5 Reasons to Never

Build a Data Warehouse

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Companies are accelerating their migration into cloud services with > 80% of companies using some cloud services

80%

Gartner estimated in early 2021 that total annual end-user spending on public cloud services would exceed $330 Billion in 2021; an increase of 23% year over year. To put that in context, our industry, pharma, generates total annual revenues near $1 Trillion globally with 5-6% annual growth. The Gartner analysis found that the global COVID-19 pandemic has catalyzed accelerated movement to the cloud.

While the concept of cloud-computing goes back to United States Defense Department projects in the 1960s, it was just 2006 when Amazon introduced EC2; about the same time Google introduced Google Docs. The big bang growth of cloud computing reflects an idea with obvious power to help organizations optimize operations, manage costs and drive revenue. Most businesses would find it difficult today to argue the merits of building their own data center. The 2020 IDG Cloud Computing Study, found that more than 80 % of companies are now using cloud-computing, up from 73% just a couple of years earlier.

Despite these trends, we occasionally speak to pharma commercial teams considering the option to build a data warehouse, whether through internal, consultant-supported development, or by out-sourced development. We suggest five reasons why this makes about as much sense as developing a proprietary CRM system.

1

Data Management Builds come at a significant cost

Development is Extremely Expensive. Commercial teams should talk to their clinical counterparts about the perils of development projects. Costs vary of course, based on the project. Pricing the development of a data warehouse is like pricing a home, the cost depends entirely on the specifications. We've been involved in data warehouse development for life science companies with an emphasis on emerging and mid-tier pharmaceutical companies, for more than 20 years. In our experience, the price-tag for these projects usually runs into the multiple millions of dollars. Often that cost is not clearly understood when the project is initiated. The subject matter is highly technical, contracts are detailed and difficult to navigate and projects are usually based on a consulting model, which creates strong incentives for the consulting companies to prolong the development effort.

If a commercial team can bring a project to completion, they almost universally underestimate the TCO or Total Cost of Ownership. TCO includes hardware, software, and most significantly, the cost of human resources capable of running the data warehouse; an expensive long-term necessity in addition to the seven-figure development cost.

Build projects often take longer than planned

2

Development Projects Take a Long Time. Without exception, pharma commercial teams are time constrained. A company replacing a legacy system is faced with parallel costs. Emerging companies are trying to manage pre-launch cash flow and want to delay pre-launch spend if possible. Data

warehouse development defies the need in either case. No matter how many external resources an established company deploys against a development project, their commercial operations team has to be involved. The project competes for time and share of mind across teams already straining to meet operational demands. Emerging companies struggle with vague or unknown requirements and often very limited human resources. In either case aspiring data warehouse owners should be very critical of claims that development projects will be completed in something less than one year.

3 Projects usually end in failure

It Usually Doesn't Work. No less of an industry expert than Gartner estimates that 60% to 85% of data warehouse development projects end in failure. That's not a statistic that finds its way into the pitch presentation very often but the reasons for this pervasive failure are

intuitive beginning with the first two reasons you should never try this at home. Data warehouse projects are rarely sold based on the glamor of automated data operations. Executives are pitched eye-popping visual analytics and the promise of magic insights driven by artificial intelligence. Oh, and by the way, we need a data warehouse to get there. When the promised fruit is slow to appear on the insight tree, executives lose interest, and the data warehouse stands like an empty half-finished home with no windows and no flooring, a monument to the inherent difficulty of these projects.

There are other challenges that will be familiar to veterans of these wars. Among them is the impossibility of gathering a complete set of requirements. Commercial teams move quickly, and their needs evolve much faster than the data warehouse development project can come to fruition. Project teams can't escape the incessant drip, drip, drip of "one more thing" or "something we forgot to mention." These afterthoughts seem trivial to the commercial team who doesn't understand that a single such

requirement could necessitate significant re-work to a data model or interface procedure.

4 Quickly become outdated

Planned Obsolescence. Those few data warehouse projects that survive to production almost all suffer a common defect. They are based on a static model. Emerging pharma companies for example, come to the project table with a likely set of data assets. A common portfolio includes syndicated Rx data, CRM data such as calls, details and samples, some marketing program data related to coupons or co-pay cards and perhaps some claims data. The data warehouse developer builds a model around this current and apparently static portfolio of data assets. Even if individuals within the pharma company have the experience and foresight to consider potential evolution of the data portfolio, they can't say how it will evolve. Development of a model that contemplates the universe of possible or even likely alternative needs would be prohibitively expensive and time consuming. The most carefully planned data warehouse model contains the seeds of its own obsolescence. Soon, commercial teams are faced with the acquisition of a new company or product, a new data set, a new marketing initiative, some new operational requirement not supported by their expensive new machine. Like a homeowner faced with the cost of retrofitting for some new heating technology, commercial teams are faced with the high cost in time, money, and energy, of evolving their data warehouse and the realization that in order to meet the constantly changing needs of the commercial organization, the data warehouse will likely always be "in-development." What they hoped would be a closed-ended engagement with their consulting partners is likely to be ongoing; for the consulting company, this is lucrative and for the pharma company, it is a perpetual cost and frustration.

5

Data Management Builds come at a significant cost

There's A Better Alternative. The last, and perhaps the most compelling reason, pharma companies should avoid data warehouse development projects, is the availability of a better alternative. We don't work by candle-light because electric lights are brighter, more convenient, easier to manage and easier to maintain not to mention much safer. Across industries, companies have moved to a cloud-first strategy because it's better. It's not possible for companies to match the cost, convenience, flexibility, or security of AWS infrastructure. It's unwise to make a significant investment in infrastructure that might be unneeded or insufficient soon after the contract is signed.

In the same way, pharma commercial teams are not well served by static, internal data warehouse models that cost a fortune to build and can't support their need for constant change. A scalable, crowd-tested data warehouse capable of assimilating the range of potential future data sets or system interfaces, eliminates the cost and frustration of planned obsolescence. This approach comes with a much lower Total Cost of Ownership and often a much lower implementation cost. Commercial Teams may find a conventional implementation of this model enables them to avoid any up-front cost, an especially enticing alternative for emerging companies.

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