

For Healthcare, Big Data Analytics Isn't an "Out of the Box" Purchase

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It may sound odd to those outside our industry, but one of the things I truly enjoy about my role as a presales engineer is that I get to meet healthcare IT executives from all over the US. While our conversations cover a wide range of IT challenges, one topic that comes up often is Big Data. Most executives don't need to be sold on the importance of big data analytics; the "how" is much murkier.

To simplify things (perhaps even over-simplify things), I tend to classify IT decision makers into one of two categories: the buyers and the solvers. The buyers look to their EMR vendor of choice and follow their lead. If they can't answer a question using the vendor's standard reporting database and tools, they work around it, and move on. If you are a buyer (and happy being so), good luck, I wish you all the best. Stop reading now.

The solvers, on the other hand, realize that not every question of interest can be answered by an EMR vendor and decide that something else, something overarching, is needed if they really want to answer their key business and clinical questions.

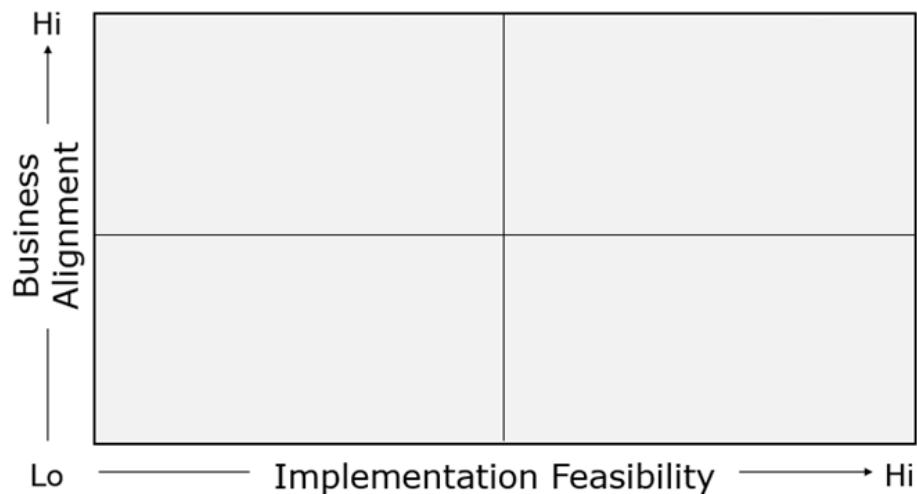
The most surprising example I have encountered comes from a relatively small hospital in a ski town. What was surprising is that smaller hospitals traditionally have trouble with basic reporting. For most organizations of their size, advanced analytics seems like a stretch. Not these guys. They had already been using the latest and greatest Epic reporting solutions, but they kept running to unanswerable questions.

For example, they noticed that they had a much higher than average incidence of deep vein thrombosis (DVT) compared to other hospitals. They looked into it and determined that they followed best practices for diagnosis and treatment, but the questions remained: why? Altitude? Are these patients sitting still on planes, trains and automobiles more than normal?

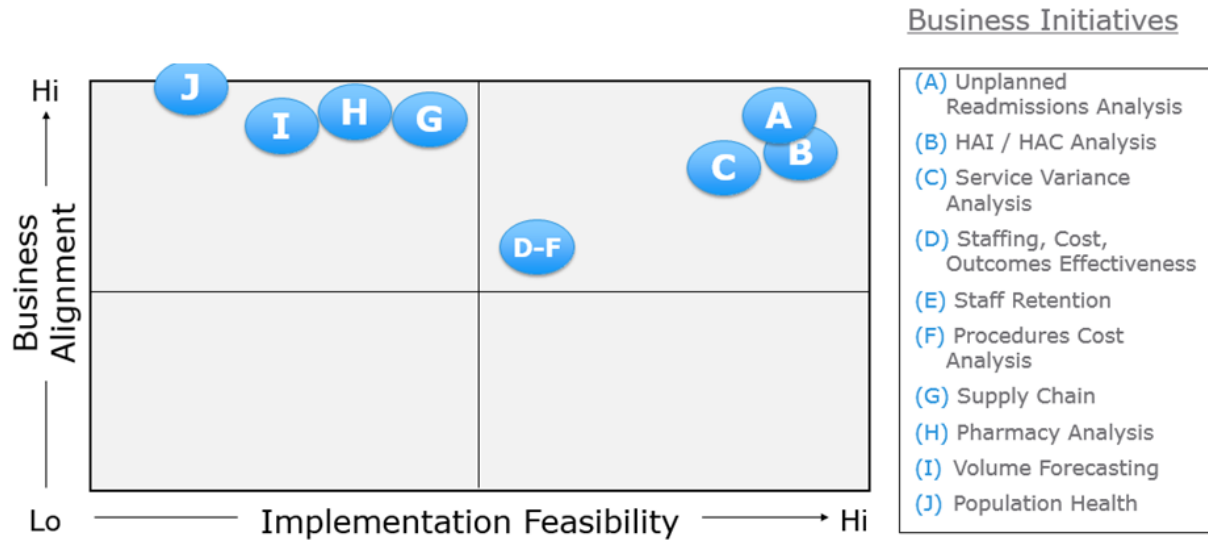
Maybe the truth is the data isn't in the EMR to tell you this. If you want to answer this kind of question, you're going to need something more comprehensive than the EMR reports. But what do you need? Do you really need real-time analytics? Data visualization? Machine learning? You might, but how do you know?

There is a solution that I've seen work really well and is actually fun (in a nerdy way). The exercise is to list out every analytics problem you'd like to solve, evaluating potential use cases. Because I like to keep things simple, I like to outline this process in 5 steps:

1. The first step is to capture some high-level information. No more than what would fit onto a 3x5 notecard. Remember those? No? Ok, well, then just jot down a description of the question, where the data comes from and who cares about solving the problem.
 - Ask around about who has unsolved problems. Ask the CMIO. Ask the nursing leadership. Ask finance and patient accounting. And yeah, ask IT too.
2. Take a look at the note cards and staple together the ones that have the same information on them. This is a good thing. It means more than one stakeholder sees the same problem.
3. Get the stakeholders together in the same room (bring food) and show them a blank matrix that looks like this:



4. Take the stack of use cases and have a collaborative discussion placing the cards on the board. The more valuable to the business, the higher it goes on the chart. The easier it is to collect the data, the further right. This will be fun and sometimes heated. Don't worry about breaking ties too much. This isn't a precision exercise. The goal is to get something that looks like this:



5. The idea is to identify about three analytics problems that are widely recognized as unsolved, valuable and doable. This should be where you start. In addition, you should have another few that you really think you need to do in a second iteration.

Once you know this, you can start to decide what analytics technology you need to own now and in the next year or so. Use this information to guide your plans for building out capabilities beyond the EMR reporting features. BTW – this technique works for any industry. It just seems to help healthcare shops in particular, given the history of looking for strictly off the shelf pre-built reporting.

Don't want to go it alone? Dell EMC Services offers the Big Data Vision Workshop that can help you and your stakeholders find the best possible use case and solve a big data challenge.