



INTRODUCTION

Architecture and Design (A&D) firms operate in a highly competitive and interconnected construction ecosystem. Work that used to be sourced locally can now be completed by a designer thousands of miles away. Large global firms need to collaborate with local firms to navigate the local context, culture, building codes, and economy.

To succeed in this global ecosystem, A&D firms need a collaboration-first approach — and the right tools to enable them. And the available technology is evolving rapidly.

New architecture, engineering, and construction (AEC) tech means designers no longer labor over drawing boards, paper, and ink.

Digital 3D iterations now augment physical models. And those 3D models can morph to serve 2D to 7D BIM workflows. Parametric and predictive modeling speed up the pace of design. The technological advancement is almost dizzying.

With those remarkable advancements come two notable costs: **The price tag attached to the tools**, but also the often overlooked **productivity costs** caused by introducing tools that aren't fit for companies' workflows (not to mention the time and expense associated with sourcing tools).

To that end, it has never been more important for AEC firms to carefully consider how they select technologies, and the criteria they consider in estimating the full costs and benefits of any particular tool.

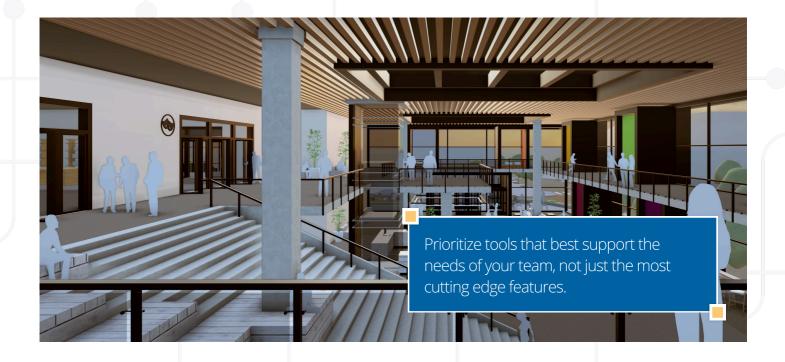
For that, we're here to help.

Read on for five factors to consider when selecting design tools to drive real ROI.

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01 Tools must be fit for purpose



Every AEC design team operates in its own unique way. Different approaches to predesign and site analysis, conceptual and schematic design, sustainability practices, visualization and rendering require different tools configured specifically for your processes.

Many firms choose tools based on their features or capabilities. And while these are of course important considerations, we suggest a different approach.

Start by defining the use cases you need to execute.

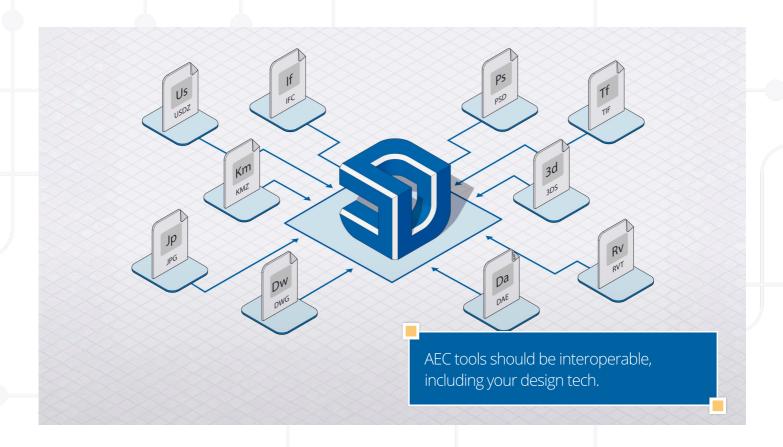
How well do the design tools being considered address team needs? How will they fit with the tools already in use? Is the learning curve shallow enough to drive adoption and return value quickly? These are the questions that will drive high adoption and tool ROI.

Don't just focus on features — focus on whether tools are fit for purpose.

- Survey your team(s) about required capabilities and integrations
- Inventory your tools for any gaps or redundancies
- Align on the subscription plans that are best for your business



02 New tools need to play nice with others



No software is ever used in isolation. In order to drive ROI, tools that support shared workflows have to integrate seamlessly...or risk creating headaches for users (and your business).

Too often, tech stacks are bandaged together with tools selected independently of each other. Long term, this approach is likely to result in tech debt, breakage, and poor performance.

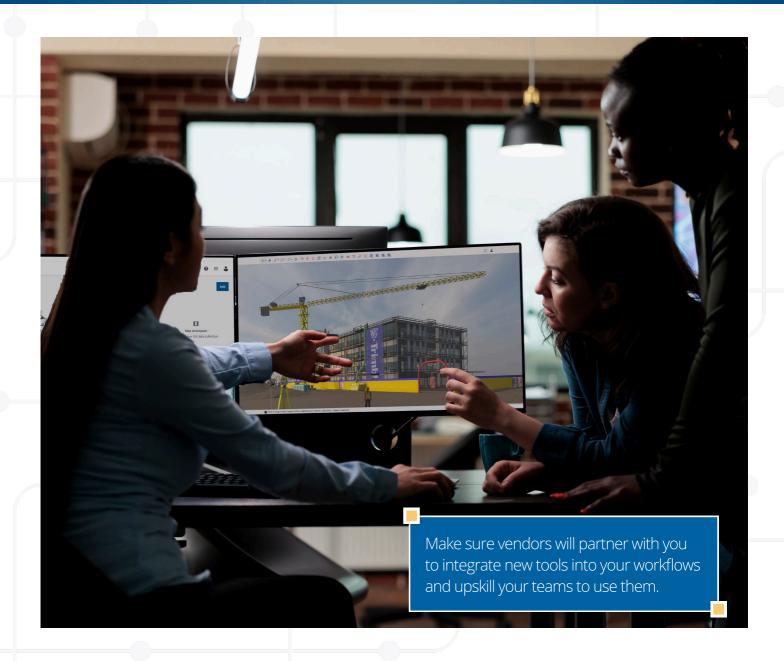
By prioritizing interoperability, and how well new tools will integrate with your existing stack, you'll minimize risk and help ensure that your stack is fit for purpose at the ecosystem level.

Siloed tools create manual workflows and rework. Interoperable tools improve quality and reduce rework.

- Take stock of your design process to identify how and when new tools plug in
- Assess and inventory your data mapping to ensure tools can be integrated
- Work with an outside expert, as needed, to build a holistic solution architecture



03 Vendors should help set you up for success



To maximize the ROI of technology investments, every team member needs to be adequately trained and onboarded.

In addition, team members must have appropriate access rights, know what they have access to, and learn how to succeed. Without taking these factors into account, investments in new tools quickly lose value.

Look for partners where onboarding goes beyond provisioning and feature overviews. Target solutions that not only provide the features you need, but the hands-on success support to drive value right "out of the box."





Consider whether your supplier can provide the training and support your team specifically needs, including continuing education and support resources to continuously meet — or exceed - the pace of industry progress.

Last, it is worth considering the total amount of training time required to get value out of a piece of software. Does one competitive toolset have a shorter learning curve and therefore a shorter time to value? After all, time is money.

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We realized during this personalized session with Trimble that we can work within SketchUp to accomplish all of our project goals — everything is integrated, from BIM workflows to IFC compatibility.

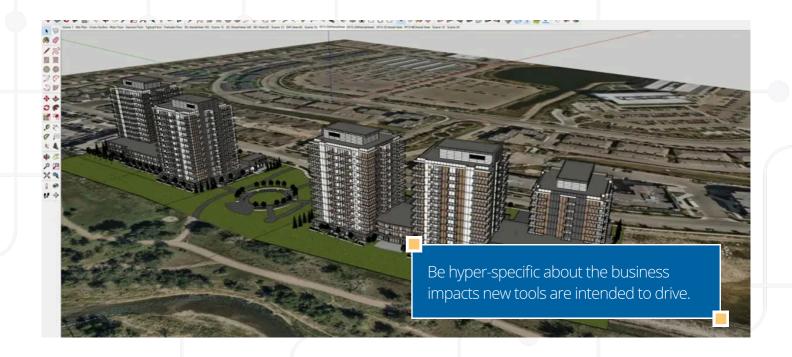
Cláudia Mateus | Co-Founder and Architecture Manager of <u>Brasil ao Cubo</u>

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- Identify the full range of team members who need onboarding to ensure coverage
- Engage adjacent vendors to identify implementation risks and downstream changes



04 Choose tools based on business priorities



Whatever your reasons for adding or switching tools, it is critical you know what impact you're trying to drive. Whether you're trying to submit accurate bids faster, keep better pace with project timelines, improve budget adherence, or enhance client satisfaction ratings, your technology stack — and associated evaluation criteria — should reflect those objectives.

For design teams, specifically, the ability to consistently generate timely, accurate bids is a key marker for increasing win rates and an important differentiator of profitable businesses.

Your tools should support standard modeling practices, in-house templates, and asset libraries that give teams a solid foundation to work from. This improves creative output and reduces focus on modeling technicalities.

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Being able to quickly and intuitively pull together detailed design projects in SketchUp is key for my role. It's the perfect combination to help us win contracts, get sign-off on projects from clients, and get building approvals from city officials.

Scott Miller | Remington Development Corporation





In addition, tooling that supports upskilling and knowledge transfer — including third-party extensions, shortcuts, and 3D assets — can boost the collective speed and efficiency of all design teams.

For <u>Lund + Slaatto</u>, using SketchUp helps designers execute workflows two weeks faster than normal by addressing critical process pain points. This is time that the firm rededicates to delivering design excellence, leading to a notable increase in win rates on competition entries with exceptionally short timelines.

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3D modeling is an efficient way of testing alternatives, communicating decisions to the rest of the office, and presenting proposals to our clients.

Henning Hagen Kolås & Daniel Lund Godbolt | Lund+Slaatto Architects

- Make sure business priorities are clearly defined and widely socialized
 - Rank and order capabilities against those priorities to support evaluation
- Check that your existing tools align with business priorities



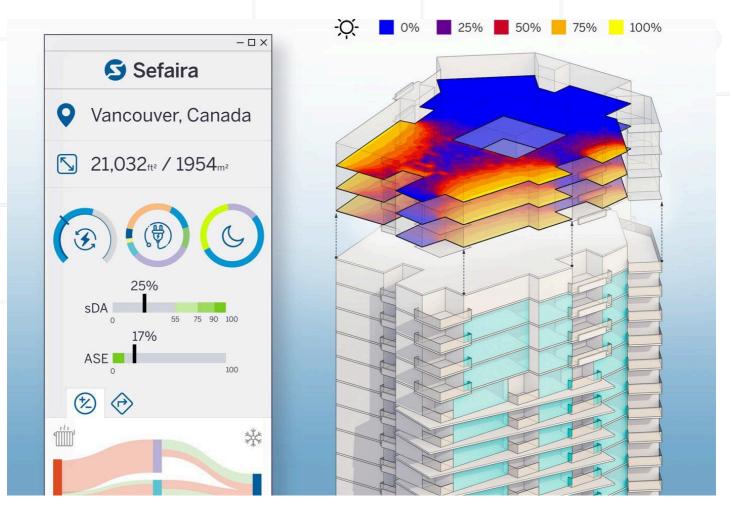
05 Tools should drive insight and aspiration

The right insights engaged at the right time can lead to immeasurable design and project value. A good technology stack contains features that help your designers make insight-driven decisions.

For example, can you test the impact of possible building forms and orientation on preliminary energy loads in SketchUp's Sefaira?

External consultants provide you with specialist knowledge that can help you plan better and execute projects more efficiently. Leveraging your technology to help you test and crystallize ideas and questions ahead of these conversations can help you collaborate more closely and efficiently.

Identify tools that have industry insights baked in to help your designers make data-driven decisions in real time.







For example, if you're looking to engage a sustainability consultant, can SketchUp's PreDesign help you collate climate insights and recommendations around ideal glazing ratios and shading options?

Suppose you're planning a showstopper visual for a competition entry. Can you leverage Photoreal Materials and photorealistic rendering to quickly

find the winning shot and try out multiple aesthetics? Or leverage Sefaira for early stage daylight and energy analysis to optimize for net zero targets?

An integrated design process enabled by good technology allows you to test design options, leading to optimal outcomes, especially during the crucial early stages where significant changes can still be made.

- Educate your design team on the insights their tools can provide
- Encourage the use of insights throughout your design process
- Use your technology insights to get the most out of your external consultants



CONCLUSION



By carefully considering the features, interoperability, cost, and time required to resource and get value out of your technology, your entire team will be empowered and equipped to contribute to superb designs.

A combination of the right talent, workflow and tools will lead to exceptional design quality delivered efficiently — a perfect recipe for winning more proposals and securing return clients.

In real estate, they say "you make your money when you buy." The same is true for technology decisions — more thoughtful evaluation up-front yields better downstream outputs and business results.

Imagine a world where iteration is made easier and more quickly; one where your tech stack preempts sensitive design factors; where you have more productive conversations with stakeholders and better real-time design feedback throughout the process.

For design teams, interoperable technology with the right training will ensure that critical collaboration is much more seamless. Fewer data blocks mean fewer clashes between architectural details and structural and mechanical elements. And better documentation means smoother builds.

What could your team achieve?

It all starts with the choices you make around technology and tools to equip your teams.

Free Savings Calculator

Could you shorten your time to value with more robust, cost-effective design tech?

Case Study

See how SketchUp and a life-cycle BIM workflow reduced Chengdu Hotel's construction time by 50%

Get a Demo

Explore how SketchUp is built for design, and designed to meet the needs of your business.



Built for design. **Designed for business.**

- ✓ Desktop, iPad and web modelers
- View 3D models on mobile or tablet devices
- Cloud storage and collaboration
- ✓ Professional 2D documentation
- Support for multiple file formats
- ✓ Native Revit importer
- Access to 1M+ prebuilt models
- Access to 1000+ third-party extensions

- Photoreal Materials and Environments
- Photorealistic rendering, powered by industry-standard V-Ray from Chaos
- Quick climate insights and design recommendations
- Powerful building performance analysis
- Scan-to-3D workflows with point cloud data
- Geolocate and import site terrain and existing 3D buildings







LEARNING RESOURCES



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SketchUp's blog hosts our latest content.



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Connect with the community & ask technical questions.



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SketchUp Campus

SketchUp's podcast on iTunes.

SketchUp's formal learning platform.



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SketchUp YouTube

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