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THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA
Quality People. Quality Projects.
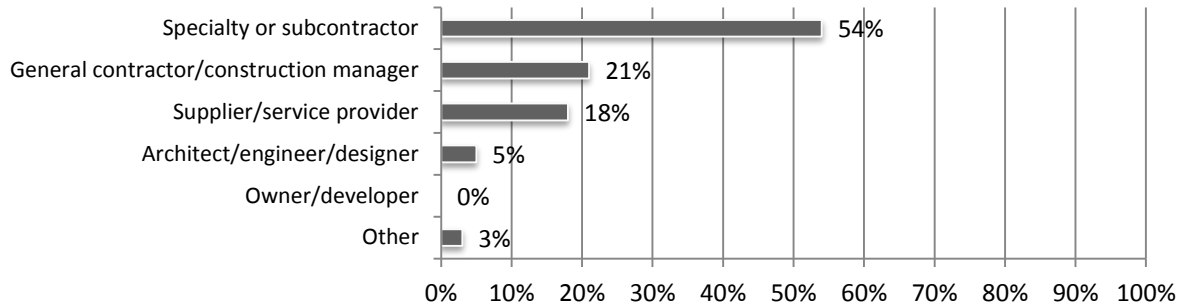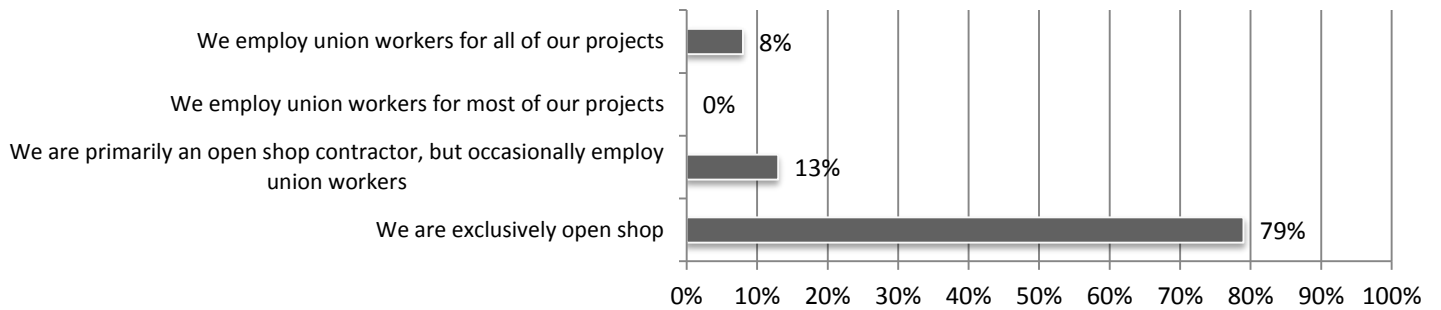
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2018 Construction Outlook Survey Results
Colorado Results

Total Responses: 39. Responses varied for some questions. Percentages are based on responses to each question and may not sum to 100 due to rounding.
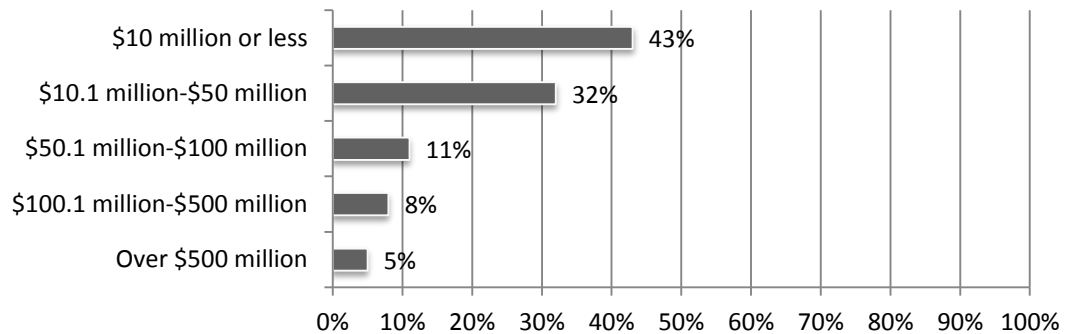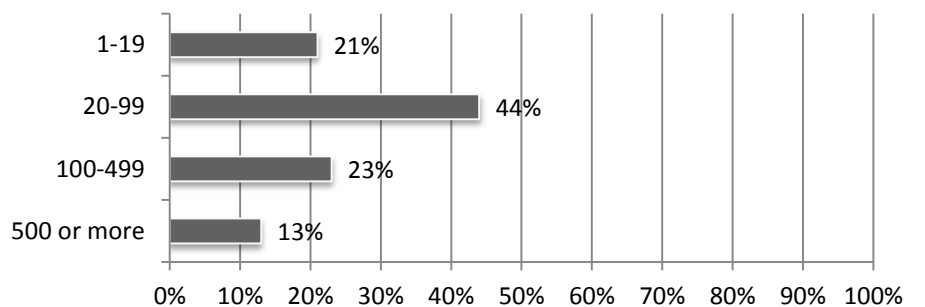
1. What best describes your firm:

Category	Percentage
Specialty or subcontractor	54%
General contractor/construction manager	21%
Supplier/service provider	18%
Architect/engineer/designer	5%
Owner/developer	0%
Other	3%

2. Does your firm employ union workers, or is your firm primarily open shop?

Category	Percentage
We employ union workers for all of our projects	8%
We employ union workers for most of our projects	0%
We are primarily an open shop contractor, but occasionally employ union workers	13%
We are exclusively open shop	79%

3. Estimate the total dollar amount of work your firm performed in 2017.

Category	Percentage
$10 million or less	43%
$10.1 million-$50 million	32%
$50.1 million-$100 million	11%
$100.1 million-$500 million	8%
Over $500 million	5%

4. How many total employees does your firm employ at all of its locations?

| Category	Percentage
1-19	21%
20-99	44%
100-499	23%
500 or more	13%

5. Compared to 2017, do you expect the available dollar volume of projects you compete for in 2018 to be:

Market	Higher	Lower	Same	Net*
All projects	59%	11%	30%	48%
Manufacturing	37%	0%	63%	37%
Public Building	40%	5%	55%	35%
Private Office	44%	12%	44%	32%
Transportation (e.g., transit, rail, airport)	35%	4%	61%	30%
K-12 School	42%	13%	46%	29%
Retail, Warehouse, Lodging	25%	0%	75%	25%
Multifamily Residential	33%	10%	57%	24%
Highway	35%	13%	52%	22%
Federal (e.g., VA, GSA, USACE, NAVFAC)	29%	10%	62%	19%
Hospital	24%	10%	67%	14%
Higher Education	10%	10%	81%	0%
Water/Sewer	11%	17%	72%	-6%
Power	6%	12%	82%	-6%

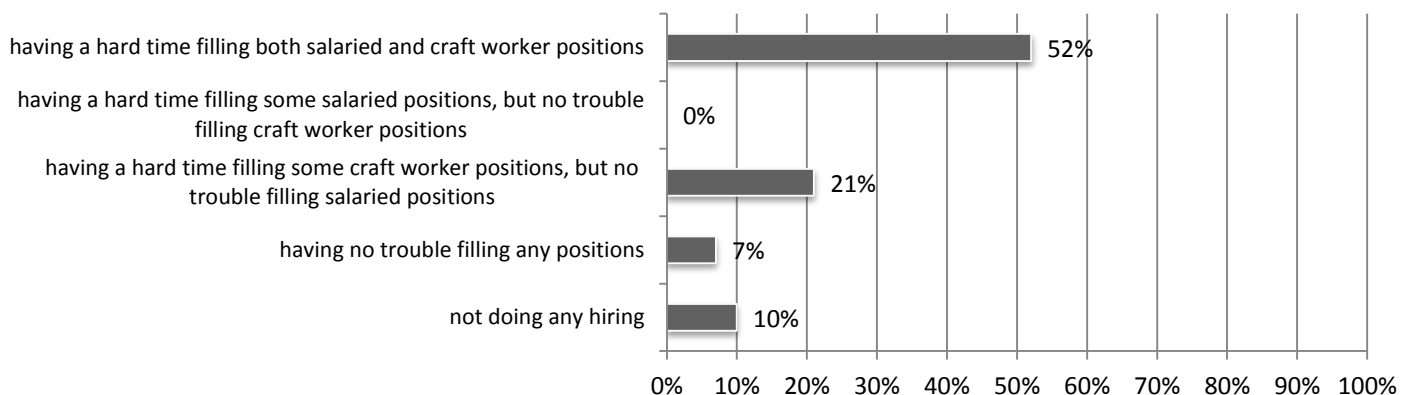*Net equals difference between number of "Higher" and "Lower" responses as percent of total.*

6. What numerical change do you expect in your headcount in 2018?

- More than 25: 20%
- 11-25: 17%
- 1-10: 43%
- No change: 17%
- Decrease: 3%
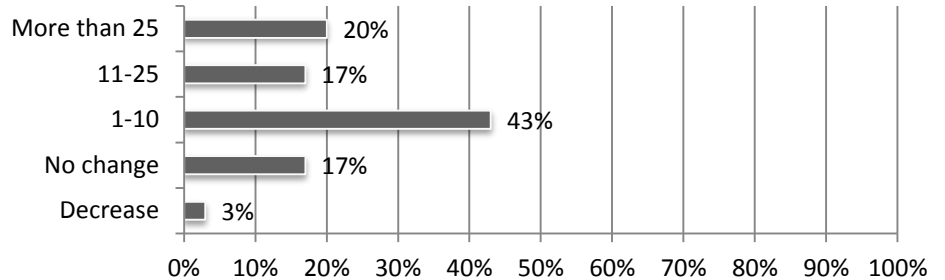
7. What percentage change do you expect in your headcount in 2018?

- More than 25%: 7%
- 11-25%: 40%
- 1-10%: 37%
- No change: 17%
- Decrease: 0%
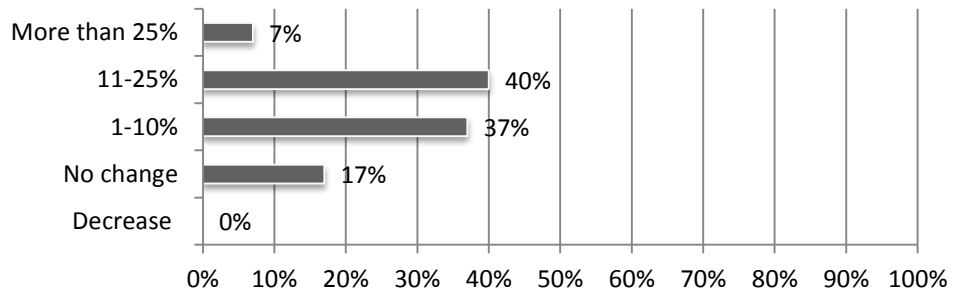
8. How would you describe your firm's current conditions for filling key salaried positions (project manager/supervisor, estimator, etc.) and hourly craft positions (carpenter, laborer, equipment operator, etc.)? My firm is:

- having a hard time filling both salaried and craft worker positions: 52%
- having a hard time filling some salaried positions, but no trouble filling craft worker positions: 0%
- having a hard time filling some craft worker positions, but no trouble filling salaried positions: 21%
- having no trouble filling any positions: 7%
- not doing any hiring: 10%

9. Do you expect any changes in the availability of salaried/hourly craft construction professionals over the coming 12 months? Finding and hiring qualified construction professionals will:

Response	Percentage
continue to be easy	0%
become easier	7%
become harder	20%
continue to be hard	53%
unsure	20%
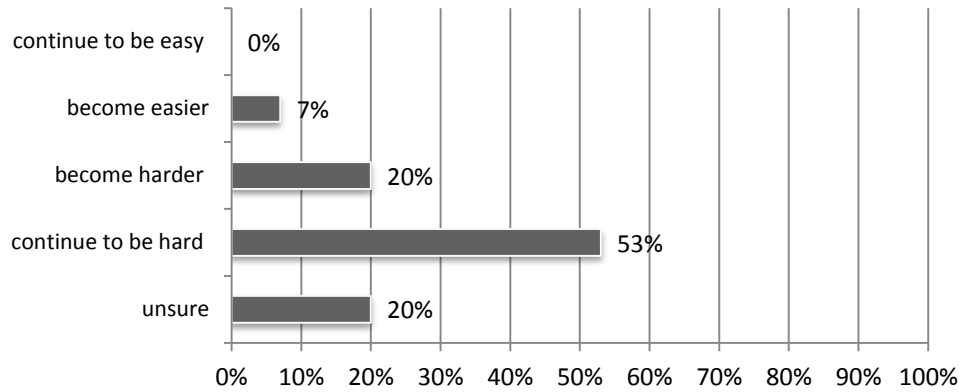
10. Did your firm increase pay or benefits in 2017 to retain or recruit salaried/hourly craft professionals?

Response	Percentage
Increased base pay	57%
Paid more overtime	23%
Provided incentives/bonuses	47%
Increased contributions and/or improve employee benefits	30%
No, but we are considering increases in pay and/or benefits in the near future	3%
No, and we are not considering increases in pay and/or benefits	7%
Unsure	17%
We did not seek to hire any salaried/hourly craft professionals in 2017	0%
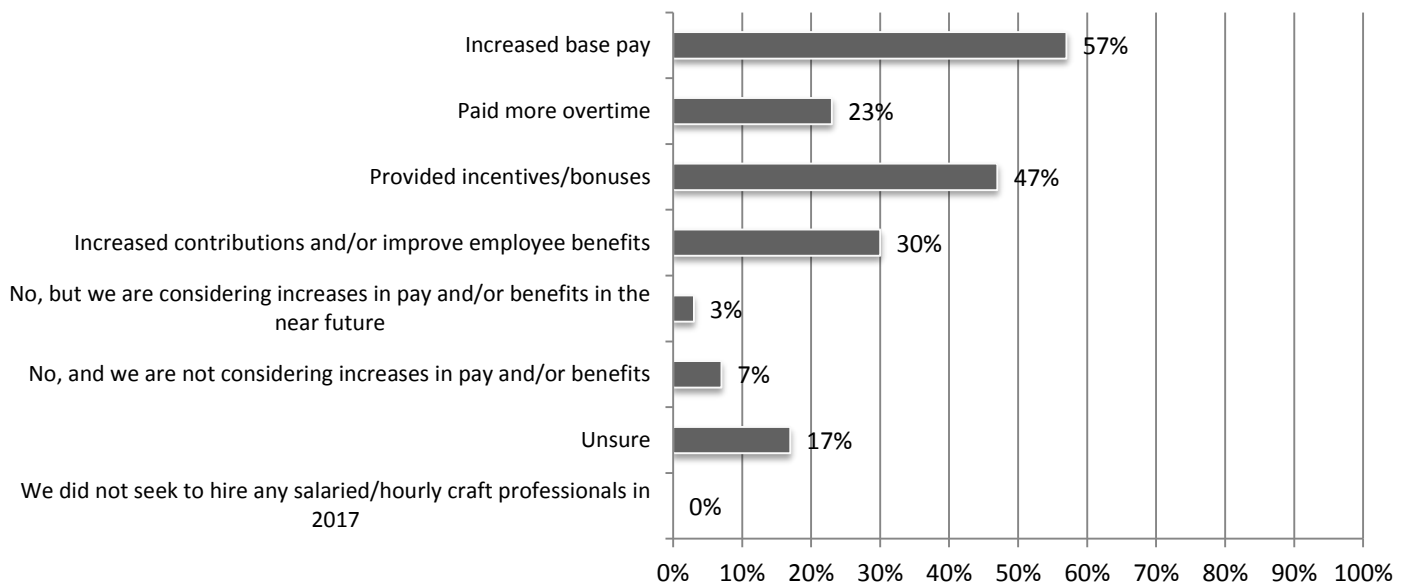
11. Compared to 2017, how will your firm's 2018 investment in training and development change?

Response	Percentage
Increase	67%
Decrease	0%
Stay the same	33%
Unsure	0%
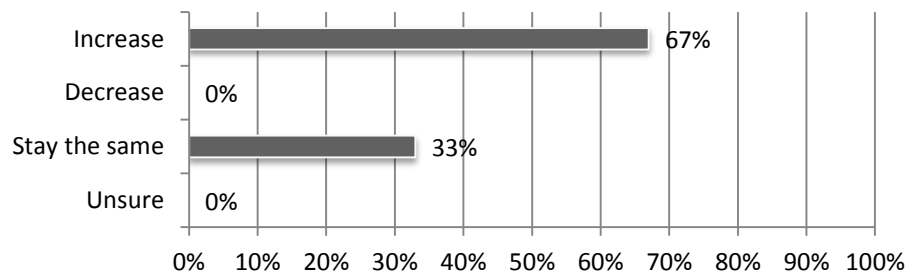
12. Which of the following issues is the biggest concern to your firm out of the following list?

Issue	Percentage
Worker shortages	56%
Increased competition for projects	55%
Growth in federal regulations	43%
Lack of public non-infrastructure work	33%
Safety	25%
Rising subcontractor costs	20%
Worker quality	9%
Rising direct labor costs (pay, benefits, employer taxes)	4%
Growth in state and local regulations	0%
Internal company process inefficiencies	0%
Lack of infrastructure investments	0%
Not enough private sector work	0%
Relations with external process inefficiencies (such as collaboration with owners, subs and/or vendors)	0%
Rising indirect labor costs (recruitment, training)	0%
Rising materials costs	0%
Subcontractor defaults	0%

13. What challenges, if any, do you see regarding the safety and health of your firm's workers?

Challenge	Major	Minor	No challenge
Inexperienced skilled labor/workforce shortage	57%	32%	11%
Lack of cooperation from federal agencies or regulators	18%	43%	39%
Low quality of available safety and health training	4%	41%	56%
Poor subcontractor safety and health performance	15%	31%	54%

≡ Major　　■ Minor　　· No challenge
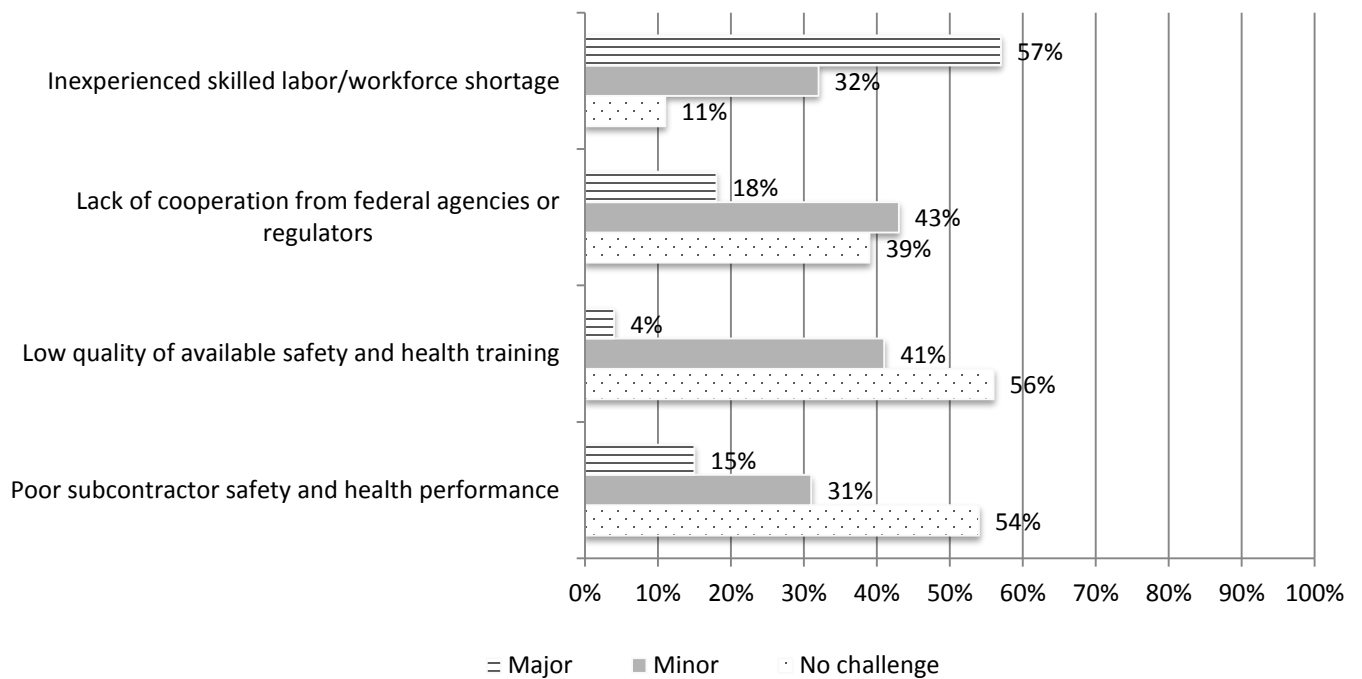
14. What change do you expect in 2018 in the number of your firm's projects that involve Building Information Modeling (BIM)?

Increase	22%
Stay the same (+/-10%)	33%
Decrease	0%
We do not expect to use BIM on any projects in 2018	26%
Unsure	19%
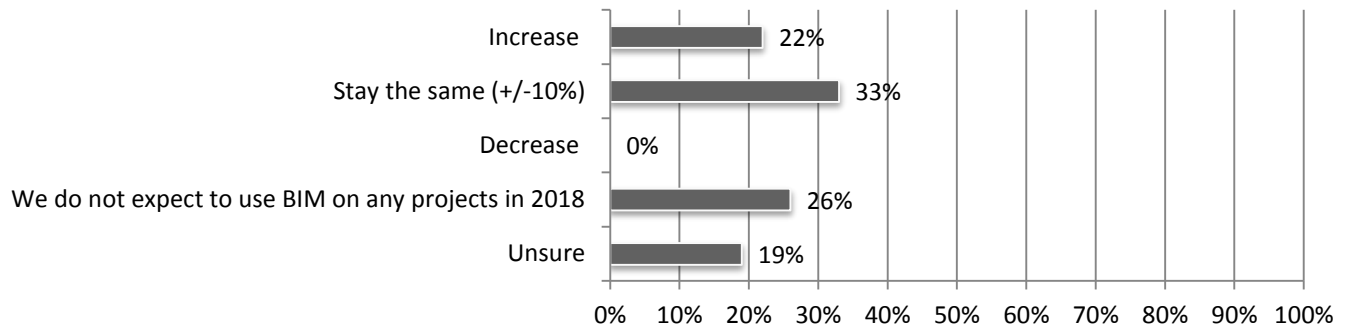
15. What is your firm using BIM for?

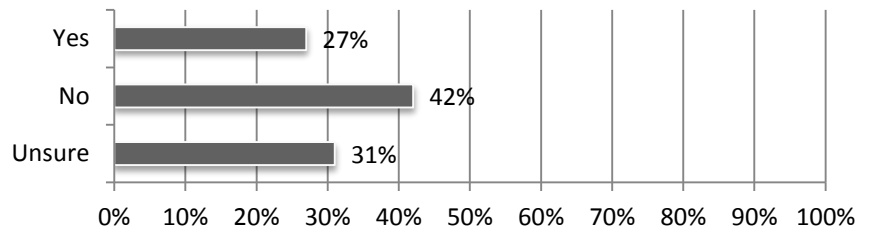|	
Constructability input into the design process	73%
Clash detection	67%
Visually communicate project scope to clients	47%
Design of 3D model	27%
Scheduling and workforce planning	27%
3D model-based takeoff for cost estimating	13%
Safety (identify safety issues, safety by design, safety training, etc.)	7%
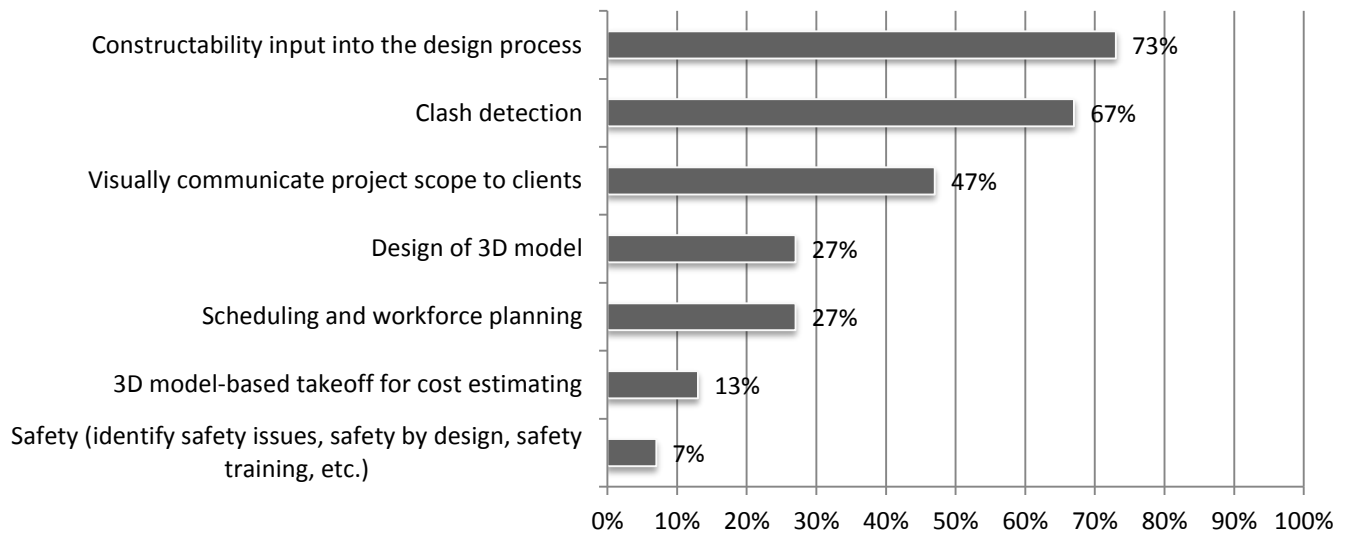
16. Does your firm utilize lean construction principles on its projects and/or in its operation?

Yes	27%
No	42%
Unsure	31%

17. Does your firm use any of the following collaborative project delivery methods?

Design-build	52%
Design-assist	44%
Public-private partnerships	26%
Integrated project delivery (IPD)	19%
None	22%
Unsure	15%
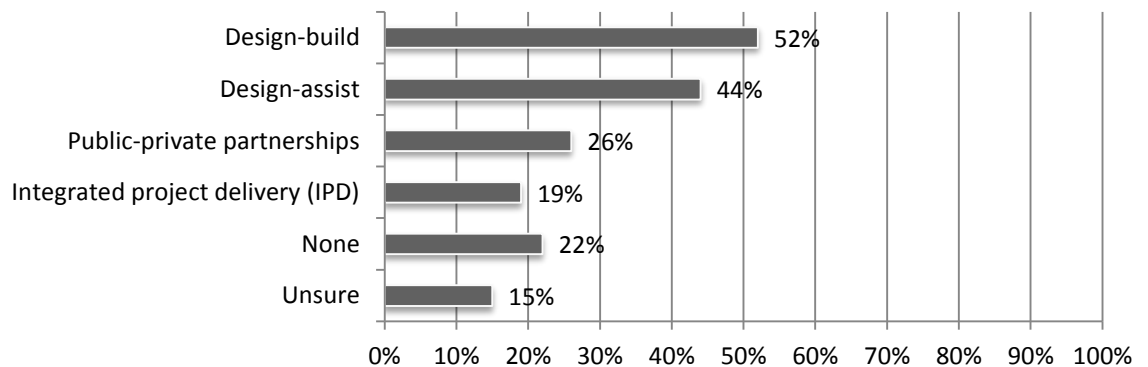
18. Does your firm use any of the following to collaborate with project partners?

Category	Percentage
File-sharing sites such as Dropbox	71%
BIM	36%
Online project collaboration software	29%
Home-grown project website	11%
None	18%
Unsure	11%
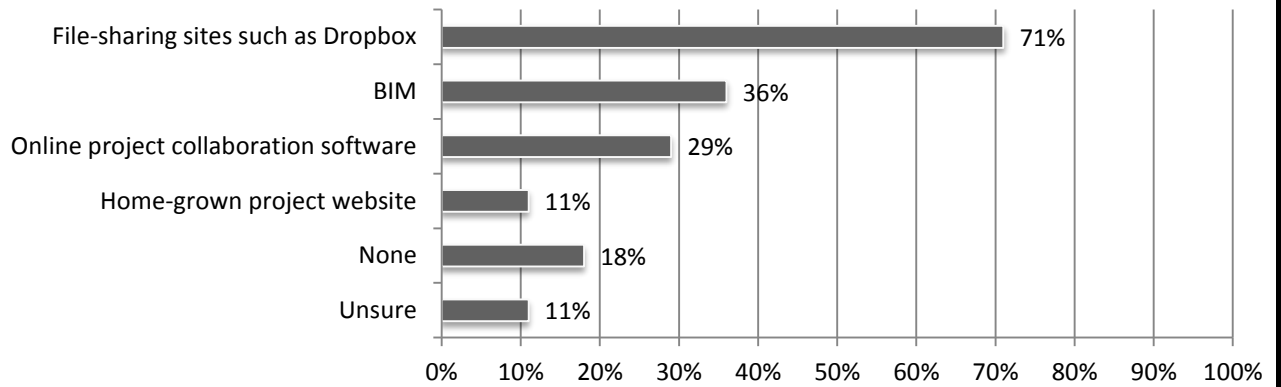
19. What business of IT functions does your firm outsource or plan to outsource to a technology provider?

Function	Currently outsource	Plan to outsource
Accounts payable automation	18%	5%
Accounts receiveable payment automation	9%	5%
Inventory	9%	9%
Lien waiver processing	9%	5%
Payroll	41%	9%
Prequalification	9%	5%
Subcontractor insurance processing	14%	5%
Backup and disaster recovery	50%	0%
Desktop (light maintenance)	23%	0%
Network management	32%	9%
Voice over IP (phone service over the internet)	27%	9%
Our firm doesn't currrently outsource or plan to outsource	23%	0%

Currently outsource   Plan to outsource

20. Approximately what percent of your firm's gross annual revenue is spent on IT?

Category	Value
Less than 1%	30%
1 to 1.9%	30%
2 to 2.9%	4%
3% or more	11%
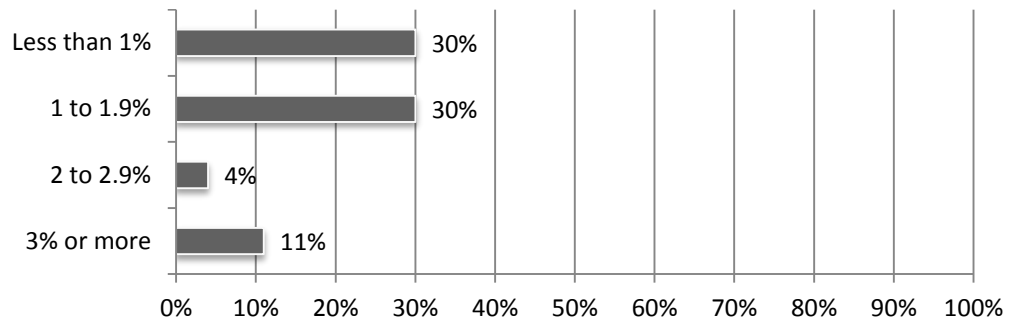
21. Compared to 2017, how will your firm's 2018 investment in IT change?

Category	Value
Increase	30%
Decrease	7%
Stay the same	48%
Unsure	15%
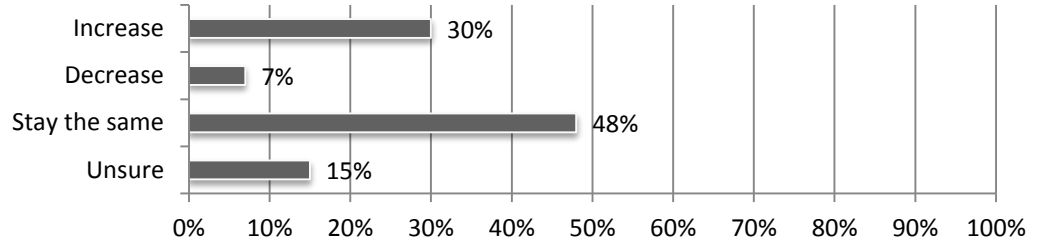
22. Compared to 2017, how will your firm's 2018 investment in the following technologies change?
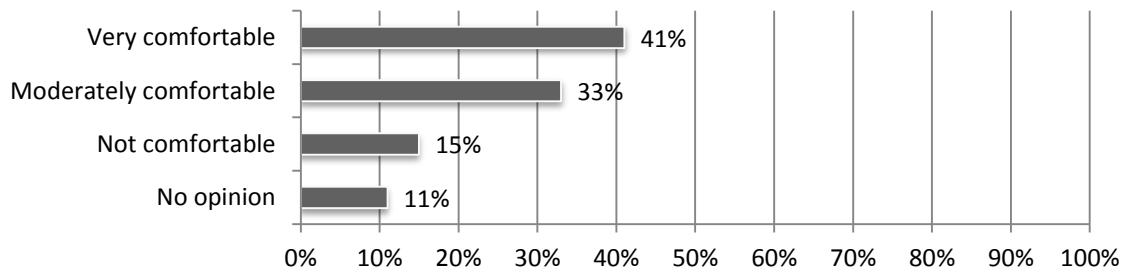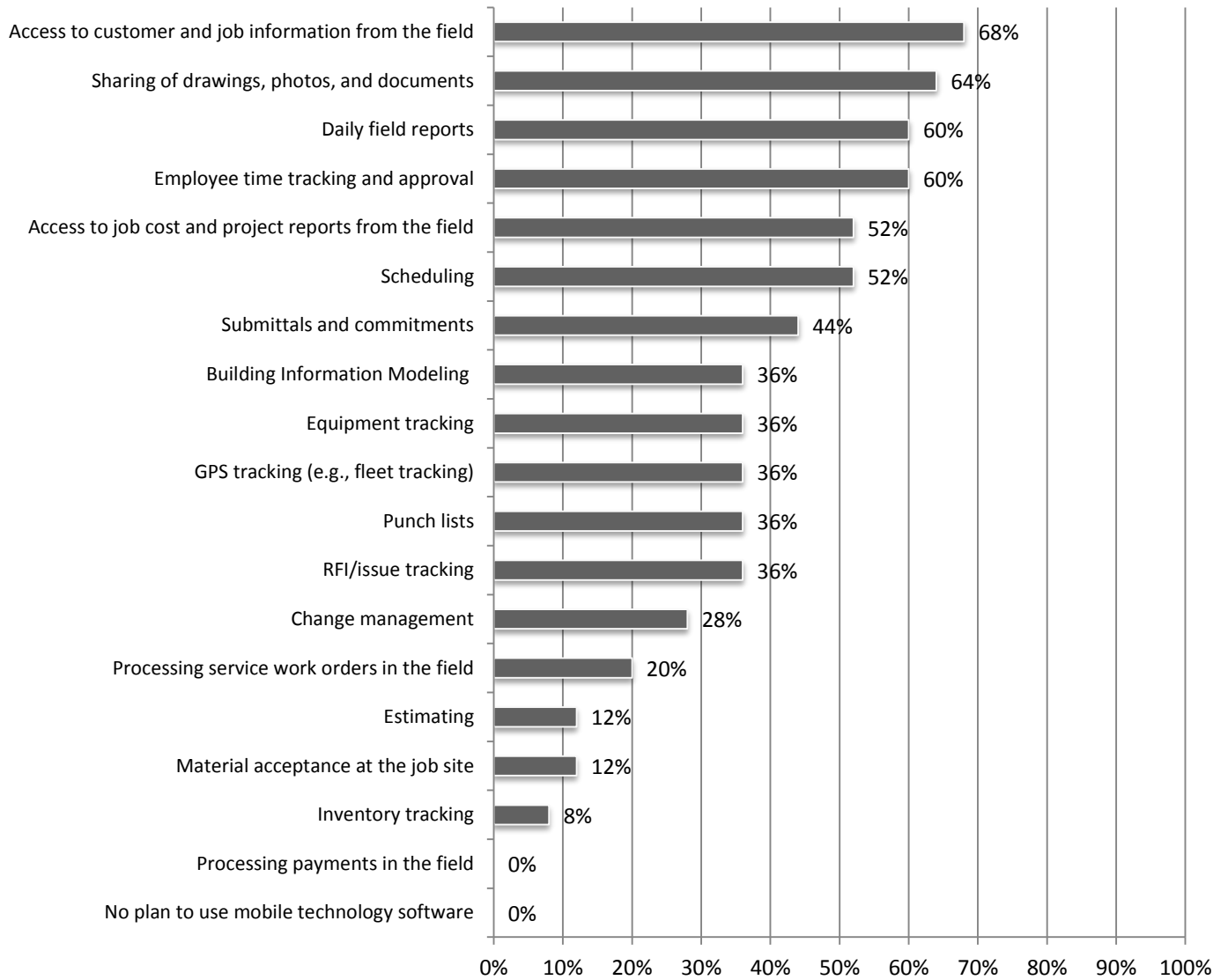
Technologies	Increase	Stay the same	Decrease	Unsure
Accounting software	12%	88%	0%	0%
Building Information Modeling	24%	52%	5%	19%
Client relationship management software	36%	55%	0%	9%
Document management software	12%	76%	4%	8%
Estimating software	32%	60%	4%	4%
Fleet tracking/management software	19%	57%	0%	24%
Human resources software	14%	67%	0%	19%
Payroll software	4%	83%	4%	8%
Prequalification software	11%	58%	0%	32%
Project collaboration software	25%	50%	0%	25%
Project management software	23%	64%	5%	9%
Scheduling software	21%	63%	8%	8%
Service management software	10%	65%	0%	25%
Subcontractor bid management/ITB software	10%	55%	5%	30%

23. How comfortable is your firm with moving its data to the cloud?

Category	Value
Very comfortable	41%
Moderately comfortable	33%
Not comfortable	15%
No opinion	11%

24. How does your firm plan to use mobile software technology?

Category	Percentage
Access to customer and job information from the field	68%
Sharing of drawings, photos, and documents	64%
Daily field reports	60%
Employee time tracking and approval	60%
Access to job cost and project reports from the field	52%
Scheduling	52%
Submittals and commitments	44%
Building Information Modeling	36%
Equipment tracking	36%
GPS tracking (e.g., fleet tracking)	36%
Punch lists	36%
RFI/issue tracking	36%
Change management	28%
Processing service work orders in the field	20%
Estimating	12%
Material acceptance at the job site	12%
Inventory tracking	8%
Processing payments in the field	0%
No plan to use mobile technology software	0%

25. Which of the following cloud service models does your firm plan to use?

Category	Currently use	Plan to use
Cloud hosting: we outsource our servers and networking components to a cloud service provider's data center	45%	20%
Hybrid cloud: our software and data is on a private network but can be securely accessed with a web browser	45%	15%
SaaS: we use software-as-a-service (SaaS) applications that are fully cloud-based	0%	5%

= Currently use   ■ Plan to use
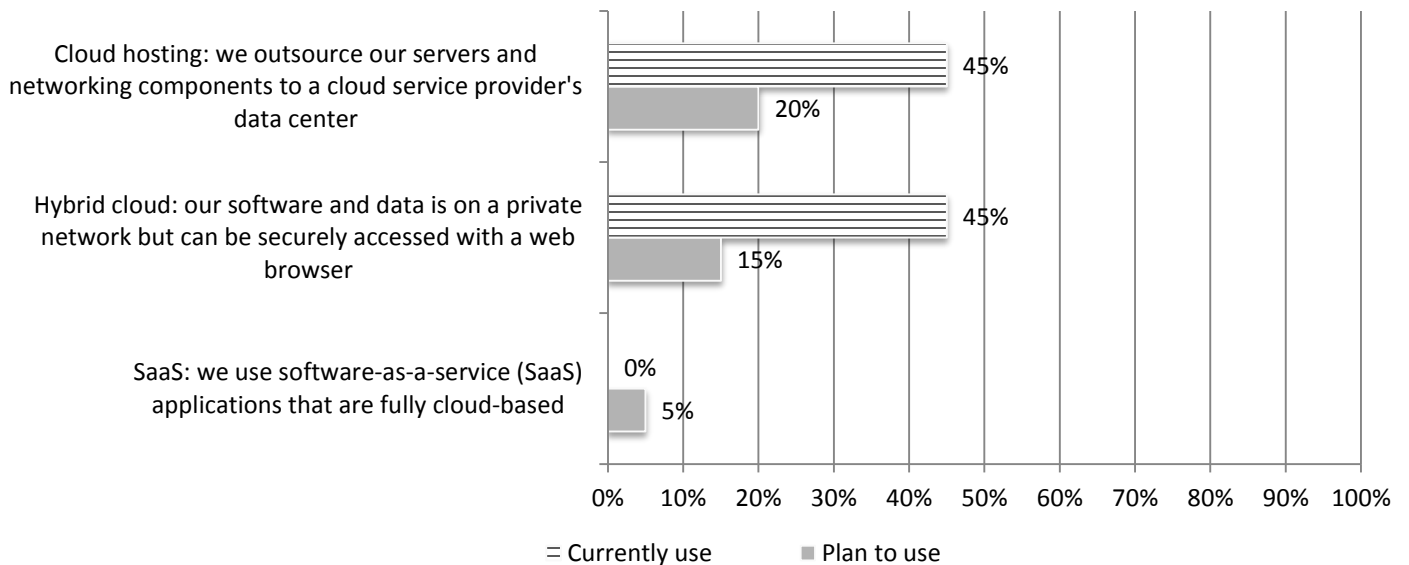
26. Does your firm currently have a mobile security plan in place?

Response	Percentage
Yes	28%
No	36%
Unsure	36%
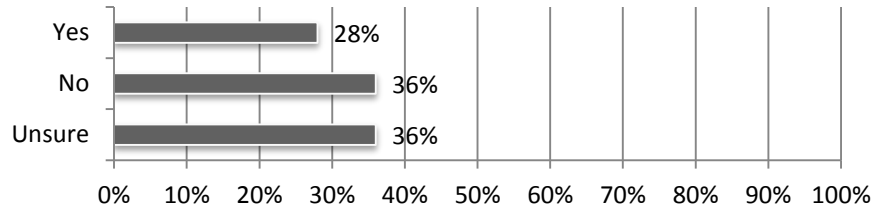
27. Does your firm currently have a formal IT plan that support your business objectives?

Response	Percentage
Yes	48%
No	28%
No, but plan to do so in 2018	8%
Unsure	16%
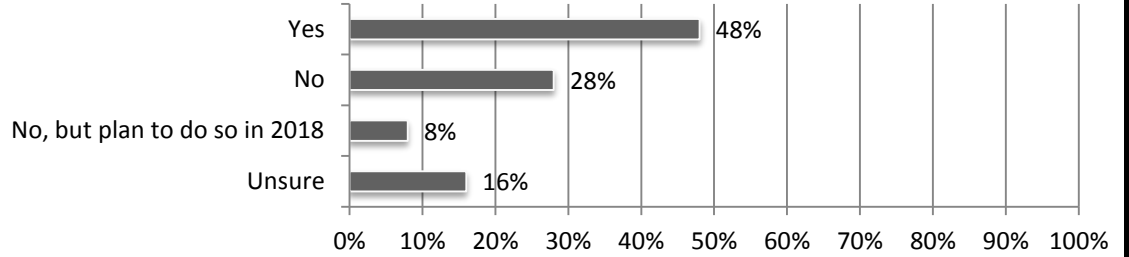
28. What are your firm's biggest IT challenges?

Challenge	Percentage
Keeping company data secure from hackers	46%
Employee resistance to technology	42%
Time needed to implement and train on new technology	42%
Communication between field and office	38%
Integration between software used inside of our company	38%
Connectivity to remote job sites	29%
Keeping hardware current	21%
Integration with software used by project partners outside our company	13%
Keeping software current	13%
Management resistance to technology	13%
Outdated company software and systems	4%
None	0%