



Build, Buy, or Subscribe and the Pursuit of Functionality: Exploring the Economics of Obtaining Software Functionality

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There is an old adage that says if you want to do something well, limit your focus to one thing and then do that one thing as best you can. For software companies, that one thing is developing software products and for service providers that one thing is providing services to their customers. What about companies that try to do both? This article will define the economics of the build versus buy scenario with an added twist of describing yet another alternative (a subscription). Can a single company focusing on providing services to their customer also economically develop their own software products? Find out in this article.

The "Value" of Purchased Software

Developing custom software applications in-house have been labeled for its associated risks, high costs, and lengthy development cycles over commercial off-the-shelf (packaged or shrink wrapped) software. However, unless the packaged software meets nearly 100% of your requirements and is priced affordably, the costs (and risks) of packaged software can easily eclipse that of similar in-house development. Research published by Forbes magazine showed that for every dollar spent on packaged software an additional \$4 to \$10 was spent installing and customizing. The amount of customization generally falls into the category of what is called "wrap-arounds" that consist of one or more applications that fill the gaps between packaged software functionality and actual customer requirements.

There is also significant expense involved in evaluating packaged software.

Evaluation of packaged software includes the gathering and publishing of operational requirements, research and location of possible software vendors, writing and issuing a request for proposal (RFP), studying, comparing, and ranking multiple submitted solutions in detail, test solutions in the lab, and potentially in the field. One of many flaws associated with the evaluation process is that not all packaged software vendors are truthful about what features their current product has versus those that are being considered for development or currently being developed. As a result, you have some vendors moving ahead in the evaluation process over other honest, legitimate vendors. In the event that no single solution can provide the required functionality, multiple vendor products may need to be assembled to produce the desired requirements. The complexity of assembling products from multiple vendors is typically more expensive and risky than building a complete in-house solution. This is especially true over the long haul as vendors may come and go and the ones that stay around may change product emphasis or flexibility. There is also risk in selecting packaged software from a startup vendor, especially if the product/company is less than five years old. Non established or committed software

vendors offer no guarantees that they will continue building products for your business or continue to cater to your company's future needs.

When all these costs are taken into account including personnel costs of individuals charged with researching, evaluating, interviewing, testing, and trialing the software as well as developing required wrap-arounds the cost of packaged software may well range between four to ten times that of similar in-house developed software. Typical timelines for buying software that must integrate into multiple service essential systems ranges from 6-18 months and may employ an average of two to six full time people.

The "Challenge" of Custom Software Development

In-house developers tend to be general-purpose programmers with a variety of entry level to intermediate skills and intimate knowledge and understanding of the company's business and user community. In-house developers tend not to be high priced talent and few companies staff an experienced principle developer. However, what in-house development staff gives up in quality they make up in quantity and business experience. The combination of quantity and business experience is more than capable of taking on fairly

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sophisticated development efforts that is very competitive to packaged software price while meeting 100% of the operational requirements. The sacrifice in using this kind of talent for in-house development is that the resulting software may have a limited useable shelf life and flexibility since it may not be designed for much more than current and immediate functionality needs. However because the total cost of ownership is generally less than purchased software it can continuously evolve and remain within a controlled budget of the service provider. Service providers who practice in-house development call this "just in time development", meaning they build the functionality they need as they need it rather than paying a premium to obtain it elsewhere prior to when they actually can use it.

Take something as simple as provisioning. Service providers know there is not much to this software and many of the largest service providers today either develop their own provisioning software or enlist a handful of specialty vendors to provide some of the solution and then make up the difference with their own (in-house) software. Those service providers that have purchased a complete solution typically view their decision as a interim (or temporary) solution until such time as they can internally come up to speed and begin shedding some or all of their existing solution in favor of internally developed products. Generally, the more a service provider understands their requirements and the more developers they have on staff, the less likely they will buy packaged software.

Protecting Your Competitive Advantage

One of least discussed problems

with purchased software is the fact that often times to obtain desired functionality a service provider may need to share key competitive information (service roadmap, strategy, etc.), desired product operation details, and functionality/performance requirements with the software vendor. When operational details such as this are divulged it places the service provider at risk of losing competitive advantage over other service providers. Few service providers approve of their chosen vendors selling similar solutions to their competitors. However most software vendors must diversify their customer base so they often sell to competing service providers within the same business sector, as one industry is unlikely to sustain any vendor unless they maintain a majority market share. Any vendors that do not make the minimum requirements to be considered a finalist at one service provider can often use this valuable operational information during the proposal process to land other competing accounts. As a result, the service provider may unknowingly be helping their competitors as they dismiss under performing vendors during the selection process.

Enter the Subscription

With the costs of in-house development looking increasingly attractive, one other option for outsourcing software is buying it on subscription. Subscription-based software generally resembles standard packaged software with a couple noticeable differences: price and service. With packaged software you pay a bulk of the cost up front and then pay yearly maintenance fees there after. The problem with this approach is that every couple years you basically need to purchase a major upgrade to stay current—this amounts to

yet another large amount up front cost. Over the course of three to five years you generally pay two or more times the original cost of the software to maintain support for your previous purchase. Some vendors even discontinue support for releases as little as one year old.

In purchasing a subscription, you will pay a small amount up front and then the balance of the full purchase price over a period of time. During this time, you generally receive all updates as part of maintaining the subscription. Subscriptions also save you money as the later payments allow you to conserve cash now in exchange for a longer-term commitment with the software vendor. The subscriptions from reputable companies give you an opportunity for an early out—generally after six months to a year. In this way, the software vendor must continually work hard to keep you and your business happy or you can walk with only a minimal investment.

While a single subscription generally costs you the same as it would if you purchased a single license to the software, you end up paying for the cost of only a single purchased license. The problem with upfront cost models is the service provider bears all the risk of the software purchase where as in subscription based software business this risk is shared between the vendor and the service provider. Subscription-based software services increasingly build strong bonds between service providers and software vendors as the two become dependent on one another. Subscriptions also reduce the need for software vendors to diversify their customer base as the reoccurring revenue stream allows them to build a profitable business.

Rules of Thumb for Determining Build vs. Buy vs. Subscription

Build in-house: If the functionality requirements are essential to your business or requires you to divulge details of your business that you consider to be confidential or could place your company at risk of losing its

competitive advantage it is generally cheaper to build in-house over purchasing packaged software. Generally, if better than 10% of your requirements cannot be met by packaged software it's time to build in-house. Also, if the best software vendor you can find has a product less than five years old, build it in-house.

Buy: If the expertise needed to construct such functionality mostly or entirely reside outside your company's product space or area of expertise. For example, if the desired software must function on a number of different platforms (PC, Macintosh, etc.) and operating systems. Essentially, the challenge of maintaining interoperability across all these systems is very difficult to accommodate with in-house developers. Multi-platform personal computer software definitely requires serious buy consideration.

Subscribe: If the cost to buy is too

much or the time to build is too long for your business needs. If the actual requirements are unknown, extremely complex, or the internal resources are limited. Also if your looking to examine the value of a desired capability but don't want to risk a large investment – especially if your unsure of the resulting benefit.

Deciding whether to build, buy, or subscribe also depends on the individual(s) employed by the service provider that are responsible for selecting and maintaining the required functionality. While some individuals are hard-wired for outsourcing and some for keeping everything in-house, the economics of obtaining software functionality will ultimately determine which is paying off for the service provider. Your challenge is to rigorously document your all aspects of your investment (time, money, resources) in whichever way you choose so as to

legitimize and substantiate your decision as few companies having made the transition from one of these options to the other rarely can show decisively the true benefit realized. Without complete documentation of all expenses associated, you will never really know which track is more economical for your company. ■

About the Author

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