2025

AEC TECHNOLOGY STACK SURVEY RESULTS

CONFLUENCE
BY AVAIL

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Confluence 2025 Tech Stack Survey

How many different software applications are in use across architecture and engineering firms? That question motivated Confluence's inaugural AEC Technology Stack Survey. The findings that follow provide an evidence-based view of how architecture, engineering, and construction (AEC) firms are assembling and operating technology ecosystems across design, delivery, and enterprise functions—based on responses from individuals within many of the world's leading firms. As a result, the tool count captured here likely underrepresents the full universe of applications in use across the industry.

Unique Tools Used per Firm by Firm Size
Filtered Range (IQR outliers removed) with Median
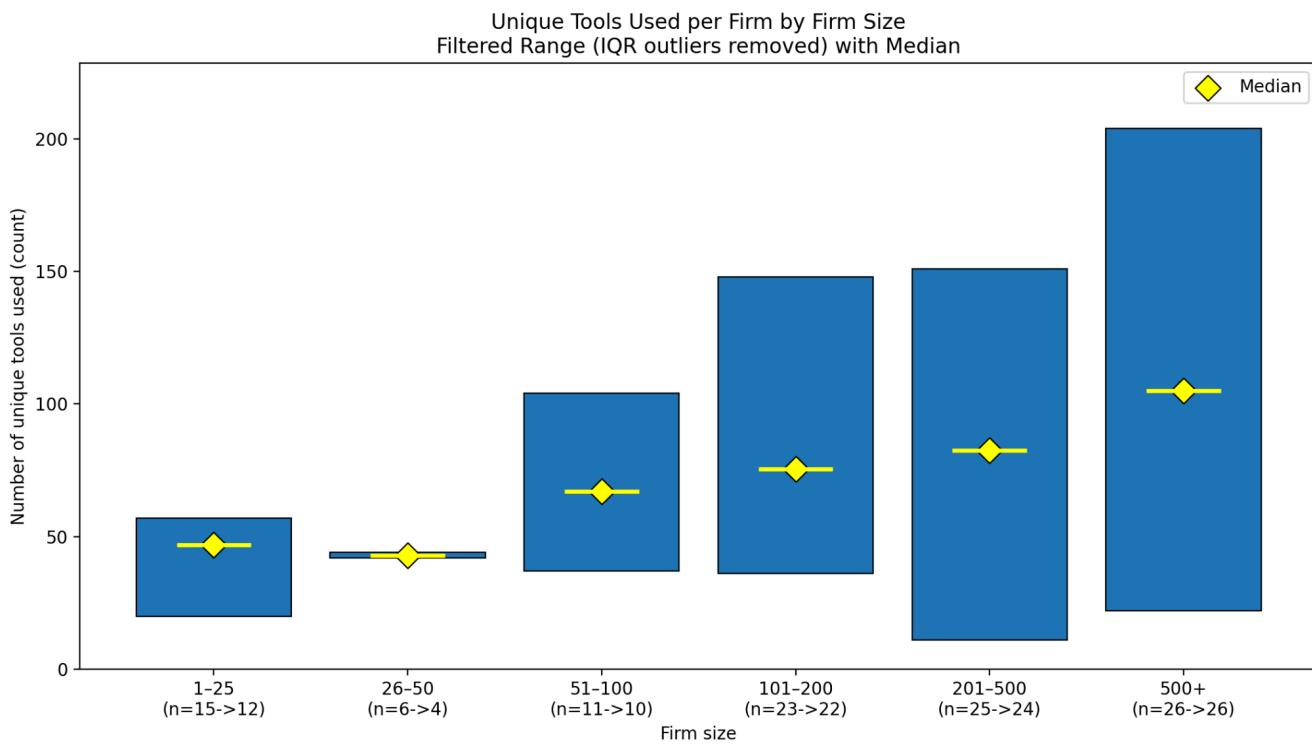
To accelerate synthesis and pattern detection, the analysis leveraged AI (primarily ChatGPT) to evaluate survey responses and identify cross-category trends. The survey targets IT leaders and Design Technology leads and focuses on two related questions:

- **What applications are firms using today** across the full lifecycle of project delivery and firm operations?
- **What infrastructure patterns are emerging**—particularly around cloud services, storage, identity, and collaboration—that enable (or constrain) those applications?

The dataset is intended to support practical decision-making: benchmarking internal toolsets against peers, identifying standardization opportunities, anticipating integration and governance needs, and informing near-term roadmap investments.

The survey was conducted in the fourth quarter (Q4) of 2025 and captured **410 distinct software applications** across **20 categories**. This report is organized by functional category (e.g., Design Modeling, Coordination, File/Content Management, Analytics, Specifications/QA, GIS, Simulation, Sustainability, Presentation/Graphics, and others). Within each category, products are evaluated by overall market penetration and segmented by firm size to surface scale effects—where smaller firms tend to optimize for simplicity and cost-efficiency, and larger firms tend to optimize for standardization, security, governance, and integration.

We now have an answer to the original question. How many applications are being managed in the average AEC firm's technology stack? The answer is **86.8** across all responses. They break down by firm size as follows:

- **1–25:** median **47**
- **26–50:** median **43**
- **51–100:** median **67**
- **101–200:** median **75.5**
- **201–500:** median **82.5**
- **500+:** median **105**

Distribution of Applications in Use per Firm
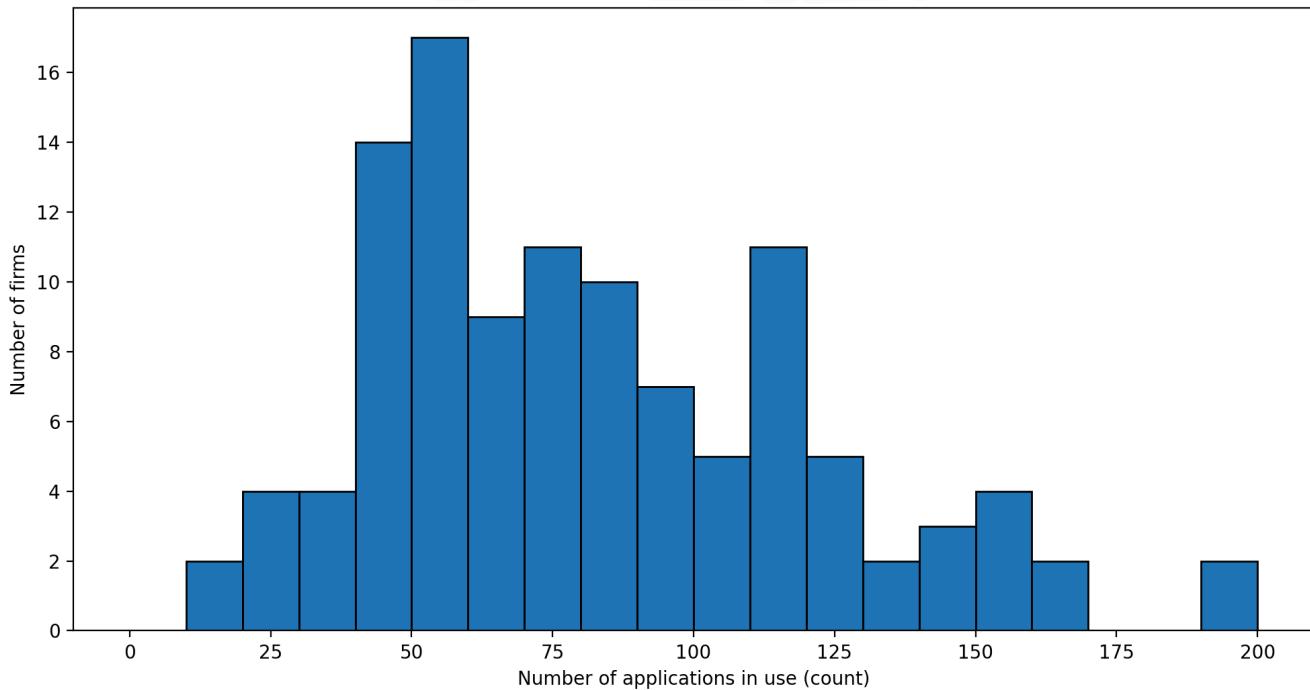
Executive Summary

The 2025 survey, with **115 contributors**, confirms that AEC technology ecosystems continue to expand in breadth while becoming more stratified by firm size. Across most categories, firms are converging around a smaller set of **platform tools** that anchor workflows (authoring, coordination, document control, and collaboration), while simultaneously adopting a growing layer of specialized applications that address targeted needs (analytics, visualization, sustainability/performance, simulation, QA/spec automation, and niche delivery tools). The net effect is a tool landscape that is both more capable and more complex—where integration, governance, and change management represent as much operational work as software selection itself.

Respondents by Firm Size
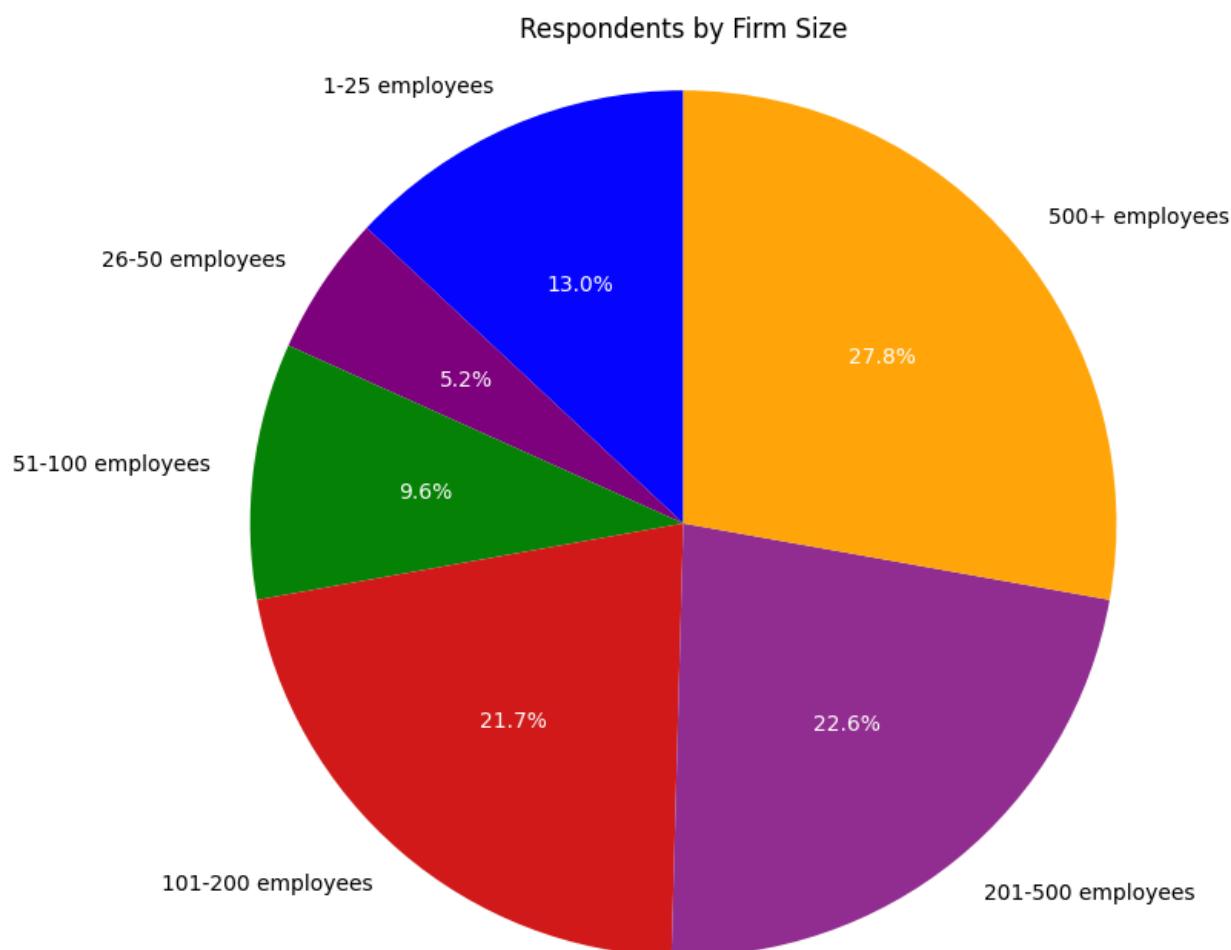
Major Themes Observed Across Categories

1) Standardization increases sharply with scale.

Larger firms exhibit stronger consolidation around a limited number of enterprise-standard platforms, driven by security requirements, role-based access, multi-office delivery, and the need for consistent project outcomes. Smaller firms show more variability, reflecting opportunistic adoption, cost sensitivity, and a greater reliance on individual or team preferences.

2) Tool ecosystems are becoming platform-centric, not application-centric.

High-penetration tools increasingly function as hubs for adjacent workflows—connecting design authoring to coordination, issue tracking, file management, and downstream reporting. This reinforces the importance of vendor roadmaps, API maturity, and integration capacity in procurement decisions.

3) File management is now an operating model decision.

Storage and content management are no longer purely IT concerns. They materially affect project delivery: model access patterns, version control, external collaboration, contractual compliance, and audit readiness. Firms with clear governance (naming, permissions, lifecycle, and retention) tend to realize fewer downstream coordination and QA friction points.

4) Analytics and reporting are moving closer to delivery teams.

Adoption patterns indicate rising demand for project and operational visibility. The strategic shift is toward repeatable metrics, automated reporting, and consistent definitions—often requiring tighter alignment between IT, Finance/Operations, and Design Technology.

5) Specialized tools are proliferating—and so is integration risk.

As firms add category-specific tools, the stack becomes more fragmented unless integration, identity, and data standards are managed intentionally. Firms that treat integrations as products—with owners, service expectations, and lifecycle planning—are better positioned to scale adoption without accumulating technical debt.

Implications For Leadership

For IT Leaders

- The primary value opportunity is reducing complexity while improving reliability: standardize where it improves delivery consistency, and explicitly govern exceptions.
- Security and compliance pressures will continue to push firms toward identity-first architecture (SSO/MFA, least-privilege access) and formalized data stewardship.
- Procurement should increasingly evaluate tools based on integration surface area (APIs, connectors, audit logs, role models), not just feature checklists.

For Design Technology Leaders

- Adoption success is less about tool availability and more about repeatable enablement: templates, standards, training paths, and practice-level champions.
- Define the "golden path" toolchain by project type, and reduce bespoke workflows that cannot be supported at scale.
- Where specialized tools are necessary, ensure there is a clear plan for interoperability, data exchange, and lifecycle ownership.

For Executive Stakeholders

- Technology performance is now a measurable component of delivery competitiveness: speed, quality, collaboration efficiency, and the ability to staff flexibly across offices.
- The firms that outperform will be those that make the stack simpler to operate—with fewer exceptions, clearer governance, and stronger measurement—rather than merely larger.

Recommended actions (practical next steps)

1. **Define and publish an enterprise reference architecture for delivery.** Identify the standard tools that form the core workflow (authoring → coordination → content management → issue management → reporting). Specify what is "standard," what is "approved," and what requires an exception.

2. **Rationalize overlapping tools by category.** Where multiple tools serve similar functions, evaluate total cost of ownership (licenses + support + enablement + integration burden).

Consolidate where possible to increase reuse, training efficiency, and interoperability.

3. **Treat integrations as first-class products.** Prioritize a small number of high-value integrations and assign owners. Establish lifecycle management (monitoring, documentation, change control) so integrations remain reliable as vendors and projects evolve.

4. **Implement governance that scales.** Establish clear standards for permissions, naming, project setup, retention, and external collaboration. Governance should be pragmatic: enough control to reduce risk and rework without slowing delivery.

5. **Invest in adoption infrastructure.** Create repeatable training paths, role-based onboarding, standards libraries, and internal communities of practice. Measure adoption with meaningful KPIs (e.g., standard workflow compliance, rework reduction, coordination cycle time).

How This Report Should Be Used

This report is designed to support two complementary uses:

- **Benchmarking:** Compare your firm's stack against peers of similar size to identify gaps, redundancies, and differentiation opportunities.
- **Planning:** Use category insights to inform a 12–24 month roadmap—focusing first on platform stability and governance, then on targeted capability expansion.

The sections that follow provide a category-by-category breakdown of adoption and product penetration, with firm-size segmentation to clarify where scale effects are most pronounced and where specific tools tend to concentrate.

Technology Stack Satisfaction

Overall satisfaction with the performance and usability of current technology stacks is decidedly positive across the respondent base. A combined 65.2% of respondents report being **Satisfied** or **Very Satisfied** (60.0% and 5.2%, respectively), while only 9.6% report being **Dissatisfied** or **Very Dissatisfied**. The remaining 25.2% selecting **Neutral** is the most meaningful signal in the distribution: the stack is generally "working," but a sizable portion of the market views their environment as adequate rather than high-performing. This is consistent with the central tendency of the results (average score 3.6/5; median 4/5), indicating the typical respondent is satisfied, but not emphatically so.

Satisfaction also trends upward with firm size, suggesting that scale, governance, and investment may be improving the end-user experience. Larger firms show stronger net satisfaction, with the **201–500** segment at 73.1% Top-2 satisfaction and the **500+** segment posting the lowest Bottom-2 dissatisfaction at 3.1% (net satisfaction +65.7). Smaller firms display comparatively more strain: **1–25** firms have a higher Bottom-2 share (13.3%), and **26–50** firms show the weakest sentiment overall (50.0% Top-2; 16.7% Bottom-2, though based on a small sample). Taken together, the results suggest the clearest improvement opportunity is converting the Neutral cohort—particularly in smaller and mid-sized firms—through better standardization, integration, and user enablement.

Satisfaction by Firm Size: Response Range (Min-Max) with Average

Satisfaction Scale (1-5)

5 Very Satisfied
4 Satisfied
3 Neutral
2 Dissatisfied
1 Very Dissatisfied

3.67 (n=15)   3.33 (n=6)   3.45 (n=11)   3.52 (n=25)   3.65 (n=26)   3.69 (n=32)

1-25 employees   26-50 employees   51-100 employees   101-200 employees   201-500 employees   500+ employees

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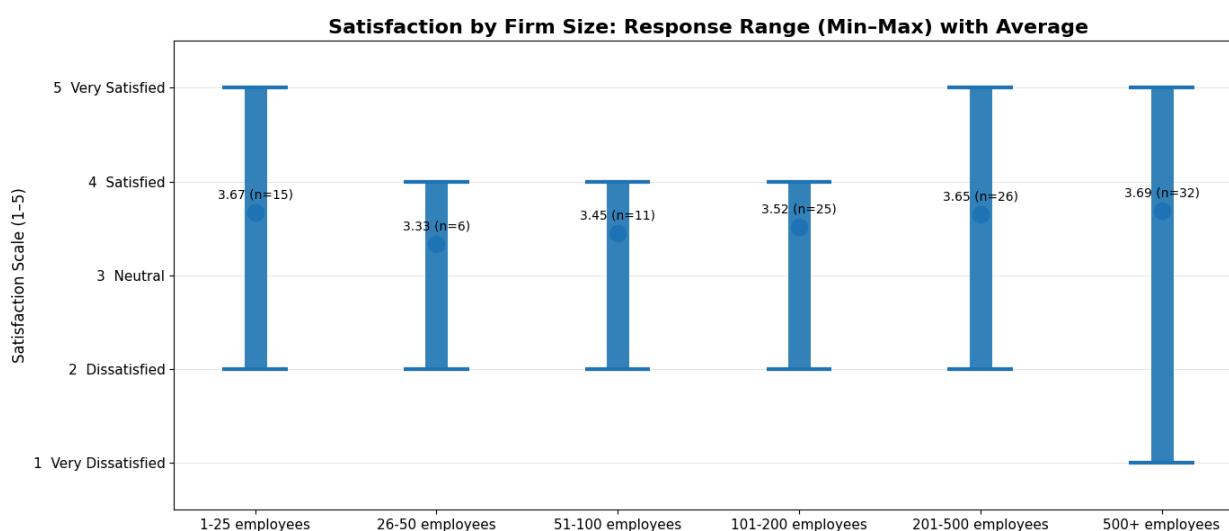
Overall satisfaction distribution

- **Very Satisfied:** 6 (**5.2%**)
- **Satisfied:** 69 (**60.0%**)
- **Neutral:** 29 (**25.2%**)
- **Dissatisfied:** 10 (**8.7%**)
- **Very Dissatisfied:** 1 (**0.9%**)

Roll-ups and headline indicators

- **Top-2 Box (Satisfied + Very Satisfied): 75 / 115 = 65.2%**
- **Bottom-2 Box (Dissatisfied + Very Dissatisfied): 11 / 115 = 9.6%**
- **Net Satisfaction (Top-2 minus Bottom-2): +55.7 points**
- **Average satisfaction score (1–5 scale): 3.6**
- **Median score: 4.0** (median respondent is "Satisfied")

Interpretation: sentiment is **materially positive**, with a **strong satisfied majority** and a relatively small dissatisfied cohort; however, **one-quarter Neutral** suggests meaningful "good enough" sentiment and opportunity to improve usability/performance and standardization.

Satisfaction by firm size (Top-2 / Bottom-2 / Net)

Key pattern: **larger firms report stronger net satisfaction**, largely driven by fewer dissatisfied responses and higher "Satisfied" rates.

- **1–25:** Top-2 **60.0%**, Bottom-2 **13.3%**, Net **+46.7**
- **26–50:** Top-2 **50.0%**, Bottom-2 **16.7%**, Net **+33.3** (small sample, n=6)
- **51–100:** Top-2 **54.5%**, Bottom-2 **9.1%**, Net **+45.4**
- **101–200:** Top-2 **64.0%**, Bottom-2 **12.0%**, Net **+52.0**
- **201–500:** Top-2 **73.1%**, Bottom-2 **11.5%**, Net **+61.6**
- **500+:** Top-2 **68.8%**, Bottom-2 **3.1%**, Net **+65.7**

Technology Stack Evaluation & Management

Based on the responses to **"Who is primarily responsible for evaluating and maintaining your technology stack?"**, responsibility for evaluating and maintaining the technology stack is most often anchored in **IT/Technology (68.7%)** and **BIM/VDC leadership (55.7%)**, with many firms describing a shared governance model rather than a single owner. The most common stated arrangement is a **joint IT + BIM/VDC partnership** (17.4% selected that exact combination), followed by **IT-only** (15.7%) and **BIM/VDC-only** (10.4%). Overall, **55.7%** of respondents indicate **shared ownership** (two or more roles involved), while 44.3% point to a single primary owner. Smaller firms are more likely to rely on practice leadership or operations and exhibit less formal governance, whereas mid-sized and larger firms more consistently show structured, multi-stakeholder ownership centered on IT and BIM/VDC.

Overall ownership model (respondent-level selection rates)

Because respondents could select multiple groups, the figures below represent the **% of respondents who included each role** in their answer:

- **IT / Technology Team: 68.7%** (79)
- **BIM / VDC Manager: 55.7%** (64)
- **Practice / Studio Leaders: 17.4%** (20)
- **Project Teams: 13.9%** (16)
- **Operations or Admin: 13.0%** (15)
- **No formal ownership: 7.8%** (9)
- Smaller mentions: Individual/Self (3.5%), External consultants (2.6%), and a handful of single mentions (Innovation, Production Services, etc.)

Single-owner vs shared governance

Responses indicate a meaningful shift toward shared responsibility:

- **Single owner (one role selected): 44.3%** (51 respondents)
- **Two roles selected: 35.7%** (41 respondents)
- **Three+ roles selected: 20.0%** (23 respondents)

In other words, **55.7%** of respondents describe a **shared governance** model (two or more groups involved).

Most common "primary responsibility" patterns (exact response combinations)

The dominant pattern is a **joint IT + BIM/VDC** model:

1. **IT / Technology Team + BIM / VDC Manager: 17.4%** (20)
2. **IT / Technology Team only: 15.7%** (18)
3. **BIM / VDC Manager only: 10.4%** (12)
4. **BIM / VDC Manager + IT / Technology Team: 9.6%** (11)
   (Same pairing as #1, just entered in reverse order.)
5. **Operations/Admin only: 5.2%** (6)
6. **No formal ownership: 4.3%** (5)

Firm size signal (directional)

There is a clear size-related trend in governance structure:

- **Smallest firms (1–25 employees)** are much more likely to report **non-IT/non-BIM ownership** (e.g., Practice/Ops) and show **very low shared governance** (**13.3%** selecting 2+ roles). Only **13.3%** of this segment included IT and **13.3%** included BIM/VDC.
- **Mid-sized firms (51–200 employees)** show the **highest shared governance** rates (**~72%** selecting 2+ roles) and the strongest presence of **IT + BIM/VDC** involvement (IT: 72.7%–84.0%; BIM: 63.6%–68.0%).
- **Larger firms (201–500 and 500+)** remain strongly IT/BIM-led, with shared models still common (shared: **53.8%** for 201–500; **62.5%** for 500+), and a slightly higher likelihood of Practice/Ops involvement than the 101–200 segment.

Net: the survey indicates that **IT and BIM/VDC are the de facto "core owners"** of the tech stack in most firms, and that **shared IT–BIM governance is the single most prevalent operating model**, especially as firms scale beyond ~50 employees.

Manual Workarounds

Survey respondents consistently indicated that **manual data movement is common and multi-directional**, with most firms reporting workarounds across several interfaces rather than a single "pain point."

Manual handoffs between tools are a pervasive feature of the current AEC tech stack. Across all respondents, the most frequently cited workaround areas sit at the junctions between core authoring/modeling workflows and downstream or adjacent systems: **Design ↔ Project Management/ERP (57.4%)**, **Modeling ↔ Specification tools (57.4%)**, and **Modeling ↔ Visualization (56.5%)**. These are followed closely by **File/Content Management ↔ Cloud Storage (51.3%)**, indicating that "last mile" file movement and synchronization remains a consistent friction point even when firms have standardized platforms. **Modeling ↔ Simulation (40.9%)** is also material, but appears more tied to firms where simulation is a more routine part of delivery.

The data also indicates this is not an isolated-issue phenomenon—respondents typically report multiple workaround zones. The average respondent selected **2.72** workaround areas (median **3**), and **53.1%** of respondents selected **3–5** areas, suggesting systemic integration gaps rather than one-off process exceptions. By firm size, the problem becomes more multi-faceted as organizations scale: smaller firms tend to report fewer distinct workaround categories on average, while mid-sized and large firms report broader, more frequent cross-platform handoffs. This pattern is consistent with increasing toolchain complexity as firms add specialty applications, governance layers, and enterprise systems—raising the operational importance of integration, standardization, and data orchestration.

Where manual workarounds occur most often (overall)

Percentages below are the share of respondents who selected each area:

- **Design ↔ Project Management or ERP: 57.4%** (66)
- **Modeling ↔ Specification tools: 57.4%** (66)
- **Modeling ↔ Visualization: 56.5%** (65)
- **File/Content Management ↔ Cloud Storage: 51.3%** (59)
- **Modeling ↔ Simulation: 40.9%** (47)

Interpretation: the highest-friction handoffs are concentrated at the **edges of the BIM authoring environment**—specifications, visualization, simulation—and at the **operational boundary**

between design tools and **PM/ERP systems**. File movement between content management and cloud storage is also a majority issue.

How widespread the workarounds are per respondent

Respondents typically selected **multiple** workaround areas:

- **Average areas selected: 2.72**
- **Median areas selected: 3**
- Distribution:
    - **1 area:** 25.2% (29 respondents)
    - **2 areas:** 21.7% (25)
    - **3 areas:** 20.9% (24)
    - **4 areas:** 20.0% (23)
    - **5 areas (all areas):** 12.2% (14)

This indicates workaround dependence is generally **systemic**, not isolated.

Most common patterns of combined workarounds

The single most common response was effectively "**we have workarounds everywhere**":

- **All five areas selected: 12.2%** (14 respondents)

After that, the most common single-focus responses were:

- **Design ↔ PM/ERP only: 9.6%** (11)
- **Modeling ↔ Visualization only: 6.1%** (7)
- **File/Content Management ↔ Cloud Storage only: 6.1%** (7)

Firm size differences (key signals)

Workaround reliance increases with firm size and becomes more multi-faceted:

- **Average # of areas selected**
    - **1–25:** 1.87
    - **26–50:** 2.00
    - **51–100:** 3.09
    - **101–200:** 2.68
    - **201–500:** 2.88

- **500+:** 3.03

Notable category skews:

- **Modeling ↔ Simulation** is **rare in 1–25 firms (6.7%)** but becomes common in larger firms (**50.0% in 500+**), consistent with simulation being more prevalent (and more integration-heavy) at scale.
- **51–100 firms** report especially high friction in **Visualization (81.8%)**, **Simulation (54.5%)**, and **Storage handoffs (72.7%)**—a pattern often associated with growing complexity without enterprise-grade integration maturity.
- **101–200 and 201–500 firms** show particularly high friction in **Specs and PM/ERP handoffs** (both **~68–69%**), reinforcing that operational and documentation systems remain difficult to connect cleanly to design authoring environments.

How to Read the Charts

The survey asked participants to mark which applications were in use within their organization with a score of 0 to 5 to indicate penetration/reliance on the application. A "5" designated firm-wide reliance. Marking something as "0" was <u>supposed</u> to mean it's present but not being used. Leaving it blank was <u>supposed</u> to mean the application was not present. **It was obvious in the results that that nuance was confusing.** To ensure comparability across firms, application responses were treated consistently: blanks, and "0" values were interpreted as **Not Used**, while any value **≥ 1** is interpreted as **In Use**. Adoption and penetration metrics are then calculated using a denominator of **all responding firms** (not rebased to tool users), which allows the report to reflect true market presence rather than only preferences among adopters.

Across category sections, the standard format is designed to make comparisons easy and consistent:

- **Category Adoption (optional top bar):** The share of firms using *any* tool in the category versus not using tools in that category.
- **Top Products by Penetration (stacked bars):** Each product's total bar length equals its **penetration across all firms**, and the bar is segmented to show **which firm sizes contribute to that penetration** (smallest to largest).

This structure allows the reader to answer two questions quickly:

1. *How universal is this category?* and 2) *Which tools matter most—and for whom?*

[01] AI-Assisted Design Results

AI-assisted design is emerging as a meaningful—though not yet universal—capability across the survey population. The chart below highlights the Top 10 AI-assisted design platforms by market penetration, segmented by firm size to show where adoption is concentrating as organizations scale. Overall, usage is led by a small set of planning and test-fit oriented tools, while the remainder of the market remains fragmented across a long tail of lower-penetration solutions. The firm-size segmentation underscores that larger firms are generally further along in adoption, but leading platforms are gaining traction across a broad range of organization sizes, indicating a shift from isolated experimentation toward repeatable, workflow-integrated use cases.

AI-Assisted Design Tools — Market Penetration by Firm Size
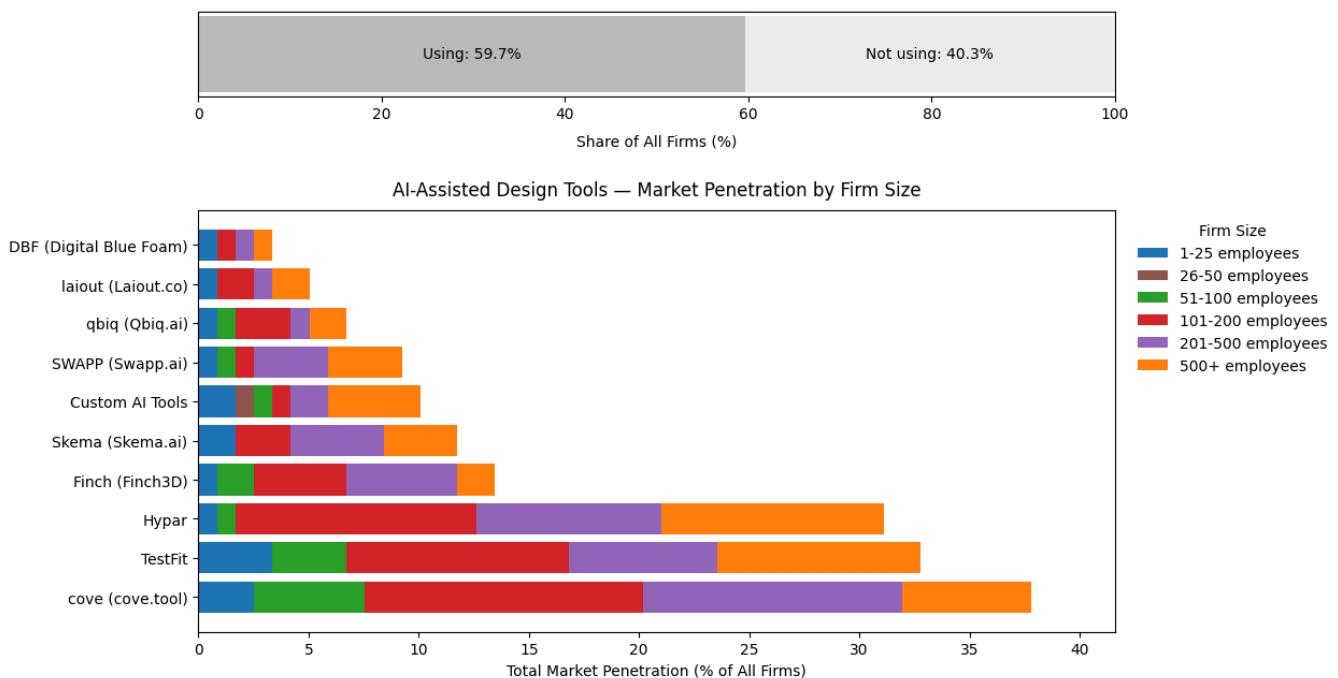
The results indicate that AI-assisted design has reached a **transition point**: it is no longer experimental as a category, but it has not yet matured into a standardized, enterprise-wide capability.

1) Category Adoption Is Real, but Not Universal

With **59.7% of firms using at least one AI-assisted design tool**, the category has achieved legitimacy. Firms are no longer asking *whether* AI belongs in design workflows, but **where and how it adds value**. At the same time, the remaining **40.3% non-adoption rate** signals persistent

barriers—such as uncertainty around ROI, workflow disruption, skill readiness, or client demand—that have not yet been overcome.

Interpretation:
 AI-assisted design is perceived as *useful but optional*, rather than essential.

2) Value Is Concentrated in Early-Stage Use Cases

The most widely adopted tools—**cove, TestFit, and Hypar**—are all oriented toward **early planning, feasibility, and rapid iteration**. Adoption drops significantly for tools aimed at later-stage design, visualization, or more speculative generative workflows.

Interpretation:
Firms are adopting AI where it **compresses time, reduces uncertainty, and supports faster decision-making**, not where it replaces creative authorship or downstream production.

3) Tool Fragmentation Reflects a Market Still in Flux

No single tool approaches majority penetration, and there is a steep drop-off after the top tier. This fragmentation suggests that firms are still **testing multiple solutions** rather than committing to a single platform as a standard.

Interpretation:
The market has not yet converged around a dominant workflow or vendor. Tool choice is driven more by **specific project needs** than by enterprise strategy.

4) Larger Firms Are Driving Depth, Not Exclusivity

Larger firms account for a greater share of adoption across most tools, particularly for platforms that require configuration, integration, or internal expertise. However, the leading tools show **meaningful uptake across all firm sizes**, including small and mid-sized firms.

Interpretation:
Scale accelerates adoption, but it is **not a prerequisite**. Smaller firms can and do adopt AI-assisted design when tools are accessible and clearly value-add.

5) Internal AI Development Signals Strategic Differentiation

A non-trivial share of firms report using **custom or internally developed AI tools**. This is notable given the relatively young state of the category.

Interpretation:

Some firms view AI not just as a productivity aid, but as a **competitive capability worth owning**, especially when commercial tools do not align perfectly with internal processes or data.

6) The Next Phase Will Be Consolidation, Not Discovery

Given current penetration levels, future growth is unlikely to come primarily from new tools entering the market. Instead, it will come from:

- Firms moving from **pilot to standard**

- Reduction in the number of tools per firm

- Deeper integration into core design workflows

Interpretation:

The strategic question for firms is shifting from *"Which AI tools should we try?"* to *"Which AI tools do we standardize, govern, and scale?"*

[02] Cloud Network / File Storage / Governance

Cloud network, file storage, and governance platforms represent foundational infrastructure for AEC firms, enabling secure access, collaboration, and information control across projects and distributed teams. The results show a highly consolidated market at the top, led by Autodesk Construction Cloud as the dominant system of record, with local network file systems continuing to play a major role—reinforcing that most firms operate in hybrid environments rather than purely cloud-native ones. A second tier of broadly adopted file-sharing platforms (notably Dropbox and Google Drive) indicates common supplemental use for external sharing and lightweight collaboration, while more governance-oriented platforms (e.g., Egnyte, ProjectWise, and Nasuni) skew toward larger organizations where security, compliance, and lifecycle management requirements are more complex. Overall, the category reflects near-universal participation, with differentiation driven less by "whether" firms use these tools and more by the mix of hybrid storage strategies and enterprise-grade governance maturity by firm size.

Cloud Network / File Storage / Governance Tools — Market Penetration by Firm Size

Firm Size
- 1-25 employees
- 26-50 employees
- 51-100 employees
- 101-200 employees
- 201-500 employees
- 500+ employees

Tool	Total Market Penetration
Sharepoint	11.8%
OneDrive	13.4%
Nasuni	15.1%
Bentley ProjectWise (ProjectWise 365)	24.4%
Egnyte	31.1%
Box	33.6%
Google Drive	58.8%
Dropbox	58.8%
Local Network File System	79.8%
Autodesk Construction Cloud	91.6%

Total Market Penetration (% of All Firms)
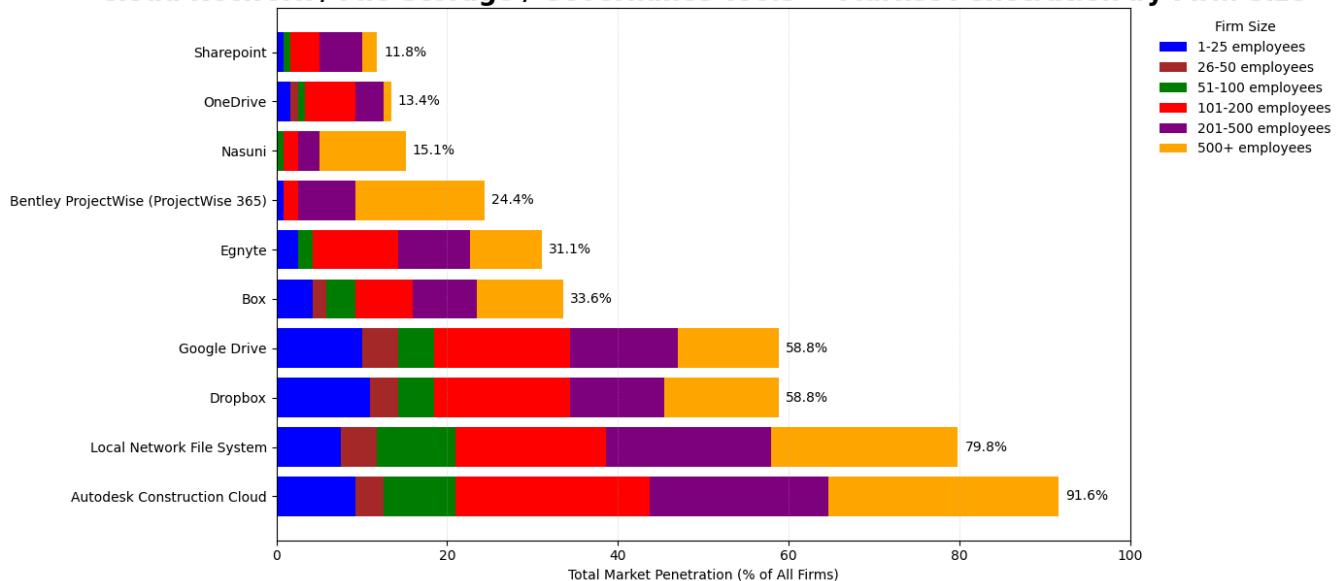
1) This is no longer an "application" category — it is core infrastructure

Cloud network, file storage, and governance tools are **effectively universal** across firms. Adoption is so high that category-level usage adds no explanatory power; the strategic question is **which platforms dominate**, not whether firms participate at all.

2) Autodesk Construction Cloud is the de facto system of record

Autodesk Construction Cloud (ACC) sits clearly at the top of the market and functions as the **primary backbone** for cloud-based file and project data management.

- Penetration approaches **enterprise ubiquity**
- Adoption spans all firm sizes, but **concentrates heavily in mid-to-large firms**
- ACC is not being evaluated alongside alternatives — it is being **standardized**

This indicates strong platform lock-in, high switching costs, and a market that has moved past active vendor comparison.

3) Local Network File Systems remain deeply entrenched

Despite cloud-first narratives, **on-prem and hybrid file systems remain widespread**, ranking second overall.

- Particularly strong among **mid-size and large firms**
- Suggests hybrid environments remain the operational reality
- Cloud platforms are augmenting, not fully replacing, local storage

This reflects risk management, legacy workflows, regulatory concerns, and performance considerations.

4) Cloud file-sharing tools are layered, not substituted

Dropbox and Google Drive show **meaningful but secondary penetration**.

- Often coexist with ACC and local file systems
- Used for **adjacent workflows** (sharing, collaboration, external partners)
- Rarely serve as the authoritative system of record

This is a **"tool sprawl by function"** pattern rather than competitive displacement.

5) Enterprise-grade governance platforms skew large

Tools such as Egnyte, ProjectWise, Nasuni, and similar platforms:

- Skew strongly toward **200+ employee firms**
- Appear when compliance, access control, and governance complexity rise
- Are typically introduced **after** ACC or alongside it

These tools are indicators of organizational maturity rather than early adoption.

6) Small firms follow the market, not shape it

Smaller firms participate broadly but rarely drive differentiation.

- Adoption patterns mirror larger firms, just at lower intensity
- Few "small-firm-only" solutions exist in this category
- Technology decisions are largely **downstream of industry standards**

Strategic Takeaway

This category is **consolidated, standardized, and mature**.

- Differentiation is no longer happening at the storage layer

- Competitive advantage is shifting **up-stack** (workflow automation, analytics, AI, governance overlays)

- Vendors in this space compete on **ecosystem control**, not feature parity

For executives, the implication is clear:

Cloud file storage is table stakes. Strategic value now comes from what you build on top of it — not which one you choose.

[03] Communication & Collaboration

Communication and collaboration platforms in this category exhibit a clear "core plus layers" adoption pattern across the industry. Microsoft Teams and Zoom function as near-universal baseline infrastructure for internal coordination and external meetings, while a second tier of tools—led by Miro, Google Meet, and Microsoft Whiteboard—appears most strongly in larger firms where distributed teams and structured ideation workflows are more common. Below the leaders, adoption drops off quickly into a long tail of niche or legacy solutions, indicating that most firms standardize on a small set of primary platforms and selectively add specialized whiteboarding or facilitation tools only when specific workflow demands justify the complexity.

Top 10 Communication & Collaboration Tools – Product Penetration by Firm Size
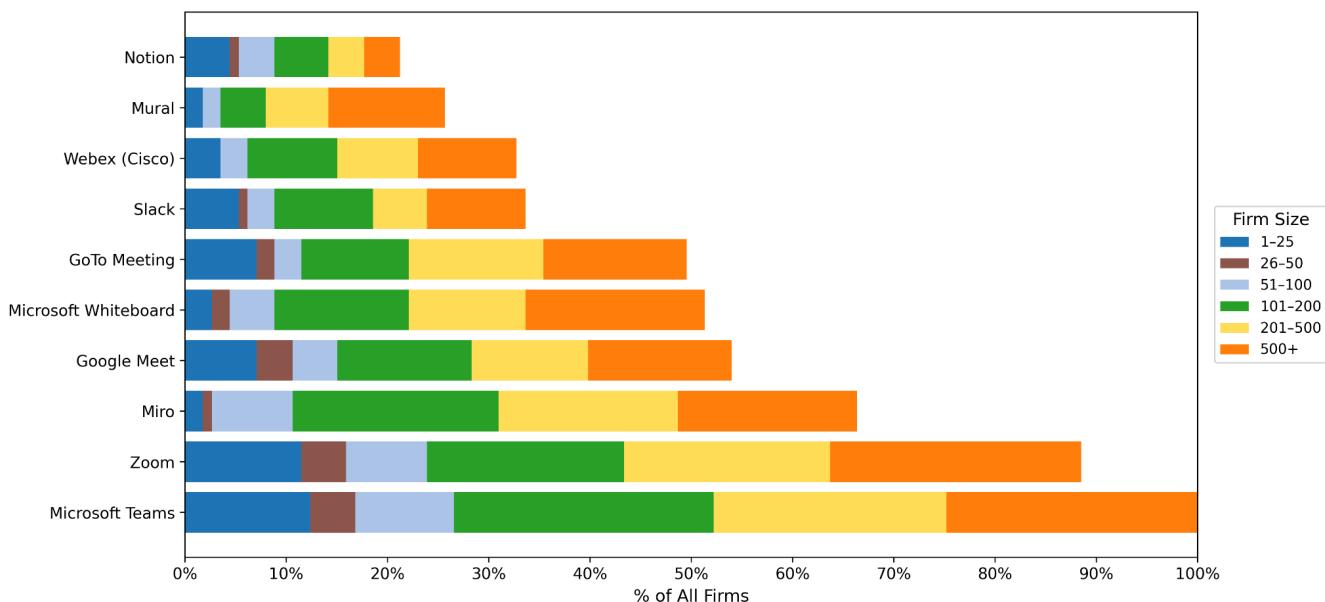
1) Microsoft Teams is effectively universal

With **~97% penetration**, Microsoft Teams functions as **baseline infrastructure**, not a competitive "tool choice." Its presence across nearly all firm sizes indicates that:

- Teams is the **default collaboration backbone** for AEC firms.
- Adoption decisions are no longer about *whether* to use Teams, but *how* it is used and integrated.
- Competing platforms are not displacing Teams; they are **layering on top of it**.

This justifies treating Teams analytically as a **table-stakes platform**, similar to email or network storage.

2) Zoom remains the dominant synchronous meeting tool

Zoom's very high penetration (second only to Teams) shows that:

- Despite Teams' bundling advantages, **Zoom continues to outperform for live meetings**, especially external-facing ones.
- Firms appear comfortable running **parallel collaboration stacks** (Teams for internal work, Zoom for meetings).
- Zoom's strength cuts across firm sizes, suggesting strong vendor lock-in and user preference.

This reinforces the idea that **"suite consolidation" is incomplete** in practice.

3) Whiteboarding and ideation tools are a secondary layer

Tools such as **Miro, Microsoft Whiteboard, Google Meet (with collaboration features), and GoTo Meeting** form a **mid-tier adoption cluster**:

- Adoption is meaningful but far from universal.
- Usage skews toward **larger firms**, indicating:
  - Greater need for distributed ideation
  - More formalized design workflows
- Smaller firms rely more on **general-purpose tools** (Teams, Zoom) rather than specialized collaboration platforms.

These tools are **situational enhancers**, not core infrastructure.

4) Slack's role is limited in AEC

Slack's relatively lower penetration suggests:

- AEC firms have largely **standardized on Microsoft ecosystems**.
- Slack adoption appears more selective, likely tied to:
  - Tech-forward teams
  - Hybrid AEC–software or consulting practices

- Slack is not functioning as a category leader in this vertical.

5) Long-tail tools are niche and context-specific

Tools like **Webex, Mural, and Notion** show modest penetration:

- They address specific use cases or legacy environments.
- Adoption does not scale broadly across firm sizes.
- These tools are unlikely to be strategic platforms for most firms.

Strategic Takeaways

1. **Do not interpret this category as "competitive share."**
   It is a **stacked ecosystem**, not a winner-take-all market.

2. **Teams + Zoom is the de facto standard pairing.**
   Any strategy, integration, or vendor positioning in AEC must assume both are present.

3. **Advanced collaboration maturity correlates with firm size.**
   Larger firms selectively add whiteboarding and ideation tools; smaller firms do not.

4. **This category is mature.**
   Future change will come from **AI augmentation and workflow integration**, not new core platforms.

[04] Coordination / Construction Management

Coordination and construction management tools show the strongest signs of standardization across the survey, with a small set of platforms forming a common operating baseline for most firms. General collaboration and communication tools—led by Microsoft Teams and Zoom—are nearly universal, while Autodesk Construction Cloud and Autodesk Docs anchor the prevailing CDE workflow and Bluebeam continues to serve as a core layer for document review and markup. Purpose-built construction execution and model coordination platforms (notably Procore and Navisworks) also demonstrate broad penetration, but with more variation by firm size—suggesting that while most organizations have a consistent collaboration and content backbone, the level of formalization in execution and model-based coordination is still a key point of differentiation.

Coordination & Construction Management — Top 10 Tool Penetration by Firm Size
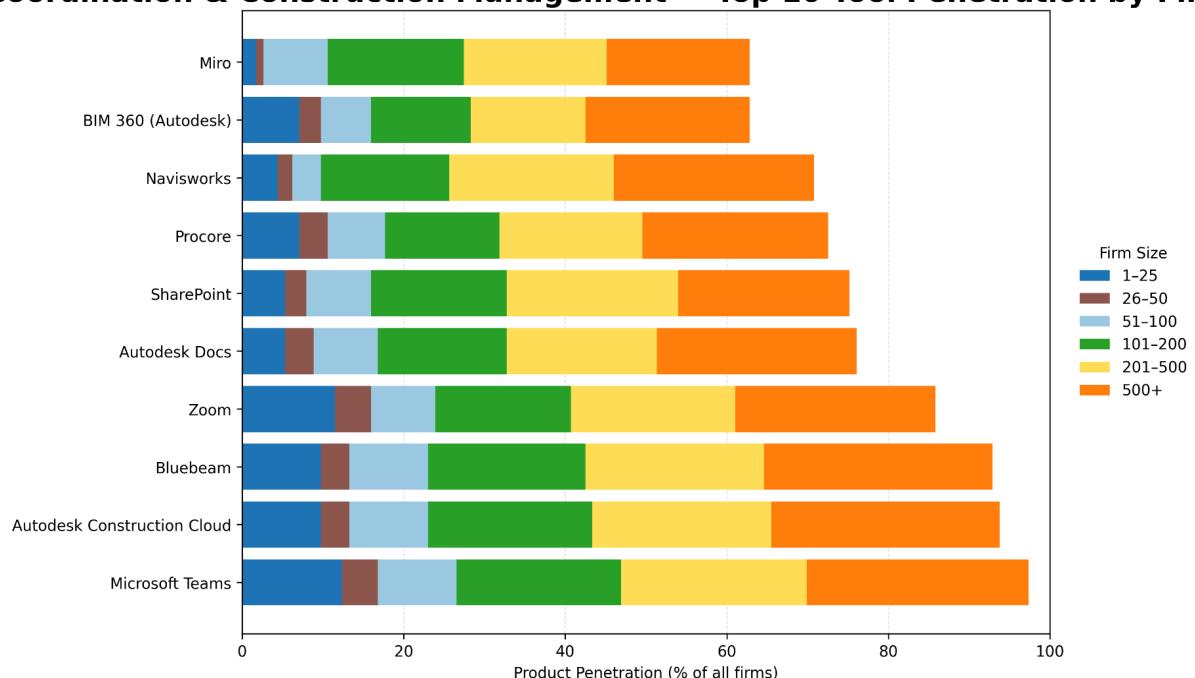
1) Coordination tooling is effectively standardized across firms.

Microsoft Teams (97%) and Zoom (86%) are near-ubiquitous, indicating that real-time communication and meetings are "table stakes" regardless of firm size.

2) The coordination backbone is Autodesk + PDF workflows.

Autodesk Construction Cloud (94%) and Autodesk Docs (76%) indicate broad adoption of Autodesk's CDE/coordination ecosystem, while Bluebeam (93%) remains a core layer for review, markup, and document-based coordination. In practical terms: many firms are running a hybrid workflow—structured CDE plus heavy PDF-centric processes.

3) Construction execution platforms are widely adopted, but not universal.

Procore (73%) is strong but still materially below Teams/ACC/Bluebeam, suggesting that while many firms have formal construction management platforms, a meaningful minority are still coordinating execution through combinations of CDE + documents + general collaboration tools.

4) Model-based coordination is mainstream but shows room for growth.

Navisworks (71%) and BIM 360 (63%) indicate that model coordination is common, but not as universal as document and collaboration layers. This often implies variation in project types, BIM maturity, or reliance on downstream partners for model-based clash/coordination.

5) Whiteboarding/collaboration indicates workflow maturity—especially where adoption is higher in larger firms.

Miro (63%) is notably high for a "workflow enhancement" tool, typically reflecting more structured coordination practices (planning sessions, design/construction alignment, constraint mapping). Where the stacked segments skew toward mid/large firms, it suggests these firms are institutionalizing collaborative planning more than smaller peers.

What this means operationally

- The market is converging on a **common core stack**: Teams/Zoom + ACC/Docs + Bluebeam.

- Differentiation between firms is more likely to show up in **execution platforms** (Procore) and **model coordination depth** (Navisworks/BIM 360), rather than in basic collaboration.

- If you're benchmarking "digital maturity," focus less on whether firms have a CDE and more on **how consistently they run execution and model coordination through standardized platforms vs. ad hoc document workflows**.

[05] Analytics & Reporting

Data Analytics & Reporting shows a clear market standard with Power BI emerging as the dominant platform across respondents. 74% report using Microsoft Power BI—more than double the penetration of the next tool—while Smartsheet serves as a widely adopted secondary solution at 34%, likely reflecting operational reporting and workflow tracking needs. Beyond these leaders, adoption drops quickly into a long tail of niche tools (Tableau at 14% and all others below 7%), indicating limited fragmentation at the platform level but meaningful variation in specialized use cases. Usage also scales strongly with firm size, reinforcing that analytics maturity and governance requirements increase as organizations grow.

Data Analytics & Reporting: Top 10 Product Penetration by Firm Size
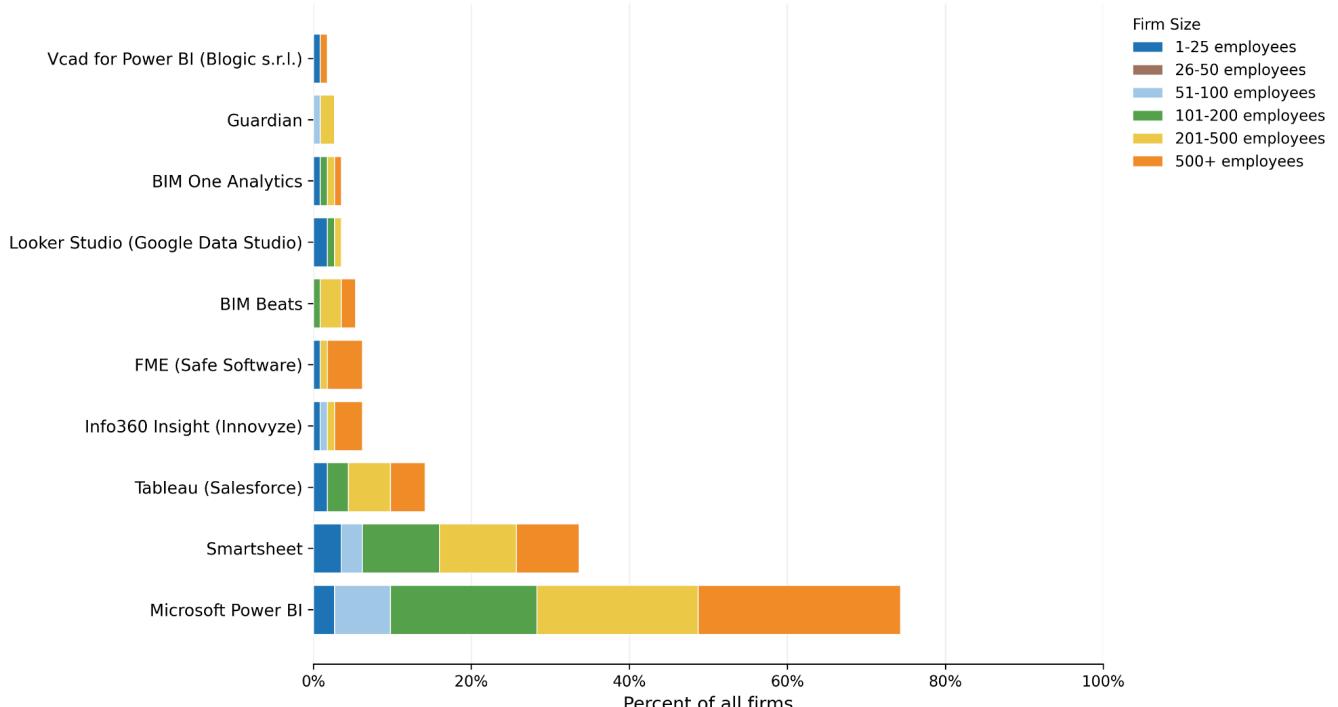
What the distribution is telling you

- **Microsoft Power BI is the clear standard**: **84 firms (74.3%)** report using it. This is more than **2x** the next tool and indicates a de facto platform choice for analytics/reporting across the respondent base.

- **There is a sharp drop after the #1–#2 tools**:

- ○ **Smartsheet** is a strong secondary tool at **38 firms (33.6%)**.
- ○ **Tableau** is a distant third at **16 firms (14.2%)**.
- ○ Everything else is **≤ 6.2% penetration**, i.e., niche/long-tail usage.

- ● Net: this category is best characterized as **"one dominant BI standard + one widely used operational reporting/workflow tool + a long tail of specialty or legacy tools."**

Firm-size pattern (what leadership should infer)

- ● **Adoption scales materially with firm size**, especially for BI platforms:

  - ○ **Power BI within-size adoption** (firms using / firms in size band):

    - ■ 1–25: **20%** (3/15)
    - ■ 51–100: **73%** (8/11)
    - ■ 101–200: **91%** (21/23)
    - ■ 201–500: **88%** (23/26)
    - ■ 500+: **91%** (29/32)

  - ○ This is the classic "data stack maturity" curve: larger firms have the staffing, governance needs, and data integration volume that pushes them toward enterprise BI.

- ● **Smartsheet is broadly used but less "enterprise-standard" than Power BI**:

  - ○ Adoption is meaningful across mid/large firms (101–200 and 201–500 are both **~40–50%**), but **drops in the 500+ segment** (likely replaced by more formal PMO/reporting stacks or BI-driven reporting).

- ● **The 26–50 segment shows zero usage across the Top 10**; this is almost certainly a **sample artifact** (only **6 firms** in that band) and should not be over-interpreted.

Business implications

- ● **Standardization opportunity is high**: with ~**3 out of 4 firms** already on Power BI, consolidating BI standards, templates, governance, and training will likely deliver outsized

ROI versus trying to support multiple competing BI ecosystems.

- **Risk is not tool sprawl at the top—it's unmanaged variance in how the same tool is used**: when a platform becomes ubiquitous, the operational risk shifts to:

  - Inconsistent data definitions ("what is backlog?", "what counts as utilization?")
  - Ad hoc models and ungoverned datasets
  - Duplicated dashboards and reporting debt.

- **The long tail tools (≤6%) are likely project- or discipline-specific** and should be treated as **exceptions** requiring explicit justification (integration need, niche capability, legacy contract, or regulated client requirement).

[06] Design / CAD / Modeling Tools

Design CAD Modeling in the updated survey reflects a highly standardized primary authoring environment anchored by Autodesk, with Revit (94.7% of firms) and AutoCAD (85.8%) serving as the dominant production platforms across the market. Most firms also maintain a complementary conceptual modeling layer, led by SketchUp (73.5%), indicating a common workflow split between production BIM/CAD and rapid early-design iteration. Notably, Rhino has emerged as a mainstream primary tool (49.6%), suggesting that advanced geometry and specialized modeling capabilities are now broadly embedded within many design stacks rather than confined to niche use cases. Discipline-specific production requirements are frequently addressed through Autodesk verticals (e.g., AutoCAD Architecture at 53.1% and Civil 3D at 49.6%), while alternative platforms such as MicroStation (24.8%) play a more targeted role driven by project type and client/agency standards.

Design CAD Modeling — Primary Design Tools Penetration by Firm Size (Updated)
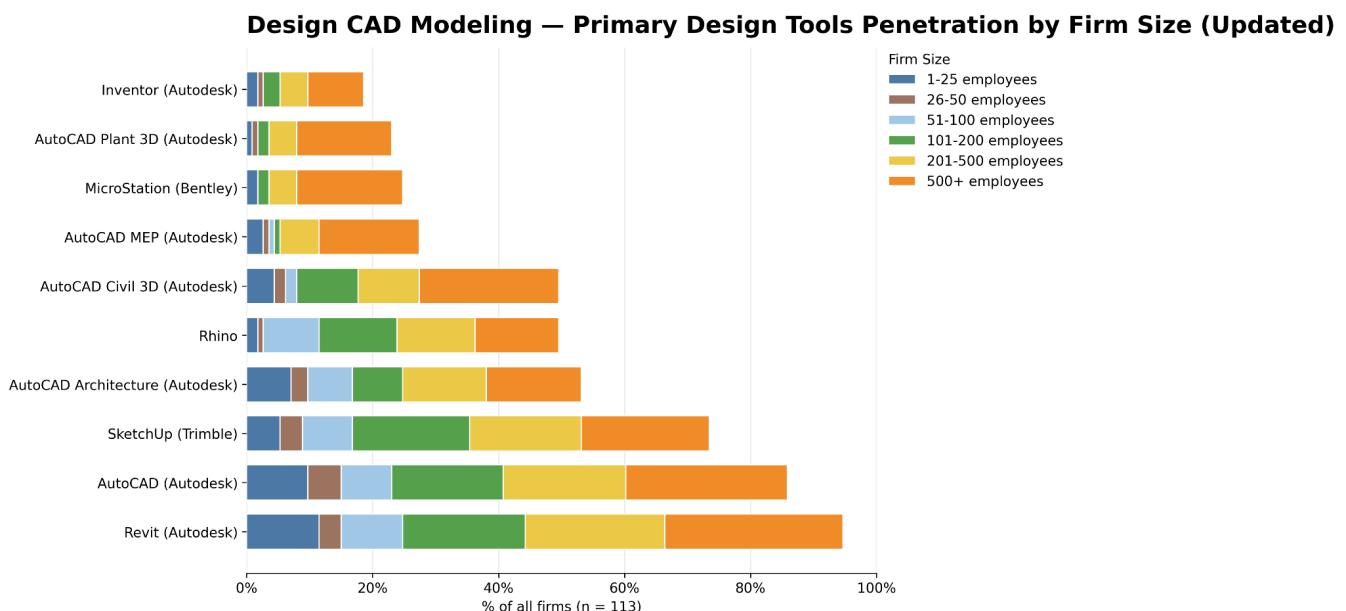
- **Primary authoring remains highly standardized around Autodesk.** Revit (**94.7%**) and AutoCAD (**85.8%**) continue to define the production baseline, indicating that most firms align their BIM/CAD standards, staffing, and deliverable workflows around the Autodesk ecosystem.

- **SketchUp remains the dominant complementary authoring tool.** With **73.5%** penetration, SketchUp is widely paired with the Autodesk core, reinforcing a common

operating model: production BIM/CAD in Revit/AutoCAD supplemented by lightweight conceptual modeling for early design, client communication, and fast iteration.

- **Rhino has moved into the mainstream as a primary platform.** Rhino reaches **49.6%** penetration, tying **AutoCAD Civil 3D** at the same level. This is a meaningful signal that advanced geometry and specialized modeling workflows are not isolated edge cases; they are now prevalent enough to be considered part of the standard "primary toolset" for many firms.

- **Specialization largely occurs via Autodesk verticals, not full platform substitution.** AutoCAD Architecture (**53.1%**), Civil 3D (**49.6%**), MEP (**27.4%**), and Plant 3D (**23.0%**) show that many organizations extend core AutoCAD into discipline-specific production environments, deepening Autodesk standardization rather than fragmenting to alternative authoring stacks.

- **Non-Autodesk primary platforms persist, but with more targeted concentration.** MicroStation (**24.8%**) and Inventor (**18.6%**) appear as secondary—but material—platforms, typically reflecting infrastructure/public-sector requirements (Bentley) or product/manufacturing-adjacent needs (Inventor). The overall pattern is a market anchored by Autodesk, complemented by SketchUp for concepting, with Rhino increasingly serving as a high-value specialist authoring layer across many firms.

Bottom line: the results depict a consistent **Autodesk production spine**, a broadly adopted **conceptual companion (SketchUp)**, and a now-prominent **specialist modeling tier (Rhino)**—with discipline depth expressed primarily through Autodesk vertical products.

[07] Desktop Publishing Tools

Across the Desktop Publishing category, the survey results show a clear **standardization around mainstream productivity platforms**, with adoption concentrated in a small set of tools that function as the industry's default for document creation and presentation. **Microsoft Office is effectively ubiquitous**—Excel and Word appear in nearly every firm, with PowerPoint also approaching universal penetration—indicating that "desktop publishing" in practice is largely being executed through general-purpose business tools rather than specialized layout software. Usage is also **strongest among mid-to-large firms**, suggesting these platforms are typically deployed as enterprise standards with consistent licensing and support models, while smaller firms participate at a slightly lower—but still substantial—rate.

A second tier of tools—most notably **Google Workspace applications**—shows meaningful penetration but remains far behind the Microsoft core, implying that many firms operate **hybrid environments** where Google tools support collaboration and file sharing while Microsoft remains the primary authoring and presentation stack. Meanwhile, **purpose-built publishing tools are comparatively niche**: Adobe InDesign appears in a small minority of firms, signaling that professional-grade page layout is either centralized within select teams, outsourced, or used only when project requirements demand it. Overall, the category reflects a market where **standard office productivity suites drive the majority of publishing-related output**, with specialized tools serving targeted, higher-skill workflows rather than broad adoption.

Desktop Publishing — Top 10 Product Penetration by Firm Size

Firm Size
- 1-25 employees
- 26-50 employees
- 51-100 employees
- 101-200 employees
- 201-500 employees
- 500+ employees
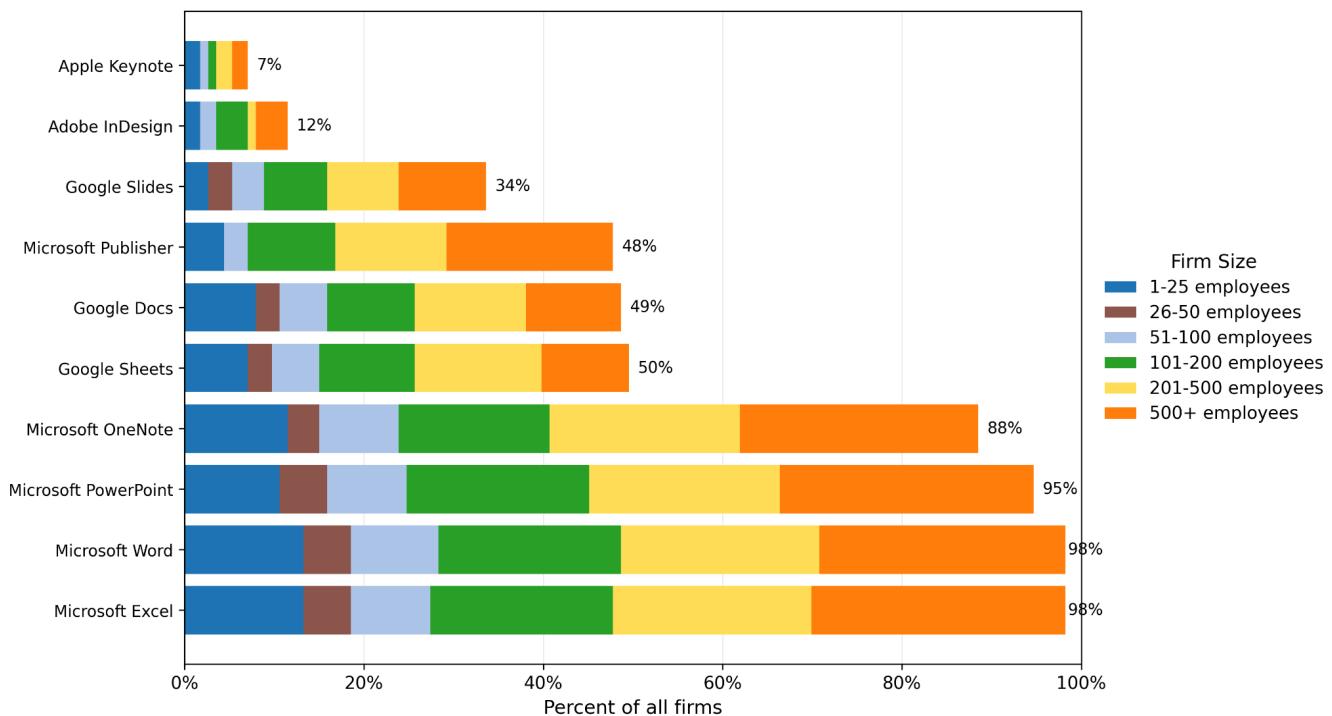
- **Microsoft Office dominates** desktop publishing workflows: **Excel and Word are essentially universal (98.2% penetration each)**, with **PowerPoint also near-universal (94.7%)**.

- Adoption is **strongest among larger firms** (especially **500+** and **201–500**) across the top tools, indicating these are **standardized, enterprise-wide** platforms rather than niche or team-specific.

- **Google Workspace tools show mid-pack penetration (~49–34%)**, suggesting a meaningful—but not dominant—secondary stack, likely driven by collaboration needs rather than "publishing" per se.

- **Publisher (47.8%)** shows comparatively high presence, with a **notable skew toward larger firms** (largest segment is **500+**), consistent with legacy/departmental use cases.

- **True publishing-specific software is low**: **Adobe InDesign is only 11.5%**, implying that in many firms "desktop publishing" is being handled primarily through **Office and presentation/document tools**, not professional layout platforms.

[08] Detail Management

The original survey design for the **Detail Management** category focused narrowly on products whose **primary function** is detail management, and therefore did not explicitly include several widely used platforms where detail/content management is an important capability but not the sole purpose of the tool. As a result, respondents used the **write-in field** to capture solutions that were missing from the option set, including **AVAIL, Kinship, Autodesk Content Catalog, and Unifi**. Recognizing this gap in the original survey, we conducted a targeted follow-up poll to correct for under-coverage: we re-polled **75 participants** who had not responded to this section and received **12 additional responses** using the expanded list of category solutions. These added responses materially improve representation of "platform-based" detail management approaches and should be treated as a scope-corrected view of category adoption.

Detail Management in the updated dataset shows a category that is **converging on a small number of credible platforms**, but without a single dominant standard. **Pirros (21.2% penetration) and AVAIL (18.6%)** form the primary cluster of adoption, with **Autodesk Content Catalog (11.5%)** establishing a meaningful third tier. After these three, adoption drops quickly into single digits, indicating that most firms are trying to **standardize on one primary approach** rather than maintain multiple overlapping systems.

Detail Management — Adoption + Top 10 Product Penetration by Firm Size
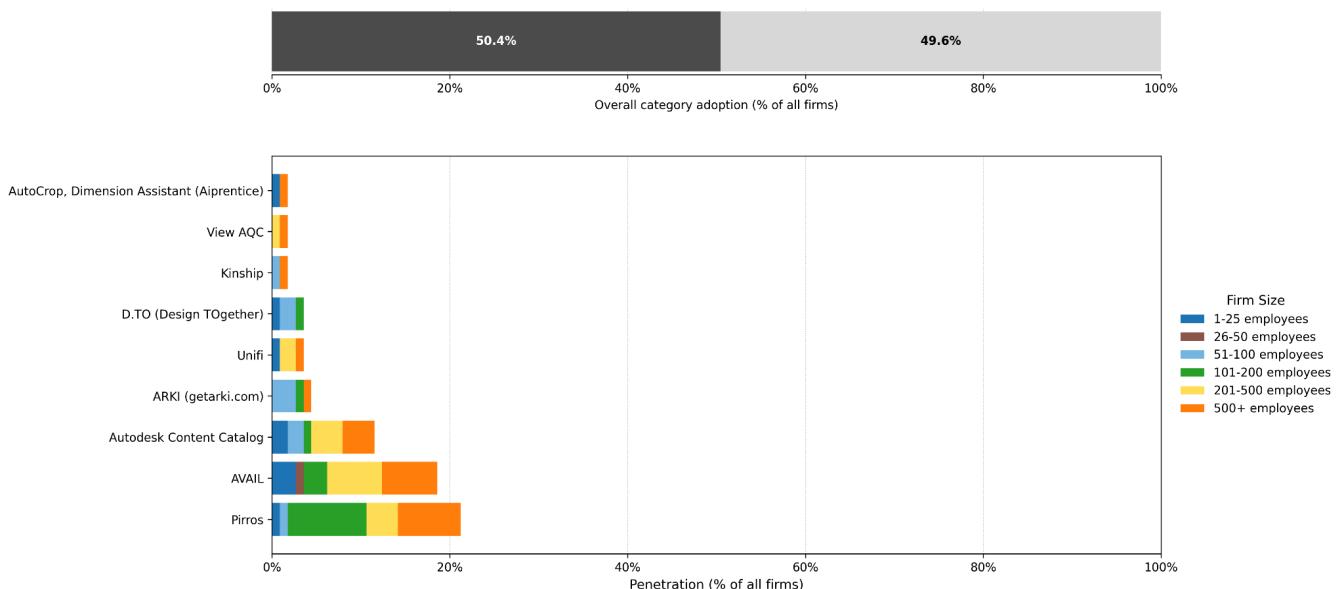
- Where the story becomes most informative is the **depth-of-adoption signal** from the 1–5 user score. Although Pirros appears in slightly more firms, its **average user score is**

materially lower (2.83; median 3) and includes a large share of "1" ratings—consistent with **limited deployments, partial rollouts, or team-specific usage**. By contrast, AVAIL's **higher average score (3.86; median 4)** and heavy weighting toward **4–5 ratings** suggests that when it is adopted, it is more often implemented as a **production-grade standard** with deeper workflow integration and governance discipline.

- Strategically, the results point to an operating-model decision more than a feature comparison: firms will get the most value by treating detail libraries as an operational system—clear ownership, publishing/QA standards, version control, and reliable distribution into production workflows. The market is not rewarding tool proliferation; it's rewarding **governance and integration**, regardless of which platform is selected.

Category tool usage appears ~50% largely because a quarter of firms did not respond to the section, and an additional ~28% explicitly indicated zero usage across all listed tools. Among firms providing any usage signal, roughly two-thirds report using at least one tool.

Only about half of firms report using a dedicated Detail Management solution because many organizations still manage details as part of core authoring standards (Revit/CAD templates and shared libraries) or via general-purpose collaboration/storage platforms—firms have a process, but not always a discrete 'tool.' The updated option set improves capture of multi-purpose platforms, but the underlying market remains split between formalized, governed systems and informal library workflows.

**Implication for strategy and operations: governance matters more than tool diversity.** Because adoption is concentrated, the value in this category is less about evaluating many competing tools and more about:

- Standardizing libraries/details

- Controlling versioning and QA/QC

- Aligning content workflows with authoring platforms (e.g., Revit)

- Ensuring distribution/access across offices and project teams

[09] ERP & Financial Management

ERP and financial management platforms form the operational backbone of AEC firms, enabling project accounting, resource planning, billing, and executive reporting. The survey results indicate that adoption is widespread—roughly three-quarters of firms report using at least one tool in this category—but standardization varies significantly by firm size. The market is anchored by a clear leader, with a smaller secondary tier and a long tail of niche or legacy solutions, reflecting both scaling requirements and historical platform decisions. The penetration patterns by firm size highlight where firms tend to formalize ERP capabilities as they grow, and where smaller organizations continue to rely on lighter-weight accounting systems.

ERP & Financial Management – Category Adoption and Top Product Penetration by Firm Size
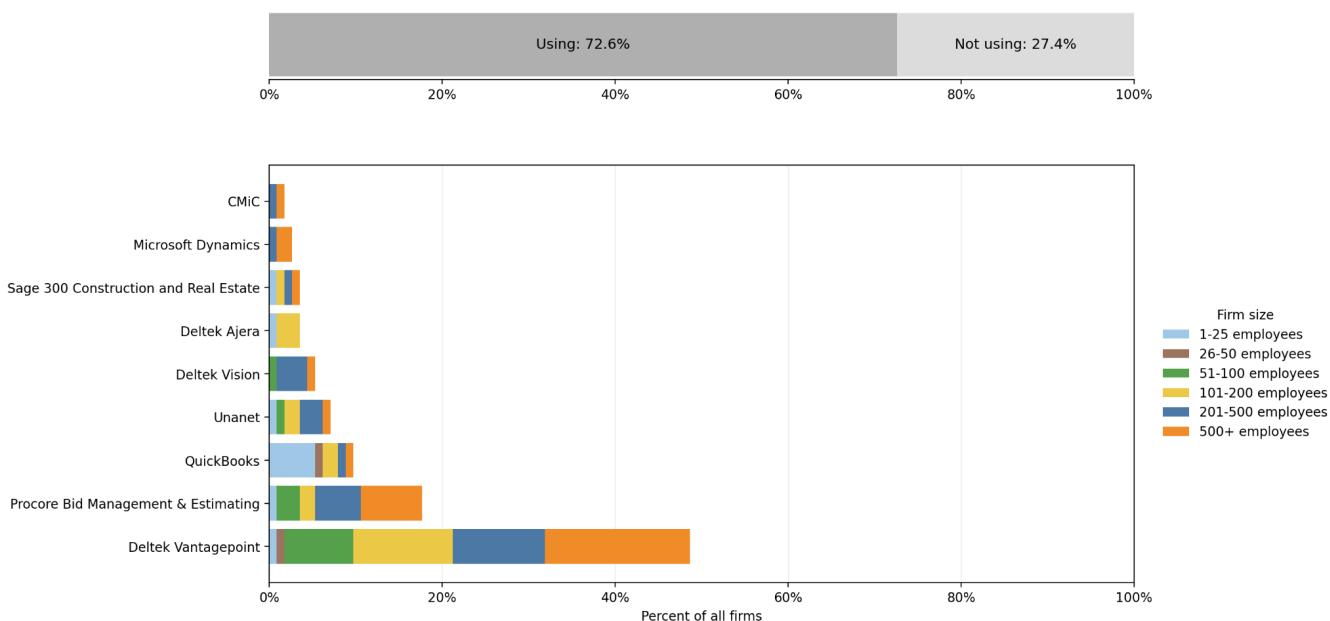
- **Category adoption is broad but not universal.** Approximately **72.6%** of firms report using at least one ERP/financial management platform in this category, leaving **27.4%** with **no tool selection recorded**. This gap likely reflects a mix of (a) firms relying on systems outside the listed options, (b) limited formalization of ERP/financial systems in some firms, and/or (c) respondents not owning or reporting on finance platforms.

- **Deltek Vantagepoint is the market anchor and scales with firm size.** At **48.7% penetration**, Vantagepoint is the dominant solution and shows strong representation in

mid-to-large firms (101–200, 201–500, 500+). This pattern is consistent with ERP standardization typically increasing as firms add project volume, multi-office complexity, and tighter project accounting requirements.

- **A second tier is present, but far behind the leader. Procore Bid Management & Estimating** is the next most prevalent at **17.7%** (20 firms), with usage weighted toward **larger firms**. This indicates that bidding/estimating workflows (or at least their reported tools) are more likely to be formalized and specialized in higher-scale operating models.

- **Small-firm behavior diverges toward lightweight accounting. QuickBooks (9.7%)** is disproportionately concentrated in **1–25 employee firms**, signaling that smaller organizations frequently optimize for simplicity and cost over deeper ERP functionality.

- **Long-tail tools suggest fragmentation and legacy footprint rather than broad standards. Unanet (7.1%)** and **Deltek Vision (5.3%)** appear as niche platforms, while **Ajera, Sage 300 CRE, Dynamics, and CMiC** sit in low single digits. In practical terms, this implies that beyond Vantagepoint, ERP/financial tooling in this sample is **heterogeneous**, likely driven by legacy adoption, vertical specialization, or regional/organizational preferences.

- **Implication for tech strategy and integration planning:** Expect **Vantagepoint-centric integration needs** for nearly half of firms, while the remaining half will require **multi-platform support** (especially Procore/QuickBooks combinations). For firms benchmarking maturity, the chart signals that **ERP consolidation and standard financial workflow tooling tends to correlate with scale**, but there remains a meaningful portion of firms without a clearly identified system in this category—an opportunity area for operational standardization and reporting consistency.

[10] File & Content Management

File & Content Management is a near-universal capability across surveyed firms, with adoption concentrating around two dominant ecosystems: Autodesk for project-centric document collaboration and Microsoft for enterprise file storage and internal sharing. The results indicate that most organizations operate a blended stack—using ACC/Docs (and, in many cases, legacy BIM 360) alongside OneDrive and SharePoint—reflecting both project delivery requirements and broader IT governance needs. Beyond these core platforms, a meaningful tier of content governance and library solutions (e.g., AVAIL and Autodesk Content Catalog) signals growing emphasis on standardization and reuse, while specialized workflow systems such as Newforma persist primarily where formal document control processes and complex project environments justify added structure.

This is a near-universal capability category, with the market consolidating around two ecosystems: Autodesk for project/document collaboration and Microsoft for enterprise file sharing and intranet-style content management. In practice, most firms appear to run a blended stack (Autodesk + Microsoft) rather than a single-platform standard.

File & Content Management — Top 10 Tools Penetration by Firm Size

Denominator: 113 firms. In Use = any value ≥ 1; Not Used = blank/null/0.
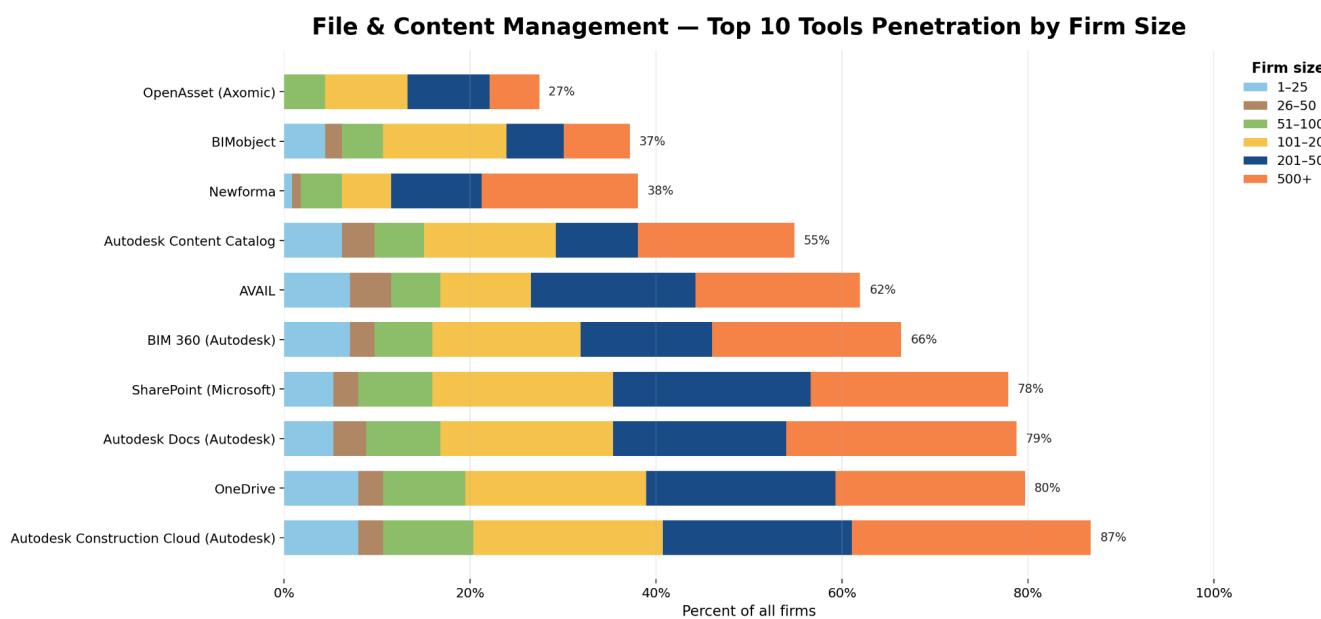
What the penetration results indicate:

- **Autodesk Construction Cloud (ACC) is the category anchor (87% penetration).** This level of reach indicates ACC functions as the default project collaboration backbone for

many firms, not a niche construction-only platform.

- **Microsoft storage/collaboration is essentially baseline IT infrastructure**: OneDrive **(80%)** and **SharePoint (78%)** are both highly penetrated, implying most firms rely on Microsoft 365 for general-purpose file storage, internal sharing, and governance.

- **Autodesk Docs is also mainstream (79%), and BIM 360 remains material (66%).** The simultaneous strength of **Docs** and **BIM 360** strongly suggests either:

    - Mixed deployments across offices/projects, or
    - Ongoing migration/overlap where legacy BIM 360 workflows persist alongside ACC/Docs

- **BIM content libraries and content governance tools are mid-to-high penetration**: **AVAIL (62%)** and **Autodesk Content Catalog (55%)**. This points to firms investing in standardized, searchable content and reusable components—not just raw document storage.

- **Specialized document/control platforms are meaningful but clearly secondary**: **Newforma (38%)** remains relevant (often strongest in larger, process-heavy organizations), while **OpenAsset (27%)** appears as a more specialized system (typically tied to marketing/asset/portfolio workflows rather than project document control alone).

- **External manufacturer-object platforms show notable but not dominant uptake**: **BIMobject (37%)** suggests many firms still pull content from broad public libraries even when internal content governance tools are in place.

Firm-size pattern (strategic read)

- The mix of tools implies a **scaling curve**: smaller firms can meet most needs with **Microsoft + core Autodesk**, while larger firms increasingly add **specialized governance and workflow layers** (content cataloging, structured submittal/RFI correspondence control, portfolio/asset management).

- The concurrent presence of **BIM 360 and ACC/Docs** is often a hallmark of **multi-year transition** and **project-by-project variability**, which tends to be more pronounced as firm size and project diversity increase.

Implications and recommended actions

- **Rationalize the Autodesk collaboration layer**: If both BIM 360 and ACC/Docs are active, establish a clear policy for "new projects here" vs "legacy stays there," with a defined migration path to reduce fragmentation.

- **Define Microsoft vs Autodesk boundaries**: Clarify what belongs in SharePoint/OneDrive (internal ops, corporate content, templates, HR/IT artifacts) versus what belongs in ACC/Docs (project delivery records), and enforce with permissions + retention policies.

- **Treat content management as an operational maturity lever**: The strong showing for AVAIL and Content Catalog suggests firms can capture real productivity gains through governed libraries, metadata standards, and content ownership (who curates, who approves, how updates propagate).

- **Assess redundancy and integration**: Where Newforma and ACC/Docs overlap, evaluate whether Newforma is delivering differentiated value (formal correspondence control, historical record, advanced search) or duplicating workflows that could be consolidated.

[11] Graphics & Presentation

Graphics & Presentation tools are widely embedded across the respondent base, functioning as a core enablement layer for marketing, proposal production, and client-facing deliverables. The results show strong consolidation around an Adobe-centric workflow, with the highest-penetration products forming a consistent "baseline stack" that appears across nearly all firm sizes. At the same time, the breadth of tools in use increases materially with scale: larger firms report significantly more applications in active use within this category, reflecting deeper specialization (e.g., dedicated marketing, visualization, and content production functions) and more differentiated deliverable requirements. Finally, secondary platforms—particularly rapid-design and emerging AI-enabled creative tools—are present as complementary layers, indicating growing demand for speed, accessibility, and experimentation alongside the established professional design suite.

Graphics & Presentation — Top 10 Product Penetration by Firm Size
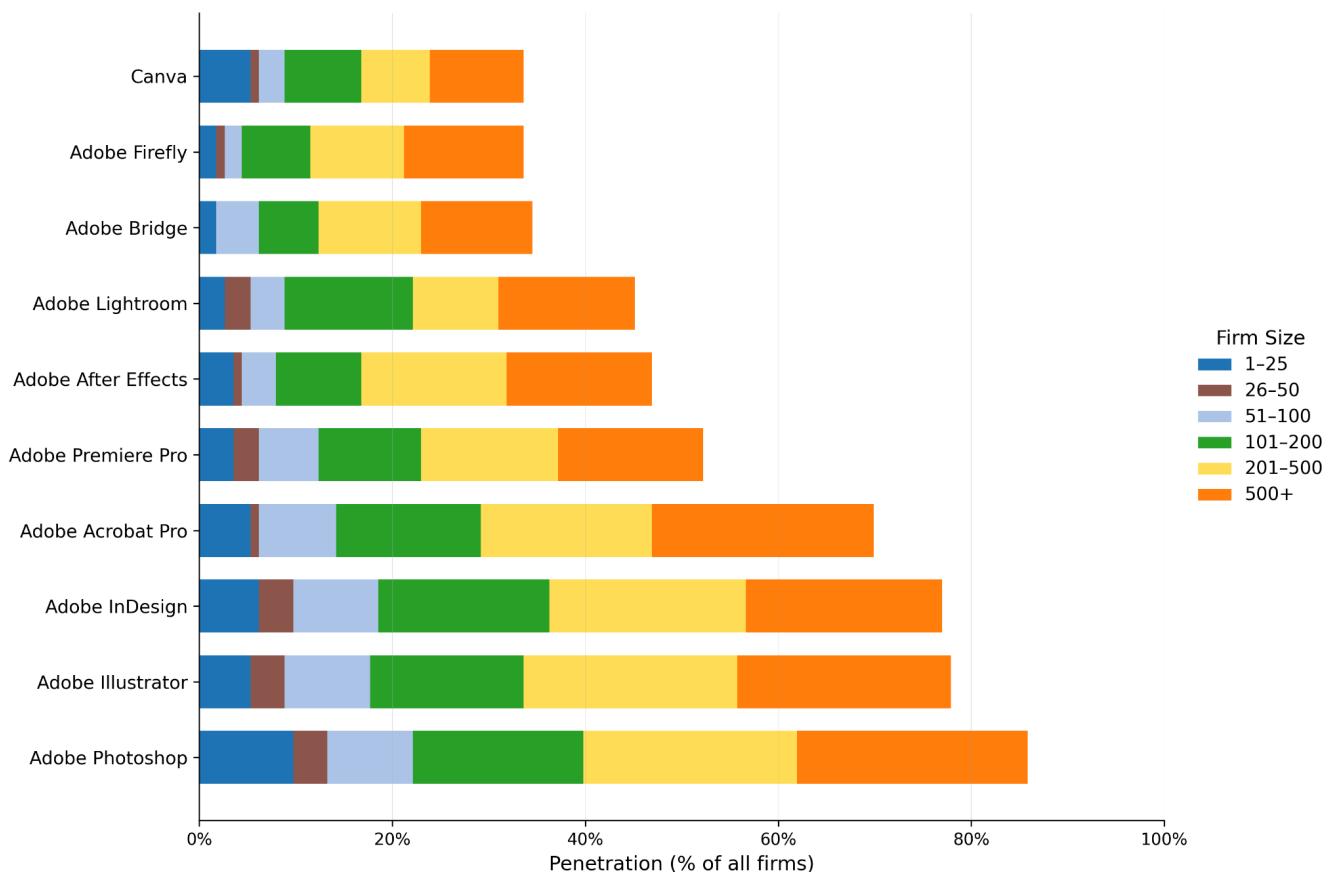
- **This category is nearly universal. ~91.6%** of firms report using at least one tool in this Graphics & Presentation set, indicating it is effectively a baseline capability across the respondent population.

- **Adobe Creative Cloud is the de facto standard platform.** The Top 4 tools are all Adobe, with **Photoshop (~84%)**, **Illustrator (~76%)**, **InDesign (~76%)**, and **Acrobat Pro (~67%)** leading overall penetration. This pattern strongly suggests many firms have standardized around an Adobe-centric production workflow.

- **Larger firms show deeper, more comprehensive Adobe adoption.** Mid-to-large firms (especially **201–500** and **500+**) tend to show stronger uptake across the "suite" tools (Illustrator/InDesign/Bridge) relative to the smallest firms, consistent with dedicated marketing/visualization teams and more formal brand/communications deliverables.

- **Video and motion tools are meaningful but secondary. Premiere Pro (~52%)** and **After Effects (~45%)** show substantial penetration, implying that video content is common—but still concentrated relative to the core print/graphic tools.

- **Canva is a material complement (and potential alternative) rather than a niche outlier. Canva (~33%)** appears broadly adopted across firm sizes, which usually indicates demand for rapid, lightweight production outside specialized design staff (templates, quick collateral, social, internal comms).

- **Generative/AI creative tooling is already present—and skewed larger. Adobe Firefly (~33%)** penetration is notable for an emerging capability and appears more concentrated in larger firms, consistent with earlier experimentation, centralized enablement, and governance capacity.

Implications for IT / Design Technology leads

- If standardization is a goal, the data supports treating **Adobe Creative Cloud as the default managed platform**, with clear packaging, identity/license governance, and role-based access (core vs. video vs. advanced).

- Where Canva is present, it is worth clarifying whether it is **approved "shadow design tooling"** or an intentional productivity layer for non-designers; governance and brand controls typically become important quickly.

- Given Firefly adoption levels, firms should consider formalizing **AI-use policy, content provenance guidance, and training** to avoid inconsistent practices across teams.

[12] Knowledge Management

Knowledge Management (KM) remains an emerging capability across the survey population, with fewer than half of firms reporting the use of any dedicated KM tool. Adoption is concentrated in a single leading platform, while the remainder of the market fragments into a long tail of low-penetration solutions—suggesting that many firms continue to manage standards, lessons learned, and institutional knowledge through adjacent systems or informal practices rather than a formal KM stack. Where investment does occur, it skews toward mid-to-larger firms, reinforcing that KM maturity tends to rise with organizational scale, governance needs, and the operational value of consistency and reuse across teams.

Knowledge Management: Top 10 Tool Penetration by Firm Size
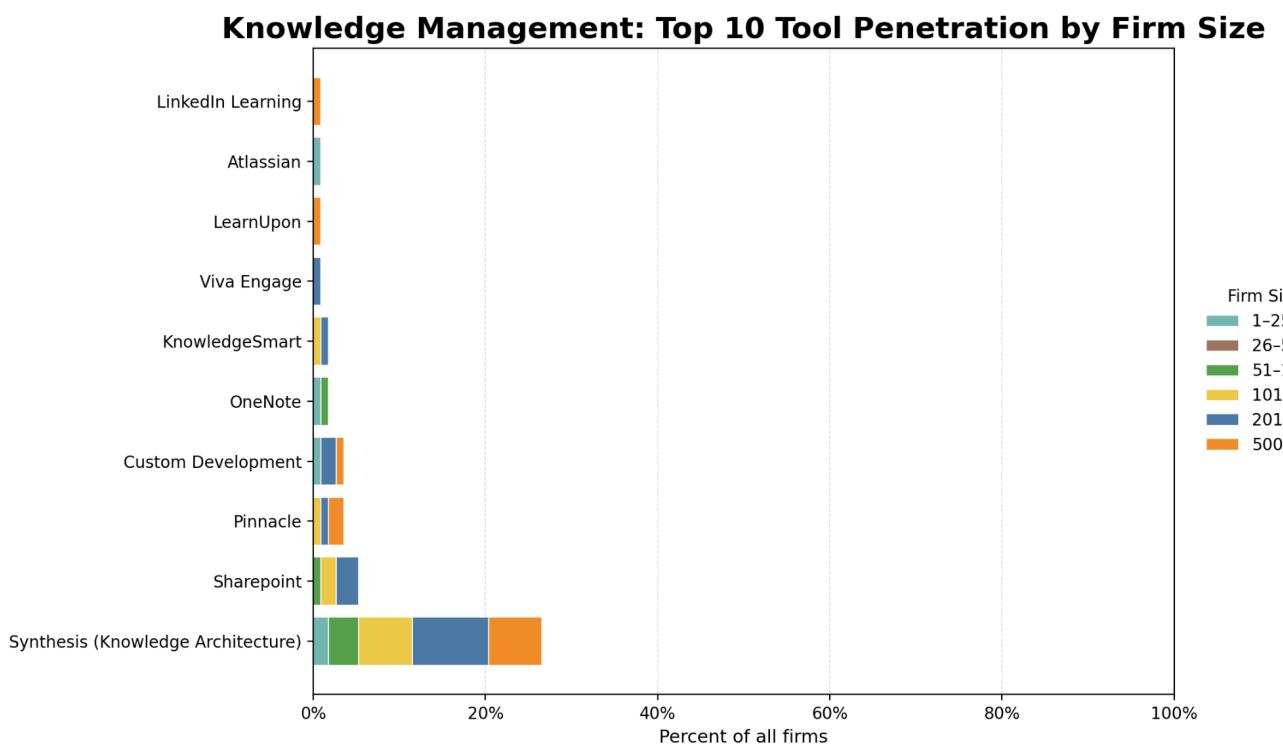
What the data says

Knowledge Management is **not yet a universally standardized capability** across the respondent base. Only **44.2% of firms** report using at least one tool in this category, indicating that a majority of firms either rely on informal practices (shared drives, email, Teams/Slack, project systems) or do not classify their approach as a discrete "KM tool" in the survey.

Adoption is also **highly concentrated. Synthesis (Knowledge Architecture)** is the clear anchor platform at **26.5% penetration**, while the next most common tool (**SharePoint**) sits at **5.3%**. Everything else falls into a long tail of minimal penetration, suggesting that firms are either (a) consolidating around a small number of structured KM approaches, or (b) solving KM needs through adjacent systems rather than dedicated KM platforms.

How adoption differs by firm size

Usage **skews materially toward mid-to-large firms**. The **201–500 employee** band is the most active, with the highest "any tool" usage rate (**69.2%**) and the highest average number of KM applications per firm (**0.73**). Large firms (500+) also participate, but the strongest signal is that firms in the middle tier are most likely to institutionalize KM as a formal discipline.

At the other end of the spectrum, **26–50 employee firms show no reported usage** in this tool list. Practically, that usually means one of two things: (1) KM is handled via general collaboration/storage tools rather than a formal KM stack, or (2) the tools being used are outside the options captured for this category.

Market structure and what it implies

This category reads as **an "architecture-led" market rather than a commoditized software market** in AEC. The lead product's dominance and the long tail pattern typically occur when:

- KM success depends more on **taxonomy, governance, and content standards** than on the UI of the platform.
- Firms treat KM as a **program** (roles, curation, contribution model) rather than a software purchase.
- Implementation requires cross-functional buy-in (practice leaders, QA/QC, learning & development, IT), which smaller firms are less likely to resource.

Operational implications for firms

- **Where KM tools exist, they tend to be single-platform deployments.** Multi-tool KM stacks are uncommon, which is consistent with firms choosing one "source of truth" for standards, lessons learned, and reusable content.

- **The primary opportunity is not "more apps," but "better adoption."** Given moderate penetration and concentration, the differentiator is governance, publishing workflows, and

search/findability—not expanding the toolset.

- **Expect KM maturity to correlate with firm scale and complexity.** As firms pass into mid/large size, KM becomes a leverage point for consistency, onboarding speed, QA/QC, and reuse across offices and markets.

Strategic recommendations (actionable)

1. **Define the KM operating model first** (taxonomy, content types, ownership, refresh cadence, contribution rules). Tool selection without this will underperform.

2. **Standardize on one primary KM platform** wherever possible to avoid fragmentation (multiple repositories, duplicative standards, unclear "latest version").

3. **Prioritize discoverability and reuse metrics** (search success, reuse rate, time-to-find, onboarding time reduction) to justify the investment beyond "nice to have."

4. **For smaller firms:** consider whether KM should remain embedded in collaboration/storage systems, but formalize standards and publishing processes to get KM-like outcomes without a dedicated stack.

[13] Learning & Training

Learning & Training tools show broad penetration across the respondent base, with **76% of firms** reporting at least one solution in use. Adoption is highly size-dependent—nearly universal among the largest firms (**97% of 500+**) and robust for mid-to-large organizations (**85% of 201–500**), but meaningfully lower among small firms (**53% of 1–25** and **33% of 26–50**), indicating that formalized learning infrastructure tends to emerge as scale and standardization requirements increase. Within the tool landscape, **LinkedIn Learning leads decisively (51% penetration)** as the de facto general-purpose platform, while an AEC-specific second tier—most notably **Global eTraining and Pinnacle (24% each)** alongside **AEC Daily (18%)**—supports more targeted upskilling needs. Overall, the pattern suggests a "core library plus specialized providers" operating model in larger firms, while smaller firms remain more selective and likely to rely on lighter-weight or ad hoc approaches.

Learning & Training — Category Adoption and Top Tools
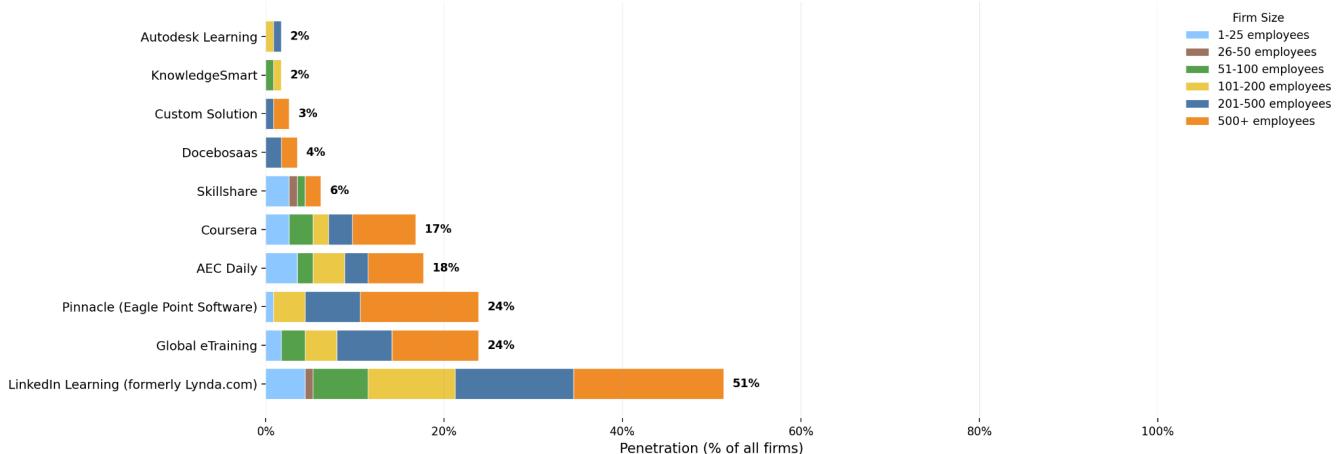
1) Category adoption is high overall, but strongly correlated with firm size

- **76.1% of firms** report using **at least one** Learning & Training solution in this category.

- Adoption scales materially with size:

    - **1–25:** 53.3%
    - **26–50:** 33.3%

- **51–100:** 72.7%
- **101–200:** 65.2%
- **201–500:** 84.6%
- **500+:** 96.9%

Implication: training platforms are effectively "standard operating infrastructure" in large firms, while smaller firms remain more discretionary and likely rely on informal learning, vendor resources, or ad hoc subscriptions.

2) The tool landscape is "one dominant platform + a specialized second tier + a long tail"

Top penetrations (% of all firms):

- **LinkedIn Learning**: **51.3%** (clear market leader)
- **Global eTraining**: **23.9%**
- **Pinnacle (Eagle Point Software)**: **23.9%**
- **AEC Daily**: **17.7%**
- **Coursera**: **16.8%**
- Remaining tools are **single-digit** penetration (e.g., Skillshare 6.2%; others ~1.8–3.5%).

Implication: most firms converge on a broad, general-purpose library (LinkedIn Learning), while AEC-specific training providers (Global eTraining, Pinnacle, AEC Daily) form a meaningful but smaller second tier. Everything else reflects niche use cases and experimentation.

3) Larger firms disproportionately drive structured platforms and bespoke approaches

- The **500+** segment contributes the largest share of adoption for most products (partly because it is a large portion of the sample), and it also shows **higher within-size usage** for key tools:

  - LinkedIn Learning within-size penetration is ~**59%** in **500+**, ~**58%** in **201–500**
  - Pinnacle rises sharply in larger firms (within-size ~**47%** in **500+**; ~**27%** in **201–500**)

Implication: larger firms appear to invest more in repeatable onboarding, standardization, and role-based learning paths—consistent with higher governance and workforce scaling needs.

4) Operational takeaway for IT / Design Tech leadership

- If the objective is **standardization and scale**, the data supports a "core platform + targeted AEC add-ons" model:

    - **Core library:** LinkedIn Learning
    - **AEC skill depth:** Pinnacle / Global eTraining / AEC Daily (depending on discipline focus)

- The long tail suggests potential inefficiency: multiple low-penetration tools increase vendor management overhead and reduce the ability to measure impact consistently.

[14] Planning, GIS, and Site Tools

Planning GIS & Site Tools remain a secondary capability for many respondents, with fewer than half of firms reporting use of any tool in this category. Where adoption exists, it is anchored by the Esri ecosystem—particularly ArcGIS Pro, ArcGIS Online, and AutoCAD integration—indicating that GIS workflows are most often deployed as part of a broader spatial data and site analysis platform rather than as isolated point solutions. Penetration is heavily weighted toward larger firms (especially 500+ employees), suggesting that resourcing for data governance, platform administration, and field-to-office workflows is a primary determinant of adoption. Overall, the results point to GIS as an area of concentrated maturity among enterprise-scale organizations, with more limited and selective uptake across small and mid-sized firms.

Planning GIS & Site Tools — Category Adoption

Using: 40.7%	Not using: 59.3%

0%   25%   50%   75%   100%
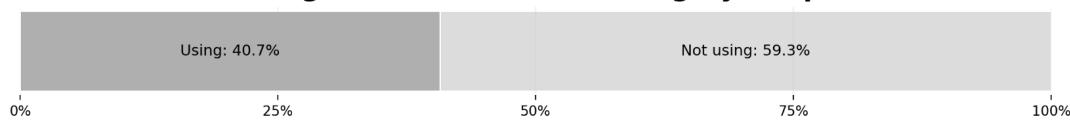
Top 10 Product Penetration (% of all firms), Segmented by Firm Size

Product	Penetration
ArcGIS Insights	8.0%
ArcGIS Hub	8.8%
Cesium (Bentley)	9.7%
ArcGIS CityEngine	9.7%
ArcGIS Field Maps	10.6%
ArcGIS GeoBIM	11.5%
ArcGIS Enterprise	15.0%
ArcGIS Online	17.7%
ArcGIS for AutoCAD	19.5%
ArcGIS Pro	23.9%

Firm Size
- 1–25
- 26–50
- 51–100
- 101–200
- 201–500
- 500+

0%   25%   50%   75%   100%
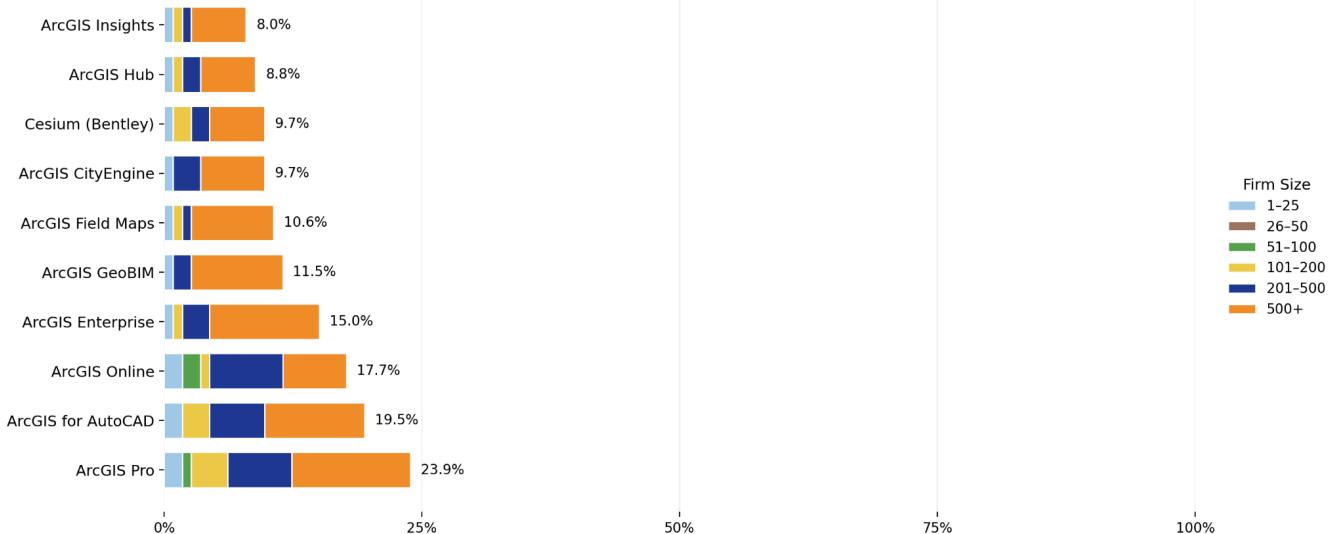
Base: 113 unique firms. Values ≥ 1 treated as In Use.

- **Overall category adoption is moderate**: **40.7% of firms** report using at least one Planning GIS / Site tool, meaning **most firms (59.3%) do not** use anything in this category today.

- **Esri dominates the category**: The Top 10 list is almost entirely ArcGIS-branded tools. The leading products are:

  - **ArcGIS Pro (23.9%)**
  - **ArcGIS for AutoCAD (19.5%)**
  - **ArcGIS Online (17.7%)**
  - **ArcGIS Enterprise (15.0%)**

- **Adoption skews strongly to large enterprises**:

  - **500+ employee firms account for the majority of penetration** across nearly every top product (especially **ArcGIS Pro, Enterprise, GeoBIM, Field Maps, Hub, CityEngine, Insights**).

  - This pattern indicates GIS capability is most mature where firms have the scale to support platform administration, data governance, and field workflows.

- **Mid-market uptake is selective**:

  - **201–500** and **101–200** firms contribute meaningfully to the "core stack" (Pro / Online / AutoCAD integration), but adoption drops off faster for platform extensions (Hub, Insights, GeoBIM).

- **Small-firm penetration is limited and uneven**:

  - **1–25** shows small but non-zero participation across several tools.
  - **26–50** shows **no usage in the Top 10** in this dataset (likely a combination of small sample size and genuinely low adoption), reinforcing that GIS is not yet a standard capability at that firm scale.

[15] Productivity & Workflow

Productivity and workflow tools are now a standard component of the AEC delivery toolkit, with **76% of surveyed firms** reporting use of at least one application in this category. Adoption is concentrated around a small number of established solutions—most notably the **Ideate** and **CTC** ecosystems, supported by **IMAGINiT Clarity**—reflecting a clear industry emphasis on automating repeatable tasks, improving model health and standards compliance, and enabling reliable data extraction and publishing processes. Penetration increases with firm size, underscoring that these platforms deliver the greatest value where organizations must enforce consistency across larger teams, reduce rework, and scale BIM execution through centralized governance and automation.

Productivity & Workflow: Category Adoption
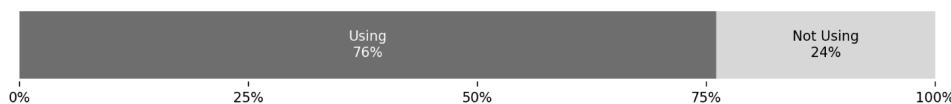
Top 10 Product Penetration (Share of All Firms) by Firm Size
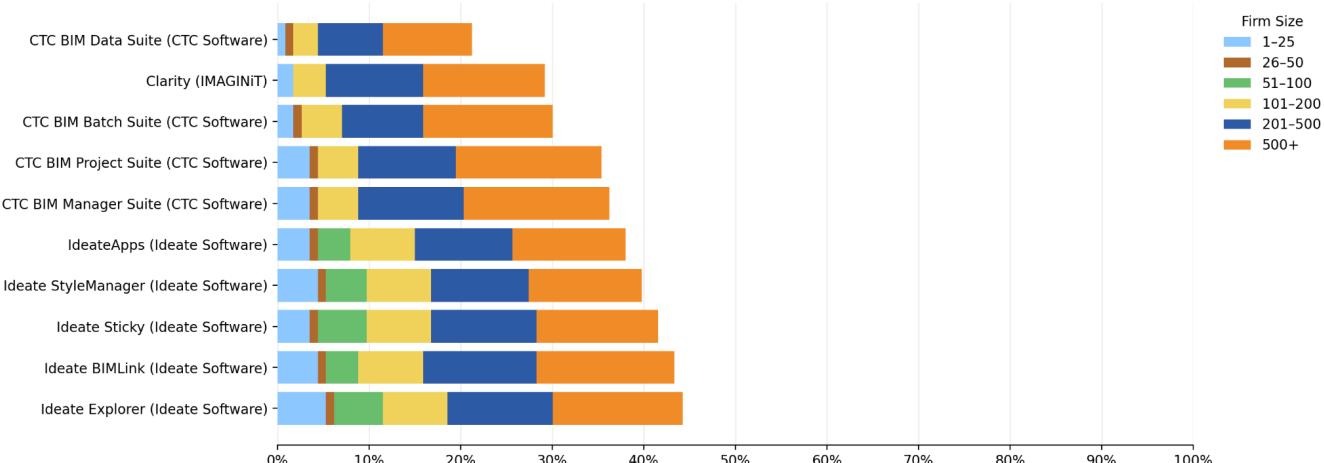
Category adoption is strong and broadly mainstream. Roughly **three-quarters of firms (76%)** report using at least one Productivity & Workflow tool in this category, indicating that workflow automation and model productivity enhancements are no longer niche capabilities—they are becoming baseline operational infrastructure.

The category is dominated by a single ecosystem: Revit productivity tooling. The **Top 10** is overwhelmingly anchored by **Ideate Software** (Explorer, BIMLink, Sticky, StyleManager, IdeateApps) and supported by **CTC Software** suites plus **IMAGINiT Clarity**. This concentration suggests firms are prioritizing tools that improve **model health, standards compliance, data**

extraction/parameter management, content governance, and repeatable task automation—all directly tied to scale, quality control, and project delivery velocity.

Adoption skews toward larger firms, reflecting enterprise governance needs. The penetration bars show that meaningful share comes from **201–500 and 500+ employee firms**, consistent with the reality that these tools deliver the highest ROI when teams need to:

- Enforce standards across many project teams
- Reduce rework from inconsistent content/model practices
- Automate repeatable QA/QC and publishing processes
- Centrally manage configuration and reporting

Implications for firm operations and strategy

- Firms investing in these tools are effectively building a **production system for BIM**: standardized, measurable, and increasingly automated.

- The tools most represented (Ideate/CTC/Clarity) map to a maturity curve: from **individual productivity** (Explorer/Sticky) to **team-level governance** (StyleManager/BIMLink) to **enterprise automation and monitoring** (Clarity and broader CTC suites).

- The **24% non-adoption** segment is a clear signal of either (a) lower BIM scale/complexity, or (b) opportunity for productivity uplift through relatively accessible tooling.

Recommended leadership takeaway

If you want to raise delivery predictability and reduce model-related rework, this category is a proven lever—especially for mid-to-large firms. The adoption pattern indicates that the market has largely standardized on a small set of vendors, making it easier to benchmark, hire for, train, and support these tools as part of a repeatable firm-wide BIM operating model.

[16] Rhino Ecosystem

The Rhino Ecosystem category shows broad—but not universal—market penetration, with **58.4% of firms** reporting use of at least one Rhino-adjacent toolset. Adoption is anchored by the core platform and computational stack—**Grasshopper (51.3%)** and **Rhino 3D (50.4%)**—with especially strong linkage into BIM workflows via **Rhino.Inside.Revit (45.1%)**, indicating Rhino is frequently positioned as a specialist front-end for complex geometry and generative design that transitions into Revit-based production. Beyond modeling, the tool mix reflects two dominant adjacent use cases: **real-time visualization** (e.g., Enscape and Twinmotion) and **early-stage performance analysis** (e.g., Ladybug Tools and Honeybee). Overall, the distribution by firm size suggests Rhino capabilities concentrate most consistently among **mid-to-large firms**, aligning with the staffing, training, and workflow governance typically required to operationalize computational design and plugin-heavy ecosystems.

Rhino Ecosystem — Category Adoption (All Firms)

Using 58.4%	Not Using 41.6%

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

Top 10 Product Penetration by Firm Size (% of All Firms)

- Human UI (Grasshopper) — 17.7%
- Speckle for Rhino — 18.6%
- Elefront (Grasshopper) — 22.1%
- Twinmotion for Rhino (Epic Games) — 25.7%
- Honeybee (Grasshopper) — 29.2%
- Ladybug Tools (Grasshopper) — 33.6%
- Enscape for Rhino — 38.9%
- Rhino.Inside.Revit (McNeel) — 45.1%
- Rhino 3D (McNeel) — 50.4%
- Grasshopper (McNeel) — 51.3%

Firm size
- 1-25 employees
- 26-50 employees
- 51-100 employees
- 101-200 employees
- 201-500 employees
- 500+ employees

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

- **Category adoption is majority, but not universal. 58.4%** of firms report using at least one Rhino ecosystem tool (vs **41.6%** not using). This indicates Rhino is a mainstream capability in the respondent set, but still optional rather than "table stakes."

- **Core platform penetration is ~50% across all firms.** The top two tools are **Grasshopper (51.3%)** and **Rhino 3D (50.4%)**, signaling that—where Rhino exists—computational workflows (Grasshopper) are as prevalent as the base modeler itself, not merely an

add-on used by a small specialist group.

- **Interoperability into BIM is a defining pattern. Rhino.Inside.Revit sits at 45.1% penetration**, a very high level for a connector. Practically, this suggests many firms are operationalizing Rhino/Grasshopper as a **front-end for complex geometry and generative design**, then moving deliverables into Revit-centric production.

- **Visualization and performance analysis are the next "cluster."**

  - **Enscape for Rhino (38.9%)** and **Twinmotion for Rhino (25.7%)** show that real-time viz is a common Rhino-adjacent use case.

  - Environmental analysis tooling is also prominent: **Ladybug Tools (33.6%)** and **Honeybee (29.2%)**. This combination points to Rhino/Grasshopper being used for **early-stage sustainability and façade/daylighting studies**, not just form-making.

- **Firm-size effect: strongest among mid-to-large firms, weakest among very small firms (with sample-size caveats).**

  - Category adoption by firm size (share of firms in that size using *any* Rhino ecosystem tool) is approximately:

    - **1–25 employees: 20%**
    - **26–50 employees: 16.7%**
    - **51–100 employees: 90.9%**
    - **101–200 employees: 65.2%**
    - **201–500 employees: 65.4%**
    - **500+ employees: 62.5%**

The **very small-firm rates are low**, but the 26–50 segment is a small sample; interpret directionally. The broader pattern is that Rhino ecosystem capability concentrates in organizations with enough scale to support specialist workflows.

- **Data exchange is emerging but not yet dominant. Speckle for Rhino at 18.6%** suggests meaningful momentum for structured interoperability and model data pipelines, but it remains a secondary layer relative to the core Rhino/Grasshopper + Revit integration.

Implications for leadership

- If your firm is investing in computational design, the market norm is **not just Rhino**, but **Rhino + Grasshopper + a Revit bridge**.

- The adoption of **Ladybug/Honeybee** indicates Rhino is often tied to **performance-driven design**; resourcing and governance for validated analysis workflows becomes relevant (templates, QA, training, libraries).

- For IT/Design Tech, the ecosystem profile supports prioritizing: **license management**, **plugin standardization**, **version compatibility controls** (Rhino/Grasshopper/Revit), and **interoperability governance** (Rhino.Inside.Revit, and optionally Speckle where data pipelines are maturing).

[17] Simulation & Analysis

Simulation & Analysis tools are increasingly being used to embed performance-based decision-making into the design process, but adoption is not yet universal across the market. In this category, approximately two-thirds of responding firms report using at least one simulation or analysis application, with usage strongly correlated to firm size—mid-to-large firms are far more likely to deploy these tools consistently than smaller organizations. The results indicate that the category is primarily anchored in design-integrated building performance workflows (energy, carbon, daylight, and related analyses), with Autodesk-adjacent solutions and widely adopted sustainability toolsets representing the most common platforms. Overall, the findings suggest a maturing capability area where larger firms are standardizing performance analytics as part of delivery, while smaller firms show meaningful whitespace and opportunity for targeted adoption and enablement.

Simulation & Analysis — Category Adoption and Top Tool Penetration by Firm Size
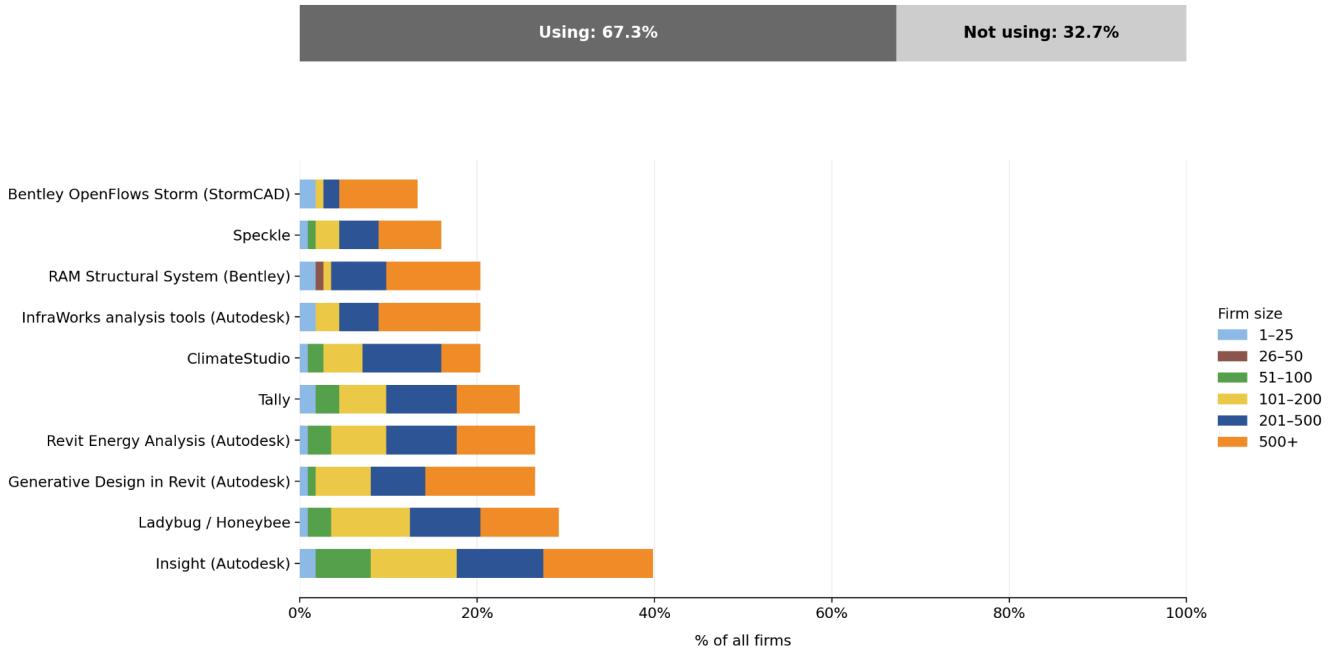
- **Broad adoption, with meaningful whitespace.** Roughly **two-thirds of firms (67.3%)** report using at least one Simulation & Analysis tool, leaving **about one-third (32.7%)** with no reported usage. This indicates the category is established, but still has a significant runway for standardization and expansion—particularly among smaller firms.

- **Adoption is strongly correlated with firm scale.** Usage rises sharply as firm size increases, with **mid-to-large firms (51–100 and 500+)** showing the highest category

adoption. The smallest cohorts (1–25 and 26–50) are materially lower. This pattern is consistent with Simulation & Analysis being driven by:

- Higher project complexity
- More formal performance/compliance requirements
- Dedicated specialist roles (energy, sustainability, computational design)
- Stronger platform standardization

- **The category is anchored in design-integrated performance analysis.** The top tools are dominated by **Autodesk ecosystem solutions** (e.g., **Insight**, **Revit Energy Analysis**, **Generative Design in Revit**) alongside widely used building-performance tools (e.g., **Ladybug/Honeybee**, **ClimateStudio**, **Tally**). The prevailing posture is less "advanced simulation everywhere" and more **energy/carbon/daylight and performance workflows embedded in design delivery**.

- **A "sustainability stack" is emerging as a mainstream requirement.** The presence of carbon/energy/performance tools in the Top 10 suggests many firms are operationalizing sustainability analysis rather than treating it as an occasional specialist service. This is consistent with a market shift toward **measurable performance outcomes** and increasing client/regulatory expectations.

- **Interoperability signals are present, but not yet dominant.** Tools like **Speckle** appearing among the leaders suggests a subset of firms is investing in **data movement and automation** (multi-tool pipelines, governance, repeatable analytics). However, this remains secondary compared to adoption of core authoring-platform-adjacent analysis tools.

- **Discipline-specific tools indicate targeted, not universal, deployment.** Structural and civil/water-focused tools (e.g., **RAM Structural System**, **Bentley OpenFlows Storm**) show meaningful penetration but at lower levels than building performance tools—consistent with **specialist adoption by practice area** rather than firmwide deployment.

What this means operationally

- For many firms, Simulation & Analysis is functioning as a **capability layer attached to the primary design platform**, not a standalone "simulation department" toolset.

- The biggest opportunity is improving **standard workflows, training, and governance** to expand adoption in smaller firms and to reduce variability across larger firms.

- Firms seeking differentiation should focus on **repeatable performance workflows** (energy/carbon/daylight) and **pipeline automation/interoperability**, where adoption is present but not yet mature across the market.

[18] Specification & QA

Specification & QA tools are widely embedded in architectural documentation workflows, with roughly three-quarters of surveyed firms reporting at least one solution in use. Adoption centers on a small core of broadly deployed platforms—most notably MasterSpec and AIA contract document tools, alongside BSD SpecLink—while the remainder of the market disperses into specialized point solutions that firms add selectively based on standards rigor, risk posture, and project delivery requirements. The results also show a clear scale effect: larger firms tend to formalize specification governance and maintain deeper tool stacks, while smaller firms exhibit more variable, project-driven adoption.

Specification & QA tools show **broad, but not universal, adoption** across the respondent base. Roughly **three-quarters of firms report using at least one tool in this category**, indicating that formalized specification workflows are common, yet a meaningful minority still rely on informal/manual approaches or tools outside this list. The category also exhibits **moderate tool density**: most adopters use **a small portfolio of tools rather than a single end-to-end platform**, which is typical for specification processes that span authorship, standards, and contract administration.

Specification & QA — Category Adoption (Using vs Not Using)

Using 74.3%	Not Using 25.7%

0   20   40   60   80   100

Top 10 Product Penetration by Firm Size (% of All Firms)

Product	Penetration
CADdetails	8.8%
VisiSpecs	8.8%
BIMsmith	10.6%
MasterSpec Plugin	15.9%
KnowledgeSmart Skills Assessment	15.9%
Deltek Specpoint	16.8%
SpecLink-E (BSD)	18.6%
SpecLink Cloud (BSD)	35.4%
AIA Contract Documents Tools	38.1%
MasterSpec (AIA)	39.8%

Firm size
- 1-25
- 26-50
- 51-100
- 101-200
- 201-500
- 500+
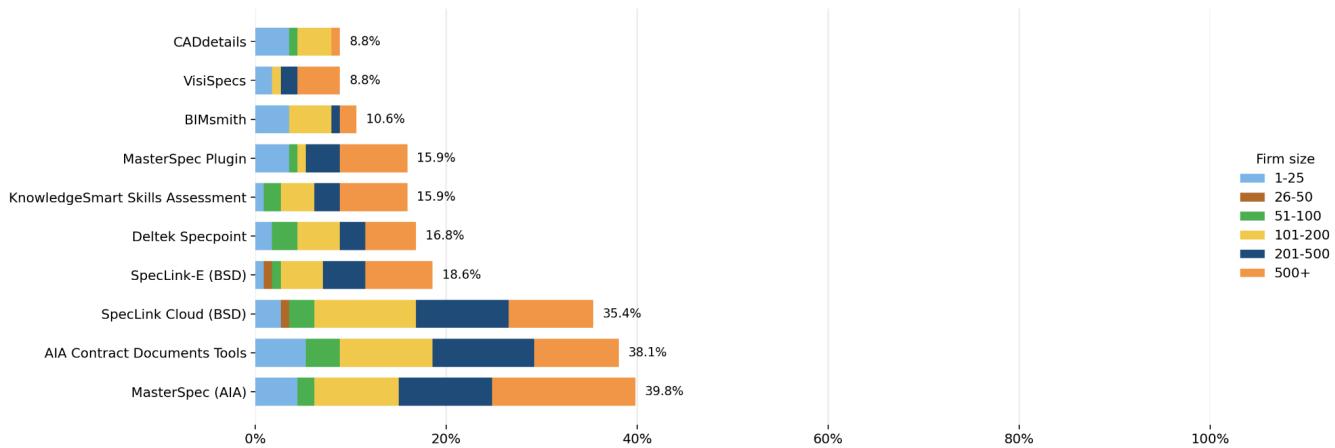
Market structure: a "core trio" plus a long tail

The product landscape is anchored by a clear core set of widely used solutions:

- **MasterSpec (AIA)** and **AIA Contract Documents Tools** are the most broadly penetrated, positioning AIA content and contract tooling as the default baseline for many firms' spec and QA practices.

- **SpecLink Cloud (BSD)** is close behind, suggesting a strong share for structured, database-driven specification authoring in addition to traditional guide-spec usage.

Beyond these, adoption drops quickly into a **long tail** of more specialized tools (e.g., SpecLink-E, Deltek Specpoint, BIMsmith, CADdetails, VisiSpecs). This pattern indicates that firms frequently standardize on a primary spec authoring/content approach, then selectively add point solutions for QA, detail/spec coordination, or content sourcing.

Firm-size dynamics: scale drives standardization and investment

The penetration profile by firm size implies that **larger firms are more likely to formalize specification and QA workflows** and invest in multiple tools. Two implications stand out:

- **Enterprise-scale firms (500+)** show strong presence in the leading AIA/MasterSpec ecosystem, consistent with centralized standards groups, risk management requirements, and repeatable documentation processes.

- **Mid-size firms (101–500)** show comparatively strong presence for SpecLink Cloud, consistent with teams large enough to benefit from structured, repeatable spec databases but still seeking efficiency gains without the overhead of highly customized internal systems.

Smaller-firm adoption is more variable, which typically reflects higher reliance on individual expertise, project-to-project variability, and fewer dedicated specification resources.

Quality signal: niche tools can deliver high satisfaction where used

Average scores suggest a pragmatic dynamic: the most common tools are not always the highest-rated, while **some lower-penetration tools score very well among their users** (e.g., VisiSpecs). Practically, this often means:

- The core tools are "table stakes" and widely deployed even if users see friction in usability, workflow fit, or licensing complexity.

- Specialized tools, when adopted for the right use case, can drive strong value and satisfaction within a subset of firms.

What this means for strategy and standardization

1. **Standardization opportunity:** The absence of a single dominant platform and the prevalence of a core + add-ons model suggests there is room to rationalize workflows—particularly around how specs connect to QA, details, and downstream construction documentation.

2. **Governance matters:** Higher adoption in larger firms implies that investment and standardization correlate with having defined spec leadership (spec writers/QA leads) and governance. Firms seeking maturity should prioritize ownership and process definition before tooling expansion.

3. **Integration is the next lever:** The strongest operational gains will come from tighter integration between specification authoring/content and the firm's broader documentation ecosystem (templates, standards libraries, BIM/detail content, and contract administration).

Net: Specification & QA tooling is widely used, but the category remains **fragmented** with **firm size strongly influencing depth and sophistication**. The leading ecosystem tools establish the baseline, while incremental value increasingly comes from targeted point solutions and process governance rather than adding yet another platform.

[19] Sustainability & Performance Analysis

Sustainability and performance analysis tools show **moderate adoption across the survey population**, with **41% of firms reporting use of at least one application** in this category—indicating meaningful progress, but also substantial remaining whitespace. Utilization is **highly concentrated in a small number of established platforms**, led by **One Click LCA, Tally, and ClimateStudio**, while the remainder of the ecosystem appears niche and project-specific. Adoption patterns also **skew toward mid-to-large firms**, suggesting that resourcing, specialized expertise, and enterprise-level delivery requirements continue to be key drivers of sustained, repeatable implementation.

**Sustainability & Performance Analysis
Top Product Penetration by Firm Size**
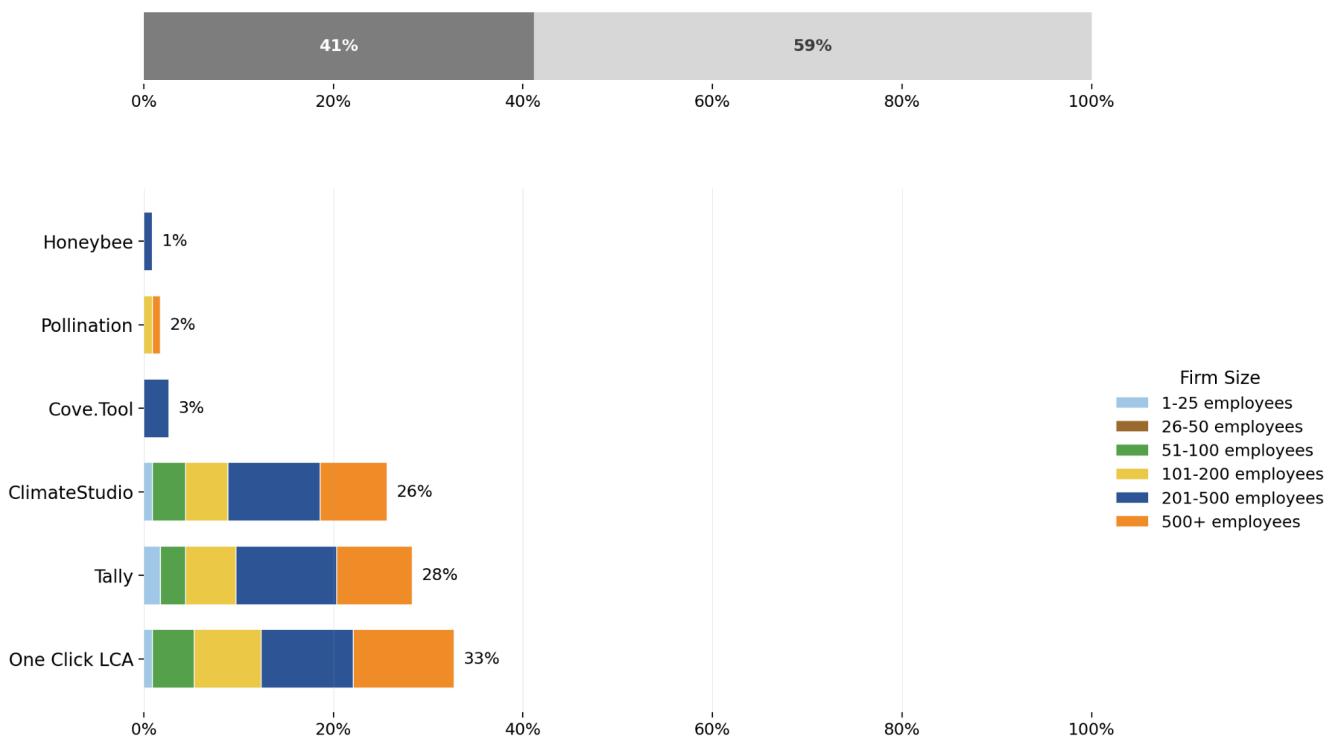
- **Moderate category penetration with meaningful whitespace.** Only **41% of firms report using at least one tool** in this category (59% not using), indicating sustainability/performance analysis is still not a universal, standardized capability across the respondent base. This is a clear opportunity area for capability-building and differentiation.

- **A clear "top tier" of platforms has emerged.** Adoption is concentrated in three products—**One Click LCA (33%)**, **Tally (28%)**, and **ClimateStudio (26%)**—with a steep drop-off to all other tools (≤3%). Practically, this suggests the market is coalescing around a small set of solutions that can be treated as the "enterprise standard options" for most firms.

- **Usage skews toward larger firms, implying maturity and resourcing requirements.** The penetration bars are dominated by **201–500 and 500+ employee firms**, with materially less contribution from smaller segments. This pattern is consistent with:

  - Higher sustainability compliance/owner demand hitting larger firms first
  - Dedicated sustainability/analysis staff being more common in larger organizations
  - Greater ability to absorb licensing + implementation + training overhead

- **Long-tail tools are not scaling beyond niche teams. cove.tool (3%)**, **Pollination (2%)**, and **Honeybee (1%)** appear as specialized or project/team-level tools rather than firmwide platforms. For most firms, these likely represent "power-user" workflows rather than standardized delivery infrastructure.

- **Strategic implication: standardize around 1–2 core tools, then operationalize.** Given the concentration, firms aiming to expand capability should focus less on tool proliferation and more on:

  - Selecting a primary platform (or paired platforms) aligned to their typical project types and deliverables
  - Building repeatable workflows (templates, libraries, QA checks)
  - Integrating outputs into design and reporting processes (rather than treating analysis as an ad hoc specialty service)

- **Competitive implication: sustainability tooling is becoming table stakes in larger-firm pursuits.** Because larger firms are adopting at higher rates, smaller/mid-sized firms competing for similar work may face increasing pressure to demonstrate credible in-house capability (or a reliable partner model) to meet client ESG/carbon reporting expectations.

[20] Visualization & Rendering

Visualization and rendering capability is effectively ubiquitous across surveyed firms, with **94.7%** reporting at least one tool in use, underscoring how central real-time visuals have become to both design iteration and client communication. Adoption concentrates heavily in integrated, workflow-friendly platforms—most notably **Enscape for Revit (80.5% penetration)**—supported by a secondary tier of real-time and production tools such as **Twinmotion, Lumion, D5 Render, and 3ds Max**. Tool depth also scales with organizational size: larger firms maintain broader multi-tool portfolios to serve varied project types and deliverable standards, while smaller firms operate with more selective stacks. Notably, generative AI has moved into the mainstream of visualization workflows, with **ChatGPT** and **Midjourney** ranking among the most widely used tools in this category.

Visualization & Rendering — Top-10 Tool Penetration by Firm Size (n=113 firms)

Firm size
- 1-25 employees
- 26-50 employees
- 51-100 employees
- 101-200 employees
- 201-500 employees
- 500+ employees
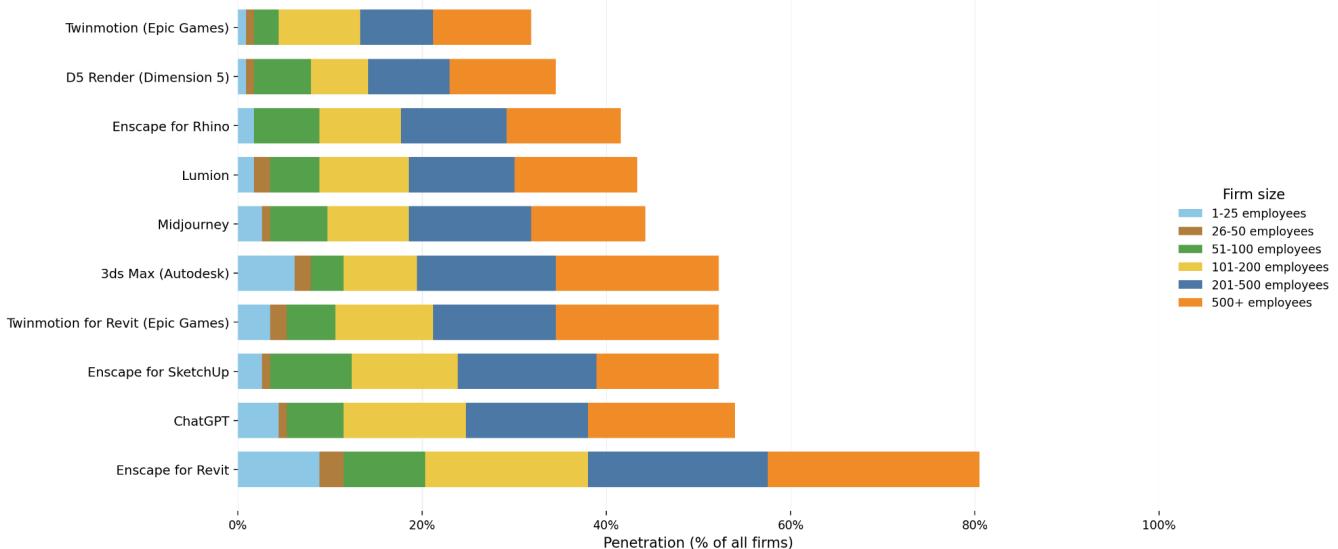
1) This is a "table stakes" capability across the market

Visualization & Rendering shows **very high adoption (94.7% of firms using at least one tool)**, indicating that rendering is no longer a niche specialty function. It is a broadly embedded capability used for client communication, design validation, and internal decision-making.

Implication: Firms that lack a consistent visualization workflow are likely to be at a competitive disadvantage in pursuit, design reviews, and stakeholder alignment.

2) The category is consolidating around real-time rendering—especially inside the Revit ecosystem

The tool landscape is anchored by **Enscape for Revit (80.5% penetration)**, far ahead of every other product. The next tier (Twinmotion for Revit, Enscape for SketchUp/Rhino, Lumion, D5) reinforces a dominant pattern: **real-time visualization tightly coupled to authoring platforms**.

Implication: The center of gravity has shifted from offline, specialist rendering pipelines to "good-enough, fast, and integrated" visualization that supports day-to-day design iteration and rapid client feedback.

3) Larger firms run deeper, multi-tool stacks; smaller firms are more selective

The average number of tools in use increases materially with scale (approximately **~6 tools in 1–25**, rising to **~11 tools in 500+**). Larger firms are not simply "more likely to use visualization"; they maintain **broader portfolios** (multiple renderers, add-ons, and complementary tools) to support diverse project types, teams, and deliverables.

Implication: Standardization matters more as firms scale. Without governance, larger firms risk redundancy, inconsistent quality, and avoidable licensing cost.

4) AI is now part of visualization workflows, not a fringe add-on

ChatGPT (54.0%) and **Midjourney (44.2%)** landing in the Top-10 signals that generative AI is being adopted as a practical component of visualization workflows—often for concept ideation, mood/atmosphere exploration, narrative support, and rapid alternative generation.

Implication: The category is expanding from "rendering tools" to "visual communication systems." Firms should treat AI usage as an operational capability with training, governance, and clear use cases (rather than ad hoc experimentation).

5) Likely operating model emerging: a primary renderer + secondary tools for edge cases

The data suggests most firms converge on **one primary renderer** (often Enscape, frequently Revit-linked), then maintain secondary tools (Twinmotion/Lumion/D5/3ds Max) for specific deliverables, performance needs, animation, or specialized visualization requirements.

Implication: A rational portfolio approach is to designate:

- A **default renderer per authoring platform** (Revit/SketchUp/Rhino)
- A **specialist tier** for high-end marketing, animation, or complex scenes, with clear criteria for when to use it

Recommended executive actions

1. **Define the standard visualization stack by platform** (Revit-first is the market norm), and document handoff expectations (model prep, materials, entourage, export standards).

2. **Rationalize licenses**: reduce overlapping real-time renderers unless there is a defined business case by studio/market sector.

3. **Institutionalize AI enablement**: training + prompt libraries + governance for client-facing imagery and IP risk management.

4. **Establish quality and performance standards** (template libraries, asset management, rendering presets) to ensure consistent outcomes across offices and teams.

Conclusion

Where The Market Is Converging

Across categories, the market is consolidating around a small number of "anchor" platforms that increasingly define how work is executed end-to-end: model authoring ecosystems, cloud-based content management, and Microsoft 365–style collaboration layers. These platforms are becoming the default backbone for delivery, not only because of feature depth, but because they bring identity, permissions, auditing, and cross-project consistency into a manageable operational pattern. As a result, vendor ecosystems, API maturity, and interoperability are becoming as influential in selection decisions as the applications themselves.

Where Fragmentation Will Persist

At the same time, specialization is not slowing. Firms continue to add tools that solve distinct problems—visualization, simulation, sustainability/performance, QA/spec automation, analytics, and niche workflow orchestration—often because the platform layer cannot address these needs with sufficient depth or speed. Fragmentation will persist most visibly in categories where innovation cycles are rapid, where project types vary materially, and where user preferences influence outcomes. The practical implication is that most firms will not eliminate long-tail tools; they will need to manage them intentionally and limit redundancy through clear standards and exception governance.

The Operating Model Shift: Integrations And Governance As Core Work

The dominant change implied by the survey is organizational, not purely technical. As stacks expand, the differentiator becomes the firm's ability to operate the ecosystem: establish a clear "golden path" toolchain, define ownership, maintain secure and predictable access patterns, and ensure reliable data exchange across systems. Integrations should be treated as products—with defined owners, monitoring, documentation, and lifecycle planning—while governance must be pragmatic enough to enable delivery rather than constrain it. Firms that institutionalize this operating model will scale adoption with less rework, fewer workarounds, and more consistent project outcomes—turning technology from a collection of tools into a durable delivery capability.

What's Next

This survey is intentionally broad, but one theme is hard to ignore: no single person inside a firm has full visibility into the entire technology stack. In many organizations, stack decisions and day-to-day tool ownership are distributed across distinct stakeholders—IT leadership, BIM/VDC managers, design technology teams, visualization leads, project delivery leadership, and others. In 2026, we see a clear opportunity to improve both the accuracy and usefulness of the results by evolving the survey into a stakeholder-based format, where multiple respondents within the same firm complete targeted sections aligned to their domain expertise. The outcome is a cleaner signal (fewer "unknowns," fewer missing tools, clearer ownership) and insights that better reflect how AEC firms actually operate.

Provide Feedback

We also want this research to be participatory. If you'd like to shape future editions, please complete this feedback survey where you can recommend additional applications—and propose new categories where you believe the industry is under-measured.

Compare Your Firm's Dataset

If your firm did not participate this year, you can still take the survey. Participants will receive an individualized peer comparison report that benchmarks your firm against this year's dataset, highlighting where your stack aligns with the market, where it diverges, and where consolidation or investment opportunities may exist.

About Confluence

Confluence is AVAIL's professional development initiative for the AEC industry—an ongoing series of events and programs designed to advance practical learning, peer exchange, and leadership dialogue across design technology and product management communities. Through in-person convenings (including its signature Confluence Lexington event) and year-round programming, Confluence brings together practitioners and technology providers to share real-world implementation lessons, examine emerging platforms and workflows, and strengthen the industry's collective capability to adopt and operationalize new tools responsibly. Confluence's broader ecosystem also includes content and conversations that illuminate how AEC software is built and why product decisions are made, reinforcing its mission to convert technology change into durable professional growth for individuals and firms. Learn more at confluence.getavail.com.

Applications Included in the Survey

Listed alphabetically with the number of firms indicating use.

3ds Max (Autodesk) (60)

Acelab (2)

Aconex (Oracle) (17)

Adobe Acrobat Pro (80)

Adobe After Effects (54)

Adobe Animate (23)

Adobe Bridge (40)

Adobe Captivate (16)

Adobe Dreamweaver (15)

Adobe Express (23)

Adobe Firefly (39)

Adobe Fresco (13)

Adobe Illustrator (89)

Adobe InDesign (88)

Adobe Lightroom (52)

Adobe Media Encoder (24)

Adobe Photoshop (98)

Adobe Premiere Pro (60)

Adobe Scan (16)

Adobe Sign (24)

Adobe Substance 3D (18)

Adobe XD (10)

Advance Steel (Autodesk) (16)

AEC Daily (21)

AEC Daily CEU Tools (8)

Affinity Suite (13)

AGi32 (Lighting Analysts) (19)

AI-REVIEW™, AI-MATCH™ (Firmus.ai) (2)

AIA Contract Documents Tools (43)

Airtable (2)

Alias (Autodesk) (4)

Allegorithmic (4)

Amazon WorkDocs (10)

Anima (Chaos) (4)

Apple Keynote (9)

Apple Numbers (8)

Apple Pages (9)

ARCAT (17)

ARCAT Revit Plug-in (10)

ArcGIS CityEngine (12)

ArcGIS Collector (9)

ArcGIS Enterprise (18)

ArcGIS Field Maps (13)

ArcGIS for AutoCAD (23)

ArcGIS GeoBIM (14)

ArcGIS Hub (11)

ArcGIS Indoors (6)

ArcGIS Insights (10)

ArcGIS Online (21)

ArcGIS Pro (28)

ArcGIS StoryMaps (9)

ArcGIS Survey123 (9)

ArcGIS Urban (8)

Archicad (Graphisoft) (10)

ArchiCheck AI (Kestrel Labs) (3)

ArchVision Family & Detail Warehouse (15)

ArchVision FOVEA (11)

ArchVision RPC (24)

Arcol (2)

Arcol (arcol.io) (7)

ARKI (getarki.com) (6)

Asana (3)

Assemble (Autodesk) (16)

AssetWise (Bentley) (8)

Atlassian (2)

AutoCAD (Autodesk) (98)

AutoCAD Architecture (Autodesk) (61)

AutoCAD Civil 3D (Autodesk) (57)

AutoCAD MEP (Autodesk) (32)

AutoCAD Plant 3D (Autodesk) (27)

AutoCrop, Dimension Assistant (Aiprentice) (3)

Autodesk Build (5)

Autodesk Construction Cloud (106)

Autodesk Content Catalog (60)

Autodesk Docs (Autodesk) (87)

Autodesk Express Tools (AutoCAD) (38)

Autodesk Forma (2)

Autodesk Learning (3)

AVAIL (68)

AWS (3)

Bentley iTwin Capture (ContextCapture) (7)

Bentley OpenBuildings Designer (AECOsim Building Designer) (11)

Bentley OpenFlows Sewer (SewerGEMS) (13)

Bentley OpenFlows Storm (StormCAD) (16)

Bentley OpenFlows Water (OpenFlows WaterGEMS) (15)

Bentley ProjectWise (ProjectWise 365) (30)

BIM 360 (Autodesk) (72)

BIM 42 Tools (10)

BIM Beats (7)

BIM One Analytics (5)

BIM One Tools (8)

BIM Pure (3)

BIM Track (25)

BIMcloud (Graphisoft) (4)

BIMobject (40)

BIMsmith (10)

BIMx (Graphisoft) (2)

Blender (32)

Bluebeam Cloud (65)

Bluebeam Drawings (legacy) (29)

Bluebeam Revu (106)

Bluebeam Studio (96)

Box (38)

Bricscad (2)

BuildCheck (BuildCheck.ai) (2)

CADdetails (8)

CalcTree (2)

Canoa (Canoa.supply) (3)

Canva (39)

Cesium (Bentley) (12)

CFD (Autodesk) (13)

ChatGPT (62)

Cinema 4D (Maxon) (4)

Civil Site Design (15)

Clarity (IMAGINiT) (34)

ClimateStudio (29)

CMiC (3)

COINS Auto-Section Box (34)

Conceptboard (8)

CONIX (CONIX.AI) (3)

Constructware (Autodesk - legacy) (8)

Corona (2)

Coursera (20)

cove (cove.tool) (43)

CTC BIM Batch Suite (CTC Software) (35)

CTC BIM Data Suite (CTC Software) (25)

CTC BIM Manager Suite (CTC Software) (42)

CTC BIM Project Suite (CTC Software) (41)

CTC CIM Manager Suite (Civil 3D) (13)

CTC CIM Project Suite (Civil 3D) (12)

CTC Express Tools for Civil 3D (CTC Software) (12)

CulvertMaster (10)

Custom AI Tools (13)

Custom Development (5)

Custom Solution (4)

D.TO (Design TOgether) (5)

D5 Render (Dimension 5) (40)

Datasmith (Epic Games) (23)

DBF (Digital Blue Foam) (5)

DDScad (Graphisoft) (3)

Deltek Ajera (4)

Deltek PIM (2)

Deltek Specpoint (20)

Deltek Vantagepoint (55)

Deltek Vision (7)

DesignAI (DesignAI.co) (4)

DiRoots (3)

DiRoots Tools (63)

Docebosaas (5)

DotSoft ToolPac (AutoCAD) (4)

DraftAid (3)

dRofus (Nemetschek) (15)

Dropbox (65)

Dynamo (Autodesk) (90)

eCheck (Archistar) (2)

eComm (Lynn Imaging) (3)

Egnyte (37)

Elefront (Grasshopper) (26)

Enscape for Archicad (2)

Enscape for Revit (92)

Enscape for Rhino (48)

Enscape for SketchUp (60)

Enscape for Vectorworks (4)

Epic Games RealityScan (RealityCapture) (12)

eTransmit for Revit (74)

Fieldwire (11)

FigJam (Figma) (16)

Figma Design (Figma) (22)

Figma Slides (Figma) (15)

Finch (Finch3D) (16)

FME (Safe Software) (8)

Fologram (2)

Forest Pro for Max (10)

Forma (Autodesk) (76)

form•Z (AutoDesSys) (4)

Generative Design in Revit (Autodesk) (31)

Geopogo Cities (Geopogo) (6)

GIMP (26)

Global eTraining (28)

Glyph (Chaos / EvolveLab) (21)

Google Docs (56)

Google Drive (65)

Google Gemini (31)

Google Meet (59)

Google Sheets (57)

Google Slides (39)

GoTo Meeting (54)

Grasshopper (McNeel) (59)

Grok Imagine (8)

Guardian (4)

Guided AI Plan Review™ (CivCheck) (3)

Helix (Chaos / EvolveLab) (18)

HIVE (CTC Software) (15)

Honeybee (Grasshopper) (34)

Human UI (Grasshopper) (21)

HydraCAD (12)

Hydraflow Extensions (13)

Hypar (36)

Ideate BIMLink (Ideate Software) (50)

Ideate Explorer (Ideate Software) (51)

Ideate Sticky (Ideate Software) (48)

Ideate StyleManager (Ideate Software) (46)

IdeateApps (Ideate Software) (44)

IESVE (10)

IMAGINiT Pulse (3)

IMAGINiT Utilities for AutoCAD (8)

IMAGINiT Utilities for Civil 3D (10)

IMAGINiT Utilities for Revit (24)

Info360 Insight (Innovyze) (8)

InfraWorks analysis tools (Autodesk) (24)

Insight (Autodesk) (46)

Inventor (Autodesk) (23)

IrisVR Prospect for Rhino (13)

Jamboard (Google - legacy) (6)

Kangaroo Physics (Grasshopper) (17)

Kinship (11)

Kiwi Codes (2)

KnowledgeSmart Skills Assessment (19)

Ladybug / Honeybee (34)

Ladybug Tools (Grasshopper) (39)

laiout (Laiout.co) (6)

LandFX (2)

Lands Design (Asuni) (7)

Layer (3)

LEAP Bridge Concrete (Bentley) (8)

LearnUpon (2)

LinkedIn Learning (formerly Lynda.com) (59)

Local Network File System (92)

Looker Studio (Google Data Studio) (5)

LookX (LookX.AI) (7)

LucidLink (5)

Lucidspark (5)

LumenRT (Bentley) (5)

Lumion (50)

MapWorks (Civil 3D, AutoCAD) (14)

MasterSpec (AIA) (45)

Materials Hub (Acelab USA) (3)

MattoBoard (Mattoboard) (6)

Maxwell Render (Next Limit) (4)

Microsoft Dynamics (4)

Microsoft Excel (112)

Microsoft OneNote (101)

Microsoft Power BI (85)

Microsoft PowerPoint (108)

Microsoft Publisher (55)

Microsoft Teams (111)

Microsoft Whiteboard (58)

Microsoft Word (112)

MicroStation (Bentley) (29)

Midjourney (51)

Milient (2)

Miro (72)

Monoceros (Grasshopper) (7)

Motif (8)

Mural (30)

Nasuni (19)

National CAD Standard Plug-in (8)

Navisworks Manage (Autodesk) (80)

Navisworks Simulate (Autodesk) (43)

NBS Chorus (NBS) (5)

NBS Source (NBS) (6)

Newforma (48)

Notion (25)

NVIDIA CloudXR (5)

NVIDIA GauGAN (3)

NVIDIA Iray (2)

NVIDIA Omniverse (7)

NVIDIA RTX Renderer (11)

One Click LCA (35)

OneClick Code (OneClickCode) (5)

OneDrive (88)

OneNote (3)

OpenAsset (Axomic) (31)

OpenBridge Designer (Bentley) (13)

OpenCities Planner (Bentley) (5)

OpenRail Designer (Bentley) (9)

OpenRoads Designer (Bentley) (14)

OpenSite Designer (Bentley) (11)

Orkestra (3)

Panzura (11)

Part3 (Part3.io) (6)

Pinnacle (Eagle Point Software) (28)

Pirros (20)

PlanGrid (Autodesk) (56)

PLAXIS (Bentley) (4)

Pollination (3)

Procore (82)

Procore Bid Management & Estimating (21)

Productivity Now (2)

Project Explorer (Civil 3D) (14)

ProjectWise (Bentley) (22)

ProStructures (Bentley) (7)

Pufferfish (Grasshopper) (14)

pyRevit (90)

qbiq (Qbiq.ai) (8)

QGIS (8)

Qlik Sense (2)

Qonic (2)

Quadri (Trimble) (3)

Qube! Render Manager (2)

QuickBooks (12)

RailClone for Max (4)

RAM Structural System (Bentley) (24)

Revit (Autodesk) (108)

Revit Batch Print (65)

Revit Energy Analysis (Autodesk) (31)

Revit Live (Autodesk) (13)

RevitLookup (50)

Revizto (46)

Rhino 3D (McNeel) (58)

Rhino.Inside.AutoCAD (McNeel) (10)

Rhino.Inside.Bricscad (McNeel) (2)

Rhino.Inside.Revit (McNeel) (52)

Robot Structural Analysis (Autodesk) (11)

Sage 300 Construction and Real Estate (5)

Sefaira (Trimble) (12)

ShapeDiver (14)

SharePoint (Microsoft) (86)

Simplebim (2)

SimScale (2)

Skema (Skema.ai) (15)

SketchBook Pro (2)

SketchUp (Trimble) (84)

Skillshare (8)

Slack (36)

Smart Overlays™ (Mbue.ai) (2)

Smartsheet (39)

Snaptrude (14)

Solibri Office (7)

Speckle for Rhino (22)

SpecLink Cloud (BSD) (38)

SpecLink-E (BSD) (21)

STAAD.Pro (Bentley) (16)

Stable Diffusion (2)

STACK │ Build & Operate (SmartUse) (2)

Stormboard (4)

Structural Bridge Design (Autodesk) (8)

SWAPP (Swapp.ai) (12)

Swatchbox (4)

Synthesis (Knowledge Architecture) (31)

Tableau (Salesforce) (17)

Tally (33)

Tekla Structural Designer (Trimble) (13)

Tekla Structures (Trimble) (17)

Tekla Tedds (Trimble) (6)

TestFit (37)

Thea Render (4)

TonicDM (5)

Trello (2)

Trimble Connect (36)

Trimble Connect AR (Trimble) (3)

Trimble Nova (Trimble) (5)

Trimble SysQue (Trimble) (5)

Trimble XR10 with HoloLens (Trimble) (2)

TwinMaster (2)

Twinmotion (Epic Games) (37)

Twinmotion for Revit (Epic Games) (60)

Twinmotion for Rhino (Epic Games) (30)

Unanet (9)

UNIFI Pro (UNIFI Labs - legacy) (15)

Unity (16)

Unreal Engine (Epic Games) (30)

V-Ray for 3ds Max (Chaos) (25)

V-Ray for Cinema 4D (Chaos) (3)

V-Ray for Maya (Chaos) (4)

V-Ray for Revit (Chaos) (25)

V-Ray for Rhino (Chaos) (20)

V-Ray for SketchUp (Chaos) (17)

V-Ray for Unreal (Chaos) (6)

Vantage (Chaos) (10)

Vault (Autodesk) (11)

Vcad for Power BI (Blogic s.r.l.) (3)

Vectorworks Architect (Vectorworks) (6)

Vectorworks Cloud Services (Vectorworks) (5)

Vectorworks Fundamentals (Vectorworks) (7)

Vectorworks Landmark (Vectorworks) (3)

Vectorworks Spotlight (Vectorworks) (4)

Veras (Chaos / EvolveLab) (32)

VIKTOR Platform (VIKTOR.AI) (2)

VIM (2)

VisiSpecs (11)

VisualARQ (Asuni) (3)

Viva Engage (2)

VRED (Autodesk) (5)

Wallacei (Grasshopper) (10)

Weaverbird (Grasshopper) (10)

Webex (Cisco) (35)

Wizer (2)

Zoom (98)