AEC

INSPIRE
REPORT

Becoming a Data-Driven AEC Organization

Survey Results and Reporting on the State of the Architecture, Engineering, and Construction Industry

Unanet

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INSPIRED INSIGHTS

Watch for our "Inspired Insights" callouts identifying key takeaways and predictions.

State of the Industry

Pressures Facing AEC Firms in 2021

● *new this year*

- Cyber Security
- M&A
- WFH/ Back to Office
- Environmental Responsibility
- COVID-19 Reopening
- 2020 Presidential Election
- Pending Infrastructure Bill
- PPP
- Cloud and Mobility

Executive Summary

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2020 was a watershed year. We navigated uncharted territory with the Covid-19 pandemic, and we had a major shift in the political landscape. AEC companies have had to make monumental changes to stay competitive, and in some cases, to simply survive. 2021, however, is shaping up to be a banner year, marked by relaxing of some Covid restrictions, new work-from-home trends, and an anticipated massive bipartisan infrastructure bill pumping billions of dollars into the AEC market-place over the course of the foreseeable future.

To help AEC Firms plan and strategize, Unanet conducted a market-focused benchmarking survey with enterprise market research firm KS&R. The AEC Inspire report gathers information from companies doing business in the AEC market specifically to help define how they are utilizing data (and the resultant KPIs) to improve operational efficiencies. We also wanted to understand the barriers/challenges that these firms face when tackling complicated business problems, so we can share ideas and solutions from our collective experience in this market.

AECs are a special breed. They are continually on alert to obtain new business, improve operational efficiencies, execute projects on time and on budget, and be innovative with new technologies. Many in the space are now keenly aware that using data to unlock growth and profitability can be a differentiator that helps achieve their goals. We hope the information in this report can serve as a useful guide to help navigate the unique challenges of this industry and drive future growth.

Research Specifications

Survey Respondents

Survey respondents include submissions from senior decision makers across the architecture, engineering, and construction industry (AEC). Respondents fall into a variety of four broad company employee and revenue sizes: Less than $20M, $20-$50M, $50-$100M, and >$100M in revenue. Read more about our survey respondents on page 9.

Standards

When conducting our survey, we adhered to three basic principles: We strove to make the survey unbiased, authoritative, and extensive, so you can trust the data and the results.

Unbiased

Market research was conducted, vetted, and compiled from over 100 independent respondents in 2021. Contributors were recruited from multiple sources and supplemented by a nonproprietary business panel.

Authoritative

All participating AEC respondents were screened to ensure their decision-making responsibilities and involvement across their area of the organization (Finance, Project Management, Sales & Marketing, BI/Analytics Purchasing Technology Solutions, HR, etc.).

Extensive

Survey sessions averaged 15-20 minutes and drew definitive data from closed ended questions.

Report Highlights

In the wake of an unprecedented 2020, a focus on growth is central to strategic planning for Architecture, Engineering and Construction (AEC) firms. For leading firms, this growth will be realized in higher revenues and profit margins coupled with the adoption of key technologies for streamlining internal processes, improving proactive decision-making, and keeping overhead resources lean. But how will AEC Firms realize growth opportunities and stay a step ahead in a highly competitive landscape?

The answer is data. And Architecture, Engineering and Construction firms are beginning to understand the value of their most precious—but often underutilized—resource. The truth is that AEC Firms are tracking information constantly, but how that information is used will determine success or failure. Data can be leveraged to make more informed decisions, measure and track key performance indicators (KPIs), or make more accurate forecasts related to pipeline, budgets, project schedules, and resources—key ingredients for running business better.

In this year's AEC Inspire report, which features senior decision-makers in AEC Firms, over half say they use data on a regular, daily basis (54%) and one in three sometimes use data, depending on the situation (Fig. 1).

Company's Approach to Using Data
Fig. 1
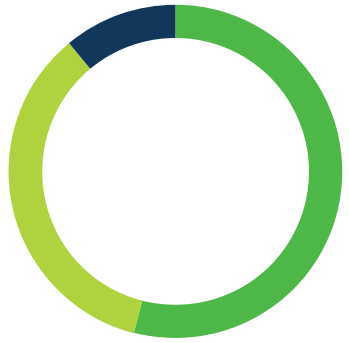
Use data regularly	**54%**
Sometimes use data	**35%**
Don't make use of data, but would like to	**11%**

However, it is also clear that AEC Firms are struggling to make greater use of data in their business. These challenges are not isolated to just one area, but rather span the entire data spectrum, including:

Data Accessibility
Over one-third (35%) say lack of data availability hinders their ability to use it.

Missing or Inaccurate Data
Nearly half (47%) indicate that missing or inaccurate data is a challenge.
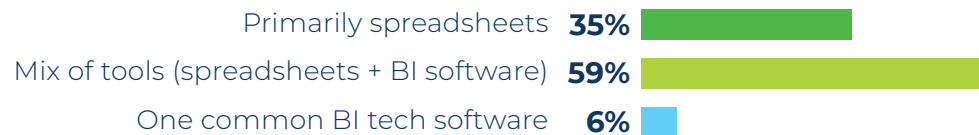
Forecasting
Over half point to forecasting as their most significant financial (58%) and project-related challenge (57%).

Left unaddressed, these challenges become major bottlenecks to turning data into information and better insights. Worse yet, inaccessible or incomplete data can often yield misleading information altogether.

One clear obstacle to making better use of data is the business applications and tools AEC Firms use (along with how those tools are leveraged). We learned that most AEC Firms are using a mix of business intelligence tools and spreadsheets, but over one-third use spreadsheets alone to measure and report on key performance indicators (Fig. 2). Use of a single common business intelligence (BI) platform is rare (6% of all AEC Firms surveyed).
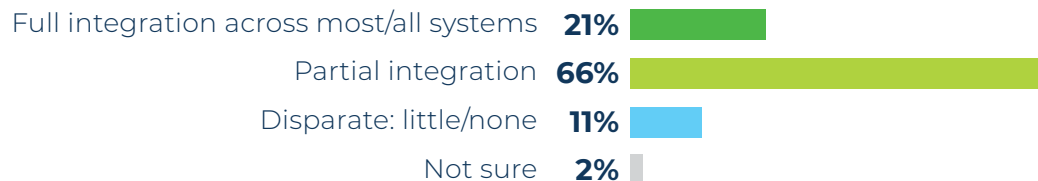
BI Tools Used to Capture, Measure, and Report on KPIs
Fig. 2

Primarily spreadsheets	**35%**
Mix of tools (spreadsheets + BI software)	**59%**
One common BI tech software	**6%**

Company's Approach to Using Data
Fig. 3

Full integration across most/all systems	**21%**
Partial integration	**66%**
Disparate: little/none	**11%**
Not sure	**2%**

INSPIRED INSIGHTS

Leading companies have stopped asking, "Do I need this technology?" Instead, they are inspecting every challenge and obstacle throughout their operations and asking, "How can technology help me address this?" Technology adoption and optimization will be a defining factor for leaders and laggards in the coming age.

This medley of tools, or over-reliance on spreadsheets that have limited capabilities, leads to challenges when it comes to accessing and leveraging data for competitive advantage:
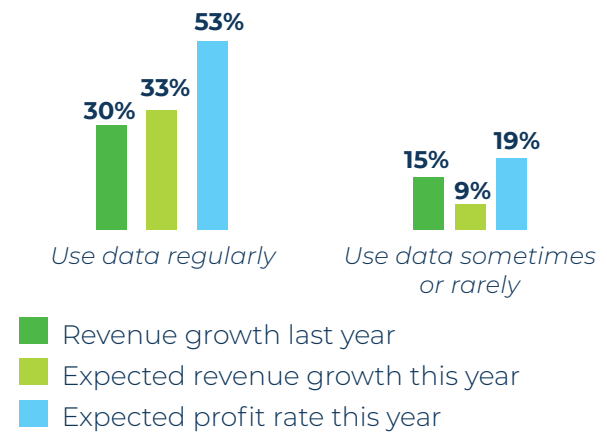
- Nearly half of AEC Firms indicate that not having sufficient tools to access, integrate, and analyze data (45%) is a significant challenge for them.

- Over one-third say not having sufficient tools to communicate performance metrics (35%) is a hindrance.

- Data integration is also a challenge, as most organizations say their applications are only partially integrated (66%) and one in ten indicate not at all (Fig. 3).

The potential pay-off of overcoming these challenges is compelling. Cross-referencing revenue and profitability with company use of data shows that companies that use data on a regular, daily basis to operate their business significantly outperform those that do not.

For AEC Firms wanting to bring their data into focus, the good news is the solution is often right at their fingertips. The first (and most difficult) step is ensuring data is captured in a standard fashion across the organization. For many firms (more than 3,200), this is

Companies that Had or Expect Positive "Double Digit" Performance (11% or Greater)
Fig. 4

Use data regularly: 30%, 33%, 53%
Use data sometimes or rarely: 15%, 9%, 19%

- Revenue growth last year
- Expected revenue growth this year
- Expected profit rate this year

already happening with Unanet—a leading provider of project-based ERP and CRM solutions purpose-built for Government Contractors, AEC, and Professional Services. Once you are collecting data in a standard way, you can turn it into actionable insights to drive better decision-making and accelerate business growth. We recommend a survey of your internal systems already in place to ensure these are being leveraged to overcome some of the more common data challenges. We often find that improvements to data visualization, workflow automation, and integration across your business systems are readily achievable once you have the data in place.
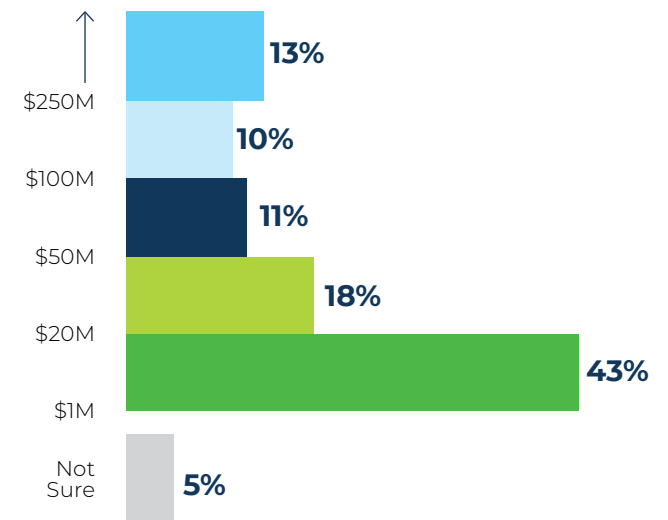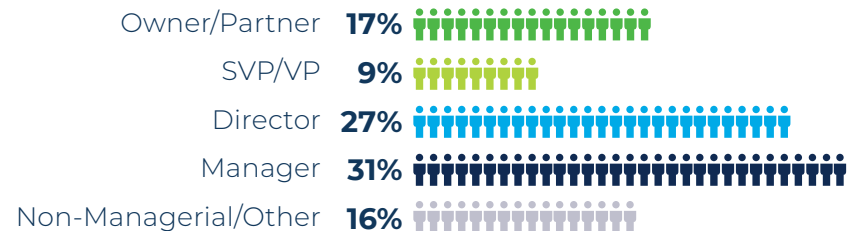
Survey Respondents

Our inaugural AEC Inspire 2021 report is comprised of survey responses from 176 contributors between January and March of 2021. Submissions were received from senior decision makers throughout the AEC industry, including owners/partners and executives/managers across sales, marketing, finance, HR, and project management.

We were pleased to see responses representing a variety of revenue bands and employee size, with a particularly even spread across SMB and Large Enterprise AEC Firms. Also of note was the level of strategic involvement respondents have across their organizations—all of which helped us achieve a high degree of statistical confidence.

Respondents by Annual Revenue

Revenue	Percentage
$250M ↑	13%
$100M	10%
$50M	11%
$20M	18%
$1M	43%
Not Sure	5%

Respondents by Role

Role	Percentage
Owner/Partner	17%
SVP/VP	9%
Director	27%
Manager	31%
Non-Managerial/Other	16%

Respondents by Industry
(Select all that apply)

Industry	Percentage
Engineering	47%
Construction	47%
Architecture	23%
Other	20%
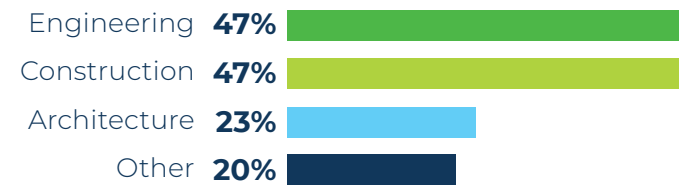
Respondents by Employee Size

No. of Employees	%
1,500	7%
1,000	5%
500	15%
250	13%
100	20%
50	16%
10	24%
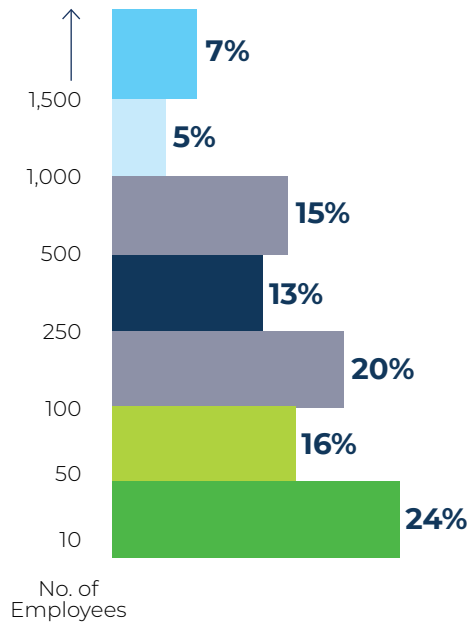
Respondents by Function

Function	%
Owner/Executive	20%
Operation & IT/Tech	20%
Marketing	18%
Business Development/Sales	13%
Finance	10%
Project Management	7%
Other	12%
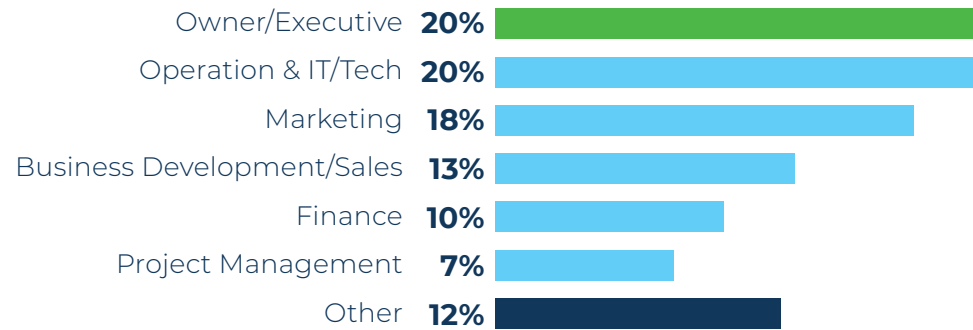
Involvement in Specific Areas

	Personnel & HR decisions	Technology solutions & tools decisions	Establishing Perf. metrics (KPIs)	Business intelligence & analytics	Business development & marketing	Project management	Developing client proposals
Owner/Executive Leadership	63%	77%	80%	80%	69%	46%	57%
Business Development/Sales	23%	32%	45%	59%	91%	18%	68%
Finance/Accounting/Controller	29%	29%	65%	59%	6%	6%	6%
Human Resources	100%	36%	18%	27%	27%	36%	27%
IT/Technology	17%	78%	57%	52%	35%	61%	30%
Marketing	16%	13%	13%	29%	90%	6%	81%
Operations	46%	46%	62%	31%	31%	69%	38%
Project Management	8%	15%	15%	8%	31%	100%	46%

Be Inspired:
Using the Report

Becoming a Data Driven AEC Organization

Data can be one of our most valuable resources. For AEC Firms, it tells the story of every hour on every project across your entire organization. Data can tell us which projects are going well, and which are falling behind. It can even be a predictor of project outcomes long before a project ever starts. Data can signal when to hire, how staff performs, and whether we are delighting our customers. Data helps us run our businesses better. And, leading AEC Firms are prioritizing technical initiatives to make this a reality.
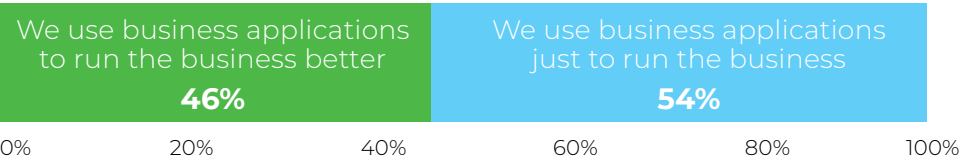
Data helps us run the business.
Work gets done, projects are completed, and processes like Time, Expense, Billings, and Collections generally save employees time.

Data helps us run the business better.
Innovative solutions and seamless application integrations cultivate collaborative efforts across the organization, turning the data you're already capturing into information that provides valuable insights and increased efficiencies—from pipeline to profit.

When AEC Firms were questioned about their growth potential for 2021, they responded positively, with 65% expecting revenue growth upwards of 30% or more. This is a significant uptrend from the actual revenue growth for 2020, where just 49% reported similar growth. With that kind of growth potential, how can AEC Firms best leverage their most valuable resource?

We use business applications to run the business better	We use business applications just to run the business
46%	**54%**

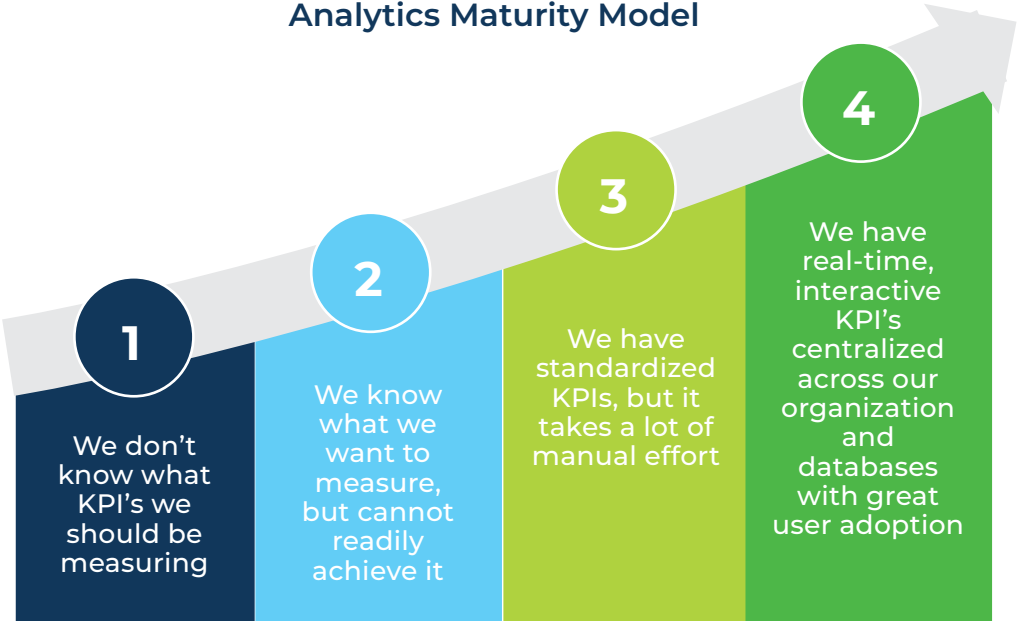0%   20%   40%   60%   80%   100%

Growth and the Role of Data

Key Performance Indicators (KPIs) have long been used to measure metrics like growth, utilization, and profit. They give us powerful insights into how our companies are performing.

But KPI's are changing. For many years, they have typically been viewed in hindsight. Now, AEC Firms are moving from asking "How did we perform?" to asking, "How *will* we perform?" In fact, many indicated that forecasting was among their largest challenges.

Executives are realizing that if they are going to see the kind of growth they anticipate, they need the ability to course correct based on forecasted pitfalls, spend their time pursuing the right opportunities, and stay one step ahead in the market. So, while target metrics on their own are certainly valuable—we all need to understand the bottom line—leading AEC Firms are becoming more metric-mature. This change is producing a lasting impact on the health and value of their companies.

Analytics Maturity Model

1 We don't know what KPI's we should be measuring

2 We know what we want to measure, but cannot readily achieve it

3 We have standardized KPIs, but it takes a lot of manual effort

4 We have real-time, interactive KPI's centralized across our organization and databases with great user adoption

INSPIRED INSIGHTS

What if your KPIs were a direct product of corporate strategy? Imagine a workplace where strategic goals informed your KPIs, which in turn determined each department's and employee's goals. With a clear sense of direction throughout the organization, growth becomes orchestrated—a symphony where everyone is playing from the same sheet of music.

Digital Transformation

The AEC industry is undergoing a digital transformation. Technologies from AI to digital-based efficiencies are headlining industry webinars and blogs every day. The truth is, if data is among our most valuable resources, how we maintain and leverage it can be worth its weight in gold.

Consider, for a moment, the potential of a company fully transformed by digital technologies that improve processes, engage talent, and drive new value-generating business models. This is a company where data is fully integrated and is being used to help make strategic decisions cross-functionally, throughout the organization. According to our research, most AEC Firms have not fully reached this status.

Why not? There are several challenges facing the industry when it comes to harnessing the power of data. Among the top cited were:

1. Missing or inaccurate data (47%)
2. Not having sufficient tools to access, integrate and analyze data (45%)
3. Not having sufficient tools to effectively communicate performance metrics/KPIs (35%)
4. Lack of data availability or accessibility (35%)

These all-too-common challenges prevent firms from making more data-inclusive decisions and deriving key insights on performance data. Unfortunately, these challenges are often compounded by the sheer number of business applications used across an organization. Lacking integration across multiple disparate systems, data becomes uncontrolled, redundant, and out of sync, making meaningful reporting and analytics nearly impossible. And, failing to make strategic investments in data-driven initiatives is costly in other ways: Lack of trust in data keeps owners, principles, and accounting staff up at night.

Are you a digitally advanced company?
(Compared to Ideal Company)

|	
Yes	**36%**
Somewhat	**54%**
No	**10%**
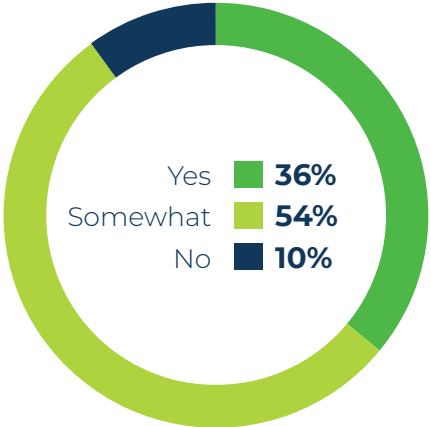
Becoming More Data-Driven

So, how do we as an industry begin to tackle the data challenges we face in order to capture the growth opportunities that await us in 2021 and beyond?

Accessibility

With the onset of work-from-home and the ongoing rollout of hybrid working environments, having easy access to your data is paramount. Many firms are making the move to a cloud-based environment for their critical business applications. In addition to providing a seamless experience, whether in the office or on-the-go, most cloud-based applications provide a more efficient platform for data performance, scalability, and security than on-premise alternatives.

Number of Applications Your Company Wants to be in the Cloud

| All or most 46% | Some 32% | Not sure 15% |
| A few 6% | | None 1% |
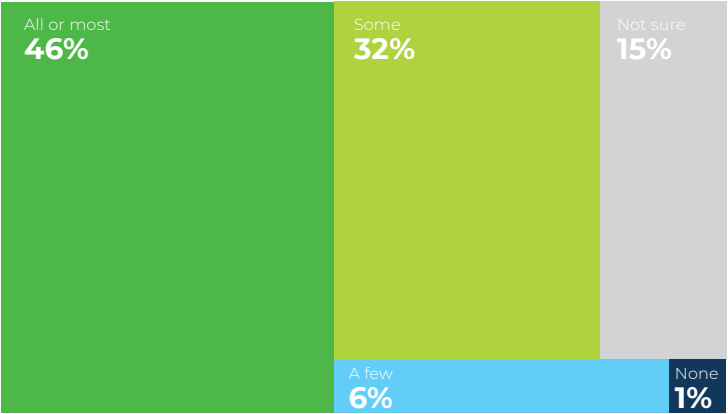
Getting started with Digital Initiatives

People

Do the right people have access to the information they need to be successful? Gaining an understanding of how your teams are leveraging technology to do their jobs, and the barriers they face, is a key step toward greater efficiencies and helping your staff focus more on the creative work that drives your business forward.

Processes

How streamlined are your processes? Take a survey of your critical business processes and look for ways technology could speed things up. Could mobile time entry kickstart your billing process with more expedient and accurate time and expense? Would online payment capabilities both serve your customers and increase your time to cash?

Tools

Take a survey of existing applications in use. Are there redundancies? Could they be integrated to reduce keystrokes and keep data in sync?
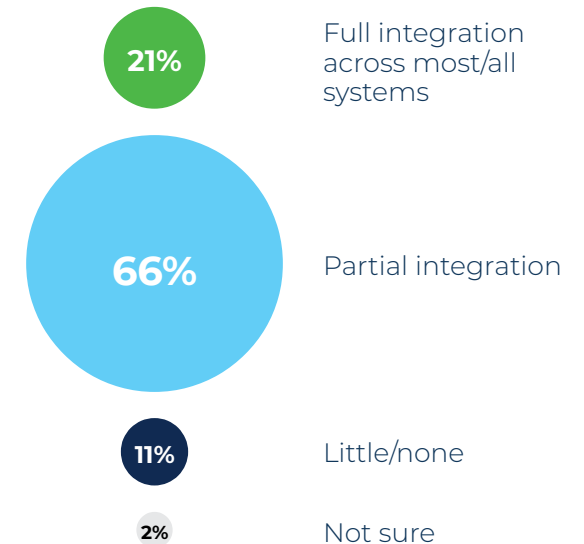
Integrations

AEC Firms reported using as many as 15 or more applications to run their businesses. Integrating these applications enables more widespread automation opportunities. Teams can better standardize processes for a variety of tasks, and eliminate manual work to streamline workflows and significantly improve data accuracy.

Modern integration platforms give you the ability to quickly deploy multiple integrations, creating an ecosystem through which you can orchestrate the flow of data across your organization. This creates key efficiencies and greater opportunities for process automation, and unlocks your team's ability to collaborate more effectively.
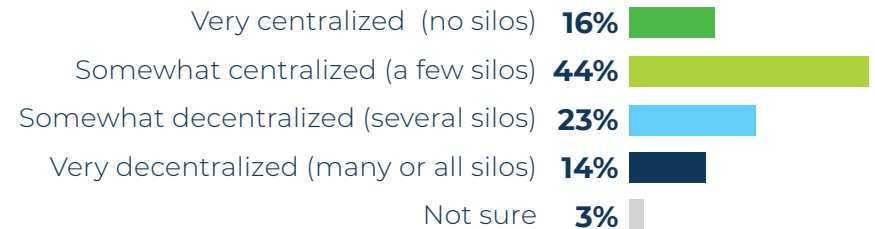
Centralized Analytics

As mentioned earlier, everyone needs to play from the same sheet of music. Centralized and standardized analytics bring teams together, removing barriers and increasing team continuity and performance. Having a single source for cross-platform analytics allows you to more seamlessly align KPIs with business goals and put your data to work to measure and optimize your efforts — including the ability to determine what metrics really matter to the company and what defines success.

Amount of Integration Between Company Applications

21% Full integration across most/all systems

66% Partial integration

11% Little/none

2% Not sure

Degree to Which Analytics Are Centralized on One Platform/Solution

Very centralized (no silos) **16%**

Somewhat centralized (a few silos) **44%**

Somewhat decentralized (several silos) **23%**

Very decentralized (many or all silos) **14%**

Not sure **3%**

What Hinders AEC Firms from Leveraging Data
(Select all that apply)

Missing or inaccurate data	**47%**
Insufficient tools to access, integrate, and analyze data	**45%**
Insufficient tools to effectively communicate	**35%**
Lack of data availability or accessibility	**35%**
Outdated data (not timely)	**26%**
Not understanding what certain metrics mean/their importance	**26%**
Little or no appreciation for using data	**25%**
Data isn't actionable	**16%**
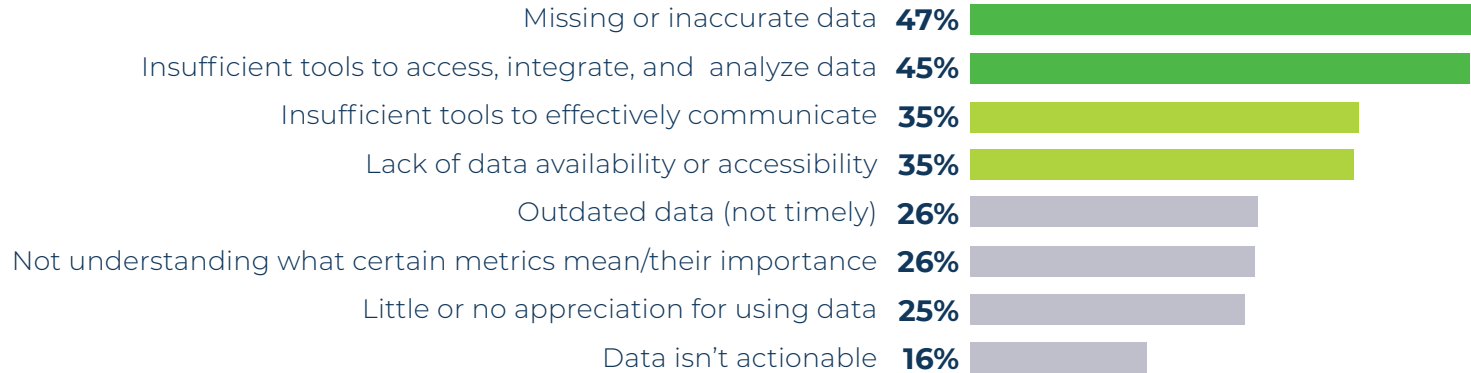
How Widely Is Data Shared Across the Company?

- **Shared widely across the entire company**
- **Shared with certain individuals or parts of the company**
- **Shared at the Board or executive level only**
- **Not sure**

Rows (top to bottom): Client satisfaction, Revenue, Growth rate, Win rate, Pipeline/backlog, Labor utilization, Employee turnover, Average bill rates, Profit/margin, Project profitability, Overhead rates, Net cash

X-axis: 0% 20% 40% 60% 80% 100%

PERCENTAGE OF RANKINGS

How Mature is Your Use of KPIs?

We use both KPIs and qualitative information to drive our business strategy

There is a strong alignment between KPIs and the goals of the organization

KPIs are regularly used in our employee performance review process

Our company has well-defined, measurable KPIs we are all focused on

We use role-based KPIs (at a functional/ employee level) that tie to company-wide goals

We have real-time, interactive KPIs that are accessible across the organization

The process of measuring the KPIs we need is easy for us to do

We are able to measure all of the KPIs we need

Legend:
- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

0%   20%   40%   60%   80%   100%

PERCENTAGE OF RANKINGS

Run Your Business Better

AEC Firms' investments in data initiatives will have a direct impact on their ability to realize anticipated growth. As AEC Firms become more data-driven, not only do they improve their ability to make strategic decisions with a higher degree of confidence, but the organization begins to transform, taking pride in newfound efficiencies and leveraging the insights they need to be successful.

For those feeling a bit behind the curve with technology, don't worry: you're not alone. Many of the key ingredients needed to advance are already right at your fingertips. And, with more modern, open platforms available, data-driven growth is now more attainable than ever.

We hope this report will give you a sense of where the AEC industry is today and the heights we can reach together as we become more data-driven.

Data-Driven Checklist

Do your current solutions help you become more data-driven? Look for these features when selecting or implementing a project-based ERP:

☐ Cloud-based application that's mobile-ready, scalable and secure

☐ Real-time, fully interactive analytics and reporting that unlocks insights and helps guide business decisions

☐ Open, modern platform for integrating your best-of-breed applications through pre-built, easy-to-deploy integrations

☐ The ability to orchestrate data and automate workflows across business applications and the organization

☐ Modern architecture with reliable optimized database, web and mobile access points

☐ Built to scale with your growing business, including growth features like Multi-Company/Currency support, workflow automation, API, etc.
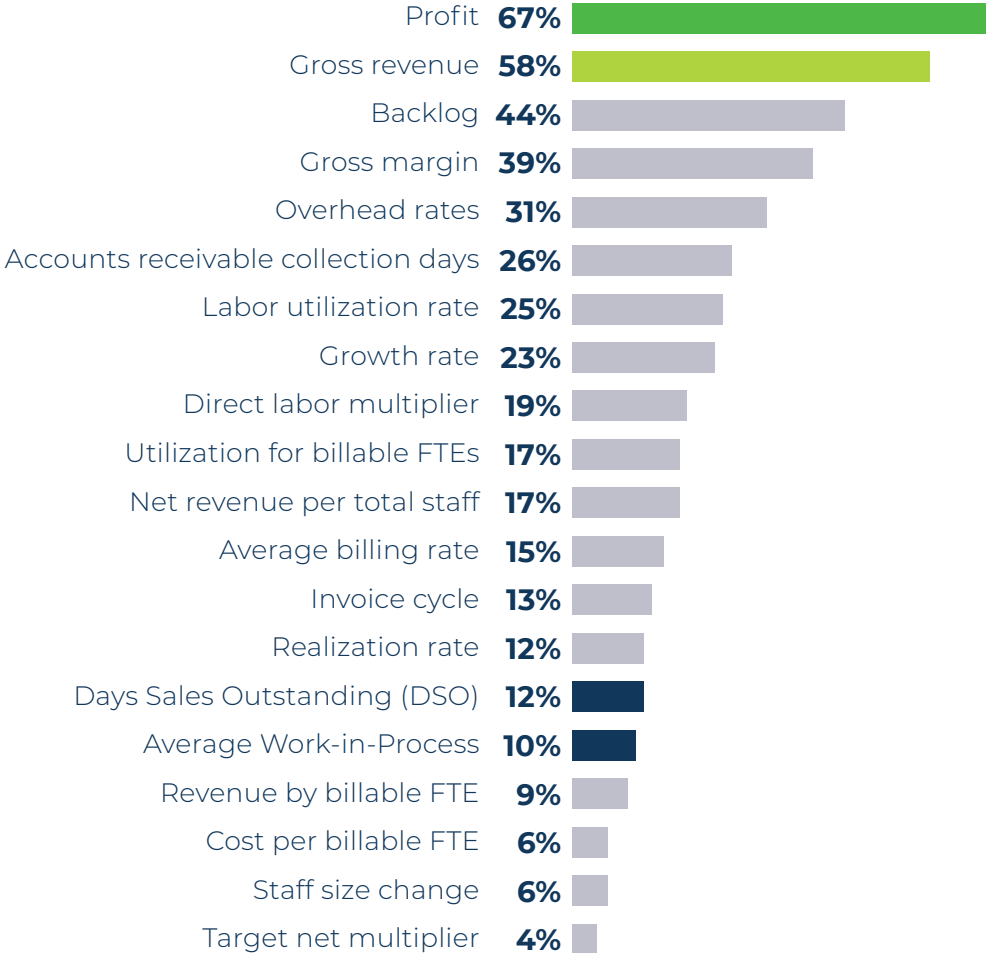
Finance and Accounting Optimization

Finance and Accounting Optimization
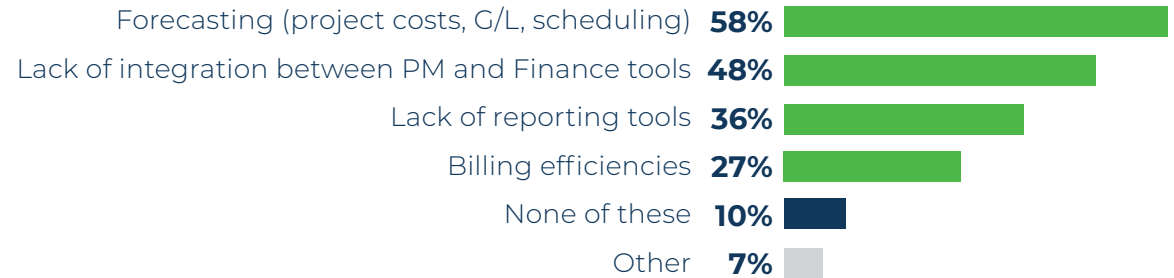## Key Takeaways

- Growth is the focus for most AEC Firms, with Profit and Gross Revenue reported as the two most important metrics. This is particularly reported among smaller and larger AEC Firms.

- In comparison, operational metrics such as Days Sales Outstanding and Average Work-in-Process trended as less important. This is noteworthy, as increased tracking of operational metrics can often uncover key opportunities for efficiencies that lead to greater cash flow as well as increases in metrics of higher importance—like Profit and Gross Revenue.

- Among metrics that firms regard as important, Backlog, Overhead rates, Growth rate and Net revenue per total staff are considered key.

- Organizations are optimistic about their current and future growth. Many firms (39%) believe they will see 11-30%+ profit rates, and most firms (65%) anticipate year-over-year revenue growth upwards of 30%+ in FY2021.

Most Important Financial & Operational Metrics
(Select up to five)

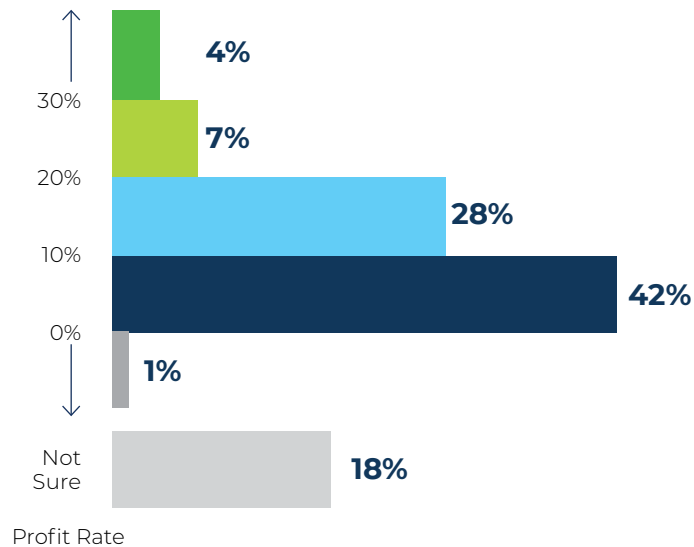| Metric	%
Profit	67%
Gross revenue	58%
Backlog	44%
Gross margin	39%
Overhead rates	31%
Accounts receivable collection days	26%
Labor utilization rate	25%
Growth rate	23%
Direct labor multiplier	19%
Utilization for billable FTEs	17%
Net revenue per total staff	17%
Average billing rate	15%
Invoice cycle	13%
Realization rate	12%
Days Sales Outstanding (DSO)	12%
Average Work-in-Process	10%
Revenue by billable FTE	9%
Cost per billable FTE	6%
Staff size change	6%
Target net multiplier	4%

- For AEC Firms, forecasting is the #1 financial challenge reported, followed by a lack of integration between project management and finance tools, and lack of reporting tools.

Financial Challenges for Company
(Select all that apply)

Challenge	%
Forecasting (project costs, G/L, scheduling)	58%
Lack of integration between PM and Finance tools	48%
Lack of reporting tools	36%
Billing efficiencies	27%
None of these	10%
Other	7%

Profit Rate (Current FY Anticipated)

Profit Rate	%
30%	4%
20%	7%
10%	28%
0%	42%
	1%
Not Sure	18%

Profit Rate

INSPIRED INSIGHTS

Forecasting is reported as the largest financial challenge for AEC Firms. Accurate forecasting can help you anticipate issues before they arise to keep your projects and financials on track with healthy margins for strategic investment back into the business. Forecasting challenges can be easily solved with the right reporting tools and a financial system that seamlessly integrates project and financial data.

Metrics that Matter

Financial KPIs help AEC Firms understand the overall health of their organizations, so it was no surprise that Profit and Gross Revenue exceeded the next tracked metric by over 15%. These two metrics certainly provide overarching insight into the growth and sustainability of the firm. However, if we take a step beyond the most tracked metrics, we find a notable trend among the metrics firms *wish* to track.
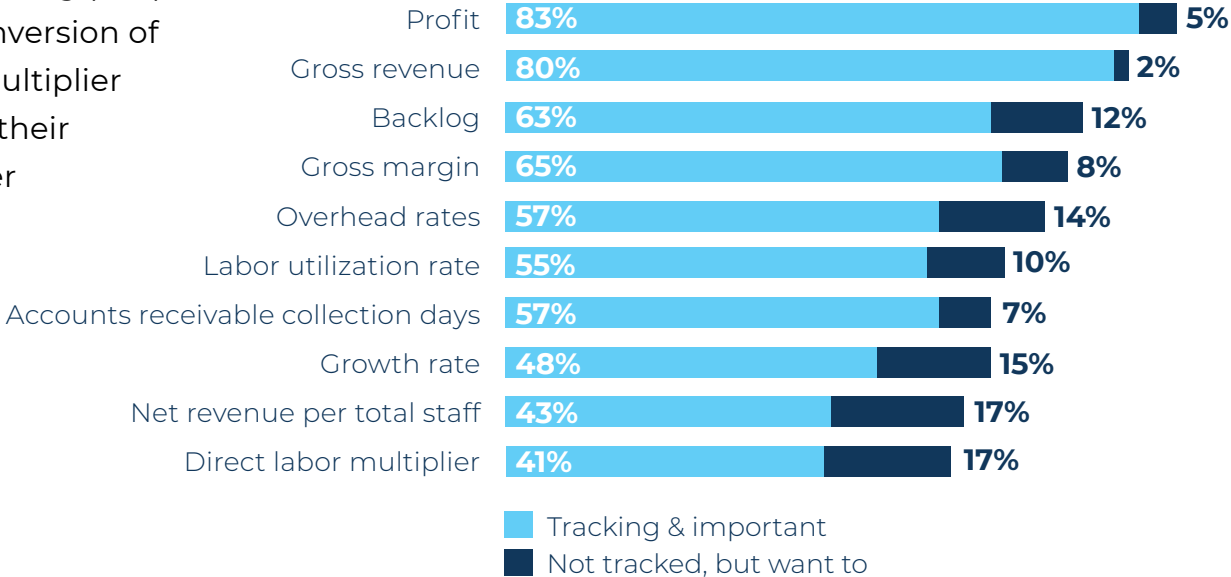
Throughout 2020, AEC Firms prioritized gaining a tighter grasp on project performance, project costing/overhead, and resource management. Whether they are gaining a clearer picture of true profit based on fully burdened job cost via Overhead tracking (14%), or tracking efficiencies related to the conversion of direct labor into revenue (Direct Labor Multiplier 17%), it is clear AEC Firms are expanding their financial KPIs. Many of these sought-after

metrics will help firms fine-tune their projects and processes and feed both Profit and Gross revenue drivers.

Metrics AEC Firms wish to track:

- Direct Labor Multiplier (17%)
- Net revenue per total staff (17%)
- Growth Rate (15%)
- Overhead rates (14%)

Financial and Operational Metrics

Metric	Tracking & important	Not tracked, but want to
Profit	83%	5%
Gross revenue	80%	2%
Backlog	63%	12%
Gross margin	65%	8%
Overhead rates	57%	14%
Labor utilization rate	55%	10%
Accounts receivable collection days	57%	7%
Growth rate	48%	15%
Net revenue per total staff	43%	17%
Direct labor multiplier	41%	17%

■ Tracking & important
■ Not tracked, but want to

YoY Revenue Growth by Employee Size
Last FY - Actual
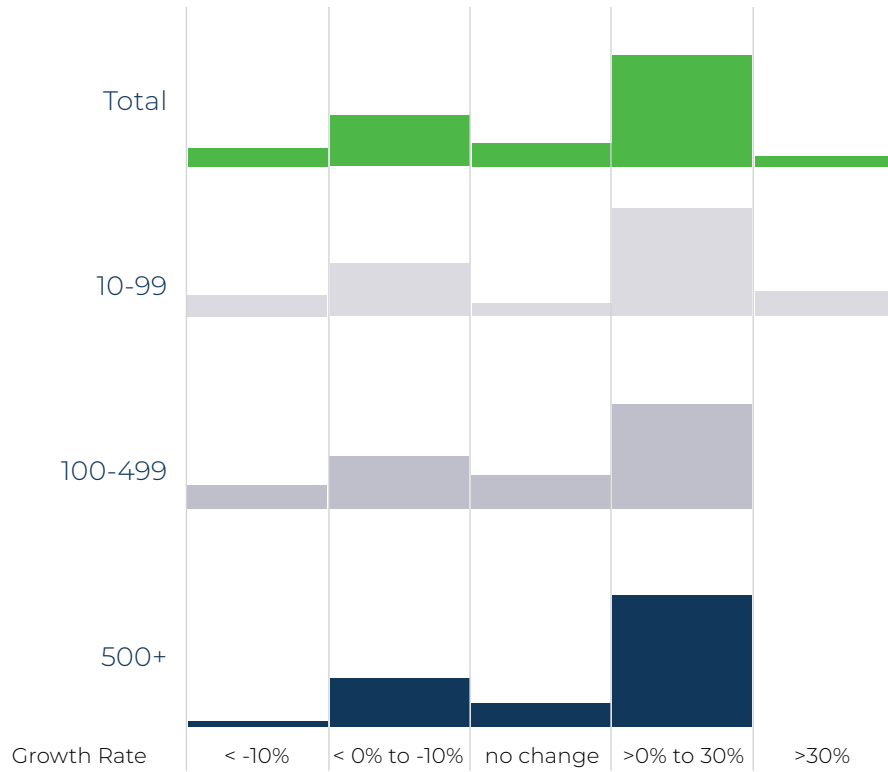
YoY Revenue Growth by Employee Size
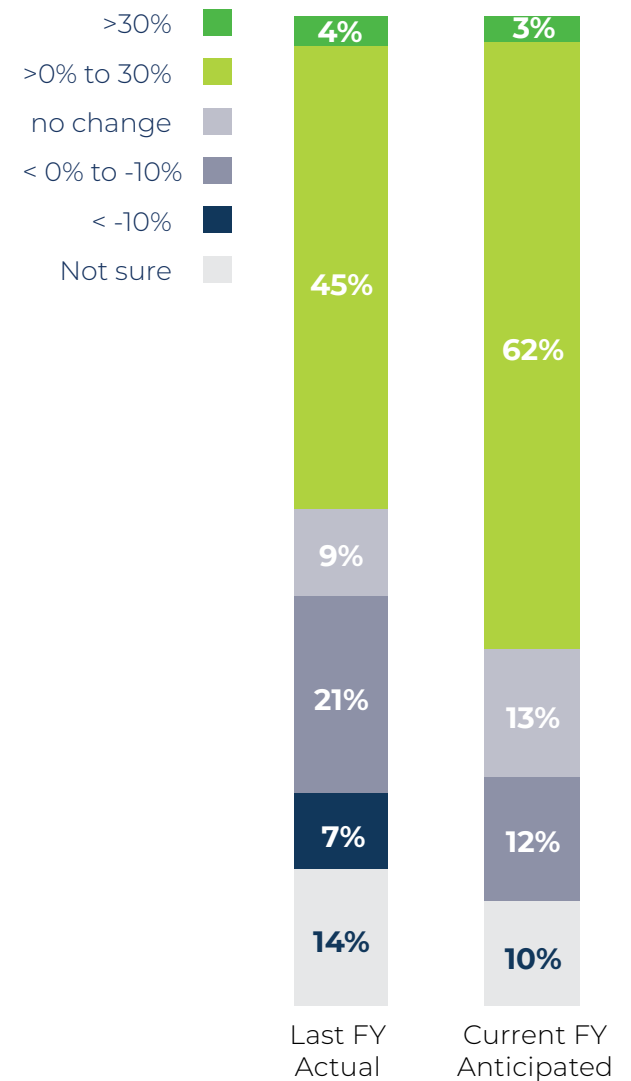**Current FY - Anticipated**
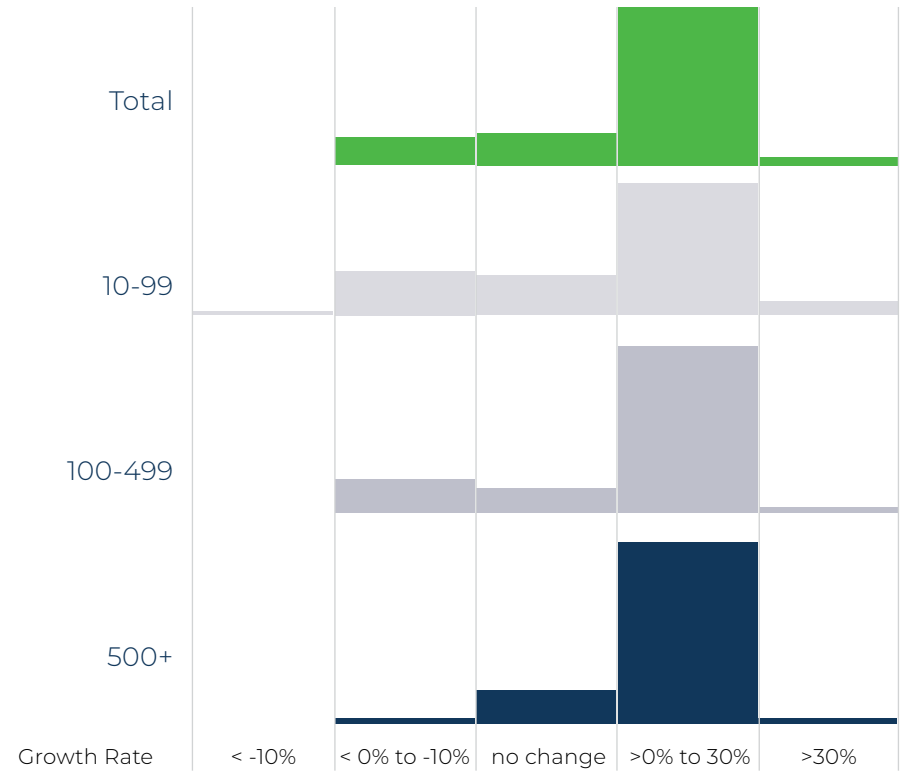
Accounting System Checklist

Does your accounting system help you become more data-driven? Look for these features when selecting or implementing a project-based ERP:

- ☐ GAAP Compliant - Ensure your financial system adheres to the principles of GAAP. While not a requirement for most private companies, if you decide to sell your business, GAAP statements will be a must.

- ☐ Project Accounting - Seamlessly recording your project costs and revenues ensures your financials and project positions are always in sync.

- ☐ Real-time Reporting - Ensure your accounting system can give you the bottom line in real-time, without the need to wait on batch processing due to outdated technology.

- ☐ Financial insights - Look for trends with easy-to-use, interactive Analytic Dashboards and Reports.

- ☐ Audit Trail - Supports a detailed reliable audit trail across accounting, labor and expense transactions.

- ☐ Flexible, scalable rate structures for Project Billings, Job Costing, Payroll and accounting for Indirect Rates.

- ☐ Multi-Company / Multi-Currency - Ensure your accounting solution can scale as you grow - both domestically and in foreign markets.

YoY Revenue Growth

Legend:
- >30%
- >0% to 30%
- no change
- < 0% to -10%
- < -10%
- Not sure

	Last FY Actual	Current FY Anticipated
>30%	4%	3%
>0% to 30%	45%	62%
no change	9%	13%
< 0% to -10%	21%	12%
< -10%	7%	
Not sure	14%	10%

Executing Successful Projects

Successfully Executing Projects
Key Takeaways

- Project success metrics such as project profitability (56%) and project revenue (49%) were reported among the most important project metrics.

- Many important metrics had stronger showings based on employee size. For instance, project profitability was most important among smaller firms (76%), while Project % complete was most important to larger 500+ firms (66%).

- While these top metrics are paramount for ensuring successful projects and a healthy bottom line, they are largely measured in hindsight when it comes to project performance. Forecasting is reported as the #1 project management challenge, exceeding other top challenges by 23%+.

- AEC Firms would like to begin tracking the following notable metrics:
    Estimate to complete (23%)
    Estimate at complete (20%)
    Burn Rate (22%)
    Average billing rate per project (20%)

INSPIRED INSIGHTS

Lower rated metrics such as Earned value (22%), Estimate at complete (22%) and Estimate to complete (20%), help give you a picture of the road ahead by forecasting project pitfalls before they happen. Similarly, keeping a steady pulse on your Unbilled (17%) time and expense can ensure you are getting the most out of your project billings and ongoing cash flow.

Most Important Project Management Metrics
(Select up to five)

Metric	Overall	No. of employees 10 - 99	No. of employees 100 - 499	No. of employees 500+
Project profitability	56%	76%	47%	43%
Project revenue	49%	60%	43%	43%
Project % complete	48%	36%	43%	66%
Budget vs. actuals	46%	46%	55%	36%
Project backlog	42%	48%	45%	32%
Project gross margin	36%	40%	35%	32%
Project % spent	30%	24%	24%	43%
Earned value	22%	6%	24%	39%
Estimate at complete	22%	16%	22%	27%
Estimate to complete	20%	18%	14%	27%
Unbilled	17%	28%	18%	5%
Project spend variance	16%	8%	20%	20%
Variance metrics	14%	10%	14%	18%
Avg. billing rate per project	13%	8%	14%	18%
Burn rate	12%	12%	18%	5%

Most Tracked

Project revenue	87%
Project profitability	86%
Project % complete	82%
Budget vs. actuals	81%

Least Tracked

Avg. billing rate per project	30%
Burn rate	28%
Estimate to complete	24%
Estimate at complete	24%

Want to Track

Estimate to complete	23%
Burn rate	22%
Estimate at complete	20%
Avg. billing rate per project	20%

Metrics that Matter

Monitoring your projects is paramount for ensuring your work is completed on-time and on (or under!) budget. The good news is there is no shortage of metrics to choose from. But what are the KPIs that really move the needle, turning good projects into great projects—and repeat business?
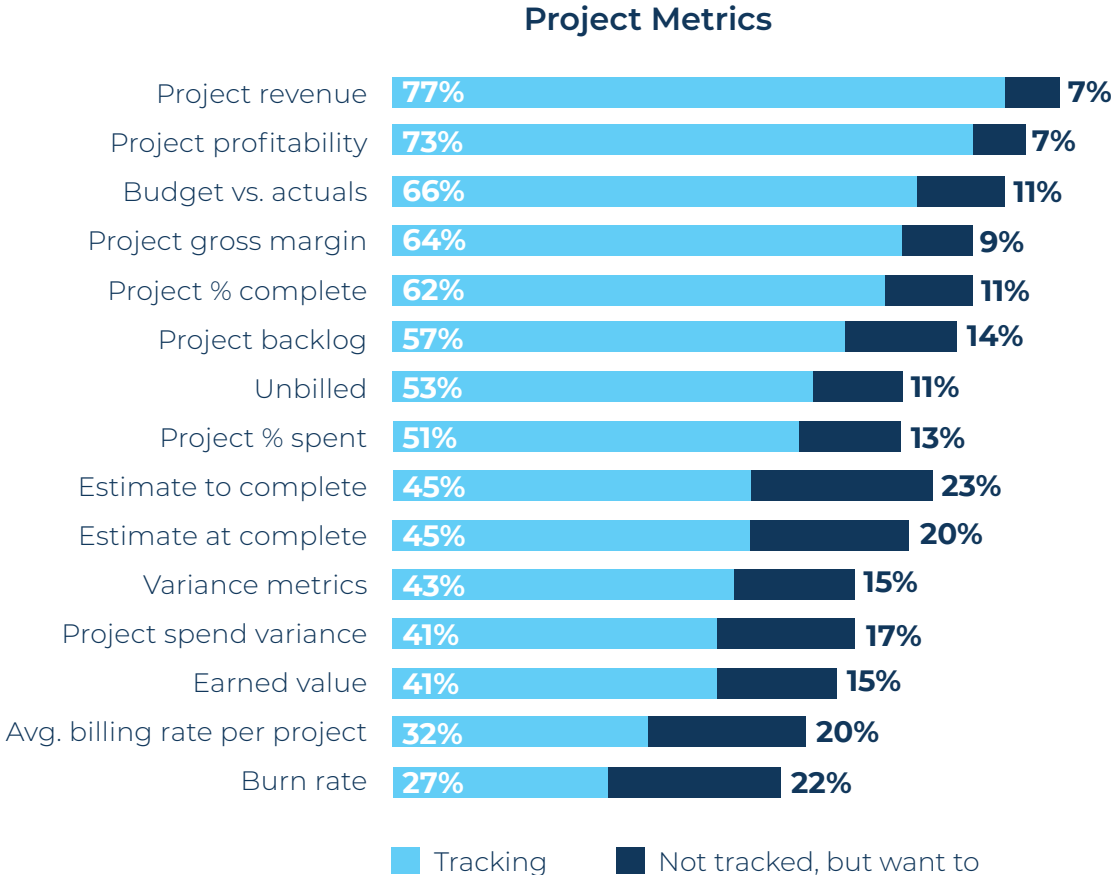
Metrics like Profitability and Revenue are a perfect starting place. They are typically very easy to report and provide insight into the overarching success of the project. However, they tend to be more rear-facing.

As AEC Firms seek to improve their ability to forecast, we are seeing a trend towards tracking more forward-facing metrics like ETC, EAC, and Burn Rate.

Do these metrics seem out of reach? Fear not—you're not alone. There are solutions that can easily both track and forecast your projects, so you can proactively anticipate pitfalls and keep things on course. We'll provide a list of what to look for in a project-based solution later in this section.

Metrics AEC Firms wish to track:

- Estimate to Complete 23%
- Estimate at Complete 20%
- Burn Rate 22%
- Avg. billing rate per project 20%

Project Metrics

Metric	Tracking	Not tracked, but want to
Project revenue	77%	7%
Project profitability	73%	7%
Budget vs. actuals	66%	11%
Project gross margin	64%	9%
Project % complete	62%	11%
Project backlog	57%	14%
Unbilled	53%	11%
Project % spent	51%	13%
Estimate to complete	45%	23%
Estimate at complete	45%	20%
Variance metrics	43%	15%
Project spend variance	41%	17%
Earned value	41%	15%
Avg. billing rate per project	32%	20%
Burn rate	27%	22%

Tracking   Not tracked, but want to

The Power of Collaboration

Project Managers fill a unique role within an AEC Firm. Increasingly, Project Managers are expected to be more agile, possess strong interpersonal skills, and be cross-functional contributors to the organization. This year, while most AEC Firms report that their Project Managers are somewhat collaborative with Sales and Finance, only some would consider these relationships very collaborative (38% and 34% respectively).

Successful collaboration depends on the tools an AEC Firm leverages to run the business. If not well integrated, disparate tools hinder your team's ability to easily collaborate on projects.

Becoming more data-driven—by integrating the tools you use every day and orchestrating how data is leveraged throughout your organization—optimizes your ability to become more collaborative.

Collaboration with Project Management
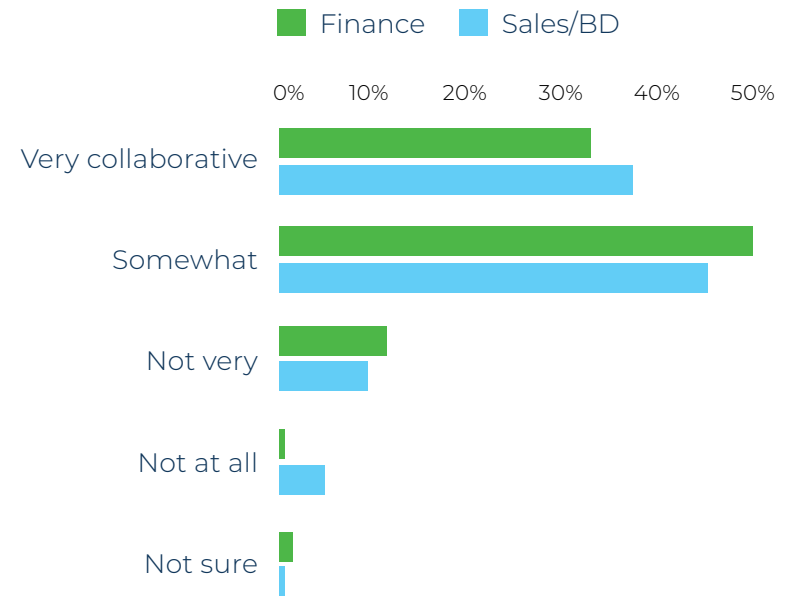
INSPIRED INSIGHTS

For project-based businesses, collaboration across the organization is a critical key to success. As the industry grapples with a hybrid work environment, firms running on multiple disparate systems will continue to struggle to maintain accurate data and promote cross-functional team collaboration.

Biggest Project Management Challenges
(Select all that apply)

		No. of employees		
		10 - 99	100 - 499	500+
Forecasting (project costs, scheduling, resource allocation)	**57%**	**72%**	55%	41%
Lack of past project performance metrics	**34%**	42%	27%	34%
Inexperienced project managers	**34%**	**48%**	33%	18%
Limited visibility into project status	**31%**	30%	39%	25%
Other	**6%**	8%	6%	2%
None of these	**12%**	8%	8%	20%

Project Management System Checklist

Does your current solution help you become more data-driven? Make sure you can do these things when selecting or implementing a project management system:

☐ Estimate opportunity win value and probability to improve company forecasting

☐ Establish project controls for accurate time, expense, and billing

☐ Provide project managers with accessible project planning and insights for more agile project management

☐ Easily capture Estimate to complete and Project % Complete for Earned Value Management and improved project forecasting

☐ Run real-time, interactive reports and analytics to ensure projects perform on-time and under-budget

☐ Intuitively forecast and manage resources for optimized planning

☐ Simply and flexibly capture and report out fully burdened project costs

☐ Gain key insights from past project performance data to improve future pursuits

Capturing Your Market

Capturing Your Market
Key Takeaways

- While we had a substantial representation from Marketing and Business Development/Sales contributors (31%), there was no consensus above 50% in overall ratings on metric importance.

- Client Satisfaction was identified as the second most important metric (40%), but was among the *least tracked KPIs*. Overall, we saw a notable difference between metrics firms consider important and metrics they can easily track.

- AEC Firms are challenged by both a lack of adoption of business development tools (50%) and siloed, disparate business development information (41%). Business development (BD) is an organization-wide effort, particularly for firms relying on a seller-doer BD model.

- AEC Firms report the following as the most important Sales and Pipeline metrics:
    - Bid to win ratio (43%)
    - Client satisfaction (40%)
    - Percentage of business from existing/ returning clients (38%)
    - Project type (38%)

For AEC Firms to realize their anticipated growth in 2021 and beyond, strategic initiatives should include:

- **Centralizing Business Development.** Unify information and insights in a single-source: moving from siloed, personal knowledge to accessible insights for the entire organization.

- **Championing a growth CRM.** For AEC Firms who have already invested in a growth-centered, scalable CRM solution, ensure your continued rollout includes regular training and knowledge sharing opportunities for your staff at large. Additionally, cross functional initiatives, particularly between business development and project management and finance, will promote your ability to pursue the right opportunities and ensure your CRM is always up to date with the latest project financials. If you currently don't own a growth platform for CRM, we'll provide a checklist later in this report for selecting one.

Most Important Sales and Pipeline Metrics
(Select up to five)

Metric	Overall	No. of employees 10 - 99	No. of employees 100 - 499	No. of employees 500+
Bid to win ratio	43%	45%	48%	36%
Client satisfaction	40%	41%	48%	30%
% of business from returning clients	38%	45%	29%	39%
Project type	38%	45%	35%	32%
# of submitted proposals/bids	35%	41%	42%	23%
% of business from new clients	31%	35%	35%	23%
Hard backlog (awarded not funded)	30%	39%	31%	18%
# of qualified opportunities	27%	22%	31%	27%
Bid to loss ratio	26%	31%	21%	27%
Opportunities by capture stage	23%	20%	23%	25%
# new prospect conversations	20%	24%	17%	18%
Employee certifications	18%	8%	21%	27%
Labor rate analysis by period	18%	12%	15%	27%
Avg. cost per sale	17%	14%	8%	30%
Length of sales cycle	16%	12%	13%	23%
Skill set utilization	13%	2%	15%	25%

Most Tracked

# submitted proposals	85%
Project type	83%
Bid to win ratio	73%
# of qualified opportunities	71%

Least Tracked

Avg. cost per sale	44%
Skill set utilization	44%
Length of sales cycle	40%
Client satisfaction	39%

Want to Track

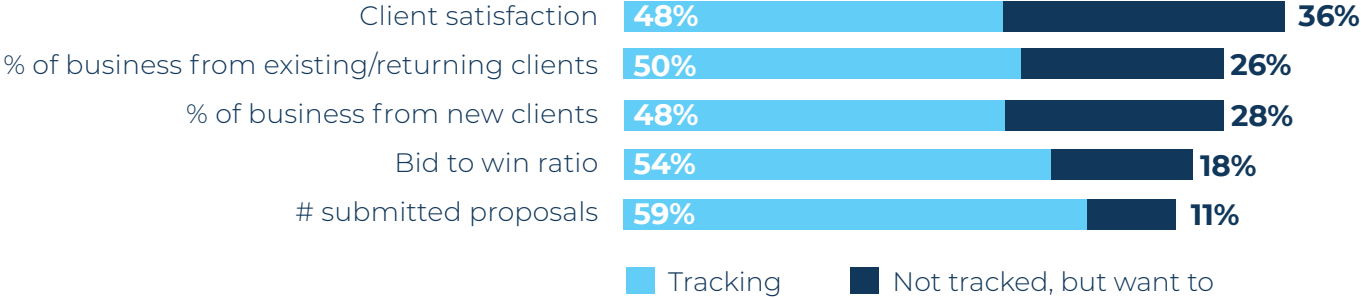|	
Client satisfaction	36%
Avg. cost per sale	33%
# new prospect conversations	31%
% of business from new clients	28%

Metrics that Matter

We dove deep into KPI tracking, asking AEC Firms not only what they currently track, but also what they wish to track. Among these KPIs there was a notable gap between areas firms consider important, and whether they are being tracked or not. This is likely due to reported challenges related to lack of adoption of business development tools (50%), siloed information (41%), or limited reporting tools (27%). The good news is, these challenges can be readily resolved with the right resources. There is tremendous opportunity for AEC Firms to improve their reporting across several important KPIs:

- Client satisfaction (84%)
- Percentage of business from existing/returning clients (76%)
- Percentage of business from new clients (76%)
- Bid to win ratio (72%)
- Number of submitted proposals (70%)

Sales and Pipeline Metrics

	Tracking	Not tracked, but want to
Client satisfaction	48%	36%
% of business from existing/returning clients	50%	26%
% of business from new clients	48%	28%
Bid to win ratio	54%	18%
# submitted proposals	59%	11%

Tracking ▮ Not tracked, but want to ▮

Biggest Business Development (BD) Challenges
(Select all that apply)

Challenge	Percentage
Lack of adoption of BD tools	50%
Siloed, disparate BD information	41%
Lack of BD resources	35%
Lack of past performance metrics	30%
Limited reporting tools	27%
Other	5%
None of these	13%
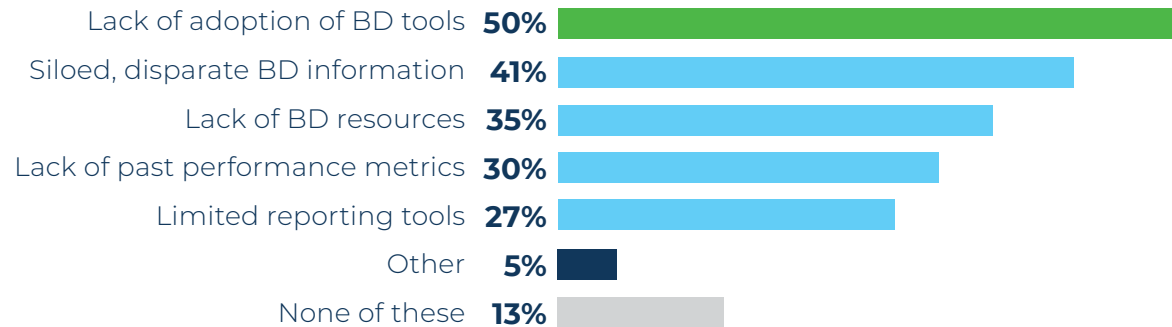
The Benefits of a Project-Based CRM

Maintaining complete CRM data throughout your client's journey can empower staff across your organization with the information they need to be nurture-minded in their interactions with clients. Unfortunately, all too often CRM data is stored outside of your ERP, isolated from your project data, KPIs, and key staff.

Seamlessly integrating your CRM with your project-based ERP provides insight into your relationships right alongside the project metrics you need, allowing you to prioritize opportunities, nurture those relationships, and ensure project success.

- Gain instant access to prospects and customers in one central place
- Track the customer journey through the entire project lifecycle
- Analyze data and make better business decisions
- Gain insights into market trends and customer pain points
- Gain a better understanding of future revenue potential and resource forecasts
- Access a weighted forecast based on probability percentages
- Increased visibility and control over future financials, including profit, revenue, growth, and new orders

CRM System Checklist

Does your current CRM solution help you become more data-driven? Look for these features when selecting or implementing a project-based CRM:

- ☐ Seamless, bi-directional integration with your project-based ERP and other critical business tools like Outlook, HubSpot, etc.

- ☐ Optimized workflows, task assignment, and easy-to-visualize opportunities by stage, along with automated key notifications

- ☐ Real-time, interactive data and metrics to guide business decisions with easy-to-use reporting and analytics

- ☐ The ability to track key project performance (current and historical) to inform analytics and prioritize pursuits

- ☐ Resource planning for both active and TBD resources

- ☐ Forecasting that reacts to updated win probability as opportunities move through the funnel

- ☐ One-click record updates from opportunity to executable projects

- ☐ Cloud-based access with complete, secure connections to your data—where and when you need it

- ☐ Key insights from past project performance data to improve future pursuits

Afterword

Thank You!

We would like to extend a special word of thanks to our contributors and respondents for participating in this inaugural edition of the AEC Inspire report. Thank you for providing such thoughtful and insightful feedback into the practices, successes, and challenges facing your firms.

AEC as an industry has always inspired us to reach for greater heights— your design, attention to detail, and vision for the world around us draws us forward. It is our hope that, in turn, this report can serve as a platform for benchmarking, insight, and perhaps even some inspiration of its own as we all seek to run our businesses better.

About Unanet

Unanet is a leading provider of project-based ERP and CRM solutions purpose-built for Government Contractors, AEC, and Professional Services. More than 3,200 project-driven organizations depend on Unanet to turn their information into actionable insights, drive better decision-making, and accelerate business growth—all backed by a people-centered team invested in the success of your projects, people, and financials. www.unanet.com

Contacting Us

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AEC INSPIRE REPORT

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