A DATA WAREHOUSE: TO BUILD OR TO BUY?

OWNERSHIP VS. OUTSOURCING

MAYBE YOU SHOULD BUILD YOUR OWN DATA WAREHOUSE

There's a certain allure to ownership, isn't there? There could be tax advantages to a capital expense vs. an operating expense as well. You'll do it your way, specifying and fully customizing your data warehouse to serve the exact needs of your organization. Initial costs will be low, but there will also be some operational risk and larger, long-term costs. Once you build a data warehousing solution, you have to run it, refine it, upgrade it, adjust the data sets, monitor it, configure it and convert it to a new system every time you make a change. Still, ownership feels good.

MAYBE YOU SHOULD BUY A DATA WAREHOUSE

When you buy a system, you relinquish some control. But outsourcing also provides relief. You've figured out the best use of your time and you've decided building a data warehouse solution isn't part of it. You'll be dependent on a vendor, but have fewer headaches and less chaos. No hiring or onboarding architects, developers or help desk staff. When things go wrong, you'll call someone. Costs are lower and more consistent, improving the budgeting process. The solution will scale with your needs over time, whatever they might be.

WE'RE HERE TO TELL YOU THERE IS NO WRONG CHOICE. Due diligence is critical though. Talk to a vendor. Do your research. Discuss with your peers. Weigh the pros and cons. Consider what's right for your company, your growth stage, your team and your industry. After witnessing dozens of clients take this journey, we know that determining the right fit comes down to five factors.

Customization   **Dependency**   **Quality**   **Security**   **Expense**

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1. SPECIFIC NEEDS: CONFIGURATION VS. CUSTOMIZATION

You think of yourself as having very unique challenges. While this may be true, remember that the more niche your solution becomes, the more challenging your software will be to maintain, sustain and scale.

BUILD VS. BUY

🔧 BUILD

If you want a data warehouse solution that's specific to your industry and customized to your internal audience, look no further than your own company. Remember that building, running, and upgrading a data warehouse solution that works with all your other systems (and factoring in time for major bugs) is no small job. Consider employee bandwidth and how many extra employees you're willing and able to hire. Are you familiar with the industry best practices required to build a powerful platform? Can you find the right talent? Finally, consider that even a hand-selected team may not cover all the expertise required, so you may end up hiring a contractor to handle the last-mile configuration.

> **Building our own data warehouse was the right decision for us. We had the right people in-house to implement it and continue to believe maintaining our own CRM, data warehouse, and business intelligence environments provides a competitive advantage. Especially with multiple CRM environments, we need full-time staff to understand the nuances of each.**
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> **— Mark Bashuk, Director of Business Analytics, Oakland A's**

🤝 BUY

Hiring a vendor to handle this project takes the responsibility off of your employees. You'll want a product that allows for the appropriate level of configuration and downplays the customizations. A good product will help you more easily respond to market shifts, quickly adopt technological changes and scale with your business as it grows.

The Technology Factor— Data Complexity & Availability

Technology changes fast, which increases your innovation, but has a downside as well. First, evolving technology adds to data complexity. And the more custom your product, the less well it plays together with other systems and the more challenging your data sets and upgrades become. Second, as technology improves, more data becomes available. This takes you from an assumption of basic system maintenance to something very different—constantly improving your current infrastructure to accommodate new data sources.

2. DEPENDENCY: ON YOURSELVES OR A VENDOR?

A common fear of buying is dependency on a vendor for such an important part of your business. In reality, however, unless the owner is doing the coding, dependency is inevitable. You just have to weigh the pros and cons. Either way, there is a dependence on people and on the technologies used.

BUILD VS. BUY

🛠 BUILD

If you build it, you're dependent on your own people. A great team can fix, configure and shift your data warehouse right there in your office. No need to call the vendor. But you'll need a significant staff, including software developers, data analysts, architects, quality engineers and even administrative support. One bonus is that they know where all the code "bones" are buried. But they also could leave at anytime. In a world of increased turnover, constant reorganization and less company loyalty than ever before, you're trusting your business to a very specific IT team.

Building also means you're dependent on the systems you have today. But your business is evolving. That means email service providers, CRM, security or ticketing may need to change. Maybe you want to switch ESPs or migrate to a marketing automation platform. Maybe an acquisition has changed your process. Whatever your reason, these transitions are a lot of work. It includes data migration, system conversion, employee training, workflow updates and much more.

🤝 BUY

If you buy it, you're dependent on your vendor and their system, so be sure they're the right partner building with the right technology. . .and have SLAs in place.

When it's time to evolve other systems (CRM, email, app), you're all set. A vendor can provide technical support, integrations, maintenance services and upgrades with an annual service package to cover it all. That peace of mind will come with a pricetag, but it's a worthy investment for a solution that can accommodate change. The benefit is that your core business remains flexible, ready to adopt new systems and work smoothly with ever-shifting technology.

IN REALITY, UNLESS THE OWNER IS DOING THE CODING, DEPENDENCY IS INEVITABLE. IF NOT THE VENDOR, IT'S AN INTERNAL TEAM. YOU JUST HAVE TO DECIDE.

3. QUALITY: WHAT DOES IT MEAN TO YOU?

How do you define quality? Is it about industry wisdom or system expertise? Does it include perseverance, problem-solving and trouble-shooting? Does it include scalability and speed? Or is it about technological best practices? Whatever your definition, ask yourself if it's related to the core work you do or if it could be better achieved through a software partner. How can you achieve the highest quality data warehouse?

BUILD VS. BUY

⚒ BUILD

If you're already schooled in data warehousing, have a team with expertise and you're confident that spending time and effort on this software will boost your industry knowledge and differentiate your business, it might be time to build. And no one knows your proprietary business operations and processes like your internal team. Keep in mind, however, that an internal team is biased by their own habits, so industry best practices on technical craft or workflows will be limited to their own insight.

🤝 BUY

A vendor will already know the data warehouse space since its their core business. And if you buy wisely, you'll gain a partner who understands the complexity of your systems. This should include data normalization, data models and security management, not to mention the business rules and workarounds that companies use to tag specific types of data. This framework should include:

- Solid data models that offer consistent output and allow you to gain insights

- A "golden record" of a fan: master data management with automation and scale

- Integration from various data sets from various formats and frequencies

Deciding to buy also boosts your potential for innovation. When it comes to system optimization, a vendor will draw on past data warehouse design or operational wisdom.

AND NO ONE KNOWS YOUR PROPRIETARY BUSINESS OPERATIONS AND PROCESSES LIKE YOUR INTERNAL TEAM.

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4. SECURITY: ASSESSING YOUR OWN RESPONSIBILITY

It's critical to understand the risks inherent in purchasing software to manage your data. For a sizeable system or company, effective security is complex. Standards like SOC 2 compliance, General Data Protection Regulation (GDPR), (and any US versions that comes next), cyber-liability and backup, and crisis response are critical.

BUILD VS. BUY

🔧 BUILD

If you build it, be prepared to purchase, understand and monitor SOC 2 compliance. This ensures your service providers are securely managing your data to protect client privacy. It's a minimal SaaS provider requirement for any security-conscious business. GDPR is a legal framework that sets guidelines for the processing, collection and organization of personal data within the European Union and will likely be mirrored in the US soon. Take heed, because non-compliance will eventually be costly. Cyber-liability insurance is also becoming a best practice and will require research and investment. Finally, you'll need to stay abreast of changes in regulations—and your team will be required to develop and adopt new approaches to handle these effectively.

🤝 BUY

If you buy it and choose a vendor wisely, legal and compliance issues will be their responsibility. Be prepared to ask about SOC 2 compliance, which ensures client data privacy protection; GDPR, which sets guidelines for personal data collection, processing and organization; and cyber-liability. These components should be part of your vendor's package. The vendor will also be responsible for staying relevant with crisis response requirements and any legal shifts that occur.

> **"While the size and complexity of our organization led us to take a good long look at building the data infrastructure internally, we opted to hire. Expertise of our current data sets (and any others we may encounter) was critical. Security was also important and played a big role in our decision process.**
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> **— Scott Miner, Director of Business Solutions, Pegula Sports and Entertainment**
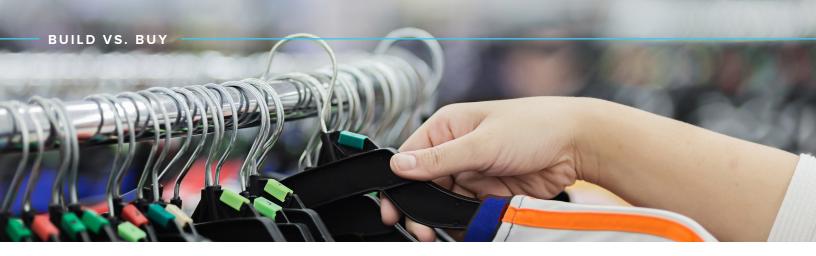
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5. EXPENSE: INVESTMENT IN EMPLOYEES OR SERVICE?

A data warehouse is an investment regardless of your decision. When looking strictly at numbers, a data warehouse is far more expensive to build than to buy. Many companies are in a "pay now vs. pay later" mindset. However, total cost of ownership over time is the best way to think about it. Factors should also include where you want to spend your money, how much you're willing to invest and your own comfort with uncertainty.

BUILD VS. BUY

🛠 BUILD

If you build, you'll be investing in employees, hardware, software and licensure. If you already have many of these components in place, you may benefit from building the data infrastructure yourself. Long-term IT costs are difficult to predict. One way to ease into costs is by selecting partners or vendors for critical components before investing in the full project. No matter how you structure the initiative, it's important to understand the layers of this expense.

One layer is the cost of new employees—onboarding, benefits, salaries and all that comes with these multiple new hires, such as analysts, help desk support, engineers, architects and automation mavens.

The second layer is the opportunity cost of your current employees working IN your data instead of working ON your data, with less availability for other initiatives.

The third layer is the various specialty contractors your system will require, including, for example, a part-time ETL developer for integrations and a part-time DBA who knows SQL. A common solution is to find a "jack of all trades" who knows a little bit about everything. But then it's critical to assess the quality trade-offs of that person's individual skills in the specific areas.

Fourth is the cost of storage, infrastructure and software licensing.

Finally, there's the ongoing cost of refinement, maintenance, upgrades and tech support. These are usually considered to be a fraction of the investment required for an externally licensed data warehouse. But in the long term, 10 years of licensing adds up. Not to mention the salaries of an internal team and the risk of losing employees along the way.

🤝 BUY

Normally, buying something is more expensive than building it yourself. For data warehouses it is actually the opposite. If you buy, you're cost layers are fewer, more straightforward, and more focused. You're investing in a relationship, as well as a scalable technology that integrates with all your current systems and is constantly innovating along the way. In this scenario, a high quality vendor would become your "jack of all trades", often at the same cost of one hire. Your investment is more predictable and consistent for the long term, with no equipment, employees or licensure costs. And the bottom line? It's simply less expensive to buy than to build.

The risk here should be calculated, beginning with trust in the technology, durability and integrity of your data warehouse vendor. But you don't handle the hiring, prioritizing or project management. You're paying someone to do it all.

ABOUT SSB

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