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Solutions for the Real World

PDSA Special Report

Custom Software vs Off the Shelf

Deciding Between Custom and Off the Shelf

Your legacy system is getting tired and old and you need to begin looking for an alternative solution. Do you buy off the shelf or do you develop custom software? You might even consider doing both. It just might make perfect sense to have one or more off the shelf (OTS) products and develop custom software for possibly integrating them and developing new feature sets. If you develop custom software, does your company have the skills to do that? Or you might need to engage a development firm to help you.

The Default: Off the Shelf (OTS)

Typically, business managers look to OTS first. There are several good reasons why:

1. Acquiring and deploying off-the-shelf software is usually faster than getting custom software developed.
 - a. Even complex installation and configuration it typically faster than developing new software.
2. Off-the-shelf software is generally cheaper than developing your own.
 - a. The development cost of an off-the-shelf package is distributed among multiple firms, possibly many firms worldwide.
 - b. These many customers more than offset the extra cost of mass production and distribution. Comparatively, with custom software your business alone bears most of the costs.
3. Off-the-shelf software typically has years of testing and years of production use, as well as feedback and improvement, giving confidence that it actually works.
4. Off-the-shelf software may include a money-back guarantee in case it does not meet your needs.

Benefits of OTS

1. OTS software is funded by a large number of users and so is usually cheaper than a custom solution (usable feature for feature).

2. OTS software tends to be 'feature rich' and may provide opportunities for your business that you would otherwise been unable to leverage.
3. Popular OTS software is typically well known in the industry and is likely to be more cost effective to find support and maintenance services.

Disadvantages of OTS

1. Less well known OTS products can be as difficult to maintain.
2. You have very little influence over the development of the OTS software and normally cannot have changes you need made to the software.
3. Packaged software is very generic and built to service a large number of users. And so it is very likely you will need to change your business practices to meet the requirements of the software.
4. There will be some ways in which your organization operates that is completely incompatible with the packaged software. This may drive the need to have the OTS customized just for you (unlikely or expensive).
5. The same system is available to your competition and gaining any lasting advantage from it is unlikely.

If you move down the path of acquiring OTS then you must first develop your list of requirements. Create a simple check list or spreadsheet of what you want and how well the vendors meet those items. But beware: OTS vendors are good at selling software and not necessarily good at meeting your requirements.

Choosing the Right OTS Vendor

Prepare and consider the following:

1. Prepare your requirements check list.
2. Research the market for candidate vendors.
3. Down select to 3 vendors.
4. For each of the 3 vendors do the research and engage the vendor to fill out your requirements list.
5. Down select to one vendor.
6. Engage the vendor in a pilot program to see if the software will really do what they claim. Get proof that the features work and meet your needs.

7. Determine if any custom configuration is required. This can be a slippery slope.
8. Have the vendor prove it meets your requirements. They may charge for some or all of this, but it is worth it.

OTS May Not Meet Your Needs

If you cannot make it down the steps listed above with any satisfaction, the custom software is likely your path and may be the best choice for you. Custom software is just that: custom and hence can exactly meet your needs, for a price of course. A reputable custom development firm will develop the features you request and will make them for your specific needs.

Don't Forget About Support

With OTS or a custom solution you will need various levels of support. Probably every OTS vendor will claim to provide great support, but you will not know about the quality of the support until you need it. At that point, it is usually too late to undo your purchase decision, leaving you high and dry with poor service. Your support contacts might lack knowledge of your problem domain, of your specific usage of the software, or might even lack good communication skills.

With custom software, you can generally get in-depth support from the team who creates and maintains the software. Such a team can offer in-depth expertise, and the ability to not merely work-around problems, but also enhance the custom software on-demand to solve them. If you need changes to an OTS product, the vendor may not do them, put them on a backlog list, or implement them for a typically high hourly rate. And even then you will have very little control over that process. But with a custom software firm, you are in the driver's seat.

Change Is Constant

Change is constant in business. An OTS package might leave you with features that no longer work well, and require a major, costly upgrade to move forward. The costs are in the license upgrades and for your organization's additional labor hours to implement new releases.

Custom software, though, can be continually enhanced to meet your growing needs, incrementally, so that users are never forced to migrate to an entirely new system.

Costs: A Rule of Thumb

The chart would imply that OTS solutions are the best. This is a very rough rule of thumb: OTS solutions are cheaper to buy and faster to install, but only IF they exactly meet your requirements.

Save Money, Go Custom

Which is the most cost effective way to go? It depends. If the OTS solution requires one or more of the following, you may consider a custom software firm.

If Your OTS requires:

- Customization
 - this increases costs and confines you to the vendor's tools and methods of customization
- Significant changes to your business processes
 - This increases costs and may affect business continuity
- Priced for a large feature set
 - this increases costs for features you may not need or use
- Priced for a higher market tier
 - this increases costs since you are not in the vendor's target customer base

Here at PDSA, a customer approached us to develop an application to exchange information between financial organizations. They had looked in the market for OTS solutions and there were several. They had various prices and features. This was a very important feature set for our customer and it was critical that they develop a solution to make them unique in the market as well as provide a much larger profit margin. They chose to go custom and have been going to the 'bank' ever since.

Differentiate Yourself in the Market

To differentiate your company from your competitors you will likely need custom software. If you have a business-to-business application or business-to-consumer those are typically the 'touch points' where you need to excel. Remember: if you are buying OTS solution, then your competitors may be buying the same one. Don't be an 'also ran,' but instead improve your competitive advantage and exemplify your company's uniqueness.

Your supplier chain (vendors) and customers 'touch' your company in many ways. That is where you should consider custom software. They don't care about how you do payroll, for example, so outsource that or buy it OTS. But your customers do care about your extranet site and your customer service.

Custom software is now on your balance sheet as a corporate asset. This could help you in the event you sell your business and may enhance your company's value. Also, you could consider selling the new software as a service or an OTS: image that!

Summary

This article is intended to provide you with a balance perspective on buying software, either OTS or custom. Remember, both may work for you for different needs. You may choose QuickBooks for your back office business management or ADP for payroll, but develop a custom software application to handle your customer's access and interface to your products and services to provide a competitive advantage.

Contact Information

If you would like to know more about the information in this special report, please contact either Paul D. Sheriff or Michael Krasowski at PDSA.

Paul Sheriff

(615) 675-4632

PSheriff@pdsa.com

Michael Krasowski

(714) 734-9792 x223

Michaelk@pdsa.com

Company Information

PDSA, Inc.
17852 17th Street
Suite 205
Tustin, CA 92780

Tel (714) 734-9792
Fax (714) 734-9793
www.pdsa.com

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