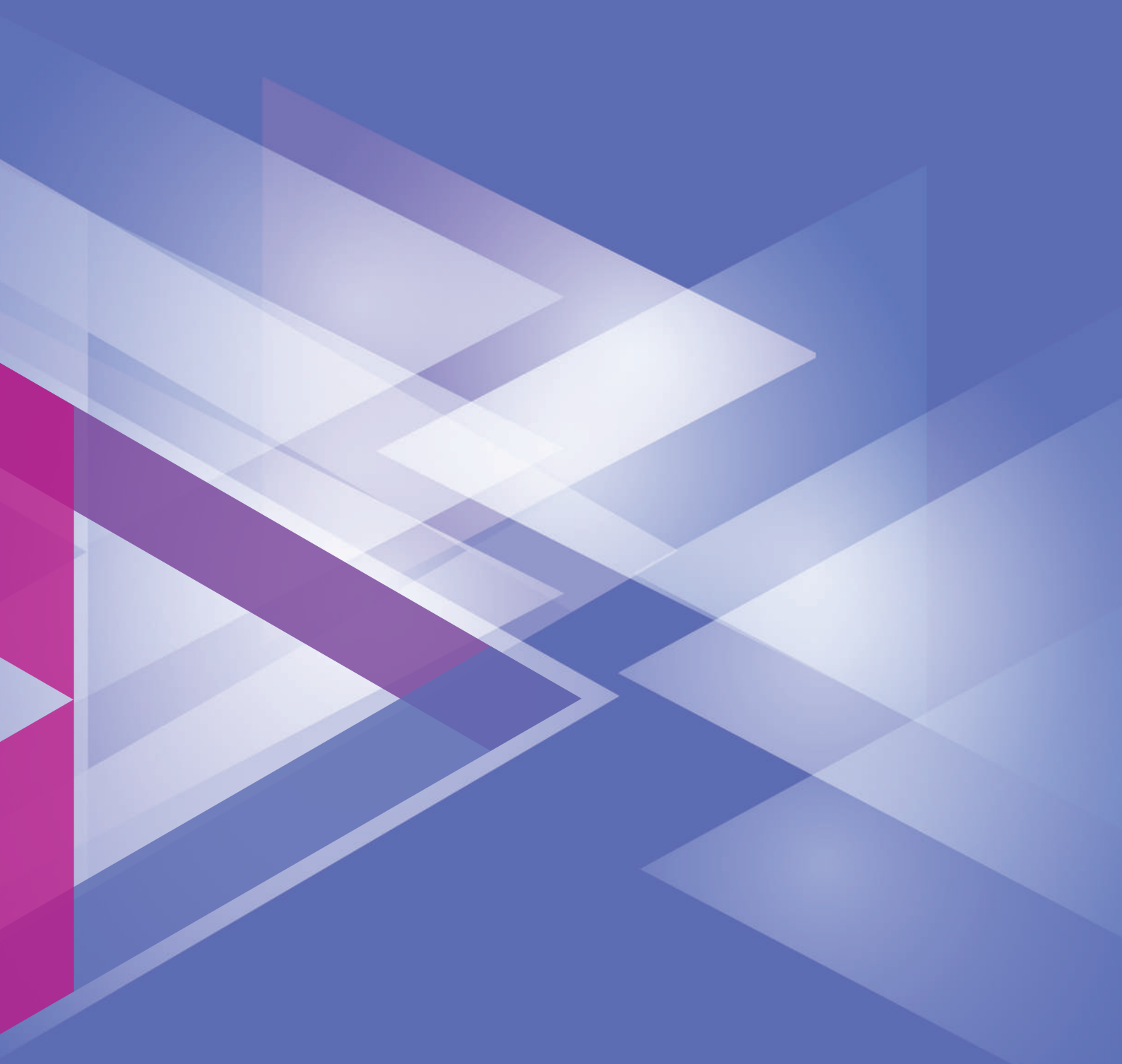


White Paper

BUILD OR BUY

Is it better to custom build software or buy an off-the-shelf packaged software product?



Introduction

In the 21st century, change is the only constant. We need to not only change our business processes and make them more adaptive, but we must also innovate and take the lead in this fast changing environment, in order to survive and grow. So, does building or buying your software solution best fit your future strategy? In general, this can be a difficult decision as there are many factors to be considered.

Consider the building option

In-house software can be the best alternative when:

- The business has very unique requirements.
- It is strategically important to maintain complete control of the software solution and the development direction.
- It could be critical to maintain secrecy and exclusiveness if the actual software is to provide a strategic competitive advantage over competitors.
- For limited ad-hoc applications that do not affect other areas of the business.
- When the organisation is committed to maintaining a significant and skilled IT team for, at least, the duration of the life of the system.

Companies can be lured into a sense of euphoria at the prospect of their own in-house development. Before making that decision, it is extremely valuable to have a clear and factual understanding to the answers of the following questions (ref: *Software Engineering Institute – Carnegie Mellon*) for your organisation:

- Are developers with the necessary expertise available?
- How would those developers be used if they were not on this project?
- If additional personnel need to be hired, will they be available within the needed time frame?
- How successful has the organization been in developing similar assets?
- What specific flexibilities are gained by developing products in-house as opposed to purchasing them?
- What development tools and environments are available? Are they suitable? How skilled is the targeted workforce in their use?
- What are the costs of development tools and training, if needed?
- What are the other specific costs of developing the asset in-house?
- What are the other specific benefits of developing the asset in-house?

“The risks of maintaining inflexible, custom-coded applications across rapidly changing business environments drives the trend toward cost-effective, pre-packaged management solutions,” explains Netkey president and CEO Alex Richardson. “No longer does buying a packaged solution mean trading off specialized features in order to increase time to market. Today’s purpose-built self-service platforms surpass in-house development in flexibility, customization and scalability, and have the added benefit of being market-proven and supported by industry experts.”

Consider the buying option

When considering whether to buy, the 3 main questions to ask are:

1. Is there a packaged software solution that fulfils 70% of my business requirements?
2. Does the packaged software solution allow customisations and integration with 3rd party services, to enable meeting all major requirements?
3. What is the credibility of the software vendor, such that I can enter confidently into a long term partnership of mutual benefit and success?

In our experience at ETP, the ETP End-to-End Retail Software Solution addresses around 85% of immediate business requirements. And of course the answer is yes, our solution can be customised and integrates with other systems. The involvement of an industry experienced team of consultants to examine the basic business processes can assist in significant process improvement as part of the implementation process.

Why build something that has already been done. Don't re-invent the wheel!

Mature, stabilized, standardized packages in general embed best practices allowing such expertise to be purchased (ref: Ulfder, 2003).

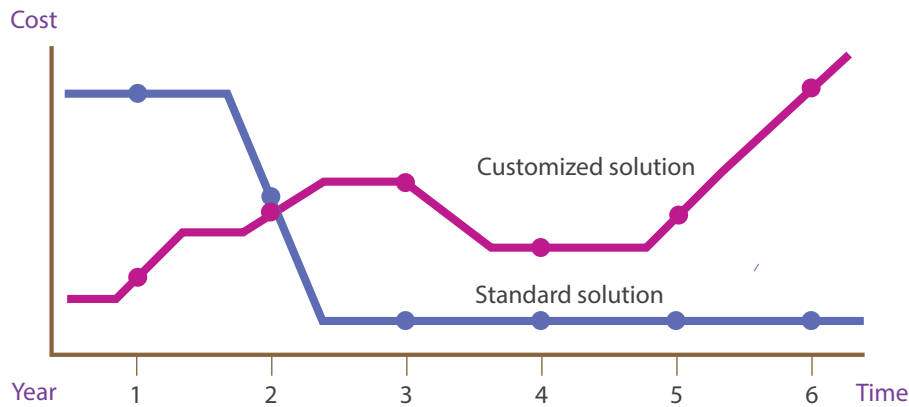
Is building worth the risk?

Every year there are many software failures that incur massive costs to the businesses that they are there to serve. Market leading companies with talented professionals are not immune to significant losses, irreparable damage to their market perception and disappointment to shareholders. There is a significantly greater risk of a software critical failure in a live environment with in-house custom built solutions that simply don't have the benefit of a packaged software solution, which has been tried and tested in numerous live environments.

Moreover, a software solution developed for the wider ranging needs of an industry and following industry standards and best practices is more often better designed with flexibility for the purpose of customisation and scaling to meet ever changing requirements. In-house software often runs the risk of being designed to meet specific business requirements and then does not tend to scale well with business growth, or cope with changes in processes.

The real cost comparison

The following is a simplified diagram of expenditure over time for a packaged solution vs an in-house solution. Note that purchased solution costs are significantly lower, over the longer term of 6 or 7 years.



The common misconception is that building one’s own software is cheaper and easier than it really is. Companies that go down this path realize too late the Total Cost of Ownership (TCO) to their organisation - after a significant investment has already been committed. There are often forgotten or underestimated costs and it is important to realise the complete development and support costs required to provide a fully functional and working solution.

It is advisable to do a full cost benefit analysis to enable making an informed decision. A typical comparison of cost factors is as follows (ref Chris Halton):

| Build cost factors | Buy cost factors |
|---------------------------------------|---|
| Software Development Resources | Software Licencing |
| Software Quality Control and Testing | Software Implementation and Integration |
| Software Configuration and Deployment | Application Customisation |
| End-User Training | End-User Training |
| Ongoing Maintenance and Enhancements | Ongoing Maintenance and Support Fees |
| Software End of Life | Software End of Life |

To realise the total cost of in-house software development the following need to be carefully considered:

- Development costs are always greater than first estimates, as the full detail of complexities are not uncovered until full requirements analysis is carried out and can still grow further at the time of development and testing.
- The cost of maintaining a development team and their skills base so that there are knowledgeable people on hand to provide ongoing development. This requires coverage to allow for staff turnover, training and keeping up-to-date with changing technologies.
- There will be ongoing development required to maintain the software for changes in legal requirements, improvements in business processes, changes in hardware, operating systems and 3rd party software.
- The support structure required to have technically capable people on call over all operational hours.
- Having the hardware and systems in place for code source control and environments to support the development and testing teams and the management of them.
- Maintaining documentation and training manuals for all development, modifications and bug fixes.
- What is the real cost if the software fails, or is unable to keep up with market trends or industry requirements?
- Realistically, how quickly will the development team be able to build and implement systems?

When a time comes where it becomes impractical to continue investing in the in-house solution, this can be a difficult and painful decision to make after significant on-going investment has been made.

Don't keep throwing good money after bad!

Summary

In-house development should only be considered if it is part of your core competence and focus. Overall value can be significantly improved over the long term by adopting a ‘future proofed’ solution from a trusted and long term business partner. Take advantage of the benefit of economies of scale by the ‘sharing’ of the costs of research, development and support amongst other industry users of the solution. ETP has seen significant savings and improvements, over the long term, for our business partners.

ETP adopts industry-wide and globally recognized best practices during project design and implementation. By employing a large and ever increasing Research and Development Team, ETP potentially has the resources to develop in-house solutions for all kinds of retail software requirements, such as Intuitive CRM, Powerful Promotions Engines, Business Intelligence Tools, etc. However, ETP takes full advantage of third party software developed by external enterprises, enabling the Research and Development Team to focus solely on the core business innovations.

About the Author

Naresh Ahuja is the Chairman and CEO of ETP International PTE Ltd, which over a period of 25 years has successfully provided End-to-End Software Solutions to some of the largest national and international retailers throughout Asia.

Sources

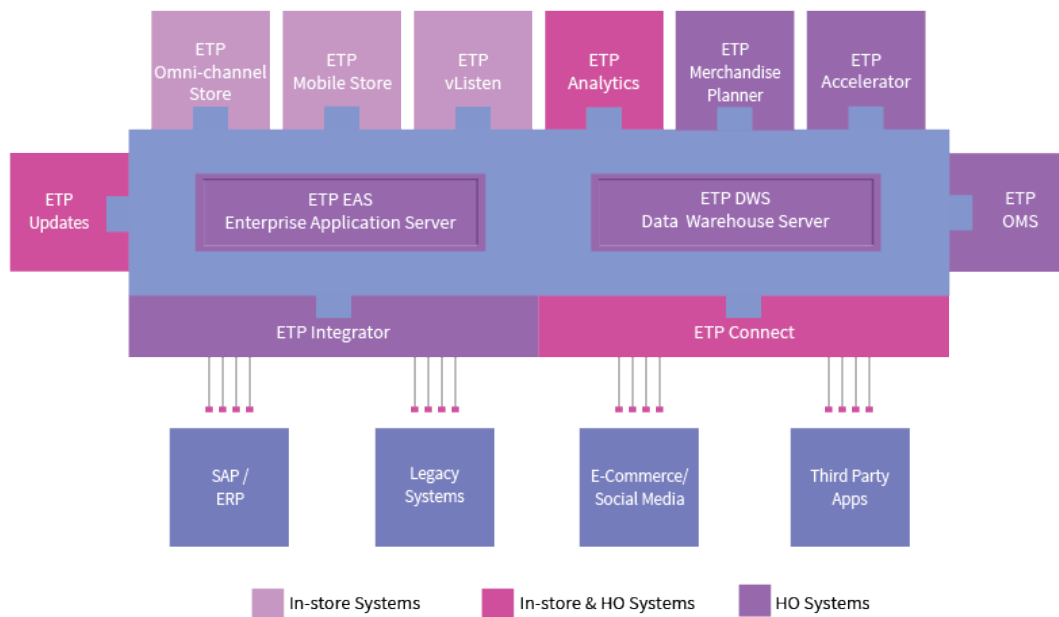
Chris Halton , Vice President, Media & Broadcast Technology
(<http://www.slideshare.net/chrishalton/build-vs-buy-strategy>)

Software Engineering Institute – Carnegie Mellon
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Ulfeder, S. (2003). Buy! No, Build!, Computerworld 37(22): 39–40.

ETP Retail Suite

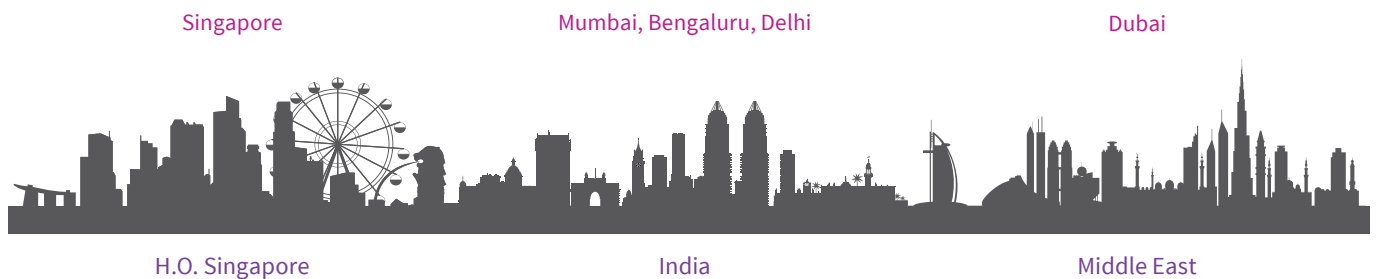
ETP V5 is an enterprise class omni-channel retail software solution that seamlessly integrates Point of Sale (POS), Customer Relationship Management (CRM) and loyalty management, merchandise and inventory management, assortment and OTB planning, marketing and promotions planning and Business Intelligence (BI). The ETP omni-channel retail software allows the scalability required for business growth that can be deployed comprehensively or modularly, in premise or on the cloud, across multiple platforms, channels and system environments.



- Superior customer service that helps you deliver desired, unified customer experience with consistent and flexible customer policies across all channels and formats
- Integrated CRM at the POS to drive better customer relationship and ensure higher sales across channels
- A powerful promotions engine that automatically distributes and implements targeted promotions across channels
- Robust analytics engine with retail KPIs built-in to increase eyeballs and footfalls, to improve margins, volume and ticket-size, and to support retail business functions such as promotion and pricelist optimization, demand forecasting, product assortment, and customer segmentation
- Merchandise planning, assortment planning, options and OTB planning tools that allow to review past retail performance, build a profitable business and adapt quickly to varying retail market conditions
- Easy to use retail software with intuitive user interface and flexible deployment options
- Highly scalable solutions; with market leaders in retail using ETP solutions across multiple countries, currencies, tax structures and time zones
- Strong process integration across sales and supply chain network enabling increased sales, reduction in inventory costs, reduced shrinkages, minimized stock outs, improved retail vendor management and efficient stock distribution
- ETP V5 retail software has a certified integration with SAP® applications to streamline retail operations
- ETP V5 is certified as PA-DSS v3.1 compliant by the PCI SSC to provide a secure payment card transaction process for retail end users



Every year, 50,000 retail associates use ETP to serve 150,000,000 consumers, selling USD 5,000,000,000 of merchandise. More than 300 brands in over 22 countries, across 10 time-zones, in 200 cities, at 25,000+ stores, in 5 languages run on ETP.



We are also present in the following countries: Australia, Bahrain, China, Egypt, Hong Kong & Macau, Indonesia, Iraq, Jordan, Kuwait, Malaysia, Oman, Qatar, Saudi Arabia, Thailand, The Philippines, Tunisia, Uzbekistan, Vietnam and Yemen.

Founded in 1988, ETP is an Omni-channel Retail Solutions company headquartered in Singapore, serving market leaders in more than 22 countries across Asia Pacific, India and the Middle East. ETP's omni-channel solutions include omni-channel POS, Mobility, CRM, Marketing and Promotion Campaigns, Order Management & Supply Chain Management, and Merchandise & Assortment Planning. ETP has successfully executed over 500 enterprise software projects across 25,000+ stores for 300+ brands. ETP's unique value proposition is its ability to create and deliver innovative products and implement them successfully with domain expertise delivered by hundreds of consultants embodying ETP's best practices. ETP helps its customers get it right in omni-channel retail.

For more information, email: info@etpgroup.com