

Developing In-House Vs. Off the Shelf

- A white paper by Clydebuilt Business Solutions Ltd

Developing In House vs. Off the Shelf

Naturally, as a software development company that operates solely within the logistics market, we believe that in most cases the most common sense and logical action is to purchase “off the shelf”.

You may well think, “Well, they would say that wouldn’t they”, but if you do read the document in its entirety, I believe that you will find it to be well balanced in its views. Read on.

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A company usually develops in-house where the issue to be addressed is trivial or where their requirement is ‘seen’ internally as complex or unusual – the ‘we do things differently’ comment, or where the IT department is seen as a fixed or sunk cost to the business and therefore a ‘cheaper’ option.

If we ignore the first and move on to the complex or unusual, the realisation of software project ranges from the totally in-house development through to the totally off-the-shelf commercial offering.

With the totally in-house development, the requirement is defined, analyzed, programmed, maintained and developed using the firm’s own resources, while in the case of the totally off-the-shelf commercial offering, you buy and effectively have to work with the package as it comes out of the box. In reality the least likely total solutions for logistic software are in those extreme positions.

In many cases there will be a large degree of external involvement in achieving the outcome. External consultants/system analysts/programmers/project managers might be used to deliver a ground-up “in-house” product; while no sophisticated commercial product is likely to be useable without some configuration and tailoring to meet the customer’s needs. This is often in close co-operation with in-house IT staff, although it should (must?) also be in cooperation with relevant operational staff.

More realistically, the comparisons are the *perceived* benefits of Bespoke Software versus those of a Tailored Commercial Package. The crux of the matter comes down to the hope that the core of the chosen Commercial Package will be tried and tested, more robust and providing a stable basis on which local workflow procedures and processes may be built. This means that even if the given methods and mechanisms that augment the core are initially less than required, the system can function, probably quite successfully, whilst additional changes are made. It is the combination of this strong, stable and very capable core, with the flexibility to tailor and add functions and procedures quickly, that characterize the modern commercial logistic software package. By comparison in-house developments can rarely afford to build in additional capabilities that are not immediately required and of course; some additional capabilities may not even be thought of.

Further developing the system with new, even minor changes, can be slow and costly to deliver.

The commercial product on the other hand is likely to be the result of a number of 'users' in differing environments all bringing their needs and requirements to the product design table. There may well be generations of design involved, making it possible that future requirements, currently unknown or vaguely known, are already catered for or easily can be added.

None of the above touches on the problems of lock-in to external consultants that can follow a bespoke program or the difficulty of supporting and amending a system where the original programmers have gone and the level of documentation is often inadequate for others to take on the development without a huge time commitment.

The pro's and cons can be summarized as follows;

In house development pro's

It gives the IT department something to do which, while not diplomatic, may have an element of truth to it.

The development costs are perceived as being cheaper.

You have control as you are not at the mercy of software house or other third parties.

Where development is of strategic importance, then having control may be vital.

The client can define and get exactly what he requires.

Hopefully the software will be built to fit in with existing in-house systems.

Hopefully the interface will be familiar, although that is not our general experience.

In house development cons

Spending valuable money on developing a system from scratch is like 're-inventing the wheel'.

Clearly defining the project and specifications is an involving task. Both operational and technical staff need to be involved, using up valuable man hours.

Tight deadlines and time constraints could mean that time is not on your side

How 'right first time' do you need it to be. The reality is that complex projects can take twice as long and at three times the cost of the budget.

Your in-house IT team might not have the skill set required for certain areas of development.

If you bring in outside specialists they might not have relevant warehouse experience, or in the worst case, be working to their own agenda.

De-bugging issues can be prolonged.

Developers can turn into an in house technocracy with whom most managers may find it difficult to argue.

The programmers are not likely to have gained lessons from others' mistakes or benefit from others' good ideas.

The system may have little inherent flexibility and scalability.

The process can drive a company further down a unique or dead-end development branch and into dependency on a developer.

Modular upgrades unlikely to be available.

There is an over reliance on one department to produce the goods.

Not necessarily cheaper. Let's assume that there is a £40K yearly total cost for employing a single developer. This means that over, say, a 5 year product life you will pay £200K for ownership. For the same £200K, assuming 20% pa support & licence charge, you could buy and maintain a £66K software package. This does not include the opportunity costs of delaying implementation of a solution whilst solution definition, software design, programming, testing and debugging takes place.

Off the Shelf pro's

It is tried and tested.

There is no need to re-invent the wheel. Specialised software packages have already been designed to cater for the problems that you are looking to address.

The system can be viewed in an operation in a similar working environment.

The better software house will bring considerable experience with them.

The implementation time will be shorter and be measured in weeks rather than months, even years.

Off the shelf con's

The package could be bloated with unnecessary features, yet falls short in some critical areas.

There is the risk of the vendor being slow to react to market trends or reluctant to adapt the software.

There could be potential integration issues with your current systems.

Support and maintenance costs may be too high.

Places too great a reliance on one company, another case of all your eggs in one basket

Summary

Looking closer at the Pro's and Con's of each option, it appears that the perceived costs along with specific business functionality are likely to be the key factors in deciding to go with bespoke development. In reality, the costs quickly mount up, resulting in a far larger investment than originally thought. The example above illustrates the cost of a single developer; this obviously increases if you employ more people to complete the project in a timely fashion.

We highlighted the scenario of working to a specific business brief that ultimately leads your company down a dead end route. The worst case scenario is that your business objectives and working practices change, before the bespoke development is even complete. Where would that leave your business?

The truth of the matter is that software company's offer off the shelf packages for a reason. The product rarely becomes defunct, as the life blood of the software company is the development of new technologies and internally they invest in research and development to keep their product useful for clients.

A good software vendor will thoroughly analyse your current practice, and make modifications to the 'off the shelf' package where applicable, giving you a solution that truly fits in with your business. Added to this is the safety in the knowledge that the software package has the flexibility to adapt as your business does; again these developments are standard for the software vendor and cause minimum headache for you and your staff.

Of course in both cases, *caveat emptor* applies, buyer-beware and choose your vendor or in-house experts well. Palming that responsibility off to an outsider may cover backs but will not guarantee a successful result and may cost in the long run.