

Electronic Licensing: The Build vs. Buy Decision



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Introduction

Software and hardware vendors today face profitability challenges from both internal and external sources. Factors such as rampant piracy, unlicensed use, and support on outdated versions cost the industry billions of dollars each year. At the same time, customers are demanding new ways of buying software, including subscription or term-based pricing models and software as a service. Software and hardware vendors that embed software in the products using hard-coded licensing terms and inflexible pricing models have difficulty responding to these changing market demands.

More than ever, technology companies need an electronic licensing and updating solution to provide flexibility for their changing businesses. They need a system that will prevent unlicensed use, automate end-user compliance, easily enable changes to licensing terms based on evolving market needs, and flexibly create different product versions to accommodate customer requirements. This licensing system needs to be fully integrated to other key business systems like ERP and CRM. Companies who achieve this ultimately reduce operational costs, promote profitability and increase revenue.

When considering a licensing strategy, software and hardware vendors must decide whether to build this capability in house or leverage technology from a third-party vendor. Industry-wide, more than two-thirds of all companies implementing electronic licensing choose a commercial licensing solution with a much smaller percentage of companies deciding to develop a solution internally (at least initially).

There are a number of short-term and long-term issues to consider when weighing the two approaches. This paper aims to guide companies in understanding the important elements of an electronic licensing solution, and the numerous factors to consider when making the build vs. buy decision. It walks them through the three main areas that are most integral to the

decision: total cost of ownership, flexibility of the solution and project risk. It encourages companies to evaluate their options in light of these considerations, as well as expected return on investment – the driving force behind any business decision.

Key Elements of an Electronic Licensing Solution

First, it's important to understand what characteristics software and hardware vendors need in an electronic licensing solution. Traditionally, licensing's function has been primarily focused on preventing piracy and unlicensed use – or blocking revenue leaks. This is certainly a critical element of a licensing solution. Today however, licensing takes on a broader role in the enterprise, emerging as a way to increase product revenue by giving users more options and flexibility in the purchase and use of products.

Following are some of the key elements of a licensing solution that protects vendor assets, streamlines operations, automates end-user compliance, reduces customer support costs and promotes profitability.

Prevention of Piracy and Unlicensed Use

The primary goal of licensing is to protect products from piracy and unlicensed use. To accomplish that, software and hardware vendors need state-of-the-art electronic licensing to ensure that all licensed products run only on authorized hardware by licensed users. The solution should also easily enforce license policies with customizable security settings and the ability to cripple products if pirated. By making it harder to "crack" software, companies can convert more casual users to paying customers and increase revenue. At the same time, vendors should make it easy for paying customers to access their products with best-of-breed encryption technology.

Flexible Licensing

Because end customers' needs vary greatly, the ability to adapt licensing models, product versions and components

to market and customer needs is an essential element of any licensing solution. The flexibility to change license terms allows companies to offer custom products and new pricing models, as well as enables them to switch from CPU-based licensing to named-user licensing, concurrent licensing, or to detached (or commuter) licensing – without incurring expensive development costs.

By enabling software terms to be changed and electronically enforced, vendors have significant flexibility to offer demo, evaluation, “lite,” standard or premium product versions with no change to the product’s binary. Or, they can accelerate revenue by offering trial versions of products that can easily be converted to standard versions. The licensing solution should be flexible enough to allow vendors to make such licensing changes in days, instead of months. Ultimately, this lets companies penetrate new market segments, creatively price and package products and increase revenue.

Automating the Entire Software Lifecycle

License administration can be a significant burden for technology companies. Vendors can reduce the hassle of administration, and reduce operational costs with licensing solutions that automate license and entitlement management. Key features include a Web-based interface enabling nontechnical users to manage licensing-related tasks like generating, moving and returning their licenses from a Web interface; and the ability to integrate licensing operations with ERP and CRM systems.

Customer Experience

It’s estimated that more than 80 percent of support calls related to licensing arise from end-user error upon first installation of a product. Other support calls come in from end users moving or changing existing licenses. The inability to get licensing right the first time, and flexibly adjust it when needed, delays usage of a vendor’s product and increases frustration for end users. Plus, it adds significantly to support costs for vendors.

By improving the customer experience, companies increase user satisfaction and reduce support costs. Essential to enhancing the customer experience is creating a seamless, “zero-touch” end user experience during installs and changes, like re-hosts. As a result, customers can begin using products sooner, and vendors lower support costs and prevent revenue leaks due to license changes.

Business and Market Intelligence

It’s essential for technology companies to understand their product usage. A well-designed software licensing solution should provide extensive visibility into product sales and market trends, including the most popular software modules, frequently used application features, license expiration dates, customer upgrade eligibility, and order fulfillment status. This repository of data – when combined with reporting and search capabilities – can serve as a powerful businessplanning tool. By mining current business and market intelligence, companies can make more informed decisions about future product direction and

development, including how to best allocate their software development resources.

As software and hardware vendors analyze the build vs. buy decision, keeping these key elements in mind can ensure that important capabilities are factored into their decisions and plans, and that they put in place a comprehensive, effective licensing solution.

Total Cost of Ownership

Total cost of ownership is the first major factor to consider when evaluating the build vs. buy decision. Companies must consider both the short-term and long-term costs of creating, maintaining, supporting and updating a licensing solution. While an internally developed solution may look more cost effective in the short term, software and hardware vendors must keep in mind the extended costs of choosing to build a licensing solution on their own.

To thoroughly assess the total cost of ownership in associated with electronic licensing solutions, companies should look at several major cost categories: initial system development; application updates and ongoing costs; as well as the costs of delaying implementation of a solution, which include support costs and lost revenue.

System Development Costs

Initial system creation accounts for a significant portion of the overall time and costs involved in building an electronic licensing system in house. Costs can be split into development and opportunity costs.

Development Costs

Many companies believe that they can save considerably by building rather than buying a commercial solution. However, they may not be fully looking at the costs of using their internal technology resources for the project. Vendors must dedicate technical staff to development, from design to coding to implementation and testing.

It’s estimated that it takes a typical software company up to five full-time equivalents (FTEs) to deploy and maintain an entry-level licensing system. The actual costs of using internal technical staff vary depending on salaries and the length of the project, however, one can generally calculate total cost of a developer, including benefits, at \$150,000 per year. If five developers devote six months to the project, the company has invested about \$375,000 into the system.

Those figures don’t take into consideration any changes in requirements or business needs that might come about in the course of the project—changes that could require developers to make fundamental changes or even start over. In fact, there are a number of unknowns that make the real cost of in-house development nearly impossible to predict. Often, these unknowns take the cost of development much higher than projected. The issue of project risk is further discussed later in this paper.

Opportunity Costs

One reason technology companies seriously consider building a licensing solution in-house is that these organizations already have talented technical teams. Why not leverage these highly skilled in-house resources? However, it pays to look at the issue more closely.

Technology companies grow revenue and profitability by delivering new features and functionality to meet customer demands. When vendors dedicate technical staff resources to development of an in-house licensing system, they can drain their core development efforts and delay time to market for new products. Most likely, any money perceived as saved by building a software licensing solution internally will be more than offset by the diversion of key resources away from the core business. The best way to optimize productivity is to keep development resources focused right where they should be: on differentiating products in the marketplace.

According to industry averages, a typical software company generates approximately \$1 million in revenue for every R&D engineer it employs. Given this, for every development resource diverted to building an electronic licensing solution, the company is losing the opportunity to generate revenues in the range of \$750K to a \$1M. In addition to the salary costs of an engineer, companies must include the opportunity cost of putting engineers on licensing projects.

By implementing a well-established commercial licensing solution, companies leverage years, if not decades, of expertise, specifically in licensing. Plus, they can keep their internal development teams focused on bringing new features and functionality to market, which ultimately has a greater impact on the bottom line.

System Updates and Maintenance Costs

Once companies build their systems, they must continuously maintain and update them to ensure that they meet changing internal and external demands, and that security is still adequate. This involves a considerable amount of research and development, and hence cost, to scope out current needs and develop new features accordingly. Most often, updates require a great deal of development because most internally developed licensing systems lack the flexibility to be altered easily.

By selecting a commercial licensing solution, companies are freed from having to dedicate development resources to ongoing system updates, maintenance and refreshes. The vendor takes on the responsibility of maintenance and keeping the solution updated to satisfy changing security, customer, and broader market demands. To stay competitive and relevant for their customers, vendors themselves must invest in research and development to ensure solutions meet customers' current and future needs. The system updates can be quite extensive. The ability to respond to market demands with new license models is an essential component of any electronic licensing solution. To maximize revenue, companies need the flexibility to change

licensing as business needs dictate. Licensing must address multiple sales models, from direct to channel to retail, as well as technology changes in the industry, such as multi-core CPUs and grid computing. While companies can design a flexible system, this requires substantial research and development, and therefore technical staff hours.

By contrast, a commercial licensing solution is designed for exceptional flexibility, and the cost of change is shared among thousands of customers. Vendors understand that customers have multiple sales models and ongoing technology challenges, and have developed systems that anticipate and accommodate changes.

Support Costs

As mentioned previously, about 80 percent of support calls related to licensing arise from end-user error upon first installation of a product, while most of the rest arise from users moving or changing licenses. These numbers demonstrate the importance of the customer experience as a means to controlling support costs.

It's challenging for technology companies to cost-effectively design and maintain a smooth customer experience in an internally developed licensing system, especially as customer and market needs change. Additionally, end customers are accustomed to standard licensing experiences across the many applications which they already use. When an application does not adhere to those familiar standards and guidelines, customers may incur a greater degree of difficulty related to product licensing.

Innovative out-of-the-box solutions take into account the importance of the user experience in terms of customer satisfaction and support cost control. New functionality allows end users to activate and change licenses with a single click – without having to call the vendor's support staff. These features enable end users to make legitimate changes to their machines, within certain guidelines, without experiencing license outages or having to rely on customer support. At the same time, they automate the process of gathering required information about a user's environment, eliminating the chance for user error, as well as automatically enabling temporary licenses to lessen instances of license outages.

Training Costs

Technology companies bring specific expertise in their own solutions – an expertise that's been years in the making and has required a significant investment. Though they likely have excellent in-house technical resources, those individuals lack subject matter or domain-specific knowledge in electronic licensing. Therefore, it's difficult for companies to design a system that will be simple for sales and support staff to learn easily. Often, custom-built solutions carry an extra level of complexity, making it more costly to train internal staff.

Makers of commercial licensing solutions are domain experts in licensing technology, and have spent years developing and

refining their solutions for ease of use and implementation. While some training may be involved, the training costs on a commercial solution are typically considerably less than with internally developed solutions. While it's difficult to put a dollar value on the cost of training engineers to be experts in licensing, it remains an important factor in weighing costs.

Product Change Costs

Product changes are often a major area where companies fail to forecast costs adequately. But in reality, the financial burden of maintaining an in-house solution continues to grow with each new product a company introduces or acquires, every new platform (operating system or hardware) on which it deploys its products, and any new software package it bundles. In each case, the company must invest in new development and operational integration, whether internal, for maintenance or due to the merging of acquired companies' licensing systems; as well as account for build and release time.

Using a commercial solution, software and hardware vendors avoid the costly development expenses and delays that are inevitable when making changes to custom systems. Rather than reinventing their systems each time, companies can leverage the innate flexibility of commercial licensing technology, which gives them the ability to price, package and license products any way customers want – including the integration of acquired software products. Companies can remain agile, making changes anytime the need arises.

Anti-Piracy Costs

Rampant piracy and unlicensed use cost the industry billions of dollars every year, making this one of the top challenges that technology companies face. The Business Software Alliance estimates that worldwide \$30 billion worth of software is pirated annually, with rates in the U.S. and Western Europe estimated at 23 percent and 36 percent, respectively. Piracy tactics are constantly becoming more and more advanced, requiring vendors to stay continuously on top of their anti-piracy measures. Remaining abreast of current piracy methods, protecting against them, keeping in-house licensing systems updated and legally enforcing compliance can add considerably to the piracy-related expenses, which can be a significant hit to the bottom line.

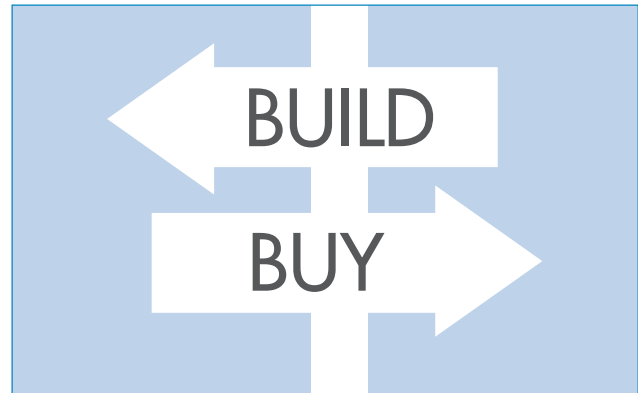
Software companies can fight the piracy battle more effectively, and for a lower cost in the long run, with commercial licensing technology. Licensing vendors themselves devote substantial efforts toward staying ahead of piracy threats and updating their licensing solutions accordingly. Packaged solutions currently available integrate important functionality such as requiring users to activate before initial use. Activation can be internal to the organization or external back to the software publisher. Additional security features that are available include machine authorization, counterfeit resistance, encryption and anti-hacking technologies. The cost

of developing such innovative features would prove significant if companies attempted to create this functionality in an in-house solution.

Business Process Alignment Costs

To take full advantage of electronic licensing, corporate business processes must be aligned accordingly. However, reviewing, designing and implementing them on an ongoing basis as licensing and business needs change can require considerable in-house resources.

With a commercial licensing solution, companies avoid the expense and time of having to keep business processes and licensing in line on their own. Commercial vendors provide consulting services that address these specific needs, and then leverage their expertise to assess, refine and implement business processes as needed.



Build vs. Buy: A Closer Look at Costs

This section examines the key cost elements that contribute to building and maintaining a licensing system in-house. Since costs incurred by companies vary based on their relative size, we have considered three categories of companies, based on revenues: small companies at between \$1M - \$10M in revenues, medium companies with revenues between \$10M - \$100M, and large companies over the \$100M revenue range.

The table on the next page outlines the costs associated with building and supporting an in-house, custom licensing solution. The costs of purchasing from a third party depend upon the solution, but can be compared to these one-time and recurring costs to demonstrate the substantial savings from implementing a third-party solution.

Company Size	Small (>\$10M annual revenue)	Estimated costs (\$)	Medium (\$10M-\$100M annual revenue)	Estimated costs (\$)	Large (\$100M+ annual revenue)	Estimated costs (\$)
Initial Software Development Costs						
Development team costs	2FTE/6months	\$150,000	4 FTE/9 months	450,000	4 FTE/1 year	600,000
Opportunity cost for development team	\$1M revenue/engineer		\$1M revenue/engineer		\$1M revenue/engineer	
Application Update Costs						
Add new pricing & licensing models (annually). Update integrations into 3rd-party systems (ERP, CRM, etc.)	.5 FTE	\$75,000	1.5 FTE	225,000	3 FTE	450,000
Upgrade security features	.5 FTE	\$75,000	1 FTE	150,000	3 FTE	450,000
Ongoing Costs						
Licensing operations team	.5 FTE for support	\$75,000	1 FTE	150,000	2 FTE	300,000
Customer support calls (licensingrelated)	10% assume volume 1000 calls/year, cost/call: \$75	\$7,500	15% assume volume 5000 calls/year, cost/call: \$45	37,000	20% assume volume 10000 calls/year, cost/call: \$25	50,000
IT application \$1,500 support costs	.1 FTE	\$1,500	.33 FTE	49,500	.75 FTE	112,500
Lost Revenue						
From inflexible licensing & pricing	up to 20% of gross revenue	\$100,000	up to 20% of gross revenue	1,250,000	up to 20% of gross revenue	7,500,000
Lost maintenance revenue	up to 10% of maintenance revenue	\$10,000	up to 10% of maintenance reven	125,000	up to 10% of maintenance revenue	750,000
Lost upgrade revenue	10% of upgrade revenue	\$10,000	10% of upgrade revenue	125,000	10% of upgrade revenue	750,000
Lost revenue due to piracy	up to 20% of gross revenue	\$300,000		\$1,875,000		\$3,000,000
TOTAL COSTS	Company A:	\$804,000	Company B:	\$2,558,250	Company C:	\$10,962,500
	Mohtly cost of not implementing licensing:	\$67,000		\$213,000		\$914,000

In addition to the cost of implementing a licensing solution, software vendors should consider the cost of inactivity – not implementing or delaying the implementation of electronic licensing. In addition to the revenue lost to piracy and unlicensed use, software companies are losing revenue due to missed opportunities – lack of fit between customer needs (subscription pricing model, for instance) and their ability to deliver. Additionally, many companies without integration between their software licensing and operations (including ERP & CRM) lose revenue to lapsed maintenance contracts and missed upgrade opportunities – simply because they lack a consolidated data source for reporting on this information.

Solution Flexibility

Solution flexibility is the second key area companies should consider when making the build vs. buy decision for an electronic licensing system. Traditionally, vendors have looked to licensing primarily to reduce unauthorized use and recoup lost revenues. However, today licensing is taking on a broader

role as a way to price and package solutions to meet the diverse needs of customers.

Flexible Pricing and Packaging

To enable this customization, technology vendors need flexible licensing solutions that let them quickly create new pricing models and product configurations so they can price products the way customers want to buy them. By catering to the way customers' use and buy products, software and hardware vendors thereby open up new revenue opportunities.

To maximize revenue, technology vendors should ensure their licensing solution has the necessary flexibility:

- The ability to support the myriad licensing models that the sales and marketing departments may demand
- Support for multiple license models using the same binary file, allowing customers to cost-effectively mix-and-match license-types
- The option to offer customers a variety of usage-based pricing models for any licensed software

- The ability to create trial versions of products without modifying source code
- Portability across platforms, products and version levels

Flexible Piracy Protection

Likewise, companies can further maximize revenue collection by implementing flexible protection against unlicensed use and piracy. To do this, vendors need the ability to support a wide range of configurable licensing models, such as trialware, subscription, shop-on-disc, rental, metered use, instant upgrades, and super-distribution.

Additionally, a licensing solution should have the capability to turn unauthorized users into paying customers easily, as well as easily enforce license policies with customizable security settings and the ability to cripple products if pirated.

Real-World Example: Benefits of Flexible Licensing

Take a leading electronic design automation (EDA) company, for example. The company turned to licensing to encourage broader use of related products throughout the design lifecycle. With a commercial licensing solution, it implemented an innovative, token-based licensing model that allows customers to share licensing across multiple products. In effect, flexible licensing allowed the company to customize its pricing and packaging to meet market needs.

As a result, the vendor effectively addressed its customers' usage needs while opening the door to increased revenue. The vendor now offers both a la carte and token-based licensing, allowing customers to choose the model that works best for them. As a result, the company has grown token license usage by 300 to 400 percent year over year and this model now represents a significant percentage of overall licenses. Most importantly, the company has seen sales growth within this product family as new products become more entrenched in the customer base. Without having to resell and license each product separately, the cost of sales has gone down. The company largely attributes this competitive advantage to the more flexible licensing model.

Project Risk

Project risk additionally ranks as a critical factor in the build vs. buy decision. During the course of building a licensing solution, which can take as long as 18 months, a number of issues can arise that throw the project off-course, requiring companies to go back to the drawing board. Because it's impossible to predict influencing factors such as changing initiatives, requirements and development resources, software and hardware vendors venture into considerable risk when building a licensing solution. When issues come up mid-project or after implementation, they can end up wasting vast amounts of time and money trying to adjust their licensing solutions accordingly.

Internal software project failures are common. In fact, 30 percent of all software projects are cancelled, and 60 percent are considered failures by the organizations that initiated them. Of those that are delivered, nearly half are over budget, nine out of ten are delivered late, and these errors are

estimated to cost the American economy as much as \$59.5 billion a year. (Economist, Nov. 2004)

Changing Initiatives

What happens if some "strategic" or "key initiative" comes along during development of a licensing system and the vendor is forced to redeploy these resources? As priorities shift, unrelated projects risk being relegated to the back burner or put on hold as resources are allocated to more pressing needs at the time. As a result, companies may lack critical capabilities to enforce licensed use of their products and protect revenue.

Changing Requirements

It's also almost inevitable that requirements for the licensing solution will change during development or once a solution is in use. Companies may want to roll out new licensing models to suit customer needs or they might merge with another company, requiring them to reinvent their licensing scheme. Internally developed solutions typically lack the innate flexibility to respond readily to shifting requirements of this nature. As a result, companies risk having to start over or dramatically rework what has already been designed and developed.

Changing Development Resources

At any given time, developers can leave an organization, or be shifted onto other priorities. When that happens during development of a licensing solution, companies lose their valuable expertise that has been developed over the course of the project. Project timelines are then at risk as they search for replacements, either externally or internally, and then hire and train them. By delaying completion of the solution, the company is potentially missing out on revenue it could be collecting by turning unlicensed users into paying customers or by packaging and pricing its products more creatively.

To minimize the potential setbacks and costs associated with these risks, flexibility is again the solution. While vendors can design flexibility into their own solutions, they do not inherently have the expertise in licensing to foresee where flexibility and customizability should be built into the application.

By contrast, commercial solutions are designed with flexibility in mind. By choosing an adaptable licensing solution, vendors can quickly adjust licensing as new requirements or initiatives emerge. Commercial solutions allow companies to minimize their risk and respond immediately to the need to change license and pricing models and terms, or to create customized products without changing source code. Companies don't have to worry that their solution will be derailed by unforeseen forces. With commercial technology, they implement a complete, ready-to-go package.

Conclusion

When evaluating the build vs. buy decision, it pays for software and hardware vendors to look at the complete picture of total cost of ownership, solution flexibility, project risk, and most importantly, return on investment. Internally developed applications can suffer from poor return on investment due to development, maintenance, and opportunity costs. Companies

opting for internal development, hoping to achieve the required functionality at a lower total cost of ownership, may experience budget overruns because they underestimate the quantity and quality of the resources required. In most cases, vendors realize a higher return on investment in the long run with a commercial solution.

Among commercial licensing solutions, Flexera Software's FlexNet Publisher is the market leader, delivering all the key elements needed in an effective licensing solution today, and has evolved from more than 20 years of continuous licensing innovation. Flexera Software's FlexNet Publisher is the only solution that gives vendors complete flexibility in customizing licensing terms and pricing models in packaging and selling products. It enables them to generate incremental revenue streams by easily creating product variants tailored to end customers' needs, implementing creative pricing to address new market segments and running trials without revenue leakage.

With FlexNet Publisher, companies can implement an effective electronic licensing solution immediately and remain flexible as their requirements and customers' needs change. Over 50,000 software and hardware vendors and virtually all of the Fortune 1000 companies use Flexera Software technologies to maximize the value of their software to address their licensing needs, as well as accomplish a number of their critical business objectives:

- Maximize revenue by pricing, packaging and licensing software any way customers want with flexible licensing models
- Increase sales by creatively pricing for broader market penetration and deeper account penetration
- Speed time-to-market with flexible licensing options and product packaging
- Prevent unauthorized use and piracy, and recapture lost revenues – cost effectively
- Minimize operational costs by automating the control and management of the entire software lifecycle with an exceptionally user-friendly solution
- Reduce customer support costs by keeping users on the most current, stable product version
- Enhance product revenue by communicating directly with customers
- Mine usage data to support more intelligent decisions

About Flexera Software

Flexera Software provides solutions that power the business of software for multiple customer segments, including hardware and software producers, engineers and developers, helping them uncover revenue opportunities, streamline their infrastructure and reduce costs. Flexera Software's proven solutions have been simplifying the business relationship between software and hardware producers and their enterprise and government customers for more than 20 years, enabling Flexera Software to maximize the value of the software the world develops and uses. For more information, please go to: www.flexerasoftware.com



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