

National Association of Home Builders

2016 Building Information Modeling (BIM) Survey

October 2016

Economics and Housing Policy Group



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INTRODUCTION

In August and September of 2016, NAHB's Economics and Housing Policy Group conducted the "2016 Building Information Modeling Survey" to collect information about NAHB members' familiarity with and usage of Building Information Modeling (BIM).

The questionnaire explained that BIM digitally captures the physical and functional characteristics of a building, such as a home, and how they interact. The survey further defined BIM as a shared knowledge resource forming a single information repository about the facility from which informed decisions can be made during its life cycle (defined as existing from earliest conception to demolition). It also specified that BIM enables a virtual information model to be handed from the design team to the contractor and subcontractors, then to the building's owner, with each professional inputting discipline-specific information into the shared model.

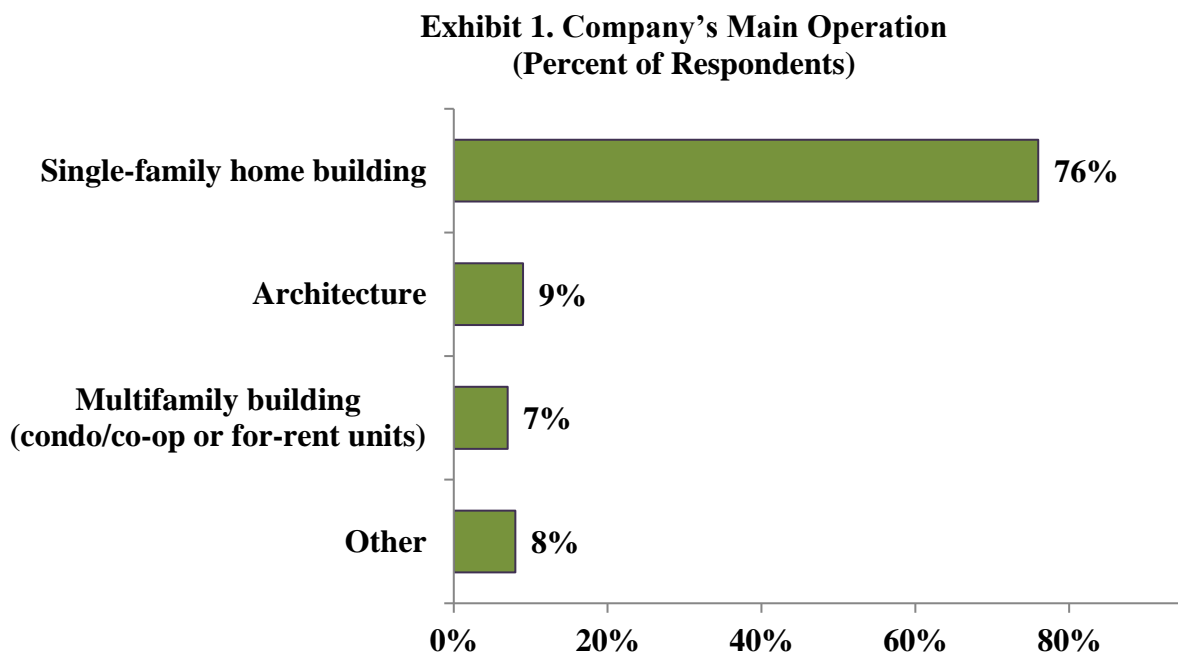
The survey was sent electronically to 4,756 single-family builders, multifamily builders and architects. A total of 277 responses were received, for a response rate of approximately 6 percent.

The first section of this report contains survey findings, which include a comparative analysis of this year's survey to the 2014 BIM survey. This report also contains detailed tables of survey results (Appendix I), open ended responses (Appendix II), and a copy of the questionnaire sent to survey respondents (Appendix III).

FINDINGS

Company's Main Operation

The majority of respondents (76 percent) reported single-family home building as their company's main operation, compared to 9 percent who reported architecture, and 7 percent who reported multifamily building (condo/co-op or for-rent units) (Exhibit 1). The remaining 8 percent of respondents reported their company's main operation as "Other", which included categories such as engineering, land development, and remodeling (Appendix II, page 22).



Prior to the current BIM survey, NAHB had conducted similar research in 2014. This report compares the two sets of results to see if there is evidence of any discernable change. The share of respondents who identified themselves as single-family builders was essentially unchanged, going from 77 percent in 2014 to 76 percent in 2016. The same was true for architects (whose share went from 7 percent to 9 percent) as well as for multifamily builders (whose share remained at 7 percent in both surveys) (Exhibit 2).

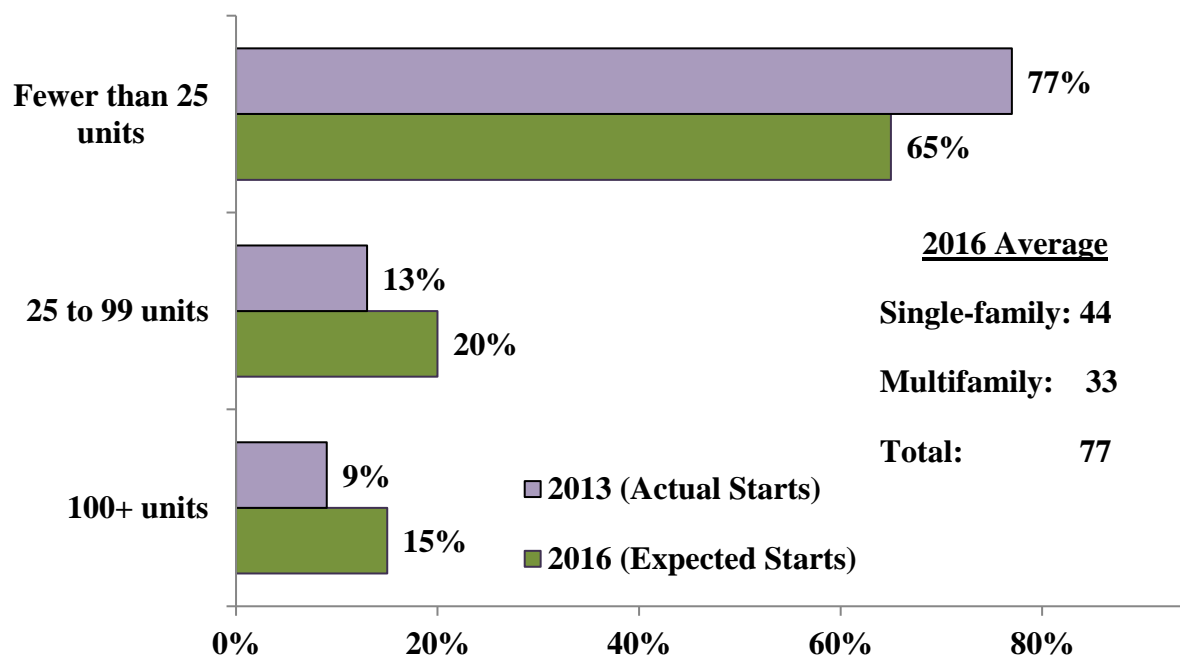
Exhibit 2. Company's Main Operation - History

	2014	2016
Single-family home building	77%	76%
Architecture	7	9
Multifamily building (condo/co-op or for-rent units)	7	7
Other	10	8

Housing Unit Starts Expected in 2016

Survey respondents were asked to estimate the number of housing units their companies expect to start in 2016. In total, they expect to start an average of 77 units, consisting of 44 single-family units and 33 multifamily units. Sixty-five percent of respondents reported that their companies expect to start fewer than 25 units, 20 percent expect to start between 25 and 99 units, and 15 percent expect 100 or more units (Exhibit 3).

**Exhibit 3. Housing Unit Starts Expected in 2016 (Actual for 2013)
(Percent of Respondents)**

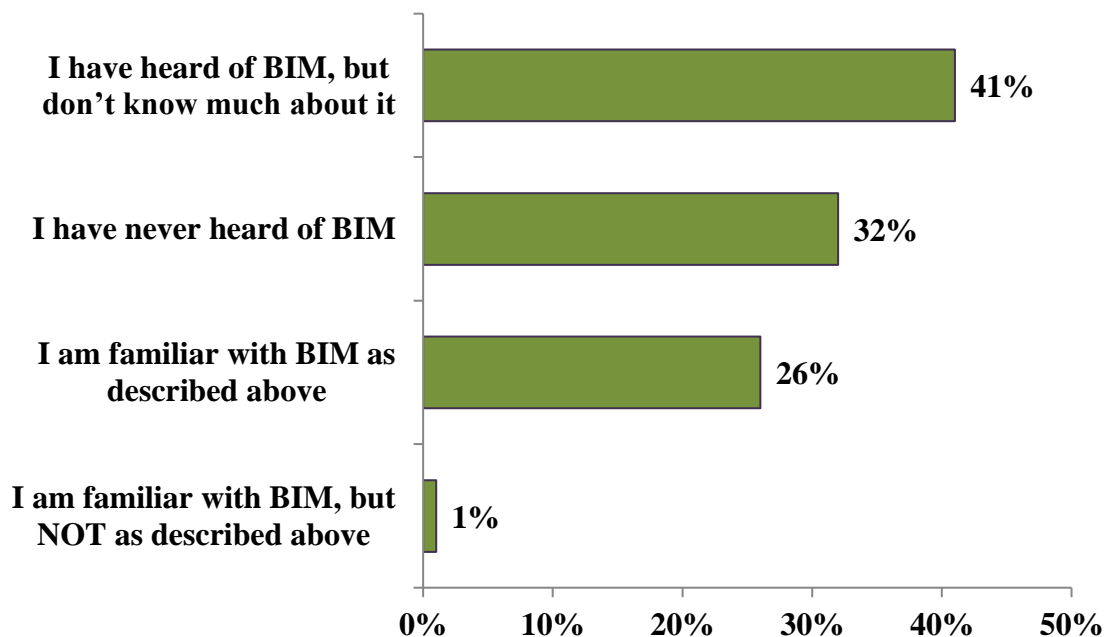


The 2014 BIM survey asked about the actual number of housing units respondents started in 2013. As Exhibit 3 shows, 77 percent of respondents said they started fewer than 25 units in 2013, 13 percent started 25 to 99 units, and only 9 percent 100 or more.

Familiarity with Building Information Modeling (BIM)

Respondents were asked if they are familiar with BIM as described in the survey. Forty-one percent of respondents have heard of BIM, but don't know much about it; 32 percent have never heard of BIM; 26 percent are familiar with BIM as described; and only 1 percent are familiar with BIM, but not as described in the survey (Exhibit 4). Those who are familiar with BIM, but not as described in the survey, provided their own description of BIM, which can be found in Appendix II, page 22.

Exhibit 4. Indicate Your Familiarity with Building Information Modeling (Percent of Respondents)



Of the three operations, architects are the most likely to be familiar with BIM (79 percent), compared to 30 percent of multifamily builders, and 21 percent of single-family builders. In contrast, the share that has either never heard of BIM, or have heard, but don't know much about it, is 79 percent among

single-family builders, 70 percent among multifamily builders, but only 21 percent among architects (Appendix I, page 17).

As the number of housing unit starts increases, the more familiar respondents are with BIM: 20 percent of those at companies expecting fewer than 25 starts in 2016 reported being familiar with BIM, compared to 30 percent among those at companies expecting 25 to 99 starts, and 43 percent among those at companies expecting 100 or more starts (Appendix I, page 17).

Comparing historical results shows an increasing familiarity with BIM among survey respondents. From 2014 to 2016, the share who reported being familiar with BIM as described in the survey jumped from 15 percent to 26 percent, while the share who said they never heard of BIM declined from 43 percent to 32 percent. Meanwhile, the share who reported having heard of BIM, but not knowing much about it was essentially unchanged, staying at around 40 percent (Exhibit 5).

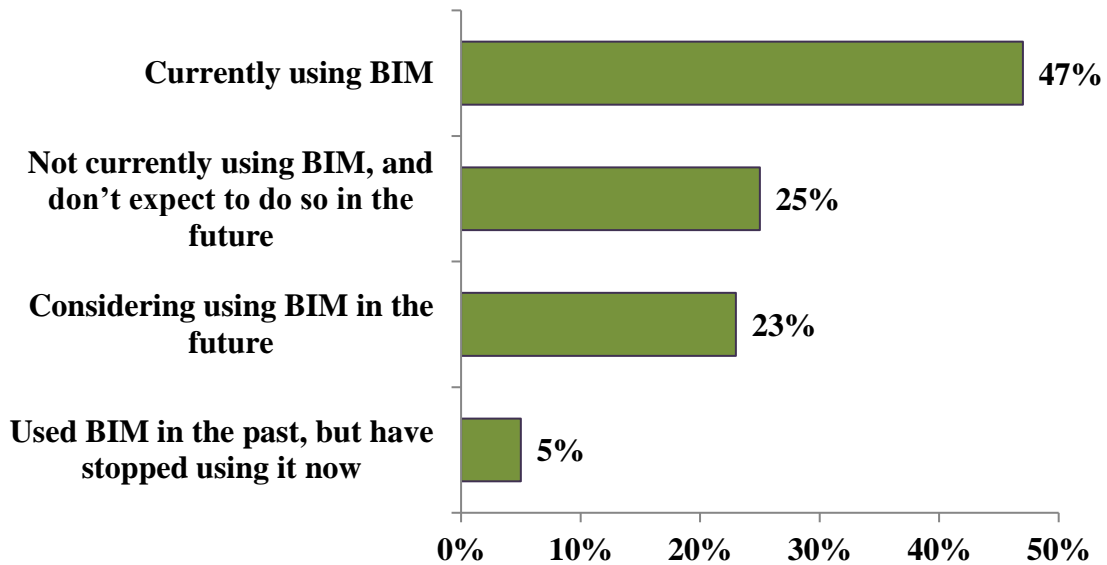
Exhibit 5: Indicate Your Familiarity with Building Information Modeling - History

	2014	2016
I have heard of BIM, but don't know much about it	40%	41%
I have never heard of BIM	43	32
I am familiar with BIM as described above	15	26
I am familiar with BIM, but NOT as described above	2	1

Company's Use of BIM

Respondents who are familiar with BIM were further asked about their use of this practice. Forty-seven percent reported that they are currently using BIM; 25 percent reported that they are currently not using BIM, and don't expect to do so in the future; 23 percent are considering using BIM in the future; and 5 percent have used BIM in the past, but have stopped doing so now (Exhibit 6).

Exhibit 6. If Familiar with Building Information Modeling Describe the Company's Use of BIM (Percent of Respondents)



Comparing results from 2014 and 2016 shows an increase not only in the share of NAHB members who are familiar with BIM, but also in the share who are actually using it (Exhibit 7). In 2014, among the 17 percent of respondents who were familiar with BIM, only 27 percent were actually using it. In contrast in 2016, of the 27 percent of respondents who were familiar with it, nearly half – 47 percent – were actually using it in their businesses. This finding corresponds well with the fact that, in 2014, 47 percent of those familiar with BIM said they were considering using it in the future. Only 23 percent of those familiar with BIM in 2016 are considering its future use. Meanwhile, the shares not currently using BIM and not expecting to do so in the future did not change much from 2014 to 2016, at 22 percent and 25 percent, respectively.

Exhibit 7: If Familiar with Building Information Modeling, Describe the Company’s Use of BIM - History

	2014	2016
Currently using BIM	27%	47%
Not currently using BIM, and don’t expect to do so in the future	22	25
Considering using BIM in the future	47	23
Used BIM in the past, but have stopped using it now	4	5

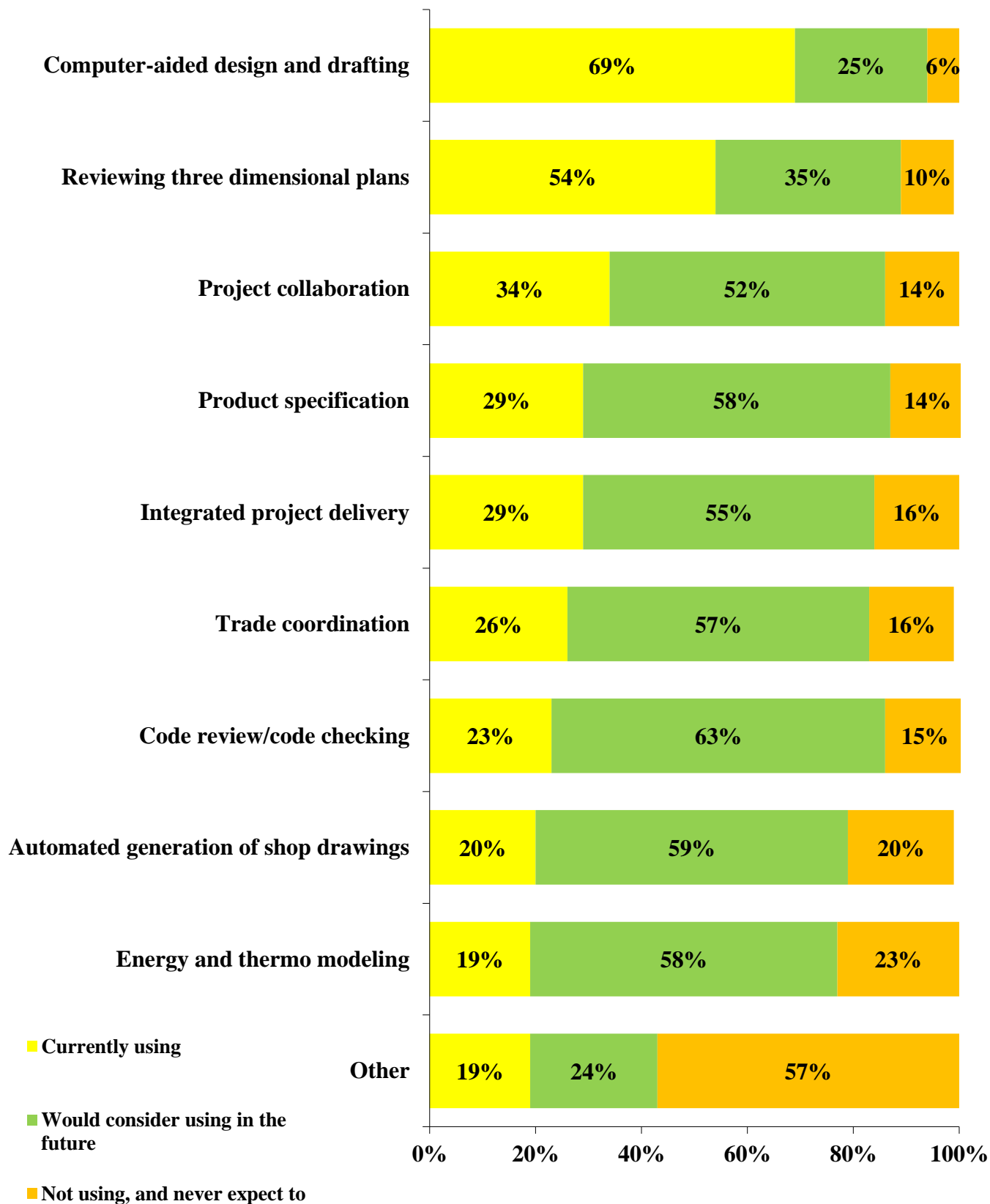
Using or Would Consider Using Building Information Modeling (BIM)

Respondents who are familiar with BIM were also asked to indicate whether their companies are using or would consider using nine specific aspects of BIM. Sixty-nine percent are currently using BIM for “computer-aided design and drafting,” 25 percent would consider it in the future for this purpose, and only 6 percent do not and never expect to. The second most common use of BIM is for “reviewing three dimensional plans,” currently being used by 54 percent of those familiar with BIM, while 35 percent would consider using it and 16 percent would not. Thirty-four percent use BIM for “project collaboration”, 52 percent would consider it for this purpose, and 14 percent do not and never expect to. Twenty-nine percent each use it for “product specification” and “integrated project delivery”, yet more than half would consider using it for these purposes (Exhibit 8).

The least used aspects of BIM among those familiar with the process are “trade coordination” (26 percent currently use it), “code review/code checking” (23 percent), “automated generation of shop drawing” (20 percent), and “energy and thermo modeling” (19 percent). Nevertheless, over 50 percent would consider using BIM for each one in the future.

Nineteen percent of respondents reported that they use BIM for “Other” purposes, including disciplines such as conflict identification, system engineering, and size. For a complete list of all the “Other” uses of BIM, please refer to Appendix II, page 23.

**Exhibit 8. If Familiar with BIM, in Which Way Is the Company Using or Consider Using BIM?
(Percent of Respondents)**



Single-family builders are more likely than architects to currently be using several aspects of BIM. For example, while 31 percent of single-family builders use ‘automated generation of shop drawings’, only 6 percent of architects do. Similarly, 41 percent of builders use both ‘product specification’ and ‘integrated project delivery,’ compared to only 17 percent and 12 percent, respectively, of architects. For other jobs, such as ‘computer-aided design and drafting’, both single-family builders and architects (72 percent) are equally likely to use Building Information Modeling (Appendix I, pages 18-20).

The share of respondents using BIM for “computer-aided design and drafting” increased from 52 percent in 2014 to 69 percent in 2016. Similarly, the shares of respondents using it for “reviewing three dimensional plans”, “integrated project delivery”, and “code review/code checking” increased over this time frame. The shares using it for “project collaboration”, “product specification”, and “energy and thermos modeling” stayed essentially unchanged, while the shares using it for “trade coordination” and “automated generation of shop drawings” decreased (Exhibit 9).

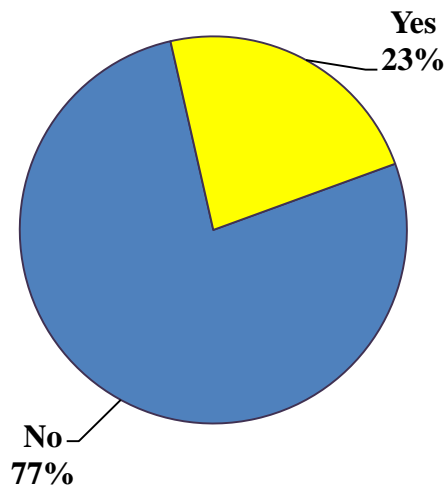
Exhibit 9. ‘If Familiar, Share Currently Using BIM for Various Aspects – History

	2014	2016
Computer aided design and drafting	52%	69%
Reviewing three dimensional plans	39	54
Project collaboration	33	34
Product specification	31	29
Integrated project delivery	18	29
Trade coordination	34	26
Code review/code checking	16	23
Automated generation of shop drawings	28	20
Energy and thermos modeling	18	19
Other	NA	19

Electronic Documentation Requirements

Twenty-three percent of all respondents reported that the local jurisdiction in which their company most often operates requires electronic documentation of building plans, compared to 77 percent who reported that no such documentation is required (Exhibit 10). Across main operations types, similar shares of architects and single-family builders reported that electronic documentation is required: 25 percent and 24 percent, respectively. In contrast, only 6 percent of multifamily builders reported that this is required (Appendix I, page 20).

**Exhibit 10. Electronic Documentation Requirements
(Percent of Respondents)**



Some of the local jurisdictions mentioned as requiring electronic documentation include counties in the Washington DC metro area, various parishes throughout Louisiana, Washington state, and Texas. For a complete list of responses, see Appendix II, page 23. The share of respondents reporting that electronic documentation is required increased between 2014 and 2016, going from 11 percent to 23 percent of respondents (Exhibit 11).

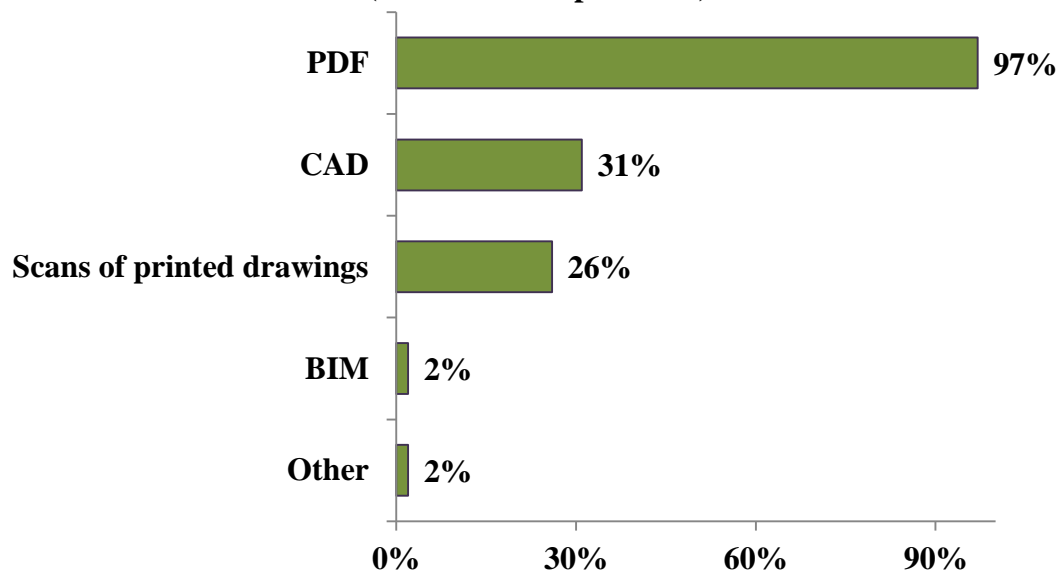
Exhibit 11. Electronic Documentation of Building Plans Requirements - History

	2014	2016
Yes	11%	23%
No	89	77

Types of Electronic Documentation Accepted

Among respondents whose jurisdictions require electronic documentation, 97 percent said that the “PDF” format was accepted, followed by “CAD” (31 percent), “scans of printed drawings” (26 percent), and BIM (2 percent) (Exhibit 12). Only 2 percent mentioned “Other” formats, such as in hard copy format (Appendix II, page 24).

**Exhibit 12. Types of Electronic Documentation Accepted
(Percent of Respondents)**



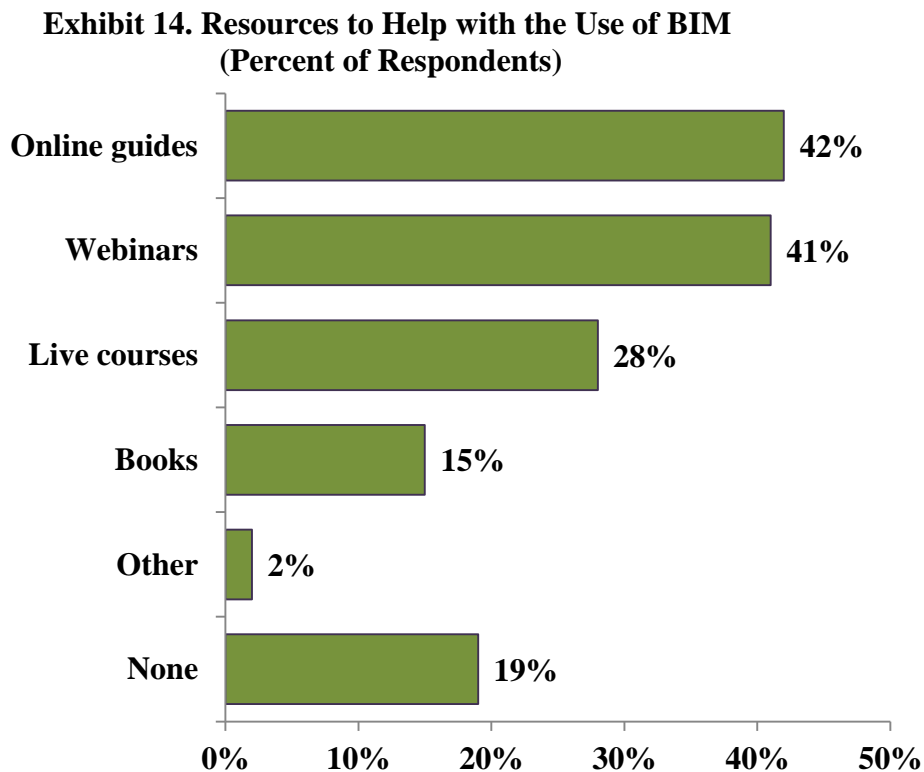
From 2014 to 2016, the share of respondents reporting that “PDF” is accepted increased from 83 percent to 97 percent, while the share reporting “scans of printed drawings” are accepted edged up a bit from 23 to 26 percent. Although a small change, it is important to note that the share reporting that BIM is accepted increased from zero percent in 2014 to 2 percent in 2016. On the other hand, the share of respondents reporting that “CAD” is accepted decreased from 37 percent in 2014 to 31 percent in 2016 (Exhibit 13).

Exhibit 13. Types of Electronic Documentation Accepted - History

	2014	2016
PDF	83%	97%
CAD	37	31
Scans of printed drawings	23	26
BIM	0	2
Other	10	2

Resources to Help with the Use of BIM

The last question in the survey asked members about resources they would like NAHB to provide to help with the use of BIM. Forty-two percent would like online guides, 41 percent would like webinars, 28 percent would like live courses, and 15 percent would like books. Two percent indicated that they would like “Other” resources, such as third-party course offerings and streaming on demand information (Appendix II, page 24). Nineteen percent of the respondents do not want resources from NAHB (Exhibit 14).



When looking at NAHB resources wanted by main operations type, some differences can be observed. Half of multifamily builders and architects would like webinars, compared to 39 percent of single-family builders. Additionally, 40 percent of multifamily builders would like live courses, compared to 33 percent of architects, and 27 percent of single-family builders. It is also important to note that 33

percent of architects are not interested in any resources, compared to 19 percent of single-family builders, and only 10 percent of multifamily builders (Appendix I, page 21).

Results show that NAHB members are now more likely to want NAHB’s help with BIM than just two years ago. From 2014 to 2016, the share asking for online guides and webinars increased by 9 percentage points each to 42 and 41 percent, respectively. The share of respondents asking for live courses increased by 8 percentage points to 28 percent, and the share asking for books increased by 7 percentage points to 15 percent in 2016. On the other hand, the percent of respondents indicating that they do not want any resources decreased during this period, going from 25 to 19 percent (Exhibit 15).

Exhibit 15: Resources to Help with the Use of BIM - History

	2014	2016
Online guides	33%	42%
Webinars	32	41
Live courses	20	28
Books	8	15
Other	3	2
None	25	19

Appendix I: Detailed Tables

Note: The tabulations are suppressed if the number of responses was less than 15.

*Q1. Please indicate your company's main operation.
(Percent of Respondents)*

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Single-family home building	76	100			86	81	49
Multifamily building (condo/co-op or for-rent units)	7		100		2	10	31
Architecture	9			100	4	8	15
Other	8				9	2	5
Responses	274	208	20	24	169	52	39

*Q2. How many housing units do you expect your company to start in 2016?
(Percent of Respondents)*

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Total Units							
Under 25	65	70	15	38	100		
25 to 99	20	20	25	25		100	
100+	15	9	60	38			100
Total Units							
Average	77	45	250	284	7	48	413
Median	12	10	168	63	5	40	228
Single-family Units							
Average	44	39	9	200	7	40	208
Median	7	9	0	7	5	40	68
Multifamily Units							
Average	33	7	241	85	0	9	204
Median	0	0	148	10	0	0	112
Responses	262	206	20	16	169	53	40

*Q3. Please indicate your familiarity with Building Information Modeling (BIM) as described above.
(Percent of Respondents)*

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
I have never heard of BIM	32	36	25		37	28	25
I have heard of BIM, but don't know much about it	41	43	45	21	43	42	33
I am familiar with BIM as described above	26	20	30	75	19	26	43
I am familiar with BIM, but NOT as described above	1	1		4	1	4	
Responses	277	208	20	24	169	53	40

*Q5. If you are familiar with BIM, please describe your company's use of this practice.
(Percent of Respondents)*

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Used BIM in the past, but have stopped using it now	5	2	/	5	3		18
Currently using BIM	47	47		53	39	50	41
Considering using BIM in the future	23	23		26	24	19	29
Not currently using BIM, and don't expect to do so in the future	25	28		16	33	31	12
Responses	75	43		19	33	16	17

Q6. If you are familiar with BIM, please indicate the ways in which your company is using, or would consider using, BIM (Check all that apply).

(Percent of Respondents)

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Computer-aided design and drafting							
Currently using	69	72		72	68	73	50
Would consider using in the future	25	18		28	29	13	44
Not using, and never expect to	6	10			4	13	6
Responses	68	39		18	28	15	16
Integrated project delivery							
Currently using	29	41		12	35		
Would consider using in the future	55	44		71	46		
Not using, and never expect to	16	15		18	19		
Responses	62	34		17	26		
Project collaboration							
Currently using	34	34		41	37		25
Would consider using in the future	52	49		47	52		63
Not using, and never expect to	14	17		12	11		13
Responses	65	35		17	27		16
Trade coordination							
Currently using	26	34		12	31		12
Would consider using in the future	57	53		59	55		76
Not using, and never expect to	16	13		29	14		12
Responses	68	38		17	29		17

Q6. If you are familiar with BIM, please indicate the ways in which your company is using, or would consider using, BIM (Check all that apply).

(Percent of Respondents) - continued

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Code review/code checking							
Currently using	23	18		29	32		20
Would consider using in the future	63	67		59	60		73
Not using, and never expect to	15	15		12	8		7
Responses	62	33		17	25		15
Product specification							
Currently using	29	41		17	44		13
Would consider using in the future	58	46		67	44		81
Not using, and never expect to	14	14		17	11		6
Responses	66	37		18	27		16
Automated generation of shop drawings							
Currently using	20	31		6	30		7
Would consider using in the future	59	56		53	59		73
Not using, and never expect to	20	14		41	11		20
Responses	64	36		17	27		15
Reviewing three dimensional plans							
Currently using	54	59		50	64	60	44
Would consider using in the future	35	31		39	32	20	50
Not using, and never expect to	10	10		11	4	20	6
Responses	68	39		18	28	15	16

Q6. If you are familiar with BIM, please indicate the ways in which your company is using, or would consider using, BIM (Check all that apply).

(Percent of Respondents) - continued

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Energy and thermo modeling							
Currently using	19	24	/	19	31	/	/
Would consider using in the future	58	56	/	56	62	/	/
Not using, and never expect to	23	21	/	25	8	/	/
Responses	62	34		16	26		
Other							
Currently using	19	27	/	/	/	/	/
Would consider using in the future	24	13	/	/	/	/	/
Not using, and never expect to	57	60	/	/	/	/	/
Responses	21	15					

Q7a. Does the local jurisdiction in which you most often operate require electronic documentation of building plans?

(Percent of Respondents)

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Yes	23	24	6	25	23	16	31
No	77	76	94	75	77	84	69
Responses	270	203	18	24	167	49	39

Q8. If "yes" in q7a, what type of electronic documentation do they accept? (Check all that apply)
(Percent of Respondents)

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
PDF	97	98			97		
CAD	31	33			33		
BIM	2	2			3		
Scans of printed drawings	26	23			23		
Other	2	2			3		
Responses	62	48			39		

Q9. What resources would you like NAHB to provide to help your company with the use of Building Information Modeling?
(Percent of Respondents)

	Total	Main Operation			Total Housing Unit Starts Expected in 2016		
		Single-family	Multifamily	Architecture	<25	25-99	100+
Webinars	41	39	50	50	36	47	53
Live courses	28	27	40	33	25	36	28
Books	15	15	10	17	17	15	8
Online guides	42	42	45	46	42	42	45
None	19	19	10	33	18	19	23
Other	2	1	0	0	2	0	3
Responses	277	208	20	24	169	53	40

Appendix II: Open Ended Responses

Q1. If “Other” in question 1, Company’s main operation:

- * Commercial construction and maintenance
- * Commercial renovations
- * Design/build
- * Engineering
- * Engineering/Architectural/Drafting firm
- * General Contractor specializing in additions and renovations with the occasional new home.
- * General contractor/ custom homes
- * Historic restoration
- * Insulation, building science and energy modeling contractor
- * Land developer
- * Land development
- * Land development & commercial properties
- * Log home handcrafter/manufacturer
- * Marketing, management and sales consultation for builders and developers of all sizes.
- * Mostly remodeling, a few high end custom homes
- * Office, warehouses factories and apartments
- * Presently, home renovations/resale
- * Remodeling
- * Remodeling
- * Remodeling
- * Remodeling
- * Remodeling of multifamily
- * Remodeling of multifamily building
- * Residential home design, not a licensed architect.
- * Retired
- * Specialty sub-contractor...but build a few spec homes too
- * Zero-energy design-build, mostly SFR.

Q4. If familiar with BIM, but not as described in the survey, how would you describe BIM?

- * NA
- * Using 3D Drafting aids & CAD layouts to explain what the client's end product will be.
- * BIM to me is the specifications of various products keyed to the drawing digitally. Each part of the construction, materials etc. is linked to the specifications of that product for review by all parties involved in the project.
- * Used for design purpose only

Q6. If you are familiar with BIM, please indicate the ways in which your company is using, or would consider using, BIM: "Other"

- * Share information with marketing and sales team members.
- * Do not know
- * System engineering and sizing
- * Marketing
- * Renderings, animations, virtual tours, exploring VR
- * May use in the future when it becomes more main stream and my trade partners are using it.
- * Conflict identification
- * None of the above
- * 3d Models for sales presentations

Q7b. Name of the Local Jurisdiction that Require Electronic Documentation:

- * New Orleans La. Orleans Parish
- * We are yes and no on this question as we build in many different jurisdictions.
- * Seminole County, Florida
- * Pima County
- * City of Bellevue, City of Redmond and several others in Seattle area.
- * New Hanover County
- * Fairfax Cty. VA, Arlington VA, Montgomery Cty., MD
- * City of Tacoma
- * Orleans and Jefferson Parish, Louisiana
- * Tacoma, WA
- * City of Hamilton, MT
- * Meridian, ID
- * Will require by 2017: City of Orlando; Orange County, FL; Seminole County, FL
- * Bozeman Building department
- * Char Mack Plan Review required e-plan .pdf submittals.
- * Mecklenburg County
- * City of St. George Utah; Washington City, Utah
- * Montgomery County
- * City of Bellingham, Washington
- * Pikes Peak Regional Building Department
- * East Baton Rouge Parish
- * Ivory of Salem, Oregon
- * Sumter County, Florida; City of Fruitland Park, Florida. We, (AgeWave Solutions, Inc.) have permitted in excess of 18,000 projects electronically. We did the first electronic permitting in Florida.
- * Saint Tammany, Louisiana
- * City of Corpus Christi, Texas
- * Bozeman, MT
- * Boston, MA; Newton, MA; and more cities and towns all the time
- * Dallas County
- * Chicago
- * Pikes peak regional building dept.
- * Newton, MA
- * Clark County

Q7b. Name of the Local Jurisdiction that Require Electronic Documentation - Continued:

- * New Castle County, DE
- * Mesa, AZ. They are just going to this requirement at this time. We are in a phase in period.
- * Ruidoso, NM
- * Rowlett, TX
- * Mansfield Texas
- * Montgomery County, Maryland
- * Scottsdale, Arizona; and Paradise Valley, Arizona
- * Williamson
- * St. Tammany
- * Spotsylvania County, VA
- * St. Louis County
- * Mecklenburg County, NC
- * City of Frontenac, MO
- * Lexington Fayette Urban County Government
- * Counties in MD
- * Dublin, Ohio
- * Salt Lake City, Summit County, Park City all are in Utah

Q8. What type of electronic documentation do [the jurisdictions] accept: "Other"?

- * Not sure what else....
- * Not sure
- * I use pdf files to send plans to vendors and trade partners
- * Printed plans
- * Cad drawings

Q9. If "Other" in question 9, Resources NAHB would like to provide to help with use of BIM:

- * Consumer education regarding the importance of lifetime costs and system integration in homes vs low upfront cost and 'bling'
- * Not familiar
- * Not sure
- * We need more suppliers and sub-contractors to get on board with this relatively new technology. I am not sure how to get there from here...
- * Facilitate third parties to offer courses, articles, books etc. at the lowest cost to NAHB
- * No experience with BIM; I cannot respond
- * Stream on demand info

Appendix III: Survey Questionnaire

1. Please indicate your company's main operation.

- Single-family home building
- Multifamily building (condo/co-op or for-rent units)
- Architecture
- Other (specify): _____

2. How many housing units do you expect your company to start in 2016?

Single-family units _____ Multifamily units _____ N/A

The following questions are about Building Information Modeling (BIM). BIM digitally captures the physical and functional characteristics of a building, such as a home, and how they interact. It is a shared knowledge resource forming a single information repository about the facility, from which informed decisions can be made during its life-cycle (defined as existing from earliest conception to demolition). BIM enables a virtual information model to be handed from the design team to the contractor and subcontractors, then to the building's owner. Each professional inputs discipline-specific information into the shared model.

3. Please indicate your familiarity with Building Information Modeling (BIM) as described above.

- A. I have never heard of BIM.
- B. I have heard of BIM, but don't know much about it.
- C. I am familiar with BIM as described above.
- D. I am familiar with BIM, but NOT as described above.

4. If "D" in Q3, how would you describe BIM?

5. If you are familiar with BIM, please describe your company's use of this practice.

- Used BIM in the past, but have stopped using it now
- Currently using BIM
- Considering using BIM in the future
- Not currently using BIM, and don't expect to do so in the future

6. If you are familiar with BIM, please indicate the ways in which your company is using, or would consider using, BIM. (Check all that apply).

	Currently using	Would consider using in the future	Not using, and never expect to
Computer-aided design and drafting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integrated project delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project collaboration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trade coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Code review/code checking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product specification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automated generation of shop drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reviewing three dimensional plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy and thermo modeling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7a. Does the local jurisdiction in which you most often operate require electronic documentation of building plans?

Yes No

7b. If ‘yes’ in q7a, what is the name of this jurisdiction?

8. If ‘yes’ in q7a, what type of electronic documentation do they accept? (Check all that apply).

PDF BIM Other (please specify): _____
 CAD Scans of printed drawings

9. What resources would you like NAHB to provide to help your company with the use of Building Information Modeling?

Webinars Online guides
 Live courses None
 Books Other (please specify): _____