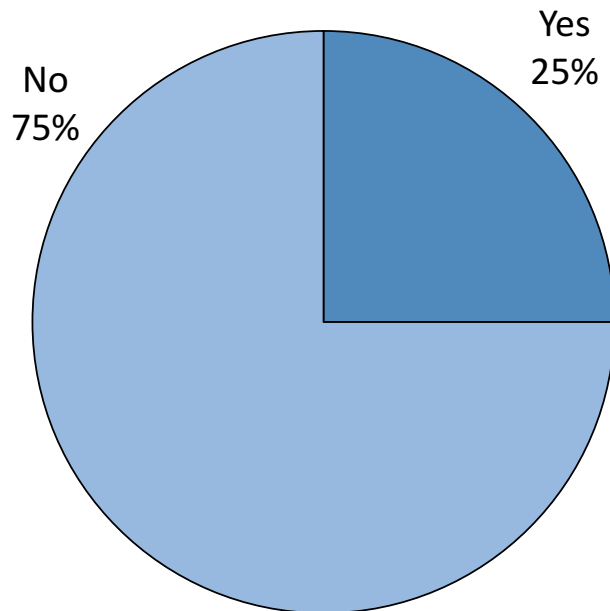


SECTION 6: PAST OR NON-USERS OF BIM

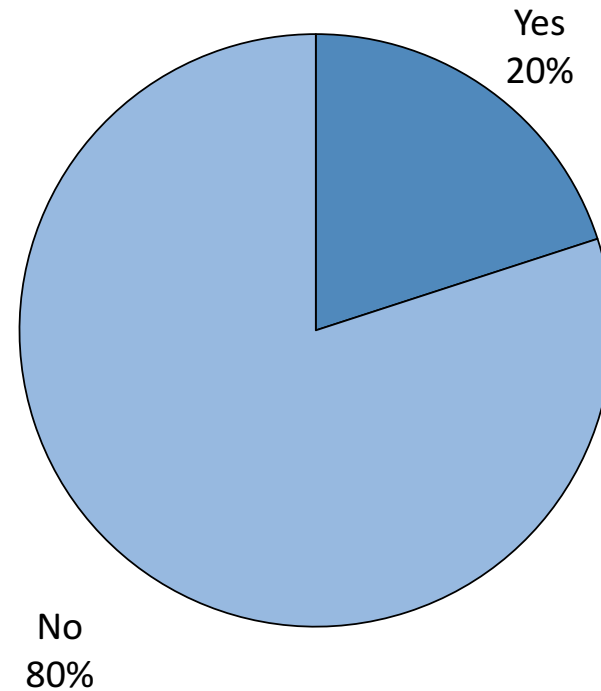
When your company used BIM in the past, did it use a BIM template with company standards?

Among those respondents currently not using BIM, the majority did not use a template with company standards.

FCSI Members



Non-Members



Why did you stop using BIM? (used BIM in past but not now)

- Not required
- No request from clients
- Lack of progress in setting up standards
- Clients no willing to pay more for 3D

Why would you like your company to start using BIM again?

Higher minimum wage will impact labor costs (56%)

The costs of benefits will be more expensive (including insurance) (32%)

It will cost more to hire, train and retain employees (28%)

Labor saving equipment and automation will help reduce payroll (19%)

Did your company ever complete a project design using BIM?

Comment: Among those not currently using BIM, 75% of FCSI members completed a project design using BIM in the past.

Level	FCSI MEMBR	NON-MEMBER
Yes	75%	20%
No	25%	60%
Don't Know	0%	20%

Among those not using BIM, why hasn't your company ever used BIM?

- No demand from clients
- Size of projects
- Costs/benefit ratio
- Satisfied with CAD
- Don't have BIM trained people/staff

Is your company planning to use BIM in the future?

Comment: Among those currently not using BIM, over two-thirds plan to use sometime in the future.

	FCSI Member	Nin-Member
No plans for future	31%	53%
In the next month	0%	6%
In the net three months	0%	0%
In the next 6 months	8%	12%
In the next year	8%	0%
In next 2 years	23%	18%
Not sure of timing	31%	12%



SECTION 7: BIM BENEFITS AND FUTURE TRENDS

What are the benefits of using BIM?

	FCSI Members	Non-Members
Architect are using	77%	69%
Offers 3D views	77%	69%
Increases accuracy	66%	65%
Gives you a complete advantage	60%	52%
Can make revisions instantly	53%	54%
Has clash detection	53%	52%
Saves time	48%	48%
Creates better looking drawings	47%	56%
Can design faster	39%	44%
Offers color views	27%	33%
Allows you to charge more	16%	13%
None	5%	15%

Over the next 5 years do you think demand for CAD in foodservice design will increase, decrease or remain the same?

Comment: Respondents indicate CAD will decrease over the next five years or at least remain the same..

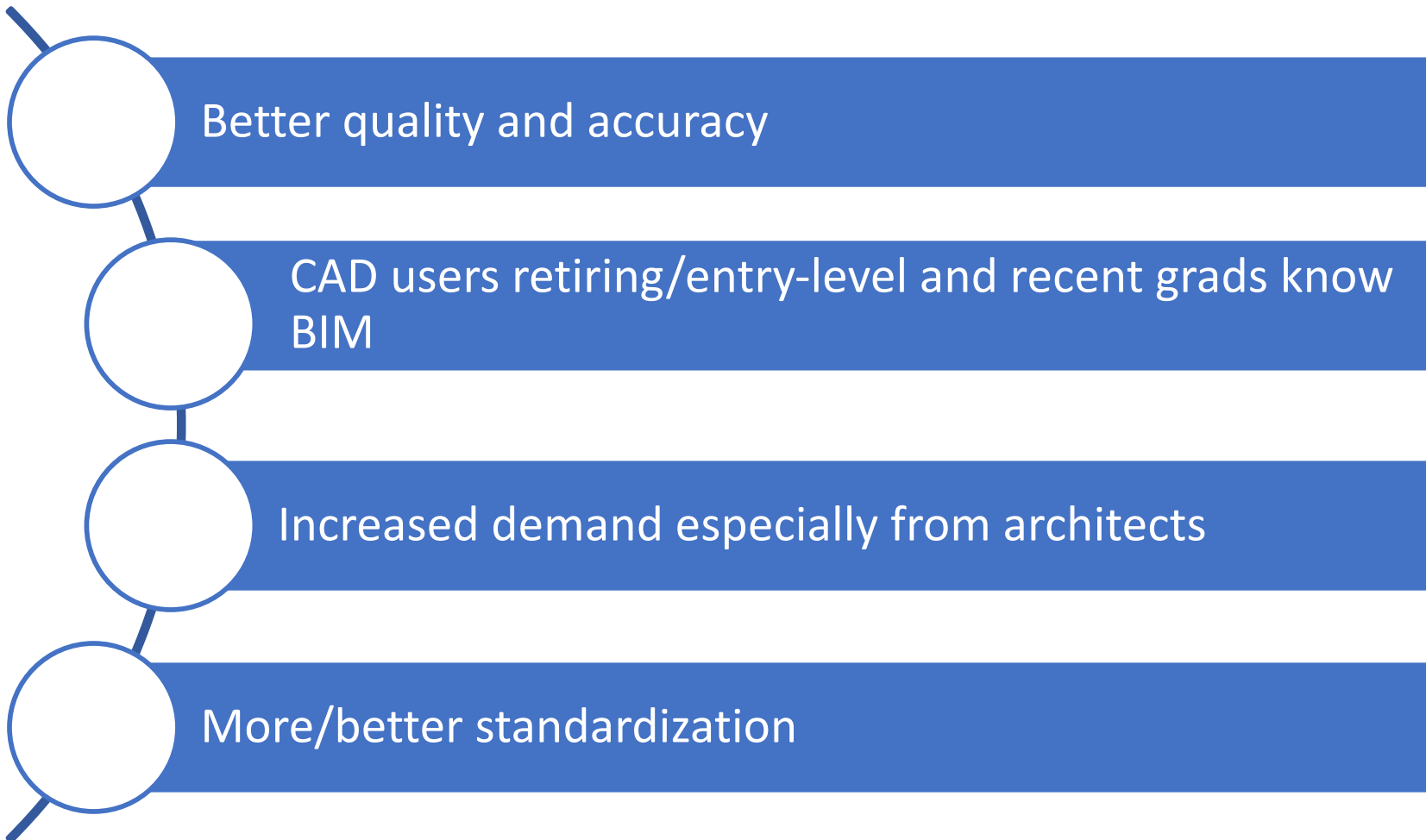
	FCSI Member	Nin-Member
Increase	13%	29%
Decrease	56%	53%
Stay the same	31%	18%

Over the next 5 years do you think demand for BIM will increase, decrease or remain the same?

Comment: Respondents indicate the demand for BIM will increase over the next five years.

	FCSI Member	Nin-Member
Increase	89%	85%
Decrease	0%	6%
Stay the same	11%	15%

What will drive an increase in BIM use?

- 
- Better quality and accuracy
 - CAD users retiring/entry-level and recent grads know BIM
 - Increased demand especially from architects
 - More/better standardization

What could hamper growth?



Costs to implement

Lack of staff training and understanding

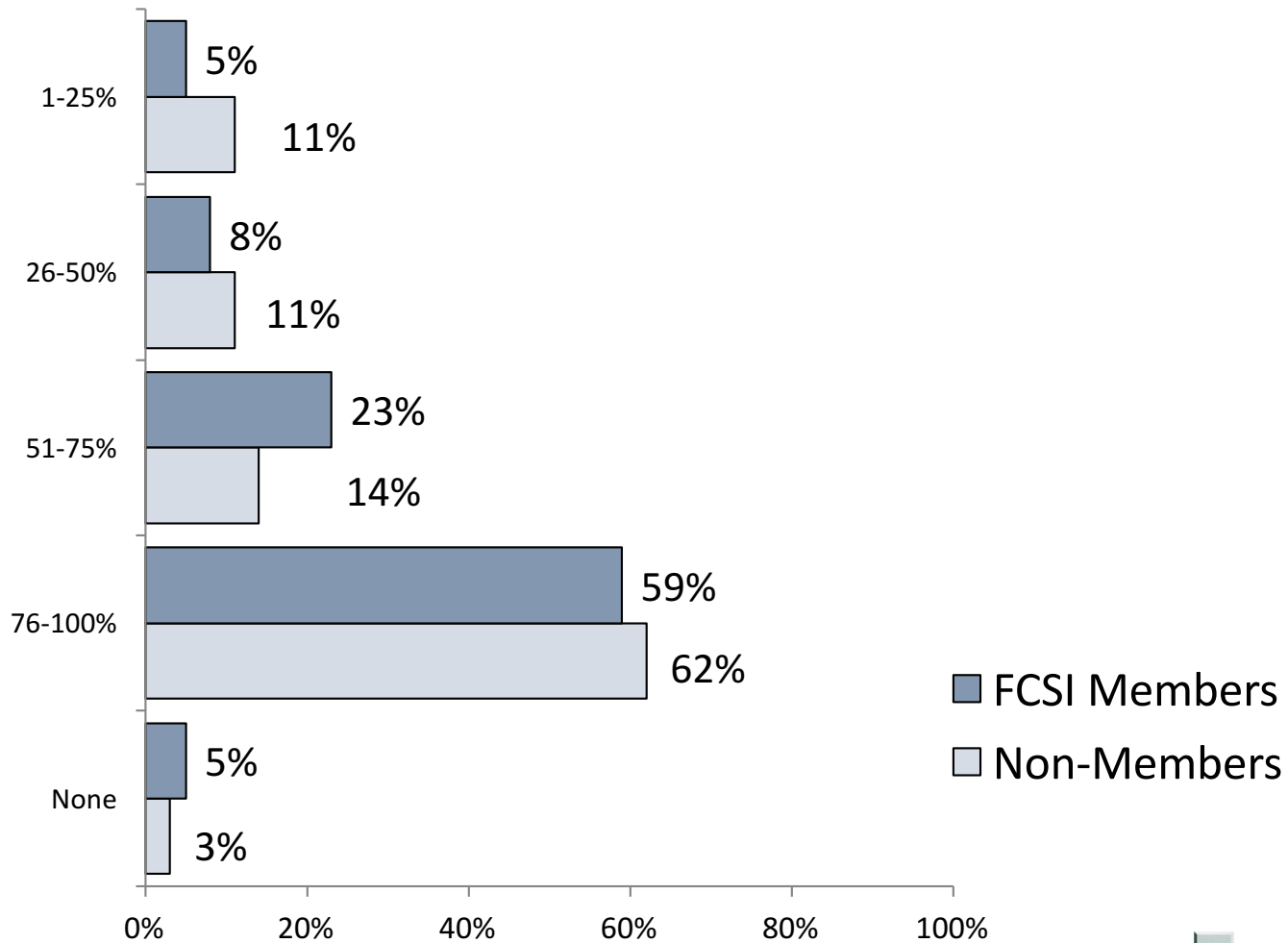
Hard to sell the increased cost to clients

Lack of manufacturer support with families



SECTION 8: DEMOGRAPHICS

Percent of Time Spent in Foodservice Design Work



Demographics

Type of Business	FCSI Member	Non-Member
FS Consultant	56%	59%
FS Design Firm	41%	22%
FS Dealer w/Design capabilities	3%	13%
Chain restaurant with design	0%	6%

Job	FCSI Member	Non-Member
Designer	21%	41%
Project Manager	23%	34%
Principal	56%	25%

Type of Business	FCSI Member	Non-Member
5 or less	54%	39%
6-10	8%	11%
11-25	10%	19%
26-50	26%	17%
Over 50	2%	14%

Demographics

Geography	FCSI Member	Non-Member
Northeast	25%	16%
Midwest	30%	36%
South	23%	18%
West	15%	24%
International	8%	7%

Length of Time in FS	FCSI Member	Non-Member
Less than 5 years	15%	30%
6-10 years	15%	7%
11-15 years	8%	17%
16-25 years	27%	24%
Over 25 years	35%	22%