ClientInsight™
by eccovia

THE FOUR PITFALLS
of BUILDING YOUR OWN DATA WAREHOUSE

Real Data. Real People. Real Insight.

eccovia.com

The Hidden Challenges of Going It Alone

Since the height of the pandemic, we've learned how interdependent social service organizations are. Data sharing has never been more important, and data warehousing has now become the clear answer to this problem. But when social service organizations need the power of analytics to help them improve their outcomes and get the most out of their data, they might be tempted to build the technology themselves. As the saying goes, if you want a job done right, you've got to do it yourself. But it can be unwise to try to go it alone and build your own data warehouse. Without the proper resources, expertise, and time to dedicate to the project, you're likely to wind up with a product that not only doesn't help but also dramatically drains what limited resources you have, which might lead to compliance issues. Let's walk through the biggest pitfalls that can trap you if you decide to build your own data warehouse.

PITFALL 1: DESIGNING THE DATA WAREHOUSE

Risk of Design Error

While there's more to consider than simply the task of designing the data warehouse itself, it's quite the task. It can be very challenging for all would-be participants to share or define requirements in such a way that the data warehouse will have what it needs from day one. Many people have an idea of what they want out of a data warehouse and what analytics they need, but those people often don't fully understand what these requirements entail or what it takes to make them real.

This disconnection leads to misunderstanding between your organization and those building the data warehouse, which ultimately results in a final product that does not deliver the needed analytics and reports, defeating the whole point of building a data warehouse in the first place.

The early stages are the most crucial. If there are problems during the planning and design phase, the entire project's viability is in jeopardy. And in order to avoid these problems, you have to build on a strong foundation of expertise, resources, and collaboration that may not be available to you.

Flexibility and Scalability

Once you've successfully build your data warehouse to meet your current business needs, you have to ask how well it will be able to handle change:

» As your programs expand, will your data warehouse be able to scale up to meet the need?
» As requirements change, as you need to track new data or ingest a new source or create new reports, will your data warehouse be able to handle modification?
» Will your data warehouse be able to deliver the needed analytics warranted by these changes?

All too often, the finished product will resist modification and prove relatively inflexible and unscalable.

Security

There are serious security concerns to consider when designing your own data warehouse. You have to plan everything out incredibly carefully to ensure that you are compliant with HUD requirements, which could vary, depending on your need. Additionally, high security often equals high cost. Is your organization prepared to take on that responsibility and its associated risks?

The need to develop a front-end UI to access the database

Without a front-end user interface (UI), you have an opaque black box that your average user will be unable to use. And of course, UI design is an entirely different beast; adding a UI designer or team to the project will add even more cost and complexity to an already extremely daunting project.

CLOUD HOSTING
$10,000
per month
(ex. Google BigQuery)

HIPAA SECURITY COSTS
$16k–$257k
per year
(depending on size and needs of organization)

PITFALL 2: GOING IT ALONE

Data Quality

When you build your own data warehouse, you own the data quality as well. And when data comes from a wide variety of sources, they can introduce inconsistencies, duplicates, and conflicts that leave your database with poor data quality. As a result, the analytics and decision-making insights that might have come from this data will be severely diminished. And if your data analytics are not strong and accurate, you might as well not have a data warehouse.

Manual v. Automatic Processes

Without the right resources and proper technology, you might find yourself relying on manual processes for data integration, which is not only far more labor intensive but also presents a much higher risk for data quality issues that haunt you later. Automatic data integration processes provided by purpose-built data warehouses for social services organizations handles the tedium of data integration and can send automatic alerts if data quality issues occur.

Legacy Data Siloes

When the data you need to ingest comes from a wide variety of sources, you're like to encounter an equally wide variety for formats. Without the right tools, you will have to reformat these data sources before your data warehouse can even ingest the data.

Best Practices in Moving Data

Without the expertise and experience of moving data, you run a strong risk of duplication and data errors. Using the wrong tools or a hodgepodge of multiple tools, you increase this risk.

Quality Assurance

Once you've finished your initial build, you need to test everything and make sure it works. Quality assurance testing can be a grueling process, one with high stakes: an error here could result in malfunctions that could render the whole operation a waste of time and resources.

Cross-Team Buy-In

Before a data warehouse can be of any use, you need everyone to be plugged in. The more data sources you can include, the more comprehensive your data warehouse can be, and the more useful it will be. The issue for those who want to build their own data warehouse is that you must have full buy-in before you can even get started on building it. Without enough buy-in from stakeholders, providers, and partners, your data warehouse will be little more than an expensive toy.

Weigh Your Options Carefully.

At the end of the day, your organization must choose what makes the most sense for you. When considering your options for data warehousing, building your own from scratch will often incur a great deal of extra cost, stress, and time compared to opting for a purpose-built solution like ClientInsight.

- Expertise
- Liability
- Training
- HIPAA
- Staffing
- Design

ClientInsight

PITFALL 3: WHO'S MINDING THE STORE?

Expertise and Knowledge

Does your team know right now what kinds of reports you'll need? Does your team have a solid understanding of big data analytics? If you were to build your own data warehouse, you would need team members with a strong understanding of data science and analytics, who know Power BI and its limitations, and so on.

If you don't currently have that level of expertise on your team, you have to consider the cost of bringing that kind of experience on board, especially while it's still in the conceptual phase. The up-front investment of time and talent is vast and necessary so the data warehouse can be built on a viable foundation in the first place.

Time and Training

Integrating a data warehouse into your workflows, if done properly, greatly improves the efficiency of your decision-making and strategizing. But the transition will likely be disruptive at first, and if you are going it alone, you will need a comprehensive training program—which itself will require a good deal of planning, time, and additional resources.
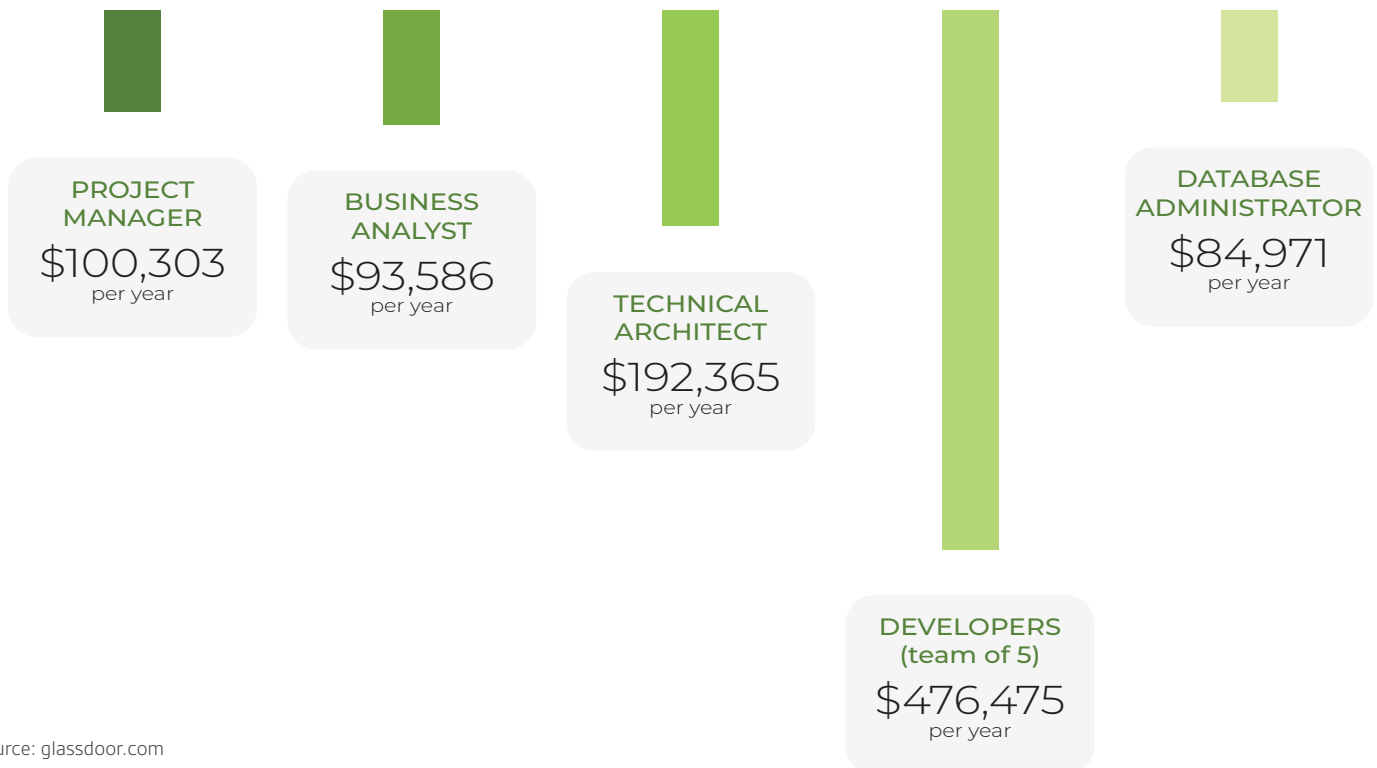
Employee Attrition

With the above two points in mind, you have to consider employee attrition. When your team is trained up and you have all the expertise needed, what happens when you lose a team member? A fully trained team member is very hard to replace, and there will be a major time and effort sink. And if that team member is one of your resident experts, you may soon find that the state of your data warehouse is in peril.

When you cannot rely on an external team of experts who handle the administration, coding, data science, and so on, each instance of employee turnover could be disastrous and set your goals back by months or years.

Limited Access to Expert Support

Where do you turn to if things go wrong? Without a dedicated support team of experts, supplied by many data warehouse providers, you may find yourself without the means to address crucial issues within the necessary timeframe. The last thing you want is to experience a major technical problem with a looming reporting deadline and nobody to help you resolve it.

PROJECT MANAGER
$100,303
per year

BUSINESS ANALYST
$93,586
per year

TECHNICAL ARCHITECT
$192,365
per year

DATABASE ADMINISTRATOR
$84,971
per year

DEVELOPERS (team of 5)
$476,475
per year

Source: glassdoor.com

PITFALL 4: WHAT ELSE? MONEY.

Higher Upfront Costs

When you're building your own data warehouse from the ground up, the costs quickly add up before you can even get started: you most likely need to bring on new expert staff, contract with developers, invest in expensive hosting and security, develop training materials, and much more. The greater the complexity and cost before work has even begun, the greater your odds of finding yourself in development hell and your data warehouse turning into an expensive vaporware project.

Ongoing Maintenance

Of course, when you're responsible for the design and set-up, you'll also have to foot all the maintenance bills. The costs of infrastructure for a data warehouse add up quickly, and they are not optional: the data warehouse will require a great deal of work to keep running well, to keep your data safe, and so forth, and your organization will bear the sole responsibility, financial and legal, for all of it.

Insurance Costs

Speaking of legal costs, when you own the data warehouse, you are also liable for it. Data breaches, HIPAA violations, and the like can result in lawsuits and exorbitant fines, so on top of up front and maintenance costs, you will also need to purchase insurance and own the burden of responsibility should anything go wrong. At the end of the day, you need to make a decision: lacking unlimited resources, will you want to invest your money and efforts in insurance, support, and maintenance costs or in your team, your staff, and your clients?

Your Time Is More Valuable

The most important consideration is the people you serve. The whole point of a data warehouse is to improve their outcomes, to make an outsized impact on your community. Certainly none of the points brought up here are insurmountable obstacles to an organization creating their own data warehouse. But consider whether they are the best investment of your time, money, or resources. If your organization is thinking of using a data warehouse, take into account the cost in money, labor, and time, and consider whether that is the best use of those limited resources.
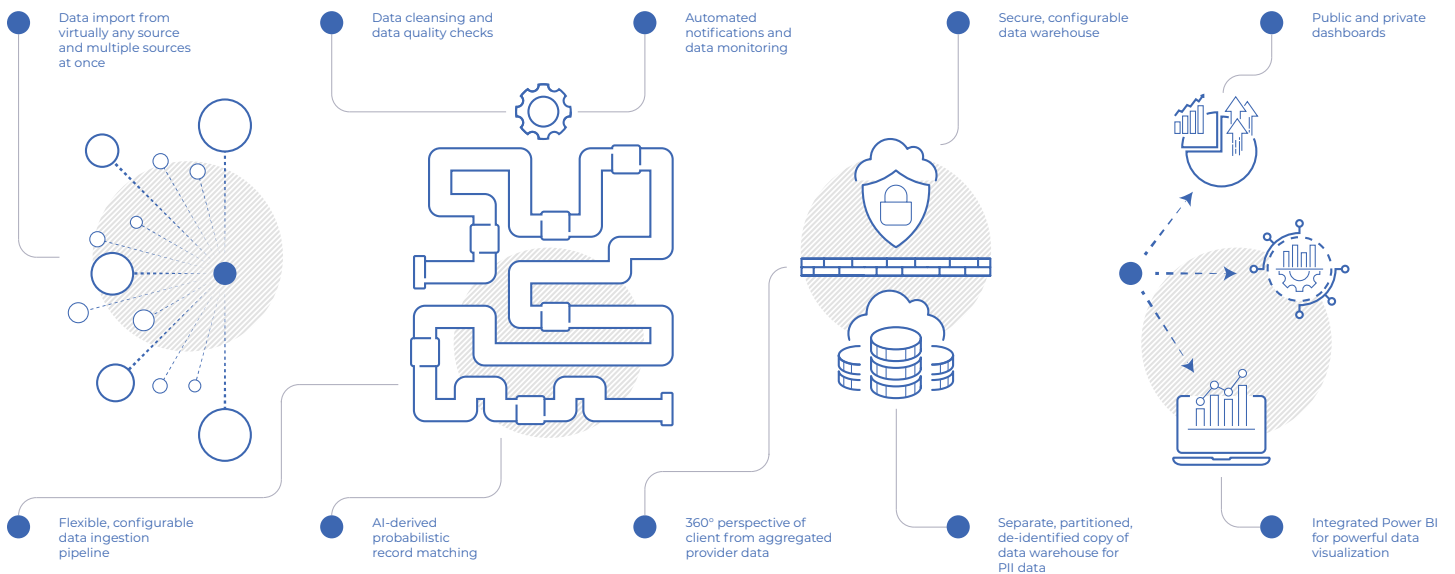
The best plans and ambitions are unfortunately curbed by budgets and resource limitations. Fortunately, we've got your back. Eccovia's data warehousing and community intelligence solution, ClientInsight, offers you a solution purpose-built to serve the needs of health and human services organizations. With ClientInsight, you don't need to compromise your vision. You can attain the analytics and insights needed to have a massively outsized impact on your community without risking any of the four pitfalls of going it alone!

CLIENTINSIGHT HAS WHAT YOU NEED

Higher Upfront Costs

Eccovia's data warehousing and community intelligence solution, ClientInsight, is ultimately a much less expensive option, in cash, time—and stress. Our partnership with Microsoft allows us to provide you with world-class security, and we provide the necessary support and expertise to build a solution with the flexibility and scalability to meet your needs now and in the future. Our data analytics expertise makes us an ideal partner to ensure that your data warehouse is producing the needed return on investment.

HOW IT WORKS

Data import from virtually any source and multiple sources at once

Data cleansing and data quality checks

Automated notifications and data monitoring

Secure, configurable data warehouse

Public and private dashboards

Flexible, configurable data ingestion pipeline

AI-derived probabilistic record matching

360° perspective of client from aggregated provider data

Separate, partitioned, de-identified copy of data warehouse for PII data

Integrated Power BI for powerful data visualization

For more information about how our powerful data analytics platform can help your organization gain greater vision and insight into how to best answer the needs of the people you serve, feel free to reach out to us at sales@eccovia.com.

eccovia®
REAL SOLUTIONS • REAL PERSON IMPACT

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