

HOW TO CHOOSE THE BEST CAD LICENSING MODEL FOR YOUR COMPANY

A hands-on guide to understanding CAD licensing, evaluating trade-offs, and selecting a model tailored to support what matters most to your organization.

INTRODUCTION

CAD software users range from large enterprises with ongoing projects to startups with short-term needs. Even a casual observer would note that no single CAD licensing model could work optimally for every organization. Still, some major CAD software publishers are shifting away from perpetual (buy-to-own) to subscription-based (pay-as-you-go) licensing.

Perpetual licenses are a one-time purchase typically treated as a capital expense (CapEx); these were traditionally preferred by financial leaders for offsetting costs through long-term depreciation and amortization. In contrast, subscription licenses can be purchased for a monthly, quarterly, or yearly term and are usually classified as an operating expense (OpEx).

Understanding these licensing models and aligning them with your business objectives is more critical than ever before.

The CAD industry continues to shift toward subscription-based (pay-as-you-go) licensing, with several major vendors having already made the transition. The pervasiveness and availability of scalable cloud infrastructure make it easier to shift away from perpetual license models but ultimately, making the change is primarily a business decision. Furthermore, subscription-based SaaS (software as a service) updates automatically, minimizing IT costs. (We will comprehensively discuss the pros and cons of each licensing model in section 2.)

However, SOLIDWORKS®, one of the leading CAD companies in the market today, still offers both CapEx and OpEx license models. As mentioned above, different project timelines, budget constraints, and

business goals preclude one-size-fits-all decisions regarding obtaining licensed CAD software. For example, a startup renting software for a few months has very different needs from an established firm standardizing on a CAD platform for over a decade.

By providing both options, SOLIDWORKS empowers organizations to choose what works best for their business model: the lower upfront cost and scalability of a subscription or the long-term investment and security of a perpetual license.

In this e-book, we will discuss the following issues:

- CapEx and OpEx Licensing Compared
- Strategic Pros and Cons for CapEx and OpEx
- Evolving CAD Buying Trends by Company Size
- Five Key Questions for CAD Licensing Evaluation
- CAD Licensing Through a Strategic Lens

Our goal is to help engineering and financial decision-makers understand and compare licensing models from financial, operational, and strategic perspectives. We want to support your business and product development objectives while protecting your bottom line.

CAPEX AND OPEX LICENSING COMPARED

Companies must evaluate whether they prefer the predictability and control of ownership with perpetual licenses (CapEx) or the agility and lower entry cost of subscription licenses (OpEx). Understanding the advantages and disadvantages of each is crucial for organizations making strategic software investments. (See Table 1.)

CapEx/perpetual licenses are purchased outright and treated as a long-term asset that depreciates over time. In contrast, OpEx licenses are term- or subscription-based and are classified as a recurring operational cost that is often easier to justify in annual budgets.

CapEx and OpEx licensing models reflect a trade-off between ownership and flexibility. The right choice depends on many factors, including financial goals, IT resources, and expectations of how quickly your company will grow or change.

TABLE 1: KEY DIFFERENCES BETWEEN CAPEX AND OPEX

	CAPEX (PERPETUAL)	OPEX (SUBSCRIPTION)
Ownership and Term	<ul style="list-style-type: none">One-time purchase.Permanent right to use a specific software version.	<ul style="list-style-type: none">Recurring fee.Time-limited right to use the software (monthly, quarterly, or annually).
Accounting	<ul style="list-style-type: none">Regarded as a capital expenditure (asset) that depreciates over years.Higher upfront cost.	<ul style="list-style-type: none">Regarded as an operating expense.Smaller regular payments, not a long-term asset.
Upgrades and Support	<ul style="list-style-type: none">Not included in the base price.Requires an annual maintenance plan for updates/support.	<ul style="list-style-type: none">Included in the fee.Users get updates, new versions, and support with an active subscription.
Cost Over Time	<ul style="list-style-type: none">Lower total cost over the long term.Most economical beyond approximately four to five years.	<ul style="list-style-type: none">Lower upfront cost, but cumulative cost increases.Can exceed perpetual license + maintenance after several years.
Flexibility and Scaling	<ul style="list-style-type: none">Fixed license count.Scaling up can require new software <i>and</i> IT expenditure.Harder to scale down.	<ul style="list-style-type: none">Flexible to scale up/down.No additional IT resources needed for scaling up.Scaling down is simple.
Access and Portability	<ul style="list-style-type: none">Tied to hardware or network-licensed servers.IT management can be expensive and complex.	<ul style="list-style-type: none">Cloud-connected (excludes term). Accessible from multiple devices.Easy IT management with no additional costs.
Cash Flow Impact	<ul style="list-style-type: none">Large lump-sum upfront payment affects capital budgets.Ongoing updates optional.	<ul style="list-style-type: none">Smooth cash flow with monthly payments. Frees up capital for other investments.Updates included.

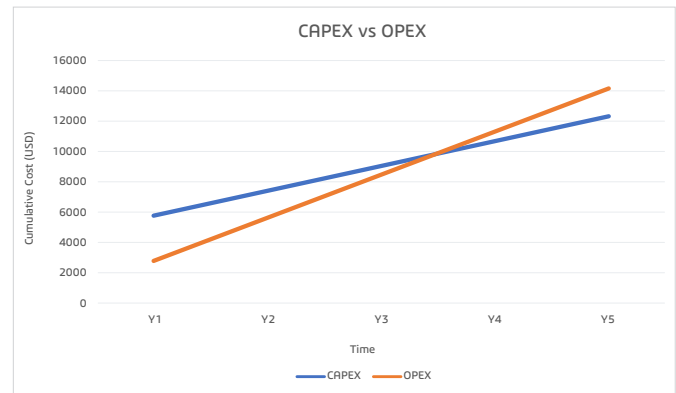
STRATEGIC PROS AND CONS FOR CAPEX AND OPEX

Across the industry, major CAD vendors are shifting from the perpetual to the software as a service (SaaS) model. Not long ago the standard was buying CAD software via a permanent license through a reseller, installing it on-premises, and optionally paying for support. However, CAD buyers today have more licensing options to consider.

It is well worth considering the details of the advantages and disadvantages of perpetual (CapEx) and subscription (OpEx) licensing. When evaluating CAD license models, companies should consider weighing the pros and cons of each model regarding cost, flexibility, risk, and alignment with long-term goals.

Perpetual License (CapEx) Advantages:

- **Long-Term Cost Savings:** If software will be used for five or more years, a perpetual license can cost less in the long run, because paying once (plus optional maintenance) typically totals less than five years of equivalent subscription fees. This provides a lower total cost of ownership for long-term usage.
- **Ownership and Stability:** You “own” forever the right to use the software version you purchased. This guarantees access to your tools and data even if budgets are tighter in the future. You can maintain a familiar, stable software environment without mandatory changes. For example, a design firm could stick with a particular SOLIDWORKS version for several years, without incurring additional costs, if it meets their needs.
- **Asset Value and Depreciation:** A software purchase can be capitalized. Some firms prefer CapEx because the software license becomes an asset on the balance sheet and can be depreciated, potentially offering tax benefits. It also allows the cost to be treated as a capital expenditure. For some companies, this may be easier to approve for long-term investments like engineering or design tools, rather than impacting short-term operating expense (OpEx) budgets.
- **No Need for Ongoing Payments:** Once purchased, a perpetual license never expires. Even if you choose to stop paying for maintenance, you still have the rights to use the last version obtained. There's no risk of losing access to the software due to a budget cut (though you forego software updates).



Perpetual License (CapEx) Disadvantages:

- **High Initial Cost:** The significant upfront cost of several licenses for a team can strain capital budgets and create a financial risk if the software ends up underutilized. A high initial cost can be a barrier for startups or small businesses with limited cash flow.
- **Ongoing Maintenance Fees:** Annual maintenance is usually required to keep software up-to-date and supported. Over several years these additional charges add to the total cost. If you drop maintenance, software can quickly become outdated and compatibility issues may occur over time.
- **Less Flexibility:** Once a perpetual license is purchased, the capital is committed. If your needs change, such as downsizing the engineering team or completing a major project, you cannot recover that investment. Scaling down is difficult, and scaling up requires new capital expenditures. Additionally, switching to different software becomes more challenging due to the initial investment already made. This lack of flexibility can be a disadvantage in fast-changing markets.
- **Technology Lock-In:** Perpetual licenses often tie you to specific versions unless you keep paying for upgrades. If you don't keep upgrading, you might miss new features or file format changes. Over an extended period, a perpetual license without updates can become obsolete or incompatible with third-party software. Also, in some cases, running old software can pose security risks if it is not regularly patched.

Subscription/Term License (OpEx) Advantages:

- **Lower Upfront and Predictable Ongoing Costs:** Subscriptions typically are paid quarterly or annually, significantly reducing the initial expenditure. This lowers the barrier to entry, which might be critical for small- and medium-sized businesses. Costs are spread out and more predictable as an operations budget item, which simplifies budgeting because there are no large spikes as with CapEx software purchases.
- **Always Latest Version and Support:** With a live subscription you automatically get access to the latest releases, features, and fixes. There's no need to plan for separate upgrade costs or major version migrations. The software continuously evolves via regular online updates. This also means all users are on the same version, which facilitates collaboration among geographically separated teams. Technical support is generally included in the price, ensuring help is available without extra fees.
- **Flexibility and Scalability:** OpEx licensing shines in flexibility. Need an extra CAD seat for three months? You can often add a term license and drop it later, paying only for what you need, when you need it. This agility is invaluable for project-based businesses or fluctuating workloads. Similarly, during growth periods you can add subscriptions without a huge capital hit; if downsizing, you can choose not to renew some subscriptions in the next cycle.
- **Access to Cloud and Collaboration Features:** Many modern CAD subscriptions come with cloud-connected capabilities. For instance, named-user subscriptions allow multi-device use (office PC, home laptop) with data in the cloud for access from anywhere. Some CAD vendors bundle cloud storage or collaboration platforms with subscriptions. This can improve workflows (e.g., easy sharing of CAD models, web-based viewing) and reduce the need for on-premises infrastructure. Essentially, the SaaS model often includes an ecosystem of services beyond just the CAD software license.
- **Accounting Benefits:** From a financial perspective, operating expenses can be beneficial because they don't tie up capital. Companies can treat software as an ongoing expense that adjusts with business activity, spending more when revenue grows and cutting back when it slows. Because technology evolves at a breakneck pace, many financial leaders prefer OpEx flexibility: A company can easily and quickly adjust operational spending by starting or stopping services as needed with less risk of owning assets that become outdated. A company can also avoid irregular capital outlays by converting large upfront investments into steady, predictable payments to improve cash flow and simplify budget planning.

Subscription/Term License (OpEx) Disadvantages:

- **Higher Long-Term Cost Potential:** While cheaper in the short run, over many years a subscription can end up costing more than a one-time purchase. As noted above, typically by around year three of continuous use, the total paid in subscriptions can exceed the cost of a perpetual license plus maintenance. For example, if you plan to use the software for 10 years, a subscription could be substantially more expensive overall.
- **Ongoing Payment Obligation:** With a subscription, if you stop paying, you lose the software access. This "software rental" aspect can be risky if budgets are cut or a project is paused without funding: You might find your tools inaccessible, and without residual value. Although you have paid for five years, you own no tangible software products. Some customers feel "locked in" to continue paying, which can be frustrating if prices increase or the software is used less than expected.
- **Dependency on Vendor and Internet:** Especially with cloud-based SaaS, you are reliant on your vendor's service availability. A vendor outage or internet connection failure can interrupt your work. (Although many CAD subscriptions still use locally installed software, cloud licensing requires periodic internet verification.) Also, you must trust that vendor updates won't disrupt your workflow because you may have less control over when to adopt a new version, since updates roll out continuously. If a subscription includes cloud storage, you must ensure the vendor's security and data policies meet your requirements.
- **Accounting and Budget Perception:** Some organizations have limitations on increasing operating budgets. The flip side of OpEx flexibility is having a recurring expense line that must be justified every year. Over time subscription costs might escalate if vendors occasionally raise prices or discontinue discounts. Also, unlike an asset you pay for once, OpEx expenditures might face scrutiny if the total expense grows larger than an equivalent asset purchase would have cost. Companies with ample cash might prefer to invest in an asset (CapEx) and have something to show on the balance sheet rather than committing to perpetual rental.

In summary, CapEx/perpetual licenses are advantageous for organizations seeking long-term cost efficiency, full ownership, and stable environments, especially when they have capital to invest upfront. On the other hand, OpEx/subscription licenses excel in flexibility, initial affordability, and ensuring use of the latest technology. The decision often depends on your financial approach and how your team uses engineering software in day-to-day operations.

EVOLVING CAD BUYING TRENDS BY COMPANY SIZE

The shift from perpetual to subscription licensing affects small business and startups, midsize companies, and large enterprises differently as CAD software buying patterns evolve.

Small Businesses and Startups

Small firms traditionally found it difficult to afford top-tier CAD software due to high upfront costs. They might have bought a couple of perpetual licenses and kept using older versions as long as possible to avoid paying for upgrades, or they might have opted for less expensive alternatives.

Today's purchasing models heavily favor small businesses and startups with subscription licensing and even short-term licenses that make professional CAD tools more accessible. For example, a startup can subscribe to SOLIDWORKS for just a few months or a small machine shop can maintain a yearly subscription without a pricey capital expenditure. The lower upfront expense of OpEx models is increasingly attractive to startups and companies in flux.

As a result, small businesses are now more likely to use the same high-end CAD as larger firms (a real advantage when competing for new business) and pay incrementally for what they need for only as long as they need it. The trade-off is paying for the recurring costs to keep their tools active. Another, hidden, trade-off: Learning tier one CAD tools is not an insignificant effort, regardless of "easy to use" marketing messaging campaigns.

Midsize Companies

In the past, midsize businesses often purchased perpetual licenses for core users and paid annual maintenance, requiring them to predict future growth and buy enough licenses without knowing whether demand would increase or decrease in a given year. Some would delay upgrades to avoid maintenance fees in lean years, causing them to run outdated software.

Today midsize firms are becoming more serious about adopting subscription models, although some take a hybrid approach. For instance, a company might maintain some legacy perpetual licenses while buying subscriptions for new seats to accommodate expansion or new projects. However, cost control is key. Therefore, companies may negotiate multiyear subscription deals with fixed pricing to manage OpEx costs.

The trend is clearly toward subscriptions for ease of management, but there is often an internal financial discussion: *Should we capitalize some software or expense all of it?* Some midsize firms with available capital may still prefer to buy a few perpetual licenses for long-term users along with subscriptions for transient needs.

Large Enterprises

Large enterprises traditionally bought large numbers of perpetual licenses managed by dedicated IT teams; however, OpEx-based subscriptions continue to grow in popularity. Enterprise agreements may center on named-user models, ensuring all engineers use the latest release. This eliminates compatibility issues and improves collaboration. Subscriptions also offer scalability.

If a project requires 50 more CAD seats for a year, it's easy to add them temporarily, unlike with perpetual models that require significant unplanned CapEx or force teams to share too few licenses.

Shifting CAD software to OpEx provides budgeting advantages, but it also increases dependence on the vendor's pricing and product roadmap. Bigger firms need confidence that updates will continue and costs won't spike. Some use the threat of switching vendors as leverage in negotiations. Ironically, subscription models make that easier, at least in theory. In practice, though, data migration remains a major hurdle.



All sizes of businesses are asking more questions about value: Instead of paying once and using software for a decade in the CapEx model, they can now evaluate yearly whether the software and its updates are worth the ongoing cost in the OpEx model. This may inadvertently put a healthy kind of pressure on software vendors to continually provide their customers with high-value software enhancements that will improve user productivity and positively impact the bottom line.

Furthermore, it is worth noting that small and midsize companies sometimes receive capital infusions that must be spent as CapEx rather than OpEx. SOLIDWORKS' current licensing model supports both approaches, giving teams the flexibility to align software purchases with their financial strategy.

FIVE KEY QUESTIONS FOR CAD LICENSING EVALUATION

When evaluating licensing options for CAD software, engineering or procurement leaders should consider more than just price. The following critical questions to ask CAD vendors, along with your internal stakeholders, will help you make an informed decision.

1. What Licensing Models Are Available?

Does the vendor offer perpetual licenses, subscription licenses, or both? If both, what is the cost difference over the expected usage period (e.g., three-year or five-year comparison)? For example, SOLIDWORKS offers both term and perpetual, whereas several other CAD vendors now offer only subscriptions. Ask the vendor to clarify all available licensing options, because these details frame your negotiation and budgeting strategy.

2. How Are Subscriptions Structured?

Is a subscription (OpEx) model monthly, annual, or multiyear? Is training, support, cloud storage, or extra tools such as viewers included? Regarding renewal terms: Is the price locked, or could it change year-to-year? Ask about different tiers of subscriptions that add more capabilities. Can you negotiate a higher tier when purchasing more subscriptions for the same price or longer timeframe? Note that locking in a three-year rate might be worth it to avoid unexpected price hikes.

3. How Does License Portability and Sharing Work?

Make sure you understand who can use the software, where they can use it, and whether the licensing setup fits how your team works, especially if people work remotely or from different offices. Is the license tied to a single user (named user) or a machine, or is it a floating network license? For named-user subscriptions, can one user be logged in on two devices or are home-use rights available for a second installation? For network floating licenses (common in SOLIDWORKS perpetual setups), clarify how users check out.

4. What If We Don't Renew?

Before choosing a subscription, ask what happens if you don't renew. Can you still open or view files? Is there a grace period or reinstatement option? For cloud-based tools, confirm you can export all CAD data in standard formats. The files are yours, of course, but will you be able to open them without an active license?

5. What Is the License Transfer or Expansion Policy?

For perpetual licenses, ask about transferability: Can they be transferred to another business unit? Some license agreements have restrictions about transfers. For subscriptions, ask about adding more users mid-term or removing licenses at renewal. If your team operates internationally, be sure to ask whether licenses purchased in one region can be used in another. Many vendors enforce region-, country-, or site-specific license restrictions that can limit flexibility across global teams.

By posing these questions along with questions specific to your company, you'll get not only a clear picture of the immediate costs and features of the CAD licensing options, but also insight into a vendor's partnership approach and flexibility. Because CAD software is often a long-term investment in both money and process, you want a licensing model that fits your company's financial model (CapEx vs OpEx) and scales with your needs. You also want a vendor who will support your success with the right tools.



CAD LICENSING THROUGH A STRATEGIC LENS

Choosing the right CAD licensing model isn't just about cost; it's also about strategic alignment. The decision between CapEx (perpetual) and OpEx (subscription) models should reflect how your company invests in tools, manages cash flow, plans for growth, and adapts to change. Perpetual licenses offer ownership and long-term savings for companies that can invest up front and prefer stability. Subscriptions offer flexibility, predictable spending, and always-updated tools for teams that need to scale or shift quickly.

No model is universally more advantageous than the other.

The right choice depends on your business size, budget approval process, IT strategy, and on your company's approach to product development. Hybrid approaches are increasingly common, especially for midsize firms seeking to balance long-term stability for core users with flexibility for short-term needs.

Just as CAD designs evolve, so must your approach to licensing.

As software vendors continue to promote cloud-first, subscription-based models, make sure to ask the right questions

before you commit. Consider licensing structure, renewal policies, data access if you don't renew, and how well the model supports your team's workflow, whether in one office or many geographic locations.

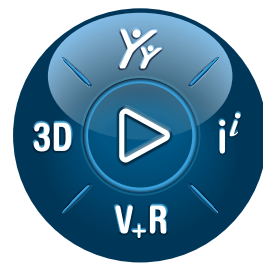
Above all, choose a CAD licensing model that suits your current requirements but also supports future growth. A good decision today can protect your budget, maximize your team's output, and ensure that your software investment keeps pace with your business objectives.

Let your licensing model serve your strategy, not the other way around.

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