

collaborate

Making Sense of Business Intel

How this valuable industry tool can help you run a better apartment company.

By Donald M. Davidoff

“BUSINESS INTELLIGENCE” (BI) IS ANOTHER ONE OF THOSE BUZZWORD terms flying around the industry today. Coupled with “big data,” everyone wants to know what it is and how they can get value from it.

BI isn’t particularly tangible, and it covers a wide range of data elements, so it’s very easy to get confused. So let’s take a tour of the four stages of BI maturation and hopefully gain insight on what, and where, each of us, given our business needs and data maturity, should focus on today.

Each stage gives deeper insights and delivers more value than the prior stage:

- Reporting;
- Analysis;
- Monitoring; and
- Prediction.

STAGE 1: REPORTING

Reporting lies at the start of the journey. Reporting answers the question, What happened? Though this stage is low on the insights and business-value scale, we shouldn’t underestimate its power.

All of us have been exposed to reports. In fact, I’m guessing there’s not a business day that goes by that you aren’t looking at multiple reports. They tell us about our operations, our finances, our customers, our prospects, and so much more. They can be highly actionable, or they can simply report the results of past actions.

By collecting data on what has happened and reporting it in an “easy to consume” way, we can make

intelligent, data-driven decisions instead of arguing over opinions.

STAGE 2: ANALYSIS

Analysis lets us get beyond the “what happened” into the “why did it happen?”

This stage engages the world of online analytical processing (OLAP) tools: infographics, drill-down reports, and so on. Instead of merely reporting what happened, analytical tools combine data from different sources or different dimensions of the business and align them in ways that make it intuitive to see the business relationships that likely are causing something to happen.

As an example, let’s look at an online competitive performance benchmark tool that a technology client of mine is developing, the Multi-family Data Exchange (MDX). This tool pulls data on various communities and compares a property’s performance with the aggregate performance of its submarket competitors.

Two key elements of analysis are immediately visible in the MDX example as it’s applied to a property named Kenmore Heights, in Washington, D.C.:

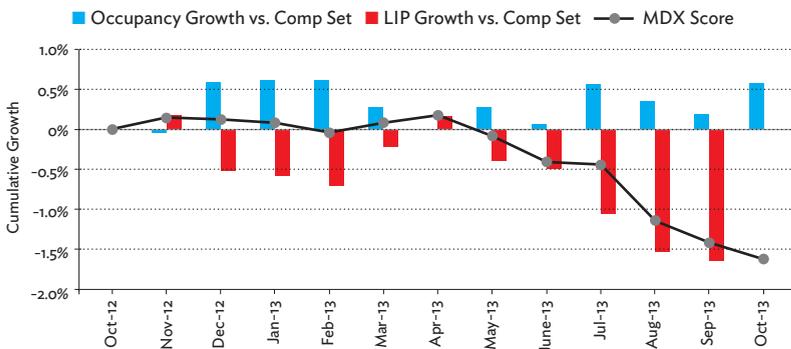
1. The MDX Score (see “Competitive Performance Benchmark Tool,” this page) is a combination of occupancy and rent-growth performance. (Lease-in-place, or LIP, growth versus the comp set is indicated by the red bars.) This allows us to see the impact of multiple performance metrics on a single critical key performance indicator.

2. OLAP drill-down capability uncovers information that gives us detailed insights into why the MDX Score is moving the way it is. It’s one thing to know that my performance is lagging the standard established by the comp set; it’s much more valuable to understand why it’s lagging. Lease-in-place growth by month (see page 24) and physical-occupancy data drill-down charts make it clear that it’s a lease-in-place problem, not an occupancy problem.

Then, like peeling an onion, OLAP BI tools allow us to take the “why” question a step further. In this case, we see that our challenge is clearly centered around renewal-rent performance, not new-lease, or move-in, rents, and we can see exactly when the problem started.

If the analysis stage looks a lot like a series of reports, that’s not a surprise. One of the key strengths of a

COMPETITIVE PERFORMANCE BENCHMARK TOOL



good BI suite is that it lets you look at a series of reports in a contextual fashion—drilling down to more levels of detail, rising up to a higher level of aggregation, and looking across data sets to see whether there are correlations that have business meaning.

All of this tells us much more than just what happened; it gives us the opportunity to diagnose why something happened.

STAGE 3: MONITORING

The third level of BI maturity brings us into real-time analysis. Monitoring gives us insights into exactly what’s happening now.

Now, we’re talking about dashboards and scorecards—quick and easy ways to see where we are, how well we’re doing against certain benchmarks, and where challenges that need attention might be. Again, this is really just another application of reporting. However, this application varies from simple reporting in two, key ways:

1. It lets us access real-time (or near real-time) data.
2. It’s accompanied by dials, color-coded scoring (the most popular of which is the “red-yellow-green” motif), and directional indicators that give us a sense of not just where we are but also where our momentum appears to be taking us.

That’s why this phase of maturation uses the metaphor of a dashboard. Much like the speedometer, tachometer, and warning lights in an automobile dashboard, our BI dashboard gives us an equivalent understanding of status, speed, and alerts about key business metrics.

STAGE 4: PREDICTION

The fourth, and highest, level of BI maturation, prediction, is often referred to as “predictive analytics.” Pre-

dictive analytics helps us answer the question, What is going to happen?

For this phase, let’s look at an example of predictive analytics I’ve used in a pricing situation.

Most multifamily housing operators understand the concept of unit amenities—features of individual apartments that have different values (such as balconies, fireplaces, ceiling fans, upgraded kitchens, and so on). We all price these amenities and then have what I like to call the “Goldilocks dilemma”—are the prices too high, too low, or “just right”?

This is where predictive analytics can help. By taking historical data on leasing from our BI solution, we can look at how many days each unit was on the market. For each amenity, we look at the list of days on the market for those units with the amenity versus those without it.

We can then apply a statistical test (in this case, I used something called a t-test) to determine whether the difference in mean days on the market between the two is similar. If the amenitized unit is leasing more quickly, we’re pricing the amenity too low; if it’s leasing more slowly, we’re pricing it too high.

In the example above, the average number of days on the market between the two examples looks very different: 34.33 versus 20.91. However, applying the t-test shows that there’s an 11.1 percent probability this difference is due purely to chance. So if we used a 90 percent certainly threshold (meaning we would be right to change the rents nine out of 10 times), then this difference is NOT statistically significant. This means we’ve priced our amenity correctly.

One might wonder how an almost two-week difference is not significant. The culprit is the low transaction density. With very few transactions and a fairly wide range of different individual transactional results, the variability in those results means even a two-week difference in the average isn’t really significant. We’re using our BI tool to predict future behavior (leasing at this price point) based on an analysis of historical results.

In conclusion, don’t worry if you’re not at stage 4 (predictive analytics) yet in your analyses. My best advice is to assess where you are and then create a plan to get to the next phase.

Over time, you’ll add more value to your enterprise, and you’ll build the platform to continuously move toward the next level of maturation—and success. **MFE**

Donald M. Davidoff is the founder of D² Demand Solutions, a technology consulting firm specializing in the multifamily housing industry. You can contact him at donald@d2demand.com.

LEASE-IN-PLACE GROWTH BY MONTH, INDEXED FROM OCTOBER 2012

