Data Warehousing - Time for a New Paradigm?

For more than 25 years now, businesses have followed a pattern of mapping business transactions in their own context into a data warehouse. Realistically this practice, driven by the ideals and methodologies of either Bill Inmon or Ralph Kimball, has to-date provided a great ability to re-format transactional data into a model that enables rapid retrieval and consistent enterprise reporting platforms. I believe that through this analytics evolution cycle, we have become a victim of our own design in that the value delivered from a data warehouse built in this manner is by and large not conducive to encouraging new questions to be asked of your business data. Typically, this stifled pattern of use leads us to generate answers from complex data warehouses to questions for which we could just have built a static report from the operational system.

What's the point you might ask? Well, simplistically, if the business transaction from one area in your organisation looks like an apple and another looks like an orange, the reality is that it is difficult to compare or analyse the two together correctly. There are a number of anomalies (of which timeliness of information, granularity, and the absence of common associative information are but a few) that restrict us from doing this effectively. So, if we insist on making each warehouse entry look like the apple or orange in the source, the warehouse is by design failing to add much, if any value other than migration of the reporting platform to a different system.

Some organisations have gone some distance toward standardising the context of their data warehouse(s), and have reaped the associated reward that comes within the data management and governance side, not to mention having common context and dimensional views across the business reports produced. But, and it is a big but, at the end of the day we are still joining apples and oranges of varying granularity levels as well as different structures. That said, where my mind has gone in looking to resolve this, is to look into the truly successful operational application solutions and start analysing what makes them so good.

The new paradigm explained

Successful business applications have, without exception, one thing in common. That is; they are designed to deliver their primary function well. Makes sense doesn't it? For example; a financial system irrespective of brand is great at finance transactions, and can probably be bastardised to carry some other functions finance related, but it cannot ever effectively cover, for example, an application that does inventory management, without significant extension. So why have we in the Business Intelligence world persisted in designing our data warehouses to do analytical processing whilst keeping the records on a one-to one mapping with the source? Surely we are just carrying the problems experienced in reporting across multiple business transactions from multiple systems into another (albeit single) system where we are trying to apply some smarts to untie the knots? Ultimately we still end up in most circumstances with the same apples and oranges.....

Business Intelligence & Analytics

With this in mind, we at Crysp have categorically started to turn the thought processes for Data Analytics, Business Intelligence and Information Management around. What if we were to ignore the existing source systems as a point of design for the data warehouse and were to instead look at the analytical requirements of our business as a start point? What if we could build a system that can deliver what we need from the repository forward? Would that make a difference? The simple answer is 'Yes'!

In order to simplify, and get to the light bulb moments that my partners and I reached a couple of years back now, ask yourself the following questions: -

- Do the current typical analytics design methodologies and derivatives thereof have any inherent flaws?
    - o Answer – No. So no need to re-invent the wheel here. Use what works;
- Is the delivery platform itself of importance in the delivery of analytics to where it is needed?
    - o Answer – Somewhat yes, but it is not restricted to any one tool or vendor. So, don't discard investments in delivery channels and mobility. You can re-purpose the technology for use in a new paradigm;
- Is the analytical structure of an organisations need already known?
    - o Answer – Mostly yes. So, you can normally re-build a successful analytics system using your existing people and knowledge, with some guidance and often with your existing dimensional views;
- Is the data in its operational form and context able to deliver true analytics?
    - o Answer – Mostly no, as it is too contextually bound and does not easily match other data in the organisation; and finally, the coup-de-grace
- Is there opportunity to rebuild/restructure my data warehouse to enable my organisation to achieve true information analytics in the business's hands?
    - o Answer – Yes, yes and yes again…

If you've seen it already, good for you! Otherwise, here it is: -

"Structure your data warehouse content to <u>reflect the raw data</u> and not the transaction, whilst keeping the organisation's already well-understood context intact. This will provide a system capable of self-service analytics as a function, rather than simply being a large, complex repository."

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Some will say "we already do that", and I would lay down one challenge to these nay-sayers to see if this is really true. If your business wants to add brand new content to the current front end analytics, what has to be done to make this happen? If your answer results in more than one item, then, chances are you are not yet where you need to be in your restructure efforts. The game really changes when you are able to truly drive your organisation's analytical capability from the user side, not from often expensive and time consuming IT technical competency. At Crysp, we recognised this need, and have delivered a flexible methodology where your organisation needs to only do one thing to add brand new content to the analytics engine. Just think how powerful that is, when measured in financial and time to value terms?

Let me answer that with some actual cost and effort facts to show you the financial and time difference between the current model(s) and the new idea……

1. Current costs of adding new content to a large corporate data warehoused environment ~$50,000.00 vs proven cost of ~$6,000.00 to deliver new content in the new paradigm.
2. Current time to add new content to a large corporate environment ~ 3 Months (12 Weeks) vs timed delivery of 5 Days for the same content using the new paradigm.

Simplified into pure business speak; would you like to reduce your cost for new data in your Business Analytics /data warehouse engine by up to 88% or more? And would you like to see the new data content arrival rate in your analytics core increase by up to 92%? I would hesitate to say that the answer for any business has to be a resounding 'YES'! Couple this with the results of moving the business analytics responsibility into the hands of the business users and removing constraints typically applied through current database structures (remember the apples and oranges discussion) and we believe that our new methodology will be of interest to you.

If this article has triggered an interest in improving the value that your analytics engines deliver to your organisation, please feel free to make contact at contact@crysp.com.au and we can help you achieve these improvements and open the experience in your organisation.

Happy Analytics,

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