To Build or Buy?

A Decision-Making Framework for Buy-Side Firms
Successful buy-side firms are complex and multifaceted. Of course, managing clients’ investments is paramount, but there are numerous tools and processes supporting that objective, from trade order management systems to customized reporting statements to audit quality book of record accounting. The complexity and value of this support infrastructure only compounds as firms grow.

As firms struggle to meet the demands of these crucial tasks, a question emerges: **when a new or updated system is needed, is it better to build or to buy?**

At the heart of this question is return on investment. Can your firm buy software that meets your unique needs and that will efficiently scale with future growth? **Or, is it more cost- and time-effective to dedicate internal development resources to build something fully tailored to your firm’s unique needs?**

**It’s not a simple decision.** The answer depends on the intricacies of your individual firm, your clients’ expectations, key stakeholders’ nuanced understanding of your challenges, and the ins-and-outs of different solutions.

However, **there are important challenges all buy-side firms must overcome during the “build or buy?” decision process.** By considering the following common factors your firm can understand the intricacies of your options and move forward with the best possible solution.
Common Challenges

The following challenges and best practices are built on industry-wide research and Clearwater’s experience helping organizations of all sizes evaluate their operations.

Intuition is Often Wrong

At first glance, the build or buy decision seems simple. Key stakeholders often weigh the options and decide that the answer is obvious based on one thing: their intuition. They will have a strong feeling, gloss over the prickly complications, and decide to trust their gut. However, intuition is often wrong when it comes to these decisions. One reason for this is that the true system requirements aren’t fully known or understood at the outset. Often, the sources of the problem are not immediately apparent, and sometimes the process of searching for a solution provides new insight into other core problems and inefficiencies.

Limited Visibility

Often, the functionality, value, and integration potential of current systems aren’t known or understood by all key stakeholders. Those with the authority to make the build or buy decision may not be users of the current system and likely won’t be involved in the day-to-day operation of a new system. As a result, they have a very different perspective than core users.

Best Practice

Involve those who will be daily users of the system early and often in the decision process. They bring a unique and important knowledge base of your firm’s daily operations.

Look for a solution that alleviates the burden of IT and data security.

IT and Data Security

Another important consideration is your IT and data security infrastructure. This should be explored no matter what type of system you choose. Security—and who is in charge of that security—is critical for your systems and the data they run on.

Those who choose to build their own software must also ensure that their system is secure from threats, both physical and cyber. They should design the system so that their data is inaccessible to outsiders and is fully backed up in case of system failure.

Those who buy software should also make security a key consideration. Some installed software still leaves system and data security in the hands of an in-house IT department, a significant burden for a team with other important functions. However, best-in-class web-based systems house your data on their own remote servers, where it is accessed through a web browser. These types of web-based software systems generally have robust security measures in place and enough redundancy to ensure all data is sufficiently backed up.

Best Practice

Look for a solution that alleviates, rather than deepens, the burden of IT and data security. The software type (i.e. web-based or installed) has significant implications for how IT and data security will need to be managed.

In-House Development Capabilities

An early consideration in the build or buy decision is your in-house software development capabilities.

Does your firm already employ a team of developers? If so, is your team large and skilled enough to build out the new system you envision? If the answer to these questions is yes, building may be an option for you. If supporting the build will require you to add developers to your staff or build a new development team, building is most likely not a good option.

Best Practice

If your firm doesn’t already employ one, factor in the resources required to build and maintain an in-house development team.

Focus on your long-term goals.
Scale and Complexity

The sheer complexity of software systems is often difficult for non-users to understand, and equally difficult for power-users to convey. What seems obvious to the casual or non-user of a software system likely does not account for its overall complexity.

How complex is the system you envision? In general, the smaller the scale and level of complexity, the easier it is to build. Conversely, systems that are complex and require highly specialized software are usually more cost-effective to purchase.

Best Practice
Focus on your firm’s long-term goals. A long-term perspective will help you determine how complex your new system should be, how it will adapt to new challenges in the future, and whether you will gain the most value by building or buying.

Industry Best Practices

How prevalent is the problem you’re trying to solve within your industry? Are your peers facing the same challenges as you, and does a similar solution work for many in your industry? If so, buying an industry-leading software solution is likely the choice with the most return on investment.

Software vendors serving common markets have had the time, expertise, and industry experience to fully understand the challenges and build the best solution. Choosing a best-in-class solution, especially one your peers rely on to solve similar challenges, means inherent optimization of operational processes. In addition to useful software, you may also receive a variety of other industry-specific benefits.

Best Practice
Consider the many significant benefits of a technology solution that solves common industry challenges based on industry experience and client feedback. Vendors who offer best-in-class client servicing provide industry expertise along with their software solution.

Straightforward applications that can be brought into production are usually built whereas more complex systems and those that may require specialized technologies can benefit from expertise and economies of scale embodied in packages.

- Farhad Daneshgar, Graham C., Low, and Lugkana Worasinchai
An investigation of ‘build vs. buy’ decision for software acquisition by small to medium enterprises
When deciding whether to build or to buy, there is a fundamental question that buy-side firms must ask before all others:

“Is the system fundamental to our value proposition?”

For most firms, this could be rephrased generally as: “Is the system under debate fundamental to our ability to make investment decisions?”

According to the findings of a study of organizations deciding to build or buy new software:

Less strategic applications should be purchased whereas more strategic applications should be built [...]. The ‘buy vs. build’ literature provides advantages of building components that form part of an organisation’s core competencies while buying those that fall outside the organisation’s core scope.

The rationale is simple: to solve common industry problems like accounting, reporting, trade management, etc., buying a solution is the most strategic and cost-effective choice. However, for a firm’s most specialized processes, the time, money, and risk inherent in building a fully-customized enterprise system may be worth it because a solution that can cater to these unique needs is probably not available.
A Rewarding Process

Choosing a new software solution can be a difficult and arduous process. That process is even more difficult when considering building a new solution in-house. It’s important that you carefully weigh your options, ask the right questions to the right people, and try to avoid the common pitfalls many have experienced.

Although it’s a difficult process, it’s also a rewarding one. Finding the right software solution will have innumerable benefits to your firm, including creating efficiencies, streamlining important processes, empowering talented personnel, and supporting your overall goal: increasing profits.

Software-as-a-Service: Best-in-Class for “Buy” Solutions

Cloud computing is the foundation for a category of software known as software-as-a-service (SaaS). SaaS vendors offer licensing or subscriptions to their software solutions, accessible through a web browser. SaaS vendors store data on their own servers, offloading security and maintenance responsibilities on their clients’ behalf as well as IT infrastructure costs. And, because it’s deployed and accessed via the internet, SaaS solutions are seamlessly and frequently updated, which is not true of traditional hard drive-installed software.

A SaaS solution carries numerous benefits, including accessibility, security, ease of implementation, ever-increasing functionality, and minimal internal IT support. As the financial services and technology industries have led the way in developing SaaS solutions, it’s likely they’ll be among your options to buy.

Appendix

Build or Buy? The Decision-Making Process in Practice

What does the build or buy decision look like in practice?

This appendix includes hypothetical scenarios that illustrate common operational challenges and considerations that many buy-side firms face while deciding whether to build or buy a certain new system. These scenarios detail how the build or buy decision might play out for these firms as they consider the framework detailed previously, pro-and-cons for each choice, how “The Question” is answered, and the final decision.

Firm A

Profile
Small investment firm specializing in fixed-income securities

Solution Under Consideration
Portfolio analysis tool

Problem
Reliance on manual processes leads to frequent data errors and inaccurate analysis

Background
Firm A needs a better solution for performing their portfolio analysis. This tool is key to their business strategy, which has developed around strategies relating to certain security types.

Firm A currently runs their portfolio analysis using Excel Macros. Data is gathered from a number of sources and then manually entered into the spreadsheet software. This manual process is prone to error from beginning to end, and the data is frequently wrong. This creates additional manual work to reconcile and validate data, which is difficult, time-consuming, and can lead to more manual errors and inaccuracies. Valuable employees with highly-specialized skills are being underutilized in the service of maintaining spreadsheets, and those spreadsheets are still prone to error.

Build or Buy?
The portfolio manager who runs the portfolio analysis feels strongly that they need to build a new solution in-house. He knows exactly how he wants the data to be automated and what information he needs to see in the reporting. He presents the scope to the CIO and development manager, and they are willing to support the build.

However, a colleague who is new to the firm suggests they look into System X, an off-the-shelf analysis software he used at a previous firm. System X is an installed software solution that claims to automate portfolio data and track performance. Though it's unclear if System X provides the exact functionality they need, they decide to consider it.

After a period four months, during which Firm A researches System X and other similar software solutions, and scopes the internal resources required to build a sufficient system, Firm A agrees on the following pros and cons for each choice.

Build

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Firm A has the development capabilities to build a custom portfolio analysis tool that fits their very specific strategic needs.</td>
<td>1. Building a software system will take up Firm A’s small development team for at least three months.</td>
</tr>
<tr>
<td>2. The solution is well understood, so developing it in-house would cost less than paying for a comprehensive solution with more functionality than we need.</td>
<td>2. Other business initiatives in development will need to be deprioritized until the project is complete.</td>
</tr>
<tr>
<td>3. Analytics are based off data, in-house formulations that won’t need to be updated according to market changes or new regulatory mandates.</td>
<td>3. Additional security precautions will need to be established before data can be migrated to the new software.</td>
</tr>
</tbody>
</table>

Buy

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Firm A’s development team could continue to focus on other important projects.</td>
<td>1. System X does not accommodate the specific analysis that Firm A needs to perform. A manual workaround in Excel would be necessary to make the process work.</td>
</tr>
<tr>
<td>2. System X has an intuitive and well-designed user interface.</td>
<td>2. System X includes a variety of functionality specific to very large, complex asset management firms and not useful to Firm A.</td>
</tr>
</tbody>
</table>

The Decision
Having completed this analysis, Firm A returns to “The Question”: “Is the system fundamental to our value proposition?”

They answer, “Yes.” There is no off-the-shelf solution available that can perform the particular portfolio analysis that they built their business success upon. Additionally, they have the personnel on staff to build an automated system that fits their specific needs.

Firm A decides to build.
Firm B

Profile
Mid-sized RIA with highly diversified strategy

Solution Under Consideration
Composite management system

Problem
Tracking composites manually is time-consuming and risky

Background
Firm B has experienced significant growth over the last few years. As a small firm, they were able to manage their composites manually using Excel. However, their growth coincided with implementing a more diverse investment strategy, causing their number of composites to rise significantly.

Managing composites has become a time-consuming and painstaking process for Firm B, and documenting changes is difficult. The complexity of the process and their reliance on manually entered data has resulted in numerous mistakes over the past few months. This has caused inconsistencies that were difficult and time-consuming to correct, and they feel at risk for future verification.

Build or Buy?
Firm B’s managing director is aware of how inefficient their composite management is and decides that they need to build a solution to automate the process and reduce the workload. However, Firm B’s CTO quickly pushes back on that decision, explaining that their limited development resources are already consumed with other projects necessary to help them scale to their growth.

As an alternative, Firm B begins researching software solutions used by other buy-side firms. They discover that there are a variety of software solution providers with sophisticated functionality to help manage composites; some seem to offer helpful benefits beyond what they thought they needed, like the ability to automate and streamline other processes as well. Firm B agrees on the following pros and cons for each choice.

<table>
<thead>
<tr>
<th>Build</th>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Firm B can build a custom composite management system that fits their specific needs.</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>They can potentially save on cost by building a small, limited use system.</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>The system can be built to integrate with other internal systems.</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Buy</th>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The right solution will add to their knowledge of industry best practices for investment accounting and reporting.</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>One of the solutions is SaaS, which appeals to the CTO.</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Utilizing an automated accounting and reporting solution will ensure that Firm B’s operations will be scalable as they plan for future growth.</td>
<td>3</td>
</tr>
</tbody>
</table>

The Decision
Having completed this analysis, Firm B returns to “The Question”: “Is the system under debate fundamental to our value proposition?”

They answer, “No.” Managing composites is an investment accounting and reporting task. Tracking and reporting on their composites is not fundamental to their value proposition. Managing composites is a challenge throughout the industry, and there is a solution available that constitutes an industry best practice.

Firm B decides to buy.
Clearwater Analytics® is the leading provider of web-based investment portfolio accounting, reporting, and reconciliation services for investment managers, corporate treasuries, and insurance companies. Clearwater aggregates, reconciles, and reports on more than $1.5 trillion in assets across 25,000+ accounts daily. For more than a decade, Clearwater best-in-class technology and client services have enabled firms to capitalize on new opportunities, strengthen their existing client relationships, and streamline their internal processes. Clearwater is committed to continuous improvement and encourages buy-side firms to rethink how they approach their investment accounting and reporting operational challenges.